OFFICIAL GAZETTE

UNITED STATES PATENT OFFICE

JUNE

VOL. 851

1968

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U.S. DEPARTMENT OF COMMERCE

OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE

June 4, 1968 Volume 851 Number 1

PATENTS

NOTICES

Board of Appeals Decisions Rendered in the Month of March 1968

Examiner affirmed	162
Examiner affirmed in part	32
Examiner reversed	58
Total	252

Tentative Schedule of Moves Into Building 2—Crystal Plaza

We expect to move employees into Crystal Plaza Building 2 beginning June 7, 1968, and extending through July 14, 1968. These plans are based on proposed completion dates furnished by Charles E. Smith Management Company and on acceptance of the completed space by General Services Administration. The installation of telephones is one other factor which will determine how closely we can adhere to this occupancy schedule.

The tentative schedule which has been determined for occupancy of Building 2 is:

JUNE 7–9

- Correspondence and Mail Branch
- Deposit Account Section (Finance Branch)
- Attorneys' Copy Pick-Up Boxes
- Supply and Receiving Room (Office Services)
- Labor Section (Office Services)

JUNE 14–16

- Trademark Examining Operation
- Issue and Gazette Branch
- Quality Control

JUNE 21–23

- Board of Appeals
- Board of Patent Interferences
- Trademark Trial and Appeal Board
- Office of the Director of Administration
- Director, Budget & Finance Division
- Budget Branch
- Head, Finance Branch
- Office Services Branch
- Printing & Records Management Branch

JUNE 28–30

- Director, Office of Patent Services
- Assignment Branch
- Application Branch
- Special Services Branch
- Document Services Branch
  (excluding the Reproduction Section)
- Employee Accounts and Accounting & Cost Analysis Sections (Finance Branch)
- Automatic Data Processing Division

JULY 5–7*

- Director, Office of Research, Development & Analysis
- Research and Development Division
- Organization & Systems Analysis Division
- Weekly Issue Section (Patent Copy Sales Branch)
- Service Branch (Office of Examining and Documentation Control)
- Mechanical Documentation Group

JULY 12–14*

- Patent Documentation Administrator
- Chemical Documentation Group
- Electrical Documentation Group
- Personnel Division (including Employee Development Branch)
- Patent Office Academy
- Drafting Branch

Once the above relocations are completed, we will then be in a position to move the patent files, the Record Room, numerical set of foreign patents, and the bindery shop. No dates have been determined, as yet, for moving the latter units.

*There is a possibility that the last two scheduled moves will be delayed by as much as two weeks because of the telephone strike.

EDWARD J. BRENNER,
Commissioner.

May 6, 1968.

Disclaimer and Dedication

3,320,823.—*Elving J. Kjellstrom,* Oregon, Wis. GRIP PULLEY. Patent dated May 23, 1967. Disclaimer and dedication filed May 1, 1968, by the inventor.

Hereby disclaims and dedicates to the Public the entire patent.

Private Law 90–211

90th CONGRESS, H.R. 11254

April 12, 1968

AN ACT

For the relief of Jack L. Good

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That, notwithstanding the provisions of section 151, title 35, United States Code, or any provision of existing law, the Commissioner of Patents is authorized and directed to accept the late payment of the final fee (prescribed in section 41(a), title 35, United States Code), in the application for United States Letters Patent of Jack L. Good of Palestine, Arkansas, serial number 381,830, filed July 10, 1964, and allowed July 28, 1966, for a stump pulverizing apparatus, as though no abandonment or lapse had ever occurred: *Provided,* That such final fee is paid within three months of the date this Act is

New Applications Received During April 1968

Patents	8060
Designs	494
Plant Patents	6
Reissues	34
Total	8594

Issue—June 4, 1968

Patents	1201	—No. 3,386,103 to	No. 3,387,303, incl.
Designs	82	—No. 211,231 to	No. 211,312, incl.
Plant Patents	3	—No. 2,814 to	No. 2,816, incl.
Reissues	6	—No. 26,396 to	No. 26,401, incl.
Total	1292		

approved. Upon payment of such fee, the Commissioner is authorized to issue to the said Jack L. Good the patent for which application was so made. No patent granted on said application shall be held invalid on the ground that the final fee was not paid within the period specified in title 35, United States Code.

Approved April 12, 1968.

Adjudicated Patents

(D.C. Mo.) Smith and Ball Patent No. 2,541,113 (99—184), for PROCESS FOR CANNING AND STERILIZING FOOD PRODUCTS. Claim 3 *Held* not infringed. *Good Processes, Inc.* v. *Swift and Co.*, 280 F. Supp. 353; 155 USPQ 640.

(D.C.N.Y.) Molitor Patent No. 2,629,134 (264—310), for A PROCESS OF MAKING HOLLOW ARTICLES FROM VINYL PLASTISOLS, *Held* invalid. *Barr Rubber Products Co.* v. *Sun Rubber Co.*, 277 F. Supp. 484; — USPQ —.

(D.C.N.Y.) Sydney Littman Patent No. 2,842,772 (3—243), for METHOD OF MANUFACTURE OF GARMENTS OR ARTICLES FROM SHEET METAL, *Held* invalid and infringed. *Nelson Planning Limited* v. *Tex-O-Graph Corp.*, 280 F. Supp. 226; — USPQ —.

(D.C.N.Y.) Nichols and Garshelis Patent No. 2,878,514 (18—19), for APPARATUS FOR CURLING PLASTIC YARNS TO BE USED AS HAIR ON DOLLS' HEADS. Claims 2, 3, and 4 *Held* invalid. *David and David, Inc.* v. *Myerson*, 277 F. Supp. 973; — USPQ —.

(D.C. W. Va.) Wilcox Patent No. 2,967,701 (299—18), for METHOD OF CONTINUOUS LOW SEAM SHORT WALL MINING USING ROTARY AUGER CUTTERS, *Held* invalid not infringed. *Wilcox Mfg. Co.* v. *Eastern Gas and Fuel Association*, 278 F. Supp. 34; 157 USPQ 82.

(D.C. W. Va.) Wilcox Patent No. 3,026,098 (299—42), for LOW SEAM SHORT WALL MINING USING ROTARY AUGER CUTTER, *Held* invalid not infringed. *Id.*

(D.C. Wis.) Taylor Patent No. 3,030,891 (103—25), for LIQUID SUPPLY PUMPING SYSTEM. Claims 4, 5, 6, 11, 12, 13, 14 and 16 *Held* invalid. *Metal Coating Corp.* v. *Baker Mfg. Co.*, 277 F. Supp. 403; 155 USPQ 401.

(D.C.N.J.) Larcen Patent No. 3,085,638 (173—36), for ROCK DRILLING MECHANISMS, *Held* invalid. *Atlas Copio Aktiebolag* v. *Ingersoll-Rand Co.*, 279 F. Supp. 783; 155 USPQ 651.

(D.C. Va.) Sherburne Patent No. 3,115,753 (60—108), for MEANS FOR AUTOMATICALLY CONTROLLING POSITION OF HIGH TEMPERATURE PIPING AND RELATED EQUIPMENT IN STEAM POWER PLANTS, *Held* invalid. *Grinnell Corp.* v. *Virginia Elec. & Power Plants*, 277 F. Supp. 507; — USPQ —.

(D.C. Va.) Loepsinger Patent No. 3,115,886 (137—16), for MEANS FOR AUTOMATICALLY CONTROLLING POSITION OF HIGH TEMPERATURE PIPING AND RELATED EQUIPMENT IN STEAM POWER PLANTS, *Held* invalid. *Id.*

(D.C. Va.) Loepsinger Patent No. 3,006,045 (248—58), for MEANS FOR AUTOMATICALLY CONTROLLING POSITION OF HIGH TEMPERATURE PIPING AND RELATED EQUIPMENT IN STEAM POWER PLANTS, *Held* invalid. *Id.*

(D.C. Mo.) Perry Reissue Patent No. 23,422 (51—320), for METHOD OF CLEANING METAL BY PROJECTING UNDER PRESSURE CARRYING IN SUSPENSION PELLETIZED BLACK WALNUT SHELLS, *Held* invalid and not infringed. *Argashell Inc.* v. *Hammons Product Co.*, 279 F. Supp. 522; — USPQ —.

Patents Available for Licensing or Sale

3,263,684. TRACHEOTOMY TUBE WITH ONE-WAY VALVE. Robert L. Bolton, 10425 W. North Ave., Wauwatosa, Wis., 53226.

3,277,274. ELECTRIC SAUNA BATH HEATING UNIT. Ulo Raabe, 459 Goulet St., St. Boniface 6, Manitoba, Canada.

3,376,580. PAPER CAPS. Kenneth M. Ashmore, Rte. 4, Freeport, Ill., 61032.

3,377,488. POWER SUPPLY CIRCUITRY FOR LIGHTING FIXTURES OR THE LIKE. Albert A. Lorenso, 1118 Walnut St., Linden, N.J., 07036.

3,382,781. CAMERA. William L. Hamilton, 9365 Euclid Chardon Road, Kirtland, Ohio, 44094.

The following 2 patents are offered by Kennecott Copper Corporation.

Inquiries concerning licenses may be addressed to: Lowell H. McCarter, Ledgemont Laboratory, Kennecott Copper Corporation, 128 Spring St., Lexington, Mass., 02173.

3,381,903. MATERIAL COMMINUTING APPARATUS.

3,368,290. INSTRUMENT FOR REPRESENTATION OF CRYSTAL STRUCTURE.

The following 3 patents are offered by Perry H. Gentzel.

Correspondence is to be directed to: Caesar, Rivise, Bernstein & Cohen, 17th Floor, Liberty Trust Bldg., Broad and Arch Sts., Philadelphia, Pa., 19107.

2,667,892. PILOT CONTROLLED MAIN VALVE FOR FLUID PRESSURE SYSTEMS.

2,752,940. VALVE SEALING DEVICE.

3,141,474. SAFETY VALVE CONSTRUCTION.

General Electric Company is prepared to grant non-exclusive licenses under the following 5 patents upon reasonable terms to domestic manufacturers.

Applications for license under the following patent may be addressed to: Division Patent Counsel, Missile and Space Division, General Electric Company, P.O. Box 8555, Philadelphia, Pa., 19101.

3,378,914. FLUXLESS ALUMINUM BRAZING.

Applications for license under the following 2 patents may be addressed to: Division Patent Counsel, Power Transmission Division, General Electric Company, 6901 Elmwood Ave., Philadelphia, Pa., 19142.

3,333,154. CIRCUIT INTERRUPTER CONTROL MEANS.

3,333,155. INVERSE OVERCURRENT-TIME DELAY CIRCUIT PROTECTIVE DEVICE UTILIZING NONLINEAR RESISTANCE.

Applications for license under the following 2 patents may be addressed to: Division Patent Counsel, Missile and Space Division, General Electric Company, P.O. Box 8555, M-3230, Philadelphia, Pa., 19101.

3,373,482. FLUXLESS ALUMINUM BRAZING.

3,373,483. FLUXLESS ALUMINUM BRAZING.

Avco Corporation is prepared to grant licenses under the following 25 patents upon reasonable terms to domestic manufacturers.

Applications for license may be addressed to: General Patent Counsel, Avco Corporation, Suite 1800, 1014 Vine St., Cincinnati, Ohio, 45202.

3,374,442. BIAS CONTROL CIRCUIT.

3,370,257. WIDE BAND IMPEDANCE TRANSFORMER.

3,370,252. DIGITAL AUTOMATIC FREQUENCY CONTROL SYSTEM.

3,366,883. AUTOMATIC BROAD BAND VSWR POWER CONTROL.

3,364,566. METHOD OF FORMING MULTILAYER CIRCUIT BOARDS HAVING WELDABLE PROJECTIONS EXTENDING THEREFROM.

3,359,559. IMPULSE-TPYE TELESCOPING ANTENNA.

3,351,777. AUTOMATIC PULSE FORMER.

3,350,644. SLIP CORRECTOR MEANS AND METHOD FOR MULTISTATION NETWORKS.

3,348,158. TEMPERATURE COMPENSATED DISCRIMINATOR PROVIDING AMPLIFICATION.

3,348,050. PASSIVE INFRARED TRACKING AND RANGING SYSTEM.

3,344,400. MICRO DECODER.

3,335,255. ARC EROSION MILLING MACHINE.

3,331,060. MULTILINE DIGITAL BUFFER.

3,331,028. MULTISTAGE TRANSISTOR AMPLIFIER IN WHICH THE IMPEDANCES OF THE VARIOUS STAGES ARE SUCCESSIVELY VARIED TO CONTROL GAIN.

3,330,944. AIR TRAFFIC CONTROL SYSTEM INCLUDING MEANS FOR GENERATING AND DISPLAYING THE PREDICTED FLIGHT PATH OF A PLURALITY OF AIRCRAFT.

3,329,815. DEVICE FOR MEASURING BEAM QUALITY OF IONIZING RADIATION.

3,327,072. TUNER CONSTRUCTION.

3,325,738. AUTOMATIC SIGNAL-NOISE DISCRIMINATOR.

3,323,037. VOLTAGE REGULATOR UTILIZING A CONTROLLED VARIABLE DUTY CYCLE SWITCH.

3,322,968. NOISE BLANKER CIRCUIT.

3,321,612. SUBTRACTION CIRCUIT.

3,320,440. SOLID STATE EVENT MONITORING DEVICE.

3,316,478. REGENERATIVE FREQUENCY CHANGER FOR MULTIPLYING AND DIVIDING.

3,307,099. MICROWAVE FREQUENCY MULTIPLIER COMPRISING SIDE BY SIDE RESONATORS WITH VARACTORS CONTAINED IN ONE RESONATOR.

3,305,756. COMBINED GATED PULSE SOURCE-TRANSVERTER-RECTIFIER POWER SUPPLY WITH SAMPLING CONNECTION FOR REGULATION.

The Radio Corporation of America offers to grant nonexclusive licenses on reasonable terms and conditions under the following 28 patents.

Inquiries respecting licenses should be addressed to: Radio Corporation of America, Staff Vice President, Domestic Licensing, 30 Rockefeller Plaza, New York, N.Y., 10020.

3,371,651. FLUID APPLICATOR APPARATUS.

3,371,881. MAGNETIC RECORDING AND PLAYBACK APPARATUS.

3,372,122. VANADIUM-CONTAINING LITHIUM FERRITES.

3,372,382. DATA PROCESSING APPARATUS.

3,372,384. CRYOELECTRIC MEMORY.

3,372,741. HEAT DISSIPATOR.

3,372,923. FEEDER APPARATUS.

3,372,967. METHOD OF MAKING A MULTI-ALKALI CATHODE.

3,373,061. CHALCOGENIDE THERMOELECTRIC DEVICE HAVING A BRAZE COMPRISING ANTIMONY COMPOUNDS AND METHOD OF FORMING SAID DEVICE.

3,373,248. MAGNETIC TAPE TRANSPORT WITH AZIMUTH ADJUSTMENT.

3,373,264. PUNCHED CARD READER WITH REGISTRATION INDICATING MEANS.

3,373,294. LINEAR LOGARITHMIC AMPLIFYING DETECTOR.

3,373,344. VOLTAGE REGULATOR CIRCUIT INCLUDING A STORAGE CAPACITOR AND A SWITCHING MEANS RESPONSIVE TO A VOLTAGE DIFFERENCE FOR CHARGING THE CAPACITOR.

3,373,407. SCRATCH PAD COMPUTER SYSTEM.

3,373,408. COMPUTER CAPABLE OF SWITCHING BETWEEN PROGRAMS WITHOUT STORAGE AND RETRIEVAL OF THE CONTENTS OF OPERATION REGISTERS.

3,373,418. BIT BUFFERING SYSTEM.

3,373,421. CONVERSION FROM GRAY CODE TO BINARY CODE.

3,374,125. METHOD OF FORMING A PN JUNCTION BY VAPORIZATION.

3,374,312. CLIPPING CIRCUIT UTILIZING AN INSULATED-GATE FIELD-EFFECT TRANSISTOR.

3,374,385. ELECTRON TUBE CATHODE WITH NICKEL-TUNGSTEN ALLOY BASE AND THIN NICKEL COATING.

3,374,406. INSULATED-GATE FIELD-EFFECT TRANSISTOR.

3,374,407. FIELD-EFFECT TRANSISTOR WITH GATE-INSULATOR VARIATIONS TO ACHIEVE REMOTE CUTOFF CHARACTERISTIC.

3,374,787. INTRA-UTERINE CONTRACEPTIVE DEVICE.

3,375,012. PHONOGRAPH PICKUP DEVICE.

3,375,389. ADJUSTABLE CONVERGENCE MAGNETS.

3,375,436. REGULATED HIGH VOLTAGE D.C. POWER SUPPLY.

3,375,467. LOW NOISE VHF TRANSISTOR OSCILLATOR.

3,375,470. MODULATION TECHNIQUE EXHIBITING IMPROVED STABILIZATION AT HIGH CARRIER FREQUENCIES.

PATENT EXAMINING CORPS

R. A. WAHL, Assistant Commissioner

CONDITION OF PATENT APPLICATIONS AS OF MAY 20, 1968

PATENT EXAMINING OPERATIONS AND GROUPS • Denotes date of oldest application for each Operation.	Actual Filing Date of Oldest Case Awaiting Action	
	New	Amended
CHEMICAL EXAMINING OPERATION—I. MARCUS, Director.		
GENERAL CHEMISTRY AND PETROLEUM CHEMISTRY, GROUP 110—R. L. CAMPBELL, Manager. Inorganic Compounds; Inorganic Compositions; Organo-Metal and Organo-Metalloid Chemistry; Metallurgy; Metal Stock; Electro Chemistry; Batteries; Hydrocarbons; Mineral Oil Technology; Lubricating Compositions; Gaseous Compositions; Fuel and Igniting Devices.	9- 7-65	4-26-63
GENERAL ORGANIC CHEMISTRY, GROUP 120—M. STERMAN, Manager. Heterocyclic; Amides; Alkaloids; Azo; Sulfur; Misc. Esters; Carbohydrates; Herbicides; Poisons; Medicines; Cosmetics; Steroids; Oxo and Oxy; Quinones; Acids; Carboxylic Acid Esters; Acid Anhdrides; Acid Halides.	10- 1-65	•12-28-62
HIGH POLYMER CHEMISTRY, PLASTICS AND MOLDING; GROUP 140—L. J. BERCOVITZ, Manager. Synthetic Resins; Rubber; Proteins; Macromolecular Carbohydrates; Mixed Synthetic Resin Compositions; Synthetic Resins With Natural Polymers and Resins; Natural Resins; Reclaiming; Pore-Forming; Compositions (Part) e.g.: Coating; Molding; Ink; Adhesive and Abrading Compositions; Molding, Shaping, and Treating Processes.	10-20-65	1- 6-64
COATING AND LAMINATING, BLEACHING, DYEING AND PHOTOGRAPHY, GROUP 160—J. R. LIBERMAN, Manager. Coating; Processes and Misc. Products; Laminating Methods and Apparatus; Stock Materials; Adhesive Bonding; Special Chemical Manufactures; Special Utility Compositions; Bleaching; Dyeing and Photography.	•4- 9-65	2-18-63
SPECIALIZED CHEMICAL INDUSTRIES AND CHEMICAL ENGINEERING, GROUP 170—W. B. KNIGHT, Manager. Fertilizers; Foods; Fermentation; Analytical Chemistry; Reactors; Sugar and Starch; Paper Making; Glass Manufacture; Gas; Heating and Illuminating; Cleaning Processes; Liquid Purification; Distillation; Preserving; Liquid and Solid Separation; Gas and Liquid Contact Apparatus; Refrigeration; Concentrative Evaporators; Mineral Oils Apparatus; Misc. Physical Processes.	9- 7-65	1-29-64
ELECTRICAL EXAMINING OPERATION—N. H. EVANS, Director.		
INDUSTRIAL ELECTRONICS AND RELATED ELEMENTS, GROUP 210—J. F. COUCH, Acting Manager. Generation and Utilization; General Applications; Conversion and Distribution; Heating and Related Art Conductors; Switches; Miscellaneous.	1- 4-66	2-14-64
SECURITY, GROUP 220—S. BOYD, Manager. Ordnance, Firearms and Ammunition; Radar, Underwater Signalling, Directional Radio, Torpedoes, Seismic Exploring, Radio-Active Batteries; Nuclear Reactors, Powder Metallurgy, Rocket Fuels; Radio-Active Material.	1-13-67	11-17-64
INFORMATION TRANSMISSION, STORAGE AND RETRIEVAL, GROUP 230—M. L. LEVY, Manager. Communications; Multiplexing Techniques; Facsimile; Data Processing, Computation and Conversion; Storage Devices and Related Arts.	•2-24-65	•6-18-62
ELECTRONIC COMPONENT SYSTEMS AND DEVICES, GROUP 250—W. L. CARLSON, Manager. Semi-Conductor and Space Discharge Systems and Devices; Electronic Component Circuits; Wave Transmission Lines and Networks; Optics; Radiant Energy; Measuring.	3- 2-65	8-15-62
PHYSICS, GROUP 280—R. L. EVANS, Manager. Photography; Sound and Lighting; Indicators and Optics; Measuring and Testing; Geometrical Instruments.	2-14-66	3-22-65
DESIGNS, GROUP 290—S. BOYD, Manager. Industrial Arts; Household, Personal and Fine Arts.	8-16-67	7- 5-66
MECHANICAL EXAMINING OPERATION—F. H. BRONAUGH, Director.		
HANDLING AND TRANSPORTING MEDIA, GROUP 310—A. BERLIN, Manager. Conveyors; Hoists; Elevators; Article Handling Implements; Store Service; Sheet and Web Feeding; Dispensing; Fluid Sprinkling; Fire Extinguishers; Coin Handling; Check Controlled Apparatus; Classifying and Assorting Solids; Boats; Ships; Aeronautics; Motor and Land Vehicles and Appurtenances; Railways and Railway Equipment; Brakes; Rigid Flexible and Special Receptacles and Packages.	11-25-66	5- 7-66
MATERIAL SHAPING, ARTICLE MANUFACTURING, TOOLS, GROUP 320—N. BERGER, Manager. Manufacturing Processes, Assembling, Combined Machines, Special Article Making; Metal Deforming; Sheet Metal and Wire Working; Metal Fusion—Bonding, Metal Founding; Metallurgical Apparatus; Plastics Working Apparatus; Plastic Block and Earthenware Apparatus; Machine Tools for Shaping or Dividing; Work and Tool Holders Woodworking; Tools; Cutlery; Jacks.	5-23-66	1-15-64
AMUSEMENT, HUSBANDRY, PERSONAL TREATMENT, INFORMATION, GROUP 330—A. RUEGG, Manager. Amusement and Exercising Devices; Projectors; Animal and Plant Husbandry; Butchering; Earth Working and Excavating; Fishing, etc.; Tobacco; Artificial Body Members; Dentistry; Jewelry; Surgery; Toiletry; Printing; Typewriters; Stationery; Information Dissemination.	•4-22-66	5-14-64
HEAT AND POWER ENGINEERING, GROUP 340—C. F. GAREAU, Manager. Power Plants; Combustion Engines; Fluid Motors; Pumps; Turbines; Heat Generation and Exchange; Refrigeration; Ventilation; Drying; Vaporizing; Temperature and Humidity Regulation; Machine Elements; Power Transmission.	3- 1-67	1-21-66
FIXED CONSTRUCTIONS, SUPPORTS, AND HARDWARE, GROUP 350—T. J. HICKEY, Manager. Joints; Fasteners; Rod, Pipe and Electrical Connectors; Miscellaneous Hardware; Locks; Building Structures; Closure Operators; Bridges; Closures; Earth Engineering; Drilling; Mining; Furniture; Receptacles; Supports; Cabinet Structures.	11-30-66	12- 8-64
TEXTILES, CLEANING AND FLUID HANDLING, GROUP 360—W. S. COLE, Manager. Fluid Handling, including Valves; Conduits; Filling Receptacles; Lubrication; Joint Packing; Bathroom Fixtures; Centrifugal Separators; Cleaning; Coating; Pressing; Agitating; Foods; Textiles; Apparel and Shoes and their Manufacture; Sewing Machines; Winding and Reeling.	5- 9-66	•5-29-63

Total number of pending applications (excluding Designs)	193,096
Total number of Design applications pending	3,486

Expiration of patents: The patents within the range of numbers indicated below expire during June 1968, except those which may have been extended under the provisions of the Veterans Patent Extension Act (64 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 690. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1953.*

Patents	Numbers 2,555,300 to 2,558,715, inclusive
Plant Patents	Numbers 1,013 to 1,018, inclusive

DECISIONS IN PATENT AND TRADEMARK CASES

In the United States Patent Office
Before the Board of Patent Interferences

Odierno *v.* Kordowski

Patent Interference No. 92,227

(Container)

1. Interference—Evidence—Late Affidavits—Rules 271 and 272.

"Affidavits of Hershey Wait and Howard W. Clement were * * * executed and submitted to the Patent Office * * * on behalf of Kordowski, without stipulation, after times for taking testimony had expired. These affidavits have not been considered (Rules 271 and 272, and *Methudy* v. *Roy*, 20 CCPA 1142, 1933 C.D. 485 at 492)."

2. Same—Conception—Conception of Species in Genus Count.

Hearing found that Odierno "was in possession of a complete conception of the mitered form of the invention" prior to conception of Kordowski, *Held* that "We conclude that the record proves that Odierno was the first to conceive the invention as defined in the interference count, i.e., of an invention broadly enough defined to include either the mitered or butt and construction."

3. Same—Evidence—Attorney-Client Privilege.

"At the conclusion of Odierno's testimony Kordowski, apparently believing that the record of correspondence of Stapling [Odierno's employer and assignee] with its attorney Conner might prove that Odierno's test work was an abandoned experiment or that the invention was deliberately suppressed and concealed by Stapling, attempted by court action to obtain access to this correspondence. Such access was denied by the court on the ground of privileged communication. Kordowski argues in his brief that adverse inferences must be drawn against Odierno because of his refusal to divulge this correspondence. We disagree with this position, for if inferences could be drawn on this basis the attorney-client privilege would be meaningless. We note, however, that the burden of proof is upon Odierno as to priority and that inferences may not be drawn *in his favor* where evidence is lacking, merely because his position could be proved only through privileged communications which he has withheld."

4. Same—Preliminary Statement—Burden on Party Amending Preliminary Statement.

"* * * one of the important functions of a preliminary statement is to test the veracity of the party making the statement (*McCullough* v. *Watkins*, 1875 C.D. 129; *Methudy* v. *Roy*, 20 CCPA 1142, 1933 C.D. 485; *Hess* v. *Dreyfuss*, 26 CCPA 1407, 1939 C.D. 793). The burden rests heavily upon a party permitted to amend his statement to prove the facts of his amended statement (*Robins* v. *Wettaufer*, 23 CCPA 952, 1936 C.D. 302). Where, as here, he defers making an amended statement under oath until all the evidence has been taken, he has failed to submit himself to the test of his own veracity."

5. Same—Inventorship—Fraud.

"In considering this issue we note that it is not an issue of the truth of the averments in Odierno's oath [that he believed himself to be the original and first inventor of the claimed subject matter] but of whether he believed them to be true. While the record is not directed to that issue, we believe that it is consistent with a conclusion that Odierno, Kingsley and the attorney may have believed them to be true, and that the charge of fraud is therefore not proved."

6. Same—Reduction to Practice—Subsequent Conduct Considered in Doubtful Reduction to Practice.

"We have seen, from the decision in the case of *Warner* v. *Smith*, that the Court of Appeals of the District of Columbia considers that when there is reasonable doubt as to a successful reduction to practice the subsequent activity or inactivity of the party asserting the reduction to practice is a highly significant factor to be weighed in the adjudication of the issue. Our present appellate court has consistently taken a similar position. Where there is no doubt that the evidence proves that the invention has been reduced to practice, subsequent inactivity cannot defeat such a holding (*Knowles* v. *Tibbetts*, 52 CCPA —, 146 USPQ 59, 1965 C.D. —, 820 O.G. 863); however, subsequent conduct is to be considered where there is doubt (*Walkup* v. *Grieg*, 52 CCPA —, 1964 C.D. 708; *Hess* v. *Bland*, 146 USPQ 378 at 384, 52 CCPA —, 1965 C.D. —; *Kirkham et al.* v. *Arden et al.*, 50 CCPA 1205, 1963 C.D. 430 at 437)."

7. SAME—SAME—SAME.

"The decision of our appellate court which we regard as most pertinent to the present situation is that of *Bowers* v. *Valley and Ernst*, 32 CCPA 1039, 1945 C.D. 323 at 330. There as here, the basis for the patent application was a different form of the invention from that involved in the alleged reduction to practice, and this fact was an important factor in lending support to the conclusion that the previous activity was an abandoned experiment and not a reduction to practice."

Curtis, *Morris* and *Safford* for Odierno.
Hume, *Groen*, *Clement* and *Hume* for Kordowski.

CASANOVA, Jr., CREWS and WILLIAMS, *Examiners of Interferences*

CREWS, *Examiner of Interferences*.

I. Introduction

The invention is a container of the pallet crate type having external cleats, and the specific improvement in the art consists in provision of transverse grooves extending inwardly from the exterior of each cleat member adjacent each end, with securement of abutting cleat ends together by wire loops encompassing the cleat ends at the transverse grooves and the container corners. The single count of the interference reads:

Count 1.—In a container having a plurality of sides mounted on a base member, the combination comprising two adjacent sides of the container disposed at substantially right angles to each other, each of said sides being composed of a substantially flat rectangular panel having one edge adapted to extend along one edge of said base member, and a plurality of cleat members mounted on each of said panels substantially parallel with said one edge with the ends of said cleat members on one of said sides being aligned with the ends of like cleat members on the other of said sides, said cleat members on said one side projecting beyond the flat panel of attachment; the ends of the cleat members on one of said sides at one corner of the container abutting the respective projecting portion of the cleat members on the adjacent side, and the end of the panel on one side, at said corner, abutting the inner face of the adjacent side; so that both of said sides are interlocked against inward movement, a transverse groove in each of the cleat members adjacent their ends and a substantially rectangular tie loop tightly encompassing at said transverse grooves the respective ends of the cleats at said corner, whereby said sides are restrained from outward movement.

Two different forms of the invention are disclosed in the interfering applications, and the parties have attached considerable importance to the differences between them. Odierno discloses only a construction in which the cleats abut each other squarely at their ends. Kordowski shows a similar construction in his FIGURES 1–3, but in his FIGURE 4 he shows a form in which each cleat end meets the associated end of the next cleat at an angle of 45°. We will refer to these as the *butt end* and *mitered* construction, respectively.

The application of Odierno is assigned to his employer, Stapling Machines Co. of Rockaway, N.J., a corporation of Delaware, and that

of Kordowski is assigned to his employer, General Box Company of Des Plaines, Ill., also a corporation of Delaware. These assignees will be referred to as Stapling and General. During the period which concerns us they had close contractual relation. Stapling was in the business of manufacturing box making machinery and leasing it to box manufacturers and General was a customer of Stapling in this business, which included a sample-making service.

Each party took two volumes of testimony, and both of them filed briefs and were represented by counsel at the final hearing held on January 11, 1966. [1] Affidavits of Hershey Wait and Howard W. Clement were also executed and submitted to the Patent Office (papers 56, 63 and 64) on behalf of Kordowski, without stipulation, after times for taking testimony had expired. These affidavits have not been considered (Rules 271 and 272, and *Methudy* v. *Roy*, 20 CCPA 1142, 1933 C.D. 485 at 492).

The burden is upon Odierno, as junior party, to prove by a preponderance of the evidence the contentions as to conception and reduction to practice and/or diligence necessary to overcome Kordowski's filing date. Both the evidentiary record and the legal contentions are exceedingly complex, however, and a different burden is applicable to certain other issues, as discussed below. The respective contentions are:

A. For Odierno:

1. That he conceived the invention and reduced it to practice before Kordowski conceived it.
2. That he conceived before Kordowski conceived and reduced to practice before Kordowski reduced to practice (*Henderson* v. *Gilpin*, 39 App. D.C., 428, 1913 C.D. 310; *Summers* v. *Vogel*, 52 CCPA 332, 1964 C.D. 690).
3. That he conceived before Kordowski and was diligent from a date prior to Kordowski's conception until he had filed his own patent application (*Morway et al.* v. *Bondi*, 40 CCPA 917, 1953 C.D. 231).
4. That Kordowski derived the invention from him.

B. For Kordowski:

1. That Odierno was not an original inventor but derived the invention from him.
2. That he should be allowed to amend his preliminary statement, and that his evidence in support of such amended statement proves that he conceived before Odierno and also reduced to practice before Odierno conceived.
3. If it be held that he has not reduced to practice before Odierno conceived, that he was diligent from a time before Odierno's conception until his own later reduction to practice and indeed to the filing of his patent application.
4. That Odierno committed fraud upon the Patent Office, and that Odierno's application must therefore be stricken from the Patent Office files.
5. That Odierno's tests of the invention were not in fact a reduction to practice but were an abandoned experiment, and that Kordowski is entitled to priority on the basis of his filing date of July 25, 1958 (*Warner* v. *Smith*, 13 App. D.C. 111, 1898 C.D. 517; *Hess* v. *Bland*, 146 USPQ 378 at 384).
6. If it be assumed that Odierno conceived and reduced to practice before Kordowski, that Odierno thereafter suppressed, concealed or abandoned the invention and was spurred into renewed activity and filing of his patent application by knowledge that his opponent had entered the field (*Mason* v. *Hepburn*, 13 App. D.C. 86, 1898 C.D. 510; *Lederer* v. *Walker*, 39 App. D.C. 122, 1912 C.D. 560; *Miller* v. *Hayman*, 18 CCPA 848, 1931 C.D. 137 at 148).

We have chosen to discuss the issues in this order because they are interrelated in a manner which can best be expounded in that way. Before they are so discussed, however, it will be helpful to consider in parallel columns a sequential treatment of elements of the record which are uncontroverted or in our judgment incontrovertible.

Date	For Odierno (O)	For Kordowski (K)
Feb. 14–17, 1958	O was in possession of a complete conception of the mitered form of the invention.	
Feb. 28, 1958	A box had been built following O's conception and subjected to some standard tests. The only defect noted was splitting at the corners.	
Mar. 1–10, 1958	O conceived and disclosed to others a second form of his invention, designed to overcome the splitting problem by substitution of a Scotch miter, still falling within the scope of the count, for the full miter.	
Mar. 12, 1958	The Scotch - mitered form had been built and subjected to some testing.	
Mar. 12, 1958	O's invention disclosure, S–506, was received by William T. Allen of the Patent Department. It showed the full mitered, not the Scotch mitered, form.	
Apr. 8, 1958		K was in possession of a conception of the invention and disclosed it to his patent lawyer.
Apr. 22, 1958	Stapling's engineering committee considered O's disclosure, S–506, and decided to refer it to Patent counsel.	
Apr. 23, 1958	The disclosure was submitted to Patent counsel with the comment that the committee recommended filing if there was a reasonable chance of obtaining a patent. Stapling vice president asked counsel to let them know as soon as possible if counsel's opinion should be against filing, so that Stapling could avoid wasting "time in preparation of drawings and a description."	
July 25, 1958		K filed his patent application. It disclosed both the butt end and mitered forms and contained claims broad enough to include both (1–5, 10 and 11), one claim specific to the butt end construction (6), and three claims specific to the mitered construction (7–9).
Nov. 7, 1958	Stapling received from General a request to prepare a sample of a container of the butt end type embodying the features of the count. O and a number of other Stapling employees took note of this and of the container made by Stapling for General according to this sample request.	
Dec. 9, 1958	On or about this date David G. Kingsley, executive vice president of Stapling, made a sketch of the butt end form of the invention and submitted it to Patent counsel.	
Dec. 15, 1958 to Jan. 20, 1959	The drawing and specification of O's application were prepared and executed. The butt end form was the only one specifically disclosed. Neither the full mitered form nor the Scotch mitered form was illustrated or described.	
Jan. 28, 1959	O filed his patent application. It contained six claims, some of which (e.g. claim 1) were broad enough to include both the mitered and butt end forms, and some of which (e.g. claim 2) were specific to the butt end form.	
Jan. 4, 1960	In response to an official letter, O restricted all claims to features of the butt end form.	
Dec. 23, 1960		K cancelled all remaining original claims and submitted four new claims, of which three were broad enough to cover both forms and one (claim 15) was specific to mitered form.
Aug. 8, 1961	The Primary Examiner suggested to both O and K that they make the claim of the interference count.	
Sept. 28, 1961	The Primary Examiner declared the interference, and in doing so he notified each party that his remaining claims (i.e., claim 2 of O, specific to the butt end construction, and claims 12–15 of K) would be held subject to rejection in the event of an adverse award of priority.	

During the motion period	Kordowski made no move to copy O's claim 2, and neither party moved to add to the interference any count specific to the butt end construction.

As a foreground to our further discussion we note at this point some aspects which seem anomalous, viz—

1. Odierno, who relies for reduction to practice on building and testing only of the mitered and Scotch mitered forms, showed only the butt end form in his patent application, and there is no evidence that he intended to show the butt end form until after it had been strikingly brought to his attention by Kordowski's company.

2. Kordowski, who now accuses Odierno of fraud on the Patent Office in describing and specifically claiming the butt end form, did not think highly enough of the distinction between this and the mitered form to retain a claim specific to the butt end form in his application, or to move to amend the interference by adding such a claim as a count. It would appear that he attached as great or greater importance to the mitered form until the specific facts of this interference were brought out.

3. Odierno, without any apparent basis in experimental background before receipt of Kordowski's butt end disclosure of November 7, 1958, first filed his application in a form *specific* to that disclosure and thereafter restricted his claim coverage to that *specific* form, eliminating from the scope of his application *all coverage either broad or specific* to the mitered form on which he relies for proof of his right to priority.

4. Kordowski, while accusing Odierno of fraud in specifically describing and claiming the butt end form, has done nothing to prove any error in Odierno's position that both forms are, in a general sense, well known in the art.

II. Odierno's case for priority

Odierno points out in his brief (pp. 8–11) that he has proved by well corroborated and documented testimony the position taken in his preliminary statement that he had conceived the invention and disclosed it to others at least as early as February 17, 1958 (see O, I, pp. 119–123, 137–141, 230–246, 291–297 and Ex. 5–5F, 13 and 16). Kordowski makes no attack upon this testimony as such, but contends that he had conceived the invention before Odierno's first documented date of February 14, 1958, and that Odierno had derived the invention indirectly from Kordowski. As we shall see when we come to examine Kordowski's record, it is inadequate in proof either of the contended derivation by Odierno from Kordowski or of prior conception by Kordowski. **[2]** We conclude that the record proves that Odierno was the first to conceive the invention as defined in the interference count, i.e., of an invention broadly enough defined to include either the mitered or butt end construction.

Immediately upon completion of the documentation of Odiero's conception, the sample department of Stapling began construction of a container following Odierno's instructions, and it was built and ready for test by February 25, 1958 (O, I, pp. 122-124, 142 and 243-251, and O Ex. 5G–5K, 13, 16 and 23). This container, along with other commercial and experimental ones that Stapling desired to test and compare, was thereafter subjected to a test program including 120 falls in a tumbling drum, a 10,000 pound compression test, a drop test onto a steel plate and a wedge test under downward pressure (O, I, pp. 30–35, 142–145, 177–185, 261–264 and 296–310, and O Ex. 2, 3, 4, 6–6E and 17). Objectionable splitting was encountered at the miter

apices. It appears that those involved in the test program did not regard the results as fully satisfactory, for Odierno suggested immediately after the first tests in February that a Scotch mitered joint be substituted for the full mitered one designated as "cleat-loc" and "1–E–1."

After the first tests with the 1–E–1 container were completed, a second container conforming to the count was made and tested. This was known as the 2–E–1. It had the mitered ends cut off to produce the so-called Scotch miter, and was tested on or about March 12, 1958 (O, I, pp. 105–111, 188–204, 264–268, and 314–318 and O Ex. 14, 15, 20, 21, 22 23). These tests were performed by Joseph McCrea, a research assistant in Stapling's packaging research laboratory, who testified (O, I, pp. 185–192) that Odierno Exhibit 19 is a report of drum, flat compression, top wedge and center wedge tests with the 2–E–1 container, that there were no failures of the 2–E–1 container after 120 falls, and that the performance of container 2–E–1 in this test was better than on conventional closures.

We find the portions of McCrea's deposition between pages 192 and 204 of volume I of Odierno's record to be indefinite and confusing. Reference is made to Exhibit 20 and test of a container 3–E–1 about March 25, 1958, without identifying that container except as "a cleat-loc design." Reference is also made to a considerable number of tests conducted between March 12 and the end of March, and to tests performed by unidentified persons on containers referred to as "type E–1," without making it clear whether it was the 1–E–1, 2–E–1 or 3–E–1 container that was tested. The only reference to container 2–E–1 in the summary sheets of Exhibits 21–23 is on page 2 of Exhibit 21, and we find no testimony which clearly relates to any tests made on that container subsequent to those of about March 12 which have been discussed above. In concluding from reports in Exhibits 21–23 that the "Odierno pallet crate of the type involved in the interference" performed "better than those of conventional closures," McCrea apparently failed to note that the five cleat splittings of type 1–E–1 were the greatest number of any container tested.

We find that the testimony concerning the 1–E–1 container leaves substantial doubt as to whether it was reduced to practice in these tests, and that there is also doubt as to the adequacy of the 2–E–1 tests. The company test program, as outlined in Odierno Exhibit 6, included tests to simulate stresses expected to be encountered with the containers loaded and in service which seem not to have been reported in any of the testimony or exhibits in the record (compare *Elmore* v. *Schmitt*, 47 CCPA 958, 1960 C.D. 296 and *Larsen* v. *Marzall*, 92 USPQ 306, 1952 C.D. 22 (App. D.C., 1952).

Odierno points to the further activity of his company in support of his contention that his tests of February and March 1958 should be held to constitute a reduction to practice. These activities included a written report (O Ex. 7) by K. F. Vasiliou (O, I, p. 319) head of Stapling's package research laboratories division, in which Vasiliou reported, on April 8, 1958, that the "cleat-loc" rated third best among seven container types tested, but that "future tests under actual load conditions may indicate a rearrangement of tabulation."

Odierno submitted an invention report on his cleat-loc conception (O Ex. 5), to the patent department of his company on March 12, 1958 (O, I, pp. 153–156) and the Stapling engineering committee considered this disclosure at a meeting held on April 22, 1958. The report of the meeting indicates that this disclosure would be "referred to patent counsel" (O, I, p. 220 and Ex. 25). Stapling's Vice President Kingsley testified that he did not know what was done by way of further development of the container following the meeting of April 22, but that studies were made as to "how these crates would be manufactured and what would need to be done to the machines to produce them." The record provides no information as to the details but Kingsley indicated that studies of effectiveness of "using various kinds of wood" and various cleat spacings were carried on during the summer of 1958 (O, I, pp. 42 and 43).

On the day following the enginering committee meeting, April 23, 1958, this disclosure (Ex. 5) was submitted to William C. Conner, patent counsel, with a covering letter stating that the committee recommended filing of a patent application if counsel believed there was a reasonable chance of obtaining a patent. The letter added these comments:

> "If you should recommend filing, will you please give us your file number when you acknowledge this letter. We will then assign our file number and send it to you.
>
> "If your opinion should be against filing an application, will you please let us know as soon as possible so that we will not waste time in preparation of drawings and a description."

Kingsley state that the engineering committee found the suggestion desirable and recommended filing if deemed patentable by the attorney (O, I, p. 29, Q. 120). He explained (p. 49) that legal work on application was done by the outside attorney and the drawing by the company patent department, which consisted of a patent draftsman (William T. Allen). He did not say when instructions were sent to Allen to make the drawing but said the drawing work was started in the middle of December 1958, explaining that Allen was "completing drawings on prior applications" up to that time except for a period of vacation and another when he was incapacitated by bad health.

Odierno argues that he is entitled to prevail on the basis of first conception followed by diligence in filing his patent application, regardless of whether his 1–E–1 and 2–E–1 tests be held to be a reduction to practice. We disagree for three reasons:

1. There is no proof that Allen was under instructions to prepare the patent drawing at any time between April and December 1958.
2. The preparation of this relatively simple patent drawing could easily have been delegated to some one else. It is not such a highly specialized task that it may be postponed, like an attorney's docket, for the attention of a single individual until he can reach it for attention.
3. The record as a whole indicates to us, at least by a preponderance of the evidence, that no definite decision was made to file this application until the late fall or winter of 1958. In this connection we note especially that the drawing of the patent application was based upon a sketch made by Kingsley on December 8, 1958 and sent to the attorney on December 9, 1958 (O, I, p. 44 and Ex. 8), showing the butt end construction and not the mitered one of disclosure S–506, and that Allen's time sheets (O Ex. 18) refer to file numbers in the 74 hundreds between April and December, whereas the present one was referred to as "S–506 Absent File" during the time of its preparation in December 1958 and up to January 15, 1959. It was apparently only after that time that the company file number of 7441 was adopted in accordance with the procedure set up in the penultimate paragraph of Odierno Exhibit 24, dated April 23, 1958.

If Odierno is to prevail over the case established by Kordowski's April 1958 conception and July 1958 filing, that result must be reached by a holding that Odierno's tests of February and March 1958 constituted a reduction to practice, and not an abandoned experiment as contended by Kordowski. Since Kordowski's record is closely related to the issues of suppression, concealment and abandonment, and to the issue of abandoned experiment, we will defer further discussion of those issues for the present.

III. Odierno's case for originality

Odierno testified that his first reaction when he saw General's request for a sample in November 1958 was one of "surprise and of wondering" how they could have seen his samples (O, I, p. 272), and and that it looked like they were "trying to steal" his idea (p. 276). He was especially suspicious that the idea might have been derived by General through Hershey Wait, a General representative who was a frequent visitor. Kordowski categorically denied receiving such a disclosure from Wait and we find no semblance of legal proof in the record on this point (see, K, II, pp. 53 and 111, and compare *Fersing* v. *Fast*, 28 CCPA 1318, 1941 C.D. 702 and *Rider* v. *Griffith*, 33 CCPA 884, 1946 C.D. 222).

IV. Privileged correspondence with Odierno's attorney

[3] At the conclusion of Odierno's testimony Kordowski, apparently believing that the record of correspondence of Stapling with its attorney Conner might prove that Odierno's test work was an abandoned experiment or that the invention was deliberately suppressed and concealed by Stapling, attempted by court action to obtain access to this correspondence. Such access was denied by the court on the ground of privileged communication. Kordowski argues in his brief that adverse inferences must be drawn against Odierno because of his refusal to divulge this correspondence. We disagree with this position, for if inferences could be drawn on this basis the attorney-client privilege would be meaningless. We note, however, that the burden of proof is upon Odierno as to priority and that inferences may not be drawn *in his favor* where evidence is lacking, merely because his position could be proved only through privileged communications which he has withheld.

V. Kordowski's motion to amend preliminary statement

After Odierno's testimony had been taken, the parties had some discussion of conservation of time and cost (see paper 11) by taking of a substantial part of Kordowski's testimony by stipulated affidavits (Rule 272c) instead of oral examination. It was planned to present in this manner the testimony of J. Donald Elston, manager of General's research laboratory, and of Kordowski, who was a laboratory technician. Affidavits were prepared by counsel (K Ex. 32 and 38), and contained averments in line with those of Kordowski's original preliminary statement, viz. that Kordowski first conceived the invention on or about March 25, 1958 and that it was first disclosed to Elston on or about that same date. It should be noted that this date is exactly two weeks before the date of April 8, 1958, when disclosure of the invention was made to General's attorney, Mr. Clement, for preparation of a patent application.

A meeting was held in the office of Clyde A. Willian, the attorney who conducted this interference for Kordowski, in October 1962. At this meeting Willian discussed with Elston and Kordowski the proposed affidavits and testimony in the Odierno record. Following this meeting the thought of submitting the Elston and Kordowski testimony by affidavit was abandoned and the eleven months between that date and the date of September 20, 1963, when Kordowski's motion to amend his preliminary statement was filed, were consumed in Kordowski's efforts to obtain access to Odierno's correspondence with his attorney and in the taking of testimony by Kordowski. The first three witnesses called by Kordowski were employees of Stapling, yet Kordowski did not move to amend the placing (see *Schneck* v. *Rider*, 1870 C.D. 135) of his preliminary statement to provide the necessary sworn averments by Kordowski and place Odierno on notice of his intended contentions until after the testimony of these and each of his other three witnesses had been taken.

In his brief in support of his motion to amend his preliminary statement, Kordowski recognizes (paper 41, p. 12) that "normally a person would attempt to amend its preliminary statement prior to taking of such further testimony." He adds the following comment:

> "This, however, was not done in this instance since the very basis for the amendment depended upon the acts and veracity of Mr. Cragwall whose conduct already was in question and that to file the motion to amend prior to interrogating him under oath could have an effect on his testimony. It was also recognized that even if Mr. Cragwall was not aware of the party Kordowski's intention to amend this should have no conceivable effect on his own testimony since only the true facts were being sought."

[4] This viewpoint overlooks the fact that one of the important functions of a preliminary statement is to test the veracity of the party making the statement (*McCullough* v. *Watkins*, 1875 C.D. 129; *Methudy* v. *Roy*, 20 CCPA 1142, 1933 C.D. 485; *Hess* v. *Dreyfuss*, 26 CCPA 1407, 1939 C.D. 793). The burden rests heavily upon a party permitted to amend his statement to prove the facts of his amended statement (*Robins* v. *Wettaufer*, 23 CCPA 952, 1936 C.D. 302). Where as here, he defers making an amended statement under oath until all the evidence has been taken, he has failed to submit himself to the test of his own veracity.

In the amended statement executed by Kordowski on September 20, 1963 (paper 42), he averred that his first drawing, disclosure to others, working model and reduction to practice of the invention were on or about December 15, 1957, whereas in his original statement he swore that the earliest of these acts occurred on or about March 25, 1958. The earliest date established by documentary proof for any act of invention by Kordowski was that of disclosure to his attorney Clement, and this is correctly averred in his original statement executed on October 26, 1961 as having occurred on April 8, 1958. In making his original statement Kordowski estimated that about two weeks had elapsed between his conception and his interview of April 8 with Clement. After seeing Odierno's record he seeks to change this two weeks to seventeen. His difficulty in recalling in October 1961 and September 1963 the exact dates of events which took place in 1958 is understandable; the thing that is not understandable is how his two sworn statements as to the time of development could reasonably vary by a factor of 850%, seventeen weeks versus two. We conclude from the record as a whole that most of the period of "several months" in development of the Kordowski invention probably occurred after April 8, 1958, not before. (Compare *Carusi et al.* v. *Looker*, 52 CCPA 1093, 343 F.2d 112, 114 USPQ 670.)

The amended preliminary statement is not only implausible on its face but it is also unsupported by the record. At the October 1962 meeting with Elston and Kordowski, they were apparently made aware (K. II, pp. 40 and 119) that Odierno had stated in his testimony (O, I, p. 236, Q. 45) that he "vaguely" remembered that "Mr. Cragwall was present" at one of his early tests in February 1958. Kordowski stated (K, II, p. 120, Q. 182 and p 136, Qs. 78 and 79) that he did not sign the affidavit prepared for him because he recalled that Cragwall was still with them at the time he made the invention.

Cragwall had been president of General but had been relieved of those duties and made chairman of the board as of November 30, 1957 and remained on the premises for about two months thereafter (K, I, pp. 30 and 31). During that period he visited the laboratory with some frequency. Toward the end of January 1958, Cragwall left General and went to work for Stapling. He was thus associated first with Kordowski and later with Odierno during the early months of 1958, and it is Kordowski's contention that Cragwall learned from Kordowski of the invention and thereafter divulged it to Odierno.

Cragwall was the first witness called by Kordowski. We find his testimony to be unusually candid and disagree with Kordowski's contention that it casts any question on his veracity. Cragwall admitted his interest in other inventions that were under development at General, but denied any recollection of seeing the invention in issue or of having revealed it to Odierno (K, I, p. 39). He made one statement to which Kordowski attached great importance, viz, that he had seen somewhere a construction in which holes were drilled through the ends of the cleats. He could not remember when or where he had seen it. Following this testimony by Cragwall, both Elston and Kordowski testified that this "buried wire" construction had been developed at General after the invention in issue (K, II, pp. 31, 100 and 101), the theory being that if Cragwall had seen the "later" buried wire construction he must have seen the earlier grooved construction. It should be added parenthetically that Kordowski's entire case on this point rested on oral testimony, as all 1958 records and material relating to any of this activity before April 8, 1958 had apparently been destroyed or lost by the time (September 28, 1961) any investigation could be made to develop the true facts for the purpose of this interference.

The attempt to connect this very candid admission by Cragwall with the testimony of Elston and Kordowski was dramatically discredited when Odierno later proved, in his rebuttal testimony, that the time of Cragwall's learning of the buried wire construction was March 1958 and the place was at Stapling (O, II, pp. 34–36).

Correction of Kordowski's preliminary statement is not essential to the ends of justice (Rule 222), and the motion to amend it is denied both for this reason and because of its untimely filing (*Hess* v. *Dreyfuss*, supra). From our consideration of this issue it will be seen also that we conclude that there is no merit in Kordowski's contentions that he was the first to conceive the invention, or that Odierno derived it from him.

VI. Fraud on the Patent Office

Kordowski's contention that Odierno has committed fraud on the Patent Office is based upon the fact that Odierno described in his patent application the butt end form on which he had done no work to the exclusion of the mitered form on which he had done work, and more importantly upon the further fact that Odierno included in the application, along with the claims which were broad enough to be readable upon both forms, claims which were specifically readable only on the butt end form.

We are not here concerned with the question of whether Odierno would be entitled to priority over Kordowski on a count specifically directed to the butt end form, for Kordowski has never presented such a count by motion, and it is therefore not before us. We are, however concerned with whether Odierno, or Stapling through the activities of Odierno, Kingsley and its attorney, committed fraud upon the Patent Office in asserting under oath that Odierno believed himself to be the original and first inventor of details of claims specifically reciting the butt end structure of the sample request of General brought to Odierno's attention in November 1958.

[5] In considering this issue we note that it is not an issue of the truth of the averments in Odierno's oath but of whether he believed them to be true. While the record is not directed to that issue, we believe that it is consistent with a conclusion that Odierno, Kingsley and the attorney may have believed them to be true, and that the charge of fraud is therefore not proved. In reaching this conclusion we have considered particularly the fact that both the butt end and mitered forms of cleat were known in the art and that it might be considered that conception of the mitered form implied almost automatically conception of the butt end form also. Regardless of whether Odierno might prevail on this argument, it is not so unreasonable that Odierno's assertion of inventorship can be adjudged fraudulent. In this connection we are reminded of the familiar language of Judge Robb in *Schmidt* v. *Clark*, 32 App. D.C. 290, 1909 C.D. 280:

> "A would-be inventor frequently has a nebulous and general idea of a result he wishes to accomplish and possibly a general idea of means to accomplish that result, but, being unable to give his ideas practical form, allows them to slumber. Upon learning that another has successfully worked out such ideas, the mists of uncertainty are immediately dissipated, vagueness takes definite form and the would-be inventor becomes, in his own mind, the actual inventor and acts accordingly." (See also 1925 C.D. 278 at 280.)

Judge Robb proceeded to comment that the need for clear and convincing proof is great in these cases because of the "danger and opportunity for fraud and mistake." Even if the issue of butt end construction were a part of the count, and if priority were to be awarded to Kordowski on such a count on the basis that the record proves him to be the only original inventor of that subject matter, the decision would not be on the ground of fraud.

VII. Summary of remaining issues

We have seen that Kordowski has provided no acceptable proof that he conceived the invention before Odierno's proved conception date. We also find no proof, either as to dates or specific facts, that he reduced it to practice before the tests relied on by Odierno for his own reduction to practice. Since Odierno has not proved that he was diligent from a date before Kordowski's conception until his own filing date, he must rely for priority on a contention that he in fact reduced the invention to practice in his tests of February and/or March 1958. Proof by Kordowski that he reduced to practice in the period of April–July 1958 would place him in no better legal position against Odierno than that established by his filing date of July 25, 1958, and we therefore treat the date of Kordowski's first actual reduction to practice as moot.

Kordowski raises two further issues as grounds for award of priority to him:

> 1. That when the total record is considered, Odierno's alleged reduction to practice must be adjudged not to be such but to be instead an abandoned experiment.
>
> 2. If it be held that Odierno's work of February and March 1958 was in fact a reduction to practice, that Odierno thereafter suppressed, concealed or abandoned the invention and was spurred into renewed activity by his knowledge of the entrance of Kordowski into the field.

The principles on which either of these conclusions might be based are closely similar but they must be distinguished. They are well stated in two cases decided on the same day, June 7, 1898, by the Court of Appeals of the District of Columbia, viz—

> 1. As to holding of abandoned experiment where there is delay, and doubt as to reduction to practice (*Warner* v. *Smith*, 13 App. D.C. 111, 1898 C.D. 517):
>
> > "Probably such claimant is not barred by any statute from making his claim, and if he sufficiently proves it he and not his competitor will be entitled to the patent, for it is to the first inventor, the first to conceive and reduce it to practice, that the law applies priority. But such conditions make it imperative upon him that he should prove his claim beyond all reasonable doubt, and that the Patent Office and the courts are justified in presuming in such cases that what is claimed to be reduction to practice is no more than mere experiment until the contrary is clearly shown."
>
> 2. As to suppression, concealment and abandonment after clearly proved reduction to practice (*Mason* v. *Hepburn*, 13 App. D.C. 86, 1898 C.D. 510):
>
> > "Considering then, this paramount interest of the public in its bearing upon the question as presented here, we think it imperatively demands that a subsequent inventor of a new and useful manufacture * * * who had diligently pursued his labors to the procurement of a patent in good faith and without any knowledge of the preceding discoveries of another shall, as against that other, who has deliberately concealed the knowledge of the invention from the public, be regarded as the real inventor and as such entitled to his reward.
> >
> > * * * * * * *
> >
> > The true ground of the doctrine, we apprehend, lies in the spirit and policy of the patent laws and in the nature of the equity that arises in favor of him who gives the public the benefit of the knowledge of his invention, who spends his time, labor, and money in discovering, perfecting, and patenting in perfect good faith that which he and all others have been led to believe has never been discovered by reason of the indifference supineness, or wilfull act of one who may, in fact, have discovered it long before."

VIII. Reduction to practice v. *abandoned experiment*

[6] We have seen, from the decision in the case of *Warner* v. *Smith*, that the Court of Appeals of the District of Columbia considers that when there is reasonable doubt as to a successful reduction to practice the subsequent activity or inactivity of the party asserting the reduction to practice is a highly significant factor to be weighed in the adjudication of the issue. Our present appellate court has consistently taken a similar position. Where there is no doubt that the evidence proves that the invention has been reduced to practice, subsequent inactivity cannot defeat such a holding (*Knowles* v. *Tibbetts*, 52 CCPA —, 146 USPQ 59, 1965 C.D. —, 820 O.G. 863); however, subsequent conduct is to be considered where there is doubt (*Walkup* v. *Grieg*, 52 CCPA —, 1964 C.D. 708; *Hess* v. *Bland*, 146 USPQ 378 at 384, 52 CCPA —, 1965 C.D. —; *Kirkham et al.* v. *Arden et al.*, 50 CCPA 1205, 1963 C.D. 430 at 437).

[7] The decision of our appellate court which we regard as most pertinent to the present situation is that of *Bowers* v. *Valley and Ernst*, 32 CCPA 1039, 1945 C.D. 323 at 330. There as here, the basis for the patent application was a different form of the invention from that involved in the alleged reduction to practice, and this fact was an important factor in lending support to the conclusion that the previous activity was an abandoned experiment and not a reduction to practice. This case differs from the Bowers case in that the time delay was much shorter but we regard the following factors as highly significant:

1. Since Odierno is junior party and this issue is a critical one, he has the burden of proving his position.
2. Odierno's mitered joint split in the tests; his Scotch mitered one was apparently not subjected to tests which in the judgment of his own company were sufficient to simulate the expected service conditions; furthermore the tests of Scotch mitered form were apparently not deemed significant to the point that this form was added or substituted in his invention disclosure.
3. The record is devoid of proof that Odierno had a continuing intention to file a patent application; a fair inference that he did not have such an intention may be drawn from the fact that he did not disclose in the application either of the forms on which he relies for reduction to practice. A further such inference may be drawn from the fact that the seventy four hundred series case number, at least temporarily contemplated in April 1958, was apparently not assigned until January 1959.

On the foregoing analysis we conclude that Odierno has not established a record adequate to overcome Kordowski's filing date of July 25, 1958.

Priority of invention is awarded to Edward S. Kordowski, the senior party.

CASNAOVA and WILLIAMS, *Examiners of Interferences.*

IX. Suppression, concealment and abandonment

In order to consider fully the issues presented in this case, we will assume that Odierno did in fact reduce the invention to practice. While the circumstances of this case bear a considerable resemblance to those of *Mason* v. *Hepburn* in that Odierno's act of filing, and possibly also his ultimate decision to file, came after knowledge that Kordowski was in the field, we note that the burden of proof on this issue, in contrast to the issue of reduction to practice, is upon Kordowski (*Gallagher et al.* v. *Smith*, 41 CCPA 734, 1954 C.D. 35). There is no proof that Odierno ever made a definite decision not to file. Also, as we have noted, the interference count is directed to the invention broadly, and not specifically to the butt end form. Our appellate court has stated that it is "not disposed to extend the doctrine * * * of * * * *Mason* v. *Hepburn*." By majority vote we hold that the evidence in this case does not warrant the application of that doctrine.

CREWS, *Examiner of Interferences.*

Special Concurrence

While I agree that the issue of suppression, concealment and abandonment should be considered, I do not agree with the conclusion of the majority with respect to that issue. It is true that, to prevail over an assumed reduction to practice by Odierno in February or March 1958, Kordowski must affirmatively establish that Odierno suppressed, concealed or abandoned the invention (*Gallagher et al.* v. *Smith*, supra). In the nature of things, however, the evidence to prove such a contention conclusively is seldom in the possession of the opposing party. Our appellate court has recognized this fact in the cases of *Dewey* v. *Lawton*, 146 USPQ 187; and *Stresau* v. *Ipsen*, 22 CCPA 1352, 1935 C.D. 716. In the latter case it stated by dictum (1935 C.D. 726) that a holding of concealment might properly be based upon "facts from which" this is "the natural and reasonable conclusion."

I believe that the facts in this case establish such a result as natural and reasonable. The mitered form of Odierno's alleged reduction to practice would apparently never have seen the light of day except for the fact of this interference. The Odierno patent application was apparently based upon the butt end form proposed by Kordowski. It was clearly not based upon any independent research by Odierno. Odierno opened up the subject of correspondence between Stapling and its attorney when he introduced into evidence his Exhibit 24. As the later evidence developed it established a state of facts leading to a natural inference that Odierno intended to abandon or conceal the invention and was spurred into activity by knowledge of the entry of Kordowski into the field. When this stage of the proceeding was reached, the burden shifted back to Odierno, in my judgment, to establish facts necessary to support a different conclusion. Whether Odierno could have done so by introduction of further evidence, privileged or unprivileged, I cannot of course know, but I would hold, in view of the total record before us, that a case of concealment or abandonment and spurring into activity has been established against Odierno. In this connection I note especially a part of the record taken when Odierno was called as an adverse witness by Kordowski (K, I, p. 75):

> Q. 42. "It is a fact that they told you they weren't going to file a patent application isn't it?" A. "I refuse to answer."
>
> Mr. CONNER. "You can ask the question as many times as you want, but the instruction and the objection are going to remain."

I note that this question was not addressed to any confidential communication between attorney and client but to an inquiry as to whether a decision had been made not to file an application, and conclude that an inference adverse to Odierno must be drawn from this refusal to answer a proper question (*Huff* v. *Gulick*, 38 App. D.C. 334, 1912 C.D. 488).

PATENT SUITS

Notices under 35 U.S.C. 290; Patent Act of 1952

2,648,428, White and Scott, SHIPPING CONTAINER, filed Jan. 26, 1968, D.C., E.D. Va. (Richmond), Doc. 5601–R, *Hoover Ball and Bearing Company* v. *Allied Chemical Corporation.*

2,742,378, T. A. TeGrotenhuis, FILLERS HAVING VINYL SILOXANE GROUPS BONDED TO THE SURFACE THEREOF AND COPOLYMERS THEREOF WITH ETHYLENICALLY UNSATURATED POLYMERIZABLE MONOMERS; **2,841,566**, same, HIGH POLYMERS WITH CHEMICALLY BONDED REINFORCING AND METHOD OF MAKING SAME, filed Oct. 27, 1967, D.C., N.D. Ohio (Cleveland), Doc. C67–787, *Westwood Chemical, Inc.* v. *Dow Corning Corporation.*

2,742,462, G. Gever, NEW N-(5-NITRO-2-FURFURYLIDENE)-3-AMINO-2-OXAZOLIDONES, filed Jan. 23, 1968, D.C., W.D. Ark. (Fayetteville), Doc. F68C–2, *The Norwich Pharmacal Company* v. *Luther Martin, doing business as Lu-Mar Laboratories.*

2,841,414, J. C. Ward, ANTI-BRAKE-HOP STRUCTURES FOR WHEELED VEHICLES, filed Jan. 22, 1968, D.C., W.D. Mo. (Springfield), Doc. 2380, *Fruehauf Corporation* v. *A.J. Industries, Inc., doing business as Reynolds Mfg. Co.*

2,841,566. (See 2,742,378.)

2,917,790, V. F. Espenschied, PRE-ASSEMBLED DOOR AND CASING, filed Jan. 26, 1968, D.C., N.D. Ohio (Cleveland), Doc. C68–69, *The F. E. Schumacher Company* v. *United Die & Mfg. Co.*

2,921,786. (See 3,112,107.)

2,937,065, Harza and Hillier, WATER STOP, **filed** Jan. 23, 1968, D.C., S.D. Tex. (Houston), Doc. 68–H–60, *Water Seals, Inc.* v. *Tiger Industries, Inc. et al.*

2,961,114, W. C. De Bardelaben, Jr., INTERLOCKING BOX PARTITION, **filed** Jan. 25, 1968, D.C., W.D. La. (Shreveport), Doc. No. 13511-S, *Marvel Box Company, Inc.* v. *W. C. De Bardelaben, Jr.*

2,975,814, G. A. Tinnerman, PLASTIC ANCHORING FASTENER WITH DIVERGING SHANKS, **filed** Jan. 25, 1968, D. C., N.D. Ohio (Cleveland), Doc. C68–62, *George A. Tinnerman* v. *Tinnerman Products, Inc.*

3,069,310, E. Torti, TRENCH SHORING MACHINE, **filed** Jan. 22, 1968, D.C.S.C. (Charleston), Doc. 68–38, *Emanuel Torti* v. *Charleston Constructors, Inc.*

3,102,875, H. L. Heiss, POLYURETHANE REACTION PRODUCT AND METHOD FOR MAKING SAME, **filed** Jan. 25, 1968, D.C., N.D. Ill. (Chicago), Doc. 68c150, *Jefferson Chemical Co.* v. *General Tire & Rubber Co.*

3,112,107, E. Theodosiou, HIGH SPEED CLOTH LAYING MACHINE; **2,921,786,** Deichmann and Becker, CLOTH SPREADING MACHINES, **filed** Jan. 22, 1968, D.C., S.D.N.Y., Doc. 68–C–277, *Cutting Room Appliances Corporation* v. *ABCO Equipment Inc.*

3,051,464, Yeo and Wald, AIR-HEATING GAS BURNER; **Re. 25,626,** same, **filed** Jan. 23, 1968, D.C., N.D. Ill. (Chicago), Doc. 68c132, *Maxon Premix Burner Company, Inc.* v. *Eclipse Fuel Engineering Company and Morrill and Moeller.*

3,132,581, Isbey and De Berard, COLD PROCESS LAMINATION MACHINE; **3,205,995,** J. J. Hill, COIN ACTUATOR FOR VENDING MACHINES; D. **205,468,** Dunn and Bembicki, VENDING MACHINE FOR LAMINATING SHEET OR CARD-LIKE ARTICLES, **filed** June 21, 1966, D.C., N.D. Ill. (Chicago), Doc. 66c1134, *Marlan Company* v. *Perma-Vend Corporation.*

3,205,995. (See 3,132,581.)

3,347,590, D. B. Bowen, CAMPER BODY STABILIZER, **filed** Jan. 24, 1968, D.C., C.D. Calif. (Los Angeles), Doc. 68–116–JWC, *Donald B. Bowen* v. *Cliff Webb, doing business as Cliffco Manufacturing Co.*

D. 205,468. (See 3,132,581.)

Re. 25,626. (See 3,051,464.)

Re. 26,220, L. R. Records, METHOD AND APPARATUS FOR WELL CONTROL, **filed** Jan. 17, 1968, D.C., S.D. Tex. (Houston), Doc. 68–H–52, *Drilling Well Control, Inc.* v. *Dresser Industries, Inc.*

REISSUES

JUNE 4, 1968

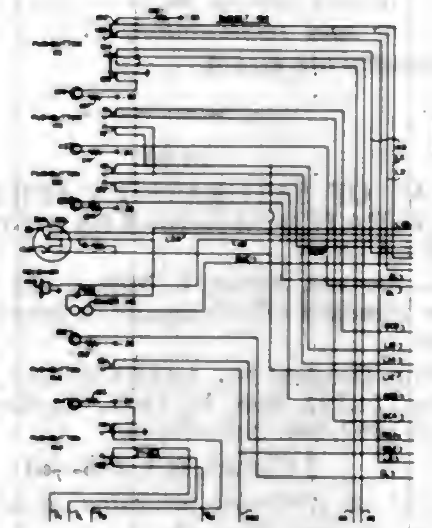
Matter enclosed in heavy brackets [ ] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

26,396
DATA TRANSMISSION SYSTEM

Robert E. Stoffels, Glen Ellyn Woods, and Horace C. Talcott, Downers Grove, Ill., David P. Erdmann, Hopkins, Minn., and James M. Luce, Addison, and Edwin P. Crabbe, Hillside, Ill., assignors to Automatic Electric Laboratories, Inc., Northlake, Ill., a corporation of Delaware

Original No. 3,206,544, dated Sept. 14, 1965, Ser. No. 171,712, Feb. 7, 1962. Application for reissue July 11, 1967, Ser. No. 661,142

8 Claims. (Cl. 178—3)



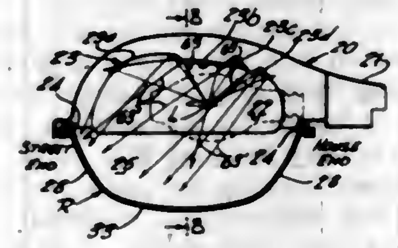
Apparatus for connecting teletypewriter equipment to switched voice frequency communication channels, including equipment for transmission and reception of frequency shift keyed signals and conversion to serial binary signals for use with teletypewriter equipment, and control circuitry for monitoring the conditions of received frequency shift keyed signals.

26,397
STREET LIGHTING LUMINAIRES

Kurt Franck, Newark, Ohio, assignor to Holophane Company, Inc., New York, N.Y., a corporation of Delaware

Original No. 3,179,793, dated Apr. 20, 1965, Ser. No. 169,166, Jan. 17, 1962, which is a continuation-in-part of Ser. No. 748,575, July 11, 1958, which in turn is a continuation-in-part of Ser. No. 434,521, June 4, 1954. Application for reissue Apr. 26, 1966, Ser. No. 548,027

9 Claims. (Cl. 240—25)



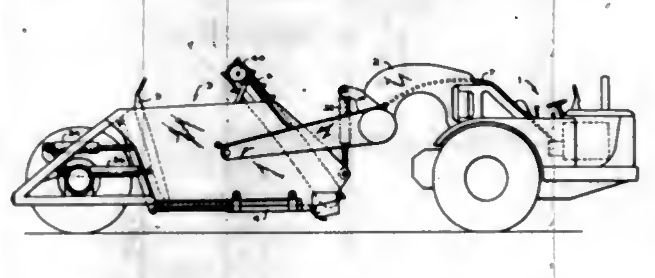
A street lighting luminaire having reflector and refracting elements which redirect the light in two beams at approximately 75° above the nadir and spreading from the curb line about 45° so as to illuminate the surface of a relatively wide street. Parbolic shielding reflectors in vertical and horizontal section are employed on opposite sides of a light source to intercept light above approximately 65° above the nadir. Above the side of the shielding reflectors is a top reflector which redirects high angled light downwardly.

26,398
HYDRAULIC CIRCUIT HAVING TWO PUMPS FOR SELF-LOADING SCRAPERS

Allyn J. Hein, Joliet, Ill., assignor to Caterpillar Tractor Co., Peoria, Ill., a corporation of California

Original No. 3,210,869, dated Oct. 12, 1965, Ser. No. 274,209, Apr. 19, 1963. Application for reissue Jan. 10, 1966, Ser. No. 533,395

2 Claims. (Cl. 37—8)



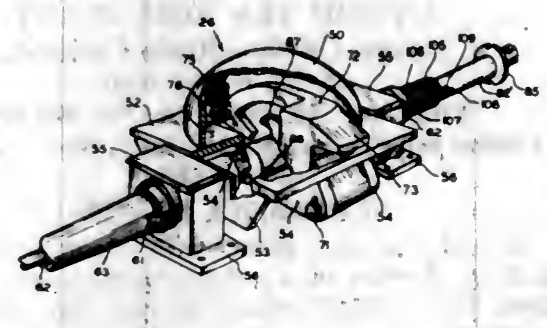
A hydraulic circuit to selectively actuate the bowl lift jacks, ejector jacks, movable floor actuating jacks and conveyor motor of a self-loading scraper. A first pump and two associated valves selectively provide actuating fluid to the lift jacks and to the ejector jacks and floor actuation jacks. A second pump and associated valve selectively provide actuating fluid to the conveyor motor. Another valve selectively communicates fluid from the first pump to assist in driving the elevator motor.

26,399
APPARATUS FOR HANDLING FREIGHT CONTAINERS

Johnny T. Watters, Battle Creek, Mich., assignor to Clark Equipment Company, a corporation of Michigan

Original No. 3,188,042, dated June 8, 1965, Ser. No. 281,582, May 20, 1963. Application for reissue Apr. 28, 1967, Ser. No. 641,729

22 Claims. (Cl. 248—361)



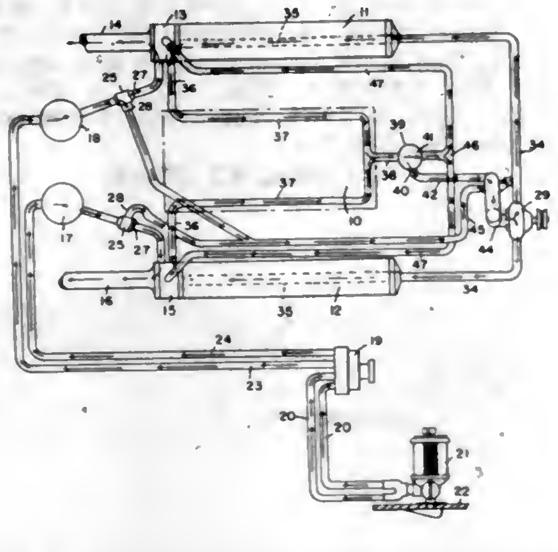
An apparatus including a load supporting surface for supporting a load in which a dome assembly mounted on the load supporting surface has a dome member extending above the load supporting surface for association with *a load, in which the dome member has a latch nose opening through which the latch nose of latch means pivoted on said dome assembly is movable inwardly and outwardly, and in which the latch means is yieldingly biased to dispose the latch nose thereof outwardly of the latch nose opening of the dome.*

26,400
COOLING SYSTEM FOR MARINE ENGINES

Elmer P. Jasper, Algonac, Mich., assignor, by mesne assignments, to Chris Craft Industries, Oakland, Calif., a corporation of Delaware

Original No. 3,105,472, dated Oct. 1, 1963, Ser. No. 198,176, May 28, 1962. Application for reissue Sept. 7, 1965, Ser. No. 485,978

18 Claims. (Cl. 123—41.08)



1. In a marine engine having cooling passages surrounding the highly heated portions and having an oil cooler, a sea water supply pump, a supply line from said pump connected to said oil cooler, an adapter on the outlet side of said cooler having an overboard discharge and an engine supply line, a recirculating pump connected to receive sea water from said supply line and propel the same through said engine cooling passages, a second adapter on the outlet side of said passages having an overboard discharge line, a recirculating conduit between said second adapter and the inlet of said recirculating pump, a thermostatic valve in said second adapter compelling the recirculation of sea water when at a temperature below a predetermined setting and also permitting overboard discharge when above said temperature setting, and a pressure relief valve in said first adapter for regulating the inlet supply to said recirculating pump in proportion to the overboard discharge from said second adapter.

13. In an apparatus for supplying raw water to the cooling system of an internal combustion engine, a dual pump arrangement comprising a centrifugal pump, a positive displacement pump, means for driving said pumps, means defining a recirculatory flow path through which the output water of said centrifugal pump is normally circulated to cool said engine, thermostatic means responsive to the temperature of water in said flow path for diverting the water to exhaust when the temperature thereof exceeds a predetermined temperature, a pressure relief valve establishing a predetermined minimum pressure at which make-up water is supplied by said positive displacement pump, and means venting the make-up at said minimum pressure into said recirculatory flow path to replenish water exhausted therefrom.

26,401
REMOVAL OF SATURATED CARBONYLS FROM UNSATURATED NITRILES BY pH-CONTROLLED DISTILLATION

Donald G. Stevens, Arthur F. Miller, and Gerald E. King, by The Standard Oil Company, a corporation of Ohio, assignee

No Drawing. Original No. 3,185,636, dated May 25, 1965, Ser. No. 174,292, Feb. 19, 1962. Application for reissue Sept. 22, 1967, Ser. No. 675,264

2 Claims. (Cl. 203—6)

A method for removing saturated carbonyls from acrylonitrile or methacrylonitrile by absorbing the reaction products from the ammoxidation of an olefin in an aqueous solution at a pH of 6.5 to 8.5, distilling the nitrile overhead with cyanhydrins. The cyanhydrins are formed by the combination of the saturated carbonyls and the hydrogen cyanide. The cyanhydrins in the overhead are stabilized by maintaining a pH of 2 to 5 of the overhead by the addition of an acid to the overhead and then distilling the nitrile overhead from the acid stabilized cyanhydrin.

PLANT PATENTS

GRANTED JUNE 4, 1968

Illustrations for plant patents are usually in color and therefore it is not practicable to reproduce the drawing.

2,814
HYBRID TEA ROSE PLANT

Stefano Calvino, Strada Coldirodi,
65 San Remo, Italy

Filed Nov. 10, 1966, Ser. No. 593,592

Claims priority, application Italy, Nov. 11, 1965, 25,011/65

1 Claim. (Cl. Plt.—20)

1. Hybrid tea rose plant, with vigorous growth and large dense flowers of a colour between Blood Red and Oriental Red, characterized in that the first plant of this variety was obtained by artificial fecundation of flowers of a hybrid tea rose variety having red flowers with pollen from a hybrid polyantha rose, known as "Ninfa," having red flowers, and said plant having the following unique combination of characteristics:

(a) from the physical standpoint: plant having good height, graceful, vigorous, with compact vegetation and branches only slightly diverging from the axis of the plant; flower stems long and graceful, average occurrence of prickles, large, abundant foliage of a colour which is in harmony with that of the flowers, these being from average to large in size, elegant and regular in shape, many doubles, colour between Blood Red and Oriental Red, borne singly on the flower stems, suitable for commerce and export,

(b) from the physiological standpoint: plant highly productive and reflourishing, rapidly growing, not requiring delicate handling in cultivation, suitable for large-scale growing, resistant to disease; flowers withstanding packing, transport and inclemency of weather well, and lasting well when cut.

2,815
ROSE PLANT

Herbert C. Swim, Ontario, and O. L. Weeks, Chino, Calif., assignors, by mesne assignments, to O. L. Weeks, doing business as Weeks Wholesale Rose Grower, Chino, Calif.

Filed Jan. 10, 1967, Ser. No. 608,464

1 Claim. (Cl. Plt.—24)

1. A new and distinct variety of rose plant of the floribunda class, substantially as herein shown and described, characterized particularly as to novelty by the low-growing, relatively compact form of the plant and its nearly continuous blooming, during the growing season; the large size of its blooms, and their bright greenish-yellow coloration, together with the persistence of that coloration in the opened flowers; and the development of the flower from a short-pointed urn-shaped bud through a high-centered opening stage to the full bloom, which has double petalage but does not completely hide the stamens.

2,816
APPLE TREE

Wayne M. Trumbull, Milton-Freewater, Oreg., assignor to Van Well Nursery, Inc., Wenatchee, Wash.

Filed Feb. 8, 1967, Ser. No. 614,757

1 Claim. (Cl. Plt.—35)

The subject apple tree comprises a new Red Delicious variety originating as a sport limb on a Brauns variety tree, Plant Patent No. 1,411. In contrast with its parent the new variety is of the spur type and its fruit colors approximately two weeks earlier than that of its parent and becomes a darker and more intensely red with a heavier underlying striped formation.

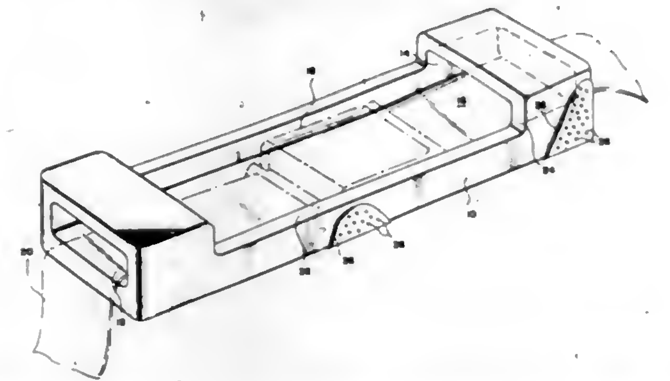
PATENTS

GRANTED JUNE 4, 1968

GENERAL AND MECHANICAL

3,386,103
SEAT BELT PAD

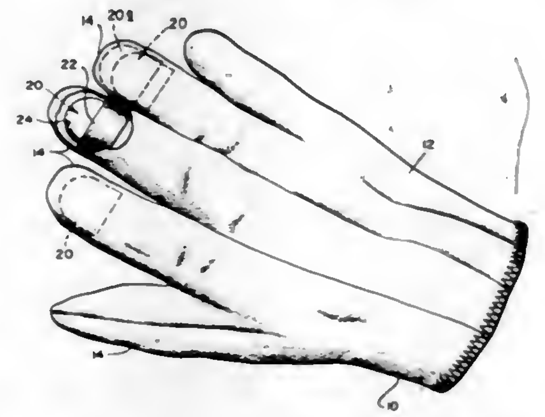
Chris B. Robinson, P.O. Box 85007, Hollywood, Calif. 90072
Filed Sept. 22, 1967, Ser. No. 675,734
3 Claims. (Cl. 2—2)



The present invention relates generally to a pad for cushioning the impact of vehicular seat belts against occupants during accidents. More particularly, the present invention is characterized by its simplicity in construction, low cost of manufacture and ease of use.

3,386,104
SAFETY GLOVE AND INTERNAL FINGER PROTECTOR

John A. Casey, Westwood, Mass.
(25 Loring Drive, Framingham, Mass. 01702)
Filed Apr. 18, 1967, Ser. No. 631,724
16 Claims. (Cl. 2—161)

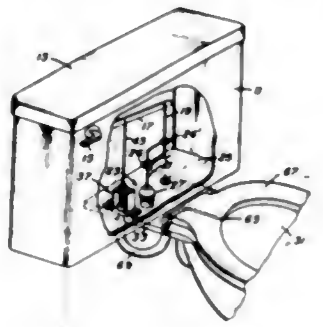


A finger protector comprises a rigid, impact-resistant cap which is inserted into a glove stall. The cap is shaped to engage over the distal portion of the wearer's finger. A retainer secured to the outside of the cap is adapted to adjustably attach to the inside of the glove stall to permit the cap to be positioned in the stall at different depths so that it can accommodate fingers therein of different lengths, yet it prevents the cap from falling out of the finger stall.

A glove has internal reusable finger protectors positioned in the glove stalls. The protectors comprise impact-resistant caps having retainers extending between the caps and the inside walls of the corresponding stalls so that the positions of the caps in their stalls can shift to suit the particular wearer's fingers, yet these retainers prevent the caps from falling out of the glove.

3,386,105
HYGIENIC SPRAY CONTROL DEVICE

Arthur H. Martini, West Hempstead, N.Y.
(144 Mendon Center Road, Pittsford, N.Y. 14534)
Filed May 31, 1966, Ser. No. 553,952
8 Claims. (Cl. 4—7)



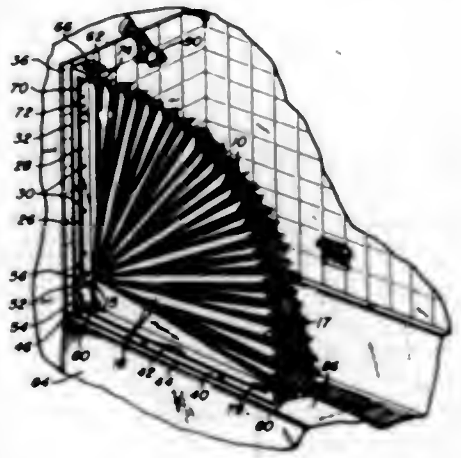
1. A hygienic spray control device for use with a toilet provided with a hygienic spray and having a flush water tank, a bowl, a water drain valve in communication between the tank and bowl, and means for actuating said drain valve to discharge water from the tank into said bowl, said control device comprising:

(a) second valve means located within said tank and in communication between said tank and said spray; and

(b) means operatively associated with said actuating means for actuating said second valve prior to said drain valve to discharge water from said tank through said spray, whereby said spray is operated before water from the tank is discharged into said bowl.

3,386,106
SHOWER CURTAIN STRUCTURE

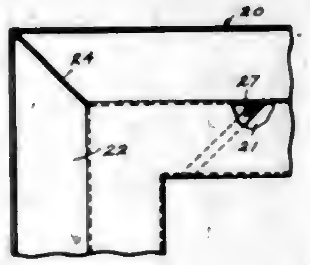
Charles Herbert Clemens, 410 Five Oak Ave., Dayton, Ohio 45405
Filed Sept. 27, 1965, Ser. No. 490,352
7 Claims. (Cl. 4—154)



A shower curtain particularly adapted for association with a bathtub which is adjacent a wall. The shower curtain has a plurality of folds, each of which extends generally toward and away from a common point. Some of the folds radiate from the common point. Some of the folds are spaced from the common point. The shower curtain is foldable into a closed position above an edge of the bathtub and is also extensible between the wall and the edge of the bathtub to prevent splashing of water from the bathtub.

3,386,107
LEVEL CONTROL AND CIRCULATION SYSTEM FOR SWIMMING POOLS

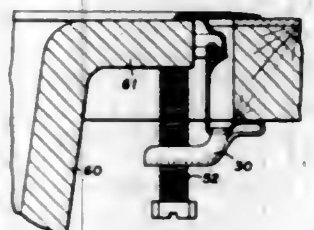
George R. Whitten, Jr., 400 Center St., Bellingham, Mass. 02019
Filed Jan. 5, 1966, Ser. No. 518,861
3 Claims. (Cl. 4—172)



A water level control and circulation system for swimming pools. A control tank is connected directly to the interior of the pool by an equalizer tube to keep the water level in the two the same. The level in the tank is maintained by a drain with an opening set at the desired level to remove excess water when the level in the tank rises, and a float valve which controls a make-up water supply and operates when the level falls. The pool has a drainage gutter connected to a manifold draining into a surge tank. A pump circulates water from the surge tank to the pool and back. The water level in the surge tank is kept below that of the pool by a float valve which shuts the return line from the pool to the surge tank when the level in the surge tank rises above a certain point.

3,386,108
RIM ADAPTIVE APPLIANCE RETAINER

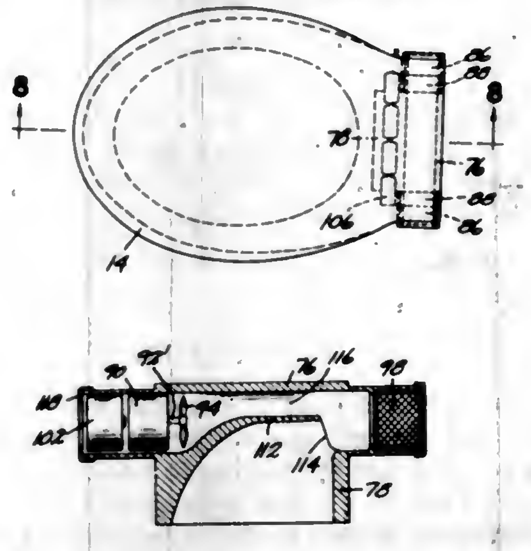
William A. Juergens, Dallas, Tex., assignor to Verson Manufacturing Co., Dallas, Tex., a corporation of Texas
Filed Sept. 27, 1965, Ser. No. 490,384
9 Claims. (Cl. 4—187)



A mounting device for installing a rimmed appliance in an opening in a supporting panel. A mounting frame has a crowned surface flange for laying across the supporting panel and upper surface of the appliance rim. A band extends downwardly from the flange in the space between the edge of the appliance rim and the perimeter of the opening. An inwardly directed shoulder integrally extends from the band and an upwardly turned hook extends along the lower edge of the band. A clip has a hook engaging the hook on the band and includes a leg having a heel extendings underneath the supporting panel and a foot extending beneath the appliance rim. A resilient tongue formed from a split center portion of the leg engages the outer surface of the upwardly turned hook. A screw is supported by the foot for engaging the underside of the appliance rim to force the rim upwardly into engagement with the surface flange.

3,386,109
TOILET DEODORIZING DEVICE

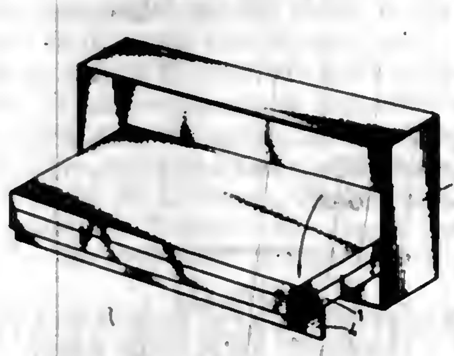
Thomas Christian, 602 W. Hively St., and Jack L. Youngblood, 401 Hively St., both of Elkhart, Ind. 46514
Filed Mar. 2, 1966, Ser. No. 531,125
5 Claims. (Cl. 4—213)



1. A deodorizing unit for a toilet device having a toilet bowl and a toilet seat, comprising an air intake member carried by said seat and a blower and filter unit connected to said air intake member to deodorize air drawn thereby through said air intake member, said air intake member having a shallow wide tubular portion with close spaced substantially parallel top and bottom walls and side walls and located at the rear bottom portion of said toilet seat, said bottom wall having clearance with said toilet bowl, said shallow tubular portion having a horizontally elongated intake mouth spaced rearwardly from the adjacent inner edge of said seat, said air intake member including a substantially cylindrical tubular outlet portion communicating with said shallow tubular portion and positioned clear of the rear outer edge of said seat, said blower and filter unit including a motor driven fan and a filter, said motor driven fan being mounted in said cylindrical tubular portion and said filter spanning a portion of said air intake member between the intake and outlet of the air flow path therethrough.

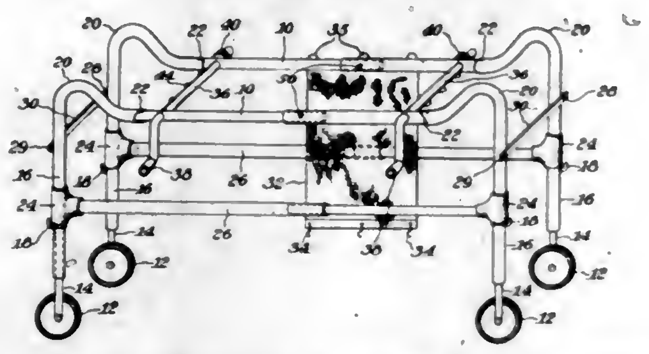
3,386,110
TIP-UP BED

Georges Charles Vanhentenrijk, Molenbeek-St.-Jean, and André Emile Blairon, Grimbergen, Belgium, assignors to Ets. A. & L. Verhaegen Societe Anonyme, Brussels, Belgium
Filed Oct. 10, 1966, Ser. No. 585,629
Claims priority, application Belgium, Dec. 3, 1965, 673,263
7 Claims. (Cl. 5—3)



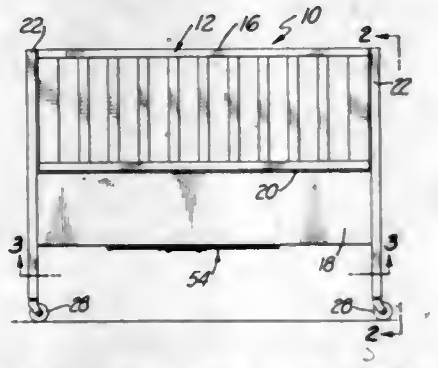
A tip-up bed and table combination having a pivotally mounted spring mattress movable between a substantially horizontal use position and a substantially vertical storage position. At least one panel is movably mounted between a first position concealing the stored bed and a second substantially horizontal position wherein the panel serves as a table.

3,386,111
PORTABLE COT
**Peggy J. Daniel, 1227 Silverleaf Circle, Oakcrest,
Charleston, S.C. 29407
Filed May 8, 1967, Ser. No. 636,823
4 Claims. (Cl. 5—81)**



A portable wheeled cot or stretcher used in transporting bedridden patients or invalids from place to place within a hospital and the like or for transferring patients from a fixed bed at a given location to another location with a minimum amount of disturbance or shift in bodily position.

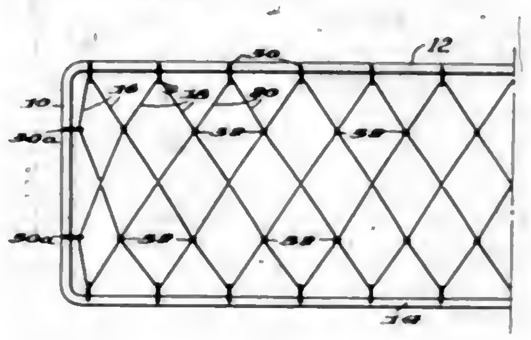
3,386,112
FOLDING CRIB
**Jamison T. Johnson, 44—301 Sun Gold St., Indio, Calif. 92201, and Peter A. Jannotta, Indio, and Walter James Lauterback, Glendale, Calif.; said Jannotta and said Lauterback assignors to said Johnson
Filed Mar. 30, 1967, Ser. No. 627,068
7 Claims. (Cl. 5—99)**



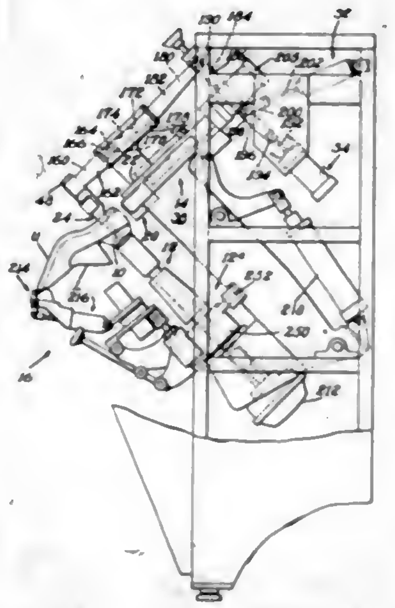
A folding crib having a bottom wall hinged to swing upwardly against one side wall, and having end walls each composed of a series of three panels hingedly interconnected for relative pivotal movement about vertical axes, the panels at one side of the crib being rigidly connected to the corresponding side wall and the panels at the other side being hingedly connected to the corresponding side wall. Two of the panels of each end wall lie between the bottom wall and one side wall when the crib is folded. A guide means interconnecting the side walls guides same toward and away from each other in parallel relation when the bottom wall is in its retracted position. An actuating means connected to one side wall and to the guide means moves the side walls toward and away from each other, and locks the crib in its folded and unfolded positions.

3,386,113
SUPPORTING SURFACE FOR A MATTRESS, CUSHION, AND THE LIKE
**Hyman Kramer, 2764 E. 16th St.,
Brooklyn, N.Y. 11218
Filed Oct. 22, 1965, Ser. No. 501,432
4 Claims. (Cl. 5—190)**

As herein disclosed, the invention is directed to a supporting surface for a mattress, cushion and the like comprising a plurality of individual, elongated endless loops fashioned from wire cable, plastic cord, rope and the like which are strung between two parallel frame members and are provided intermediate their end portions with one or more simple half-twists, as results is the long side-leg portions of the loops crossing one another at at least one point along the length thereof; and said twisted loops being connected together to form a supporting network solely by mechanical tie means which secure together the adjacent crossed side-leg portions of each adjacent loop pair at points along their length which are spaced from but bear predetermined relation to the points of crossing of the side-leg portions of the adjacent loops making up each loop pair. The disclosure is also directed to the method of fabricating a mattress or cushion supporting surface from endless loops which are half-twisted and connected to one another as aforesaid.

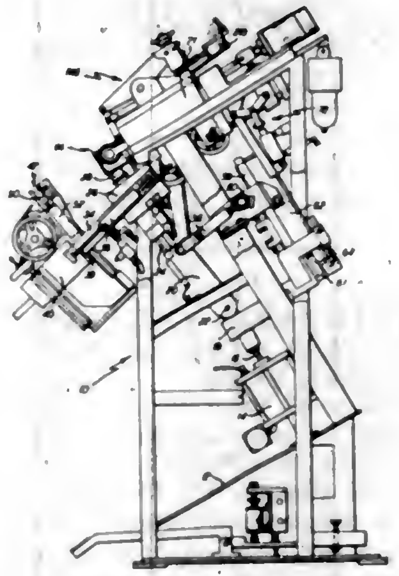


3,386,114
ADHESIVE APPLYING DEVICES FOR HEEL SEAT LASTING MACHINES
**George C. Barton and George Millar, Leicester, England, assignors to United Shoe Machinery Corporation, Flemington, N.J., a corporation of New Jersey
Filed Mar. 31, 1967, Ser. No. 627,335
Claims priority, application Great Britain, Apr. 23, 1966, 17,861/66
10 Claims. (Cl. 12—12.5)**



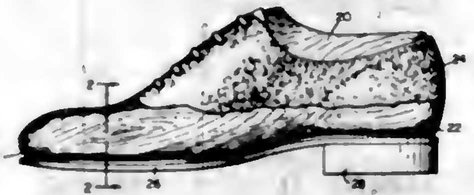
A heel seat lasting machine having a shoe support, a holddown against which the heel end portion of the insole of a shoe on the support is clamped and lasting instrumentalities including a heel band and a pair of wipers and means for operating the heel band and wipers wherein the holddown is modified to serve also as a nozzle member through which adhesive is ejected onto the bottom of the insole and/or the inside surface of the lasting margin of the upper after the operation of the heel band and prior to operation of the wipers.

3,386,115
SHOE END LASTING WITH PRONGED WIPERS
**Raymond McKibbin and Normand Bergeron, Montreal, Quebec, Canada, assignors to Jacob S. Kamborian, West Newton, Mass.
Filed July 11, 1963, Ser. No. 294,351
14 Claims. (Cl. 12—12.5)**



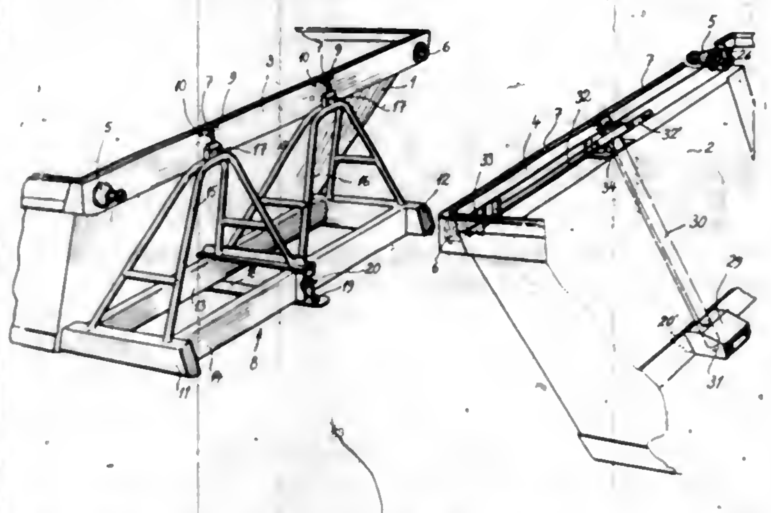
1. A method of lasting an end of a shoe comprising: supporting bottom-up a last having a shoe insole located on its bottom and a shoe upper mounted thereon with the margin of an end of the upper extending upwardly of the insole; providing a pair of wipers that have side surfaces diverging forwardly from a bight, that are mounted for inward and outward swinging movement about a vertex that is proximate to the bight, and that each have at least one prong depending from an otherwise smooth undersurface in a region relatively remote from and forwardly of the vertex; supporting the wipers adjacent the end of the last corresponding to said end of the upper so that said side surfaces are exterior of the said end of the upper and last; causing relative forward translation of the wipers with respect to the last so that the bight of the wipers crosses the last to wipe the upper margin at the extremity of said end of the last upon the insole with the prongs remaining exteriorly of the last; and swinging the wiper side surfaces inwardly about the vertex to cause the remainder of the wiper side surfaces to cross the last and wipe the upper margin portions engaged thereby against the insole and to cause the prongs to drag the said margin portions inwardly during this movement and stretch them tightly about the last.

3,386,116
SHOE AND PROCESS FOR MAKING THE SAME
**Charles F. Batchelder, Milton, and Jerome A. Rubico, Boston, Mass., assignors to Batchelder-Rubico, Inc., Boston, Mass., a corporation of Massachusetts.
Filed May 7, 1963, Ser. No. 278,568
3 Claims. (Cl. 12—142)**



1. The process of shoemaking which comprises: forming a thin, flexible, full, one piece skeletal rand insole; applying said rand insole to a last; temporarily adhesively securing said rand insole to said last; moistening an upper and lasting said upper to said temporarily secured rand insole; breaking the temporary bond between the rand insole and the last while the upper is still in a moist, tempered state employed for lasting and thereafter applying a sole element to the shoe prior to any substantial change of dimension in said upper due to contraction caused by drying; and, finally removing said last.

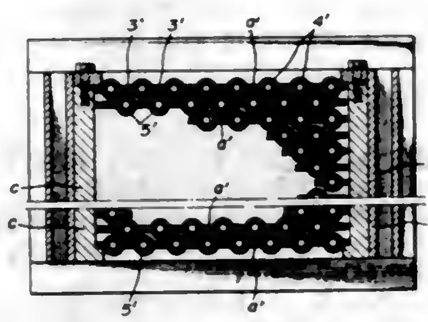
3,386,117
SYSTEM FOR CONNECTING BUOYANT BODIES TOGETHER
**Stig Roland Sterner, Skultuna, Sweden, assignor to Aktiebolaget Svenska Metallverken, Vasteras, Sweden, a joint-stock company limited
Filed Dec. 8, 1965, Ser. No. 512,321
Claims priority, application Sweden, Dec. 10, 1964, 14,916/64
9 Claims. (Cl. 14—27)**



A system for connecting floating bodies together in which a number of male and female coupling members are located in a predetermined pattern above the water line each of said body, the male and female coupling members being conical in shape so that upon connection of the bodies they are automatically aligned by the self-centering action of the engaging coupling members. The male and female coupling members are so situated that at least one male and one female coupling is found on the connecting sides of the floating bodies, so that said bodies are fully interchangeable. The system also includes a draw bar supported by an intermediate buoyant body and located below the water line, each end of the draw bar being provided with a claw coupling which engages a socket of corresponding configuration located on the sides of the bodies. The male and female coupling members situated above the water line are locked in position by means of laterally movable locking bar while the claw coupling and socket is locked by means of a vertically movable locking bar.

3,386,118
RESILIENT BRUSH UNIT
**Shigemi Morioku, 117 2-chome, Marugome-cho, and Toshio Sueyoshi, 35 2-chome, Higashiokoshi-cho, both of Nakagawa-ku, Nagoya-shi, Japan, and Masami Murakami 146 2-chome, Kitatata-machi, Ichikawa-shi, Japan
Filed Mar. 7, 1967, Ser. No. 621,269
Claims priority, application Japan, Mar. 18, 1966, 41/16,901
5 Claims. (Cl. 15—181)**

The construction of a brush holder is described in respect to two separate embodiments. In each embodiment the brush holder includes a pair of juxtaposed plates each having a plurality of spaced semi-cylindrical cavities which are aligned with the adjacent plate upon juxtaposition to define a cylindrical brush-receiving cavity. A brush having bristles which are formed into a U-shaped configuration are held with the inner bent end within the cavity by forming each cavity with an inturned edge which engages each brush element tightly. The brushes



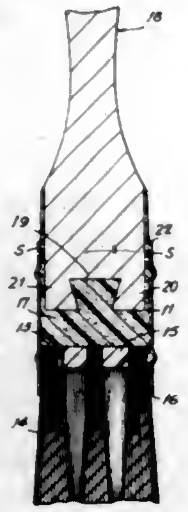
are advantageously biased outwardly away from the cavity by means of a spring element acting on the cavity for the brush.

3,386,119
PAINT BRUSH AND METHOD OF MAKING THE SAME

Stuart M. Shulman, New York, N.Y., assignor to Baker Brush Co. Inc., New York, N.Y., a corporation of New York

Filed Mar. 2, 1967, Ser. No. 619,999

5 Claims. (Cl. 15—193)



This invention relates to an improved paint brush or the like of the multiple component type including a tubular ferrule, a bristle knot and a handle, and to a method of making the same. The space within the ferrule, between the bristle knot and the handle, is filled with a light-weight, closed cell, expanded, foamed resinous material, which material completely seals the interior of the brush against the ingress of solvents, paint and the like.

In accordance with the method, the pressure developed by the expanding resin forces increments of the foamed plastic into all the interstitial spaces leading to the interior of the ferrule, thus sealing the interior without appreciably adding to the weight of the brush.

In accordance with an embodiment of the invention, the foamed plastic serves the additional function of anchoring the handle within the ferrule.

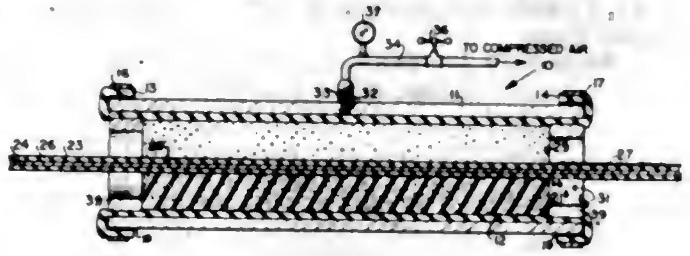
3,386,120
STRAND WIPING APPARATUS

Charles J. Weisbecker, Orange, Calif., assignor to Anaconda Wire and Cable Company, a corporation of Delaware

Filed Jan. 21, 1966, Ser. No. 522,275

8 Claims. (Cl. 15—210)

A wiper to remove the cooling water from insulated wire issuing from an extruder is comprised of a split cylinder of cellular material within a rigid casing. The casing is lined with rubber tubing, and pressurized air



is introduced between the tubing and the casing wall to compress the cellular material around the insulated wire.

3,386,121
MOLDED METAL PARTS, AND VAPOR PHASE SINTERING PROCESS, MOLDS AND COMPOSITIONS FOR PREPARING SAME

Robert C. Reed, Poway, Calif.
(890 Armada Terrace, San Diego, Calif. 92106)

Filed June 20, 1966, Ser. No. 558,875

13 Claims. (Cl. 75—224)

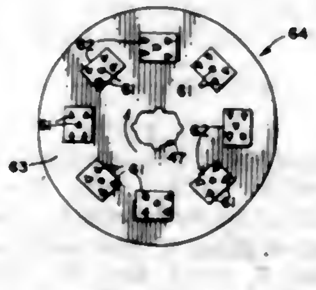
The disclosed process uses metal vapor of a selected group of metals to simultaneously sinter and alloy a mass of loose metal powder shaped and heated in a porous, nonmetallic, non-oxidizing mold, thereby to form in one step a molded and alloyed article having the desired final shape. No vapor-forming metal is in contact with said loose metal powder, so that only the metal vapor acts on said powder. The vapor-forming metal is selected from the group consisting of magnesium, zinc, cadmium, arsenic, rubidium, cesium, potassium, sodium, and mixtures thereof. The loose metal powder is selected from the group consisting of iron, cobalt, nickel, manganese, titanium, zirconium, columbium, vanadium, copper, silver, gold, alloys in which one of the foregoing elements constitutes the base, composite powders, and mixtures of the foregoing.

3,386,122
ROTATABLE DISC DEVICES

Robert V. Mathison, 5 Woodcrest Road, Asheville, N.C. 28804

Continuation-in-part of application Ser. No. 285,261, June 4, 1963. This application Dec. 13, 1965, Ser. No. 513,400

7 Claims. (Cl. 15—230.17)



Rotatable devices with disc-face containing sloping projections adapted to penetrate and remain seated in porous member and releasably grip same; uses thereof in holders for rotary cleaning devices, clutches and one-way drives.

3,386,123
WINDSHIELD WIPER BLADE

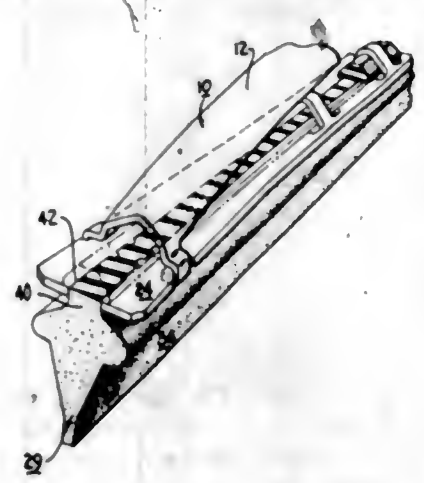
John R. Oishei, Buffalo, and Raymond A. Deibel Cheektowaga, N.Y., assignors to Trico Products Corporation, Buffalo, N.Y.

Filed Feb. 23, 1966, Ser. No. 529,294

9 Claims. (Cl. 15—250.42)

1. A windshield wiper comprising in combination with an arm pressure distributing superstructure having blade

straddling claws, a wiping assembly comprising a blade of rubber-like material having a longitudinally extending wiping lip and a longitudinally extending back portion forming a longitudinally extending neck portion therebetween, said neck portion having a transversely thickened portion adjacent an end thereof, a backing strip



including a pair of spaced apart side rails being disposed on opposite sides of said neck portion, engaging means formed on at least one of said side rails disposed in the region of said thickened portion of said neck for operatively engaging said superstructure to securely retain said wiping assembly and said superstructure in assembled condition.

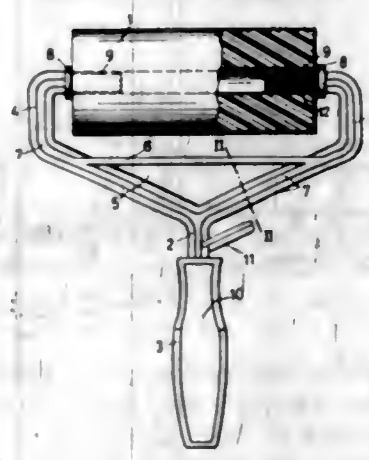
3,386,124
HAND ROLLER

Wolfgang Feine, Ingazhofen, Post Friesenhofen, Germany

Filed Dec. 2, 1965, Ser. No. 511,056

Claims priority, application Germany, Dec. 4, 1964, F 44,612

10 Claims. (Cl. 15—230.11)



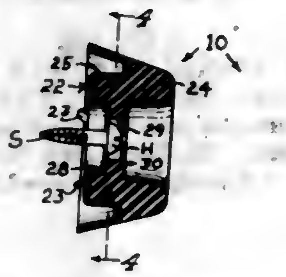
This disclosure teaches a handle for interchangeable paint rollers. The invention resides in a simplified, superior, one-piece handle structure which comprises a hand piece with arms connected thereto and which can be stretched apart and on relaxation of the stretching positioned to journal bearings therebetween on which a roller is axially mounted. The present handle is characterized in that the arms are joined by an integral triangular web with an enlarged base forming a crossbar and joining ribs of the arms. By this arrangement an inexpensive, light and strong roller handle is produced which accommodates sufficient yield for work on uneven surfaces, resists twists and permits easy changing of rollers. Three degrees of elasticity are provided in three mutually normal directions.

3,386,125
DOOR BUMPER

Albert E. Hand, Southington, Conn., assignor to Emhart Corporation, Bloomfield, Conn., a corporation of Connecticut

Filed Oct. 14, 1965, Ser. No. 496,072

17 Claims. (Cl. 16—86)



A door bumper having a mounting frame, a retainer and a bumper element wherein said bumper element is placed into a recess of the mounting frame, said recess being open outwardly in a direction away from said mounting frame and wall structure. The retainer is mounted on the bumper element to form a specific subcombination structure which is placed into the said recess after the mounting frame has been placed into position on the wall behind a swinging door. This bumper is of a simple and child-proof construction in that once the door bumper is put into place the retainer holds it in the said recess through the use of a forceful frictional bearing engagement.

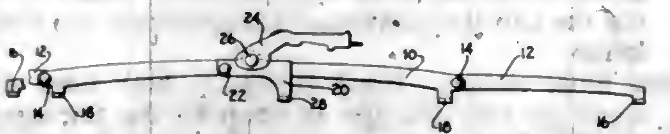
3,386,126
WINDSCREEN WIPERS

Ruben Hadekel, London, England, assignor to Trico Products Corporation, Buffalo, N.Y.

Filed Aug. 18, 1965, Ser. No. 480,738

Claims priority, application Great Britain, Aug. 18, 1964, 33,705/64

4 Claims. (Cl. 15—250.42)



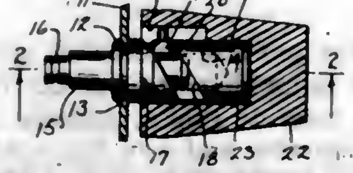
A windscreen wiper for distributing proportionate pressure to a single substantially central point close to an arm attachment member through an auxiliary yoke assembly pivoted to the primary yoke. The primary yoke has pressure applying claws secured to the rubber wiper element. A spring biased lever element is secured to each end of the primary yoke with a pressure applying claw secured at each end of the blade.

3,386,127
CONTROL KNOB CONNECTING MEANS

Franklin C. Hitzeroth, Elgin, and David B. Walitzer, Algonquin, Ill., assignors to McGraw-Edison Company, Milwaukee, Wis., a corporation of Delaware

Filed Oct. 22, 1965, Ser. No. 501,045

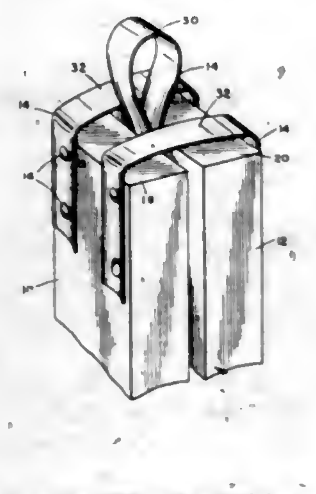
2 Claims. (Cl. 16—121)



A control knob connection for reciprocably and rotatably moving a member supported within a bearing, including trapping a protuberance integral with the member within a curved slot in the bearing and an axial slot within a handle portion fit rotatably over the bearing, and rotatably securing the handle on the bearing by a resilient arm integral at one end with the handle and presenting a projection at its opposite end that fits within a circumferential recess on the bearing.

3,386,128
SELF-ACTUATING, SELF-LOCKING HINGE

Wesley W. Vyvyan, San Diego, Calif., assignor to The Ryan Aeronautical Co., San Diego, Calif.
Filed Sept. 26, 1966, Ser. No. 581,862
4 Claims. (Cl. 16—150)



1. A self-actuating, self-locking hinge for interconnecting a pair of adjacent members, the confronting edge portions of which have a certain thickness, the hinge comprising:

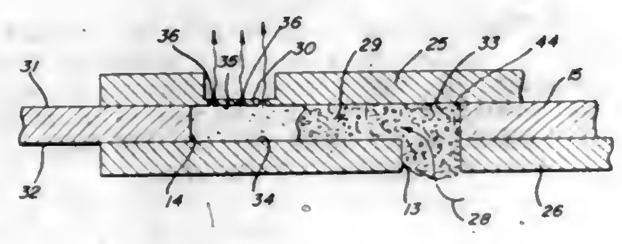
a plurality of elongated, strap-like hinge elements of resilient material each having a cambered cross section;

the ends of said hinge elements being secured to the pair of members with the confronting edges of the members spaced apart and the hinge elements bridging the gap therebetween in substantially parallel relation;

said hinge elements being secured to both sides of the members and thus spaced apart by the thickness of the members to form a box-like open frame structure connecting the members.

3,386,129
MOLDING APPARATUS WITH AIR RELIEF

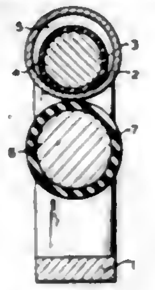
Harry H. Holly, Olympia Fields, Ill., assignor to Hollymatic Corporation, a corporation of Illinois
Filed Oct. 29, 1965, Ser. No. 505,697
2 Claims. (Cl. 17—32)



A device for molding successive articles of a plastic material such as molding meat patties from ground meat in which the meat or similar material is injected into a mold that is movable and with the mold having air vents communicating therewith together with a particle severing edge on the mold that will sever particles of the meat or similar material retained in the vent passage inner ends when the mold is moved to discharge position.

3,386,130
EMBOSSING ROLL, IN PARTICULAR FOR THE TREATMENT OF WEBS OF THERMOPLASTIC MATERIAL

Waldemar F. W. Grunewald, Monchen-Gladbach, and Johannes Peiler, Krefeld, Germany, assignors to Firma Dornbusch & Co., Krefeld, Germany
Filed Mar. 28, 1966, Ser. No. 538,047
5 Claims. (Cl. 18—10)



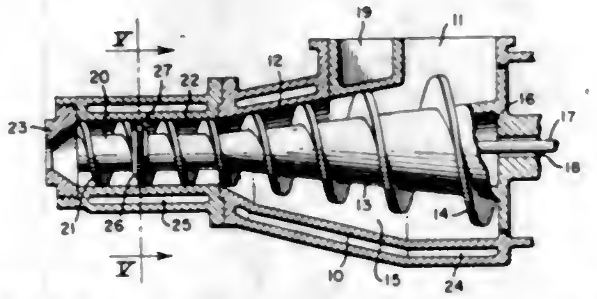
A solid shaft has an outer sleeve of resilient material permanently secured to its outer wall. An embossing roll of a larger diameter than the sleeve and open on both ends is freely rotatable about the shaft. An auxiliary, parallel counter roll, provided with a resilient sleeve presses against, and transmits its rotation to the embossing roll.

The solid shaft is additionally provided with passages for cooling liquid communicating with the space formed between the shaft and the embossing cylinder.

The elastic sleeve may be further provided with a central circumferential slit and with a series of grooves. A cut-off ring is provided in the circular slit.

3,386,131
APPARATUS FOR THE CONTINUOUS TREATMENT OF RUBBER AND PLASTIC MATERIAL IN GENERAL

Marcello Vanzo, Milan, Italy, assignor to Pirelli S.p.A., Milan, Italy
Filed June 17, 1966, Ser. No. 558,391
Claims priority, application Italy, Sept. 10, 1965, 20,161/65
10 Claims. (Cl. 18—12)



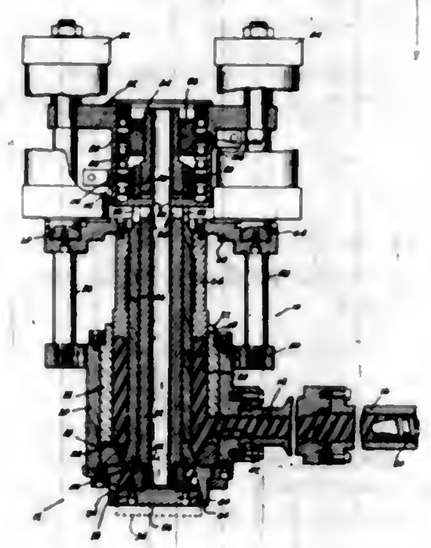
An apparatus for the treatment of plastic material including a receiver having a feed screw rotatably mounted therein and adapted to feed said material from an inlet opening to a discharge opening formed in the receiver. A closing member is quick detachably mounted in the inlet opening to cover a portion thereof in the general lengthwise direction of said receiver.

3,386,132
EXTRUSION APPARATUS

Edward Fischer, Saline, Mich., assignor to Hoover Ball and Bearing Company, Saline, Mich., a corporation of Michigan
Filed Oct. 22, 1965, Ser. No. 501,147
10 Claims. (Cl. 18—14)

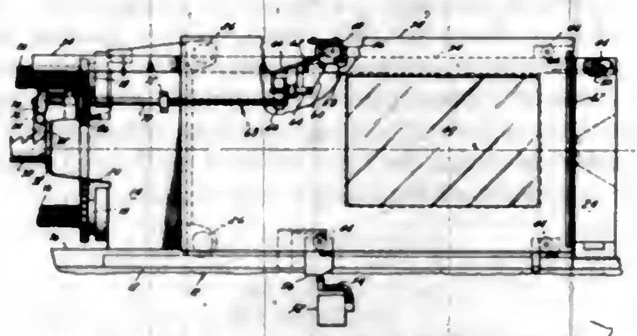
Apparatus for use in conjunction with blow molding of plastic material to form hollow articles which includes a plasticizer for plasticizing the material and a die head assembly connected to the discharge end of the plasticizer from which tubular parisons of desired shape and

wall thickness can be extruded for blow molding operations. The die head assembly has an annular accumulation chamber into which the plasticizer discharges the plastic material and an annular piston or plunger is provided for discharging the accumulated material through an annular orifice in the form of a tubular parison. Control means are provided for selectively varying the wall thickness of the parison.



3,386,133
SAFETY MECHANISM FOR PLASTIC INJECTION MOLDING MACHINE OR THE LIKE

Seymour Weiner, Springfield, Mass., assignor to Package Machinery Company, East Longmeadow, Mass., a corporation of Massachusetts
Filed May 31, 1966, Ser. No. 553,788
8 Claims. (Cl. 18—30)

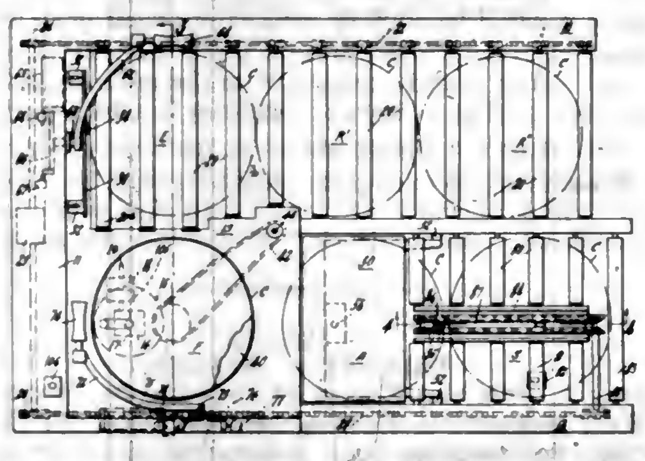


1. In a machine having a base or stock and one die movable relative thereto toward and from a fixed die on guide structure including at least one guide rod movable axially with said one die, and also having a frame and a gate movable thereon to and from a closed position wherein it prevents operator access between the dies, an improved safety mechanism comprising cam means operable by initial movement of said gate from closed position to engage said guide rod and block movement of said one die toward said fixed die until said gate is in closed position.

3,386,134
TEXTILE SLIVER CAN CHANGING AND STORAGE APPARATUS

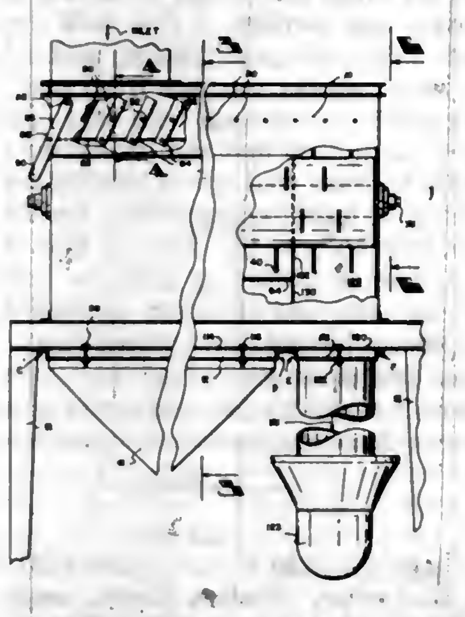
Richard W. Munroe, Paul B. West, Gordon C. Anderson, and William H. Drake, Clemson, S.C., assignors to Maremont Corporation, Chicago, Ill., a corporation of Illinois
Filed Oct. 1, 1964, Ser. No. 400,705
19 Claims. (Cl. 19—159)

Can changing apparatus for a high speed drawing frame having a series of drafting rolls and a coiler in lineal arrangement providing a can filling station. A full can storage station is positioned in lineal arrangement in front of the drafting rolls and coiler. It is spaced from the can filling station by an operator access platform in the form of a horizontal plate across which a full can is doffed by engagement with its bottom rim. The plate has a suitable switch for sensing the presence of any weight on it so that a full can will not be doffed while an operator is standing on the plate as during drafting roll or coiler servicing. An empty can ready station is positioned beside filling station and one or more empty can storage stations are provided in lineal arrangement parallel to that of the drafting rolls and full can storage station, producing a U-shaped path of can travel with the filling and ready stations at the base of the U and the empty and full can storage stations at its ends. Can doffing and donning devices are provided together with suitable controls for operation of the apparatus, which are integrated with the operation of the drawing rolls and coiler by a yardage counter which senses a predetermined quantity of sliver delivered to a can at the filling station and actuates the controls at appropriate intervals as well as arresting the delivery of sliver and severing it so that the coiling operation can begin in each new can with a fresh end of sliver. After the can changing apparatus completes its operations, its controls restart the drawing rolls and coiler.



3,386,135
CLEANING MACHINE

Howard J. Clifford, Phoenix, Ariz., Joe A. Dugger, Rte. 1, Box 90-A, Brawley, Calif. 92227, and Dick L. French, El Centro, Calif.; said Clifford and said French assignors to said Dugger
Filed June 21, 1966, Ser. No. 560,378
9 Claims. (Cl. 19—200)

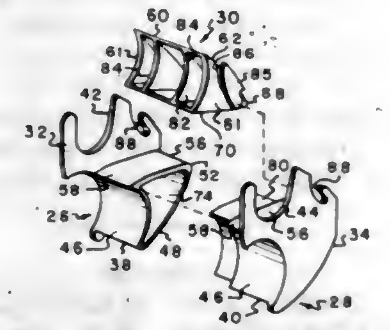


1. In a cotton cleaning machine the combination of: a housing; an inlet in said housing and an outlet in said housing; a pair of axially elongated laterally spaced and axially parallel cylindrical rotors having peripheral portions provided with radially extending beater members; a

plurality of said members spaced about the periphery of each rotor and said beater members also spaced apart longitudinally of the axis of said rotors; means for counter-rotating said rotors, said inlet in said housing communicating with said rotors near one end of each rotor, said inlet communicating with a space between said rotors at a location in which peripheries of said rotors counter-rotate toward each other, said outlet below said rotors and communicating with said rotors nears ends thereof opposite said one end, said outlet communicating with said rotors at a location in which the peripheries of said rotors counter-rotate away from each other; a plurality of elongated laterally spaced grate bars disposed axially parallel to each of said rotors, said grate bars arranged in arcuate rows around lower peripheral portions of said rotors slightly spaced from the ends of said beater members, said grate bars at locations in which peripheries of said rotors counter-rotate away from each other; and a trash receiving plenum communicating with said bars, said bars terminating at said outlet, such that said outlet has unrestricted communication with areas below said rotors.

3,386,136
DRAFTING SYSTEM

Bobby L. Pitts and Robert M. Ingham, Jr., Spartanburg, S.C., assignors to Deering Milliken Research Corporation, Spartanburg, S.C., a corporation of Delaware
Continuation-in-part of abandoned application Ser. No. 390,272, Aug. 14, 1964, which is a continuation-in-part of abandoned application Ser. No. 366,023, May 8, 1964. This application Feb. 3, 1965, Ser. No. 432,069
11 Claims. (Cl. 19—245)

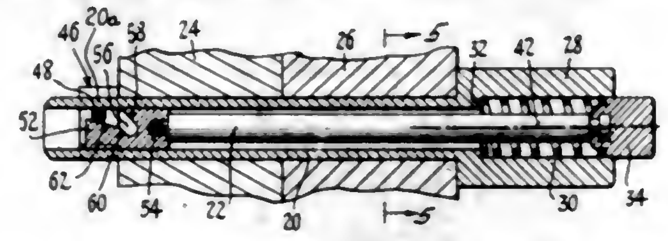


1. A drafting cradle comprising: an apron guiding and cleaning element, said apron guiding and cleaning element having a concave surface, said apron guiding and cleaning element having two surfaces converging in a direction extending away from said concave surface and culminating in a convex nose portion, a first wall member operably associated with said apron guiding and cleaning element, a second wall member separate from said first wall member and operably associated with said apron guiding and cleaning element, said first and second wall members having notches therein, said apron guiding and cleaning element having at least two segments, one of said segments being partially hollow, the other of said segments having a portion thereof projecting into the hollow portion of said one segment, and an apron guiding and cradle connecting element having tab means thereon engaging, said notches in said first and second wall members to maintain said wall members and said apron guiding and cleaning segments in predetermined relationship to one another.

3,386,137
RELEASABLE PIN ASSEMBLAGE

John J. McCarthy, Weston, Conn., assignor to Norco, Inc., Ridgefield, Conn., a corporation of Connecticut
Filed Feb. 2, 1966, Ser. No. 524,647
3 Claims. (Cl. 24—211)

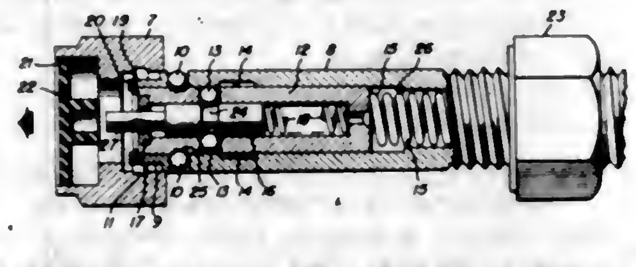
A clevis pin comprising a hollow shank having a head at one end, with a movable release button which is connected to a release rod passing through the shank. A laterally projectable abutment is disposed at the other shank end, having a camming connection with the release rod whereby the latter can project or retract the abutment.



A spring acting on the release rod causes the camming connection to be under continual force, preventing looseness of the abutment.

3,386,138
ENVIRONMENT DISCRIMINATING RELEASE MECHANISM

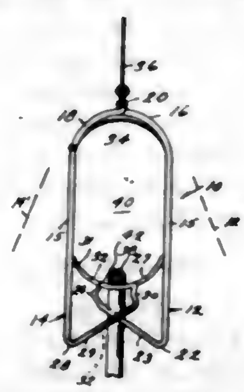
Harold S. Overman, Dahlgren, Va., assignor to the United States of America as represented by the Secretary of the Navy
Filed Mar. 8, 1966, Ser. No. 534,972
9 Claims. (Cl. 24—211)



A fastening means, especially adapted to release upon a rapid increase of the pressure within an enclosure, comprising a head, a body secured within said head by a first detent, a compensator slidably mounted within said body and subjected to spring pressure and located with respect to said body by a second detent, and a plunger within said compensator connected to a piston so that movement of the piston causes movement of the plunger, thereby releasing said second detent to allow movement of the compensator which in turn releases said first detent to allow separation of the body from the head.

3,386,139
FASTENER

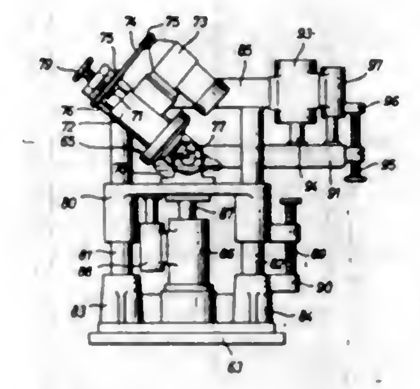
Frankie Rocchetti, Hyenga Lake, Rte. 59, Spring Valley, N.Y. 10977
Filed July 12, 1966, Ser. No. 564,605
14 Claims. (Cl. 24—242)



The fastener is easily attached to and detached from articles and has positive means to prevent detachment from an article until desired. The fastener comprises two laterally-spaced arms joined together at the rear end and having free forward ends with the forward end of each arm having a first segment extending rearwardly and toward the other arm and a second curved, segment extending rearwardly and away from the other arm.

3,386,140
METHOD AND MACHINE FOR THE MANUFACTURE OF POTTERY

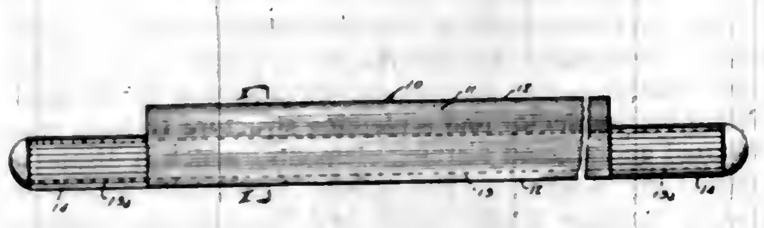
Ernst Brückner, Adalbert-Stifter-Weg 7, Selb, Bavaria, Germany
Filed Apr. 15, 1964, Ser. No. 360,016
Claims priority, application Germany, June 19, 1963, B 72,337
9 Claims. (Cl. 25—24)



1. A machine for jiggering substantially disk shaped blanks for plates and similar articles of pottery, comprising a rotary mold having a profile complementary to the profile of one side of the jiggered blank; a rotary forming tool comprising a conical front end portion and a frustoconical rear end portion, said conical front end portion having a tip arranged to be aligned with the axis of a blank which is to be jiggered by said tool, the section of said front end portion in a plane passing through the axis thereof resembling an isosceles triangle wherein the angle between the sides of equal length is less than 90°, said rear end portion diverging in the same direction as but at a greater angle than said front end portion, said tool being arranged to engage the other side of a blank on said mold in such a way that the blank is contacted along a line extending radially thereof, said tool having a tip located on an extension of the axis of said mold; means for rotating said tool and said mold so that the tool rolls along and jiggers the other side of a blank on said mold; means for rocking said tool about an axis which is perpendicular to the axis of said mold and which passes through the tip of said tool; and means for varying the distance between said tool and said mold in the axial direction of said mold.

3,386,141
STRIKE-OFF BAR STRUCTURE

Richard L. Olson, Hickory Hills, Ill., assignor to Dike-O-Seal, Incorporated, Chicago, Ill., a corporation of Illinois
Filed Oct. 21, 1965, Ser. No. 500,044
11 Claims. (Cl. 25—104)



1. A strike-off bar of the character described comprising:

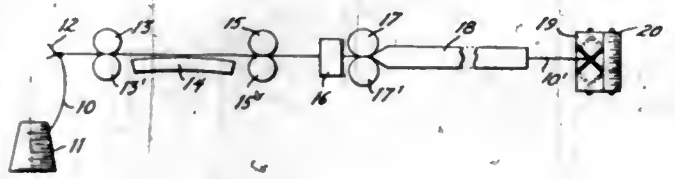
a substantially rigid elongated core;

a body molded on and about said core and comprising a highly abrasion-resistant plastic material, said body having a plurality of angularly related faces joining on strike-off edges; and

handle means on the opposite ends of the core projecting endwise beyond the body.

3,386,142
STRAND TREATMENT PROCESS AND APPARATUS

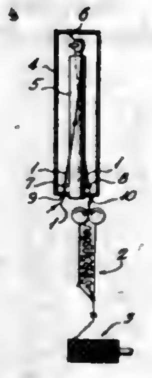
Robert K. Stanley, Media, and Malcolm F. Irwin, Philadelphia, Pa., assignors to Techniservice Corporation, Lester, Pa., a corporation of Pennsylvania
Continuation-in-part of application Ser. No. 401,160, Oct. 2, 1964. This application July 22, 1966, Ser. No. 567,245
The portion of the term of the patent subsequent to Oct. 18, 1983, has been disclaimed
10 Claims. (Cl. 28—1)



The degree of crimp imparted to textile strands being fed continuously at constant rate into a stuffer crimping zone is controlled by setting the windup rate to desired constant value, without varying either rate in accordance with level or quantity of crimped strand in the chamber or otherwise synchronizing the rates.

3,386,143
APPARATUS FOR HEATING FIBRILLARY PRODUCTS AND CRIMPING APPARATUS EMPLOYING SAME

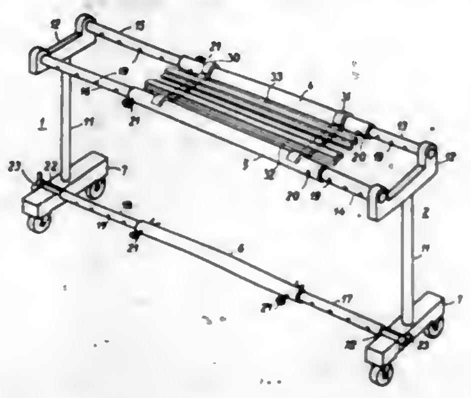
Jan van Silfhout, Arnhem, Netherlands, assignor to American Enka Corporation, Enka, N.C., a corporation of Delaware
Filed Mar. 15, 1967, Ser. No. 623,277
Claims priority, application Netherlands, Mar. 17, 1966, 66—3,469
6 Claims. (Cl. 28—1)



The heating apparatus comprises a hollow chamber, which houses a cylindrically shaped or rod-like heating member. A thread reversing wheel is positioned directly over the upper end of the heating member so that the initial and final thread bearing portions of the wheel substantially overlie the thread bearing portions of the heating member. At the bottom end of the heating member, thread guides are provided. The thread to be heated enters an eyelet at the bottom of the chamber, passes over one of the guides and upward and helically around the heating element, over the reversing wheel and helically down another portion of the heating element, over the other thread guide, through a second outlet and directly into the nip of a pair of rolls feeding to a stuffer box crimper. The reversing wheel can be displaced to a position beside and at the bottom of the heating member to facilitate system thread-in.

3,386,144
SUPPORT FRAME FOR WARPS

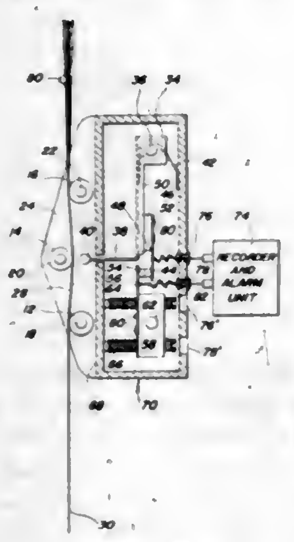
Alois Altenweger, Uster, Switzerland, assignor to Zellweger Ltd., Uster, Switzerland
Filed Jan. 14, 1966, Ser. No. 520,575
Claims priority, application Switzerland, Jan. 14, 1965, 626/65
5 Claims. (Cl. 28—49)



A warp-stretching frame for warp-tying machines having first and second substantially vertically disposed uprights and a plurality of interconnecting telescoping sections extending between said uprights to form an adjustable frame having a thread clamping means supported on an upper pair of telescoping sections, a lower telescoping section inter-connecting the base of each of said uprights being inter-connected between the uprights in a readily removable manner.

3,386,145
QUALITY MONITORING SYSTEM FOR CONTINUOUSLY MOVING FILAMENTARY STRUCTURES

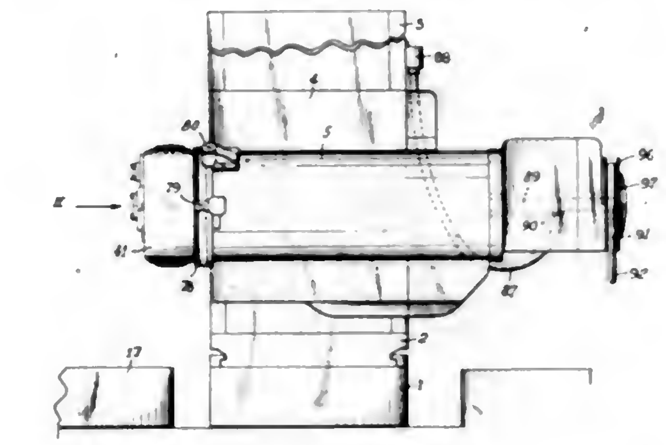
James E. Harris, Kingsport, Tenn., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed Feb. 10, 1966, Ser. No. 526,434
10 Claims. (Cl. 28—64)



A filamentary monitoring device incorporating a guide arrangement that bands (i.e. spreads) a multifilament yarn-like tow into a web of side-by-side filaments while at the same time monitoring each of these filaments for irregularities of a predetermined size.

3,386,146
MILLING AND BORING MACHINE HAVING A ROTARY TAILSTOCK

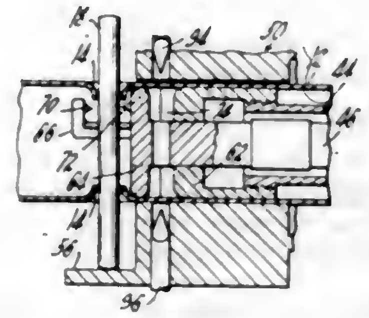
René Deflandre, Paris, France, assignor to Societe Derefa, Etablissement Pour le Developpement, Recherches et Fabrications Industrielles, Vaduz, Liechtenstein
Filed Oct. 23, 1965, Ser. No. 502,935
Claims priority, application France, Nov. 5, 1964, 993,890
8 Claims. (Cl. 29—26)



This device is concerned with a horizontal milling and boring machine in which the headstock is in the shape of a cylindrical body that is adapted to rotate coaxially with the tool-carrying spindle of the machine in a support which is vertically movable on an upright.

3,386,147
APPARATUS FOR MANUFACTURING COAXIAL TRANSMISSION LINES

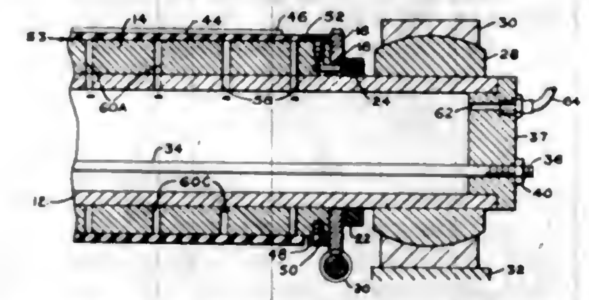
Donald N. Sewell, Acton, Mass., assignor to Dielectric Products Engineering Company, Inc., Littleton, Mass., a corporation of Michigan
Original application June 3, 1965, Ser. No. 460,951. Divided and this application Jan. 9, 1967, Ser. No. 624,106
4 Claims. (Cl. 29—34)



Apparatus for forming tabs in a tubular electrical conductor and locking a dielectric pin in position with those tabs includes a two component support that is disposed within the conductor and a piercing structure (having two opposed and aligned piercing elements) which is disposed outside the conductor. The support has axially separable mating surfaces which define two diametrically aligned bores (aligned with the piercing elements), each bore having a smoothly curved entrance; and two axially aligned clinching elements. In operation, the two piercing elements are driven through the conductor into the respective bores to form two aligned apertures, each surrounded by inwardly projecting tabs; a dielectric pin is inserted through the aligned apertures; and the spearpoints of the tabs are then forced into the pin in a securing operation by the clinching elements.

3,386,148
FLUID BEARING TABLE ROLL

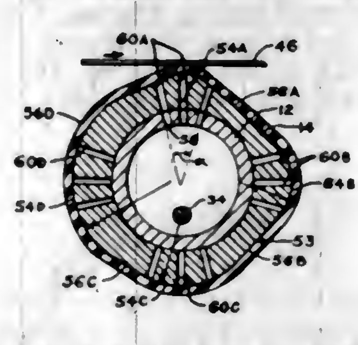
John D. Robertson, Taunton, Mass., assignor, by mesne assignments, to Mount Hope Machine Company, Incorporated, Taunton, Mass., a corporation of Massachusetts
Continuation-in-part of application Ser. No. 451,455, Apr. 28, 1965. This application Oct. 15, 1965, Ser. No. 505,101
4 Claims. (Cl. 29—116)



A roll having a rigid annular sleeve rotatably supported by a fluid bearing on a stationary cylindrical support, which has two rows of orifices for feeding fluid to the clearance space between the sleeve and support. The rows are so oriented that the resultant of the sleeve's working load is applied between them. This equalizes the flow on either side of the load to maintain clearance between the sleeve and support.

3,386,149
FLUID BEARING TABLE ROLL

John D. Robertson, Taunton, Mass., assignor, by mesne assignments, to Mount Hope Machine Company, Incorporated, Taunton, Mass., a corporation of Massachusetts
Application Oct. 15, 1965, Ser. No. 505,101, which is a continuation-in-part of abandoned application Ser. No. 451,455, Apr. 28, 1967. Divided and this application Sept. 19, 1967, Ser. No. 678,134
10 Claims. (Cl. 29—116)

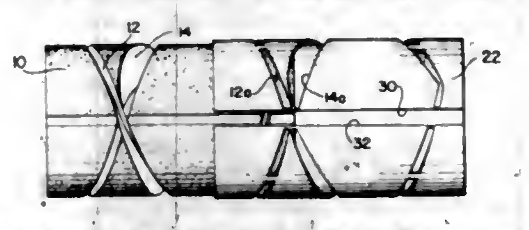


A roll having an annular sleeve rotatably supported by a fluid bearing on a stationary cylindrical support, which has two rows of orifices for feeding fluid to the clearance space between the sleeve and the support. The rows of orifices are so oriented that the resultant of the sleeve's working load is applied between them. This equalizes the flow on either side of the load to maintain clearance between the sleeve and support. The support's outer surface may be cylindrical or be formed with a number of portions of differing curvatures.

3,386,150
TRAVERSE ROLL

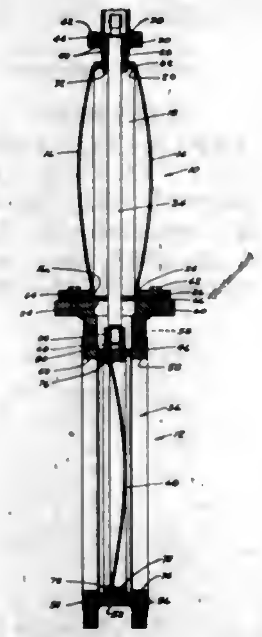
William H. O'Brien, Warwick, R.I., assignor to Leesona Corporation, Warwick, R.I., a corporation of Massachusetts
Filed May 31, 1966, Ser. No. 553,925
5 Claims. (Cl. 29—148.4)

1. The method of constructing a rotary traverse roll comprising the steps of, providing a traverse roll having yarn engaging grooves therein for guiding a strand of yarn, forming a sheet of wear resistant material with slots therein corresponding to the grooves in said traverse roll, providing tie portions across the slots between the sections of said sheet separated by said slots for maintaining the structural integrity of the sheet, forming the sheet into a substantially cylindrical sleeve, securing the sheet to said traverse while aligning said slots with said grooves, joining the edges of said sheet together, and finally removing the tie portions to interconnect said slots.



3,386,151
VALVE CONSTRUCTION METHOD

Marvin G. Combes, Castro Valley, Calif., assignor to Grove Valve and Regulator Company, Oakland, Calif., a corporation of California
Filed Sept. 14, 1965, Ser. No. 487,265
13 Claims. (Cl. 29—157.1)



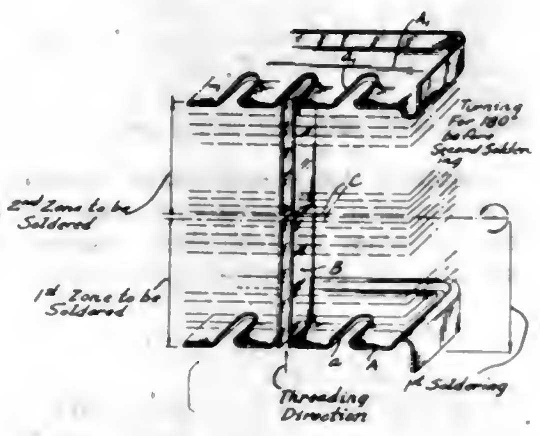
Constructing a valve body by forming an enclosure of thin metal with opposing walls and a band between them, and making it fluid tight by peripheral welding. The enclosure is expanded outward by a pressure fluid and is then severed, forming an open end body section. A complementary body section with flow passages is formed of thick material to withstand pipe line forces, and the two sections are joined as by welding each to a flange and sealing the flanges together.

A rigid member with an opening of a width corresponding to the flange opening is secured around the enclosure before expanding it to insure fit.

3,386,152
METHOD OF MAKING HEAT EXCHANGER NEST AND MORE PARTICULARLY COOLING RADIATORS

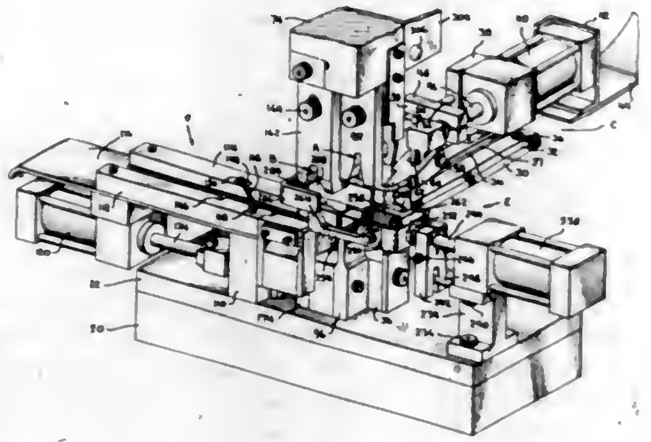
Alain Edouard Plegat, Asnieres, Seine, France, assignor to Societe Anonyme des Usines Chausson, Asnieres, Seine, France, a company of France
Continuation of application Ser. No. 291,719, July 1, 1963. This application Aug. 17, 1967, Ser. No. 661,469
Claims priority, application France, July 9, 1962, 903,403
4 Claims. (Cl. 29—157.3)

Heat exchanger cores, including circulating tubes covered with solder and secured at both ends to collectors also covered with solder and having collars around the holes through which the tubes extend and having heat-dissipating fins along the length of the tubes, are manufactured by assembling the collectors and the fins on the tubes to form a unit with the collars of the collectors extending in the same direction; the so-constructed unit is then submitted to fluxing; the soldering is then accomplished by blowing heated air over half of the unit and then cooling; finally, the unit is turned over and the other portion is soldered by the use of heated air and then cooled.



3,386,153
METHOD AND APPARATUS FOR FORMING AN INSULATED ELECTRICAL CONNECTION

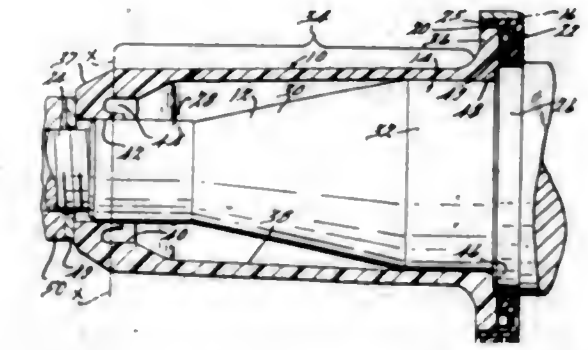
Ralph R. Lau and Gilbert C. Sitz, Harrisburg, Pa., assignor to AMP Incorporated, Harrisburg, Pa.
Filed Sept. 23, 1965, Ser. No. 489,558
6 Claims. (Cl. 29—203)



1. Apparatus for performing a two-stage crimping operation, said apparatus comprising a frame, a first crimping station located on said frame, a second crimping station located on said frame adjacent to said first crimping station, first and second crimping dies located respectively at said first and second crimping stations, means for feeding electrical terminals in strip form to said first crimping station, crimping head means at said first crimping station and cooperating with said first crimping die for performing a crimping operation on said electrical terminals, severing means at said first crimping station for severing said terminal from said strip immediately prior to said crimping operation at said first station, means for transferring said terminals to said second crimping station subsequent to said crimping operation, means for feeding insulating members in strip form to said second crimping station simultaneously with the movement of said transferring means whereby said terminal overlies said insulating member, crimping head means at said second crimping station and cooperating with said second crimping die for crimping said insulating member to said terminal, and severing means at said second crimping station for severing said insulating member from said strip immediately prior to said crimping operation at said second station.

3,386,154
OIL SEAL ASSEMBLY SLEEVE

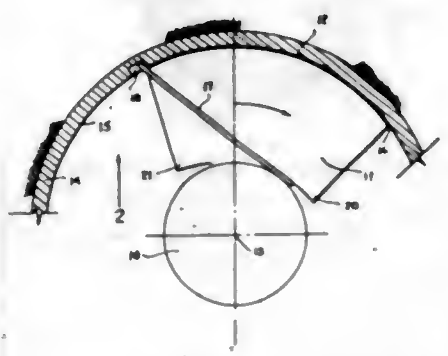
Walter Edward Thill, Bloomfield Township, Oakland County, Mich., assignor to Federal-Mogul Corporation, Southfield, Mich., a corporation of Michigan
Filed Apr. 29, 1966, Ser. No. 546,414
14 Claims. (Cl. 29—271)



A tubular device for applying radial seals on a seal receiving surface on a spindle. One end of the tubular member has a surface for supporting a seal while the same is being moved into position on the seal receiving surface of the spindle. The other end of the tubular member has a surface against which an advancing means engages to position said seal.

3,386,155
METHOD OF FITTING SEAL RINGS TO BLADES

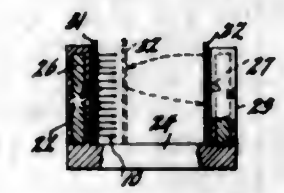
Richard I. Jenkinson, Lachine, Quebec, Canada, assignor to Dominion Engineering Works, Limited
Filed July 1, 1963, Ser. No. 291,700
9 Claims. (Cl. 29—401)



8. The method of installing a resilient seal ring around a blade of an axial flow turbo-machine having a bladed rotor and a surrounding static structure and wherein the radial distance between the tip of the blade and said stationary structure is less than the thickness of said seal ring comprising, forming a slot in the wall of the stationary structure, the major dimension of said slot being substantially parallel with the axis of rotation of the rotor, and slightly greater than the width of the path swept by said blade tip when said blade is at its minimum pitch angle, positioning the rotor such that one edge of the blade is adjacent said slot, placing the seal ring in said slot and passing said seal ring over one corner of the blade, rotating the rotor until the blade has passed said slot and passing said seal ring over the other corner of said blade.

3,386,156
METHOD OF MAGNETICALLY LOADING A MASS OF ARTICLES INTO A WORKHOLDER

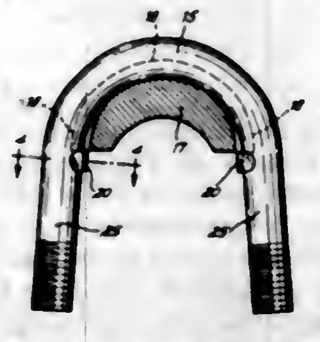
Harold Ammarell Griesemer, Reading, and Donald Martin Large, Temple, Pa., assignors to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 28, 1965, Ser. No. 516,854
9 Claims. (Cl. 29—428)



A method of loading an apertured workholder with a mass of elongated paramagnetic articles, deposited in a fixture having magnets at spaced ends thereof to establish a magnetic field having horizontal lines of force to suspend the articles in a generally horizontal manner against two non-magnetic plates, one at each end of the fixture. One of the plates is moved away from the adjacent magnet and the workholder is inserted between the magnet and the plate. The plate is removed to transfer the articles to the workholder, which is manipulated to align the articles with the apertures and allow the magnet to draw the articles into the workholder.

3,386,157
METHOD OF FABRICATING U-BOLT KEEPER ASSEMBLY

Robert W. Jarvi, Scarboro, Ontario, Canada, assignor to McGraw-Edison Company, Milwaukee, Wis., a corporation of Delaware
Filed June 10, 1963, Ser. No. 286,730
3 Claims. (Cl. 29—458)



3. The method of fabricating a U-bolt keeper assembly comprising: forming a rod into a coplanar configuration with a pair of diverging legs extending from a curved portion; forming an ear on each of said legs on the confronting surfaces thereof adjoining the curved portion; thereafter applying a protective coating to the surface of said U-bolt; assembling the keeper plate adjacent the interior curved surface of said curved portion and drawing said legs toward one another to a substantially parallel disposition wherein said ears at least partially underlie said keeper preventing disassembly of said U-bolt and keeper plate.

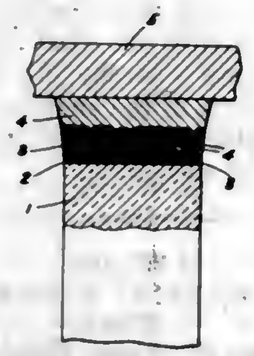
3,386,158
METHOD OF FORMING A REFRACTORY METAL-TO-CERAMIC SEAL

Alfred E. Milch, 461 Palmer Road, Teaneck, N.J. 07666; Richard H. Ahlert, 29 Raymond Ave., Spring Valley, N.Y. 10977; and Joseph J. Lalak, 122 Schrade Road, Briarcliff Manor, N.Y. 10510
No Drawing. Continuation-in-part of application Ser. No. 364,739, May 4, 1964. This application Mar. 28, 1966, Ser. No. 537,649
5 Claims. (Cl. 29—473.1)

1. A method of hermetically joining a refractory ceramic body to a refractory metal surface comprising the steps of forming on a portion of the surface of the ceramic body a tightly adherent spongy layer of a first refractory metal selected from the group consisting of molybdenum, tungsten, and mixtures thereof, applying a layer of a metal alloy selected from the group consisting of an alloy of ruthenium and molybdenum and an alloy of rhodium and molybdenum on the metal covered surface portion of the ceramic, heating the metal coated ceramic with the metal alloy layer thereon in a reducing atmosphere to a temperature substantially below the melting point of said alloy but at a temperature sufficient to fire the alloy into the underlying molybdenum layer, and brazing the so-called metal covered surface of the ceramic body to the refractory metal surface with a brazing alloy having a melting point substantially below that of said metal alloy.

3,386,159
METHOD OF FORMING A REFRACTORY METAL-TO-CERAMIC SEAL

Alfred Milch, Teaneck, N.J., and Joseph J. Lalak, Briarcliff Manor, and Richard H. Ahlert, Spring Valley, N.Y., assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Original application May 4, 1964, Ser. No. 364,739, now Patent No. 3,340,025, dated Sept. 5, 1967. Divided and this application Jan. 24, 1967, Ser. No. 632,843
14 Claims. (Cl. 29—473.1)



1. A method of hermetically joining a refractory ceramic body to a refractory metal surface comprising the steps, forming on a portion of the surface of the ceramic body a tightly-adherent spongy, porous layer of a first refractory metal selected from the group consisting of molybdenum, tungsten and mixtures thereof, applying over the interior and exterior surfaces of the spongy metal layer a second refractory metal selected from the group consisting of rhenium, alloys of ruthenium and molybdenum, and alloys of rhodium and molybdenum which are capable of wetting the first refractory metal, and joining the refractory metal surface to the thus covered surface portion of the ceramic body with a refractory brazing metal.

3,386,160
METHOD OF MANUFACTURING A REFRACTORY METAL-TO-CERAMIC SEAL

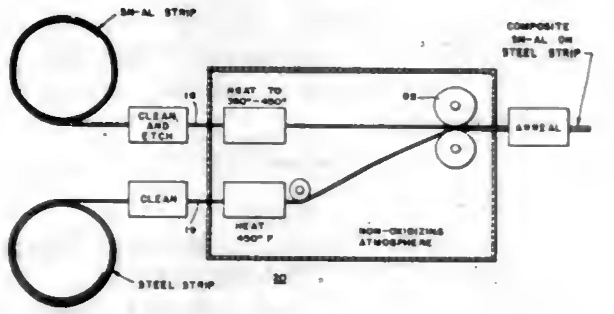
Alfred Milch, Teaneck, N.J., and Joseph J. Lalak, Briarcliff Manor, and Richard H. Ahlert, Spring Valley, N.Y., assignors to North American Philips Co., Inc., New York, N.Y., a corporation of Delaware
No Drawing. Application Oct. 7, 1966, Ser. No. 584,966, now Patent No. 3,366,466, dated Jan. 30, 1968, which is a continuation-in-part of application Ser. No. 364,739, May 4, 1964. Divided and this application Oct. 26, 1967, Ser. No. 678,169
8 Claims. (Cl. 29—473.1)

A method of manufacturing a refractory ceramic-to-metal seal in which the refractory metals tantalum and niobium are joined to a metallized ceramic by means of special alloys containing tantalum and niobium.

3,386,161

METHOD OF MAKING BEARING MATERIAL

Ernst H. Ruf, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed June 24, 1965, Ser. No. 466,665
8 Claims. (Cl. 29—487)

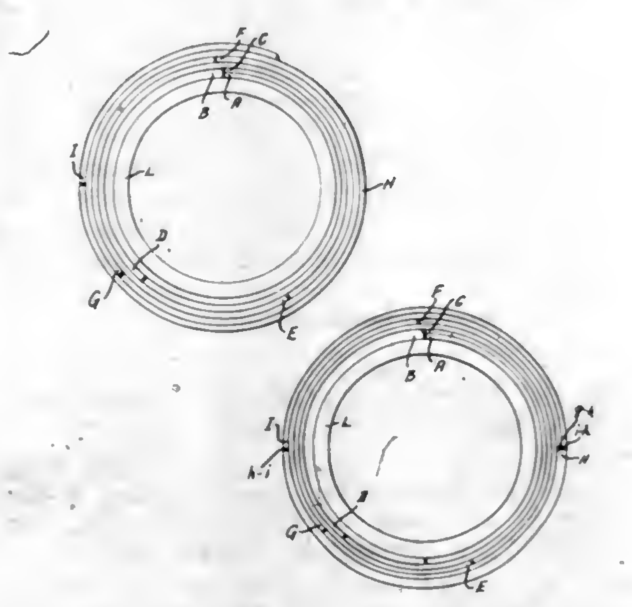


A composite metal strip, comprising a layer of aluminum-tin alloy which is joined to a steel backing by means of a strong coextensive bond, suitable for manufacturing bearings and the like is formed by etching a surface of an annealed aluminum-tin alloy strip to remove substantially all of the tin therefrom, heating the aluminum-tin strip to about 425° F., heating a steel strip to about 450° F., passing the two strips with the etched surface of the aluminum-tin strip against the steel strip between rollers under suitable pressure whereby the tin-aluminum layer is substantially reduced in thickness and a suitable coextensive bond is obtained between the tin-free surface and the surface of the steel layer.

3,386,162

METHOD OF MAKING A MULTI-LAYERED VESSEL

Charles G. Woelfer, St. Louis County, and Albert D. Dohr, St. Louis, Mo., assignors to Nooter Corporation, St. Louis, Mo., a corporation of Missouri
Filed Feb. 28, 1966, Ser. No. 530,704
8 Claims. (Cl. 29—471.1)

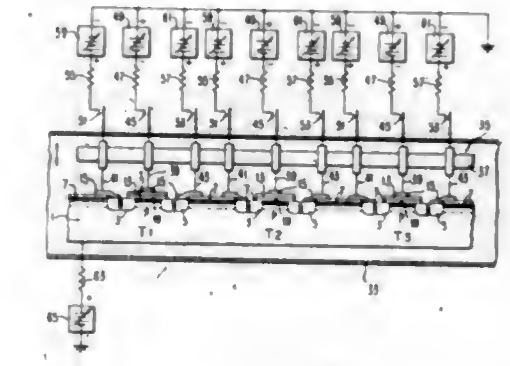


1. In a method of making multi-layer vessels having an inside liner, the steps of applying a plurality of segments having a substantially uniform thickness with a crown extending along the center portion thereof in parallel relation to the initial edge and final edge of each segment and a truncated segment having an initial edge with thickness substantially equal to the thickness of said other segments and increasing to a final edge having a thickness substantially twice the thickness of said other segments, applying said truncated segment as one of the first segments applied to said vessel so that truncated segment and at least one of said segments of uniform thickness extend completely around said liner outwardly thereof, the crown of said segment of uniform thickness extending parallel to the axis of the vessel, then applying said segments of substantially uniform thickness in spiral fashion to the multi-layer vessel being formed with their crowns parallel to the axis of the vessel to build up a plurality of segment thicknesses until the desired wall thickness of the vessel is attained.

3,386,163

METHOD FOR FABRICATING INSULATED-GATE FIELD EFFECT TRANSISTOR

Andrew E. Brennemann, Chappaqua, Donald P. Seraphim, Bedford Hills, and Sabih Tansal, Jackson Heights, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Aug. 26, 1964, Ser. No. 392,144
20 Claims. (Cl. 29—571)



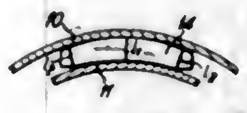
12. The method of controlling carrier density along the narrow surface portion of a semiconductor body at a semiconductor body-insulating layer interface, said carrier density being determined, in part, by space charge effects due to oxide-ion vacancies in said oxide layer, said method including the steps of forming a layer of impurity material over the surface of said oxide layer, diffusing said impurity material into at least a portion of said insualting layer, said impurity material when diffused into said insulating layer being charged such as to compensate the charge of said vacancies, and subjecting said insulating layer to electrical fields while maintained at an elevated temperature so as to control the distribution of asid impurity material and said vacancies in the lattice of said insulating layer.

3,386,164

COMPENSATING FOR THE SINTERING DISTORTION OF ARCUATE MAGNETIC MEMBERS AND ASSEMBLING SAME BETWEEN ARCUATE ROTOR MEMBERS

Gerhard Weitbrecht, Stuttgart-Botnang, Germany, assignor to Robert Bosch G.m.b.H., Stuttgart, Germany
Original application Dec. 4, 1962, Ser. No. 242,247, now Patent No. 3,234,416, dated Feb. 8, 1966. Divided and this application Aug. 18, 1964, Ser. No. 390,421
Claims priority, application Germany, Dec. 9, 1961, B 65,116
4 Claims. (Cl. 29—598)

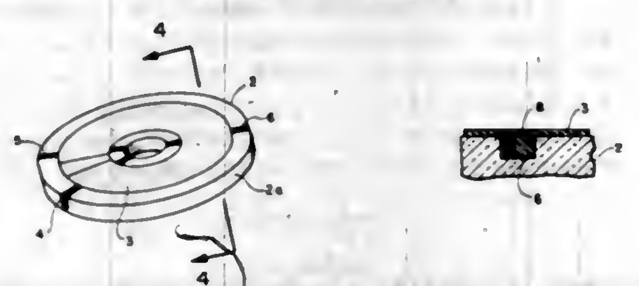
1. A method of manufacturing a magnetic rotor, comprising the steps of: manufacturing an annular support member having a cylindrical concave inner surface of a predetermined first radius; making a pole member shaped substantially as a segment of a cylinder and having one convex surface of a predetermined second radius smaller than said first radius; forming a magnet member blank having an outer part-cylindrical curved face of a third radius only slightly differing from said first radius but substantially larger than said second radius, and an inner part-cylindrical curved face having a fourth radius slightly larger than said second radius but substantially smaller than said first radius, said magnet member blank being composed of a center portion having a radial thickness substantially equal to the difference between said first and second radii and two end portions at opposite sides of said center portion and each having a radial thickness which is smaller than the difference between said first and second radii; subjecting said magnet member blank to a treatment during which said blank is slightly deformed in its curvature in such a manner as to obtain a finished magnet member the radius of the outer face of which does not exceed said first radius of said inner surface of said support member and the radius of the inner surface of which is at least equal to said second radius of the surface of said pole member; and concentrically assembling said pole member within said annular support member with said finished magnet member, the latter being interposed between said inner surface of said annular support member and said outer surface of said pole member so that, due to the radial thickness of said center portion the said center portion in the finished magnetic rotor assembly contacts both said surfaces of said support member and of said pole member, respectively, while any space that may be left between said surfaces and said faces of the magnet member will be restricted to said end portions of said magnet member due to the smaller radial thickness of said end portions.



3,386,165

METHOD OF MAKING CERMET RESISTANCE ELEMENT AND TERMINAL CONNECTIONS THEREFOR

Donald A. Bruhl, Jr., Whittier, and William E. Counts, Anaheim, Calif., assignors to Beckman Instruments, Inc., a corporation of California
Original application Feb. 1, 1963, Ser. No. 255,575. Divided and this application Mar. 11, 1965, Ser. No. 443,757
4 Claims. (Cl. 29—621)

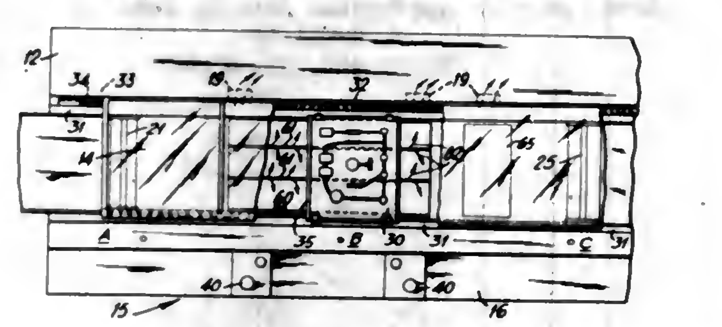


Formation of a low resistance junction between a conductor lead and a cermet resistance element deposited on a ceramic substrate including the formation of a fused metal-glass layer between the interface portions of the conductor lead and the adjacent cermet resistance element deposited on the substrate, the metal-glass layer having substantially greater proportion by weight of metal constituent than glass constituent.

3,386,166

METHOD AND APPARATUS FOR SOLDERING PRINTED CIRCUIT BOARDS

Louis V. Tardoskegyi, Montreal, Quebec, Canada, assignor to Electrovert Manufacturing Co. Ltd., Montreal, Quebec, Canada
Filed Apr. 7, 1965, Ser. No. 446,220
19 Claims. (Cl. 29—625)

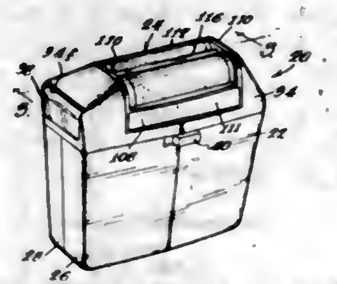


Apparatus for fluxing and soldering printed circuit boards is disclosed as including relatively elongated guide rail means defining a path of travel for printed circuit boards through a fluxing station, a preheating station and a soldering station, with the fluxing station including means for producing a standing wave of flux and the soldering station including means for producing a standing wave of molten solder. The heating station includes a flat plate forming a source of black infrared energy and formed with slots for flow of hot air therethrough so that a combined heating by radiant energy and by convection heating is effected. This not only evaporates the solvent for the solder but also sweeps away the vapors resulting from such evaporation of the solvent. A second and subsequent heating station is provided which is again a source of infrared radiant energy but a more intense source than a first source. This heats the printed circuit boards to prevent thermal shock when the latter enter the soldering wave. A feature of the disclosure is that the relatively elongated guide rails are formed as successive individual rail sections, and individual height adjustment means are provided at the ends of the several rail sections. Thereby not only the height of the rails at the fluxing and soldering stations but also the angle of inclination of the rails at these stations can be adjusted, to adjust the depth of immersion of the printed circuit boards in the flux wave and in the solder wave, and to adjust the angle of entry and the angle of exit of printed circuit boards relattve to these two waves.

3,386,167

ELECTRIC DRY SHAVER WITH DETACHABLE SHAVING HEAD

Francis J. Schuessler, Chicago, Ill., assignor to Sunbeam Corporation, Chicago, Ill., a corporation of Illinois
Filed Mar. 20, 1967, Ser. No. 624,266
13 Claims. (Cl. 30—34.1)



An electric dry shaver having a motor enclosing housing formed by a pair of cup-shaped members and a cover superimposed over the long hair trimmer and adapted to detachably receive an open frame of a shaving head. A channel-shaped guard is slidably received on the shaving head with portions overlying and protecting said shaving head and the long hair trimmer.

3,386,168

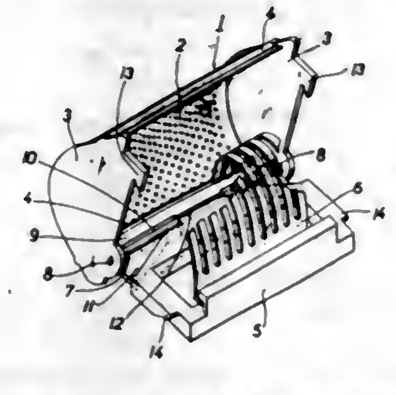
SHAVING HEAD FOR A DRY SHAVER HAVING A CUTTER FOIL MOUNTED ON A PIVOTAL FRAME

Aldo Loner, Carinthia, Austria, assignor to Firma Carinthia Elektrogerate Geselischaft m.b.H., Carinthia, Austria

Filed June 13, 1966, Ser. No. 557,260

Claims priority, application Austria, June 15, 1965, A 5,422/65

4 Claims. (Cl. 30—43.92)



A shaving head for a dry shaver in which a frame has a movable cutter arranged under a cutter foil supported in the frame and a spring bar is supported over a part of its length by bearing means and locking members on the frame adapted to lock the frame under a spring force.

3,386,169

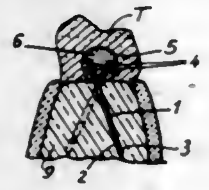
METHOD AND MEANS FOR ATTACHING TEETH AND THE LIKE TO THE MAXILLAR BONE

Jacques Scialom, 52 Quai du Petit Parc,
Saint Maur, Val-de-Marne, France

Filed Jan. 22, 1963, Ser. No. 253,113

Claims priority, application France, Jan. 26, 1962, 886,088; Mar. 2, 1962, 889,782

16 Claims. (Cl. 32—10)



2. A method of attaching a loose tooth with the aid of anchoring post means to a maxillary bone, comprising the steps of: producing a recess in a side surface of the loose tooth portion projecting from the maxillary bone and drilling from said recesses through the root of the tooth and into the maxillary bone at least one channel of predetermined diameter, which channel passes through the root in a position of other-than alignment with the root canal and which is inclined at an acute angle of at least 5° against the axis of the tooth, fixing in said channel an anchoring post means in such a position that an end portion thereof projects outwardly into said recess and attaching said tooth to said outwardly projecting portion of said anchoring post means by filling said recess with cement material surrounding said projecting portion of said anchoring post means.

3,386,170

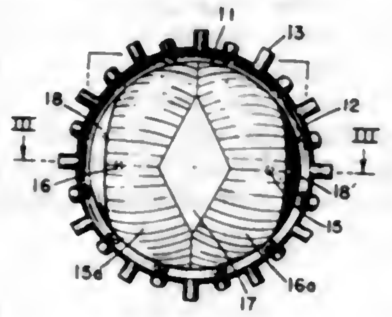
INERTIAL REFERENCE DEVICE

Robert J. von Bose, Arlington, Tex., assignor to Ling-Temco-Vought, Inc., Dallas, Tex., a corporation of Delaware

Filed Mar. 30, 1964, Ser. No. 355,850

6 Claims. (Cl. 33—1)

An inertial reference device operable when a spherical reference element is static or is moving within a spherical cavity of a mounting structure, the outer surface of the reference element having distinctive areas with appropriate properties for reflecting polarized light from the surface, the planes of polarization of said reflected light being aligned with one or more reference points on the reference element, and further including a plurality of sensors on the mounting structure, each having a polarized analyzer, a photocell, and a Faraday light rotation cell for providing an indication of the orientation of the reflected polarized light with respect to the polarized analyzers, and further including a plurality of areas with distinctive reflecting properties that permit identification of a reference point which is located by virtue of the polarizing areas of the reference element, and a computer means for determining by spherical triangulation the exact location of the reference element with respect to the mounting structure.



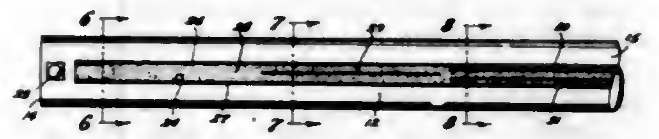
3,386,171

BINOCULAR RIB SIGHT

George C. Luebkeman, Cincinnati, Ohio
(115 Mt. Nebo Road, Cleves, Ohio 45002)

Filed Dec. 28, 1965, Ser. No. 516,869

3 Claims. (Cl. 33—47)



1. A binocular sight for the barrels of firearms comprising an elongated rib mounted upon the barrel and extending rearwardly from the muzzle end portion of the barrel, said rib being bisected longitudinally by a vertical plane containing the center axis of the barrel and having a flat upper surface lying in the plane normal to said vertical plane, a longitudinal, laterally restricted and upwardly opening groove formed in the flat surface of the rib and extending from the rear end portion of the rib through the muzzle end thereof, said groove having a trough portion and opposed sides projecting upwardly from the edges of the trough portion, a continuous, elongated and laterally restricted aiming eye-attractive area disposed wholly within the trough portion of the groove, and an upstanding, longitudinally extending fin disposed in and laterally dividing the groove whereby the upstanding sides of the groove and the fin shield the aiming eye-attractive area from the non-aiming eye of the user.

3,386,172

WEAPON SIGHT LEAD DETERMINING DEVICE

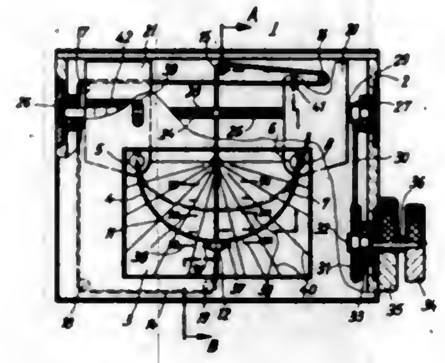
Ulf Wossagk, Munich, Germany, assignor to Bolkow Gesellschaft mit beschrankter Haftung, Munich, Germany

Filed July 7, 1965, Ser. No. 470,165

Claims priority, application Germany, July 11, 1964, B 77,635

21 Claims. (Cl. 33—49)

A device for determining the lead for sighting upon a flying target, in which a group of target flight direction lines are overlaid by an adjustable lead curve constituted by a flexible elastic rod or loop. The curvature and length of the rod or loop is regulated by adjusting the rotational position of the lateral holding pins and the vertical position of an intermediate guide member according to target velocity and weapon characteristics, respectively.



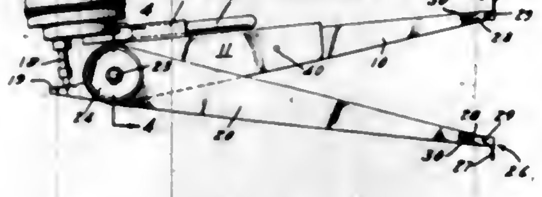
3,386,173

DIAL READING CALIPERS

Alexander Enrico Kiralfy, 823 Wellesley Ave.,
Los Angeles, Calif. 90049

Filed June 25, 1965, Ser. No. 466,916

10 Claims. (Cl. 33—148)



1. A dial reading calipers comprising an elongated inner leg disposed within a shorter U-shaped outer leg, a pivot pin mounting said inner leg for pivotal movement with respect to said outer leg, an elongated spring connected at one end thereof to one end of said inner leg, said spring extending substantially parallel to the upper edge of said inner leg, the opposite end of said spring being free and bearing against the inside of said outer leg to normally urge the ends of said legs carrying said spring apart from each other, a dial indicator gauge mounted on said outer leg, said gauge having a control pin, a flange carried by the end of said inner leg adjacent to said gauge, said flange engaging said control pin at substantially a right angle, a third leg connected to said outer leg adjacent to said gauge, a fastening member extending through all three of said legs, said inner leg having a slot surrounding said fastening member whereby said inner leg may be pivoted to a limited degree with respect to said outer leg, a manually operated nut threaded on said fastening member, said nut when loosened permitting pivotal movement of said third leg with respect to said inner and outer legs, including reversing the positions of said legs with respect to each other to change between measuring inside and outside dimensions, said nut when tightened frictionally engaging said third leg to prevent pivotal movement thereof with respect to said inner and outer legs, and a pair of work engaging feet, one carried by the end of said inner leg remote from said gauge and the other carried by the end of said third leg remote from said gauge, the distance between said pivot pin and said control pin being substantially equal to the distance between said pivot pin and the foot carried by said inner leg.

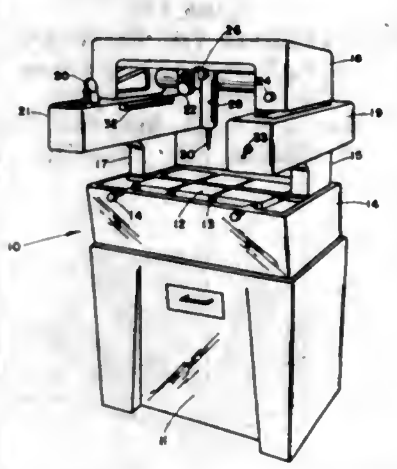
3,386,174

COORDINATE MEASURING MACHINE

Robert I. Leach, Clinton, and John H. Lanahan, Whitesboro, N.Y., assignors to The Bendix Corporation, Utica, N.Y., a corporation of Delaware

Filed July 1, 1965, Ser. No. 468,736

6 Claims. (Cl. 33—174)



A mechanical coordinate measuring machine having a first frame rigidly attached to a work support means and composed of a pair of parallel members, one of which is tubular and the other of which is an elongated rectangular rail. This frame supports a second frame, movable thereon in a direction parallel to the first pair of rail members and composed of a similar pair of parallel members perpendicular to the first pair. The position of the second frame with respect to the first is controlled by a vernier positioning control using a pivoted gripping bracket which grips the rail of the first frame and pivots to precisely position the second frame. The second frame similarly supports a probe holder which is, in turn, free to move thereon in a second direction which is perpendicular to the direction in which the second frame is free to move and which includes a similar vernier positioning control.

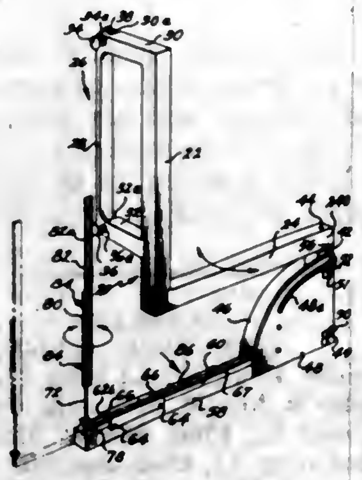
3,386,175

GAUGE FOR USE IN SETTING FORMS

William C. Stockman, Fountain Valley, Calif., assignor to Retlaw Enterprises, Inc., Burbank, Calif., a corporation of California

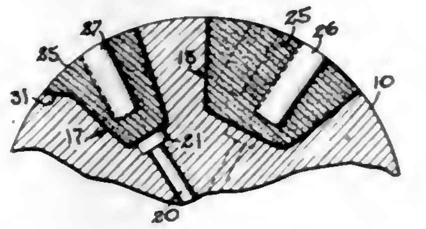
Original application Jan. 2, 1962, Ser. No. 163,396, now Patent No. 3,235,966, dated Feb. 22, 1966. Divided and this application Aug. 23, 1965, Ser. No. 481,820

3 Claims. (Cl. 33—174)



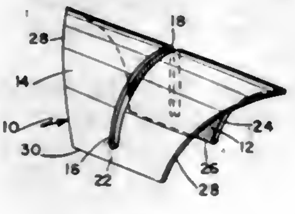
A gauge for establishing the locations of longitudinally spaced, successive stations on a elongated body relative to a vertical plane and relative to a horizontal plane, and also for establishing the angular inclination of the stations about a longitudinal axis, the gauge including a frame for attachment to the body; a first arm pivoted to the frame for establishing the angular inclination of the frame; and a second arm coupled to the first arm in such a way that one extremity of the second arm can be moved along horizontal and vertical axes to provide indications respecting the proximity of such extremity to the vertical and horizontal planes of interest.

3,386,176
CUSTOM FITTING OF BOWLING BALLS
Russell P. Lotta, 3535 Latham St., Rockford, Ill. 61103
Filed Dec. 27, 1965, Ser. No. 516,477
5 Claims. (Cl. 33—174)



A master ball for use in locating finger holes in a blank ball and having two recesses in which cups are fitted and held by bolts extending through the ball and threaded into the bottoms of the cups. The cups are filled with wood fiber plastic in which the intended users fingers are pressed and adjusted to bowling positions, the fingers being encased in finger cups which are left in the plastic when the fingers are withdrawn. Then the excess plastic is scraped away, the plastic in the cups is allowed to harden, and the user can test the ball by actual bowling before the master ball is used as the model for drilling an actual ball.

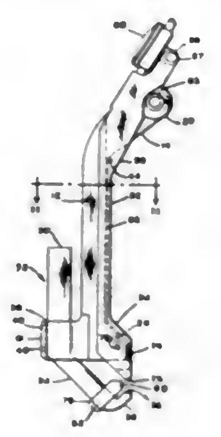
3,386,177
MARKING TOOL FOR MOLDING
George H. Von Koscielski, 255 N. 1st St., El Cajon, Calif. 92021
Filed May 8, 1967, Ser. No. 636,815
5 Claims. (Cl. 33—174)



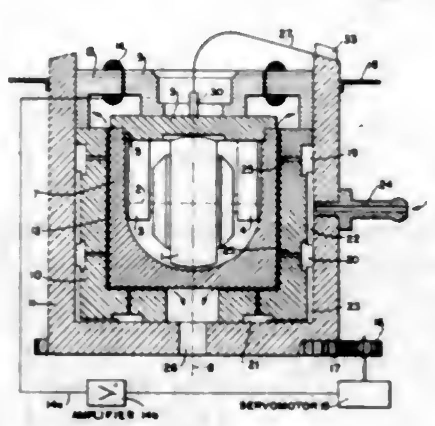
The tool is a simple, unitary channel-like element shaped to fit the cross section of a molding, specifically quarter-round molding, and has guide edge portions by which the molding can be marked for a square end cut, a miter cut in either direction, or an arcuate undercut for fitting one piece of molding perpendicular to an uncut piece.

3,386,178
GRINDING GAGE
Philip S. Arnold, Flint, Mich.; John M. Wright, executor of said Philip S. Arnold, deceased; and Kent B. Arnold, 3321 E. Court St., Flint, Mich. 48506
Filed Aug. 11, 1965, Ser. No. 478,856
1 Claim. (Cl. 33—178)

A gage for production grinding operations to determine when the desired diameter of a workpiece has been achieved. The gage includes a frame element adapted for pivotal mounting to the grinding machine and carrying one of the two contact points necessary for determining the diameter of the workpiece. A plunger element is slidably mounted with respect to the frame element and is provided with the other contact point in engagement with the workpiece. An indicator has a dial for indicating the relative distance between the contact points and thus the diameter of the workpiece.



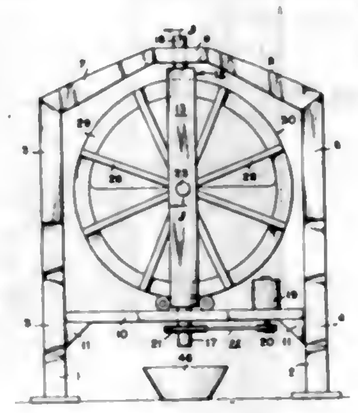
3,386,179
GYROCOMPASS
Dieter Thomaier, Heidelberg, and Heinz Riethmüller, Heidelberg-Kirchheim, Germany, assignors to TELDIX Luftfahrt-Ausrüstungs G.m.b.H., Heidelberg-Wieblingen, Germany
Filed Mar. 11, 1965, Ser. No. 438,977
Claims priority, application Germany, Mar. 14, 1964, T 25,820
9 Claims. (Cl. 33—226)



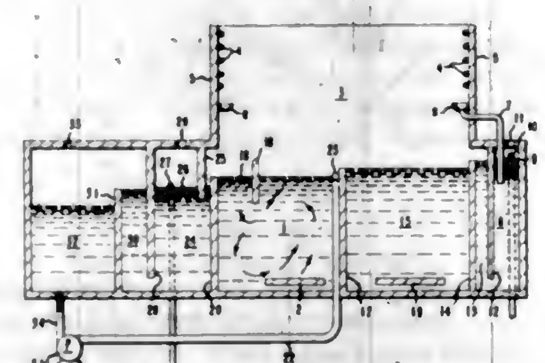
A gyrocompass having a rotor element disposed in a first frame in the form of a cylinder, a second frame in the form of a cup-shaped housing in which the cylinder is disposed to define at least one gas cushion between the cylinder and the housing, means for rotating the housing so as to bring it into alignment with the cylinder, and mechanical spring means elastically interconnecting the rotor element and the housing, the spring means being conductive leaf springs which are connected for opposing rotation of the rotor element relative to the housing and for supplying electrical energy to the rotor element.

3,386,180
CONTINUOUS CENTRIFUGAL DEVICE
Gunther W. Balz and Forrest P. Leipold, Kalamazoo, Mich., assignors to Roto-Finish Company, Kalamazoo, Mich., a corporation of Michigan
Filed Feb. 16, 1966, Ser. No. 538,120
14 Claims. (Cl. 34—8)

A centrifugal apparatus for treating discrete products such as articles or materials having a frame and subassembly mounted on the frame adapted to rotate about an axis, loading and unloading stations disposed at the axis, and a conveyor assembly forming a portion of the rotatable subassembly adapted to transport or actively convey the articles to a point spaced apart from the axis to cause the articles or materials to revolve about the axis thereby subjecting them to centrifugal force for treating the articles or materials with a substance or removing a substance therefrom, and transporting or actively conveying the articles or materials back to the axis to be discharged without stopping the apparatus.



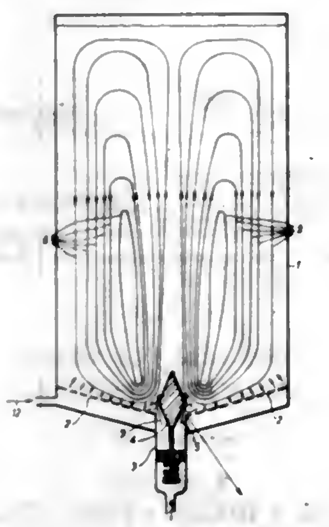
3,386,181
METHOD OF REMOVING WATER AND APPARATUS THEREFOR
Warren R. Steinacker, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Nov. 15, 1966, Ser. No. 594,606
11 Claims. (Cl. 34—9)



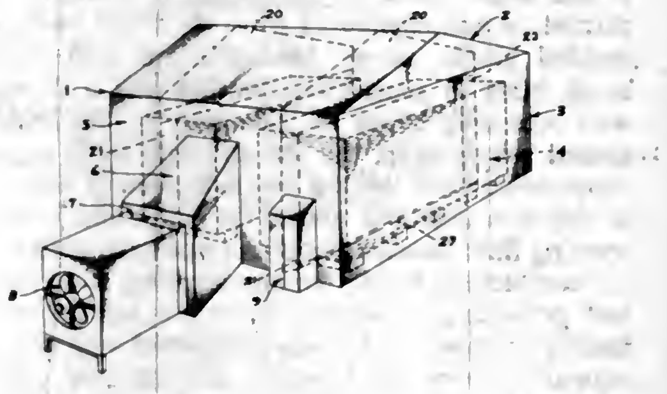
A continuous method of removing water from the surface of non-absorbent articles by immersing them in a bath containing as its principal component a water-immiscible solvent which does not form an azetrope containing more than about 4% water or boiling more than about 8° C. below the boiling point of the solvent in which water is removed from the bath other than by vaporization. An apparatus for the removal of water comprising a sump containing a substantially vertical baffle which assists in removing water from the sump.

3,386,182
METHOD OF AND APPARATUS FOR THE MIXING, DRYING OR MOISTENING BY PNEUMATIC MEANS OF MATERIAL IN POWDER FORM
Axel Lippert, Krefeld-Bockum, Germany, assignor to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany
Filed Sept. 13, 1966, Ser. No. 579,052
Claims priority, application Germany, Sept. 18, 1965, F 47,240
8 Claims. (Cl. 34—10)

Mixing, drying or wetting of pulverulent or granular particle material by fluidized bed operation using fluidizing gas jets and at least one propellant gas jet continuously injected in unidirectional flow with the fluidizing gas jets but at a substantially higher velocity to produce regular and uniform circulation of the bed material and intensive mixing thereof under the influence of the inherent shearing forces produced, and a fluidizing chamber for carrying out the foregoing which has a propellant gas jet supply conduit opening into the chamber bottom and containing at the opening a spring-loaded check valve.



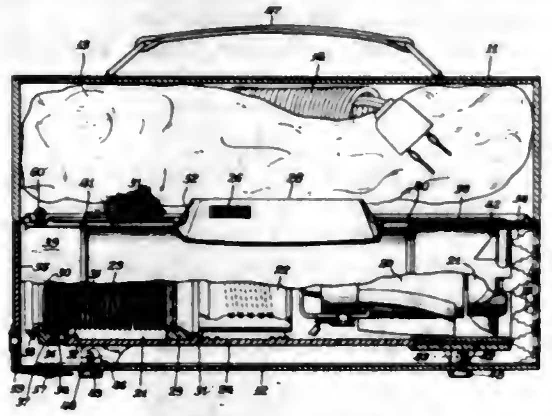
3,386,183
LUMBER DRYER AND DRYING METHOD
Hugh W. Reynolds, Longview, Wash., assignor to Weyerhaeuser Company, Tacoma, Wash., a corporation of Washington
Continuation of application Ser. No. 341,684, Jan. 31, 1964. This application Oct. 3, 1966, Ser. No. 584,003
4 Claims. (Cl. 34—48)



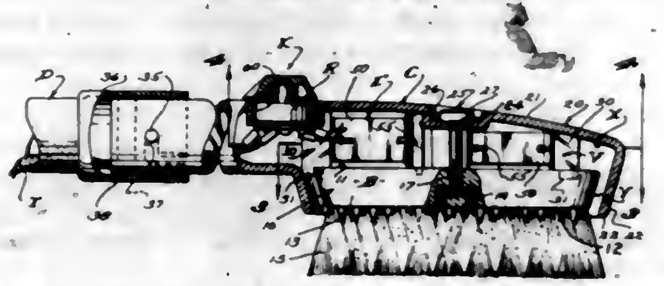
A process and apparatus suitable for drying lumber which utilizes an enclosure for the lumber, a blower, heating means for heating the incoming ambient air, sensing means for measuring wet-bulb temperature in the incoming air, sensing means for measuring the dry-bulb temperature of the drying air, and control means for maintaining a constant wet-bulb depression by controlling the heating means without changing the ambient water content of the air. With this equipment it is possible to dry lumber utilizing a constant wet-bulb depression of the drying medium without changing the ambient water content.

3,386,184
HAIR DRYER CASE WITH COLLAPSIBLE HOSE AND CAP STORAGE MEANS
George M. Ponczek, Chicago, Ill., assignor to Sunbeam Corporation, Chicago, Ill., a corporation of Illinois
Filed Aug. 8, 1966, Ser. No. 571,078
4 Claims. (Cl. 34—99)

A compact portable hair dryer case having a pair of abutting case halves one of which receives a combination motor, blower, and heater unit with a collapsible hose stored therein and the other of which provides storage for a power cord and a hat attachable to said hose.



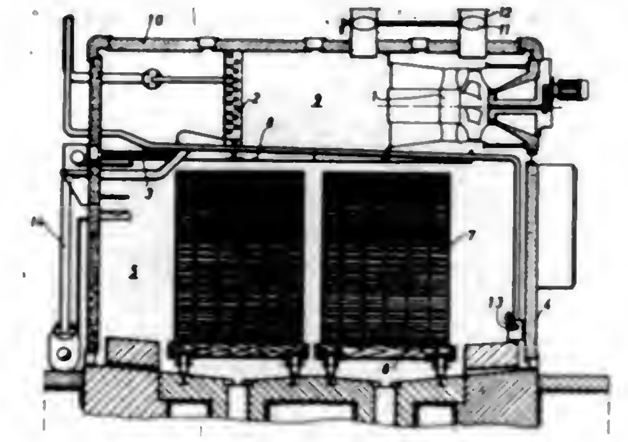
3,386,185
HEATED AIR CIRCULATING HAIR BRUSH
Elena Angelillo, 4958 Loleta Ave.,
Los Angeles, Calif. 90041
Filed Sept. 13, 1966, Ser. No. 578,657
10 Claims. (Cl. 34—97)



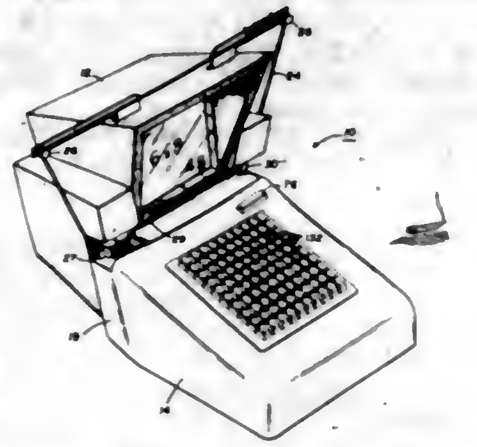
A hair brush with heated air circulating means including, a horizontal brush body having a flat top surface and a side edge about its perimeter, a plurality of bristles carried by and depending from the brush body, a unitary, molded plastic carrier having a top wall overlying the brush body in spaced relationship and a depending side wall occurring about the side edge of the brush body in spaced relationship, the top and side walls of the carrier cooperating with the top and side edge of the brush body to define a chamber above the body and a downwardly opening flow passage about the body, an elongate tubular air conducting handle communicating with the chamber and projecting outwardly from the carrier, an elongate flexible air conducting hose connected with and extending outwardly from the handle and connected with a power driven blower to conduct air under pressure unto the chamber for discharge through said passage, vane means formed on and depending from the top wall of the carrier into the chamber and arranged to direct the air for substantially uniform distribution through said passage and adapted to engage the top of the brush body to orient the brush in the carrier and heating means within the chamber to heat air flowing into and through the chamber.

3,386,186
APPARATUS FOR CONDUCTING A GASEOUS DRYING MEDIUM
Johann Tiefenbach, Lichtenau, Wurttemberg, Germany,
assignor to Robert Hildebrand Maschinenbau G.m.b.H.,
Oberboihingen, Wurttemberg, Germany
Filed Jan. 24, 1966, Ser. No. 522,531
Claims priority, application Germany, Feb. 2, 1965,
H 55,028
5 Claims. (Cl. 34—191)

A dryer for use in connection with cut wood and in which the drying medium is circulated by means of a blower through guide baffles and through the material to be dried. The dryer also includes various elements connecting the drive means to the baffle elements to oscillate the same and means for varying the oscillating movements.



3,386,187
TEACHING MACHINE
Jack S. Kilby, Dallas, Tex., assignor to Texas Instruments
Incorporated, Dallas, Tex., a corporation of Delaware
Filed Feb. 28, 1966, Ser. No. 530,481
8 Claims. (Cl. 35—9)



1. In a teaching machine, the combination of:

film means having a series of frames, each frame having a first image area for a written question and a second image area comprised of a number of subareas for a programmed answer,

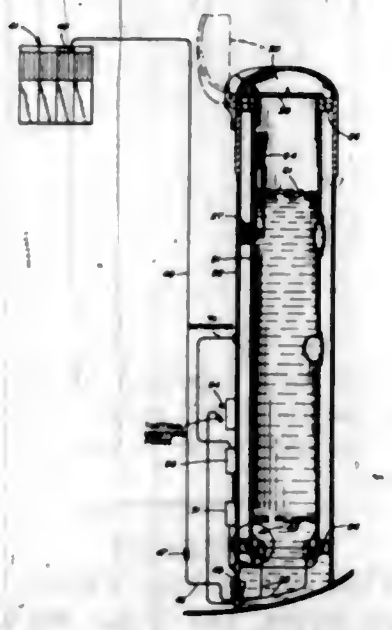
projection means for projecting the first and second image areas of a frame positioned at a projection station including electrically operated indexing means for moving the next frame to the projection station when energized,

display means for displaying the image projected from the first image area, and

multiple choice comparison means comprising a number of photosensitive switching means corresponding to the number of subareas electrically connected in a series circuit for energizing the indexing means, each photosentitive switching means being positioned to be illuminated by light projected through the corresponding subareas, the photosensitive switching means being essentially nonconductive when in a first state of illumination and conductive when in a second state of illumination, and a manually operable switch means connected in shunt around each photosensitive switching means,

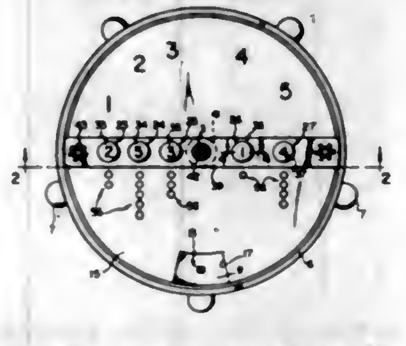
said multiple choice comparison means is programmed by opaquing out one or more of the subareas so as to render the photosensitive switching means corresponding to the correct answer nonconductive, closure of the manually operable switch means connected in shunt around the nonconductive photosensitive switching means causing the indexing means to index the next frame into position thereby indicating a correct answer by the student.

3,386,188
MISSILE LAUNCH SIMULATOR
Maurice H. Baller, Chevy Chase, Md., assignor to the
United States of America as represented by the Secretary of the Navy
Filed Aug. 23, 1965, Ser. No. 481,990
5 Claims. (Cl. 35—25)



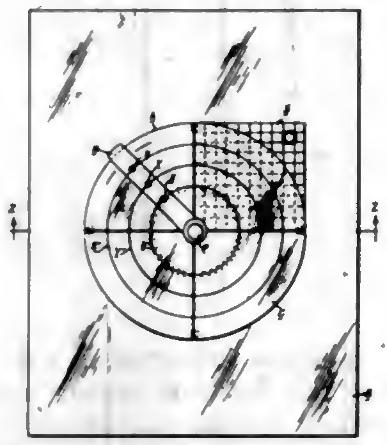
A method for simulating a missile launch in an underwater tube type missile system wherein the simulated launch provides a method of conducting launch and post launch operation sequences by filling the missile launch tube with water of a weight equal to that of an operational missile and then allowing an additional amount of water into the tube to simulate post launch conditions.

3,386,189
EDUCATIONAL DEVICE
Eunice C. Russell, 10670 Dixie Highway,
Birch Run, Mich. 48415
Filed Sept. 26, 1966, Ser. No. 582,128
10 Claims. (Cl. 35—31)



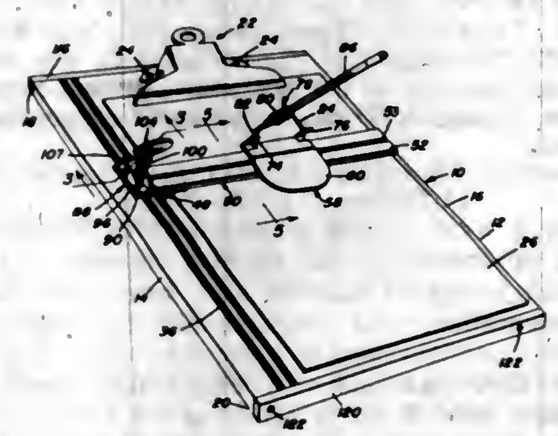
1. An educational device comprising first and second overlying members; means mounting said members for relative rotation; a plurality of latch members mounted on one of said members; means biasing said latch members toward the other of said members; a plurality of sockets in said other of said members corresponding to the number of latch members and so arranged relatively thereto that only one of said latch members may be received in a socket at any one relative position of said members; and latch release means carried by the other of said members and operable to remove said one latch member from its associated socket whereby said first and second members may be rotated relatively to one another.

3,386,190
DEVICE AND METHOD FOR DEMONSTRATING THE AREA OF A CIRCLE
Cornelius Savin, Westbury, Alan G. Vorwald, Bethpage,
and Christopher R. Vagts, Huntington, N.Y., assignors
to Antran Corporation, a corporation of New York
Filed Oct. 22, 1965, Ser. No. 500,779
11 Claims. (Cl. 35—24)



An animated transparency device and method for demonstrating visually the characteristics and area of a circle comprising a circular member, a square grid member adapted to be disposed under a quadrant of said circular member and a rotatable arm member pivotally attached to said circular member centrally thereof, said rotatable member having a plurality of holes arranged therealong in which a marking instrument is adapted to be inserted for inscribing circles on said circular member, all of said members being made of a transparent material of identifying and contrasting colors adapted to be projected on a screen by an overhead projector.

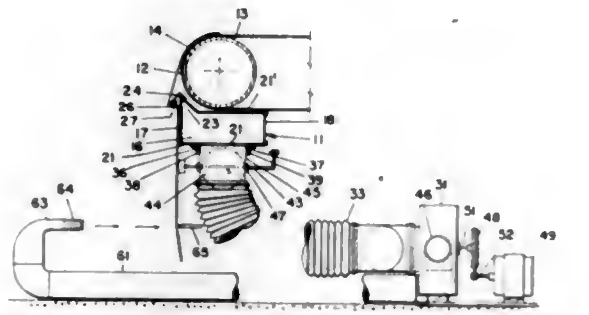
3,386,191
WRITING GUIDE
Maurice J. Michel, 5973 Canal Blvd.,
New Orleans, La. 70119
Filed Nov. 18, 1965, Ser. No. 508,526
8 Claims. (Cl. 35—38)



A writing aid for the handicapped and the blind in particular including a writing board having a carrier movable vertically therealong through a gear and rack arrangement whereby a movement of a control lever advances the carrier a predetermined amount down the board. The carrier in turn mounts a horizontally extending track means upon which a hand support slides. The hand support includes a writing implement holder which receives and mounts a writing implement for access thereto by the hand on the hand support.

3,386,192
EQUIPMENT FOR FEEDING LAUNDRY TO FLATWORK IRONER

Ray P. Fornaciari, 1066 Francisco St.
San Francisco, Calif. 94109
Filed Feb. 7, 1966, Ser. No. 525,581
2 Claims. (Cl. 38—143)



The present invention is directed to a removable adjustable attachment for flatwork ironers and comprises a manifold removably secured underneath the leading edge of the feed member of the flatwork ironer and in close proximity thereto; said manifold having openings in the bottom thereof in communication with suction means for causing a continuous flow of air to be drawn into and out of said manifold, and said manifold having a series of openings in the front wall thereof for admitting air from the atmosphere into the manifold, a guard and stripper element on the top of the manifold projecting forwardly and downwardly therefrom to define a transversely extending shallow pocket between said guard and stripper element and said front wall of said manifold, said suction means in operation creating a vacuum in said shallow pocket for drawing depending portions of the laundry articles thereinto during advancement thereof to the presser units of the ironer to retard such advancement and to be engaged by said guard and stripper element whereby any folds or wrinkles in the laundry articles are removed and the articles are maintained smooth as they are fed to the presser units of the ironer.

3,386,193
DRY SHAPING OF CELLULOSIC FABRICS AT TEMPERATURES GREATER THAN 400° F. AND PRESSURES GREATER THAN 300 P.S.I.

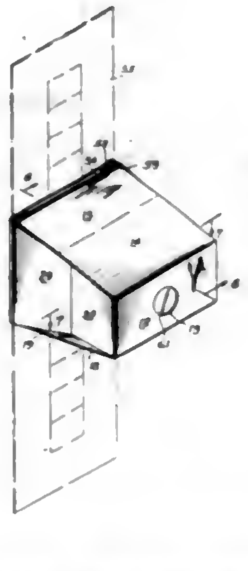
Charles G. Tewksbury, Silver Spring, Md., and Bernard G. Kidda, Washington, D.C., assignors to The Cotton Producers Institute of the National Cotton Council of America, Memphis, Tenn., a non-profit corporation of Tennessee
No Drawing. Filed July 24, 1964, Ser. No. 385,080
11 Claims. (Cl. 38—144)

1. A dry process for imparting a durable configuration to a fabric possessing a cellulosic fiber content of at least 35%, which comprises shaping said fabric into the desired configuration, and mechanically dry pressing it while in said configuration at a pressure above 300 p.s.i. and below 1200 p.s.i. and at a temperature above 400° F. and below 600° F. for a period in the range of from about 1 second to about 5 minutes until said fabric is durably set in the desired configuration.

3,386,194
OPTICAL VIEWER

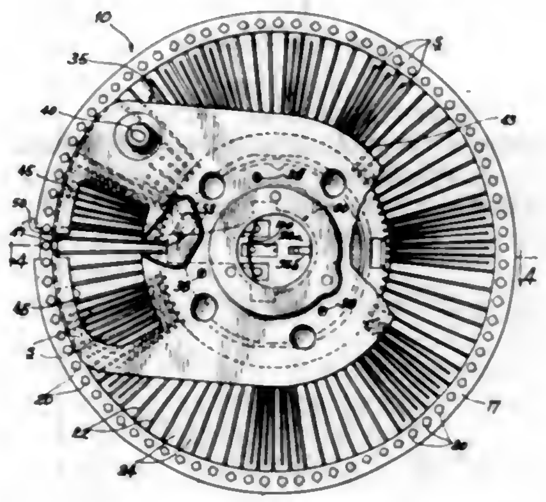
Robert Kaufman, New York, N.Y., assignor to The Taylor-Merchant Corporation, New York, N.Y., a corporation of New York
Filed Apr. 5, 1965, Ser. No. 445,520
2 Claims. (Cl. 40—63)

A foldable optical viewer of the type having a lense carrying rear panel and a front panel separated by foldable top, bottom and side panels in which the viewer includes a pocket defining panel which extends from the top panel and overlies the front panel without being secured thereto to form a pocket between the pocket defining panel and the front panel. The viewer may include a film strip aperture in the bottom panel at the base of the pocket.



3,386,195
SLIDE TRAY FOR PROJECTOR

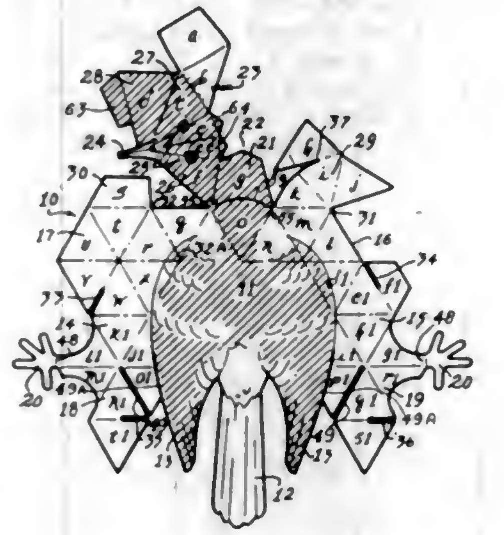
William Bruce Pester, Ann Arbor, Mich., and Albert J. Schwarz, Lincolnwood, and Charles F. Seltz, Oak Park, Ill., assignors to Sears, Roebuck and Co., Chicago, Ill., a corporation of New York
Filed Nov. 28, 1966, Ser. No. 597,367
8 Claims. (Cl. 40—79)



A circular magazine for a slide projector, suitable for use apart from a projector for storage of a large number of transparencies, mountable on or detachable from the projector in any angular position, and including a detachable translucent ring serving a dual function, i.e., of retaining the slides in the magazine and also, by means of numerals on the ring, of indexing the slides stored in the magazine. The magazine has a skeletonized base plate, permitting forced ventilation of the slides and also illumination of the indexing ring from the projector light source. The base plate is slotted to permit passage of a slide from the magazine to projection position, and this slot is closed by a spring-biased gate when the magazine is removed from the projector. Said gate is automatically retracted when the magazine is mounted on the projector.

3,386,196
SHEET BLANKS FOR CONSTRUCTION OF THREE-DIMENSIONAL REPRESENTATIONS OF BIRD SPECIES

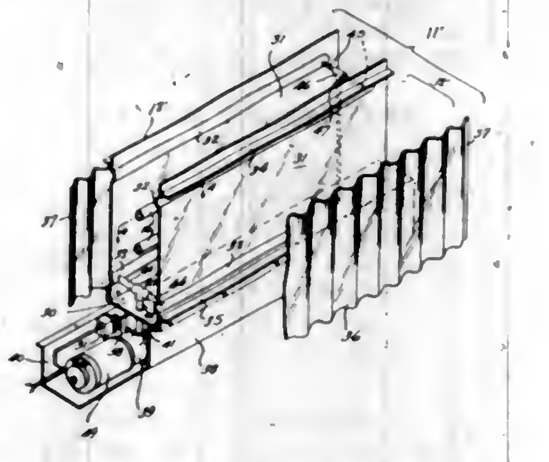
Dante Razzolini, 24 Mountain St.,
Aylmer, Quebec, Canada
Continuation-in-part of application Ser. No. 509,504, Nov. 24, 1965. This application July 22, 1966, Ser. No. 567,227
8 Claims. (Cl. 40—126)



A card stock is shaped to outline a blank by a method commencing with establishing a profile of a bird species, superimposing the projection of a cone on the body profile to register along the breast line and the back line with a tail extension and wing flight feather-simulating extensions, defining a sector on the card so that the margins thereof meet along the breast line when rolled to form the cone, superimposing the projection of a conic segment on the throat profile and defining a further sector on the card as an appendage having curved margin and locking flap, and defining a head-forming appendage connected with the back and foldable to form a hollow head shell set in closing relation on the throat segment; defining leg appendages.

3,386,197
ILLUMINATED SIGN

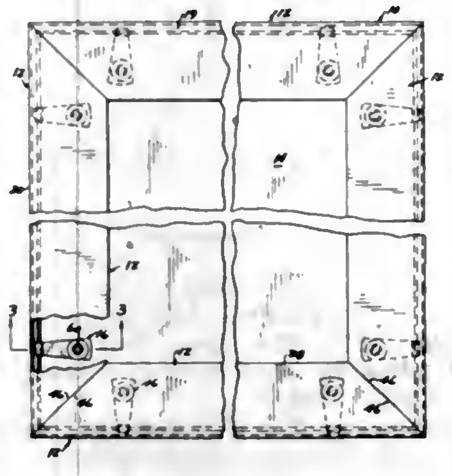
Philip D. Elfstrom, 1302 Barney Ave.,
Flint, Mich. 48503
Filed Jan. 7, 1966, Ser. No. 519,339
8 Claims. (Cl. 40—132)



An illuminated sign consisting of a housing having transparent panels carrying indicia. Elongated lamp bulbs are mounted in the housing. Transparent conduits containing colored liquid surround the bulbs and cause the light transmitted from the bulbs through the transparent panels to be correspondingly colored. The liquid may be caused to rise by means of a pump, producing a color-change effect. The transparent sign panels may be hollow, having corrugated walls, and the colored liquid may be moved through the spaces defined by the corrugations.

3,386,198
POSTER HOLDER

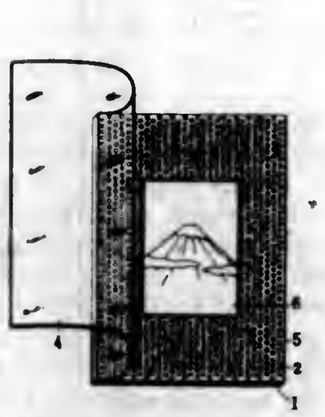
David S. Howell, Troy, Mich., assignor, by mesne assignments, to Woodle Corporation, Detroit, Mich., a corporation of Michigan
Filed Mar. 1, 1966, Ser. No. 530,956
9 Claims. (Cl. 40—156)



A poster holder comprising a base and a plurality of clamping members about the base wherein each clamping member includes a pivoted holder spring biased to hold the poster against said base.

3,386,199
PHOTOGRAPH MOUNTING

Masanori Nagatsuka, 54 3-chome, Aoyama, Minami-cho, Minato-ku, Tokyo, Japan
Filed July 19, 1966, Ser. No. 566,372
Claims priority, application Japan, July 28, 1965, 40/61,582; Sept. 3, 1965, 40/71,993
3 Claims. (Cl. 40—158)

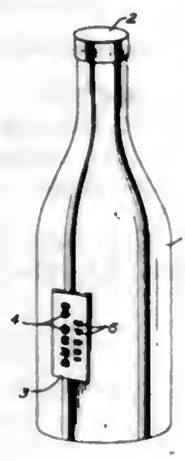


A stiff cardboard sheet is used to mount photographs. The face of the cardboard sheet is covered with a metal foil having small cavities, which may make the foil cloth-like in appearance. The metal foil is covered with a pressure-sensitive adhesive and the adhesive is covered by a removable transparent film.

3,386,200
CONTAINER LABELS

John J. Beretta, U.S. Naval Hospital,
Great Lakes, Ill. 60088
Filed Oct. 19, 1965, Ser. No. 498,162
1 Claim. (Cl. 40—310)

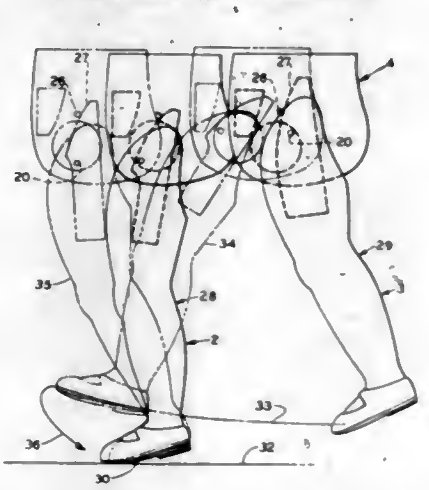
A drug dispensing container bearing letter and numeral indicia identifying the contained drug, the indicia being raised, preferably embossed, and also being arranged in



mirror-image order to enable transfer by inking and stamping techniques.

3,386,201
WALKING DOLL

Patrick J. Kelly, 2579 38th Ave., San Francisco, Calif. 94116, and Allan R. Lossius, 2165 Crestmoore Drive, San Bruno, Calif. 94066
Continuation-in-part of application Ser. No. 304,838, Aug. 27, 1963. This application Oct. 22, 1965, Ser. No. 507,627
4 Claims. (Cl. 46—149)



1. In a walking device having a body and a pair of generally vertically extending legs depending therefrom:

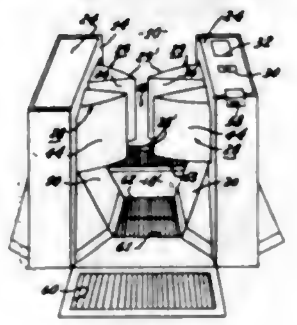
(a) revolvable means rotatably carried by said body for movement around a horizontal axis including horizontal pins pivotally supporting said legs from points spaced below their terminating upper ends providing upper end portions above said pins and said pins being spaced at opposite sides of said horizontal axis for simultaneous movement of said upper end portions in the same direction in horizontally spaced, generally vertically disposed circular paths upon rotation of said revolvable means whereby the upper end of one leg will be successively moved upwardly, forwardly, downwardly and rearwardly and at the same time the upper end of the other leg will be successively moved downwardly, rearwardly, upwardly and forwardly relative to the direction in which said device is moved;

(b) control means respectively on said body and on said legs including stationary camming members on said body and a cam surface on the forward edge of each of said upper end portions in cooperatively slidable engagement during the circular movement of said upper ends of said legs for effecting a swinging of the lower end portion of each leg forwardly relative to the direction in which said device is moved;

(c) said upper end portion of said legs being free for rearward swinging of said upper end portions and for forward swinging of said lower ends of said legs about said horizontal pins independently of said control means to positions of said legs extending horizontally relative to vertical to enable seating said device on said floor.

3,386,202
AUTOMATIC PASSAGEWAY

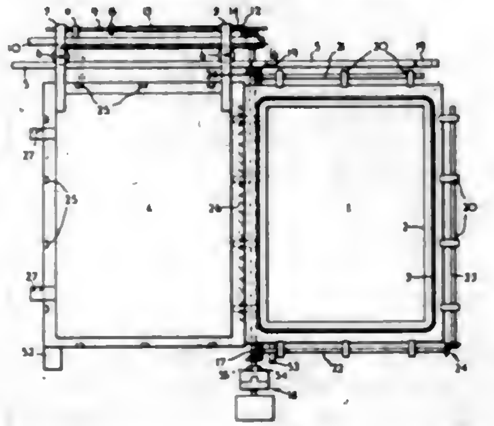
John B. Crews and Edward Dillingham, Pacific Palisades, and James R. Kearl, Costa Mesa, Calif., assignors to Calculator Equipment Corporation, Los Angeles, Calif.
Filed June 4, 1964, Ser. No. 372,450
16 Claims. (Cl. 49—35)



An automatic passageway with two pairs of power actuated passage obstructing doors and an intermediate foot space restricting structure. A computer circuit responsive to passage sensing devices disposed along the passageway and to a fare payment sensing device enables the entrance door to open upon payment of fare, closes the entrance door and simultaneously opens the exit door upon sensing the presence of a person in the passageway, and closes the exit door when exit from the passageway is sensed. Succession of fare payments at short time intervals results in the computer counting and storing the number of paid fares, holding both doors open, and counting the number of persons passing through the passageway. Passenger counting is accomplished by the central sensing device cooperating with the narrowed floor space provided by the foot space restrictor, thereby insuring that only one person can pass through at a time, and be individually sensed.

3,386,203
POWER-OPERATED DOORS

Richard A. Butler, Cranham, Essex, Albert H. Haller, Weybridge, Surrey, and Ramon Perera, Ilford, Essex, England, assignors to British Sterilizer Company Limited, Ilford, England, a British company
Filed Feb. 15, 1966, Ser. No. 527,585
Claims priority, application Great Britain, Feb. 23, 1965, 7,741/65
10 Claims. (Cl. 49—210)

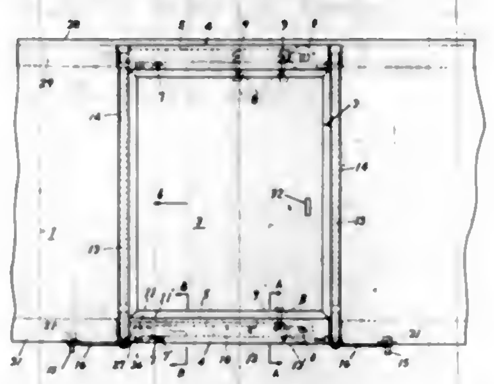


Door apparatus comprises a door frame defining a door aperture, a sliding door mounted for sliding movement

across the door frame between an open position away from the aperture and a closed position covering the aperture, and being mounted so as to permit limited movement of the door when in the closed position substantially perpendicularly toward and away from the door frame. Clamps are mounted on the door frame at intervals around the door aperture to reciprocate substantially perpendicularly toward and away from the door frame, and pads are provided on the door for engagement by the clamps. The clamps are connected to driving means to be reciprocated constantly by the driving means during sliding of the door, and that the pads are so arranged on the door that they are engaged by the clamps only when the door is in closed position. A constantly engaged geared positive driving means operates in common and simultaneously both the sliding of the door and the reciprocating movement of the clamps.

3,386,204
SLIDING DOOR ARRANGEMENT

Kiyokatsu Obata, Kanagawa Prefecture, Japan, assignor to Kato Body Manufacturing Company, Ltd., Tokyo, Japan
Filed Oct. 5, 1966, Ser. No. 584,426
Claims priority, application Japan, Oct. 23, 1965, 40/64,845
5 Claims. (Cl. 49—212)



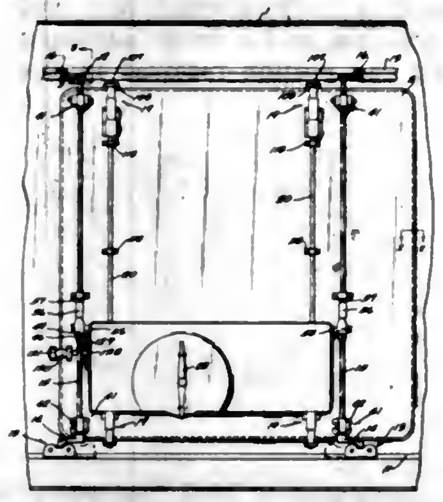
A door for a freight car or the like is received flush in the car wall when closed. It moves outward of the door opening and then along the outer car surface on three sets of guide members. Two sets telescope to fit into the door opening when collapsed and move outward and inward of the door opening on the guide members of the third set which slide in receptacles below and above the opening and the freight area of the car so that the open door and the freight area are unobstructed by the door mechanism. The door is moved outward and inward of the opening by levers or latches on the underside of the car.

3,386,205
DOOR OPERATING AND LOCKING MECHANISM

Theodore Z. Herr, 672 Hyacinth Place, Highland Park, Ill. 60035
Filed Feb. 15, 1967, Ser. No. 616,221
26 Claims. (Cl. 49—220)

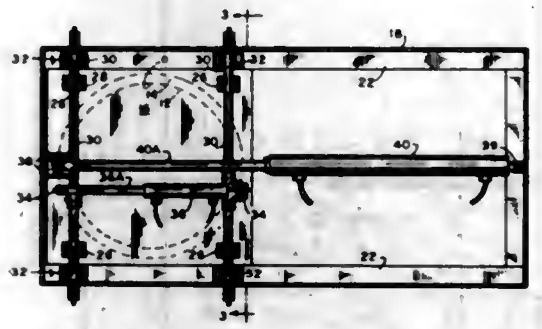
An operating and locking mechanism for a sliding flush door for a railway car. The door is mounted for sliding movement on tracks on the car, and a pair of crank arms are pivotally connected to the upper and lower edges of the door and each crank arm carries a roller assembly which rides on the tracks. The door is locked in place by a series of locking members which are located along the edges of the door.

Both the crank arms and the locking members are operated through an operating mechanism located on the outside of the door. The operating mechanism includes a cam having a spiral groove, and a follower is disposed to ride in the spiral groove as the cam is manually rotated. The follower is connected to a slide, and linear movement of the slide is transmitted to both the crank arms and the locking members in a sequential manner so that on closing of the doors, the crank arms will be initially pivoted to move the door to the closed position and the locking members will be subsequently actuated to lock the door within the opening.



3,386,206
CLOSURE FOR LARGE DIAMETER OPENING OF A PRESSURE VESSEL

Marion Walter Loveless, 419 S. Allegheny, Tulsa, Okla. 74112
Filed Feb. 1, 1966, Ser. No. 524,241
4 Claims. (Cl. 49—221)



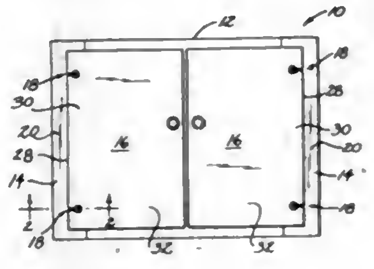
This invention relates to an improved closure for a large diameter opening of a pressure vessel. More particularly, the invention relates to a closure for a large diameter opening for a pressure vessel having a horizontal closure edge, the closure including spaced parallel horizontal guide rails adjacent and exterior of the opening, each of the guide rails having horizontal upper and lower runners, a lid horizontally movable relative to the opening to fully close the opening in one position and to fully expose the opening in another position, a pair of spaced horizontal shafts rotatably affixed to the upper surface of the lid, the end of each shaft extending between the upper and lower guide rail runners, rollers supported by each of the shafts at each outer end thereof, the rollers and shafts being eccentric relative to each other, and means of simultaneous rotation of each of the shafts for vertical displacement of the lid by eccentricity of the shafts and rollers.

3,386,207
HINGE, DOOR ASSEMBLY AND METHOD FOR MAKING SAID ASSEMBLY

Richard J. Brown, Andrews Road, Wolcott, Conn. 06716
Filed Nov. 4, 1966, Ser. No. 592,071
20 Claims. (Cl. 49—402)

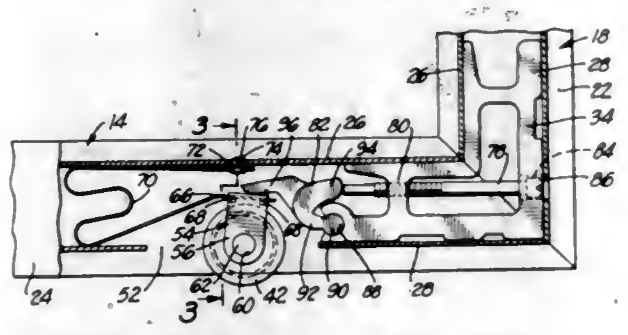
1. In a door assembly the combination comprising a jamb member having a first hole therein, a door member

movable relative to said jamb member between an open position and a closed position, said door member overlying said jamb member in said closed position and having a second hole therethrough proximate a marginal edge portion thereof generally aligned with said first hole in said closed position, and a hinge having a first part including a first end portion received in said first hole, a second part connected to said first part for movement about a pivot axis generally parallel to said marginal edge portion between said open position and said closed position, said second part having a second end portion received in said second hole, said first and second end portions in said closed position being located on the same side of said pivot axis.



3,386,208
ADJUSTABLE DOOR ROLLER CONSTRUCTION

Joseph Banner, Whittier, Calif., assignor to Anjac Manufacturing Co., El Monte, Calif., a limited partnership
Filed May 10, 1966, Ser. No. 548,889
7 Claims. (Cl. 49—420)

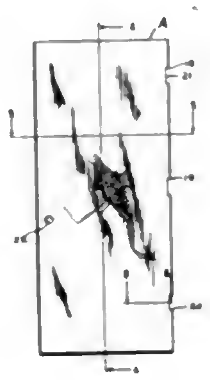


An adjustable door roller construction is disclosed which has a spring mounted roller structure located in the bottom rail of the door, a corner bracket located in the bottom rail of the door, a corner bracket located in the bottom rail of the door, a stop level pivotally mounted on the bracket, and a horizontal adjusting screw threaded into the bracket. By manipulation of the adjusting screw the position of the stop lever can be adjusted so as to limit movement of the roller structure.

3,386,209
REVERSIBLE DOOR

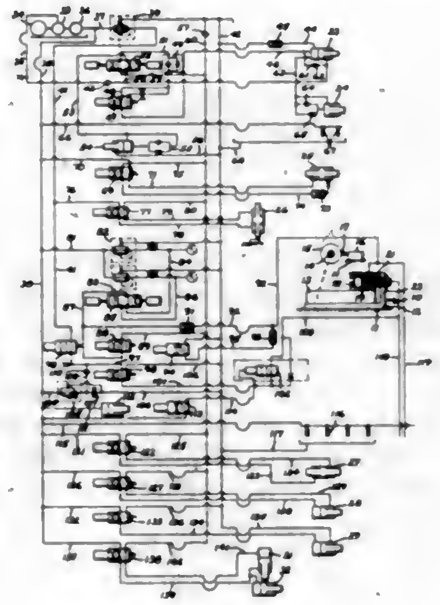
Louis J. Starcevic, Florissant, Mo., assignor to Atlas Enameling Company, Inc., St. Louis, Mo., a corporation of Missouri
Filed Mar. 28, 1966, Ser. No. 537,883
9 Claims. (Cl. 49—501)

A reversible door adapted for mounted disposition in a door opening so as to be swingable in either preselected direction without requiring a modification of the door opening, which door comprises a pair of opposed facing elements formed of sheet material and having upper, lower and lateral marginal flanges; reinforcing members provided between said facing elements and being of such extent as to cause the flanges of the facing elements to terminate in spaced apart relationship. Resilient jamb-sealing members mounted on the side margins of said door having a portion extending between the spaced apart lateral flanges of the facing elements and an outer part supported upon said flanges for engaging the door opening jambs; there also being a threshold sealing-jamb on the lower margin of said door.



3,386,210
GRINDING MACHINE

George H. Lockwood, Fort Lauderdale, Fla., and Fred Thomas, Worcester, Mass., assignors to The Heald Machine Company, Worcester, Mass., a corporation of Delaware
Filed Apr. 21, 1965, Ser. No. 449,817
5 Claims. (Cl. 51—5)

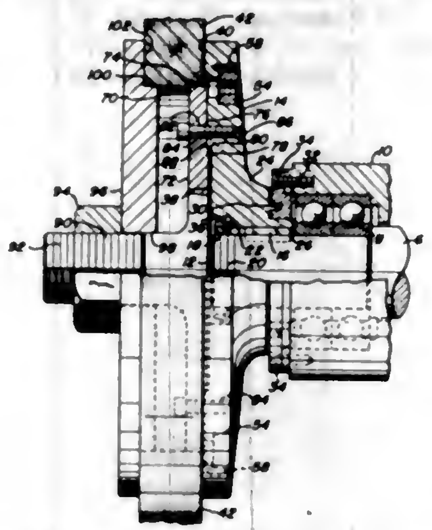


The invention relates to a grinding machine and, more particularly, to such an apparatus in which the abrasive wheel is passed over a diamond for a dressing operation, but on a return pass metallic deformation is used to prevent contact between the wheel and the diamond.

3,386,211
UNIVERSAL WHEEL MOUNT FOR GRINDERS

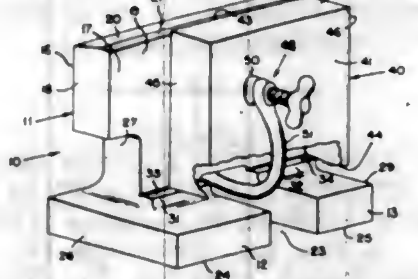
Harold J. Wagner, Cincinnati, Ohio, assignor to Setco Industries, Inc., Cincinnati, Ohio, a corporation of Ohio
Filed Mar. 25, 1965, Ser. No. 442,603
4 Claims. (Cl. 51—168)

The rotable spindle of a grinding machine is provided with a universal nose or wheel mount whereby the spindle may be adapted to accommodate alternatively, an arbor-type grinding wheel, or an arborless type grinding wheel with ease and dispatch, and without removing from the spindle a drive disc which safely supports and drives either type of wheel. The substitution of wheels involves simply the substitution of an arborless clamp disc for an adapter disc assembly carrying an arbor.



3,386,212
GRINDING FIXTURE

Leslie A. Lenhard, 20 Fairfield Drive, Brighton, N.Y. 11235
Filed Oct. 21, 1965, Ser. No. 508,413
4 Claims. (Cl. 51—217)

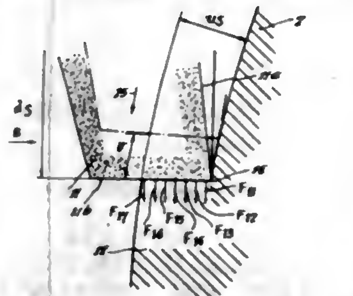


A fixture for squaring blocks has a flat, upright master surface to which a flat face of a block is clamped, flat end surfaces accurately perpendicular to the master surface, and a flat base accurately perpendicular to both the master surface and the end surfaces. The base is formed as spaced-apart feet providing a channel extending under the fixture for receiving the span of a C-clamp for clamping the block to the master surface. A broad inclined plane along the top of the upright body of the fixture supports the fixture in an inverted, canted orientation in which a block can be quickly clamped to the fixture with its top accurately parallel with and extending above the fixture body for grinding. The block is also arranged with an end extending beyond one end of the fixture so that the top and extending end of the block can be accurately squared without unclamping the block. A notch can be formed in an end surface of the upright body to receive an additional C-clamp for greater clamping security.

3,386,213
METHOD FOR GRINDING TOOTH FLANKS OF TOOTHED GEAR WHEELS

Alwin G. Hauser, Winterthur, Switzerland, assignor to Maag Gear Wheel & Machine Company Limited, Zurich, Switzerland, a company of Switzerland
Filed Apr. 19, 1966, Ser. No. 543,732
Claims priority, application Germany, Apr. 23, 1965, M 64.990
7 Claims. (Cl. 51—287)

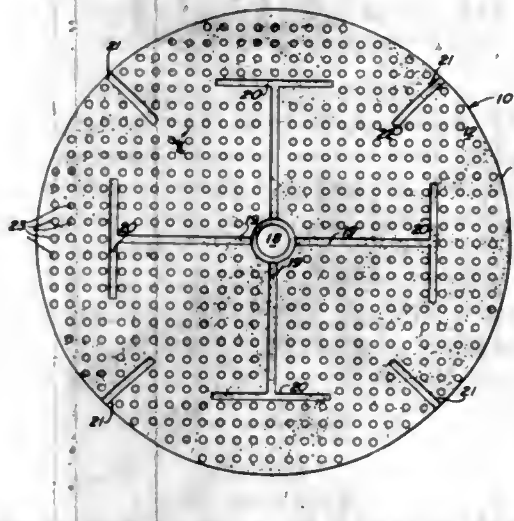
1. The method of grinding the tooth flank of a toothed gear wheel by means of a dished grinding wheel having that end face which faces the tooth flank tapered inwardly from the periphery of the grinding wheel to provide a shallow dish, and in which the tooth flank theoretically is ground by a point in the edge of the grinding wheel formed by the junction of the face of said shallow dish and the face of the grinding wheel rim, characterised in that the grinding wheel is in-fed towards the tooth flank



by an amount substantially equal to the full grinding allowance left on completion of cutting of the gear wheel, is reciprocated along the width of the tooth flank in the general direction of the toothed gear wheel axis, and is reciprocated between the tooth tip and the tooth root, so that the removal of the grinding allowance is carried out substantially by the face of the grinding wheel rim.

3,386,214
GRINDING DISC

Frank O. Shoemaker, Palos Park, Ill., assignor to Titan Abrasives Company, a corporation of Illinois
Filed Sept. 1, 1965, Ser. No. 484,211
3 Claims. (Cl. 51—356)

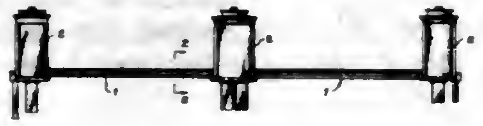


An abrasive grinding disc having a side grinding surface and a peripheral edge with a coolant opening being provided adjacent the center of the disc, a number of first coolant passages extending from this center opening toward but short of the peripheral edge and at the end of each first coolant passage, a second coolant passage arranged transversely to its first passage to receive coolant therefrom with all coolant passages having open sides at the grinding surface and all extending in essentially straight lines.

3,386,215
BLOW-OUT ROOF FOR ELECTROSTATIC DUST SEPARATOR

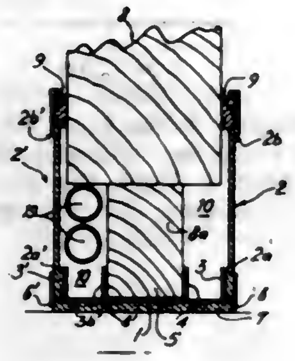
Günter Wendel, Frankfurt am Main, and Jean Wiemer, Oberhochstadt, Taunus, Germany, assignors to Metallgesellschaft Aktiengesellschaft, Frankfurt am Main, Germany
Filed Jan. 23, 1967, Ser. No. 610,867
Claims priority, application Germany, Jan. 29, 1966, M 68,185
1 Claim. (Cl. 52—1)

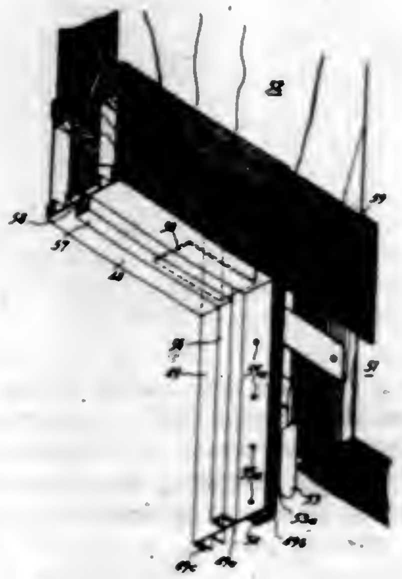
The roof sheets of an electrostatic dust separator are connected to each other by plates capable of being deformed by the pressure of an explosion in the separator,



and to the side walls and roof beams by joints which are released by the explosion.

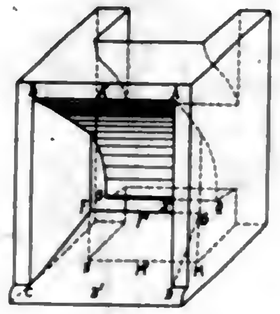
3,386,216
PARTITIONING ELEMENTS, IN PARTICULAR FOR THE ERECTION OF DISMANTLABLE AND REMOVABLE PARTITIONING
Charles Zwickert, 108 bis Rue Jean-Jaures,
Noisy-le-Sec, Seine, France
Filed Jan. 15, 1965, Ser. No. 425,844
Claims priority, application France, Jan. 17, 1964,
960,681; June 4, 1964, 977,035
14 Claims. (Cl. 52—205)





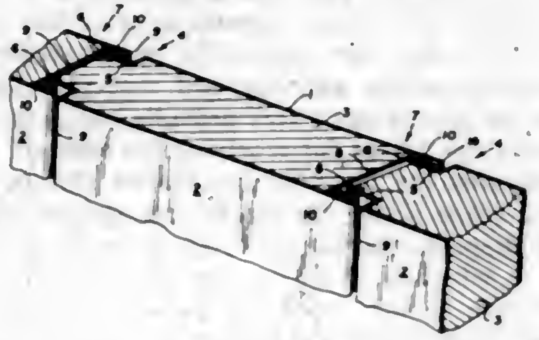
14. A partition comprising at least one panel mounted in two frame elements the edges of the panel in contact with the frame elements fitting into a central longitudinally arranged groove in each frame element; two lateral elements associated with each frame element and fitting into grooves on either side of the central groove and extending out from the frame element parallel to and in close contact with faces of the panel; and a door assembly associated with the partition and having hinges which are mounted on a block placed between the central groove and one of the lateral grooves of one of the frame elements.

3,386,217
STATIC MODULAR VENTILATING UNIT
Robert Couture, 31 Rue Berteaux,
63 Clermont, Ferrand, France
Filed Apr. 9, 1965, Ser. No. 446,862
6 Claims. (Cl. 52—303)



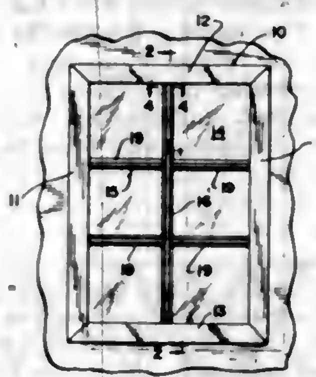
A constructional unit for cooling a building constructed of such units. The exterior shape of the unit is substantially parallepiped and has an inner opening with a rectangular face open to the sky. The interior of the building communicates with the exterior through such opening. Associated with such opening are means whereby heat radiation may take place towards the exterior. Screens with reflector surfaces are provided associated with such opening to prevent receiving radiation from the exterior other than that emitted from the sky and diffused by the atmosphere. One of the screens is provided with a parabolic reflector surface and other screens have lateral reflector surfaces to protect the opening from the morning and afternoon sun. The sun's rays are turned back towards the exterior by the reflector surfaces.

3,386,218
BUILDING PANEL WITH RIBBED SEALING ELEMENT BETWEEN OVERLAPPING EDGES
Harley D. Scott, Wexford, Pa., assignor to Elwin G. Smith & Co., Inc., Pittsburgh, Pa.
Filed June 8, 1966, Ser. No. 556,066
2 Claims. (Cl. 52—309)



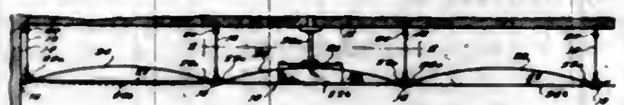
1. A rigid building panel comprising spaced, parallel front and rear sheets having molded therebetween an insulating, foamed rigid core material, one side edge of said sheets being bent and offset inwardly and engaging an edge portion of said material so as to form a panel edge portion of reduced thickness, a sealing element in the form of a plurality of flexible ribs surrounding each of the edges of said offset portion of said insulating material, the other side of said panel being formed by a channel having outwardly extending flanges engaging the inner surfaces of said sheets and being engaged by 180° bent end portions of said sheets to form a female member into which a male member of an adjoining panel may project to form a seal for resisting air and water penetration, which will allow for expansion and contraction of the sheets from temperature changes, and which will allow for variations in alignment.

3,386,219
WINDOW GRILLE
Forrest F. Bell, Dubuque, Iowa, assignor to Caradco Incorporated, a corporation of Iowa
Filed Dec. 28, 1965, Ser. No. 516,846
2 Claims. (Cl. 52—456)



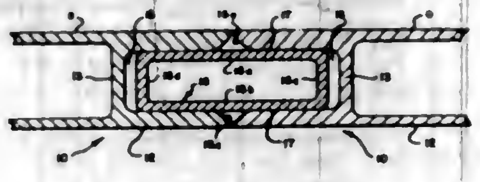
A removable plastic window grille for a solid pane window adapted to be held against the single pane when the grille is installed to give the appearance of an assembly of small panes, the grille is held securely in the window frame against the pane when installed but can easily be removed to clean the window.

3,386,220
CEILING PANEL CONSTRUCTION WITH TENSIONING MEANS
Henry N. Staats, 1344 Linden Ave.,
Deerfield, Ill. 60015
Filed May 24, 1965, Ser. No. 458,000
4 Claims. (Cl. 52—495)



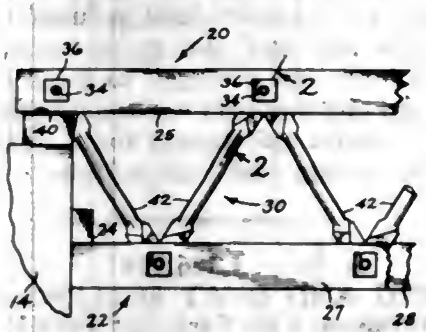
A ceiling panel construction including mounting beams extending outwardly from a wall surface having laterally extending supporting edges and flexible panels resting on said supporting edges and stiffened by tensioning members which span the panels.

3,386,221
LIGHTWEIGHT PANEL
Julius L. Giovannucci, Rome, N.Y., assignor to Revere Copper and Brass Incorporated, Rome, N.Y., a corporation of Maryland
Continuation-in-part of application Ser. No. 425,225, Jan. 13, 1965. This application Sept. 8, 1967, Ser. No. 666,424
1 Claim. (Cl. 52—586)



An extensible structural panel system in which web-supported thin skin members of interconnected panels are provided with thickened portions extending beyond the endmost webs to form rigid channels which are joined by a snugly-fitting rectilinear coupling member the end portions of which are spaced apart by a lesser distance than that between the webs forming the bases of opposing channels when the edges of the thus-connected panels are in abutment.

3,386,222
HIGH-LOAD TRUSS JOIST LINK
Arthur L. Troutner, Skyline Drive,
Boise, Idaho 83702
Filed May 23, 1966, Ser. No. 552,025
2 Claims. (Cl. 52—693)

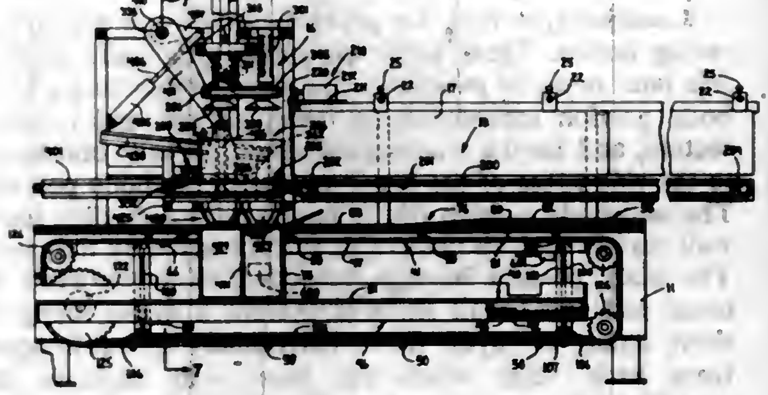


Each of the flattened ends of a truss link rod has opposed surfaces offset inwardly from the periphery of the rod, one surface being monoplanar and the other biplanar, thereby forming a thin terminal section having a thickness equal to one-half the width of the space between the pair of structural pieces comprising the chord of a truss joist, and a thick section having a thickness equal to the width of said space. A pair of such rods thus may have their thin terminal sections overlapped, with the thick sections forming pads filling the space between the pair of structural pieces.

3,386,223
METHOD OF JOINING DRYWALL PANELS
Arthur A. Wegwerth, St. Paul, Minn., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
No Drawing. Continuation-in-part of application Ser. No. 204,833, June 25, 1962. This application Feb. 1, 1966, Ser. No. 523,880
6 Claims. (Cl. 52—741)

A drywall jointing and filler composition which adheres well to gypsum drywall panels and metal which dries without visible shrinkage and which is easily sanded after drying, formed from inorganic friable hollow microbubbles and a quantity of a thermoplastic, nonhydrosettable, nonrubbery matrix adhesive, having a quantity approximately sufficient to fill the interstices among the microbubbles, the mixture containing a volatile vehicle mixture which permits careful control of the drying time.

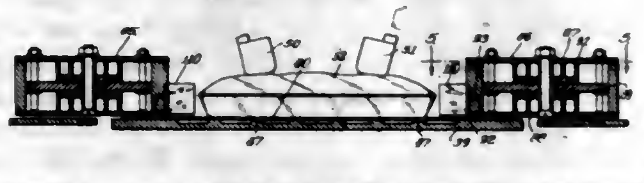
3,386,224
CASE PACKER
James J. Shuttleworth, 1300 Salamonie Ave.,
Huntington, Ind. 46750
Filed Dec. 16, 1965, Ser. No. 514,205
15 Claims. (Cl. 53—165)



1. A case packer comprising a frame, a platform in a first position, an object conveyer for conveying objects onto said platform, a first box conveyer operable to carry

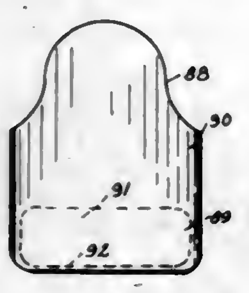
boxes to a loading position beneath said platform, a vacuum head positioned over said platform and incorporating a plurality of vacuum cups adapted to engage the individual objects for lifting thereof, means for moving said platform horizontally between a position adjacent said object conveyer and a removed position where it is no longer under said vacuum head, a funnel for guiding objects into said box, and cam means connecting said funnel and platform and arranged to force said funnel into said box when said platform moves into said removed position and to remove said funnel from said box when said platform moves into said first position.

3,386,225
WRAPPING AND HEAT SEALING MACHINE
Bengt A. Arvidson, Villa Park, and Fritz F. Treiber, Niles, Ill., assignors to Corley-Miller, Inc., a corporation of Ohio
Continuation of application Ser. No. 426,300, Jan. 18, 1965. This application May 22, 1967, Ser. No. 640,423
10 Claims. (Cl. 53—184)



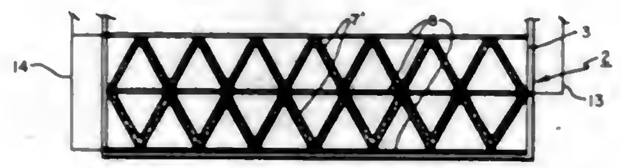
A package wrapping and sealing machine having structure for wrapping a package in heat-shrinkable film with overlapped section of film on the bottom of the package with means for heating localized areas of the overlapped film sections to secure the film layers together along with structure for applying heat to the film to shrink the film around the product contained in the package.

3,386,226
RACING BOOTS FOR HORSES
Rheta M. H. Code, Box 161, Moosomin, Saskatchewan, Canada, and Joseph B. Lindecker, Skokie, Ill. (1193 Valetta Drive, Temperance, Mich. 48182)
Application Sept. 13, 1965, Ser. No. 496,220, now Patent No. 3,284,989, dated Nov. 15, 1966, which is a division of application Ser. No. 368,677, May 19, 1964. Divided and this application July 6, 1966, Ser. No. 571,672
4 Claims. (Cl. 54—82)



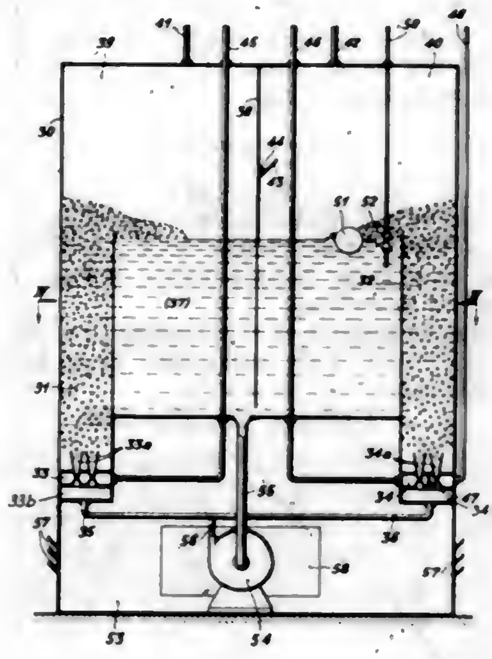
A scalper-type boot for preventing injury to the legs of racing horses. These boots are made principally of flexible latex material molded in one piece, comprising a latex body portion embodying an upper section and a lower section, and having a latex heel strap integrally connected to the side edges of the lower section of the body portion. The said body portion of the boot having a flexible inner wall surface and an outer wall surface made by the latex. The body portion having embedded solely between its inner and outer wall surfaces thereof a dense lining of short nylon or rayon fibers individually movable apart from each other when the latex wall surfaces are stretched. The upper portion having a peripheral top and side edge portions consisting solely of latex material so they will cling tightly in the area of the fetlock joint. The strap consisting solely of latex material so it will cling tightly to the lower hoof area of the foot. This scalper-type boot is made to be interchangeable, same design and suitable to fit the right rear hoof or left rear hoof.

3,386,227
ELECTROSTATIC FILTER DEVICE
Lawrence J. Czerwonka, Louisville, Ky., assignor to American Air Filter Company, Inc., Louisville, Ky., a corporation of Delaware
Filed Sept. 1, 1966, Ser. No. 576,578
3 Claims. (Cl. 55—142)



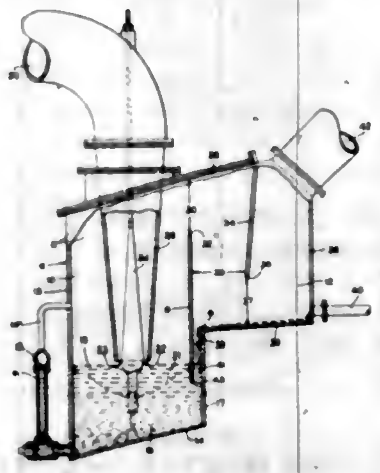
A gas filter arrangement including successively stacked pleated sheets of filter medium spaced and separated by electrically conductive sheets sandwiched therebetween, the sheets being electrically charged to provide an intensified electrical potential gradient across the filter medium.

3,386,228
APPARATUS FOR SEPARATING GASEOUS COMPONENTS FROM GAS MIXTURES
Fortunat Hartmann, Zurich, Switzerland, assignor to Sulzer Brothers Limited, Winterthur, Switzerland, a company of Switzerland
Continuation-in-part of application Ser. No. 419,291, Dec. 18, 1964. This application Nov. 21, 1966, Ser. No. 617,729
Claims priority, application Switzerland, Dec. 20, 1963, 15,557/63
5 Claims. (Cl. 55—196)



A common reservoir is used for storing a liquid absorbent for gas absorption and stripping operations in which operations the absorbent from the reservoir is withdrawn and separately delivered to two mixing zones, immediately below an absorption column and a stripping column, respectively. The liquid absorbent delivered to both zones is accelerated to a speed sufficient to entrain the gas mixture whose component is to be absorbed into the mixing zone for the absorption column, the stripping gas into the mixing zone for the stripping column. The resultant liquid and gas mixtures are directed to their respective absorption and stripping columns. After separation of the gas and liquid components from the absorption and stripping columns, the liquid components are returned to the reservoir for further use.

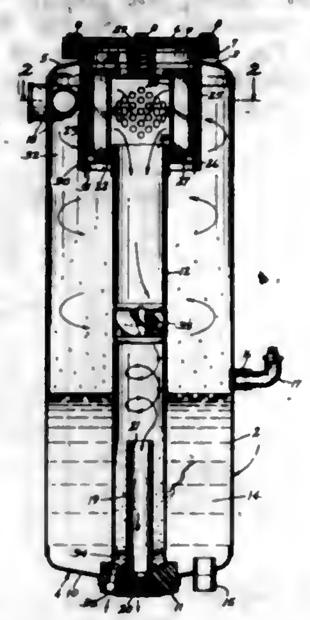
3,386,229
APPARATUS AND METHOD FOR TREATMENT OF GASES
Leo O. Reed, Covina, Calif., assignor to Joy Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania
Continuation of application Ser. No. 101,826, Apr. 10, 1961. This application July 22, 1965, Ser. No. 477,634
4 Claims. (Cl. 55—227)



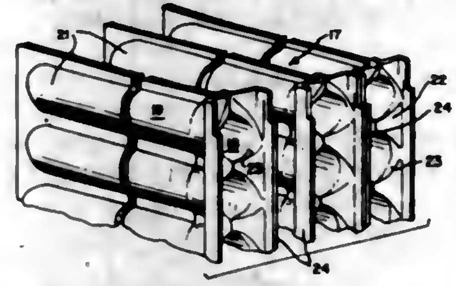
1. Apparatus for recovering foreign particles entrained in a gaseous stream comprising, a space enclosing housing having a roof portion and vertically displaced base portions, a wall portion extending vertically and laterally through an interemediate portion of the space enclosed within said housing with the lower edge thereof spaced above the lower of said base portions and below the upper of said base portions of said housing so as to define first and second compartments within said housing said upper base portion being the base of said second compartment, said wall portion having the upper edge thereof spaced from said roof portion so as to define a single gas flow opening therebetween, said first compartment having said lower base portion and wall portions defining a sump, means for maintaining the level of a liquid in said sump below the level of the base of said second compartment, means within said first compartment for introducing such a gaseous stream having foreign particles entrained therein into said sump, means depending from said roof portion of said second compartment in lateral spaced relationship to said intermediate wall portion so as to define a second opening between the lower edge thereof and said base of said second compartment, said first mentioned and said second openings and the smallest opening defined by said intermediate wall portion and said depending means having substantially equal cross sectional areas, and gas outlet means spaced upwardly of the base of said second compartment on the side of said depending means opposite from said first mentioned opening.

3,386,230
LIQUID AND GAS SEPARATOR
Kenneth D. Riesberg, Minneapolis, and Paul U. Gaul, Jr., St. Paul, Minn., assignors to Donaldson Company, Inc., Minneapolis, Minn.
Filed Dec. 27, 1966, Ser. No. 605,011
4 Claims. (Cl. 55—337)

A separator comprising a housing, an inlet generally tangentially to its wall, a pleated cylindrical filter coalescer surrounding an inlet of a tubular member provided with a helical van adjacent its inlet and a co-axial tube downstream thereof whereby liquid is separated from gas in the housing and tubular member.

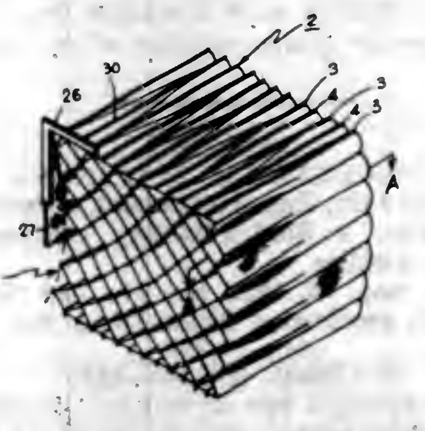


3,386,231
POCKET-TYPE FILTER
Arthur Nutting, Louisville, Ky., assignor to American Air Filter Company, Inc., Louisville, Ky., a corporation of Delaware
Filed Dec. 23, 1966, Ser. No. 604,479
8 Claims. (Cl. 55—418)



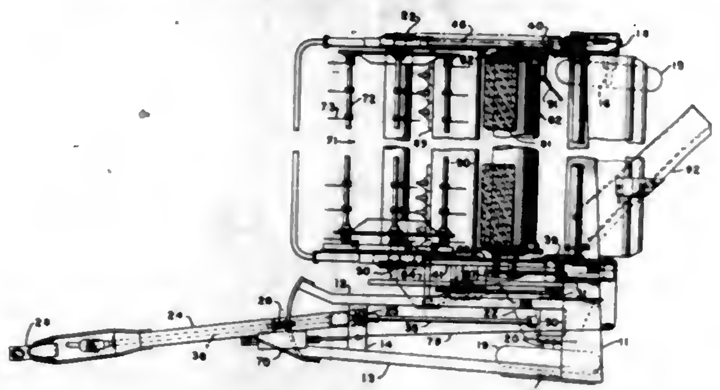
The present invention provides a molded fluid filter formed from a self-supporting filter material to include a plurality of longitudinally extending, side-by-side filter pockets.

3,386,232
POCKET-TYPE FILTER
William C. Gaines, Jr., Louisville, Ky., assignor to American Air Filter Company, Inc., Louisville, Ky., a corporation of Delaware
Filed Apr. 22, 1965, Ser. No. 450,132
10 Claims. (Cl. 55—500)



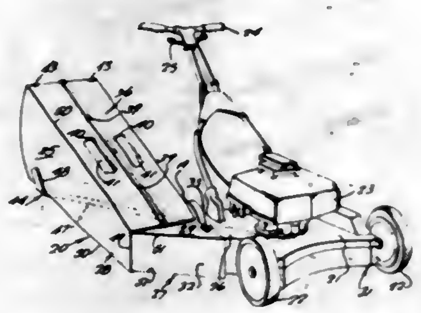
A pocket-type fluid filter arrangement wherein the pocketed pleats of filter pleat sets are positioned in alternating side-by-side relationship with the pockets of one set offset from the pockets of the other and the pleats joined at the mouth-forming portions of the pockets only.

3,386,233
IMPLEMENT FRAME
Emmett F. Glass, Akron, and Horace G. McCarty, New Holland, Pa., assignors to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware
Filed Apr. 16, 1965, Ser. No. 448,631
14 Claims. (Cl. 56—23)



A harvester in which a header is pivotally mounted to a frame having a transverse section and a fore-and-aft section connected to an inboard end of the transverse section. The transverse section is tapered and is carried by wheels mounted under the section which support the section a sufficient distance above the ground to allow passage of material from the header under the section.

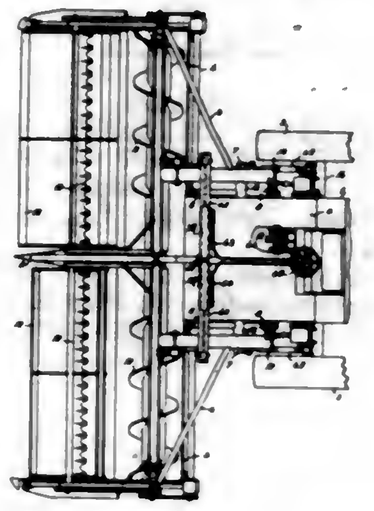
3,386,234
GRASS AND LITTER CATCHER
Harold P. Leader, 2216 Tal Brook Road, Birmingham, Ala. 35216
Filed Sept. 23, 1965, Ser. No. 489,578
3 Claims. (Cl. 56—202)



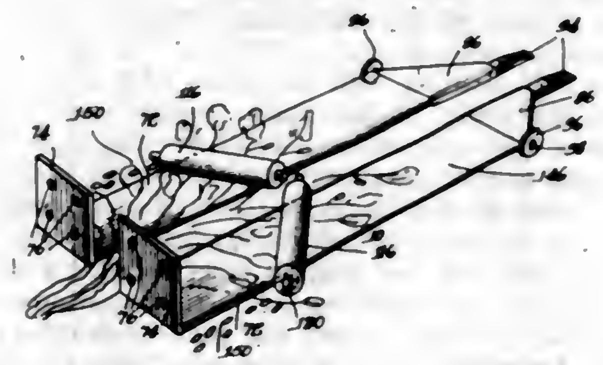
1. A grass catcher adapted to be mounted on a lawn mower adjacent the lateral discharge thereof, comprising an elongated hollow structure of rectangular cross section having means adjacent a side of one end to receive air entrained grass clippings from said lateral discharge and means adjacent the other end to exhaust air therefrom, said structure being tapered such that the cross sectional area increases from said receiving means to said exhaust means and being made of a relatively rigid but flexible material in such a manner that the catcher may be collapsed for storge purposes when removed from the mower.

3,386,235
AGRICULTURAL MACHINES
Cornelis van der Lely, Zug, Switzerland, assignor to Texas Industries Inc., a limited-liability company of the Netherlands Antilles
Filed Aug. 18, 1965, Ser. No. 480,705
Claims priority, application Netherlands, Sept. 29, 1964, 64—11,285
19 Claims. (Cl. 56—210)

A harvester having a pair of mowing and crop gathering members which bear on the ground, each of the members supported in part by hydraulic rams whereby the downward component of force of each member on the ground is maintained substantially constant, a control mechanism connected to the rams responsive to hydraulic fluid pressure changes therein causing fluid to flow on out of the rams as necessary for quick restoration to the original pressure so that the members almost instantaneously adjust to ground contours; each of the members having two such rams adapted to pivot same about different axes; the control mechanism including means to adjust the downward component of force of each member and to raise or prevent the lowering of a member; a single control mechanism controlling two of the hydraulic rams, one on each member.



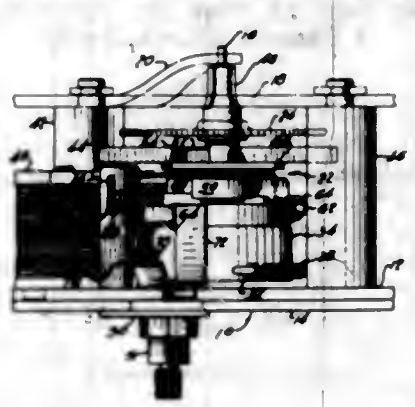
3,386,236
CUCUMBER HARVESTING MACHINE
John F. Mitchell, Wiesner Road, Mitchell Farms, Breckenridge, Mich. 48615
Filed July 20, 1965, Ser. No. 473,399
10 Claims. (Cl. 56—327)



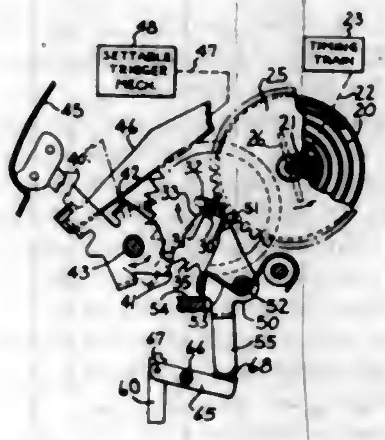
1. Cucumber harvesting apparatus comprising elongated support means having a top surface and a front end and a rear end, means for passing said support means longitudinally along the ground and beneath cucumber vines from said front end to said rear end, roller means mounted on but spaced above said support means a predetermined distance according to the diameter of cucumbers to be harvested with the axis of said roller means substantially parallel to the top surface of said support means, and means for rotating said roller means with the portion thereof confronting said support means top surface relatively moving from said rear end to said front end.

3,386,237
WINDING APPARATUS FOR AN ELECTRIC CLOCK
Aubrey W. Earleywine, Jr., Springfield, Ill., assignor to Stewart-Warner Corporation, Chicago, Ill., a corporation of Virginia
Filed Feb. 14, 1966, Ser. No. 527,315
11 Claims. (Cl. 58—41)

1. An improvement in a car clock of the type including an electromagnet for rotating an inertia weight in one direction on energization of said electromagnet to wind a mainspring arranged to drive the clock hands, the improvement comprising an armature for said magnet, means mounting said armature for rotation independent of said inertia weight and coaxial therewith, and means rotatable with said armature in response to energization of said coil for rotating said inertia weight in said one direction about said axis with the major component of the force generated on movement of said armature transmitted to said inertia weight through an arc coaxial with said axis.

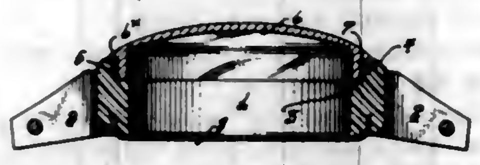


3,386,238
CONTROL MECHANISM FOR ALARM CLOCK
Richard L. Voit, Northbrook, Ill., assignor to General Time Corporation, New York, N.Y., a corporation of Delaware
Filed Mar. 15, 1966, Ser. No. 534,471
3 Claims. (Cl. 58—50)



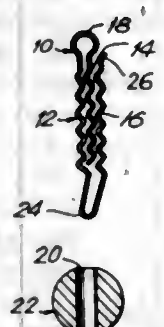
An alarm clock in which bodily lifting from the supporting surface is effective to shut off the alarm after it has sounded and to illuminate the clock face whereas lifting before the alarm sounds is effective to produce illumination but has no effect upon the alarm mechanism.

3,386,239
COMBINATION PLASTIC WATCH CASE AND CRYSTAL
Jerome Shiffman, 128 Cartage Road, Scarsdale, N.Y. 10583
Filed June 16, 1966, Ser. No. 558,069
3 Claims. (Cl. 58—91)



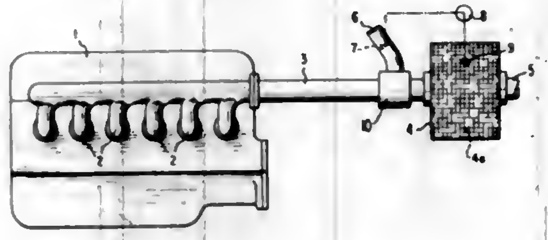
A plastic watch case and crystal, the crystal having an external thread configuration that mates with an internal thread configuration of the watch case and bears upon the bezel to seal the case against moisture.

3,386,240
BEAD CHAIN LINK
Abraham Blumstein, 98—03 69th Ave., Forest Hills, N.Y. 11375
Filed Apr. 13, 1966, Ser. No. 542,263
6 Claims. (Cl. 59—78)



1. A link arranged to be inserted in an apertured bead to connect the bead in a string of similar beads, said link comprising a length of flexible and resilient material bent to form a main strip section, a first leg extending from one end of said main strip and bent arcuately to overlie a part of said main strip thereby forming an arcuate loop end to said link, a second leg extending from the other end of said main strip portion and bent to overlie a part of said first leg thereby forming a wedge shaped apex loop end, said main strip section and said first and second legs each having a corrugated surface extending over the respective portions of said main strip section, and said first and second legs which overlie each other, said wedge shaped loop end being adaptable to be inserted into said bead aperture, said arcuate loop end and said wedge shaped end being adaptable to being successively interlinked with other links similar to said link.

3,386,241
PROCESS AND APPARATUS FOR AFTERBURNING EXHAUST GASES OF INTERNAL COMBUSTION ENGINES
Helmut Säufferer, Waiblingen, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany
Filed Dec. 8, 1965, Ser. No. 512,468
Claims priority, application Germany, Dec. 10, 1964, D 46,014
10 Claims. (Cl. 60—30)



1. In a process for the catalytic afterburning of the exhaust gases of internal combustion engines, with secondary air supply in the presence of a catalyst being operative only above a fixed starting temperature substantially above the ambient temperature, the improvement comprising the steps of: supplying the secondary air for admixture only after the expiration of a warm-up

phase determined by the catalyst temperature during which substantially only exhaust gases flow through said catalyst; supplying and admixing the secondary air at a rate increasing with increasing catalyst temperature, beginning with a catalyst temperature below the fixed starting temperature and above ambient temperature, and reaching at least the admixture rate operational stoichiometric value when the catalyst has reached essentially the fixed starting temperature.

2. An installation for the catalytic afterburning with secondary air supply, of the exhaust gases of internal combustion engines, comprising: exhaust gas line means for collecting and conducting exhaust gases from an internal combustion engine to the atmosphere including a catalyst housing in flow communication with the exhaust gases and a catalyst within said housing in flow communication having a fixed starting temperature substantially above the ambient temperature; secondary air supply means connected with said exhaust line means for supplying secondary air to the exhaust gases; control means for controlling the secondary air supply so that secondary air is added only after the expiration of a warm-up phase determined by the catalyst temperature during which substantially only exhaust gases flow through said catalyst housing; said control means including temperature responsive means for adding the secondary air substantially in dependence of the catalyst temperature at a rate increasing with increasing catalyst temperature, beginning with a catalyst temperature below the fixed starting temperature for the catalyst and substantially above the ambient temperature, and reaching at least the admixture rate operational stoichiometric value when the catalyst has reached a fixed starting temperature thereof.

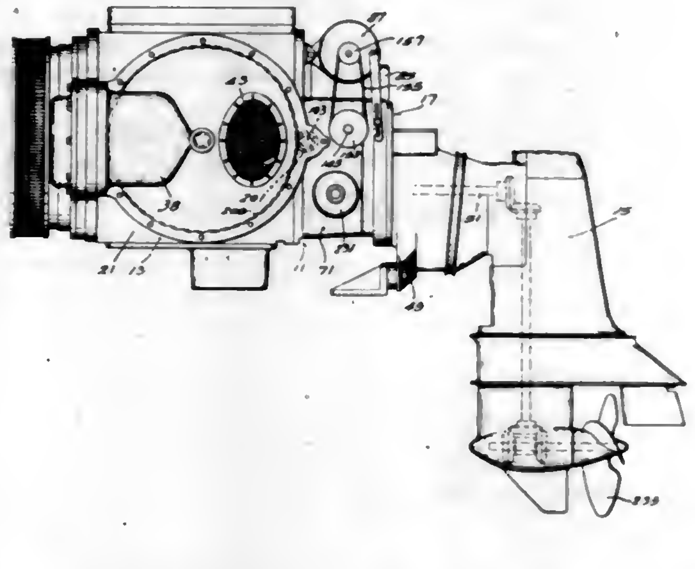
3,386,242

ENGINE

Robert L. Trapp, Milwaukee, Wis., assignor to Outboard Marine Corporation, Waukegan, Ill., a corporation of Delaware

Filed Oct. 23, 1965, Ser. No. 503,878

10 Claims. (Cl. 60—39.16)

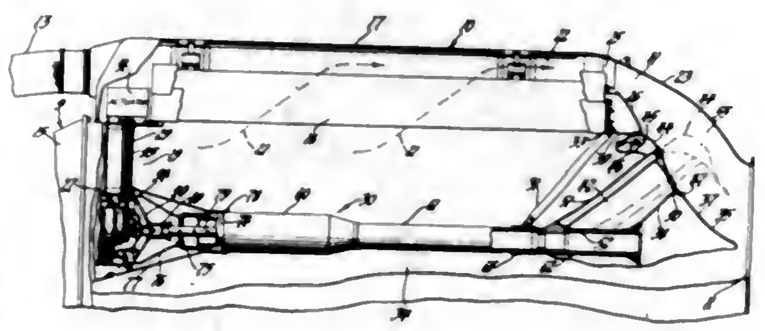


Disclosed herein is a turbine driven marine propulsion device including a turbine unit, a gear box, and a stern drive unit. The marine propulsion device is arranged and designed so that the stern drive unit may be removed as a whole from the gear box and so that the gear box, together with various accessories carried thereon, can be removed as a whole from both the stern drive unit and the turbine unit.

3,386,243

BYPASS VALVE FOR RECUPERATIVE GAS TURBINES

Paul E. Beam, Jr., and Esten W. Spears, Jr., Indianapolis, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Sept. 12, 1966, Ser. No. 578,611
9 Claims. (Cl. 60—39.51)



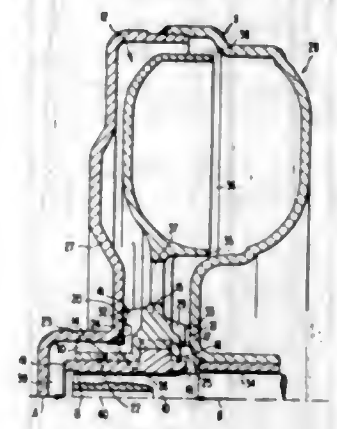
1. A valve having an axis and comprising, in combination.
   means defining an outer annular inlet converging toward the axis
   means defining an inner annular inlet coaxial with and radially within the outer inlet diverging to intersect the means defining the first inlet
   means defining an outlet coaxial with and spaced axially from the inlets
   the aforesaid means defining a radially convergent fluid path from the outer inlet to the outlet and a radially divergent-convergent path from the inner inlet to the outlet
   and a movable valve member of annular airfoil form converging toward the outlet having a convex outer face and a concave inner face
   the valve member being mounted for movement axially of the valve from a first position blocking the inner inlet through a range of positions in the converging portion of the outer inlet variably opening the inner inlet and defining aerodynamic means to turn the flow from the inner inlet to a convergent path compatible with the flow from the outer inlet.

8. Valve means for combining two streams of fluid with aerodynamic efficiency and regulating flow of one of the streams comprising, in combination,
   means defining a first inlet
   means defining an outlet substantially coaxial with and spaced axially of the valve means from the first inlet
   means defining a generally annular second inlet disposed around and spaced radially from the first inlet, the second inlet being of substantially greater overall diameter than the outlet
   a first converging wall defining the outer boundary of a passage from the second inlet to the outlet
   a second converging wall defining the inner boundary of a passage from the second inlet to the first inlet
   a third converging wall defining the inner boundary of a passage from the first inlet to the outlet
   the second and third walls being spaced radially to provide an annular entrance from the first inlet and being spaced axially so as to lie approximately in a common converging surface
   a movable annular valve member
   means mounting the valve member for movement axially of the valve means
   the annular valve member being in the form of an annular airfoil converging toward the outlet
   the valve member bridging the gap between the second and third walls in a closed position to block the said entrance and complete an inner wall from the second inlet to the outlet
   the valve member opening the said entrance upon movement away from the closed position toward the outlet and serving to turn the flow from the entrance toward the axis and thus minimize flow losses from interference between the fluid streams from the two inlets.

3,386,244

ROTOR OF HYDRODYNAMIC UNIT

Josef A. Helmer, Aich, Kreis Nurtingen, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany
Filed May 16, 1966, Ser. No. 550,364
Claims priority, application Germany, May 19, 1965, D 47,311
20 Claims. (Cl. 60—54)

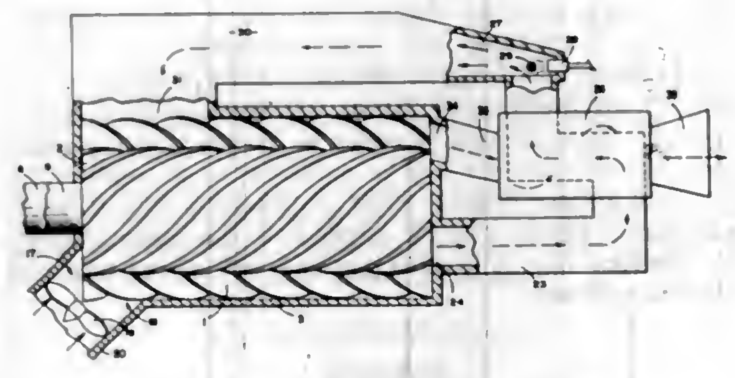


1. A rotor structure for a hydrodynamic unit, especially a hydrodynamic coupling for vehicles, comprising wheel body means of cast material, and a hub portion serving as torque-transmitting entrainment sleeve between a shaft to be connected to the rotor and the wheel body means, said hub portion consisting of a material having relatively high rigidity and being provided with an externally tooth collar, and said collar being surrounded by the material of said wheel body means which is cast about said collar on all sides thereof.

3,386,245

ROTARY EXTERNAL COMBUSTION ENGINES

Russell W. Gamage, 8201 Tuscany Ave., Playa Del Rey, Calif. 90291
Original application May 7, 1965, Ser. No. 467,158, now Patent No. 3,310,043, dated Mar. 21, 1967. Divided and this application Jan. 19, 1967, Ser. No. 634,781
2 Claims. (Cl. 60—59)

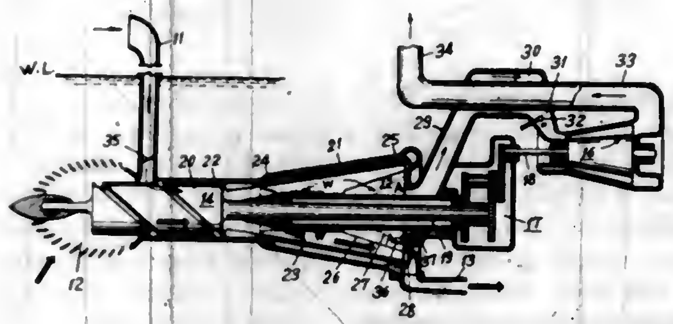


A rotary external combustion engine is provided in the form of a casing incorporating a single pair of meshing rotors having helical grooves defining teeth for mating. An air inlet port is provided for admitting gas into the confined region between the casing and the rotors near one end on the side of the rotors, the rotors serving to compress the received gas and there being provided an air discharge port for passing the compressed gas from the casing. A conduit conducts the compressed gas to a hot gas intake port there being provided means in this conduit for heating and expanding the gas.

3,386,246

COMPOSITE GAS-LIQUID PRESSURIZING ENGINE

Hiroshi Sugimura, 156 2-chome, Higashitamachi, Suginami-ku, Tokyo, Japan
Filed Feb. 25, 1966, Ser. No. 530,161
19 Claims. (Cl. 60—221)

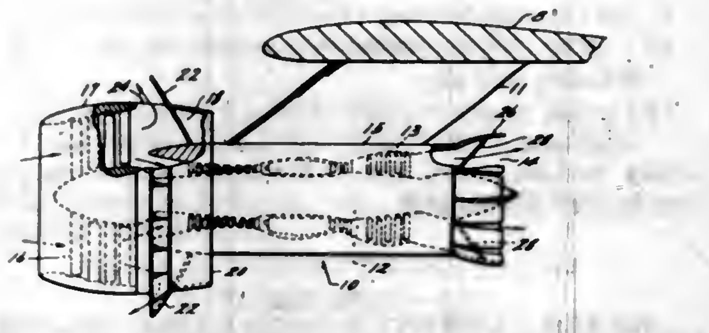


The invention comprises an engine with a built in pump having a liquid intake and a separate gas intake such as for water and air, respectively. The pump combines the liquid and gas under pressure and it discharges them together into a gas-liquid separator. The separator, which may be of the centrifugal type or of the gravity type, has a liquid outlet connected to a jet nozzle for performing useful work. The separator also has a gas outlet which is connected to the inlet of a gas turbine through gas expansion means. The drive shaft of the turbine is driveably connected to the pump or pumps and optionally to the separator. A detector may be associated with the liquid level of the separator to control a valve in the gas intake of the pump. Several variations include recycling liquid from the jet to the pump intake and recycling liquid from the outlet of the separator to its inlet.

3,386,247

POWERPLANT WITH THRUST REVERSER

Charles H. Gross, Lebanon, and Augustus M. Helmintoller, Loveland, Ohio, assignors to General Electric Company, a corporation of New York
Filed Sept. 9, 1966, Ser. No. 578,380
8 Claims. (Cl. 60—226)

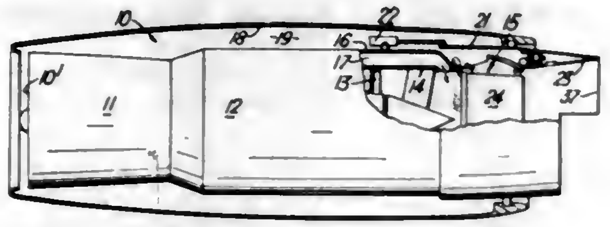


The invention is directed to a fan jet powerplant with thrust reversing means in the cowling for the fan stream. A thrust spoiling means is used at the exit of the primary inner jet so that spoiling the primary stream increases the pressure ratio across the fan to overspeed it and increase its reverse thrust.

3,386,248

NOZZLE ASSEMBLY FOR A JET PROPULSION ENGINE

Malcom Roy Pike, Woodthorpe, Norman Arthur Kerridge, Alvaston, Derby, and Thomas Herbert Frost, Marston Montgomery, Derby, England, assignors to Rolls-Royce Limited, Derbyshire, England, a British company
Filed Mar. 2, 1966, Ser. No. 531,144
Claims priority, application Great Britain, Mar. 26, 1965, 13,079/65
8 Claims. (Cl. 60—261)

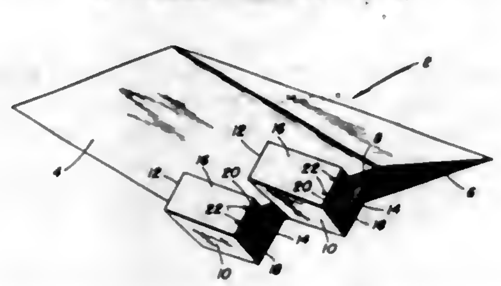


A nozzle assembly for a jet propulsion engine comprises an axially movable shroud, a variable area convergent nozzle which is mounted within the shroud and which is axially fixed. There is provided a fixed divergent nozzle at the downstream end of the shroud and the shroud moves axially relative to the variable area final nozzle so that the fixed divergent nozzle may be placed both in an operative position in which it controls expansion of the jet gases leaving the variable area convergent nozzle and in an inoperative position in which it cannot exercise such control. The variable area convergent nozzle has a plurality of angularly spaced apart flaps each of which is mounted at its upstream end on a pivot and which have an axially extending curved portion. The curved portion is engaged by rollers carried by the shroud so that axial movement of the shroud effects radial movement of the flaps, the area of the convergent nozzle being increased when the shroud moves towards the operative position.

3,386,249

FUEL INJECTION PYLONS

Gordon L. Dugger and Frederick S. Billig, Silver Spring, Md., assignors to the United States of America as represented by the Secretary of the Navy
Filed Jan. 10, 1964, Ser. No. 337,108
8 Claims. (Cl. 60—270)



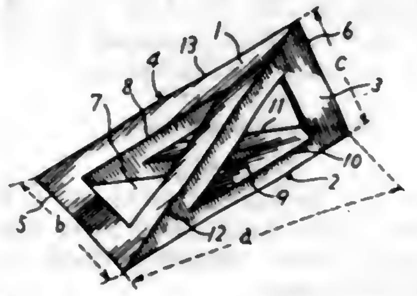
1. An external burning ramjet engine, comprising
(A) ramp means located in a supersonic air stream for diffusing said air,
(B) pylon means connected to and projecting from said ramp means for further diffusing said air, and
(C) fuel injection means for injecting fuel into said further diffused air.

3,386,250

WATER CURRENT CONTROLLING MEANS

Susumu Katayama, 1404 Kitashinchi, Kagami-cho, Kumanoto-ku, Yatsushiro-gun, Japan
Filed Dec. 1, 1964, Ser. No. 415,084
Claims priority, application Japan, Dec. 7, 1963, 38/65,530
10 Claims. (Cl. 61—3)

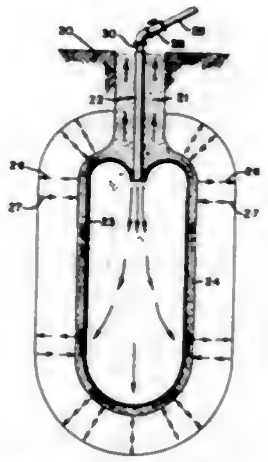
1. A water current control block comprising a four sided hollow body, each of said sides being in the shape of an isosceles triangle and having an opening communicating with the interior of said body the distance between the base of at least one triangular side and the opposite apex is greater than the length of said base.



3,386,251

METHOD OF STRENGTHENING AND STABILIZING COMPRESSIBLE SOILS

Leo Casagrande, Winchester, Mass., and Richard W. Loughney, Oceanside, N.Y., assignors to Griffin Wellpoint Corporation, New York, N.Y., a corporation of New York
Filed May 23, 1966, Ser. No. 552,298
14 Claims. (Cl. 61—35)



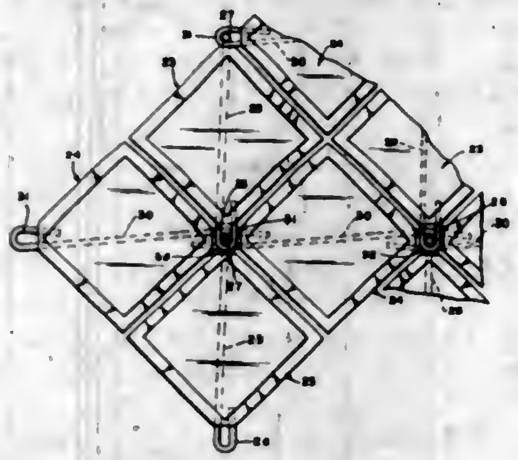
The disclosure herein sets forth a method and means for stabilizing soil, consisting essentially of spacing holes about an area the soil of which is to be strengthened and stabilized; inserting in each hole an expandable member such as a stretchable membrane of lesser diameter than the daimeter of the hole; filling the annular space between the unexpanded membrane and the hole wall with drainage material such as sand; and simultaneously expanding the membranes in all holes to expand the holes and force pore water out of the soil into the drains. The method contemplates increasing the pressure in the holes as the soil is strengthened, to assure that the pressure originally applied does not cause collapse of the soil, and also contemplates maintaining a particular pressure for sufficient time to effect the desired degree of strengthening. In some instances a plurality of membranes is provided in each hole, those at the further depth being simultaneously gradually pressurized, followed by those at increasingly lesser depths in order to assure that the maximum pressure applied will be sufficient to strengthen the soil at the greater depths, while at the same time a lesser maximum pressure can be applied at the lesser depths, thus assuring that soil strengthening will occur and soil collapsed will not.

3,386,252

RIP RAP STRUCTURE DEVICE

Carl P. Nelson, 511 Avenue C, Bismarck, N. Dak. 58501
Filed Sept. 8, 1966, Ser. No. 577,925
5 Claims. (Cl. 61—37)

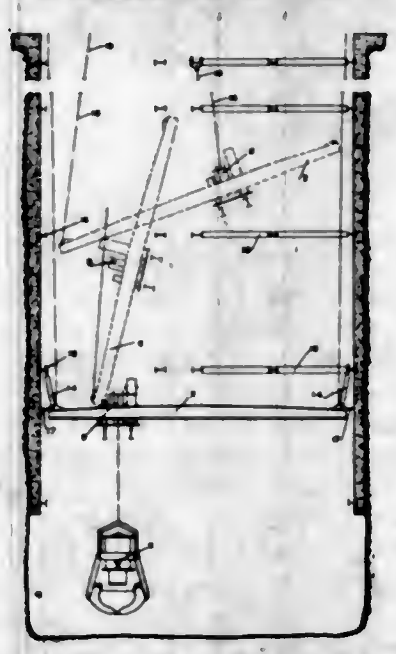
The invention comprises a rip rap structure having a plurality of sets of rectangular blocks interconnected together at certain of their corner ends, each of said blocks in one of said sets having a hook at one corner end and an eyelet at the diagonally opposite corner end with each of said blocks in another of said sets of blocks having an eyelet at a pair of diagonally opposite corner ends with said hooks received in said eyelets to hook said blocks together.



3,386,253

LASHING GEAR

Herbert V. Henderson, Germiston, Transvaal, Republic of South Africa, assignor to Wright Anderson (South Africa) Limited, Boksburg North, Transvaal, Republic of South Africa
Filed June 30, 1966, Ser. No. 561,984
Claims priority, application Republic of South Africa, July 9, 1965, Ser. No. 65/3,633
5 Claims. (Cl. 61—41)



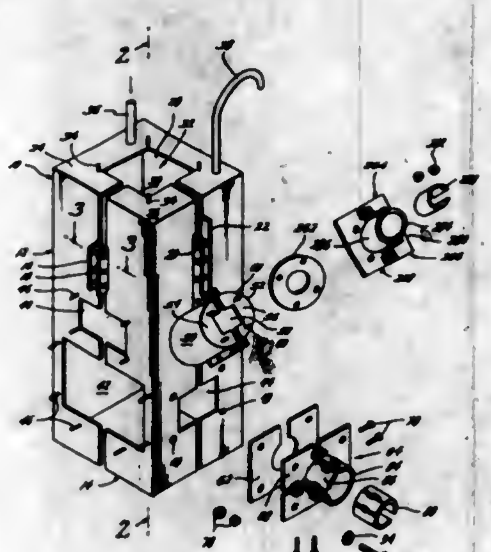
A lashing gear for a mine shaft is made up of members forming a rectangular frame and includes a pair of oppositely disposed members forming a track. A bridge is supported on the track for movement longitudinally thereof. The bridge carries a winch supporting carriage movable in a direction normal to the bridge movement. Adjustable means such as telescopic tube hangers, suspends the frame from sets of shaft steel in the walls of the mine shaft for vertical and angular adjustment.

3,386,254

UNDERWATER WORK VESSEL

Dickey P. Connally, Groves, Tex., assignor to Reading & Bates Offshore Drilling Company, Tulsa, Okla., a corporation of Delaware
Filed Apr. 26, 1966, Ser. No. 545,279
4 Claims. (Cl. 61—69)

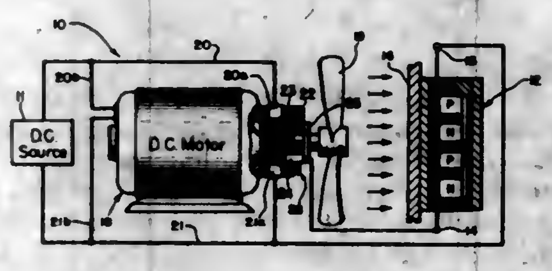
A compartment is made of segments which are arranged to be bolted together in forming a watertight chamber about a workpiece at a subsea location. Sealing structure is formed about longitudinal members extending at angles from the workpiece to maintain the chamber watertight.



3,386,255

THERMOELECTRIC SYSTEM WITH IMPROVED ENERGIZING NETWORK

Harry J. Venema, Wheaton, Ill., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Filed Feb. 27, 1967, Ser. No. 618,965
3 Claims. (Cl. 62—3)



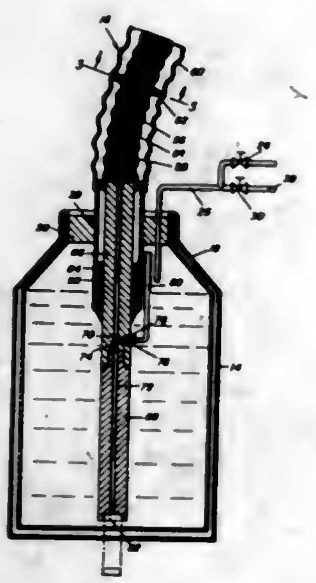
A thermoelectric system in which a D.-C. electric motor operated fan is used to a cool a thermoelectric module, and a third brush is provided in the electric motor to tap the required low voltage for energizing the thermoelectric module. This abstract shall not be used for interpreting the scope of the claims.

3,386,256

FLEXIBLE HEAT-CONDUCTING MOUNT

Peter Alexander, Ho-Ho-Kus, N.J., assignor, by mesne assignments, to Isotopes, Inc., Westwood, N.J., a corporation of California
Filed Aug. 24, 1966, Ser. No. 574,644
9 Claims. (Cl. 62—45)

A cryogenic system comprising a reservoir containing a liquefied gas cryogenic coolant, a mounting block to support an object to be cooled, an elongated linkage being flexible at least in part having one end in thermal contact with the contents of the reservoir and the other end connected to the mounting block, said linkage including a solid thermal conductor extending from the mounting block to the reservoir for extracting substantial amounts of heat from the block and delivering by solid thermal conduction the extracted heat to the coolant, said conductor being one of a metallic braidlike member



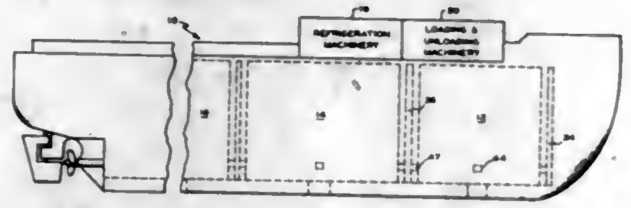
arranged to generally fill its periphery along its length and a metallic cable of at least two twisted strands.

3,386,257
STORAGE AND TRANSPORTATION OF COLD LIQUIDS

Charles W. Beazer, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Filed Aug. 3, 1966, Ser. No. 569,992

10 Claims. (Cl. 62—45)



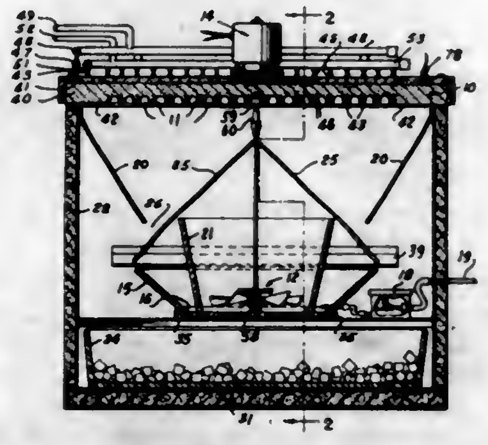
In a vehicle for storing and transporting a cold liquid cargo at low temperatures, the tanks carried by the vehicle are stabilized therein against longitudinal and transverse movement by a system of keys and keyways attached to the side walls of said tanks and the adjacent structural members. Means are also provided for preventing vertical movement of said tanks.

3,386,258
SPRAY TYPE ICEMAKER

Alfred E. Zygiel, 2510 Hillsboro, Dallas, Tex. 75228

Filed Feb. 6, 1967, Ser. No. 614,121

10 Claims. (Cl. 62—138)



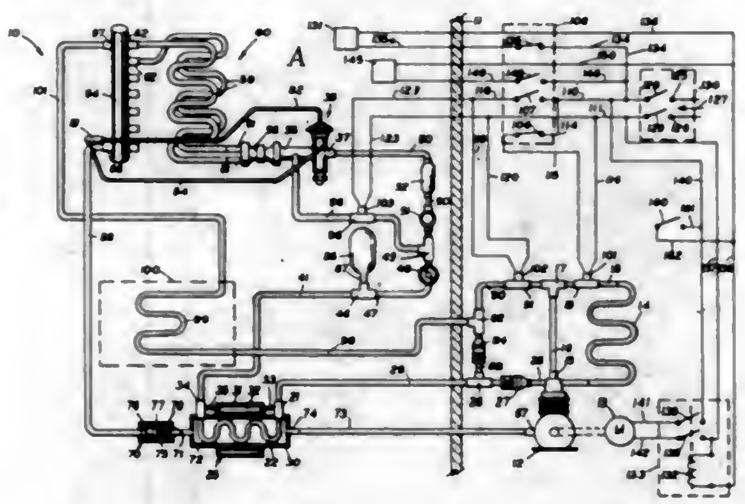
The disclosure relates to a spray type icemaking machine which uses a high speed fan for generating and directing water vapor that is to be frozen onto an icemaking surface. The fan is spaced slightly above a water reservoir and in operation directs a fine water mist towards an icemaking surface directly over the water reservoir where the water mist is frozen and to eventually make cubes thereon. The ice cubes are released from the icemaking surface by a conventional hot gas defrosting cycle and fall by gravity to an ice bin beneath the water reservoir.

3,386,259
AIR CONDITIONING APPARATUS WITH HOT GAS HEATING MEANS

Henry O. Kirkpatrick, Dallas, Tex., assignor to Cummins Engine Company, Inc., Columbus, Ind., a corporation of Indiana

Filed June 20, 1966, Ser. No. 558,674

17 Claims. (Cl. 62—156)



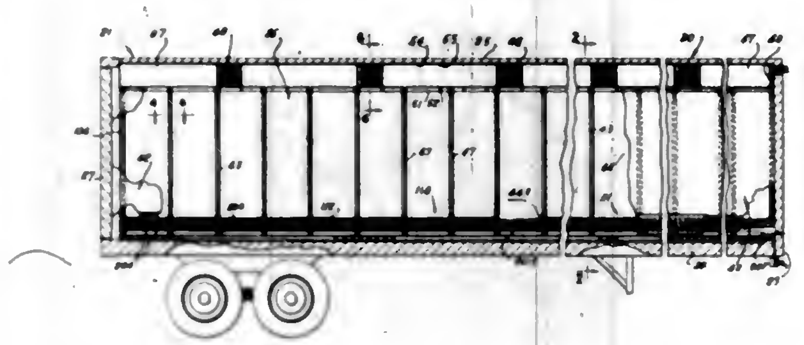
1. An air conditioning apparatus for controlling the temperature in a chamber including: a compressor having an inlet and an outlet; a condenser, said compressor and said condenser being disposed exteriorly of the chamber; an evaporator having coil means and an expansion valve for controlling flow of liquid refrigerant fluid to said coil means, said evaporator being disposed in the chamber; first conduit means for conducting refrigerant fluid from said outlet of said compressor to said condenser; second conduit means for conducting refrigerant fluid from said condenser to said expansion valve; first bypass means connected to said first and second conduit means for conducting fluid from said outlet of said compressor to said second conduit means without passing through said condenser; second bypass means connected to said second conduit means for conducting fluid from said second conduit means to the inlet end of said coil means without passing through said expansion valve; third bypass means for conducting fluid from said first bypass means to the outlet end of said coil means; third conduit means for conducting refrigerant fluid from said evaporator to said inlet of said compressor; and valve means operatively associated with said bypass means and said first conduit means for causing refrigerant fluid to flow from said outlet of said compressor through said condenser, said expansion valve, said evaporator and said third conduit means to said inlet of said compressor during the cooling cycle of operation of said apparatus and for causing refrigerant fluid to flow from said outlet of said compressor to opposite ends of said coil means and through said third conduit means to said inlet of said compressor during the heating cycle of operation of said apparatus.

3,386,260
HEAT EXCHANGERS

Henry O. Kirkpatrick, Dallas, Tex., assignor to Cummins Engine Company, Inc., Columbus, Ind., a corporation of Indiana

Filed Dec. 19, 1966, Ser. No. 602,770

14 Claims. (Cl. 62—239)



1. A vehicle including: a body providing an elongate chamber for holding cargo, said body having top, bottom, side and end walls; a plurality of longitudinal transversely spaced runners on said bottom wall for holding cargo in said chamber spaced above said bottom wall, said runners having transverse apertures therethrough to permit flow of air transversely in said chamber below said cargo supported by said runners; an inner wall on each of said side walls extending substantially the full length of each of said side walls; means between said inner walls and said side walls securing said inner walls to said side walls in spaced relation thereto to provide vertical passages; said inner walls being spaced from said bottom and top walls; an evaporator assembly secured to each of said side walls; a cover plate secured to each of said side walls constituting a downward extension of said inner walls and covering said evaporator assemblies, said passages opening downwardly above said evaporator assemblies; plenum means providing a longitudinal plenum at the upper end of each inner wall of greater width than said passages, said plenums extending longitudinally substantially the full length of said side walls adjacent said top wall of said body, said passages opening upwardly into said plenums; and a plurality of longitudinally spaced air moving means for drawing air transversely outwardly from the upper portion of said chamber into said plenums and moving the air downwardly through said passages past said evaporator assemblies, and into the chamber adjacent said bottom wall.

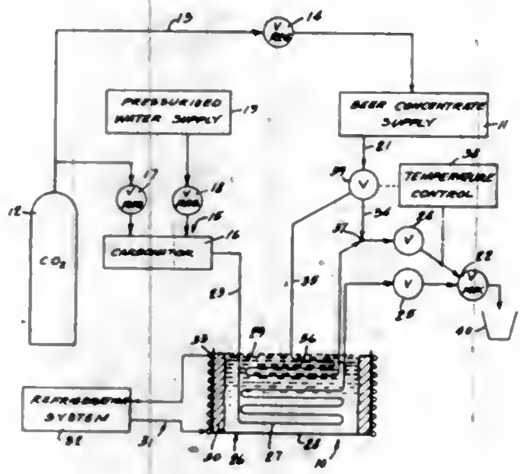
3,386,261
METHOD OF AND APPARATUS FOR DISPENSING RECONSTITUTED BEER

Richard T. Cornelius, Minneapolis, Minn., assignor to The Cornelius Company, Anoka, Minn., a corporation of Minnesota

Filed Sept. 6, 1966, Ser. No. 577,426

12 Claims. (Cl. 62—339)

Method and means for dispensing reconstituted beer from room-temperature water and beer-concentrate supplies including carbonating the water supply, thereafter refrigerating it to a low temperature and directing it to a mixing valve, directing the warm beer concentrate directly to the mixing valve, controlling the ratio of cold carbonated water and warm beer concentrate to produce both the desired dilution, resulting carbonation, and resulting temperature, and where necessary bypassing a portion of the warm beer supply only once through refrigeration means and reuniting it with an unrefrigerated portion of the beer concentrate enroute to the mixing valve, and controlling the amount of beer concentrate so bypassed in response to the resulting (warm) temperature of the beer



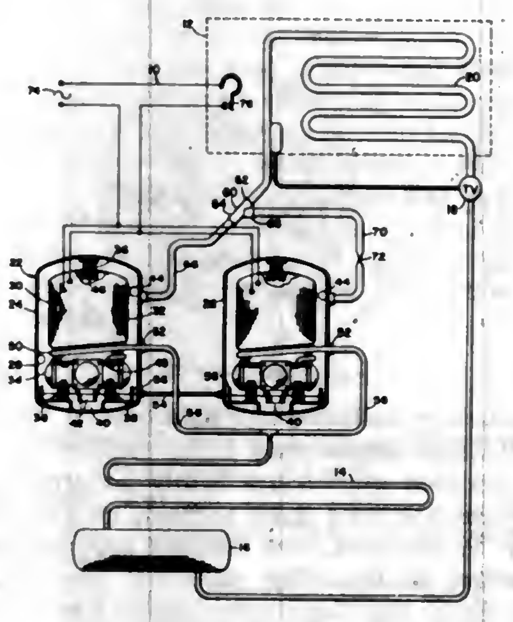
concentrate downstream of the point where it is reunited with the remainder of the supply of beer concentrate.

3,386,262
REFRIGERATION APPARATUS WITH COMPRESSORS IN PARALLEL

Reuben J. Hackbart and Duane F. Sanborn, La Crosse, Wis., assignors to The Trane Company, La Crosse, Wis., a corporation of Wisconsin

Filed Oct. 31, 1966, Ser. No. 590,744

9 Claims. (Cl. 62—469)



A refrigeration system having parallel circuited compressors in which means is provided for maintaining the oil sump of one compressor at a higher pressure than the oil sump of the other compressor so that excess oil in the one compressor may flow through an oil equalizer conduit to the other compressor; and means for directing a greater portion of the oil returned from the evaporator to the higher pressure oil sump.

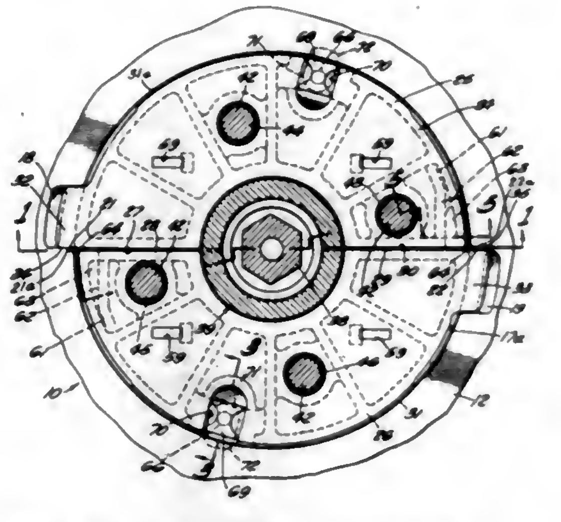
3,386,263
ROTARY TABLE MASTER BUSHING

Spencer W. Long, Inglewood, Calif., assignor to Armco Steel Corporation, Middletown, Ohio, a corporation of Ohio

Filed Oct. 22, 1965, Ser. No. 501,565

16 Claims. (Cl. 64—23.5)

The master bushing assembly for a well drilling rotary machine comprises duplicate split halves each having a laterally extending driving lug provided with a radial driving face, the master bushing halves each being provided with axially extending pin sockets for reception of driving pins on a kelly bushing.



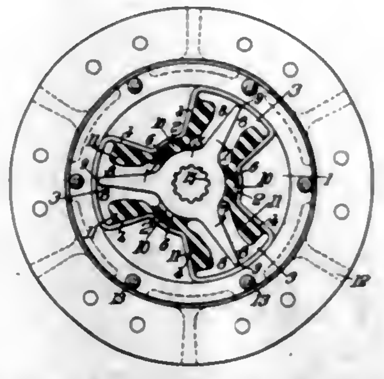
3,386,264
RESILIENT COUPLINGS

Jean Felix Paulsen, Chateaudun, France, assignor to Luxembourgeoise de Brevets et de Participations, Luxembourg

Filed Mar. 24, 1966, Ser. No. 537,185

Claims priority, application France, Mar. 30, 1965 11,300

5 Claims. (Cl. 64—27)



The coupling includes two members in the form of a disc and a hub respectively to be resiliently coupled together. Resilient masses are firmly adhered to both the disc and the hub, and these resilient masses absorb, substantially by shearing, low torques applied from one of the members to the other. Resilient abutments are adhered to either the disc or the hub and engage the other member to absorb, substantially by compression, higher torques applied from one member to the other.

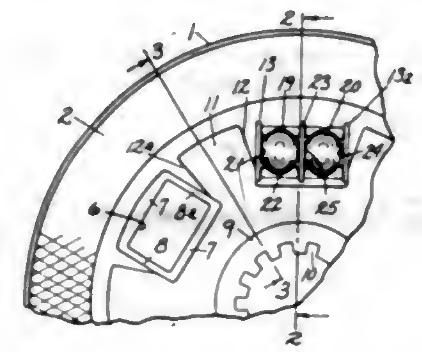
3,386,265
TORSIONALLY RESILIENT DRIVE

Ronald L. Kasaback, Erie, Pa., assignor to Lord Corporation, Erie, Pa., a corporation of Pennsylvania

Filed Sept. 27, 1966, Ser. No. 582,380

8 Claims. (Cl. 64—27)

1. In a torsionally resilient drive, relatively rotatable first and second members, one member being a driving member and the other member being a driven member, a torsionally resilient drive between the members comprising a pair of angularly spaced tangentially extending elastomeric springs, a finger on the second member in the space between the springs, each spring having spaced end plates, one end plate of each spring being adjacent the finger and the other end plate of each spring being remote from the finger, elastomeric means between the end plates and having ends of reduced area bonded to the end plates, the elastomer diverging from the end plate to which it is bonded to a larger area intermediate section of elastomer whereby under compression load the elastomer of said larger area intermediate section swings down against the end plates outside said ends and protects the bond to said ends, said first member having a thrust surface providing a seat for each end plate, said finger having a thrust surface facing the adjacent end plate of each spring whereby movement of the second member relative to the first member in one direction lifts the adjacent end plate of one spring off its seat to compress the elastomer of said one spring while movement of the second member relative to the first member in the opposite direction lifts the adjacent end plate of the other spring off its seat to compress the elastomer of said other spring.

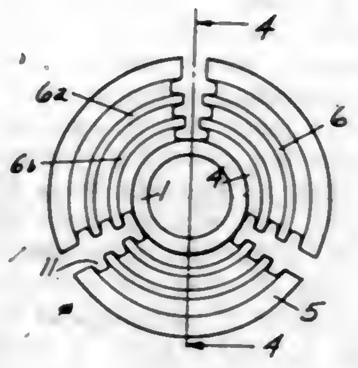


3,386,266
SLIP COUPLING

Victor J. Grumblatt, Erie, Pa., assignor to Lord Corporation, Erie, Pa., a corporation of Pennsylvania

Filed June 2, 1966, Ser. No. 554,702

6 Claims. (Cl. 64—30)



A flexible coupling in which a friction driven element between concentric driving and driven members is a body of elastomer having at least two radially extending flexing sections, each section having nonextensible means disposed in the elastomer of said section to increase the compression stiffness of the elastomer and the resultant friction grip.

3,386,267
CIRCULAR KNITTING MACHINES OF THE SUPERIMPOSED NEEDLE CYLINDER TYPE AND METHODS OF KNITTING ON THE SAME

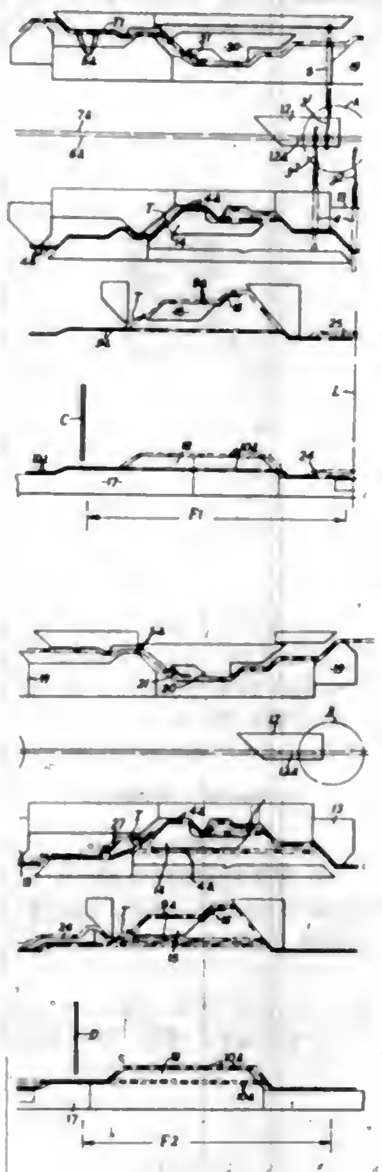
Albert H. Widdowson, Osmond Ecob, and Bertram Johnson, Leicester, England, assignors to Wildt Mellor Bromly Limited, Leicester, England, a British company

Filed Feb. 1, 1966, Ser. No. 524,049

Claims priority, application Great Britain, Feb. 6, 1965, 5,239/65

5 Claims. (Cl. 66—14)

A method for producing selective links-links float jacquard fabric on a machine having odd and even feeds and bottom and top needle cylinders equipped with double-ended needles. The method consists in selecting needles at a station in advance of each even feed to knit in bottom cylinder at the following odd feed, and selecting at a station in advance of each odd feed needles to knit in top cylinder at this odd feed, leaving non-selected needles at the odd feed which knitted the bottom cylinder at aforesaid even feed to non-knit in bottom cylinder at the odd feed.

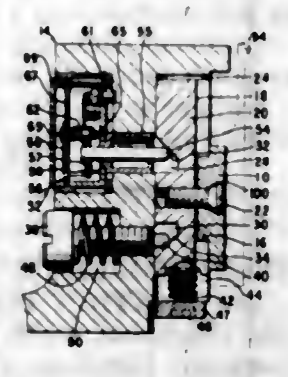


3,386,268
STITCH CAM ADJUSTMENT AND INDICATOR MEANS

Leonard A. Beckenstein, Farmingdale, N.Y., assignor to The Singer Company, New York, N.Y., a corporation of New Jersey

Filed Nov. 1, 1965, Ser. No. 505,853

4 Claims. (Cl. 66—54)



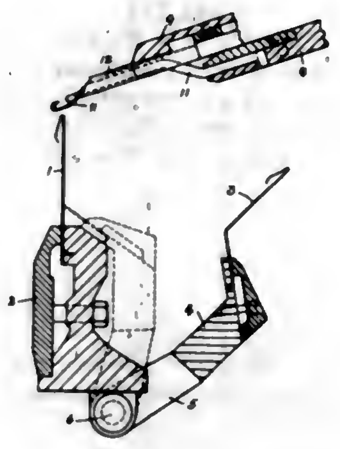
Apparatus for accurately indicating the setting of a knitting machine cam is disclosed as utilizing a positionable cam post provided with a pair of acutely cut notches, one thereof accommodating the end of an adjustment screw, and the other accommodating the push rod of an indicator.

3,386,269
STRAIGHT-BAR KNITTING MACHINES

Eric E. G. Pynegar, 207 Smalley Hill, Heanor, England, and Alfred E. Howitt, 140 Heanor Road, Smalley, England

Filed Sept. 8, 1965, Ser. No. 485,778

12 Claims. (Cl. 66—88)



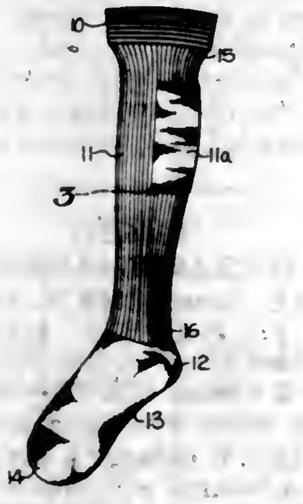
There is disclosed straight-bar knitting machine structure including a set of frame needles of which certain needles are movable from an operative position into an inoperative position and returnable to said operative position, and a set of machine knitting elements which can be moved into position over the movable frame needles when the latter are in an inoperative position and cooperate with the remaining frame needles to produce rib work, the machine knitting elements comprising two independently operated parts which are movable relatively to each other and to the frame needles, said two parts being movable relatively to each other to form knitted loops in yarn taken from between the frame needles to produce rib fabric or to transfer loops produced by the machine knitting elements to the movable frame needles when said movable frame needles are returned from an inoperative to an operative position for the production of plain knitted work on the frame needles, and said machine knitting elements being withdrawable to an inoperative position during the production of said plain knitted work.

3,386,270
MAN'S SUPPORT SOCK AND METHOD OF FORMING SAME

John C. Simmons, Valdese, N.C., assignor to Alamance Industries, Inc., Burlington, N.C., a corporation of North Carolina

Filed Apr. 18, 1966, Ser. No. 543,405

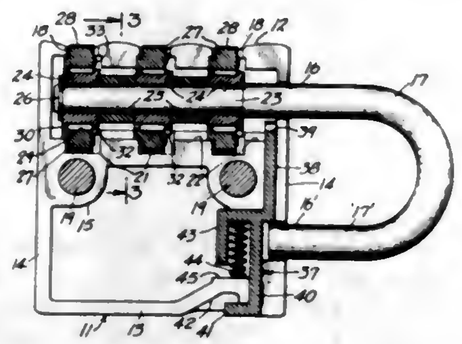
10 Claims. (Cl. 66—178)



The leg of the sock is preferably knit of courses of thermoplastic "stretch" yarn alternating with courses of covered spandex "elastic" yarn. The stretch yarn is knit in every wale throughout the leg while the elastic yarn is knit and floated in selected wales throughout the major portion of the leg to form mock ribs therein and knit in every wale of an area at the rear to form a non-rib, plain knit portion which is adapted to engage the calf of the wearer.

3,386,271
COMBINATION PADLOCK

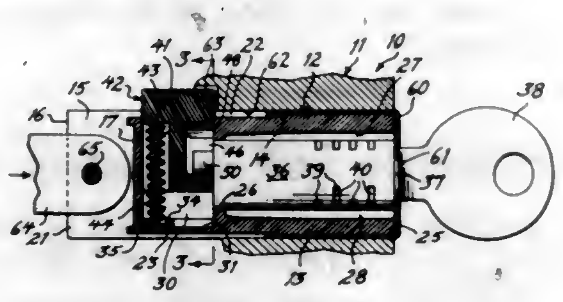
Louis H. Morin, Bronx, N.Y., assignor to Coats & Clark Inc., New York, N.Y., a corporation of Delaware
Filed May 20, 1966, Ser. No. 551,742
8 Claims. (Cl. 70—25)



A combination padlock having settable combination wheels and manual means for changing the combination when said padlock is in open position.

3,386,272
FILE-CABINET-TYPE LOCK

Jerome Schwartz, Philadelphia, Pa., assignor to Taylor Lock Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed July 19, 1965, Ser. No. 473,088
3 Claims. (Cl. 70—81)

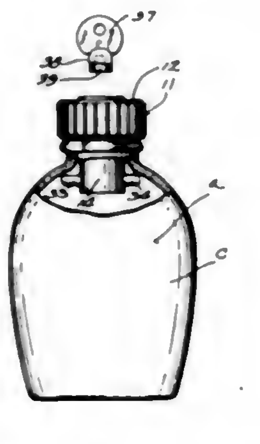


This invention is concerned essentially with cylinder locks of the file-cabinet type and apparatus for their manufacture, wherein the locks include a lockable plug rotatable in a body and carrying a cam for operating a bolt between extended and retracted positions.

3,386,273
LOCKABLE CLOSURE

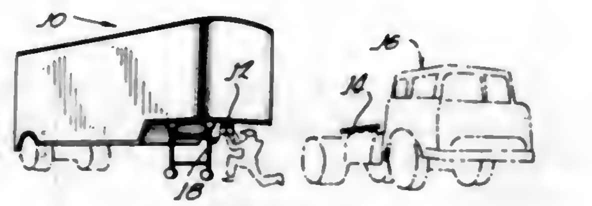
Michael L. Green, 8660 N. Point Drive, Fox Point, Wis. 53217
Filed Jan. 21, 1966, Ser. No. 522,315
2 Claims. (Cl. 70—168)

This invention relates to a lockable closure for aspirin bottles and the like. It includes a cap and depending tubular housing. A locking pin projects through an aperture in the tubular housing and is pivotally mounted eccentrically on the lower face of a plug which is rotatable within the tubular housing. The upper face of the plug is exposed through an aperture in the cap. Mutually cooperable means on a key and the upper portion of the plug permit the plug to be rotated by use of the key. Means are provided for limiting rotation of the plug from a first position in which the locking pin is substantially retracted into the tubular housing to a second position in which the locking pin extends substantially from the tubular housing. The position of the plug in which the locking pin extends the maximum amount being intermediate of said first and second positions.



3,386,274
TRAILER LOCK

Duncan McIntyre, Chicago, Ill., assignor of one-half to Samuel Kurland and Ann Kurland, Skokie, Ill., joint tenants
Filed June 16, 1967, Ser. No. 646,680
6 Claims. (Cl. 70—232)



A trailer lock having a generally cylindrical shaped housing, with a flat plate at the top and the bottom and an aperture extending through it which is adapted to receive the coupling pin of a trailer. A pair of jaw elements are pivotally secured within the housing in spaced relation and normally biased to lockingly engage the coupling pin of the trailer. The jaw elements each have an extension which overlaps one another, and a cam member operated by a lock mechanism cammingly engages one of the extensions to pivotally move the two jaw elements to an open, unlocked position to permit the locking means to be removed from the trailer's coupling pin.

3,386,275
KEY CHANGEABLE TUMBLER CONSTRUCTION FOR COMBINATION LOCKS

Anthony J. Potzick, Cincinnati, Ohio, assignor to The Mosler Safe Company, Hamilton, Ohio, a corporation of Ohio
Filed Feb. 14, 1966, Ser. No. 527,371
14 Claims. (Cl. 70—316)

A key changeable tumbler construction wherein, in preferred form, a center disk is releasably connected to a gate-presenting outer ring by a circular spring. The

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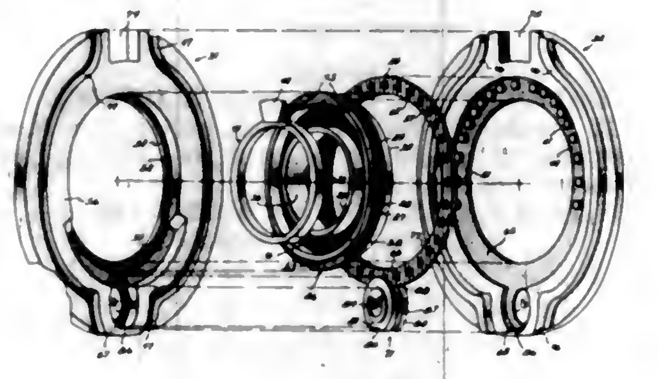
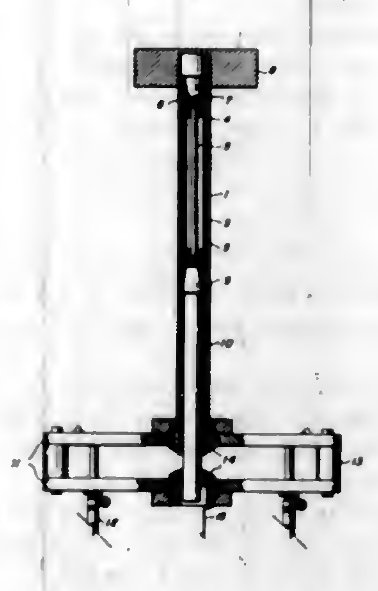
spring is mounted to the outer ring for rotation therewith and is displaceable, by a cam, in the direction parallel to the axis of the center disk, toward and away from the center disk. When rotated, the cam bends a portion of the spring into interlocking engagement with the center disk, so that the center disk is then coupled to the outer disk for ordinary lock operation. When the key-operated cam is turned in the other direction the spring is uncoupled from engagement with the center disk, so that the outer ring is released and can be rotated relative to the center disk to change the combination.



3,386,276
DEVICE FOR FORMING SMALL DIAMETER TUBING

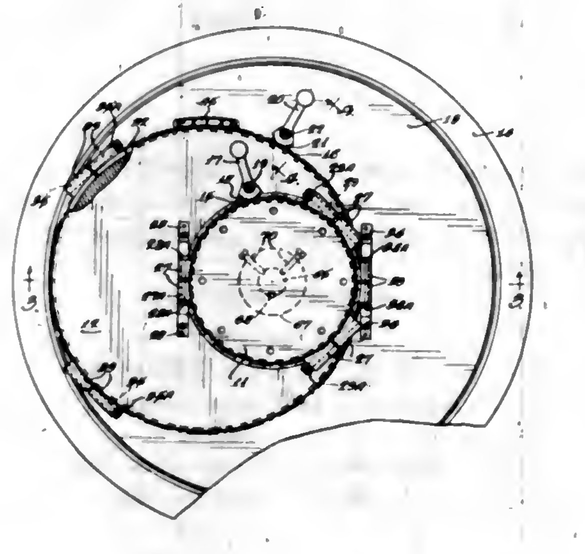
George F. Erickson, Los Alamos, N. Mex., assignor to the United States of America as represented by the United States Atomic Energy Commission
Filed June 3, 1964, Ser. No. 372,423
1 Claim. (Cl. 72—56)



1. A device for forming small diameter metal tubing comprising in combination:
 (a) an inner electrical coaxial conductor,
 (b) an outer electrical coaxial conductor which is electrically insulated from said inner conductor by a thin suitable dielectric material,
 (c) a power supply capable of supplying 10^4 to 10^6 amperes,
 (d) tapered shorting plugs which electrically connect the outer conductor to the inner conductor so as to allow current to pass from the power supply to ground by the triggering of a suitable switching means, and
 (e) a mandrel that is concentrically positioned within the inner conductor and electrically insulated from it.

3,386,277
POSITIONING DEVICE

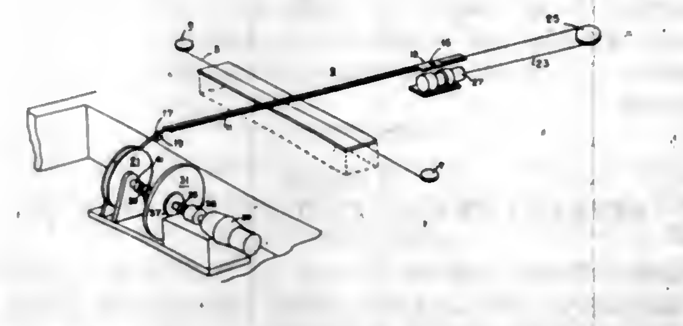
Louis W. Hennings, Marion, Va., assignor to Brunswick Corporation, a corporation of Delaware
Filed June 11, 1965, Ser. No. 463,227
6 Claims. (Cl. 73—1)



A device for positioning sighting instruments, comprising three generally parallel rotary members, each mounted for rotation about an axis eccentric relative to the next lowermost member, with means provided for locking the members against relative rotation.

3,386,278
DEADLOAD SIMULATOR

Robert F. Barthelemy, Lafayette Hill, Pa., assignor to the United States of America as represented by the Secretary of the Navy
Filed Jan. 20, 1966, Ser. No. 521,997
1 Claim. (Cl. 73—11)

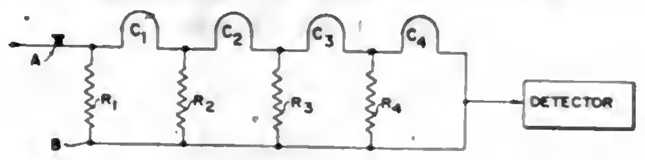


The subject invention relates to unique apparatus for simulating the movement and impact of large translational live or dead loads on aircraft arresting gear to be evaluated under varying test conditions. The improved apparatus utilizes the kinetic energy of a large rotating flywheel device which wraps an elongated tow tape about a clutch connected capstan and, in doing so, draws an attached shuttle and hook assembly into the arresting gear under test.

3,386,279
TIME RESOLUTION ANALYSIS APPARATUS

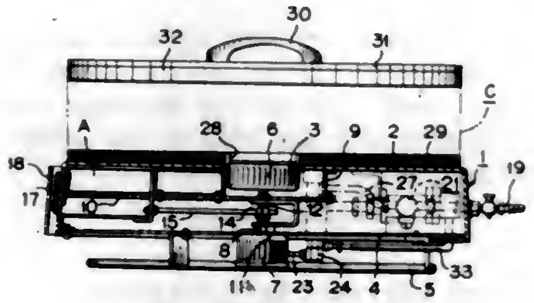
James C. Sternberg, Fullerton, Calif., assignor to Beckman Instruments, Inc., a corporation of California
Filed Mar. 1, 1965, Ser. No. 435,931
9 Claims. (Cl. 73—23.1)

Analysis apparatus employing a time resolution principle. A number of chromatographic columns are connected in series to a detector with a restrictor connected from the input of each column to the detector to give timed pulses indicative of the retention on each column of a sample passed in a carrier through the columns. A second embodiment connects delays in series from sample inlet to the detector with selective modifiers such as traps connected from the inputs of the delays to the detector to obtain timed indications of the effect of the modifiers on the sample.



3,386,280
AIR CLEANER TESTER

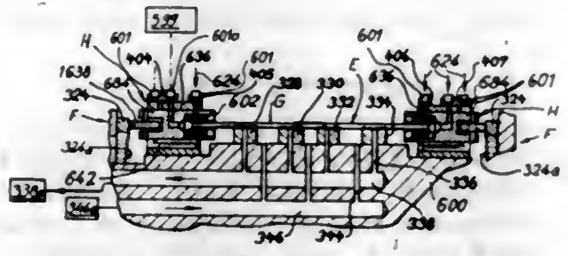
**Toyoo Yamada, 7–14 Chuo 5-chome, Ahta-ku,
Tokyo, Japan
Filed July 28, 1966, Ser. No. 568,630
1 Claim. (Cl. 73—38)**



A testing device for an air cleaner of the type used on automobiles including a casing having an intake opening alignable with an air filter to be tested. An air pressure operated fan disposed in such opening for drawing air from the air filter into a corridor in the casing, the corridor being closed by a baffle plate which is deflected by the air flow and which has an indicator for movement therein to indicate the filter characteristics of the air cleaner.

3,386,281
APPARATUS FOR TESTING CIGARETTES AND THE LIKE

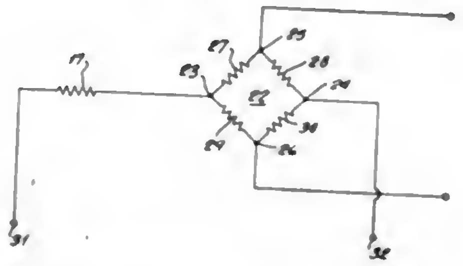
**Guenter Menge, Sander Damm 13, Hamburg-Lohbrugge,
Germany, and Gerhard Koop, Allermoeher Deich 35.
Hamburg-Allermohe, Germany
Filed Jan. 12, 1966, Ser. No. 520,221
Claims priority, application Germany, Jan. 23, 1965,
H 54,959
7 Claims. (Cl. 73—41)**



Cigarettes are tested during travel with a conveyor which carries pairs of registering sealing devices having openings for the ends of wrappers on cigarettes. Each sealing device comprises an annular sealing element consisting of elastomeric material and deformable from a first condition in which it can freely receive the end of a cigarette to a second condition in which it forms a fluid-tight seal around the wrapper in the region adjacent to the respective end. The sealing elements can be deformed mechanically or by means of a fluid.

3,386,282
TEMPERATURE RESPONSIVE DEVICE

**Walter E. Jacobson, Meriden, Conn., assignor to Revere
Corporation of America, County of New Haven, Conn.,
a corporation of New Jersey
Filed Apr. 15, 1966, Ser. No. 546,125
6 Claims. (Cl. 73—88.5)**

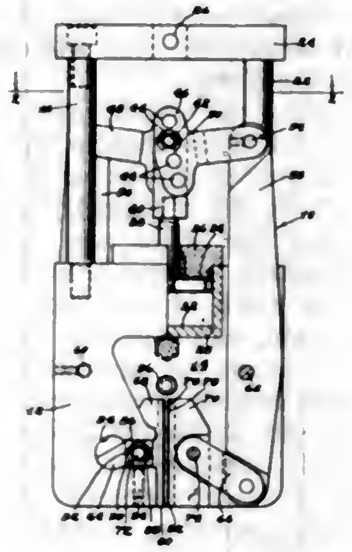


6. An electrical circuit responsive to variations in a variable condition and compensated for variations in ambient temperature, comprising:
- (a) a bridge circuit responsive to said variable condition, said bridge circuit including:
  - (1) a pair of input terminals;
  - (2) a pair of output terminals; and
  - (3) arms interconnecting said input and output terminals, at least one arm including a variable resistance element responsive to said condition and also responsive to variations in ambient temperature;
- (b) a compensating resistance element;
- (c) means connecting said element in series with one of said input terminals, said connecting means and the other input terminal being adapted for connection to a source of electrical energy; and
- (d) mounting means for said resistance element, including:
  - (1) an inner ring of a material having a substantial temperature coefficient of expansion and having diametrically opposed external protrusions;
  - (2) an outer ring of a material having a substantially lower temperature coefficient of expansion engaging said protrusions so as to stress both said rings; and
  - (3) said inner ring being adapted to carry said compensating resistance element so that said element is subjected to strain variations corresponding to variations in the ambient temperature.

3,386,283
TENSILE TESTER WEDGE CLAMP

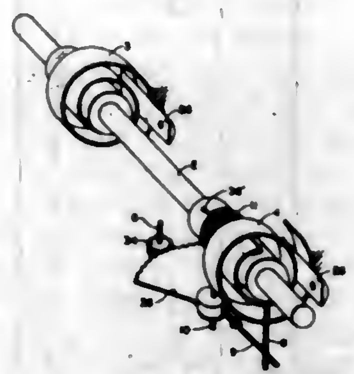
**John L. Holmes, Providence, George W. Torrey, Barrington, Nicholas D. Spino, Providence, and Walter S. Vargas, North Kingstown, R.I., assignors to The Bendix Corporation, a corporation of Delaware
Filed Oct. 8, 1965, Ser. No. 494,219
1 Claim. (Cl. 73—103)**

A pneumatically-actuated wedge clamp for a tensile tester in which the initial clamping is produced by pneumatic pressure on piston operating adjustable toggle arms to engage the clamping anvils. Further clamping pressure is obtained by allowing a precise, limited rotary wedging movement of the clamping anvils on their toggle arms. The anvils are limited in their wedging action by abutment with the frame of the clamp so that the tensile force is transferred from the toggle arms to the frame. Pneumatic actuated release of the clamping forces insures against test equipment "freezing" or "locking-up" and terminates the test cycle.



3,386,284
TORQUE GAUGE

**Sid Hejzlar, Flushing, N.Y., assignor to Aero-Chatillon Corporation, New York, N.Y., a corporation of New York
Filed July 1, 1965, Ser. No. 468,769
6 Claims. (Cl. 73—139)**

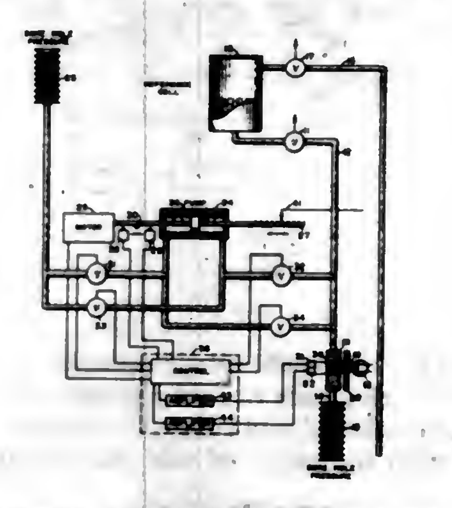


This invention provides improvements in torque gauges. The improved torque gauge includes opposed spiral springs mounted on a torsion shaft. The springs are placed under initial stress to resist the turning movements of the torsion shaft in either direction of turning. The turning movements of the shaft are translated into movements of a gauge dial pointer by actuating means which include engaging rotary arms whose effective lengths change during operation of the gauge. The rotary arms are arranged so as to move in a manner which maintains a straight line relationship between the angular movement of the torsion shaft and the angular movement of the gauge dial pointer.

3,386,285
SYSTEM FOR MEASURING CHANGE IN FLUID PRESSURE

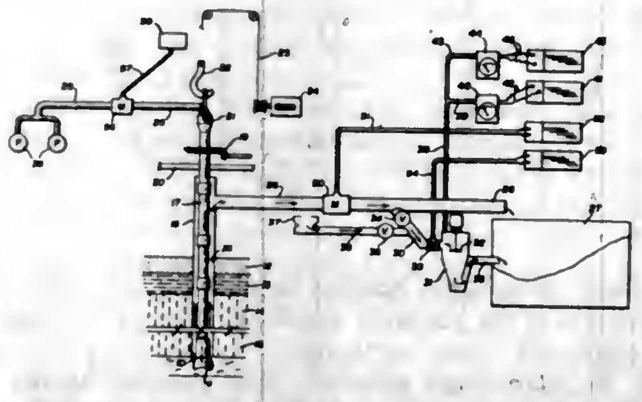
**Robert A. Kirby, Houston, Tex., assignor to Esso Production Research Company, a corporation of Delaware
Continuation-in-part of application Ser. No. 473,663, July 21, 1965. This application June 7, 1967, Ser. No. 644,220
5 Claims. (Cl. 73—152)**

Automated, differential-pressure, sensing device adapted to be lowered within an oil well, including means for balancing the fluid pressure of a reference cell against the well pressure and metering fluid to-and-from the reference cell as required to maintain a balanced condition. The device includes an improved and simplified reference cell adapted to be charged with gas at the surface and lowered to the desired operating depth where it is vented to ambient pressure after establishing thermal equilibrium. The cell is then closed thereby establishing a reference pressure against which changes in reservoir pressure may be measured.



3,386,286
HYDROCARBON WELL LOGGING

**Olan T. Moore, P.O. Box 3297,
Midland, Tex. 79701
Filed Mar. 18, 1966, Ser. No. 535,423
7 Claims. (Cl. 73—153)**



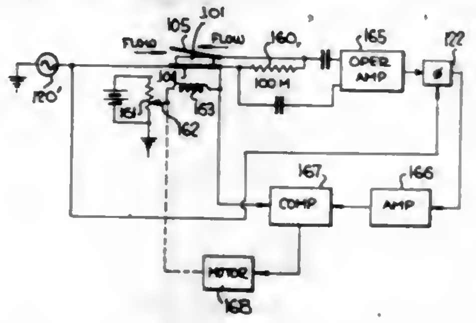
A hydrocarbon well logging method which includes, in addition to the usual depth measurements, mud flow measurement and detection of hydrocarbon gases in the diverted portion of the mud, the steps of measuring the total flow rate of mud, the flow rate of diverted mud and correlatively recording the total relative amount of gas for the mud flowing through increments of the well bore, in order to obtain the relative gas content of each volumetric increment of the formation through which the well is drilled. In addition the relative amount of total methane, ethane and propane, as well as the relative amount of normal butane, isobutane, normal pentane and isopentane may be recorded.

3,386,287
FLOW DETECTORS

**Hyman Hurvitz, 822 Warner Bldg.,
Washington, D.C. 20004
Filed Feb. 20, 1964, Ser. No. 346,201
4 Claims. (Cl. 73—194)**

1. A vortex system comprising:
a pure fluid vortex device,
said pure fluid vortex device including an egress orifice issuing rotating fluid from said pure fluid vortex device,

a cantilever element mounted in the path of said rotating issuing fluid and arranged to respond motionally only to rotational energy of said rotating issuing fluid, and



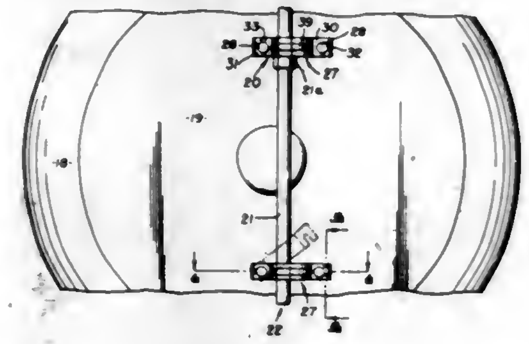
a piezoelectric element, said cantilever element constituting an electrode of said piezoelectric element so that the position of said cantilever element establishes the resonant frequency of said piezoelectric element.

3,386,288
QUICK-DISCONNECT BEARING BRACKET FOR A GAS METER DIAPHRAGM

Robert Kenneth Fairchild, Fairfield, Ohio, assignor to Lancaster Meter Parts Co., Lancaster, Ohio, a corporation of Ohio

Filed Aug. 10, 1966, Ser. No. 571,501

3 Claims. (Cl. 73—278)



An easily detachable bearing bracket for use generally in gas meters of the movable diaphragm type. Said bracket being employed more particularly for securing the flag arm to the diaphragm member. Said bracket having as its novel feature means for quickly disconnecting same as provided by slotted end portions in the strap which engage headed studs in the bearing block.

3,386,289
LIQUID TESTER

Paul D. Norcross, 1811 W. Warner Ave., Chicago, Ill. 60613

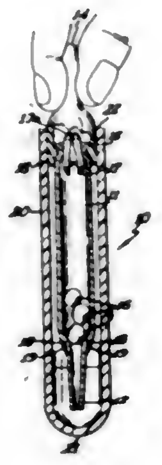
Continuation-in-part of application Ser. No. 217,417, Aug. 16, 1962. This application June 16, 1964, Ser. No. 375,554

1 Claim. (Cl. 73—440)

1. A portable, pocket-size apparatus for testing specific gravity of a liquid, comprising an elongate tube constructed of rigid, transparent and fracturable material of the nature of glass, said tube having open forward and rear ends permissive of fluid communications therethrough, said tube being sharply reduced in cross-sectional size adjacent said forward end to produce an obstruction at the tube interior permissive of fluid communication therethrough, said tube having an oblong cross-sectional configuration at said obstruction,

a resiliently flexible bulb having a generally straight sided open end encompassing and gripping the rear end of the tube in fluid-sealing relation, said straight sided open end of the bulb having an outwardly protruding annular and resiliently compressible bead formed therearound and being disposed transversely outwardly of the rear end of the tube, said bulb being adapted for manual manipulation to effect drawing of liquid and air into the tube and expulsion of the liquid and air therefrom,

a plurality of balls in the tube of varying specific gravities whereby to float and sink in liquids of different specific gravities when the liquid is drawn into the tube, said balls having a diameter substantially less than the interior size of the tube, and having a diameter substantially greater than the size of the tube across the width of the oblong across section at said obstruction, said balls also having a diameter considerably in excess of one-half the internal size of said tube and thereby prevent said balls from passing by one another within the tube and whereby the ball immediately adjacent said obstruction will engage the tube at the oblong cross section at only two points to prevent jamming of the balls into a fixed position,



and an elongate cap constructed of stiff, impact-resisting material and having a closed end and an open end, the said cap having a tubular sidewall between said open and closed ends with an interior size to receive the tube in loose fitting relation, the open end of said cap having a cross-sectional size and configuration at least as large as said tubular wall and receiving the straight sided inner end of the bulb and the compressible bead therein in liquid sealing relation, said bead and the open end of the cap maintaining the fracturable tube substantially centered within the cap and in closely spaced relation therewith, said tube and bulb being removable from said cap for testing liquids and returnable into said cap to protect the tube against breakage and to confine the drippings of the liquid within the cap inwardly wiping of the bead on the bulb periphery inwardly along the cap and in liquid sealing and frictional relation therewith while the bulb is dipped and squeezed to effect expulsion of all the liquid from the tube and create a fluid pressure of less than atmospheric within the tube and bulb to prevent outward migration of any liquid in the cap.

3,386,290
CONTROL APPARATUS

Werner H. Egli, Minneapolis, Minn., assignor to Honeywell Inc., Minneapolis, Minn., a corporation of Delaware

Filed Feb. 25, 1965, Ser. No. 435,786

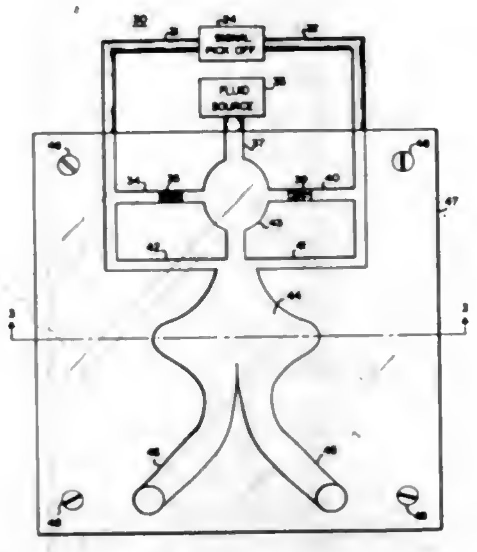
6 Claims. (Cl. 73—505)

1. An apparatus of the class described comprising:

a vortex rate sensor having airfoil pickoff means including a first and a second fluid passage;

a fluid amplifier having a first and a second fluid control port, the output of said fluid amplifier being controlled by the flow of fluid through said first and second fluid control ports; and

impedance matching means, said impedance matching means including first fluid conductor means connecting said first fluid passage to said first control port, said first fluid conductor means having a first fluid conductor means having a first conduit connected thereto, said first conduit having fluid resistance means to limit the flow of fluid therethrough, said first conduit being adapted to be connected to a fluid source which is at a pressure greater than the



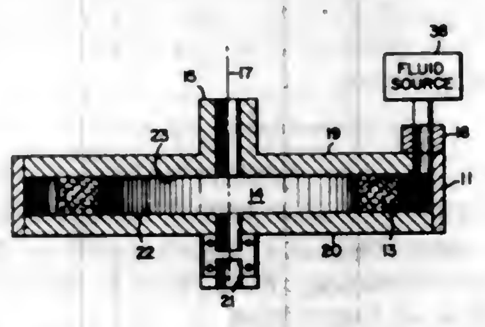
pressure signals produced by said pickoff means, second fluid conductor means connecting said second fluid passage to said second control port, said second fluid conductor means having a second conduit connected thereto, said second conduit having fluid resistance means to limit the flow of fluid therethrough, said second conduit being adapted to be connected to a fluid source which is at a pressure greater than the pressure signals produced by said pickoff means, said impedance matching means functioning to substantially eliminate the attenuation of the fluid signal between said vortex rate sensor and said fluid amplifier by virtue of the pickoff means operating as a fluid sink.

3,386,291
FLUID VORTEX APPARATUS

Richard A. Evans, Columbia Heights, and Harvey D. Ogren, Roseville, Minn., assignors to Honeywell Inc., Minneapolis, Minn., a corporation of Delaware

Filed Sept. 30, 1965, Ser. No. 491,776

3 Claims. (Cl. 73—505)



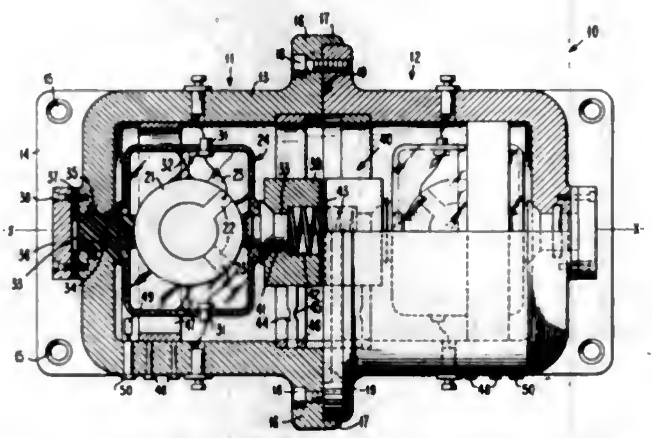
Apparatus having a foil element extending completely across a passage in an edgewise manner so that fluid flow having a component not parallel to said foil element produces a differential pressure signal.

3,386,292
DIGITAL ACCELEROMETER

Robert A. Watson, Endicott, Robert E. Mahoney, Apalachin, Thomas C. Nielsen, Endwell, and James J. Kiernan, Apalachin, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Sept. 28, 1964, Ser. No. 399,777

8 Claims. (Cl. 73—517)



1. An accelerometer for detecting accelerations along a sensitive axis, comprising:

supporting frame means;

vibrating crystal means having first and second vibrating crystals carried by said frame means and disposed along said axis;

first and second seismic mass means movably mounted between said crystals for motion along said axis in response to said accelerations;

resilient means for disposing said first and second seismic mass means in force exerting relationship with respect to said crystals, said force exerting relationship placing said first and second crystals in a compressively prestressed condition under zero acceleration, said prestressed condition of said first and second crystals being increased and decreased, respectively, by said first and second seismic mass means in response to the magnitude of the accelerations applied along said axis in a given direction, and said prestressed condition of said first and second crystals being decreased and increased, respectively, by said first and second seismic mass means in response to the magnitude of the accelerations applied along said axis in an opposite direction; and

means for interpreting the changed stressed condition of the crystals to provide a signal indication representative of the corresponding applied acceleration.

3,386,293
RATE ACTUATOR FOR HYDRAULIC RATE CONTROLLED SYSTEMS

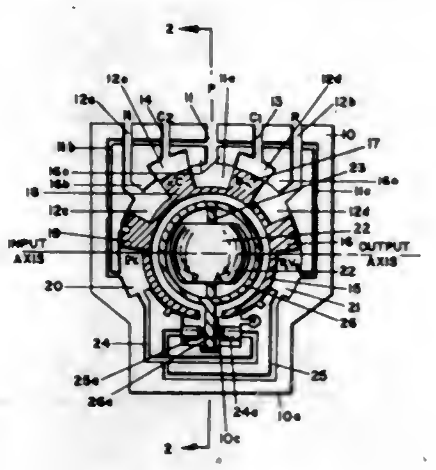
Howard W. Boothroyd, Amherst, N.H., assignor to Sanders Associates, Inc., Nashua, N.H., a corporation of Delaware

Filed Dec. 2, 1964, Ser. No. 415,528

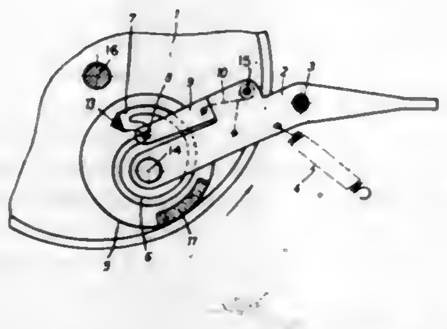
17 Claims. (Cl. 74—5.6)

1. In a rate actuator for hydraulic systems, in combination, a casing having ports and chambers for hydraulic fluid flow, a rate gyro mounted in a gimbal in said casing, means including said gimbal for operatively connecting said gyro to a rotary piston, said rotary piston having segments arranged to control the flow of fluid through said

ports, and means associated with said gimbal for applying a torque thereto opposed to the precessional torque produced by said gyro in response to movement of said gyro about its input axis.



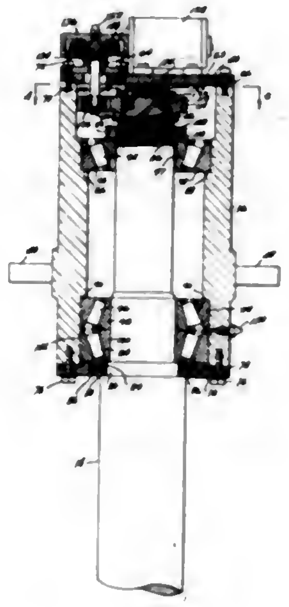
3,386,294
STEPPING GEAR FOR THE TRACK SELECTOR IN A MULTI-TRACK TAPE RECORDER
Hermann Waldenburger, Pforzen, near Kaufbeuren, and Peter Schlegel, Stottwang, near Kaufbeuren, Germany, assignors to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware
Filed Apr. 19, 1966, Ser. No. 543,584
Claims priority, application Germany, Apr. 23, 1965, St 23,727
3 Claims. (Cl. 74—54)



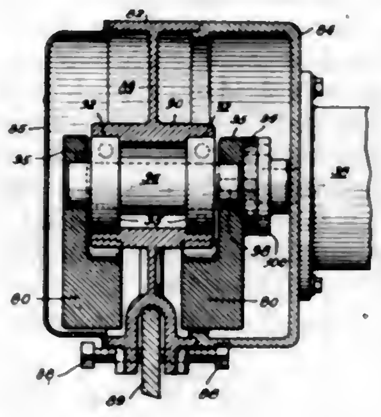
An eccentric friction wheel is provided which is pivotally mounted to a swivel lever and with the aid of a spring is pressed against a tape windup reel. The body of the wheel comprises a spiral shaped groove, the beginning and end of which is joined by an S-shaped cam portion, and a guide pin lever which is pivotally mounted to the swivel lever has a guide pin which engages the groove in the friction wheel.

3,386,295
SWIVELING TOOL SUPPORT FOR EARTH-WORKING MACHINE
Audie B. Tomlinson, P.O. Box 864, Rufus, Oreg. 97050
Filed July 22, 1966, Ser. No. 567,094
10 Claims. (Cl. 74—63)

1. A swiveling tool support for attachment to the boom of an earth-working machine, comprising a housing, means for pivotally attaching said housing for swinging movement in the plane of a boom, a tool support shaft having an upper end disposed in said housing and a lower portion protruding therefrom, bearing means supporting said shaft for rotation about its own axis through an angle of 360 degrees, braking means to retain said shaft locked against rotation, and means on the lower portion of said shaft for pivotally supporting an earth-working tool.



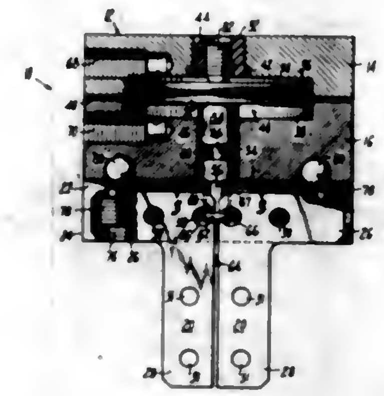
3,386,296
VIBRATION MECHANISM AND METHOD
Carl G. Matson, 401 E. Central Blvd., Kewanee, Ill. 61443
Filed Jan. 10, 1966, Ser. No. 519,614
9 Claims. (Cl. 74—87)



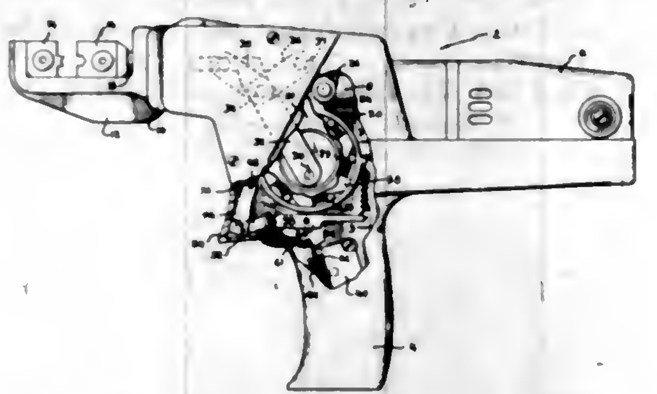
Vibrating mechanism for mechanically vibrating apparatus wherein a shaft carries a balance wheel having eccentric weight means thereon, the shaft only being journalled in bearings and the weight means being located in spaced relation to the bearing means for distributing force to the bearing means.

3,386,297
MOTION CONVERSION MECHANISM
Grant N. Willis, Bristol, Conn., assignor to The Arthur G. Russell Company, Incorporated, Bristol, Conn., a corporation of Connecticut
Filed May 23, 1966, Ser. No. 551,997
9 Claims. (Cl. 74—99)

Mechanism comprising a housing, a pair of cooperating levers supported on the housing for pivotal movement about fixed pivot axes, and a reciprocable center drive member mounted in the housing and held captive between a pair of spaced opposed knife edge portions formed on the levers to effect line contact engagement therewith for providing a low friction drive for pivoting said levers.



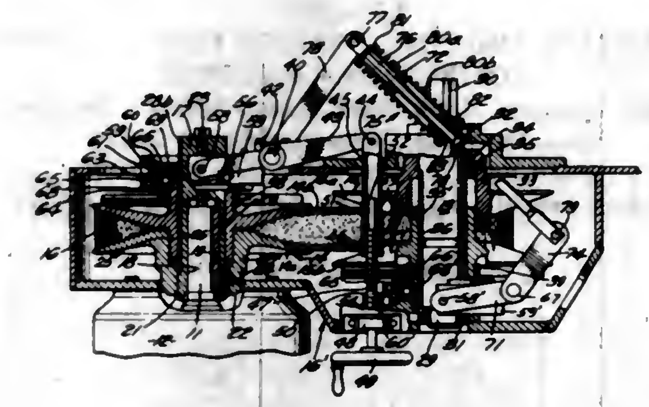
3,386,298
SWITCH CONTROL MECHANISM
Martin Luther Klingler, Hershey, Pa., assignor to AMP Incorporated, Harrisburg, Pa.
Filed May 11, 1966, Ser. No. 549,335
7 Claims. (Cl. 74—122)



1. In a motion transmitting means comprising a pair of circular ratchets in side-by-side relationship on a common axis, each ratchet comprising first and second circular elements, each ratchet having means effective between its first and second element permitting said first element to rotate around said axis in either direction and permitting said second elements to rotate in unison in only one direction with either of said first elements while preventing rotation of said second elements in the opposite direction, camming means for oscillating said first elements in out-of-phase relationship, engaging means for engaging said camming means with said first elements, electric motor means for actuating said camming means, switch means for said motor means, and starting means effective to initially close said switch means and subsequently actuate said engaging means whereby, during starting, said motor means is permitted to attain its operating speed before engagement of said first elements with said camming means.

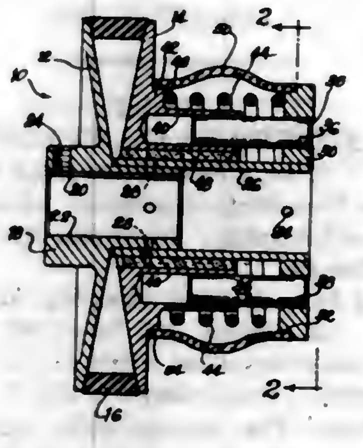
3,386,299
VARIABLE SPEED POWER TRANSMISSION
Donald J. Brown, La Crescenta, and Jerry C. Hanlon, Rosemead, Calif., assignors to The Cowles Dissolver Company, Inc., Cayuga, N.Y., a corporation of New York
Filed Oct. 20, 1965, Ser. No. 498,405
6 Claims. (Cl. 74—230.17)

A variable speed power transmission in which a V-belt is trained over a diameter adjustable V-pulley formed by a fixed member and associated movable member on a drive shaft, and a diameter adjustable V-pulley formed by a fixed member and a movable member on a driven shaft, adjusting rocker means being connected to the movable member on the drive shaft including a first swingable lever, and adjusting rocker means connectible to the movable member on the driven shaft including a second swingable lever, the first lever being of greater length than the second lever and these levers being interconnected at their outer ends by an extensible link containing telescoped members surrounded by a compression spring having its opposite ends respectively connected with the telescoped members, this spring normally acting to move the driven V-pulley members towards a position of greatest pulley diameter, one end of the spring moving a greater distance than the other end, when the first lever is moved by a connected adjusting screw means to adjust the delivery speed of the driven shaft, whereby the effective spring pressure acting on the driven V-pulley will be increased at its greatest diameter and decreased at its smallest diameter.



Also disclosed is the key arrangement for nonrotatably, but axially slidably securing the adjustable pulley members on their associated shaft by using a key of self-lubricating plastic material of rectangular cross section and providing key slots respectively on the shaft and surrounding part of the adjustable pulley member, these slots having abutment shoulders respectively making full face engagement with transversely opposite faces of the key so as to place the key material between such faces in compression rather than in shear.

3,386,300
VARIABLE SPEED SHEAVE
Joseph E. Maurey, Chicago, and Peter E. Lastowsky, Chicago Heights, Ill., assignors to Maurey Manufacturing Corporation, Chicago, Ill., a corporation of Illinois
Filed Jan. 10, 1966, Ser. No. 519,598
7 Claims. (Cl. 74—230.17)

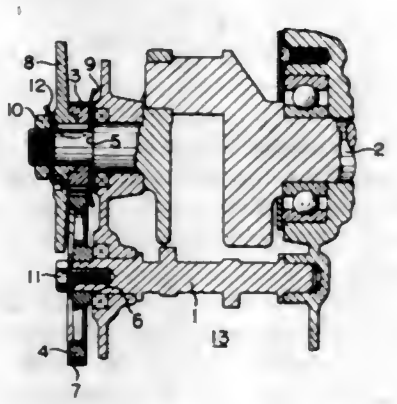


A variable speed sheave comprising a cylindrical support with a first flange member movably carried by the support and with a second flange member rigidly attached to the support. A graphite sleeve is inserted between the first flange member and the support surface to provide self-lubricating characteristics.

An end plate is fixed at the end of the support remote from the position of the first flange, and a spring is interposed between the plate and the first flange to normally urge the first flange toward the second flange. The hub of the first flange defines bores which slideably receive pins carried by the plate, and these pins serve to transmit driving movement from the support to the first flange. Tension pins provide the means for connecting the end plate to the cylindrical support to reduce stress build-up.

3,386,301
CAMSHAFT DRIVING SYSTEM FOR INTERNAL COMBUSTION ENGINES

**Mikio Koyama, 4808 Oaza Shimo-Niikura, Saitama,
Yamato-machi, Kita-adachi-gun, Japan
Filed Sept. 8, 1965, Ser. No. 485,796
Claims priority, application Japan, Sept. 16, 1964,
39/73,605
1 Claim. (Cl. 74—219)**

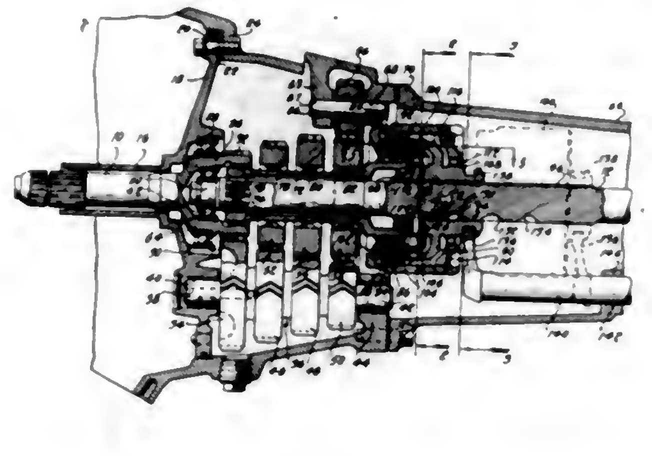


Camshaft driving system for internal combustion engines including a crankcase with a crankshaft portion extending outside the crankcase and a toothed wheel of synthetic resin removably secured on the portion outside the crankcase. A camshaft portion also extends outside the crankcase with a synthetic timing wheel mounted for angular adjustment thereon and in alignment with the wheel on crankshaft portion. The crankshaft wheel is mounted on the crankshaft portion between belt guard plates and the plates rotate as a unit with the toothed wheel. The outer radial portion of the plates receive therebetween a radial portion of the cam wheel; and a non-metallic belt with teeth is entrained about the wheels in mesh with the teeth thereof, whereby the crankshaft wheel drives the camshaft wheel, and the angular relationship of the wheels is adjusted by angular positionment of the cam wheel on the camshaft portion.

3,386,302
MULTIPLE SPEED RATIO, SYNCHRONIZED TORQUE TRANSMISSION MECHANISM

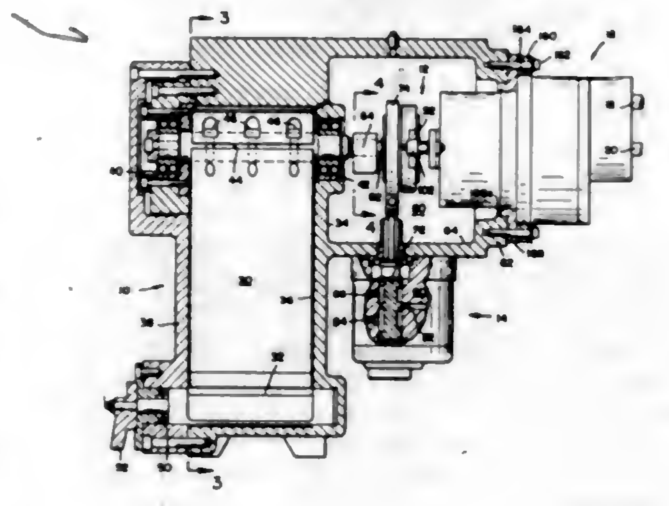
**Peter George Ivanchich, Dearborn, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed May 2, 1966, Ser. No. 546,881
12 Claims. (Cl. 74—339)**

This specification describes a manually-controlled, multiple-ratio, geared transmission for use in an automotive vehicle driveline. The transmission includes a clutch sleeve engageable selectively with each of several power output gears. A synchronizer clutch assembly which surrounds a common axis for the output gears synchronizes the motion of the sleeve with respect to the gears prior to clutching engagement. It functions also to disconnect the synchronizer sleeve shaft from other rotating inertia masses in the gear system during ratio changes thus improving shift quality.



3,386,303
SERVOMECHANISM

**John Curlett, Los Gatos, Calif., assignor to Gurries Manufacturing Co., San Jose, Calif., a corporation of California
Filed Oct. 20, 1965, Ser. No. 498,486
8 Claims. (Cl. 74—388)**

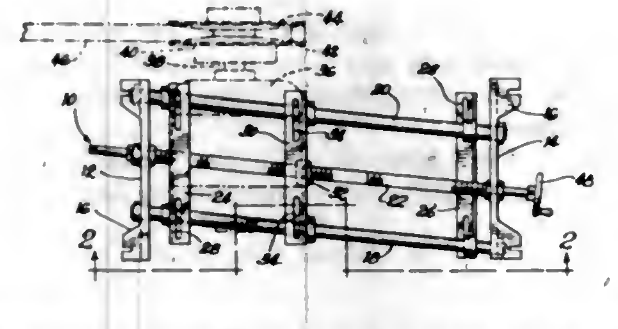


A servomechanism for automatically controlling the disposition of the working implement of earth leveling equipment, such as the blade of a road grader, including a pendulum sensing unit mounted directly on the main frame of the equipment, feedback mechanism connected to the earth moving blade, and means for providing a novel control mechanism which combines the inputs from the pendulum sensing unit and the feedback mechanism to control the disposition of the blade or other earth working implement.

3,386,304
ADJUSTABLE MOTOR BASE

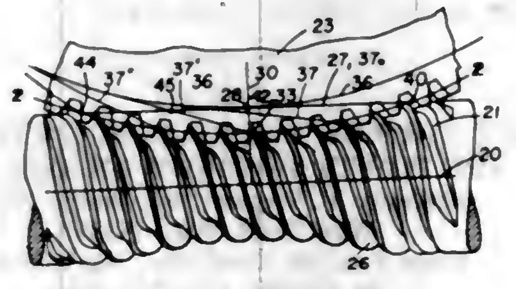
**Joseph E. Maurey, Chicago, Ill., assignor to Maurey Manufacturing Corporation, Chicago, Ill., a corporation of Illinois
Filed Mar. 7, 1966, Ser. No. 532,322
6 Claims. (Cl. 74—424.8)**

An adjustable motor base for carrying a motor provided with a variable speed sheave. The base is provided with at least three supports for attaching the motor to the base. At least one of the supports is driven by a drive screw while the other supports are movably mounted whereby the position of the motor and supports relative to the base can be shifted. The screw driven support extends on either side of the base while at least one of the movable supports extends on opposite sides of the base so that a motor can be mounted on either side. The screw and rods for mounting the support extend angularly relative to the direction of movement of the drive belt, and the drive screw can be driven from either end whereby left- or right-hand drive can be accomplished with the system.



3,386,305
WORM GEARING

**Ernest Wildhaber, Brighton, N.Y.
(124 Summit Drive, Rochester, N.Y. 14620)
Filed Apr. 28, 1966, Ser. No. 546,090
12 Claims. (Cl. 74—425)**

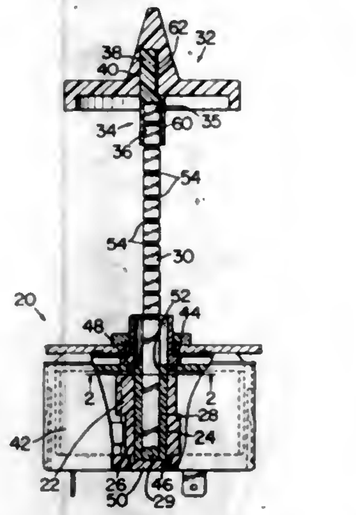


The invention relates to worm gearing containing an hourglass worm that will mesh at right angles with a helical gear or a spur gear. In a gear pair constructed according to this invention the mesh is inclined to the direction of the worm gear periphery rather than following the periphery. This reduces local heating of the worm gear teeth; and it increases the contact intimacy and load capacity by placing the pitch point outside of the throated outside surface of the worm.

3,386,306
SWITCH WITH CAM HAVING A PLASTIC SLEEVE INSERT

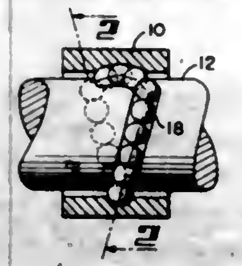
**Fred V. Kenyon, Anaheim, Calif., assignor to Robertshaw Controls Company, Richmond, Va., a corporation of Delaware
Continuation-in-part of application Ser. No. 525,049, Feb. 4, 1966. This application May 31, 1967, Ser. No. 642,473
13 Claims. (Cl. 74—548)**

A switch construction has an actuating cam made of rigid thermosetting plastic material, with a sleeve insert of relatively yielding thermoplastic material. The sleeve receives an actuating shaft. A knob is secured to the other end of the shaft. A connector, of similar thermoplastic, has a shaft receiving opening at one end receiving such other end of the shaft, and has a knob engaging extension telescoped in an opening in such knob. The shaft may have a series of fracture grooves to sever parts of the shaft to tailor a shaft of desired length.



3,386,307
BALL RECIRCULATING MECHANISM FOR BALL SCREW AND NUT ACTUATORS

**Jerald L. Park, Stratford, and Charles Rossetti, Huntington, Conn., assignors to Avco Corporation, Stratford, Conn., a corporation of Delaware
Filed Mar. 15, 1967, Ser. No. 623,454
2 Claims. (Cl. 74—459)**

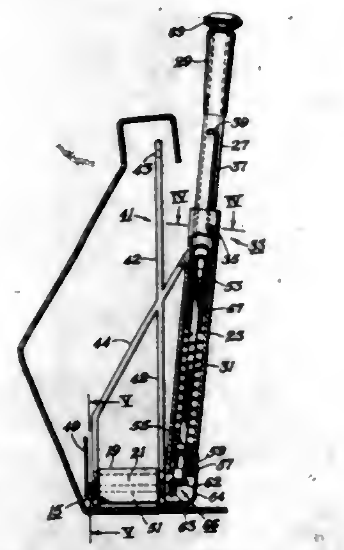


The illustrated ball screw and nut mechanism includes a conventional screw and nut, each having a helical channel, which cooperate through antifriction balls placed between them. The balls are permitted to circulate from the end of the single convolution helix back to the beginning by connecting the ends of the helix in the nut with a groove across which the balls can travel, and by removing from the corresponding location on the screw the land between adjacent grooves. The relative rotation between the nut and screw is limited by the number of degrees of land removed from the screw. However, the balls do not change their radial position at any time, including those times when traveling from the end of the spiral back to the beginning.

3,386,308
BOAT CONTROLLERS

**Maurice H. Butler, 807 E. Tucker Blvd.,
Arlington, Tex. 76010
Filed Jan. 3, 1966, Ser. No. 518,402
6 Claims. (Cl. 74—480)**

Following is disclosed a boat controller having a reciprocable handle element in a control arm pivotally secured by means of a rotatable element inserted into a mounting means secured to a boat. The rotatable element extends through the mounting means and receives a bracket member that is connected with a steering control line attachment arm, the arm extending upward along the length of the control arm and handle element to receive steering cables. A modified form of boat controller has the handle element reciprocally secured to a drive rod rotated thereby to in turn rotate a pair of gears, one of which is seured to a shaft secured in the



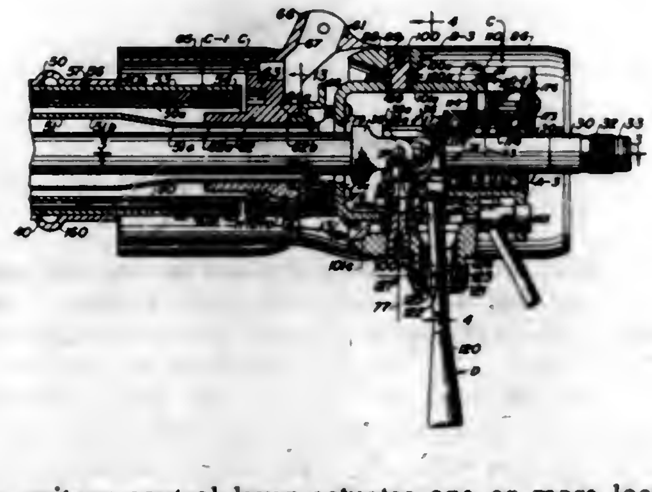
rotatable element. The end of the shaft opposite the gear receives an output plate for connection to a throttle control line.

3,386,309
ADJUSTABLE STEERING MECHANISM

Thomas S. Reed, Glen Ellyn, and Edward S. Staunch, Jr., Crestwood, Ill., assignors to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois

Filed Nov. 26, 1965, Ser. No. 509,907

14 Claims. (Cl. 74—493)



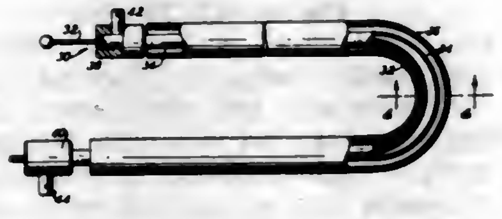
A unitary control lever actuates one or more locking mechanisms to enable a tubular column to flex and/or telescope.

3,386,310
THREE-ELEMENT PUSH-PULL CABLE ASSEMBLY

Charles Haddad, Allen Park, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware

Filed Apr. 5, 1966, Ser. No. 540,361

3 Claims. (Cl. 74—501)



A three-element, power transmitting cable assembly for transmitting power along a curvilinear path. A flexible wire is surrounded by a flexible, power transmitting tubular case that is surrounded by a flexible, tubular sheath. Means are provided for taking up slack in the wire such that the wire urges the power transmitting case against the inner surface of the sheath at bends in said assembly to reduce backlash.

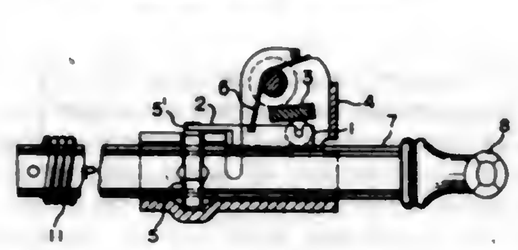
3,386,311
LOCKING DEVICE FOR HANDBRAKE

Tetsuo Kobayashi and Teruaki Kasai, Tokyo, Japan, assignors to Otsukakoki Kabushikigaisha, Yokohama-shi, Japan

Filed Mar. 18, 1966, Ser. No. 541,898

Claims priority, application Japan, Sept. 14, 1965, 40/74,917

4 Claims. (Cl. 74—531)



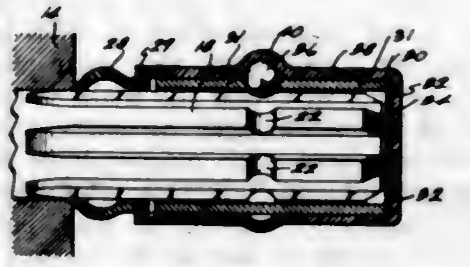
A locking device for an emergency or parking brake of an automotive vehicle in which a spring-loaded shaft having a brake handle at one end and a releasing pin mounted thereon is rotated to cause movement of an actuator plate in the axial direction of the shaft. A roller is supported by the actuator plate and is movable into and out of a wedging engagement between the shaft and the stopper plate in response to the rotation of the shaft.

3,386,312
SAFETY CAP FOR THE STUB SHAFT OF A TRACTOR POWER TAKE-OFF OR THE LIKE

Anthony V. Wessler, 603 Ridge Road, West Bend, Wis. 53095

Filed Jan. 10, 1966, Ser. No. 519,803

16 Claims. (Cl. 74—609)



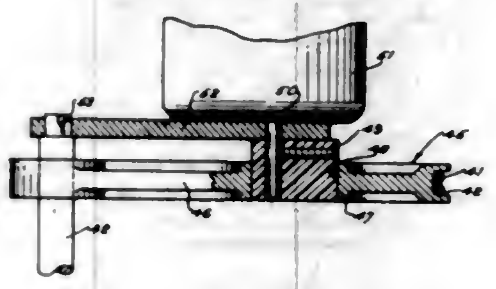
13. Means for protecting personnel from being injured by bodily or clothing contact with a rotating splined power take-off stub shaft having intermediate its ends a spline-encircling annular groove and designed to receive a power take-off coupling and exposed when no coupling is attached thereto, such means comprising a cap readily applicable and removable manually without tools for external bearing contact with the splines and within which the stub shaft is freely rotatable, and retaining means wholly on said cap at a point remote from both ends thereof for engagement in said annular groove for releasably holding the cap to the stub shaft to be entirely supported therefrom, said retaining means being yieldable radially outwardly to clear said groove and said cap having means for holding said retaining means in said groove for securing the cap to the shaft.

3,386,313
STEERING MECHANISM FOR WATERBORNE VESSEL

Arthur A. Richardson, 79 Rutherford Ave., Warwick, R.I. 02886

Filed Oct. 8, 1965, Ser. No. 493,988

4 Claims. (Cl. 74—625)



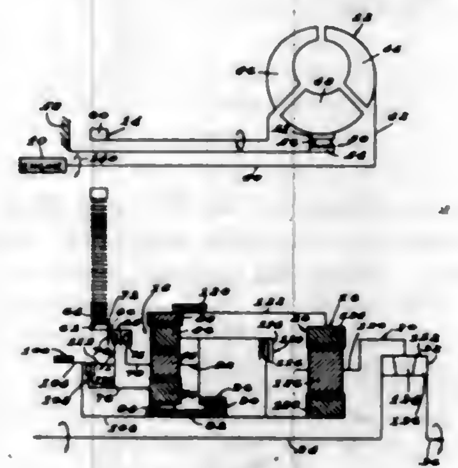
A steering device for waterborne vessel involving both manual steering and power steering, particularly automatic power steering frequently referred to as an automatic pilot.

3,386,314
FOUR-SPEED TRANSMISSION AND AXLE ASSEMBLY

Thomas R. Stockton, Northville, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware

Filed Oct. 22, 1965, Ser. No. 501,864

15 Claims. (Cl. 74—759)



A unitized engine-transmission-differential power pack in which the transmission is parallel to both the engine output shaft and the driving axles; the final reduction drive is placed ahead of the transmission instead of between the transmission and differential, so that the direct drive speed of the transmission will be the same as the axle speed; and the transmission provides four forward drives and a reverse drive by the use of two interconnected planetary gearsets controlled by friction clutches and a multi-member brake means.

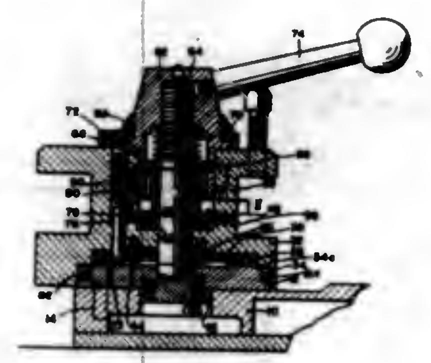
3,386,315
INDEX MECHANISM FOR ROTARY TOOL REST ON LATHE

Kenzo Aihara and Kazuo Takaya, Tokyo, Japan, assignors to Ikegai Tekko Kabushiki Kaisha, Tokyo, Japan

Filed Jan. 10, 1966, Ser. No. 519,802

1 Claim. (Cl. 74—813)

A rotary tool rest for a lathe having an index mechanism with an index disk which has four radial undulations disposed at angular intervals of 90 degrees on the outer peripheral portion. A thin disk of resilient material is fixed at the central portion to the lower surface of a tool rest facing the index disk through a space with an annulus interposed between them and has four radial ridges disposed at angular intervals of 90 degrees in such positions that they can selectively engage the undulations on the index disk. The tool rest is locked to the index disk through engagement of the ridges with the undulations.

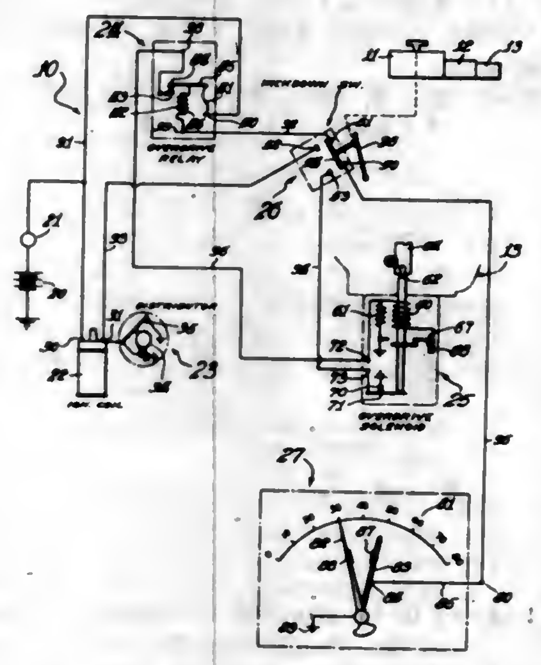


3,386,316
VARIABLE CONTROL FOR TRANSMISSION MECHANISM

Kenneth M. Armantrout, Muncie, Ind., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois

Filed June 30, 1966, Ser. No. 561,940

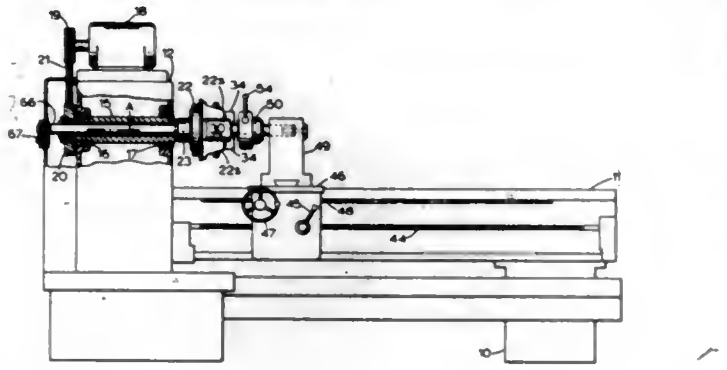
16 Claims. (Cl. 74—870)



1. In a control system for a transmission for an automotive vehicle having an engine, a source of energy, a first means adapted to be connected to said source of energy to vary the drive ratio through the transmission, a second means connected to said first means and adapted to be actuated to connect said source of energy to said first means, a speedometer for said vehicle having a speed indicator means and an adjustable means, said adjustable means being connected to said second means whereby when said speed indicator means contacts said adjustable means said second means will be actuated to connect said source of energy to said first means to change the transmission drive ratio.

3,386,317
BORE MACHINING MECHANISM

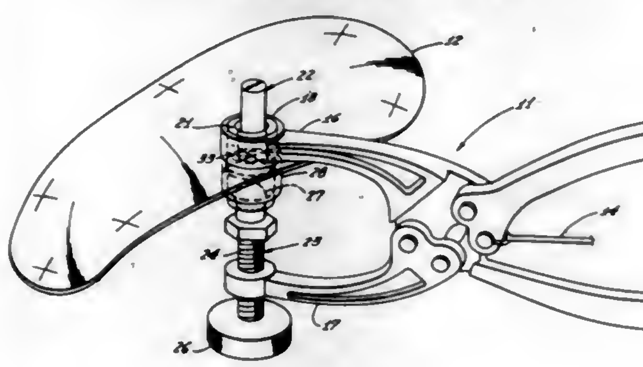
Carl N. Flick and Richard C. Greathouse, Cincinnati, Ohio, assignors to The Cincinnati Milling Machine Co., Cincinnati, Ohio, a corporation of Ohio
Filed May 31, 1966, Ser. No. 554,012
5 Claims. (Cl. 77—3)



1. Mechanism for machining in a bore of a workpiece comprising:
- (a) means to mount the workpiece with the bore centered on a longitudinal axis,
- (b) an elongated tool having a cutting edge thereon,
- (c) means to mount the tool for extension through the bore, said means including a bearing at each end of the workpiece, said bearings positioned to support the tool for rotation in an axis displaced from the central longitudinal axis of the workpiece bore, and
- (d) means to rotate the tool and the workpiece.

3,386,318
PRECISION DRILL CLAMP

Leonard S. Pekarcik, Torrance, and Richard Charles Alger, Los Angeles, Calif., assignors to Northrop Corporation, Beverly Hills, Calif., a corporation of California
Filed Mar. 4, 1966, Ser. No. 532,001
4 Claims. (Cl. 77—62)

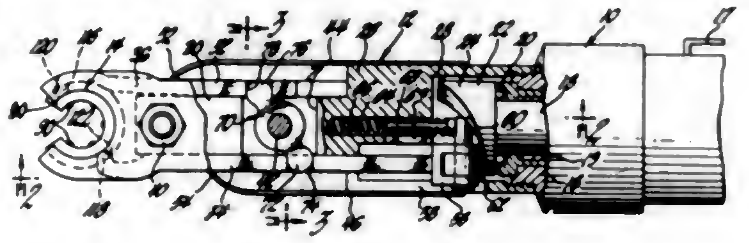


A tool adapted to be attached (clamped) on a curved or flat plate, sheet etc., facilitating the drilling of a hole therein and in which the axes of the hole has a normal relation with respect to the surface of the plate.

3,386,319
POWER ONE-WAY DRIVE ENGAGING WRENCH

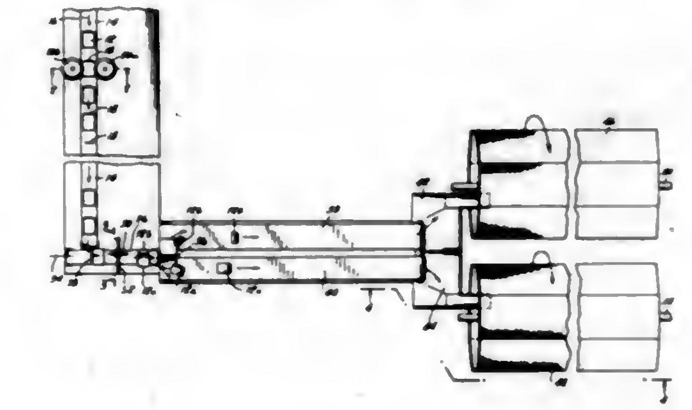
James W. Bloom, Montvale, N.J., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Aug. 29, 1966, Ser. No. 575,630
2 Claims. (Cl. 81—54)

A wrench having an open end head oscillated between an open and obstructed position to turn an object. The wrench head is driven through linkage including a pair of reciprocating rods having lug engagement with the head. One of the rods receives the input by a spring biased cam follower engaging an input cam member. The spring force and cam profile provide for swinging the head from the obstructed position to the open position upon discontinuance of input to the wrench.



3,386,320
PACKAGE-OPENING METHOD AND APPARATUS

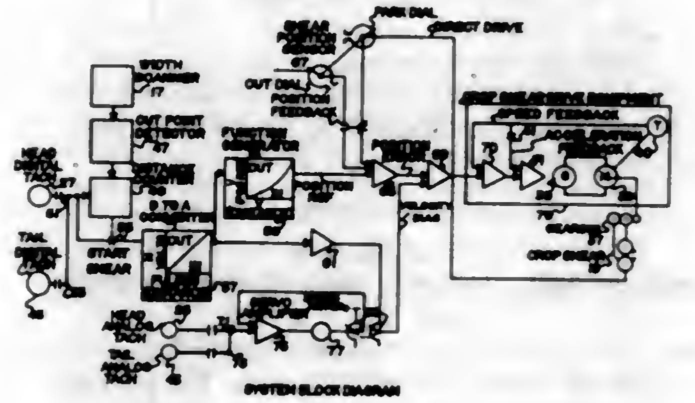
Jesse R. Pinkham, Roger C. Trivette, Joseph H. Davidson, and Herbert L. Speas, Jr., Winston-Salem, N.C., assignors to R. J. Reynolds Tobacco Company, Winston-Salem, N.C., a corporation of New Jersey
Filed Mar. 10, 1966, Ser. No. 533,326
8 Claims. (Cl. 83—23)



A packaging-opening method and apparatus, involving slitting a package longitudinally along two opposed sides of the package, cutting the package transversely to the two slits so as to divide the package into two parts, and tumbling the package parts so as to cause the contents thereof to be dislodged therefrom.

3,386,321
AUTOMATIC CONTROL SYSTEM FOR HOT STRIP MILL CROP SHEAR

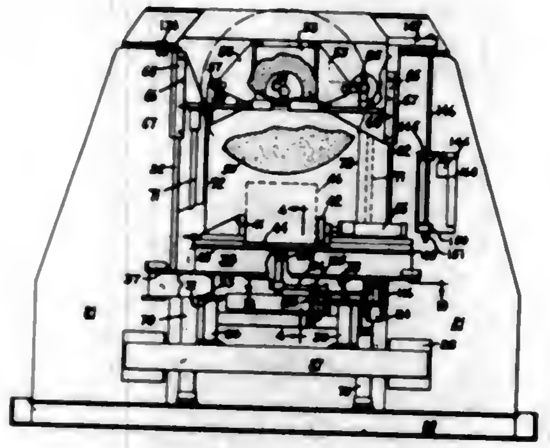
Hugh S. Maxwell, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Filed Apr. 22, 1965, Ser. No. 450,083
7 Claims. (Cl. 83—295)



5. A crop shear for shearing plates at a crop line in a hot strip mill comprising, a shear having shear blades for shearing plates, means for selecting a crop line on said plates, means for producing a position reference for said shear as said crop line approaches said shear, means for producing velocity bias to indicate ideal blade velocity at any one instant of time as said crop line approaches said shear, and means responsive to said velocity bias and said position reference for controlling said shear to shear said plates at said crop line.

3,386,322
CUT-OFF MACHINE

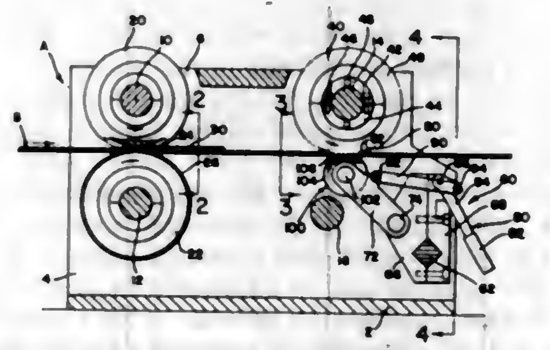
Arthur R. Stone and Roland H. Fitch, Manlius, N.Y., assignors to Stone Machinery Company, Inc., Manlius, N.Y., a corporation of New York
Filed Mar. 21, 1966, Ser. No. 535,767
6 Claims. (Cl. 83—488)



The cutter wheel head is mounted on a support slidable on vertical columns, power-operated means is carried by the support and is operable during downward movement of the support and wheel head to effect repetitive reciprocation of the wheel head transversely of the work piece. Control means is provided for arresting upward movement of the cutter wheel head when the cutter wheel clears the work piece regardless of the diameter of the cutter wheel.

3,386,323
ACCESSORY DEVICE FOR A SLITTER

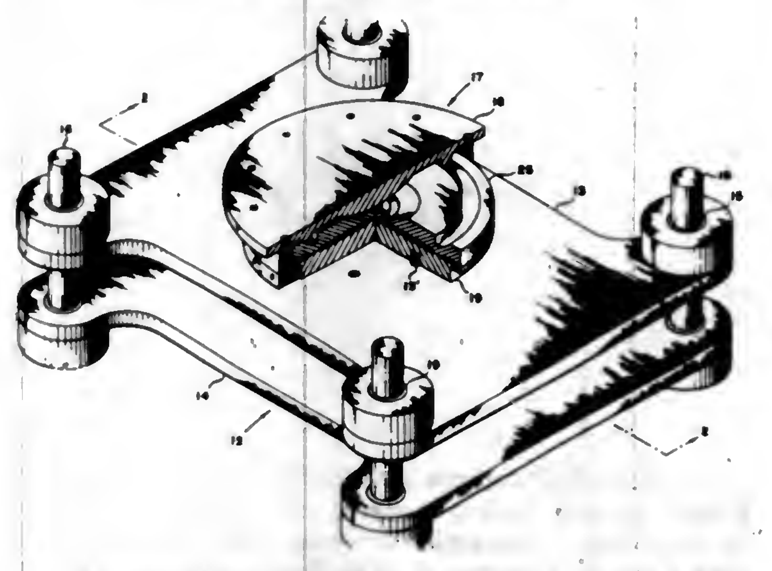
Norman E. Dovey, Anderson, Ind., assignor to George Russell Smythe, Jennifer R. Smythe, Craig W. Smythe, Denise Y. M. Smythe, Michael W. Melvill and Sally Melvill, all of Muncie, Ind.
Filed Oct. 21, 1965, Ser. No. 499,720
3 Claims. (Cl. 83—470)



There is provided a cutting mechanism for a standard slitter which mechanism includes a small, grooved plastic anvil mounted on an auxiliary shaft. The anvil coacts with a circular serrated cutting knife to cut cardboard or other similar material passing through the slitter.

3,386,324
MOUNTING ADAPTER FOR THE RAM OF POWER PRESSES

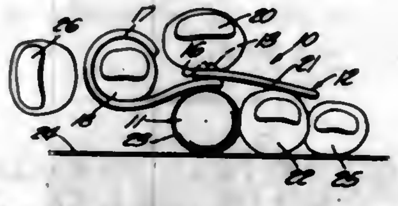
Hans E. Ihle, Smyrna, Ga., assignor to Lockheed Aircraft Corporation, Burbank, Calif.
Filed Aug. 23, 1966, Ser. No. 574,455
4 Claims. (Cl. 83—543)



1. A mounting adapter for the ram of a power press incorporating a die set to locate and retain die elements in a predetermined relative position in the press between the ram and bed components thereof during its operation comprising:
- a pair of plates adapted to be mounted between said ram and said die set;
- an intermediate plate disposed between said pair of plates;
- coacting concentric surfaces on one of said pair of plates and said intermediate plate at the center and adjacent the marginal edges thereof, said surfaces establishing the sole areas of contact between said one and said intermediate plates and said center surfaces being generally spherical;
- a space between said one and said intermediate plates radially inward of and from the marginal edge surfaces aforesaid whereby said one plate is capable of nutation about said center surfaces;
- a resilient member between the marginal edges of said pair of plates radially outward of said concentric surfaces; and
- a clamp engaging said pair of plates across said resilient member, said clamp applying a uniform force less than that required to fully compress the resilient member.

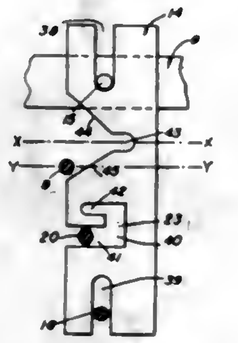
3,386,325
SLIDE BAR FOR HAWAIIAN GUITAR

Walter E. Smith, Caldwell, Idaho 83605
Continuation-in-part of application Ser. No. 459,551, May 28, 1965. This application May 3, 1966, Ser. No. 547,225
5 Claims. (Cl. 84—319)



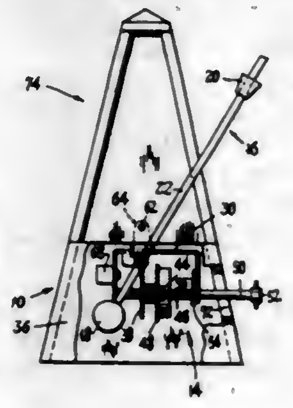
A slide bar for a Hawaiian guitar has a finger contacting retainer fixed to the bar at right angles, the retainer providing a ring at one side of the bar for reception of a finger, and being provided with a projection on the other side of the bar to overlie another finger, to facilitate manual grasping of the slide bar and operation on strings in either a horizontal or inclined plane.

3,386,326
MECHANICAL CAPTURE SYSTEM
Richard H. Campbell, Jr., Gilford, N.H., and Vernon F. Braun, St. Louis, Mo., assignors, by mesne assignments, to Vernon F. Braun, St. Louis, Mo.
Filed June 25, 1965, Ser. No. 466,967
11 Claims. (Cl. 84—345)



A mechanical capture system for automatically reproducing desired voicing patterns of a musical instrument is illustrated. Conventional voice tabs are interrelated with a series of capture tabs to form a matrix. Actuation of a selected capture tab will produce the desired positioning of each of the voice tabs, thus creating a number of automatically reproduceable voicing arrangements equal to the number of capture tabs utilized.

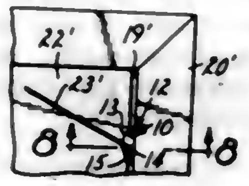
3,386,327
METRONOME
Frederick Franz, 2 Woodruff St., West Haven, Conn. 06516
Filed Nov. 22, 1965, Ser. No. 508,953
10 Claims. (Cl. 84—484)



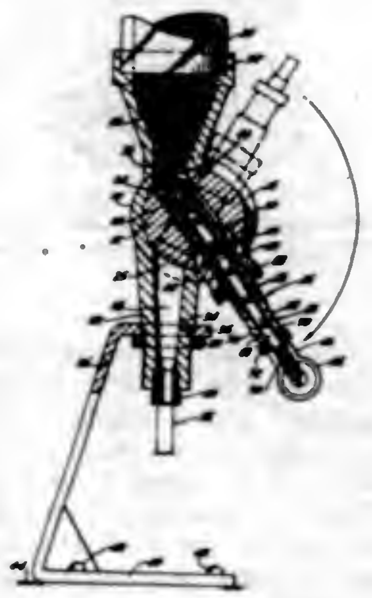
1. A metronome comprising, in combination:
(a) a base
(b) a gravity-controlled metronome movement, and
(c) means movably mounting said movement on the base and automatically providing, for different tilted positions of the base within limits about an axis transverse to the direction of gravity, a fixed orientation of said movement with respect to a plane extending in the direction of gravity, said axis being contained in said plane.

3,386,328
NAIL HAVING HEAD TO RECEIVE CORD OR THE LIKE
Dorothy W. Litfin, Rte. 1, Walnut Grove, Minn. 56180
Filed Mar. 11, 1966, Ser. No. 533,494
2 Claims. (Cl. 85—28)

A nail having a head with one arcuate edge and a second edge forming a chord of the arcuate edge with a slot through the head having the opening in the second edge and terminating adjacent the body of the nail. The slot is adapted to receive a cord or the like for hanging frames, etc. and the nail is positioned with the second edge abutting a vertical surface so the slot is closed to prevent the cord from being released therefrom.



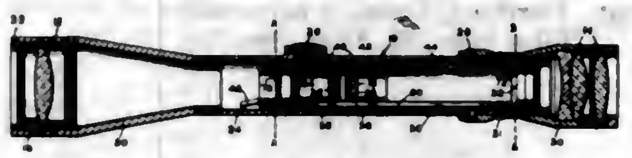
3,386,329
POWDER MEASURE FOR LOADING CARTRIDGES
Herbert E. Rohrbacher, Whittier, Calif., assignor to Bergandi Manufacturing Company, Inc., El Monte, Calif., a corporation of California
Filed Sept. 29, 1966, Ser. No. 582,850
4 Claims. (Cl. 86—31)



This invention relates to apparatus for controlling the amount of gunpowder inserted into cartridges so that a first amount of gunpowder can be inserted into cartridges for pistols and a second amount of gunpowder can be inserted into cartridges for rifles. The invention includes a fixed housing and a member pivotable between first and second positions in the housing. In the first position, the member is constructed and disposed to receive a controlled amount of gunpowder from the housing, and, in the second position, the member is constructed and disposed to dispense the gunpowder into the cartridge.

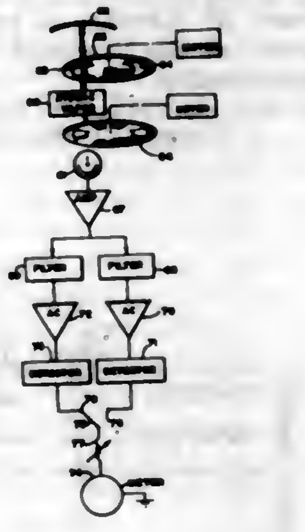
The member is provided with a hollow configuration, and a first plunger is disposed in the hollow member and is adjustable in position relative to the hollow member to provide a coarse control of the volume available for the insertion of gunpowder. First means such as a first lockwasher are disposed on the hollow member for locking the first plunger in the adjusted position. The first plunger is also hollow, and a second plunger is disposed in the first plunger and is adjustable in position relative to the hollow member to provide a fine control of the volume available for the insertion of gunpowder. Second means such as a second lockwasher are disposed on the first plunger for locking the second plunger in the adjusted position. The first and second plungers are disposed on a sleeve which is releasably inserted into the hollow member to provide for a removal of the first and second plungers when it is desired to clean the plungers and the hollow member.

3,386,330
OPTICAL RANGE-FINDING DEVICE
Donald J. Burris, Broomfield, Colo., and Gene E. Stanley, Western Springs, Ill., assignors to Redfield Gun Sight Company, Denver, Colo., a limited partnership of Colorado
Filed June 22, 1964, Ser. No. 376,895
8 Claims. (Cl. 88—1)



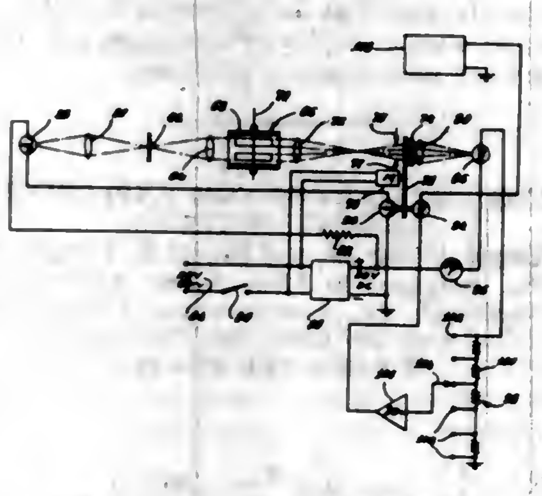
This invention relates to a range-indicating variable-power riflescope based upon the principle that the average shooter knows the approximate dimensions of most targets and is, therefore, capable of making a comparison measurement whereby indicia within the riflescope's optical system of known dimension can be matched to a like dimension on the target and, in so doing, the range to the target is revealed. More specifically, non-magnifying indicia within the second focal plane of the optical system in a variable power riflescope is superimposed upon an image of the target and the size of the target image is increased or decreased until said indicia brackets a dimension on the target substantially equal to that predetermined dimension said indicia is designed to indicate. Once the foregoing condition is achieved, an index mark within the optical system, preferably in the form of a field stop diaphragm, shows the range to the target on a range scale located in the forward image plane that varies in apparent size along with the target image.

3,386,331
APPARATUS FOR ABSORPTION SPECTROCHEMICAL ANALYSIS
John D. Keller, Greece, N.Y., assignor to Bausch & Lomb Incorporated, Rochester, N.Y., a corporation of New York
Filed Mar. 24, 1964, Ser. No. 354,395
7 Claims. (Cl. 88—14)



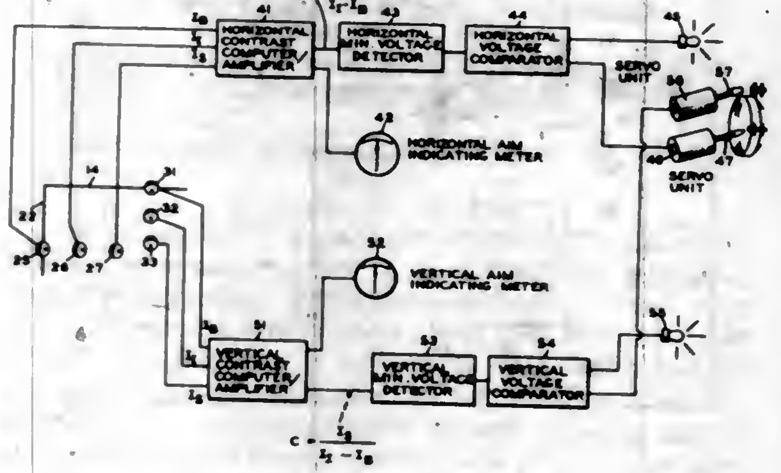
A photoelectric apparatus for spectrochemical analysis wherein samples to be analyzed are inserted into a flame to emit a predetermined radiation spectral line characteristic and absorb the same. Radiation from the flame is directed to a photosensor and also redirected back through the flame to the photosensor. The signals generated by the photosensor are monitored to determine the amount of redirected radiation absorbed by the sample in the flame.

3,386,332
DIFFERENTIAL REFRACTOMETRY
Emmett S. Watson, 5 Country Club Road, Ridgefield, Conn. 06877
Filed July 13, 1964, Ser. No. 382,278
9 Claims. (Cl. 88—14)



1. A differential refractometer which comprises: a source of electromagnetic radiation; a base element of a radiation transparent material; means for retaining both a sample and a reference material against the surface of said base element to form respective first and second interfaces therewith; means for directing radiation from said source along a single optical axis onto each of said first and second interfaces at an angle thereto; means for adjusting the angle of incidence of said radiation on said interfaces to an angle slightly less than the critical angle or the angle corresponding thereto; detection means responsive to first and second radiation intensities to produce first and second electrical signals proportional thereto; means for directing radiation leaving each of said first and second interfaces against said detection means; and readout means for converting said electrical signals to a visually observable indication of the difference in refractive index of the sample and reference materials.

3,386,333
HEADLAMP AIMING
Bruce W. Preston, Dearborn, Mich., assignor to The Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Dec. 28, 1964, Ser. No. 421,421
10 Claims. (Cl. 88—14)

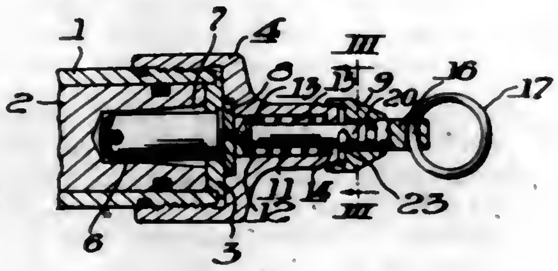

C = I_S / (I_T - I_B)
41
43
44
45
HORIZONTAL CONTRAST COMPUTER/AMPLIFIER
HORIZONTAL MIN. VOLTAGE DETECTOR
HORIZONTAL VOLTAGE COMPARATOR
SERVO UNIT
42
HORIZONTAL AIM INDICATING METER
SERVO UNIT
14
31
32
22
25
26
27
33
52
VERTICAL AIM INDICATING METER
51
53
54
VERTICAL CONTRAST COMPUTER/AMPLIFIER
VERTICAL MIN. VOLTAGE DETECTOR
VERTICAL VOLTAGE COMPARATOR
C = I_S / (I_T - I_B)

1. In a system for aiming in a horizontal direction the light pattern of a low-beam headlamp of an automotive vehicle, a headlamp aiming board, three phototransducers

mounted on a substantially horizontal line on said headlamp aiming board, and spaced apart in accordance with a predetermined light intensity pattern within said light pattern, and means coupled to said three transducers for computing the ratio of the light intensity from said light pattern falling on the phototransducer positioned nearest the center of said light pattern when said light pattern is properly aimed to the difference in light intensity falling on the other two phototransducers, and means for indicating when said ratio is a minimum.

3,386,334
FIRING MECHANISM FOR EXPLOSIVELY ACTUATED TOOLS

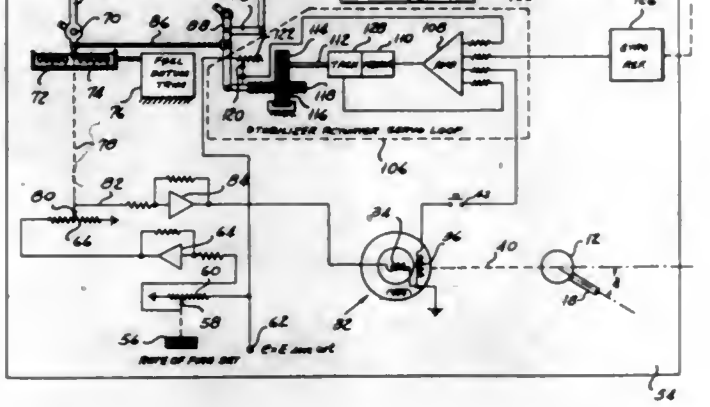
Robert Temple, Swissvale, and Ernest E. Temple, Murrysville, Pa., assignors to Mine Safety Appliances Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Oct. 20, 1965, Ser. No. 498,572
1 Claim. (Cl. 89—1)



The rear end of a firing pin and the front end of a pin retractor are hooked together in such a manner that when the retractor is pulled back far enough, it will automatically separate from the firing pin, which will be driven forward by a spring. Even in its released position, the rear end of the pin projects from its support so that the retractor can be connected to it again.

3,386,335
GUN PLATFORM STABILIZATION SYSTEM

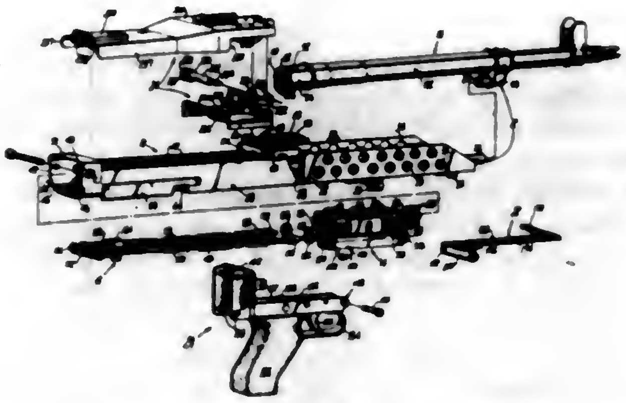
Frank S. Preston, Fairfield, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed June 8, 1967, Ser. No. 644,628
15 Claims. (Cl. 89—41)



A system for stabilizing a platform on which a gun is carried on a movable mount spaced from the center of gravity of the platform including means responsive to firing of the gun for generating a signal approximating the torque applied to the platform as a result of the firing and means responsive to the signal for applying a counteracting torque to the platform.

3,386,336
CONVERTIBLE MACHINE GUN FOR RIGHT- AND LEFT-HAND CARTRIDGE FEED AND OPERATION

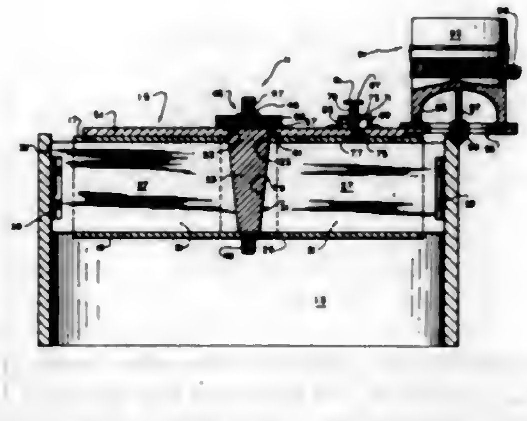
Robert E. Roy, East Haven, Conn., assignor to Colt's Inc., Hartford, Conn., a corporation of Arizona
Filed Mar. 30, 1966, Ser. No. 538,701
12 Claims. (Cl. 89—191)



A lightweight gas operated machine gun readily convertible under field conditions for different applications and installations includes a basic modular unit comprising a U-shaped sheet metal receiver and a solid receiver block fixedly positioned between the sides of the receiver about midway along its length for aligning and receiving replaceable auxiliary components including different size barrels, manual and remote fire control systems, and right- and left-hand cartridge belt feed mechanisms and right- and left-hand manual charging members. The gun employs a reciprocating bolt carrier assembly slidable within the receiver rearwardly of the block and a gas piston operable almost entirely forwardly of the block.

3,386,337
PORTABLE MILLING TOOL

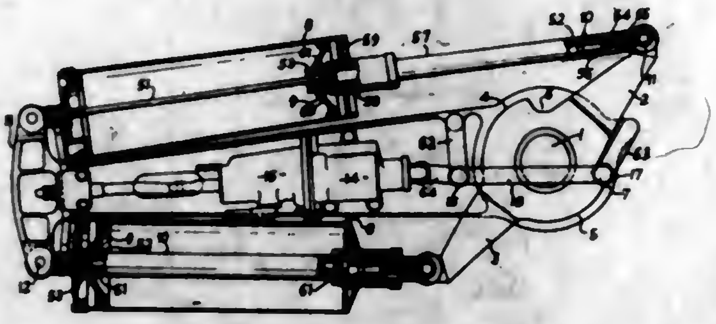
Raymond A. Spier, Huntsville, Ala., assignor to the United States of America as represented by the Administrator of the National Aeronautics and Space Administration
Filed Apr. 5, 1966, Ser. No. 540,414
1 Claim. (Cl. 90—12)



A portable milling tool having an expandable mandrel which fits within the end of a tube and presses against the inside surface to round the end. The tool has a router revolving about the center of the mandrel to mill the end edge of the tube.

3,386,338
SELF-LOCKING ACTUATORS FOR ROTARY VALVE AND OTHER TWO-POSITION ROTARY ELEMENTS

Henry V. King, Fareham, England, assignor to Plessey-U.K. Limited, a British company
Filed Jan. 9, 1964, Ser. No. 336,702
Claims priority, application Great Britain, Jan. 18, 1963, 2,284/63
6 Claims. (Cl. 91—44)

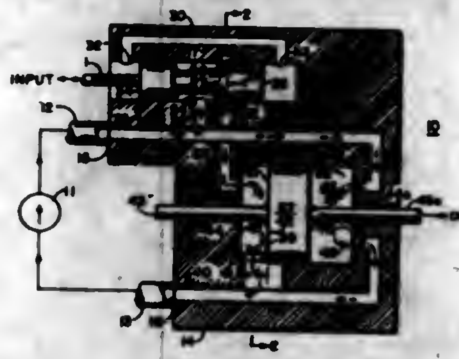


3. An actuator for the rotary movement of an element between two end positions, which comprises a double-acting main ram device and means for operative connection of said ram device with such element, a sequence valve controlling said ram device and including a slide-valve piston movable in a valve cylinder that extends substantially radially in relation to the axis of rotation of the element, a cylindrical cam which is rotatable with such element and has locking recesses, a pair of rollers coupled to said valve piston at approximately diametrically opposite positions relative to said cylindrical cam, said recesses being so arranged in the circumference of said cam as to be respectively in the line of movement of one and the other of the two rollers at each of the two end positions of the rotary movement of the element, the valve cylinder having ports so arranged that admission of pressure fluid to one side of the valve piston to initiate operation of the ram device for moving the element from one end position to the other, causes the valve piston to move that roller which, by engagement with one of the recesses of the cam has been locking the element in one position, out of said recess to a point at which movement of the valve piston is halted by contact of the other roller with the cylindrical surface of the cam, and the slide valve being so constructed that this displacement of the valve piston causes the slide valve to admit pressure fluid to one side, and release fluid from the other side, of the ram device, thus causing the ram device to effect reversed movement of the element, the other recess being so arranged on the circumference of the cam that at the completion of this movement said other recess faces the line of movement of said other roller, thus enabling the valve piston to complete its stroke and thereby engage the said other roller in said other recess for locking the element in its reversed position and isolating that side of the ram device which during the reversing operation was connected to exhaust, the actuator further comprising a manual selector valve having one position in which it admits pressure fluid to one side of the valve piston and vents it from the other side, and another position on which it conversely admits pressure fluid to said other side of the valve piston and vents it from said one side, and resilient indexing means which tend to retain the manual selector valve in each of said positions.

3,386,339
HYDRAULIC AMPLIFIER

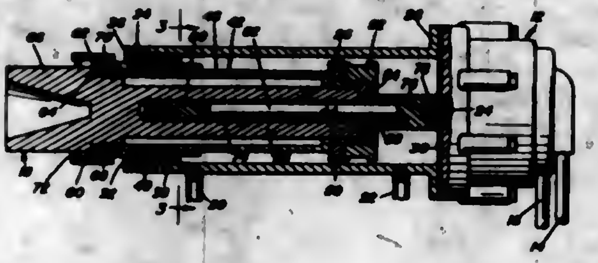
Roger L. Selsam, Rochester, N.Y., assignor to General Dynamics Corporation, a corporation of Delaware
Filed June 7, 1965, Ser. No. 461,805
6 Claims. (Cl. 91—52)

A hydraulic amplifier is described having first and second movable valving elements. The first element is responsive to input signal motion for varying the flow area of a first orifice in communication with a second orifice whose flow area is determined by a longitudinal slot having a given width and the positions of the second element which opens the second orifice. The second element moves to vary the flow area of the slot in response to changes in the flow area of the first orifice, but with a greater change in displacement than is executed by the first element.



3,386,340
FLUID POWER DRIVE UNIT HAVING ROTARY AND RECIPROCATORY MOVEMENT

Ellsworth C. Engle, 3340 Main St., Ravenna, Mich. 49451
Filed Nov. 24, 1965, Ser. No. 509,492
4 Claims. (Cl. 91—61)



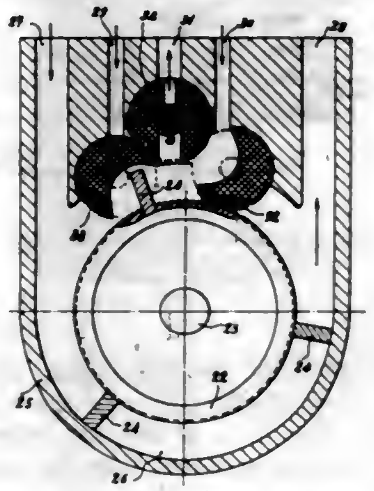
A work or tool feeding attachment for fluid motors in which a piston assembly axially displaces a motor driven spindle extending from the motor through a housing enclosing the piston assembly. The piston is rotatably supported on an enlarged end of the spindle to which a workpiece or tool is secured outside of the housing, the forward end of which mounts a sealing limit stop.

3,386,341
APPARATUS FOR THE GENERATION AND ACCUMULATION OF ENERGY

Francisco Martinez Angulo, 37 Gobelas, Las Arenas, Vizcaya, Spain
Continuation-in-part of application Ser. No. 405,077, Oct. 20, 1964. This application Apr. 19, 1966, Ser. No. 551,822
Claims priority, application Spain, Apr. 20, 1965, 312,012
7 Claims. (Cl. 91—92)

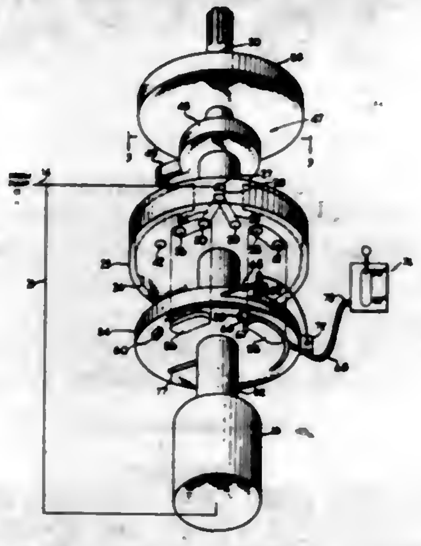
1. In an apparatus capable of functioning as a pump or motor, a housing formed in its interior with a circular channel surrounding a predetermined axis, rotary vane means for turning continuously about said axis along said channel and including a vane unit, fluid-control means communicating with said channel for directing fluid into and out of the latter respectively toward a trailing face of said vane unit and from a leading face of said vane unit, said flow-control means including a unit composed of an inlet duct and an outlet duct both communicating with said channel and spaced from each other on one side of said axis at an angle of less than 180°, both of said means together including at least a total of three of said units

so that at least two of said units of one of said means coact with at least one of said units of the other of said means to provide for continuous, uninterrupted rotary movement of said vane means in said channel, and partition means situated at said one side of said axis between said inlet and outlet duct and having a blocking position extending across said channel occupying a predetermined space therein and a non-blocking position providing for clearance for said vane means when the latter passes through said space.



3,386,342
VARIABLE STROKE FLUID DRIVE

Yunus E. Moochhala, Bombay, India, and Herbert N. Underwood, Chicago, Ill., assignors to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Filed Aug. 28, 1967, Ser. No. 663,803
6 Claims. (Cl. 91—277)

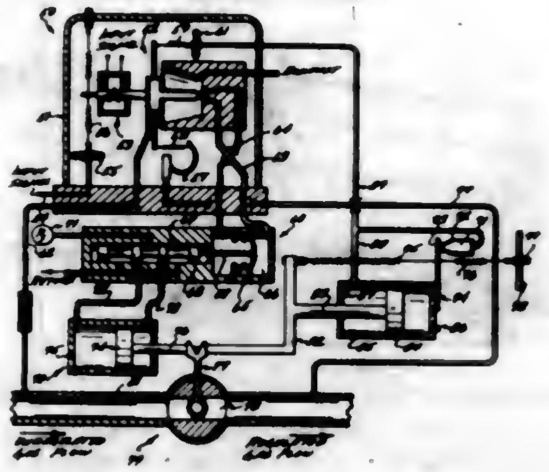


A fluid motor, acting in cooperation with a fluid pump, which motor is adapted to drive the agitator of an automatic washing machine including valving adapted to vary the length of stroke of the agitator in response to a control mechanism remote from the motor.

3,386,343
DYNAMICALLY CONSTANTLY VARIABLE GAIN SERVOCONTROL SYSTEM

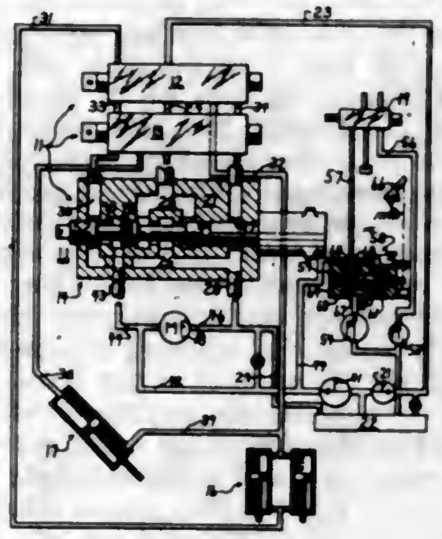
Samuel A. Gray, Sun Valley, Calif., assignor to Bell Aerospace Corporation, a corporation of Delaware
Filed Aug. 20, 1965, Ser. No. 481,336
12 Claims. (Cl. 91—364)

Disclosed is a jet pipe device supported upon a torsion tube having a source of fluid under pressure directed through the tube into the jet pipe. Movement of the jet pipe is accomplished by the application of signals thereto from a number of sources; for example, an electrical command signal a pressure feedback signal, an input signal indicating system pressure, a signal representing regulated flow pressure, or the like, to accomplish control of a desired apparatus—for example, such as a flow control valve in a gas pipeline. The feedback signal may be generated by a rate of change responsive feedback network which includes a piston positioned within a cylinder to define a chamber the volume of which changes responsive to movement of the actuator connected to the valve. As the volume of the chamber varies, the pressure therein changes dependent upon the rate of movement of the piston and the escape from the chamber of the pressure is controlled by the positioning of the flapper adjacent a nozzle defining a restricted orifice. The nozzle-orifice combination is connected through a diaphragm to the jet pipe to affect position thereof.



3,386,344
SELF-LOADING SCRAPER HYDRAULIC CIRCUIT WITH DIVERTER

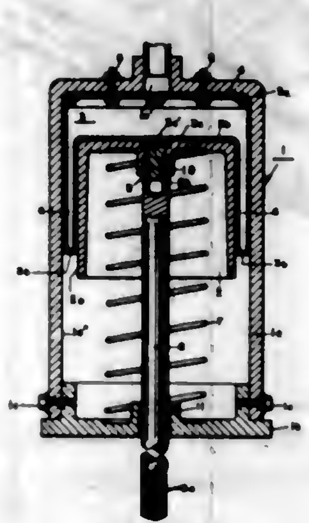
John A. Junck, Joseph Kokaly, and James E. Scheidt, Joliet, Ill., assignors to Caterpillar Tractor Co., Peoria, Ill., a corporation of California
Filed Sept. 30, 1966, Ser. No. 583,243
10 Claims. (Cl. 91—414)



A hydraulic circuit especially useful in self-loading scrapers wherein multiple elevator mechanism speeds are provided. The highest speed ranges of the elevator mechanism are achieved by diverting a portion of the hydraulic fluid used for steering the vehicle to feed the elevator motor. Another portion of the steering hydraulic fluid is available to the steering valves at all times. Upon demand, the portion of the steering hydraulic fluid used for driving the elevator mechanism at the higher speeds is rediverted back to the steering valve.

3,386,345
ROLLING DIAPHRAGM DEVICE HAVING CENTERING BUTTON ON DIAPHRAGM AND HAVING PISTON ROD ROTATABLE RELATIVE TO PISTON

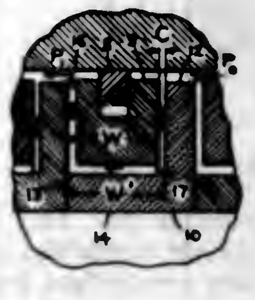
John F. Taplin, 15 Sewall St., West Newton, Mass. 02165
Filed Aug. 1, 1966, Ser. No. 569,393
5 Claims. (Cl. 92—99)



A rolling diaphragm device is provided with diaphragm centering means including a screw securing the piston rod to the piston whose head is flush with the end surface of the piston and defines a recess coaxial with the piston engaged by a projection integral with the radially inner circular portion of the rolling diaphragm. The piston rod is mounted for relative rotation with respect to the piston.

3,386,346
CONTROLLED LEAKAGE PISTON RING ASSEMBLY

Martin J. Halpin, West Seneca, N.Y., assignor to Worthington Corporation, Harrison, N.J., a corporation of Delaware
Filed Apr. 15, 1966, Ser. No. 542,885
7 Claims. (Cl. 92—183)

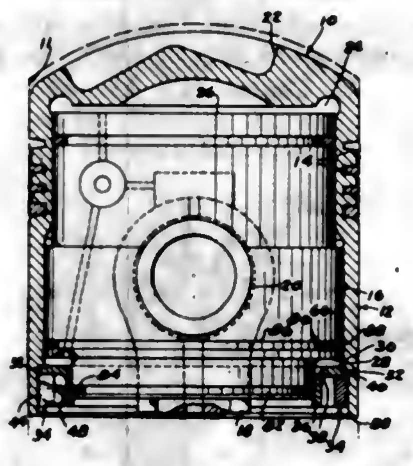


A controlled leakage piston ring assembly is provided which includes piston ring carriers for mounting the piston rings and passage means for bypassing the said ring only on the compression strokes of the piston to permit controlled leakage and evenly distribute the forces or work loads across the piston rings.

3,386,347
RETAINER STRUCTURE FOR VARIABLE COMPRESSION RATIO PISTON

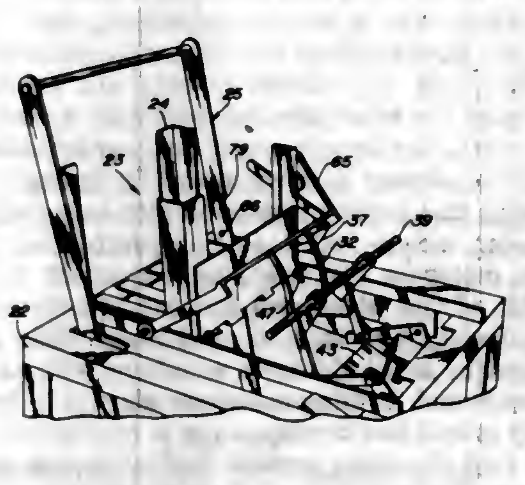
Carl F. Bachle, Grosse Pointe Farms, Mich., assignor to Continental Aviation and Engineering Corporation, Detroit, Mich., a corporation of Virginia
Filed Dec. 13, 1965, Ser. No. 513,250
10 Claims. (Cl. 92—216)

A variable compression ratio piston for an internal combustion engine wherein movement of the outer shell toward the combustion chamber is restrained by a retainer ring held axially in place on the shell by a resilient self-expanding snap ring having a series of circular lands engaging complementary lands on the shell.



3,386,348
EGG CARTON SETUP MACHINE

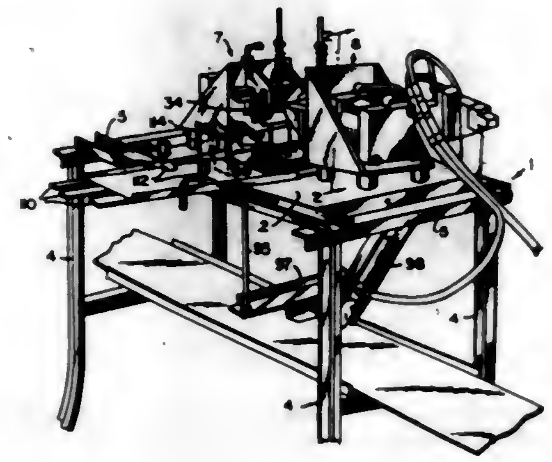
Soenke Soennichsen, Chicago, Ill., assignor to Premier Tool Works, Inc., Chicago, Ill., a corporation of Illinois
Filed May 23, 1966, Ser. No. 552,048
4 Claims. (Cl. 93—37)



1. An egg carton setup machine for manual operation comprising a frame equipped with a magazine for supporting a plurality of egg carton blanks for bottom, sequential dispensing, a handle pivotally mounted on said frame and equipped with a head mounted on said handle below said magazine for reciprocating arcuate movement whereby said head is adapted to remove the bottom-most blank from said magazine during the initial forward movement of said head, said head including a plurality of forwarding projecting fingers adapted to develop cells in said blank after the same has been partially opened, blank opening means on said frame responsive to the forward movement of said handle, blank stabilizing means on said frame adjacent the forward end thereof for engaging the forward edge of the a blank during operation of said opening means and the initial engagement of said fingers with said blank incident to forming cells, a creasing blade rigidly mounted on the forward portion of said frame aligned with said blank leading edge, and means on said frame for operating the said handle for reducing the spacing of said fingers and for removing a carton therefrom after the cells thereof are formed.

3,386,349
BOX MAKING MACHINE

**Hazen G. Hale, Jr., 36 Hull St.,
Beverly, Mass. 01915
Continuation of application Ser. No. 410,609, Nov. 12, 1964. This application May 3, 1967, Ser. No. 635,927
12 Claims. (Cl. 93—49)**

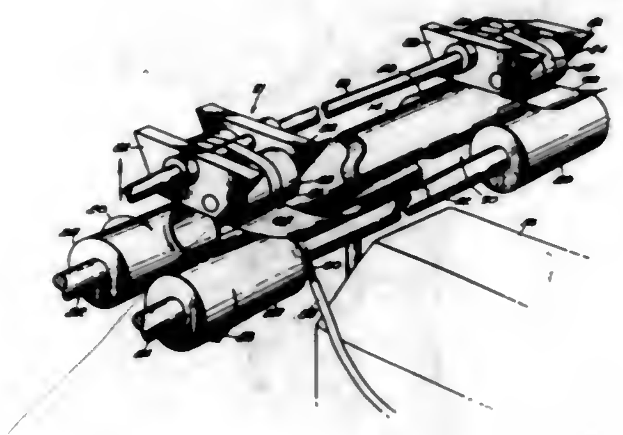


1. A machine for forming boxes from blanks having sidewalls and tabs defined by score lines with said tabs adapted to be engaged with said sidewalls under pressure to form a box comprising, a frame with an aperture formed therein over which said blanks are moved to a first position, means for successively feeding said box blanks to said first position, means for folding said tabs and sidewalls along said score lines, defining them to shape said blank into a box configuration, means for moving said box configuration in a direction normal to the plane within which the bottom of said box configuraiton lies to engage the sidewalls and tabs with a clamping means, said means for moving said box configuration including members adapted to move upwardly through said aperture carrying said box configuration into engagement with said clamping means and a folding mechanism having hold-down members for engaging the upper surface of the bottom of said blank and forming members for engaging the sidewalls and tabs to hold them while said blank is engaged by said hold-down members, with said hold-down members and forming members adapted to be moved vertically as said box configuration is carried into engagement with said clamping means, said clamping means having elements for engaging said tabs and sidewalls and applying pressure thereto seal said tabs and sidewalls in fixed interengagement to form said box, and means for ejecting said box from said machine.

3,386,350
APPARATUS FOR MANUFACTURING MAILING TUBES

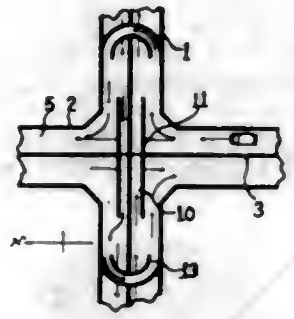
**Sidney L. Grodberg, Newton, Mass.
(Marshall St., Randolph, Mass. 02368)
Filed Mar. 31, 1966, Ser. No. 538,999
9 Claims. (Cl. 93—77)**

1. Apparatus for making mailing tubes comprising
a frame,
a support on the frame for rotating cylinders,
means for feeding cylinders one at a time to the support,
dispensing means on the frame adjacent to support for feeding a strip of adhesive coated paper aligned with one end of the cylinder on the support,
pressure roller means adjacent the cylinder for pressing the adhesive coated side of the paper onto the cylinder causing the cylinder to roll up the paper on its end with the end of the cylinder intermediate the side edges of the paper,
and means for removing the cylinder from the support.



3,386,351
SYSTEM OF GRADE SEPARATION AND ALSO UNDERROAD PARKING

**Shusaku Hara, 22 1-chome Higashiasakayama-cho,
Sakai, Japan
Continuation of application Ser. No. 354,938, Mar. 26, 1964. This application May 8, 1967, Ser. No. 637,003
Claims priority, application Japan, Sept. 14, 1963, 38/49,679
2 Claims. (Cl. 94—1)**

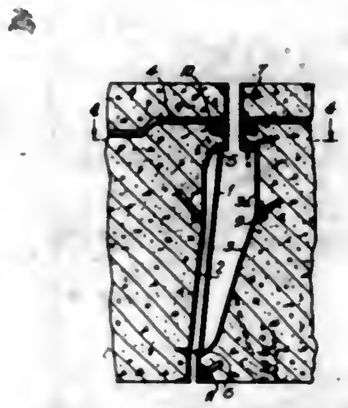


A roadway interchange for two intersecting trunk streets which has a straight overbridge over one street, and a single pair of U-turn overbridges over the other street for runs over the straight overbridge, the U-turn overbridges being disposed on opposite sides of the intersection from each other, and the interchange further having turning rods between the corresponding side lanes of the streets with merging and diverging areas between the ends of the U-turn overbridges and the ends of the straight overbridge, whereby the vehicles entering the interchange can turn either right or left by using the U-turn overbridges without having to cross oncoming traffic.

3,386,352
EXPANSION-CONTRACTION JOINT

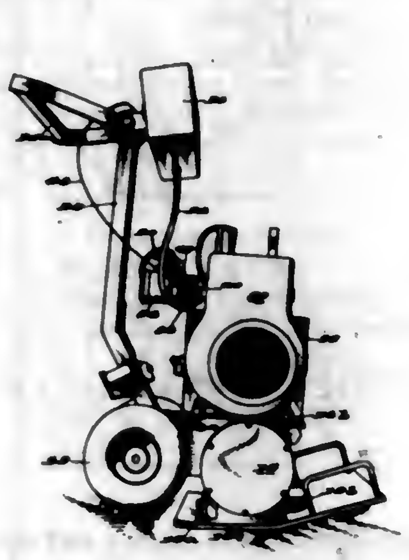
**Morris Berman, P.O. Box 115,
New York, N.Y. 10001
Filed Sept. 29, 1965, Ser. No. 491,099
1 Claim. (Cl. 94—18)**

A load transfer mechanism of an expansion-contraction joint between adjacent slab ends of a roadway having struts seated in the two slab ends for transmitting the load between said slab ends wherein the struts are sloped in one direction initially and on further opening of the joint, first assume a vertical position followed by a slope in the opposite direction.



3,386,353
VIBRATORY COMPACTING MACHINES

**Gorden S. Wells, Binghamton, N.Y., assignor to Stow Manufacturing Co., Binghamton, N.Y., a corporation of New York
Filed Apr. 6, 1966, Ser. No. 540,591
13 Claims. (Cl. 94—48)**

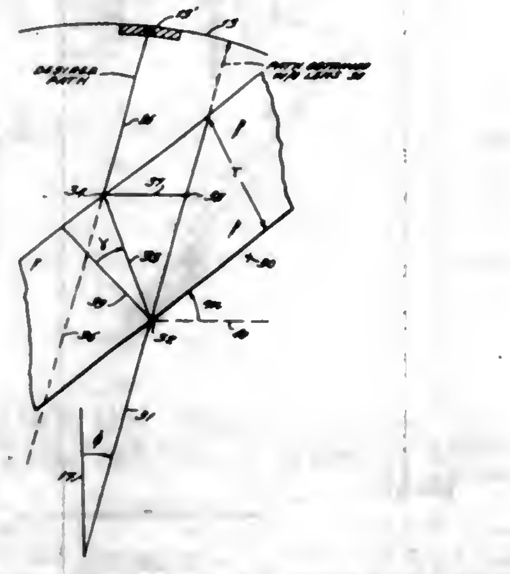


The present disclosure is generally directed to the control of tamper engine speed and, more particularly, to means for setting the speed of a tamper engine so that the latter can be run only at an idling speed or an operating speed determined at the factory to be a safe operating speed, i.e. one that will not result in impairment or destruction of the tamper or parts thereof or of the engine due to excessive vibrations. Such is effected by means of a manually controlled, two-position toggle-actuated means associated with the engine carburetor which in one over-center position establishes an angular position of the throttle butterfly shaft as results in idling speed and in the other over-center position results in proper operating speed.

In another of its aspects the disclosure relates to engine-speed verifying means operated from the conventional engine governor and which provides a means for determining any deviation in actual engine speed, i.e. either idling or proper operating speed but particularly the latter, from the idling and operating speeds established as in the foregoing.

3,386,354
LENS SYSTEM FOR CORRECTING EFFECT OF EARTH'S MAGNETIC FIELD IN COLOR TUBES

**James W. Schwartz, Western Springs, Ill., assignor to National Video Corporation, Chicago, Ill., a corporation of Illinois
Filed Oct. 1, 1965, Ser. No. 491,972
8 Claims. (Cl. 95—1)**



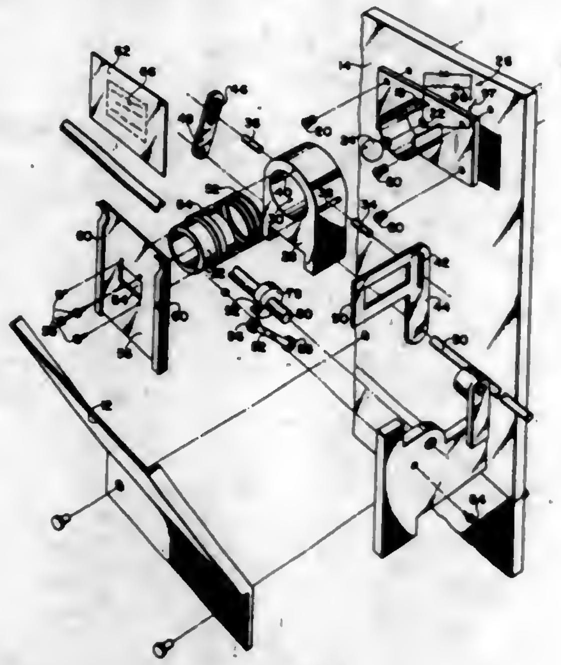
Method and apparatus for enhancing the color purity of a color receiver tube of the shadow-mask type by compensating for the effect of the earth's magnetic field upon the electron beam of the color receiver tube. The method consists of providing a corrective lens system to appropriately position phosphor dots deformed during the deposition process so as to be in the appropriate location in order to be impinged upon by only its associated electron beam. The corrective system is used in addition to the normal lens systems employed for the purpose of correcting for the effects of misconvergence and radial misregister.

3,386,355
PHOTOGRAPHIC EXPOSURE AND PROCESSING APPARATUS

**Herman E. Erikson, Winchester, Mass., assignor to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware
Filed Mar. 8, 1966, Ser. No. 532,766
9 Claims. (Cl. 95—1.1)**

1. Photographic apparatus for use with a photosensitive film unit of the self-developing type having a pair of liquid-confiining layers, one of which includes a predetermined area adapted to transmit visible light, said apparatus comprising, in combination:
(a) means defining a lighttight chamber having an entry portion for movement of said film unit into said chamber;
(b) spreading means positioned adjacent said entry portion and adapted to effect the spreading of a liquid processing composition between said layers as said film unit is moved into said chamber;
(c) a light source positioned within said chamber and adapted, upon actuation, to emit visible light;
(d) positioning means for holding said film unit in an exposure position within said chamber wherein said predetermined area of said one layer is in the path of light from said source;

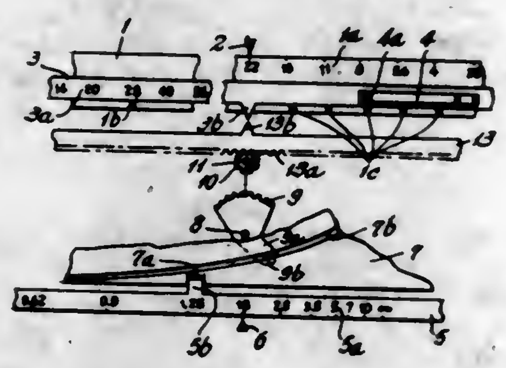
(e) means for positioning indicia-carrying means between said light source and said predetermined area, whereby an image of the indicia is formed in the photosensitive layer of said film unit in said predetermined area upon actuation of said light source; and



(f) means for actuating said light source in response to movement of said film unit into said exposure position.

3,386,356
PHOTOGRAPHIC CAMERA WITH INDEPENDENTLY ADJUSTABLE CONTROLS FOR DISTANCE AND DIAPHRAGM APERTURE VALUES

Waldemar T. Rentschler, Calmbach (Enz), Germany, assignor to Alfred Gauthier, G.m.b.H., Calmbach (Enz), Germany, a corporation of Germany
Filed July 27, 1964, Ser. No. 385,191
Claims priority, application Germany, July 27, 1963, G 38,327
8 Claims. (Cl. 95—10)

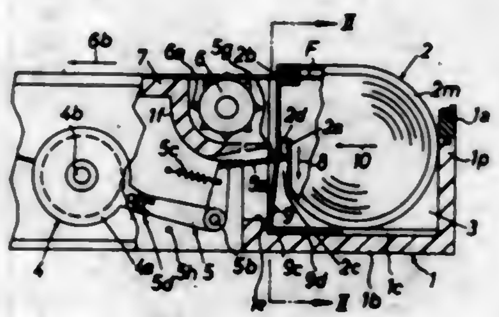


A camera having two pointers to be made to coincide for taking flash photographs, one pointer being controlled by the range setting control and the other by the diaphragm aperture control.

3,386,357
PHOTOGRAPHIC CAMERA WITH BUILT-IN LIGHT METER

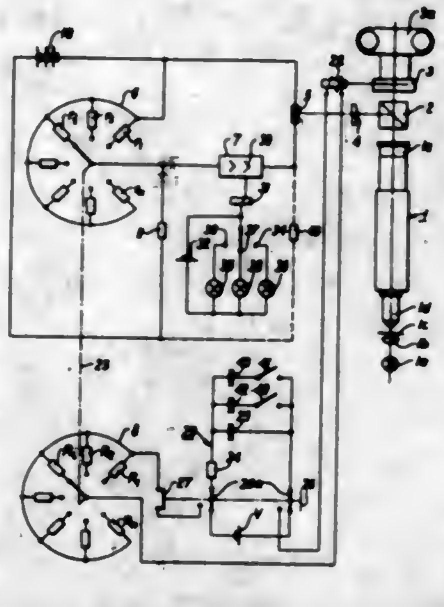
Rudolf Kremp, Grunwald, Munich, and Alfred Winkler, Heinz Ernst, Dieter Engelsmann, and Kurt Zattler, Munich, Germany, assignors to Agfa Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany
Filed May 3, 1965, Ser. No. 452,583
Claims priority, application Germany, May 8, 1964, A 45,991
15 Claims. (Cl. 95—10)

A photographic camera which is used with supply cartridges having thereon a pair of stops spaced from each other by a distance which is indicative of the sensitivity of film in the cartridge. A yieldable locating member which is permanently installed in the chamber for the cartridge is engaged by one of the stops when the cartridge is properly inserted into the chamber. The other stop is engaged by a sensing element which adjusts the light meter as a function of film sensitivity.



3,386,358
EXPOSURE CONTROL APPARATUS FOR PHOTOMICROGRAPHY

Karl Kropp, Vienna, Austria, assignor to C. Reichert Optische Werke Aktiengesellschaft, Vienna, Austria
Filed Oct. 13, 1965, Ser. No. 495,621
Claims priority, application Austria, Oct. 14, 1964, A 8,720/64
5 Claims. (Cl. 95—10)

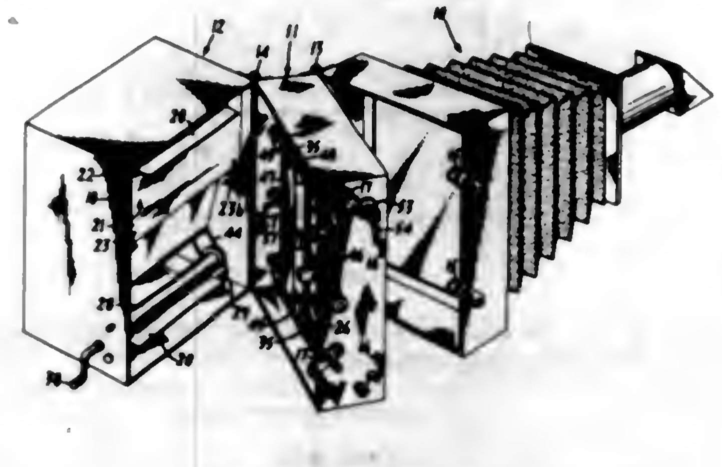


1. An apparatus for measuring and automatically controlling the exposure time for photomicrography, comprising an electromagnetic shutter, which is opened and closed by an electric timer, which contains a resistance-capacitance arrangement and determines the exposure time and permits of a control of *n* exposure times graded according to a geometric series, and a light detector, which is included in the path of rays and is exposed to an illumination intensity which is proportional to that which would fall on the sensitized layer, characterized in that a compensating circuit is provided, which includes *n* compensating resistors r_i, where $i=1$ to *n*, an auxiliary voltage source, and the light detector, said compensating resistors are so dimensioned that the *i*th compensating resistor compensates the current flowing through the light detector so that a zero signal is indicated, the timer includes a resistance-capacitance arrangement which is adjustable in *n* time constant steps $n(RC)_i$, where $i=1$ to *n*, and said resistance-capacitance arrangement is coupled by known means to the compensating resistors r_i in such a manner that the connection of the *i*th compensating resistor, into the circuit so as to obtain a zero signal results in the timer in a synchronous adjustment of the resistance-capacitance arrangement to the *i*th step,

which has been determined by calibration so that the timer controls an exposure time which results in a correct exposure when the illumination intensity of the sensitized layer corresponds to the *i*th stage.

3,386,359
APPARATUS FOR MAKING PHOTOGRAPHIC IMAGES

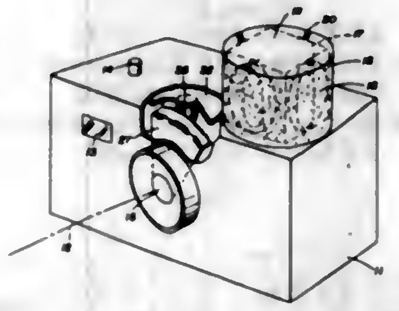
Lawrence F. Gentile, Stamford, Conn., assignor to Time, Incorporated, New York, N.Y., a corporation of New York
Filed June 23, 1965, Ser. No. 466,231
8 Claims. (Cl. 95—11)



A camera for making photographic screened images in which the housing is in separable sections, one section accommodating an optical system, another a transparent support for a halftone screen, a pressure plate, and an actutaing device to impart relative movement to the transparent support and the pressure plate to separate them and to bring them together to sandwich a light-sensitive strip therebetween and still another section containing a magazine for the light-sensitive strip.

3,386,360
FLASH FILTER

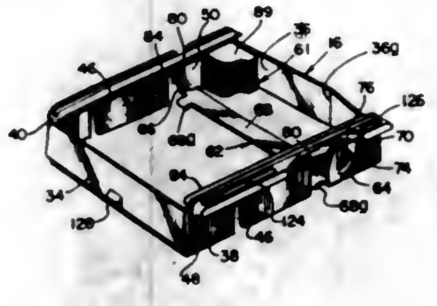
Hubert Nerwin, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed July 12, 1965, Ser. No. 471,180
4 Claims. (Cl. 95—11)



An adjustable filter cap overlying the lamp(s) and reflector(s) of a camera flash attachment, particularly a multilamp flash unit such as a flashcube, the cap having one or more walls varying in a light-transmitting characteristic, such as neutral density, to modify lamp output in accordance with a variable picture-taking factor, such as camera-to-subject distance; and a device interconnecting the filter cap and an adjustable camera mechanism, such as that for adjusting lens focus or diaphragm aperture, whereby both the filter cap and camera mechanism can be adjusted simultaneously to correspond with a particular value of the picture-taking factor.

3,386,361
PHOTOGRAPHIC PRODUCT

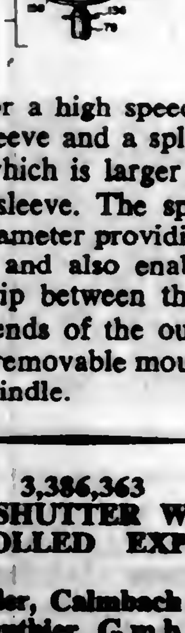
Bernard R. Danti, Lexington, Mass., assignor to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware
Filed Dec. 27, 1965, Ser. No. 516,363
16 Claims. (Cl. 95—13)



The present application relates to an assemblage consisting of a container or magazine mounting a film-pack. The magazine includes structure cooperating with that of the film-pack to enable loading of the film pack and forward movement, and release of each unit thereof when the magazine is mounted in a camera.

3,386,362
FILM CARTRIDGE

Christian J. Soenksen, Mundelein, and Joseph F. Chinlund, Northbrook, Ill., assignors to SCM Corporation, New York, N.Y., a corporation of New York
Original application May 27, 1963, Ser. No. 283,409, now Patent No. 3,256,525, dated June 14, 1966. Divided and this application Aug. 26, 1965, Ser. No. 482,845
8 Claims. (Cl. 95—31)



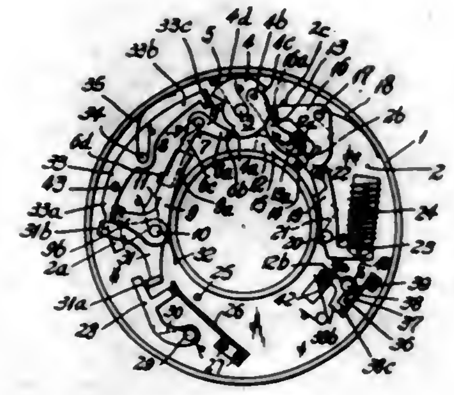
A film cartridge, for a high speed drum camera, with a transparent outer sleeve and a split internal sleeve, the normal diameter of which is larger than the internal diameter of the outer sleeve. The split internal sleeve is sprung to a smaller diameter providing a free fit insertion into the outer sleeve and also enabling disposition and pressing of a film strip between the internal and outer sleeves. Discs at the ends of the outer sleeve enable releasable coupling and removable mounting of the cartridge coaxially on a drive spindle.

3,386,363
PHOTOGRAPHIC SHUTTER WITH ELECTRONICALLY-CONTROLLED EXPOSURE TIMING DEVICE

Waldemar T. Rentschler, Calmbach (Enz), Germany, assignor to Alfred Gauthier, G.m.b.H., Calmbach (Enz), Germany, a corporation of Germany
Filed Sept. 23, 1964, Ser. No. 398,630
Claims priority, application Germany, Sept. 26, 1963, G 38,790
6 Claims. (Cl. 95—53)

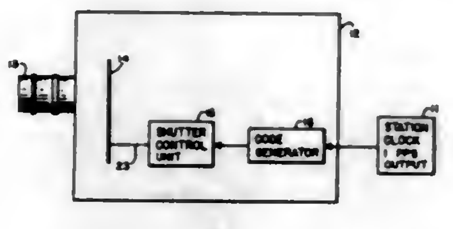
1. A photographic shutter comprising: a shutter blade; driving means to actuate said shutter blade to open and

to close the same; a shutter release operatively connected to said driving means to initiate the opening of said shutter blade; an electronically-controlled exposure timing device; a switch operatively connected to said shutter release to be actuated in order to switch on the electronically-controlled exposure timing device when said shutter release is operated to initiate the opening of said shutter blade; and a locking device operatively connected to said shutter release and engageable with said switch to hold said switch in its closed position until the running down of the exposure is completed.



3,386,364
SYNCHRONOUS INTERVALOMETER

Leonard O. Hayden, Accokeek, Md., assignor to the United States of America as represented by the Secretary of the Navy
Filed July 19, 1965, Ser. No. 473,250
11 Claims. (Cl. 95—53)

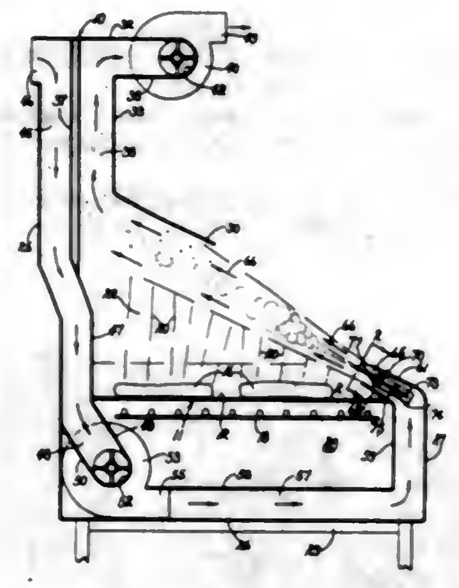


A tracking camera for photographing moving objects wherein the film exposure times are varied according to a predetermined code and the sequential exposures are synchronized with universal time. A code generator comprising a series of cascaded bistable multivibrators is used to produce a pattern of time varying pulses which control the camera shutter so that the resultant photograph provides a dashed trail with each dash synchronized with a known interval of universal time.

3,386,365
APPARATUS AND METHOD FOR PRODUCING A FOG CURTAIN HEAT SHIELD

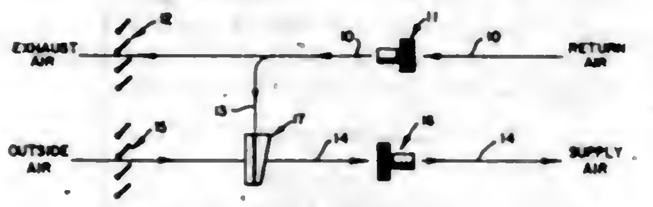
Donald D. Jensen, 1141 Park Circle Drive, Fresno, Calif. 93702
Filed Jan. 16, 1967, Ser. No. 609,582
7 Claims. (Cl. 98—36)

A system for confining heat to a localized area from which such heat tends to emanate by radiation and convection, which system provides an elongated orifice to project a curtain of air as a heat barrier across the localized area. A plurality of adjustable nozzles are disposed within the orifice and disperse a spray of water droplets into the airstream to produce an uninterrupted shroud of fog which serves as a reflective and heat absorbing barrier against the passage of convectional and radiant heat to minimize or preclude heating and polluting the surrounding atmosphere.



3,386,366
AIR MIXING DEVICE

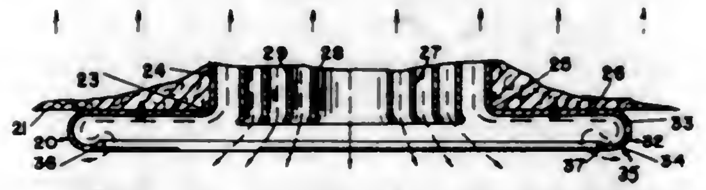
Leander Economides, 308 Glenwood Ave., Leonia, N.J. 07605, and Norman Goldberg, 1411 Ave. N, Brooklyn N.Y. 11230
Filed Aug. 17, 1966, Ser. No. 573,033
5 Claims. (Cl. 98—38)



An air mixture device having a plurality of air distributing ducts located perpendicular to and within a supply air duct. The distributing ducts are connected to a return air duct.

3,386,367
ANTISMUDGE RING

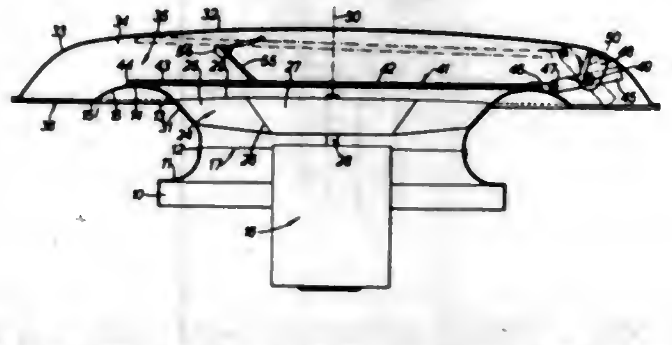
Joseph Pellegrino, 10 Sherbourne St., Andover, Mass. 01810
Filed July 21, 1966, Ser. No. 566,959
4 Claims. (Cl. 98—40)



An antismudge ring of annular configuration of one piece of sheet material has a substantially flat plate encircling the area of a ceiling immediately around a ceiling air duct, the outer peripheral rim of the plate being turned downwardly for a short distance, then turned inwardly and then turned slightly upwardly to form a horizontally disposed dust trap groove at a spaced distance below the plate. Lateral air currents discharged across the ceiling from the duct are intercepted by the rim and turned back upon themselves to precipitate dust particles in the groove where they are not visible but can be cleaned therefrom. An annular baffle of U-shaped cross section may be fixed to the ring to redirect air currents laterally outwardly after passing the dust trap groove.

3,386,368
VENTILATORS

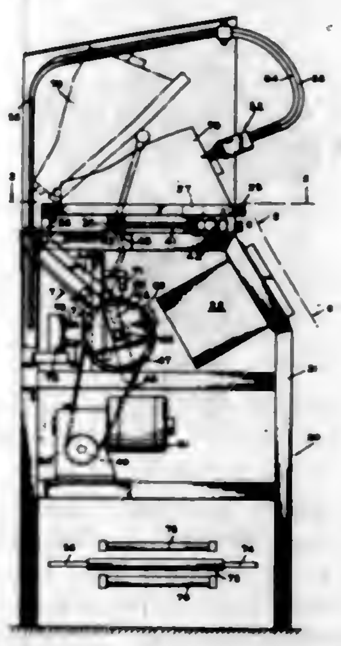
Eric Fielding, Cosham, England, assignor to Colt Ventilation and Heating Limited
Filed May 18, 1966, Ser. No. 551,118
Claims priority, application Great Britain, May 19, 1965, 21,120/65
19 Claims. (Cl. 98—43)



The disclosure relates to a motor operated discharge ventilator having a discharge fan impeller and fan casing wherein the impeller blades closely conform to the shape of a trumpet shaped discharge outlet so that in operation air leaving the trailing edges of the impeller blades has a large component of movement substantially radially outwardly of the impeller.

3,386,369
MACHINE FOR CONTROLLED INJECTION OF PICKLE FLUID IN MEAT PRODUCTS

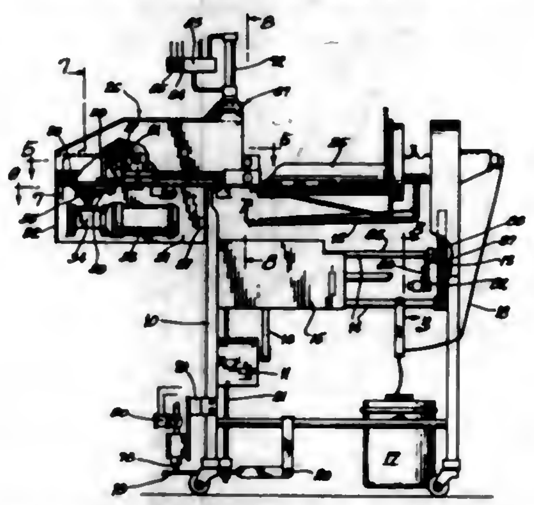
Norman H. Vogt, Clawson, Mich., assignor to Vogt Incorporated, Clawson, Mich., a corporation of Michigan
Filed Oct. 26, 1964, Ser. No. 406,448
18 Claims. (Cl. 99—257)



A machine constructed in units for weighing and injecting hams or other products with a pickling fluid. A ham or other product positioned on a tray will impose the weight thereof on a weight strain bridge. The bridge emits a signal directly proportional to the weight of the product and an analog memory system receives the signal. Pump means which is controlled by the system pumps a measured amount of fluid into the product. Upon completion of the pumping the product is ejected from the machine.

3,386,370
TYING MACHINE FOR MAKING PARALLEL TIES

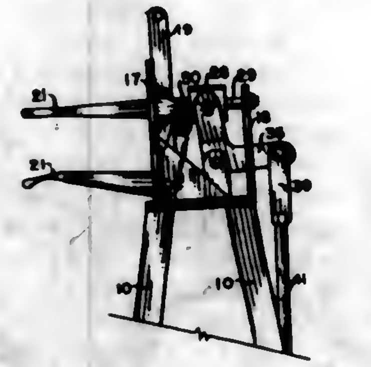
Robert G. Brown, Washington, D.C., assignor to B. H. Bunn Company, Chicago, Ill., a corporation of Illinois
Filed Sept. 7, 1966, Ser. No. 577,718
12 Claims. (Cl. 100—4)



A tying machine for meat rolls or the like comprising an intermittently driven conveyor for advancing rolled meat toward a tying machine, with electrically interlocked controls for the conveyor and tying machine by which the conveyor and tying machine are alternately operable until the entire rolled meat is tied.

3,386,371
BANDING MACHINE

Harold L. Farmer and Robert Waltman, Baton Rouge, La., assignors to Ethyl Corporation, New York, N. Y., a corporation of Virginia
Filed Aug. 5, 1965, Ser. No. 477,411
3 Claims. (Cl. 100—9)

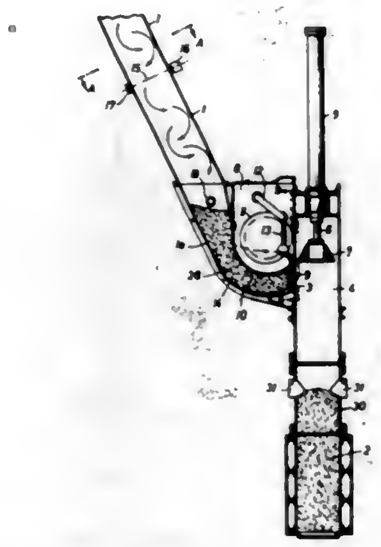


An apparatus for applying plastic bands to a plurality of elongated objects. Apparatus includes a support frame having a plurality of fingers pivotally mounted thereon intermediate their ends. A reciprocating body is provided which engages the rearward end of the pivotally mounted fingers to open and close the fingers. Coupling means are attached to the reciprocating body whereby power may be applied to operate the apparatus. The device is particularly adapted for stretching plastic shrink bands for wrapping of fruit such as bananas, carrots, etc., without causing damage to the fruit.

3,386,372
METHOD AND APPARATUS FOR DOSING FIBROUS MATERIAL

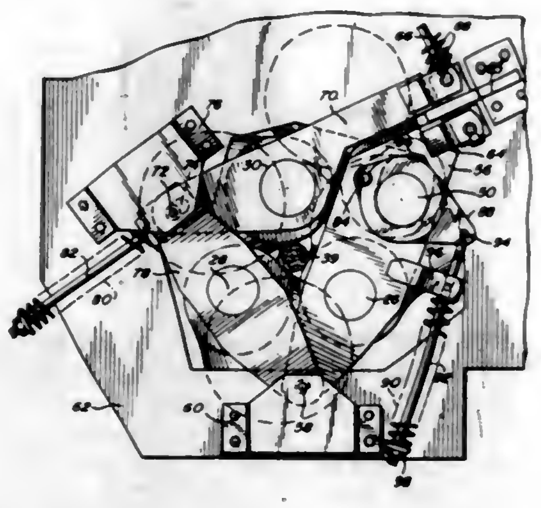
Karl-Heinz Knipp, Dusseldorf, Germany, assignor to Lindemann Maschinenfabrik G.m.b.H., Dusseldorf, Germany
Filed Aug. 26, 1965, Ser. No. 482,712
Claims priority, application Germany, Aug. 29, 1964, L 48,659, Patent 1,214,138
5 Claims. (Cl. 100—35)

A method and an apparatus for apportionately feeding fibrous material supplied through an at least vertical feed channel into the collecting chamber of a tramper press, the fibrous material being allowed to accumulate in said channel to form a plug closing the outlet opening thereof, the level of said plug moving between a lower and an upper detecting means each of which, respectively switches off and switches in a feeding device comprising raking means to detach a substantially constant volume of material from said plug for delivery into said collecting chamber.



3,386,373
CROP PELLETER

Richard W. Bushmeyer, David E. Krause, Rockford, and Carl J. Rath, Rockton, Ill., assignors to J. I. Case Company, a corporation of Wisconsin
Filed Oct. 24, 1965, Ser. No. 504,972
13 Claims. (Cl. 100—89)

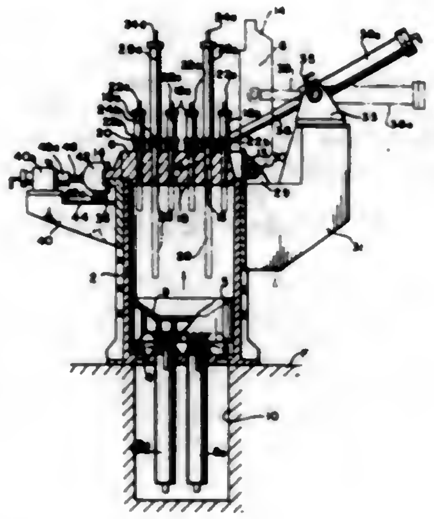


This invention relates to a crop pelleter in which the forming rollers and the finishing rollers, either separately, or in combination, are supported, so that they can accommodate variations in the crop input into the forming chamber. To this end, the forming and finishing rollers are spring-mounted at both ends thereof.

3,386,374
SCRAP-METAL COMPRESSOR

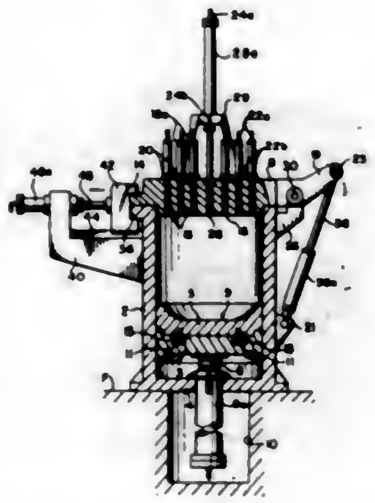
Kunitoshi Tezuka, 34 7-chome, Minamisuna-machi, Koto-ku, Tokyo, Japan
Filed Sept. 2, 1966, Ser. No. 576,915
13 Claims. (Cl. 100—215)

Scrap-metal compressor for forming into blocks various iron and metal materials to be reprocessed in a furnace, with a compressor casing into which the materials are introduced, a pressure plate slidable in the casing, a pressure receiver removably attached to one end of the casing, and at least one ram and cylinder assembly, traversing the pressure receiver, and energizable for applying a compressive force to the materials for compacting the same into said blocks.



3,386,375
DEVICE FOR REMOVING MATERIALS FROM A COMPRESSOR

Kunitoshi Tezuka, 34 7-chome, Minamisuna-machi, Koto-ku, Tokyo, Japan
Filed Sept. 2, 1966, Ser. No. 576,916
Claims priority, application Japan, Dec. 21, 1965, 40/78,220
14 Claims. (Cl. 100—218)

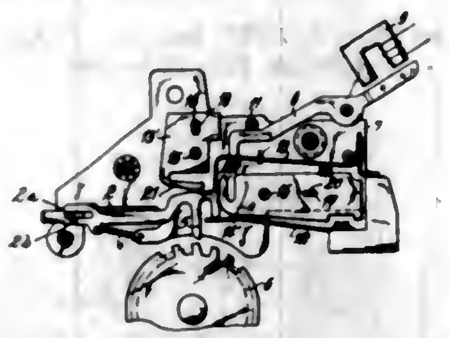


Device for removing materials from a compressor, such as compressed scrap-metal blocks from a compressor particularly adapted for forming into blocks various iron and metal materials to be re-procesed in a furnace. The device has a drive mechanism operatively connected to the casing of the compressor into which the materials are introduced, for reciprocating a pressure plate slidable in the casing, an operational plate interposed between the drive mechanism and the pressure plate, and a track at the level or above the edge of the structure, allowing the pressure plate to be moved therealong once it is elevated to said level by the intermediary of the operational plate.

Preferably wheels are secured to the underside of the pressure plate to be moved therealong once it is elevated of the operational plate, and the track is provided with rails for rolling the presure plate therealong.

3,386,376
DAMPING MEANS TO PREVENT PRINT HAMMER REBOUND

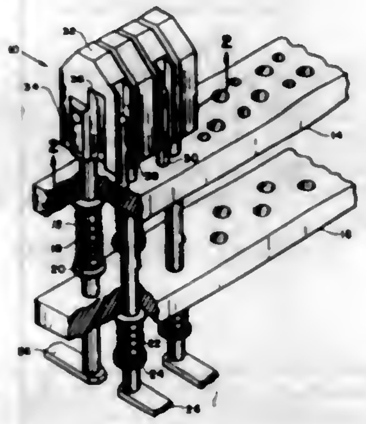
Gerhard Mutz and Gerd Gronwald, Villingen, Germany, assignors to Kienzle Apparate GmbH, Villingen, Black Forest, Germany
Filed Sept. 2, 1966, Ser. No. 577,014
Claims priority, application Germany, Sept. 8, 1965, K 57,075
11 Claims. (Cl. 101—93)



The rebound of a printing hammer is dampened by a collision with a resiliently mounted oscillatory damping means whose mass and resiliency are selected so that a second collision cannot take place during oscillation of the damping means.

3,386,377
PRINT HAMMER ASSEMBLY EMPLOYING TWO-PIECE HAMMERS

John F. Dalton, Worcester, Pa., assignor, by mesne assignments, to Mohawk Data Sciences Corporation, East Herkimer, N.Y., a corporation of New York
Filed Mar. 17, 1967, Ser. No. 623,872
2 Claims. (Cl. 101—93)

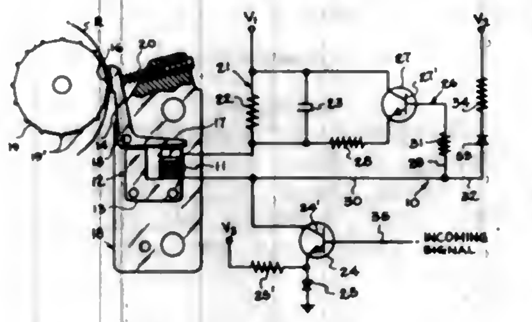


A plurality of two-piece print hammers are mounted in closely spaced side-by-side relation and provided with offset actuating stems of diameter equal to the hammer head width. A pair of opposed, convex side portions on each head accommodate an end hole of sufficient diameter to receive the stem and concave side portions on each head provide clearance for the convex portions when the heads are nested together.

3,386,378
ELECTROMAGNETIC CONTROL MEANS FOR PRINT HAMMERS

Wilburn F. Bradbury, Northbrook, and William I. Erdman, Glenview, Ill., assignors to SCM Corporation, New York, N.Y., a corporation of New York
Filed Apr. 24, 1967, Ser. No. 632,999
9 Claims. (Cl. 101—93)

There is disclosed a print hammer cooperable with a platen, and actuating apparatus for the print hammer. A spring is used to drive the print hammer into printing cooperation with the platen and an electromagnet is used to actuate the print hammer out of printing cooperation with the print hammer. The electromagnet is energized by energizing means sequentially with relatively heavy starting current and with relatively light holding current so that the print hammer is relatively rapidly actuated and is held out of printing cooperation with the platen by relatively light holding current. When the print hammer is to be driven into printing cooperation with the platen, the electromagnet is de-energized and the spring is able to perform its function. Structure is provided to drive the energizing means into rapid transition from the holding current condition to a de-energized condition to enable the relatively heavy holding current to be applied to the coil a short time after the coil is de-energized.



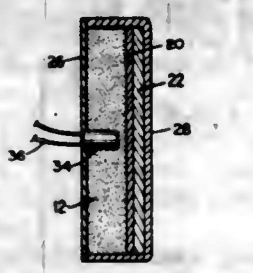
3,386,379
DUPLICATING WITH COLOR PRODUCING REAGENTS

Robert W. Gundlach, Victor, and Vsevolod S. Mihajlov, Rochester, N.Y., assignors to Xerox Corporation, Rochester, N.Y., a corporation of New York
Continuation-in-part of application Ser. No. 185,048, Apr. 4, 1962, now Patent No. 3,332,347. This application Apr. 26, 1963, Ser. No. 276,108
3 Claims. (Cl. 101—469)

1. A method of image duplicating from a xerographic master which comprises forming an electrostatic latent image on the surface of a xerographic plate, developing said latent image with a toner composition comprising a thermoplastic material and a vaporizable color producing reagent, contact in the presence of heat said developed image with the surface of a salt treated copy paper such that a portion of said color producing reagent vaporizes and reacts with the salt component of said copy paper to produce a visible image.

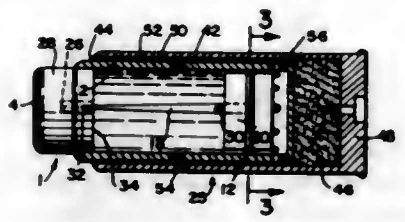
3,386,380
METHOD AND APPARATUS FOR PROPELLING PROJECTILES FOR SPACE AND OTHER APPLICATIONS

Gus Francis, 1480 S. Josephine, Denver, Colo. 80210
Continuation of application Ser. No. 439,866, Mar. 15, 1965. This application Jan. 4, 1967, Ser. No. 609,267
16 Claims. (Cl. 102—23)



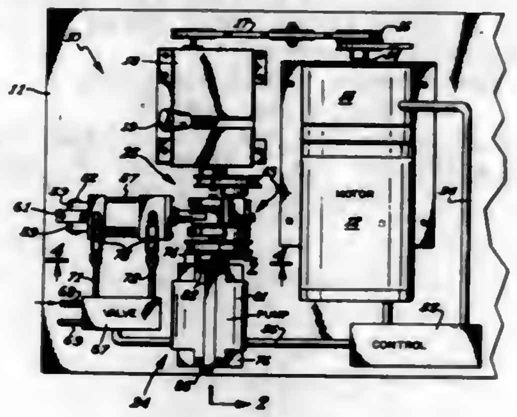
The invention is a weapon device for hurling without a projectile chamber, flat plate projectiles against a target, and comprises an explosive charge having at least one flat face with a buffer plate having opposed flat faces mounted contiguous to the explosive charge and a flat metal projectile plate mounted contiguous to the buffer plate, the specific improvement being the use of the buffer plate to prevent premature shattering of the metal projectile plate. A modification is the incorporation of the weapon device using opposed metal plates on space vehicles as it is peculiarly adaptable to use in space where a recoilless weapon is required.

3,386,381
HYPODERMIC PROJECTILE
Thomas E. Ferb, 63 Barton Ave.,
Staten Island, N.Y. 10306
Filed July 6, 1966, Ser. No. 563,125
8 Claims. (Cl. 102—92)



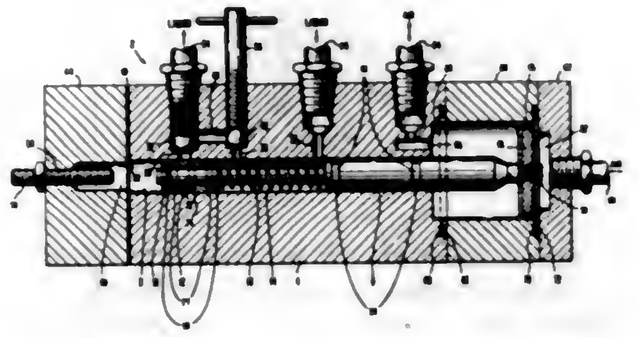
A hypodermic projectile is provided which is adapted to inject a liquid drug into an animal or human upon impact therewith, the projectile including a hollow body having a puncturable front wall and a rear wall with a liquid drug therein. A slidable piston member is provided in the hollow body with a needle extending therefrom also located within the body. The needle has a pair of apertures communicating with a hollow center thereof so that when the piston is forced forwardly, the needle pierces the front wall of the hollow body into the animal or human and as the piston moves forward, the liquid drug will be forced through the needle and into the animal or human being treated.

3,386,382
FLUID MATERIAL DISPENSING APPARATUS
Thomas L. Schuette, Wayzata, and Melvin J. Straub, Hopkins, Minn., assignors to Possis Machine Corporation, Minneapolis, Minn., a corporation of Minnesota
Filed Aug. 15, 1966, Ser. No. 572,512
7 Claims. (Cl. 103—3)



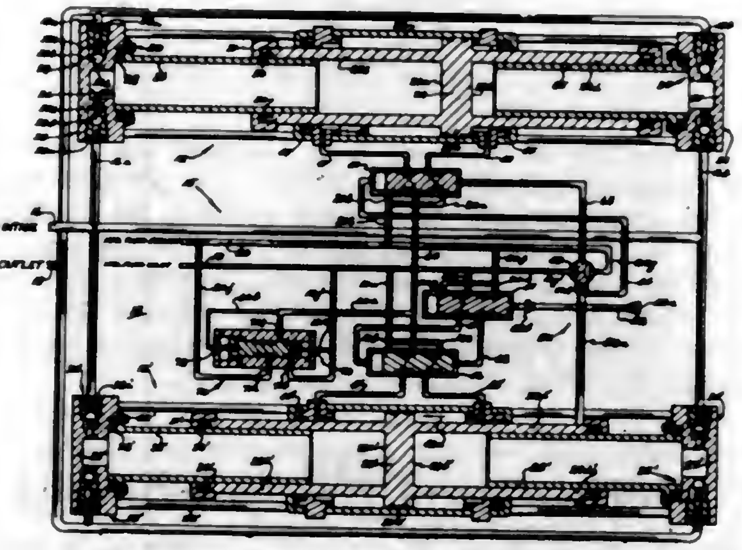
A liquid dispensing apparatus for depositing a thermosetting resin on the ends of windings of a rotor for an electrical machine. The apparatus has a pump having a rotatable member engaging a plurality of flexible tubes to move fluid to nozzles aligned with rotor windings. The pump is connected to a power transmitting means operable to reverse the drive of the pump to prevent dripping of the fluid from the nozzles after the dispensing operation.

3,386,383
POSITIVE-DISPLACEMENT PUMP FOR METERING FLUIDS
Hans C. Dreher, Dallas, Pa., assignor to General Cigar Co., Inc., New York, N.Y., a corporation of New York
Filed Nov. 9, 1966, Ser. No. 593,010
2 Claims. (Cl. 103—38)



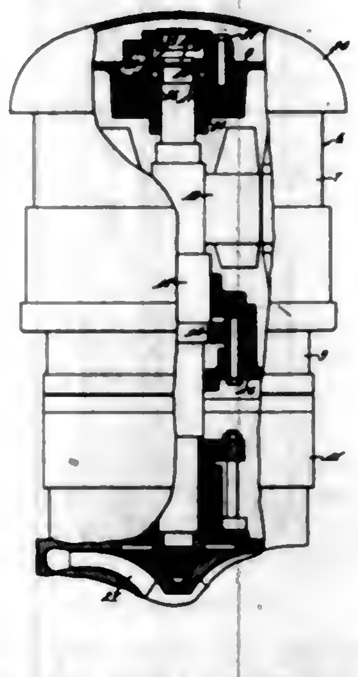
The pump of the invention comprises a main piston with a shaft extending from its compression end. A secondary ring-type piston is slidably mounted on the shaft. A compressible spring around the shaft extends from the compression end of the main piston to the secondary piston which is thereby held against a limit fixed on the free end of the shaft. Adjustable means are provided for varying the forward movement of the main piston. The difference between the movements of the main and secondary pistons controls the amount of fluid dispensed.

3,386,384
MULTIPLE POWER CONSUMING DEVICES
Ernest L. Potts, Houston, Tex., assignor to Cicero C. Brown, Houston, Tex.
Continuation-in-part of application Ser. No. 522,764, Jan. 24, 1966. This application June 27, 1966, Ser. No. 560,412
8 Claims. (Cl. 103—49)



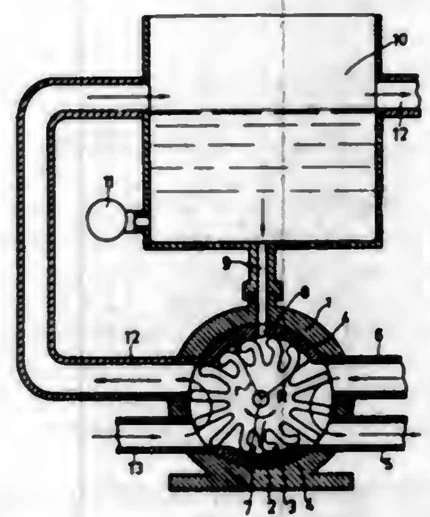
A multi-plex pumping system employing a power fluid distributing system supplying power fluid serially to the pump units and including means responsive to the relative loads on the respective units for correspondingly varying the power fluid distribution to the respective pumping units to smooth out the operation thereof.

3,386,385
PUMP ADJUSTING MECHANISM
Robert G. Bartheld and Edward F. Cooney, Cincinnati, Ohio, assignors to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed May 12, 1966, Ser. No. 549,631
2 Claims. (Cl. 103—87)



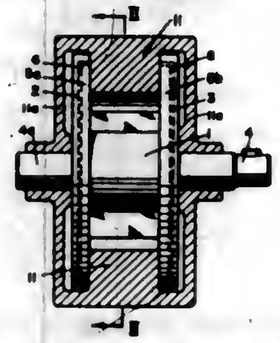
A pump-motor combination having an adjusting mechanism including spring biasing means for adjusting the axial position of the pump-motor shaft.

3,386,386
PUMP FOR SUCKING LIQUID, AIR AND SOLID PARTICLES
Sven G. Eriksson, 15 Sveavagen, Djursholm, Sweden
Filed Feb. 3, 1966, Ser. No. 524,792
Claims priority, application Sweden, Feb. 3, 1965, 1,401/65
1 Claim. (Cl. 103—117)



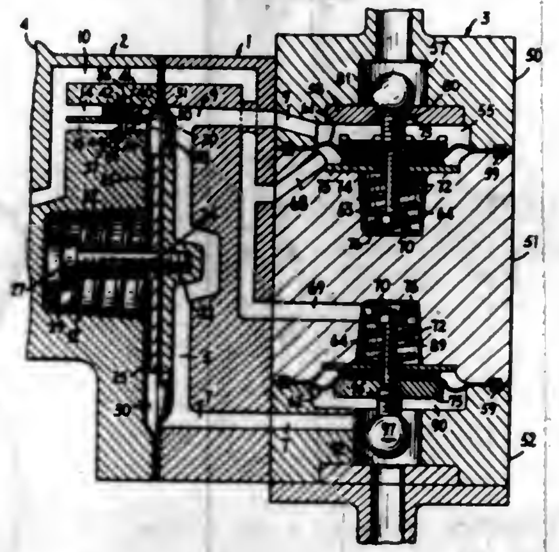
The invention relates to a pump for use, for example, by dentists, for clearing the mouth of saliva and bone splinters and the like and which remains operative even when only air is present, the said pump having a continual liquid supply to maintain it primed, under all conditions.

3,386,387
ROTARY FLUID HANDLING DEVICE
Karl Eickmann, 2420 Isshiki, Hayama-machi, Kanagawa-ken, Japan
Continuation-in-part of application Ser. No. 292,217, July 2, 1963. This application Aug. 9, 1966, Ser. No. 571,327
Claims priority, application Germany, July 6, 1962, R 23,161
10 Claims. (Cl. 103—136)



The rotor of a vane machine has a central portion and side walls of greater diameter. A slot extends through the central portion and partly into the side walls so that the vanes of a pair of vanes can be alternately fully retracted into the center portion, or fully advanced out of the same in radial direction.

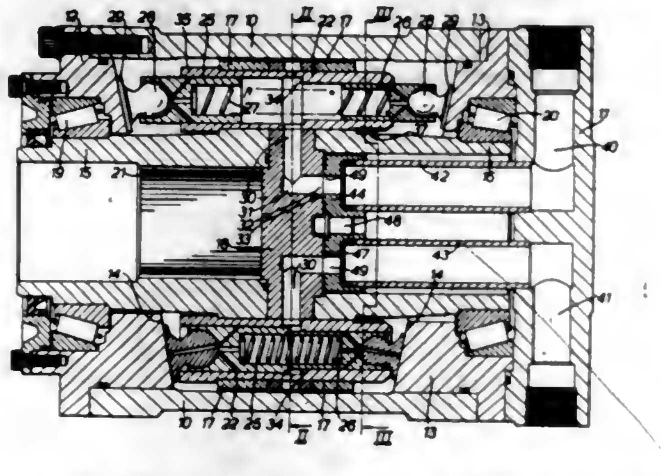
3,386,388
HYDRAULICALLY ACTUATED PUMP
David Rosenberg, 12 Francis Court, Glen Cove, N.Y. 11542
Filed June 22, 1966, Ser. No. 559,547
14 Claims. (Cl. 103—152)



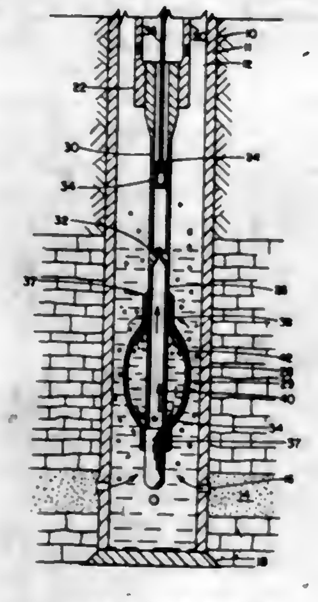
A hydraulically actuated diaphragm pump is provided having a check valve in a line from the hydraulic source to the chamber adjacent the diaphragm. A second hydraulic line connects the pump valve with the hydraulic source. The check valve creates a differential pressure between the chamber and the second hydraulic line on a stroke of the pump to maintain the sequence of movement between the diaphragm and the pump valve.

3,386,389
HYDRAULIC PUMPS OR MOTORS
Oswald H. Thoma, Cheltenham, England, assignor to Hydraulic-Drive A.G., Glarus, Switzerland, a company of Switzerland
Filed May 27, 1966, Ser. No. 553,516
6 Claims. (Cl. 103—162)

A rotary hydraulic motor having a number of double-ended rotating axial cylinders each containing pairs of separate opposed pistons cooperating with inclined cam plates at opposite ends of the machine, and valve means with axially facing surfaces for admitting and discharging hydraulic fluid from the cylinders, the two pistons of each pair being of different diameters and sliding in cylinder bore sections of different sizes so that the resultant differential pressure urges the cylinder block towards the stationary valve member.



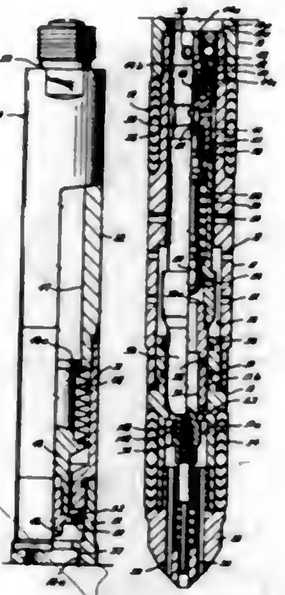
3,386,390
GAS ANCHOR
Joseph O. Fair, Casper, Wyo., assignor to Pan American Petroleum Corporation, Tulsa, Okla., a corporation of Delaware
Filed July 28, 1966, Ser. No. 568,598
4 Claims. (Cl, 103—203)



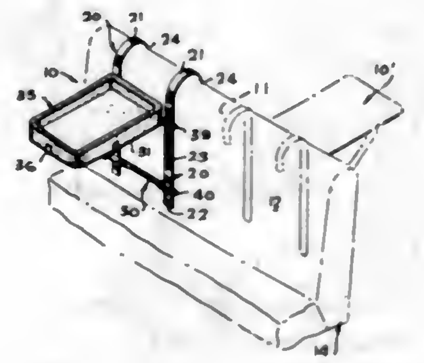
This invention concerns a gas anchor for use in an oil well. When oil can no longer be produced of its own energy, a pumping barrel and gas anchor are lowered down through the string of tubing and extend out the lower end thereof. The upper end of the working barrel of the pump is seated in a landing nipple at the lower end of the string of tubing. A collapsible sleeve surrounds a dip tube which is supported at the lower end of the pump barrel. Bow springs are provided inside the collapsible sleeve and once the sleeve and dip stick leave the lower end of the tubing, the sleeve is expanded out and together with the dip tube forms a gas anchor.

3,386,391
WELL APPARATUS AND METHOD
Henry U. Garrett, P.O. Box 35167, Houston, Tex. 77035
Filed Sept. 6, 1966, Ser. No. 577,405
15 Claims. (Cl. 103—233)

1. A gas lift system comprising,
a casing,
a tubing in the casing,
means for supplying gas to the casing at a controlled rate,
and a plurality of unloading valves at spaced intervals along the tubing;
said valves including,
a main valve member and valve seat,
means responsive to one of tubing and casing pressure for moving the valve member to open position,
means for latching the main valve member in open position in response to said main valve member being moved to open position,
means responsive to the other of tubing and casing pressure for releasing said latching means and moving said main valve member to closed position,
and at least one working valve for working the well after unloading through said unloading valves.

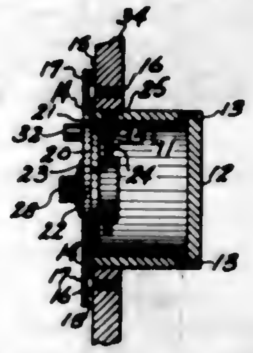


3,386,392
ADJUSTABLE TRAY APPARATUS
Raymond A. Gramm, 14429 Califa St., Van Nuys, Calif. 91401
Filed May 11, 1967, Ser. No. 637,758
16 Claims. (Cl. 108—44)



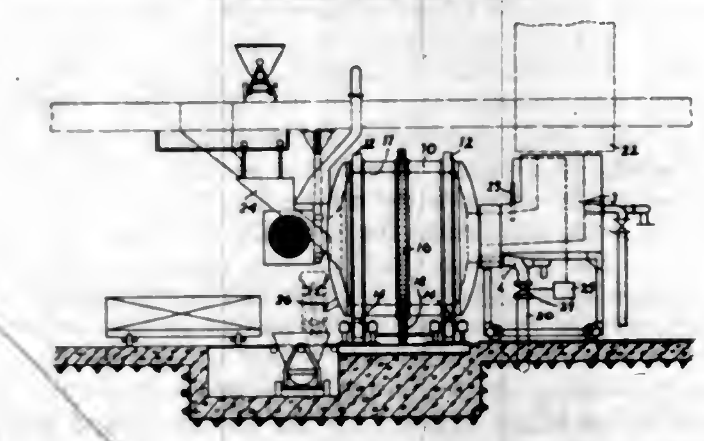
Adjustable tray apparatus for supporting a pet or articles in vertically and angularly variable positions relative to an automobile seat or the like. A parallel pair of horizontal supports are removably secured in vertically adjustably spaced engagement at their ends with a parallel pair of generally vertical support members adapted to hook over the back of a seat in either forward or rearward orientation. A tray base is pivotally removably mounted on either of the horizontal supports and is provided with a pair of slotted tracks for slidably receiving the corresponding ends of a pair of angular supports, the other ends of which are pivotally removably mounted on the other horizontal support. The tray base is provided with a removable pet cushion. The apparatus is laterally adjustable to accommodate differently contoured seats and is collapsible and disassemblable.

3,386,393
WALL DEPOSITORY
Tim L. Peterson and Lowell S. Peterson, both of 4406 Winnequah Road, Madison, Wis. 53716
Filed Apr. 26, 1966, Ser. No. 545,426
1 Claim. (Cl. 109—50)



A wall depository adapted for insertion in an opening within a wall with means being provided on said depository for securing it to the wall and further means being provided to prevent access to said securing means.

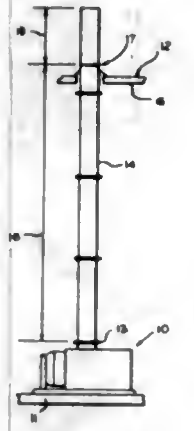
3,386,394
METHOD AND APPARATUS FOR WASTE DISPOSAL
Carl-Hermann Heise, Alfeld, Leine, Germany, assignor to Firma Alfelder Eisenwerke
Filed Sept. 28, 1966, Ser. No. 582,687
Claims priority, application Germany, Nov. 6, 1965, H 57,609
8 Claims. (Cl. 110—14)



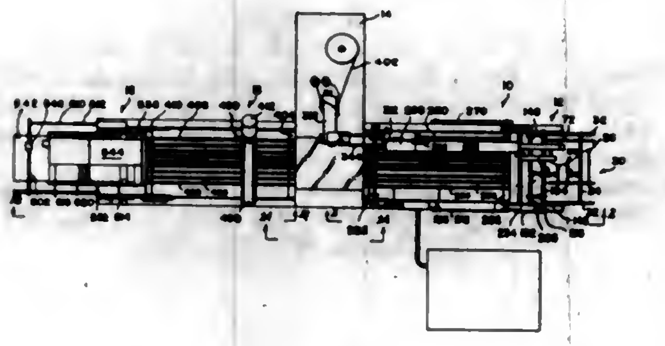
Method and apparatus for waste disposal in which waste material is introduced into one end of a short drum-like rotary furnace which contains a bath, preferably of quartz sand and soda ash, and into which furnace fuel gases are supplied at the other end while combustion gases are withdrawn also from the said one end of the furnace, and wherein the temperature of the combustion gases is monitored for controlling the supply of fuel gases to the furnace.

3,386,395
COMBUSTION NOISE ELIMINATOR
Robert T. Brady, Elmhurst, and Ozgun Kartal, Chicago, Ill., assignors to Vapor Corporation, Chicago, Ill., a corporation of Delaware
Filed Dec. 14, 1966, Ser. No. 601,734
6 Claims. (Cl. 110—184)

This invention relates in general to a combustion noise eliminator, and more particularly to a method and apparatus for eliminating combustion noise generated during the operation of a boiler or steam generator, and still more particularly to a simple and inexpensive method and apparatus for conditioning the stack of a boiler to eliminate combustion noise generated thereby.



3,386,396
COMBINED AUTOMATIC SEWING ASSEMBLY
Herbert Jacobs and Herschel Baron, Philadelphia, and Eric Winston, Melrose Park, Pa., said Baron and said Winston assignors to Jacobs Machine Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Continuation-in-part of application Ser. No. 467,911, June 29, 1965. This application June 12, 1967, Ser. No. 660,143
29 Claims. (Cl. 112—2)



A combined automatic sewing assembly having feeding means including reciprocable feeder foot means operative to contact the topmost piece of porous cloth that is stacked in a pile. The reciprocable feeder foot means separate the topmost workpiece from the remainder of the pile in a lifting action with the feeder foot means having adhesive means for engagement with the topmost workpiece in order to achieve the aforesaid lifting action. The feeder foot means also have vacuum means that are activated during the lifting action in order to assist the adhesive means in maintaining contact with the workpiece during the lifting action. In another embodiment of the invention a pin extends from the vacuum means to engage the workpiece and assists in urging the workpiece forwardly following the aforesaid lifting action in order to project the workpiece towards feed rollers. In another embodiment of the invention the adhesive means are dispensed with, such that the lifting and feeding action is achieved with the vacuum means-pin combination.

Other features may be associated with the feeding means including a sewing station, cutting means and stacking means.

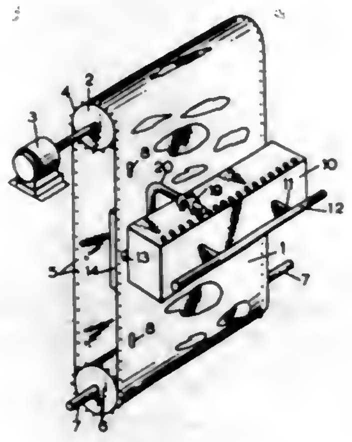
3,386,397
PATTERN CONTROL DEVICE FOR TEXTILE TUFTING MACHINES

Ronald Ellison and John Pritchard, Blackburn, England, assignors to Ellison Tufting Machinery Limited, Blackburn, England

Filed Dec. 16, 1965, Ser. No. 514,331

Claims priority, application Great Britain, Mar. 30, 1965, 13,366/65

1 Claim. (Cl. 112—79)



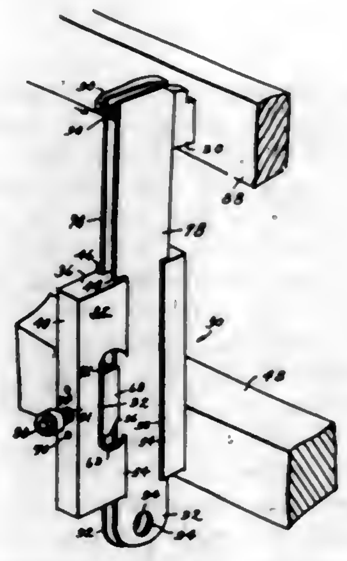
An opaque flexible endless pattern band travels on a pair of spaced rollers. A row of photo-sensitive devices is mounted in a bar arranged transversely to the band's path adjacent the band's outer face. Lamps are mounted above the respective photo-sensitive devices and the light from these is transmitted by a bent transparent bar to the pattern. The light is reflected from the pattern to the photosensitive device through a small hole in the bar.

3,386,398
TUFTING MACHINE KNIFE BLOCK

James A. Cobble, Sr., Harrison, and James A. Cobble, Jr., East Chattanooga, Tenn., assignors to Southern Machine Company, Inc., Chattanooga, Tenn., a corporation of Tennessee

Continuation of application Ser. No. 421,867, Dec. 29, 1964. This application Dec. 13, 1966, Ser. No. 601,432

11 Claims. (Cl. 83—700)



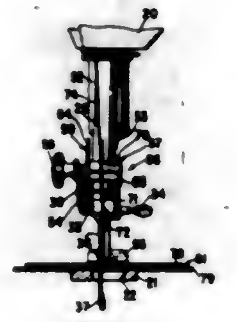
A knife block for a tufting machine comprising: an elongated channel-shaped body having a web and first and second flanges extending along opposite sides of said web for slidably receiving a tufting knife; an elongated bore extending transversely through said first flange; a slot having a larger cross section than said bore, formed through said knife block and communicating with said bore; an insert received in said slot for sliding movement therein transversely of the knife block; and an elongated operator extending through said bore, said element having an inner end portion engaging said insert so that when said elongated operator is moved transversely of the knife block along its own longitudinal axis said insert will be urged toward said web to engage the adjacent edge of a tufting knife received in said knife block.

3,386,399
SKIP STITCH ATTACHMENTS FOR ZIGZAG SEWING MACHINES

John C. Seck, Colonia, N.J., assignor to The Singer Company, New York, N.Y., a corporation of New Jersey

Filed Aug. 23, 1966, Ser. No. 574,406

10 Claims. (Cl. 112—154)



1. A skip stitch attachment for a sewing machine having a frame, a needle bar mounted in the frame, means for imparting endwise reciprocating motion to the needle bar, means for jogging the needle bar laterally, a needle having an eye and connected to the exterior end of the needle bar, needle thread extending through the eye of the needle, a needle thread loop-engaging means mounted in the frame for cooperation with the needle, means for moving the needle thread loop-engaging means in timed relation with movement of the needle to form stitches, and a work feed mechanism mounted in the frame, said skip stitch attachment comprising a clamp, means for connecting the clamp to the needle bar, a bell crank having two arms, and means for pivotally mounting the bell crank on the clamp so that one arm contacts a portion of the sewing machine to rock the bell crank during the downstroke of the needle bar in one of its lateral positions to enable the other arm to nip the needle thread thus preventing the formation of a needle thread loop which is normally engaged by the needle thread loop-engaging means to form a stitch.

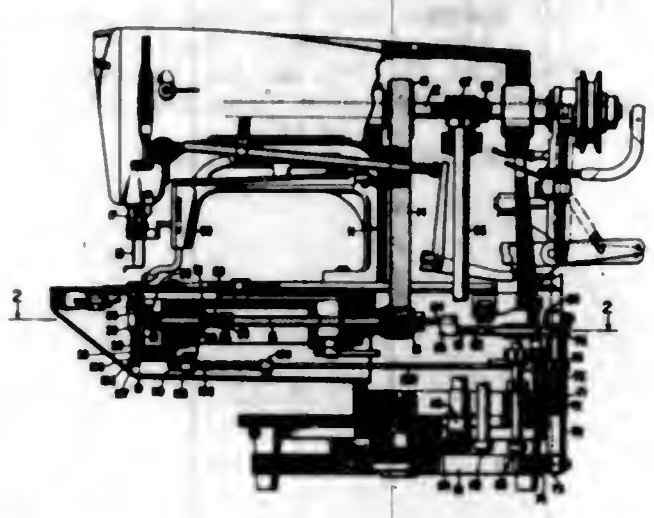
3,386,400
BOBBIN THREAD REPLENISHMENT MECHANISM FOR LOCKSTITCH SEWING MACHINES

Michael F. Ivanko, Rockaway, N.J., assignor to The Singer Company, New York, N.Y., a corporation of New Jersey

Continuation-in-part of application Ser. No. 544,952, Apr. 25, 1966. This application Oct. 16, 1967, Ser. No. 675,498

8 Claims. (Cl. 112—181)

A lockstitch sewing machine is disclosed in which the rotation restraining means for the bobbin case in a circularly moving loop taker is associated with mechanism by which either one of two discrete angular positions of the bobbin case is attained. Needle thread manipulating means on the loop taker and on the bobbin case cooperate to influence the needle thread in one angular position of bobbin case to move about the bobbin case so as to form stitches, and in the other angular position of the bobbin case to move onto the bobbin for replenishment of bobbin thread.

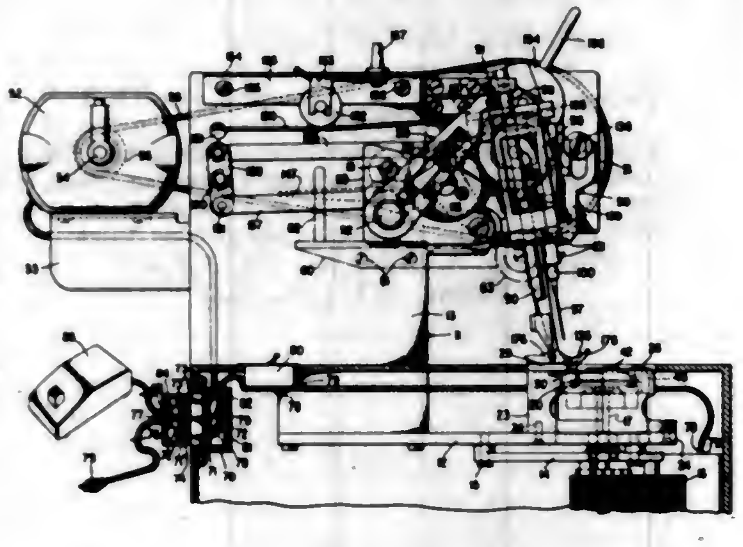


3,386,401
SEWING MACHINES

Ralph E. Johnson, Boonton, N.J., assignor to The Singer Company, New York, N.Y., a corporation of New Jersey

Filed Mar. 12, 1965, Ser. No. 439,420

14 Claims. (Cl. 112—184)



A sewing machine is disclosed in which the needle and the loop taker may be operated in an untimed relation yet cooperate in the formation of stitches. Included is a disclosure of a loop taker construction adapted specifically for the manipulation of thread in the formation of lock stitches in cooperation with an endwise reciprocatory needle to which movement may be imparted differing in period and phase from that of the loop taker.

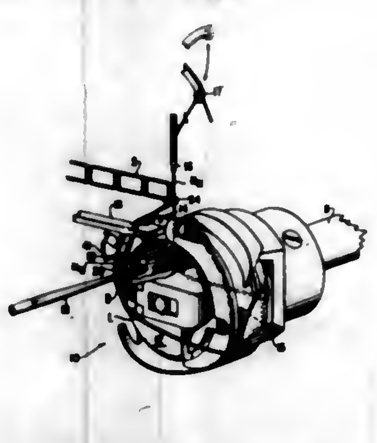
3,386,402
THREAD TRIMMING MECHANISM FOR SEWING MACHINES

Roger J. Ross, Dover, N.J., assignor to The Singer Company, New York, N.Y., a corporation of New Jersey

Filed July 5, 1966, Ser. No. 562,576

10 Claims. (Cl. 112—252)

6. In a lock stitch sewing machine having a vertically reciprocatory thread carrying needle, a needle thread take up mechanism effective to draw the needle thread taut during upstroke of the needle, a loop taker operatively connected with said needle and including a thread carrying bobbin, drive means for said needle, loop taker and take up mechanism, operator influenced means for at will interrupting said drive means and a needle positioning device effective to position said needle selectively either up or down, a trimming device for both the needle and bobbin threads comprising a thread catching element shiftably supported on said sewing machine for movement relatively to said loop taker into and out of the path of needle and bobbin threads thereon, a thread cutter shiftably supported on said sewing machine for movement relatively to said loop taker, actuating means for operating said thread trimming device and said needle positioner in concert and including operator influenced means for shifting said thread catching element into a shifted position in the path of said needle and bobbin threads on said loop taker only when said needle is positioned down by said needle positioner, detaining means for detaining said thread catching element in said shifted position, operator influenced means for operating said needle positioner to raise said needle, and means rendered effective by said operation of said needle positioner to raise said needle, to release said thread catching element detaining means and to actuate said thread cutter in seriatim.

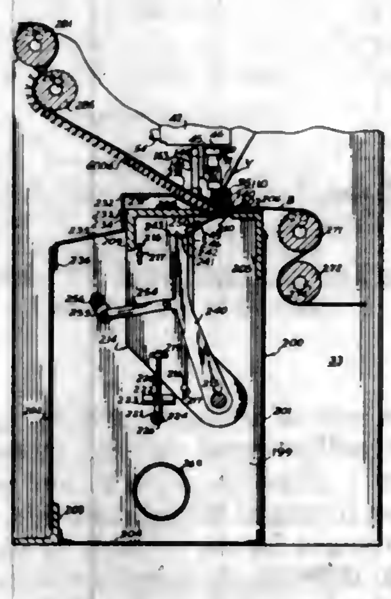


3,386,403
MULTI-PURPOSE TUFTING MACHINE AND METHOD

Joe T. Short, West Point, Ga., assignor, by mesne assignments, to Callaway Mills Company, La Grange, Ga., a corporation of Georgia

Filed Dec. 9, 1964, Ser. No. 417,165

27 Claims. (Cl. 112—266)

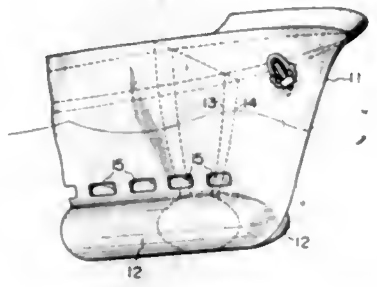


There is disclosed a tufting machine and method for forming successive loops of yarn, some of the loops being long and others being short, the loops being held in extended condition by differential fluid pressure and adjustable severing means being provided to selectively sever all of the loops, the long loops only or none of the loops as desired.

3,386,404

SHIP'S HULL ADAPTED FOR CONSIDERABLY REDUCING VERTICAL FORCES CAUSED BY WAVES

Seizo Motora, 100 Komagome Kamifujimae-cho,
Bunkyo-ku, Tokyo, Japan
Filed Aug. 22, 1966, Ser. No. 574,156
Claims priority, application Japan, Aug. 22, 1965,
40/50,915
9 Claims. (Cl. 114—56)

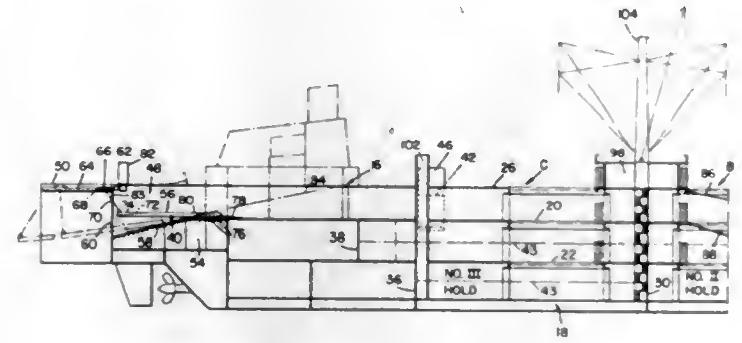


A submersible hull for supporting a super structure above the water wherein the hull is comprised of an inner and outer hull spaced from each other and secured to the upper surface of a hollow member having an oblong cross-section extending outwardly of the outer hull. The hollow member is disposed in communication with the interior of the inner hull and communication openings are provided in the outer hull below the surface of the water adjacent the hollow member to allow the water to communicate into and out of the space between said inner and outer hulls.

3,386,405

ROLL-ON, ROLL-OFF TRANSPORT VESSEL

George R. Knight, Jr., and Thomas F. Bridges, Port Washington, N.Y., assignors to John J. McMullen Associates, Inc., New York, N.Y., a corporation of New York
Filed Sept. 28, 1966, Ser. No. 582,718
4 Claims. (Cl. 114—72)

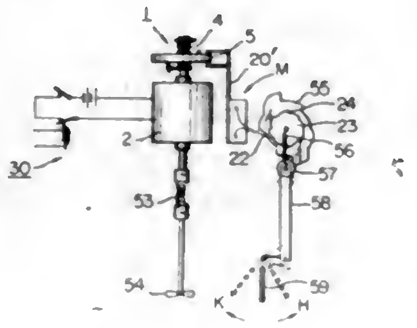


A roll-on, roll-off transport ship for quick loading and discharge of self-powered vehicles, including a hull characterized by a plurality of decks and subdivided into a cargo section having at least three holds. A movable ramp system is arranged for the center hold and enables vehicular traffic to different deck levels within the center hold. The holds are separated by liquid-tight transverse bulkheads, each having doors to permit the vehicular movement between holds. A stern ramp system provides vehicular access to the main deck and includes a retractable ramp movable between a stowed position and an operating position.

3,386,406

CONTROL APPARATUS OF AN ELECTRICALLY DRIVEN TOY

Ichiro Tsunoda, 1397 Maenuma, Iyo-cho,
Adachi-ku, Tokyo, Japan
Filed Dec. 12, 1966, Ser. No. 601,066
Claims priority, application Japan, Dec. 14, 1965,
40/76,447
8 Claims. (Cl. 114—144)

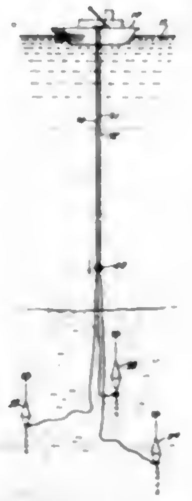


An electrically operated toy vehicle which is steered by an inertia operated mechanism including a threaded spindle driven by an electric motor, a flywheel threadedly movable on the spindle, and a linkage arrangement transmitting the axial movement of the flywheel on the spindle during acceleration or deceleration of the motor to the steering mechanism which may consist of a clutch connecting the motor to one of two drive wheels if the vehicle is a car, or of a rudder when the vehicle is a boat.

3,386,407

ANCHORS AND ANCHORING MECHANISMS

Wadsworth Walton Mount, Warren Township, Somerset County, N.J., assignor to Bossert Manufacturing Corporation, Utica, N.Y., a corporation of New York
Filed Aug. 2, 1966, Ser. No. 569,642
7 Claims. (Cl. 114—206)

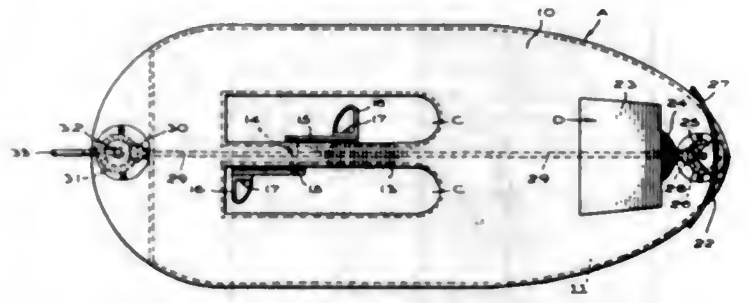


1. An anchor mechanism for use in extreme ocean depths which comprises a ship at the surface, a plurality of anchors each having an anchor rod to vertically penetrate the ocean bottom and a cable attached to the anchor at one end and to the ship at the other, said anchors being cast at widely spaced points, and a ring releasable from the ship while the upper ends of the cables remain attached thereto, said ring having openings through which the cables pass whereby the ring holds the cables near the bottom and causes any upward pull on a cable to be transmitted in a substantially horizontal direction to the anchor to which it is attached.

3,386,408

SURF RAFT

Hugo Carl Johnson, 2157 Cherrystone Drive,
San Jose, Calif. 95129
Filed Sept. 14, 1967, Ser. No. 667,749
1 Claim. (Cl. 115—26.3)

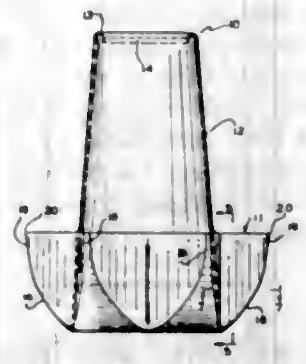


A buoyant surf raft provided with a deck having sufficient length so that an occupant may lie thereon in prone position, the raft being formed with a pair of spaced elongated openings extending vertically therethrough from the deck to the underneath surface thereof, these openings being dimensioned and located to receive the legs of the occupant. Crankarms are arranged in these openings and may be actuated by the feet of the occupant to turn a propeller shaft and thus drive the raft through the water.

3,386,409

SELF-RIGHTING TRAFFIC CONE

Robert E. Dawson, Huntingdon Valley, Pa., assignor to R. E. Dietz Company, Syracuse, N.Y., a corporation of New York
Filed May 16, 1967, Ser. No. 638,852
8 Claims. (Cl. 116—63)



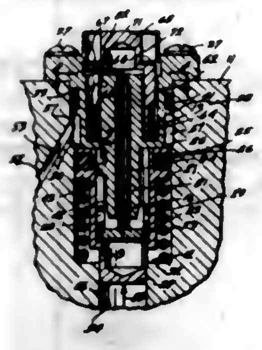
A hollow molded plastic traffic cone has a base portion weighted to give a low center of gravity to the cone. The annular bottom of the base is gradually curved outward and upward to provide rockers so the cone is self righting and is divided into six angularly spaced triangular legs to prevent rolling when the cone is knocked over. The cone has a frusto-conical body so as to be nestable and an annular top and is provided with a frusto-conical plastic extension whose base snaps into engagement with the cone top when drawn up inside the cone.

3,386,410

FLUID PRESSURE INDICATOR APPARATUS

Lloyd L. Barnes, Jr., Burbank, Calif., assignor to Bell Aerospace Corporation, a corporation of Delaware
Filed Mar. 14, 1966, Ser. No. 533,921
10 Claims. (Cl. 116—70)

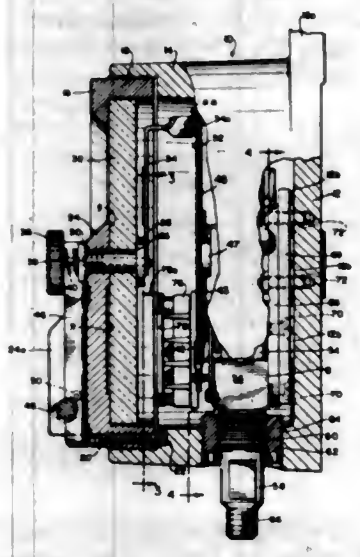
Disclosed is a hydraeric pressure indicator apparatus which includes a piston movable in response to the application of a predetermined pressure thereto. As the piston moves, a latching means is actuated through a torsion rod in such a manner as to release the indicator so that it can move and thereby provide a signal that the predetermined amount of pressure is present.



3,386,411

CONTROL DEVICE

Walter Eli Levine, Hamden, Conn., assignor to Dresser Industries, Inc., Stratford, Conn., a corporation of Delaware
Filed Feb. 5, 1965, Ser. No. 430,712
4 Claims. (Cl. 116—129)

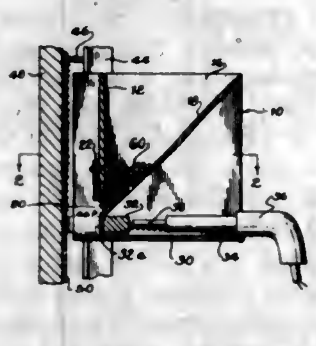


A pressure actuated switch for use in an explosion susceptible atmosphere having an external knob which is operable to internally set the switch point conditions and including locking means to prevent subsequent unauthorized resetting of the preset switch conditions.

3,386,412

STONE SETTING APPARATUS

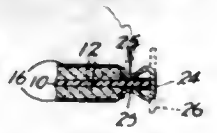
Albert R. Smith, 625 Robert St.,
Lansing, Mich. 48910
Filed July 15, 1966, Ser. No. 565,480
8 Claims. (Cl. 118—200)



Rows of small stones slide down an inclined bottom in a hopper and onto a shelf. A reciprocating plunger drives rows of stones off the shelf and into an adhesive layer on a vertical wall surface, the hopper being moved at the same time. This results in a stone-faced wall surface with the stones being substantially evenly set into the wall.

3,386,413
INKING PAD AND METHOD OF PRODUCING THE SAME

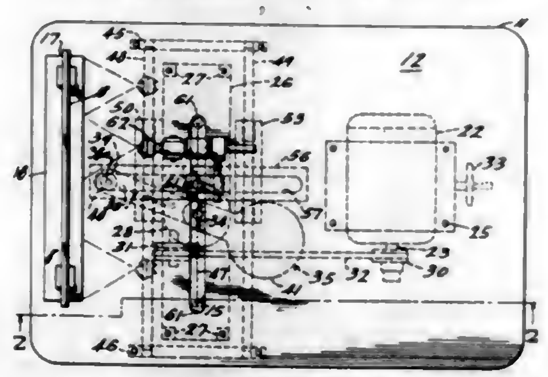
Whitney K. Munson, 192 Comanche Drive, Oceanport, N.J. 07757
Filed Feb. 24, 1966, Ser. No. 529,782
2 Claims. (Cl. 118—269)



An inking pad and method of producing the same, wherein the pad comprises a perforated plastic plate with absorbent pads on opposed surfaces thereof and, wherein, the peripheral edges of the plate provide projecting ribs with fabric facings lying over and heat sealed to the rims and fingergrips are clamped to said rims.

3,386,414
DECORATIVE PAINTING APPARATUS

Elmer L. Faber, Toledo, Ohio, assignor to Deco Tools, Inc., Toledo, Ohio, a corporation of Ohio
Filed Apr. 13, 1966, Ser. No. 542,318
10 Claims. (Cl. 118—323)

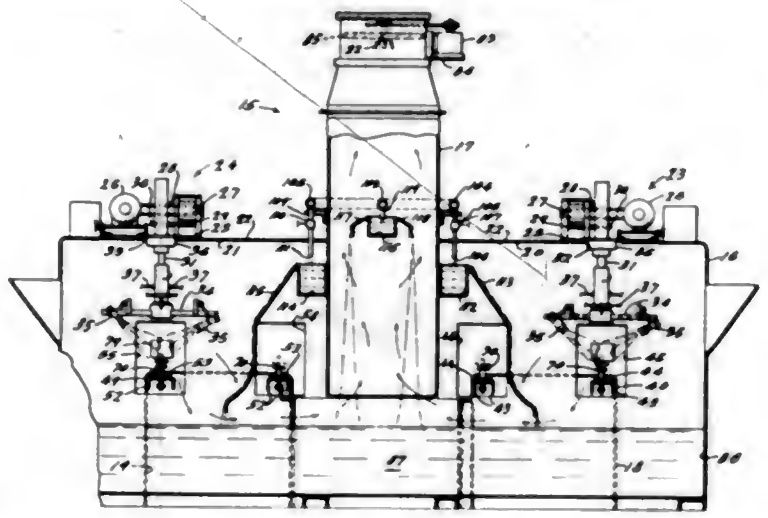


A decorative painting apparatus for reciprocating spray guns along a rectilinear path. The apparatus having a driven member which supports a spray gun post. The post mounts one or more spray guns in painting relationship to a workholder. Opposed guide members are mounted parallel to the path and slide members, which are connected to the driven member, reciprocate along the opposed guide members. A motor driven driver is connected to the driven member and reciprocates the driven member, the slide members, the post, and the spray guns. A counterweight is positioned on the driver to reduce spray gun inertia dwell at the ends of each stroke and the apparatus includes means for adjusting the length of the stroke.

3,386,415
COATING MACHINE

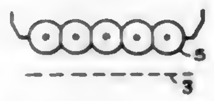
Elmer L. Faber, Toledo, Ohio, assignor to Deco Tools, Inc., Toledo, Ohio, a corporation of Ohio
Filed May 16, 1966, Ser. No. 550,232
6 Claims. (Cl. 118—323)

A painting machine having a spray housing and two opposed coating stations defined in said spray housing. First and second endless conveyors are mounted for movement along spaced horizontal paths through respective ones of the coating stations. Drive mechanisms transport the conveyors at predetermined individual speeds and each of the conveyors includes work holding means. At least one spray gun is mounted for horizontal circular movement within each of the coating stations. Exhaust means are positioned between the two opposed coating stations for removing contaminated fluid and means are located within the housing for removing at least some of the paint particles from the contaminated fluid.



3,386,416
ELECTROSTATIC FLOCKING APPARATUS

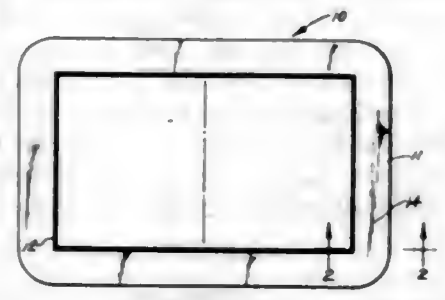
Arno Wirth, 69 Reutlingen am Heilbrunnen, Germany
Filed Nov. 17, 1965, Ser. No. 508,332
Claims priority, application Germany, Nov. 19, 1964, W 37,987
11 Claims. (Cl. 118—636)



An apparatus for electrostatic flocking onto the surface of a material whereby flocks form an adherent coating thereon. A flock supply container is provided with a permeable bottom in that a series of adjacent rollers fill a bottom opening formed therein. The rollers are each turned in a like rotational sense. Adjacent rollers engage each other elastically so that a uniform flow of flock migrates therebetween. This teaching achieves more uniform flocking than had been attainable by prior art devices. It is preferred that the rollers are brushes and that an electrical potential be maintained between the container and the article to be coated.

3,386,417
SANITARY STATION FOR PET ANIMALS

Eugene C. Machowski, 7728 Holmes St., Kansas City, Mo. 64131
Filed Aug. 19, 1966, Ser. No. 573,566
6 Claims. (Cl. 119—1)



1. A sanitary station for pet animals comprising, in combination, a rectangular plate-like station member, a means defining a rectangular enclosure within the main portion of said station member and spaced from the edge thereof, layers of liquid absorbing litter material within said enclosure, the edge portions of said station member assume inwardly inclining, angular configurations for directing the liquid from said edge portions into said enclosure, said enclosure being provided with a plurality of horizontally disposed holes adjacent the top surface of said station member for admitting said liquid therein, and leg members for supporting said edge portions and spacing them from the flat surface.

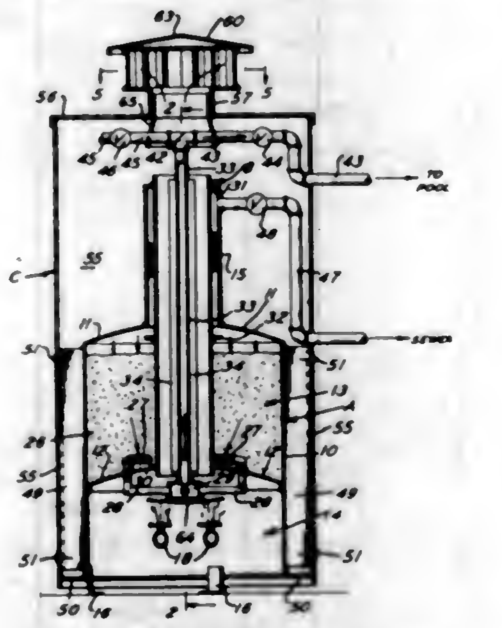
3,386,418
PROCESS FOR FEEDING DOMESTIC ANIMALS, ESPECIALLY PIGS

Heinrich Biehl, Witzhave, near Trittau, Germany
No Drawing. Filed Mar. 16, 1966, Ser. No. 534,676
Claims priority, application Germany, Oct. 23, 1965, B 84,226
5 Claims. (Cl. 119—51)

A method for the feeding of animals to increase the efficiency of the conversion of feed to usable animal weight whereby the animals' digestive processes are stimulated by regulating the duration and number of daily feedings such that the animals' appetites are not satiated. The practice of the invention permits feeds having higher nutrient value than previously employed to be utilized with advantageous results, particularly with respect to protein content.

3,386,419
LIQUID FILTERING AND HEATING APPARATUS

William A. van den Broek, Doylestown, Pa., assignor to Sylvan Pools, Inc., Doylestown, Pa., a corporation of Pennsylvania
Filed Aug. 18, 1966, Ser. No. 573,257
10 Claims. (Cl. 122—18)

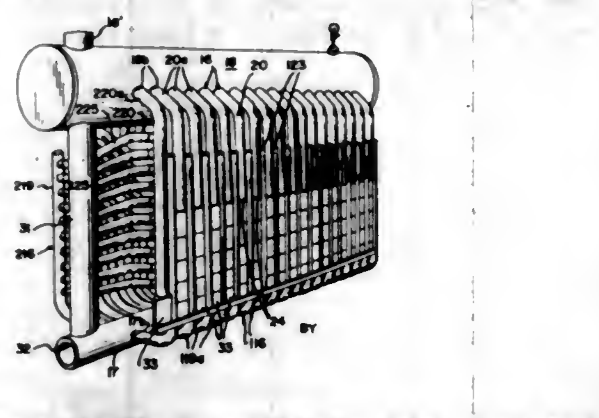


A liquid filter-heater combination, useful for swimming pools, containing in a single shell a filter, a combustion chamber and a heater. The filter includes a primary silicious filtration zone and a secondary foraminous filter. Filtered water is heated, not only as it flows through the heat exchanger but also by the heat exchanging relationships of internal surfaces, including those common to both filter and combustion chamber.

3,386,420
ATMOSPHERIC FIRED BOILER

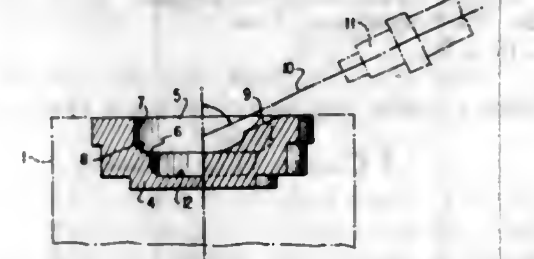
John C. Cleaver, River Hills, Gustav A. Rehm, Milwaukee, Glenn D. Craig, Menomonee Falls, Walter J. Baron, Hubertus, Frank Gething, Shorewood, and Fred G. Wiegratz, New Berlin, Wis., assignors to Cleaver-Brooks Company, a corporation of Wisconsin
Filed May 19, 1966, Ser. No. 551,361
12 Claims. (Cl. 122—235)

An atmospheric fired boiler including a cold water inlet drum and a hot water-steam outlet drum, with a plurality of heat exchange panels extending between the cold water inlet drum and the hot water-steam outlet drum. Each panel includes a plurality of vertically spaced connecting members extending between an inlet header that communicates with the cold water inlet drum and an outlet header that communicates with the hot water-seam outlet drum. Each connecting member includes generally horizontally disposed outer end portions, and an upwardly inclined intermediate portion.



3,386,421
AIR COMPRESSING INJECTION-TYPE INTERNAL COMBUSTION ENGINE

Heinrich Hoffmann, Stuttgart-Gerokruhe, and Werner Traub, Rommelshausen, Germany, assignors to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany
Filed Mar. 17, 1966, Ser. No. 535,243
Claims priority, application Germany, Mar. 20, 1965, D 46,858
5 Claims. (Cl. 123—32)

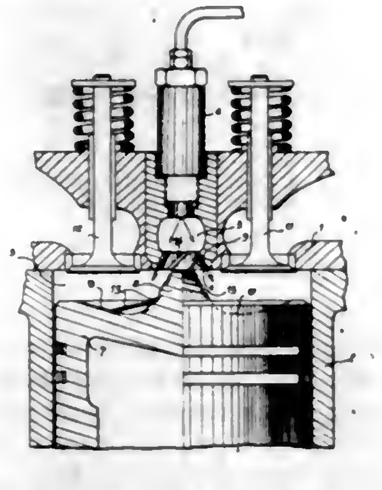


An air compressing, injection-type internal combustion engine having a swirling inflow of the combustion air into a substantially axially symmetrical combustion space arranged principally within an insert of the piston, whose lateral wall is provided with an enlargement extending outwardly forming an annular radial shoulder, with the fuel being injected into the area of the enlargement against the lateral wall by means of a fixed nozzle approximately in the flow direction of the air in a substantially flat or shallow manner.

3,386,422
COMPRESSION-IGNITION ENGINE

Pierre Eyzat, Vanves, France, assignor to Institut Français du Pétrole, des Carburants et Lubrifiants, Rueil-Malmaison, Hauts-de-Seine, France
Filed Nov. 21, 1966, Ser. No. 595,749
Claims priority, application France, Nov. 23, 1965, 39,509/65
11 Claims. (Cl. 123—32)

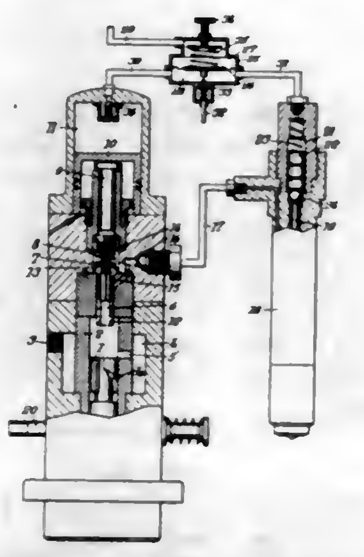
Disclosed herein is a compression-ignition motor, or engine, which is capable of producing improved ignition for any fuel charge level. The motor includes a principal combustion chamber formed between the cylinder head and the piston and communicating with a pre-chamber through the intermediary of a communicating passage, a fuel injector being disposed with its outlet in the pre-chamber and being arranged for directing a conical sheet of atomized fuel toward the communicating passage, said piston having a projection on its end face, arranged to enter said communicating passage at the end of the compression stroke. Improved operation is obtained by causing the wall of said passage to substantially conform to the outer lateral surface of such conical sheet and the wall of said projection to the inner lateral surface thereof when said piston is in the vicinity of its top dead center position and by causing the volume defined by the space enclosed by the principal combustion chamber to be equal to at least about 70% of the total combustion volume defined by the space enclosed by the principal chamber and the pre-chamber when said piston is in its top dead center position.



3,386,423

FUEL INJECTION SYSTEMS OF THE ACCUMULATION TYPE FOR FREE PISTON AUTOGENERATORS

Emile Vallin, Lyon, France, assignor to Societe d'Etudes et de Participations, Eau, Gaz, Electricite, Energie, S.A. (S.E.P.)
Filed Dec. 12, 1966, Ser. No. 601,032
Claims priority, application France, Dec. 14, 1965, 42,249
9 Claims. (Cl. 123—46)

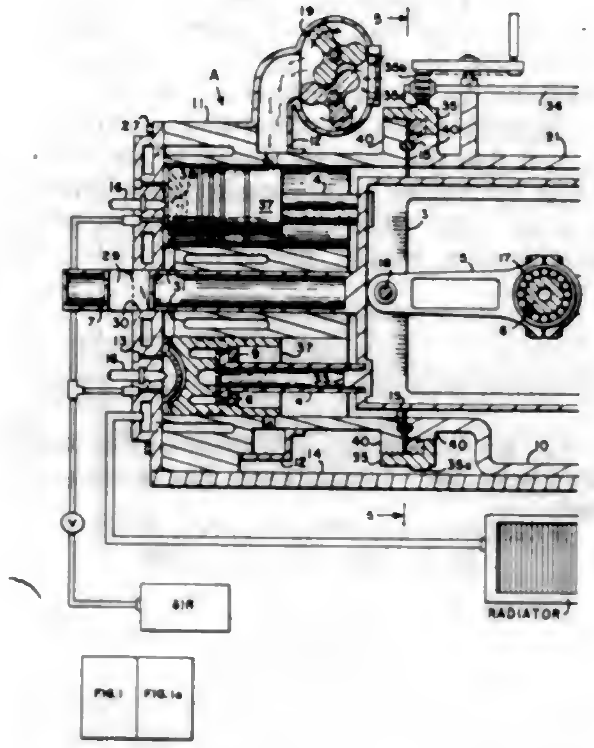


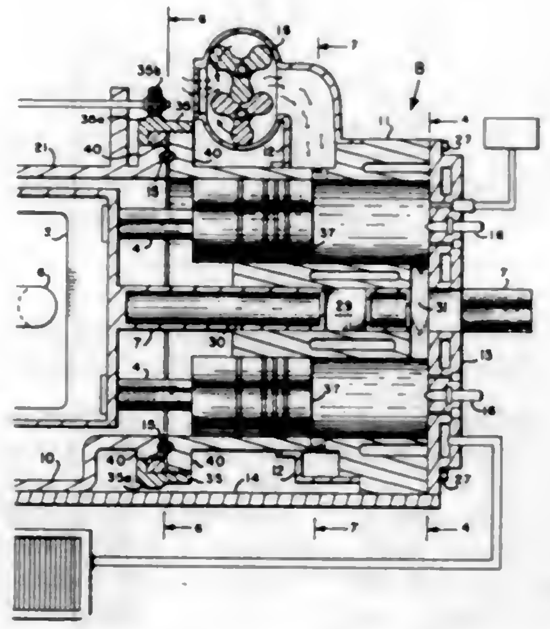
Fuel injecting system of the accumulation type for free piston autogenerators in which an injection piston-pump, operative by the pistons of the autogenerator, delivers fuel to an accumulator chamber from where it is then delivered under pressure to the autogenerator at the end of the delivery stroke of said pump. The accumulator chamber coacts with a piston-cylinder system whose piston is subjected to a pneumatic pressure dependent upon the load on the autogenerator to control the pressure in said chamber, thus the pressure and, consequently, the flow of the fuel injected in the autogenerator, whereby the amount of fuel injected during the practically constant ignition delay separating the beginning of the injection and the auto-ignition of the fuel is less when the autogenerator works under a small load than when it operates under a heavy load.

3,386,424

INTERNAL COMBUSTION ENGINES

Ralph Appeman, Box 994, San Luis Obispo, Calif. 93401
Continuation-in-part of application Ser. No. 491,510, Sept. 27, 1965. This application Dec. 22, 1966, Ser. No. 604,074
6 Claims. (Cl. 123—48)



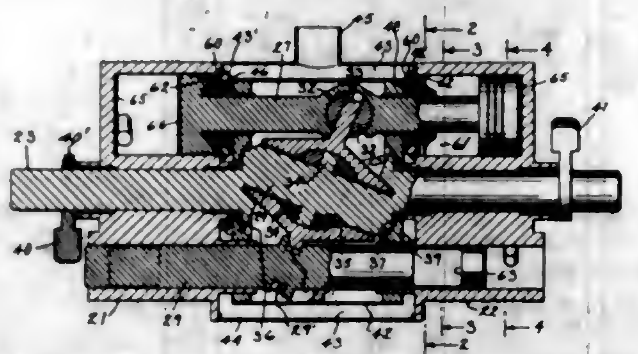


An internal combustion engine with two horizontally opposed cylinder blocks, each of which is provided with at least two power cylinders, and an additional cylinder positioned between the two power cylinders. The pistons in the power cylinders are provided with piston rods rigidly connected to spaced points on opposite sides of a power frame. Sleeve pistons rigidly connected to opposite sides of the power frame between the piston rods are slidable in the additional cylinders. The axis of the sleeve pistons corresponds to the axis of symmetry of the power frame. The volumes of the compression chambers of the cylinders may be increased or decreased so that the temperature of the compressed fuel may be controlled and operating efficiency of the engine increased.

3,386,425

INTERNAL COMBUSTION ENGINES

Arthur L. Morsell III, 2020 N. Beverly Glen Blvd., Los Angeles, Calif. 90024
Filed July 11, 1966, Ser. No. 564,217
14 Claims. (Cl. 123—58)

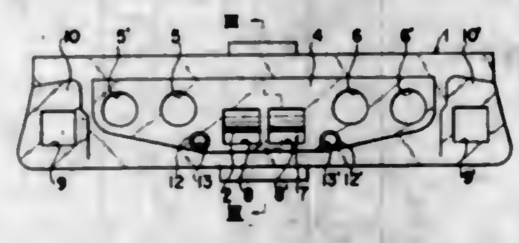


An internal combustion engine having a rotatable output shaft and having a plurality of sets of opposed cylinders and pistons in circular formation around the output shaft, a movable valve rod for each set having means for transferring a compressed charge from a cylinder of one set to a cylinder of another set for expansion in the latter, and a wobble plate drive for the output shaft.

3,386,426

FUEL HEATING DEVICE FOR INTERNAL COMBUSTION ENGINES

Shigeichi Kamijo, Tokyo, Japan, assignor to Takayuki Takahashi and Shigeichi Kamijo, Tokyo, Japan
Filed May 4, 1966, Ser. No. 547,548
1 Claim. (Cl. 123—119)



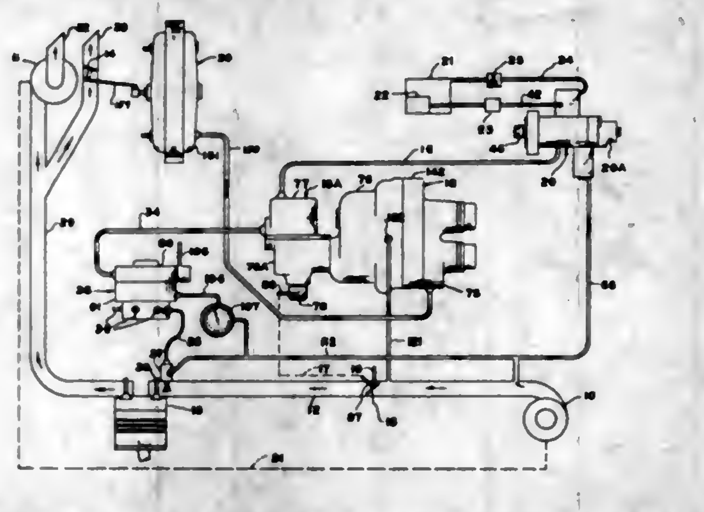
A preheater for fuel fed to an internal combustion engine wherein the heat is obtained from exhaust gas, including a spring biased valve closed during low speed and open during high speed.

3,386,427

FUEL SYSTEMS

Robert J. Powell, deceased, late of Muskegon, Mich., by Ruth B. Powell, administratrix, Muskegon, Mich., and James E. Champion, Muskegon, Mich., assignors to Continental Motors Corporation, Muskegon, Mich., a corporation of Virginia
Original application Apr. 11, 1966, Ser. No. 541,650, now Patent No. 3,365,878, dated Jan. 30, 1968. Divided and this application Mar. 31, 1967, Ser. No. 627,562
10 Claims. (Cl. 123—119)

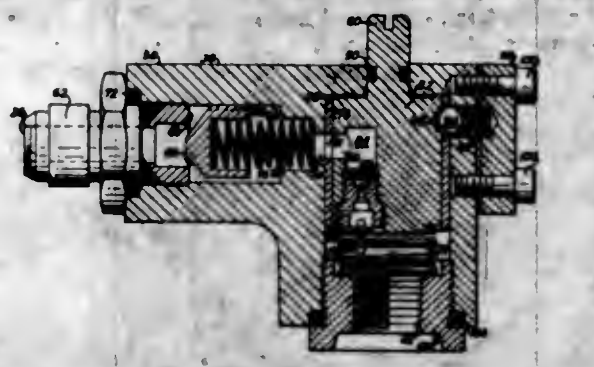
A system for metering the fuel delivered to a turbocharged engine including an engine driven fuel pump, a controller for regulating the pressure of the fuel and for bypassing fuel and which functions in accordance with supercharger pressure upstream of the throttle, a control for varying fuel delivery from the controller relative to throttle position, a manual control for selectively varying fuel delivery from the throttle control to provide for economy cruise and idle cut-off and a device for controlling turbocharger speed which is responsive to discharge pressure of the throttle with an atmospheric pressure controlled override at the above critical altitude.



3,386,428

ENGINE FUEL SUPPLY SYSTEM

Martin W. Slabey, Dearborn, and Tao-Yuan Wu, Ann Arbor, Mich., assignors to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Apr. 20, 1966, Ser. No. 543,898
11 Claims. (Cl. 123—139)



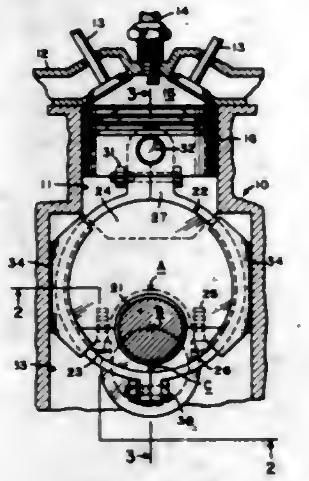
A bypass valve is used in the fuel supply system for a fuel injection engine to divide bypass fuel flow into primary and secondary channels. A plurality of orifices are movable individually into the primary channel to adapt the fuel supply system to different types of fuel or different types of general engine operation. The secondary channel contains a valve linked to the throttle blade to open when the throttle blade closes, thereby permitting extra fuel bypass during engine deceleration. A pressure responsive valve is located in the secondary channel to prevent flow through the secondary channel at low speeds so high injection pressures are available for acceleration. In addition, a valve for stopping all flow through the bypass system, which is desirable for starting, is included in the bypass valve housing.

3,386,429

INTERNAL COMBUSTION ENGINE

Earl M. Trammell, Jr., Ladue, Mo.
(Box 435, St. Louis, Mo. 63166)
Filed July 11, 1966, Ser. No. 564,195
8 Claims. (Cl. 123—197)

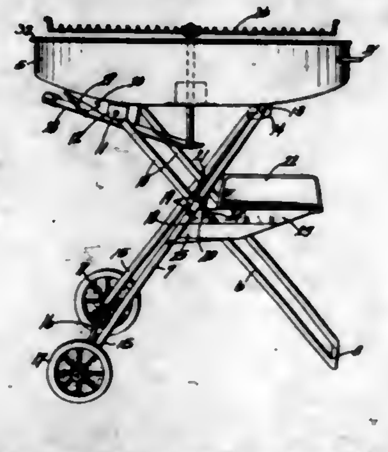
A crankshaft assembly in an internal combustion engine that permits a substantial reduction in conventional connecting rod lengths for piston-operating engines. The assembly has a connector bearing oscillatively mounted to a crankarm bearing so that the center axes of the connector bearing and crankarm bearing are eccentric, and so that the distance between the center axes of the connector bearing and crankarm bearing determines the length of a comparable effective, conventional, connecting rod. To provide this advantageous result, the distance between the center axes of the connector bearing and crankarm bearing is greater than the distance between the center axes of the crankarm bearing and the crankshaft. Furthermore, the center axis of the connector bearing is located between the center axis of the crankarm bearing and the top of the piston at all times during rotation of the crankshaft.



3,386,430
PORTABLE FOLDABLE OUTDOOR GRILL

Robert S. Linstead, Rockford, Ill., assignor to Structo Division King-Seeley Thermos Co., Freeport, Ill., a corporation of Michigan

Filed Mar. 29, 1966, Ser. No. 538,405
9 Claims. (Cl. 126—25)

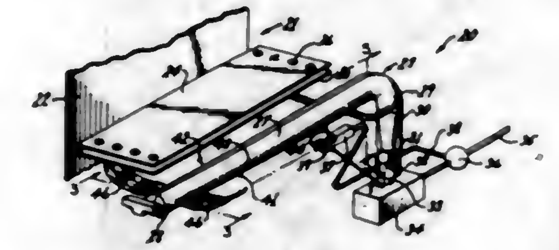


1. A foldable portable grill comprising a brazier, and a foldable X-frame for support thereof in its horizontal operative position, said X-frame comprising two generally U-shaped legs, the first of which has the upper ends of the arms thereof pivotally connected to the brazier on one side of its center while the substantially horizontal cross-portion of the U at the lower end of this leg rests on the ground or floor, the second leg being of inverted U-form pivotally connected intermediate the ends of the arms thereof to the respective arms of the first leg intermediate the ends thereof, the lower ends of the arms of the second leg carrying rollers to rest on the ground or floor, while the substantially horizontal cross-portion of this U at the upper end is detachably engaged in a substantially vertical hook provided on the brazier on the other side of its center and facing the pivotal connections of the first leg with the brazier, the X-frame upon disconnection of said hook from the cross-portion of said second leg being foldable to substantially flat form into compact substantially parallel relation to said brazier so that the first named cross-portion serves as a handle for rolling the folded grill while the hook is detachably engaged over a substantially horizontal projection provided on one of said legs.

3,386,431
BURNER CONSTRUCTION AND METHOD AND APPARATUS FOR MAKING THE SAME AND THE LIKE

Charles David Branson, Greensburg, Pa., assignor to Robertshaw Controls Company, Richmond, Va., a corporation of Delaware

Filed Aug. 9, 1966, Ser. No. 571,316
14 Claims. (Cl. 126—39)

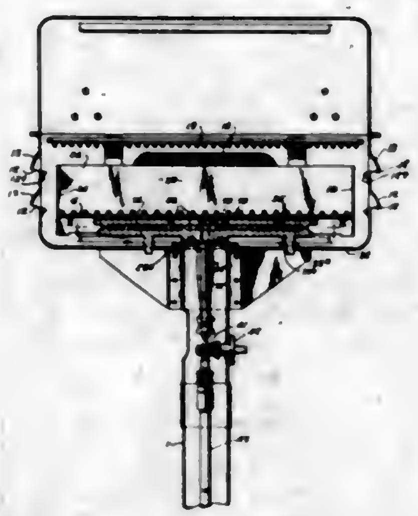


This disclosure relates to a burner construction wherein the burner has an interior chamber defined by wall means so that such chamber can receive a flow of fuel and pass out of port means formed in the wall means to be burned for a heating purpose or the like, at least one pair of the port means each having a tab means provided with a free end projecting into the chamber from the interior surface of the wall means and being provided with another end attached to the wall means on the side of its respective port that is disposed adjacent to a like side of the other port that forms the respective pair of ports so that the fuel is adapted to flow from the chamber in two streams respectively out of the pair of ports and impinge against each other to form a substantially common stream that is angularly disposed relative to the wall means.

3,386,432
BARBEQUE GRILL

Roy W. Hansen, 221 Yorktown, Dallas, Tex. 75208

Filed June 22, 1966, Ser. No. 559,524
12 Claims. (126—41)

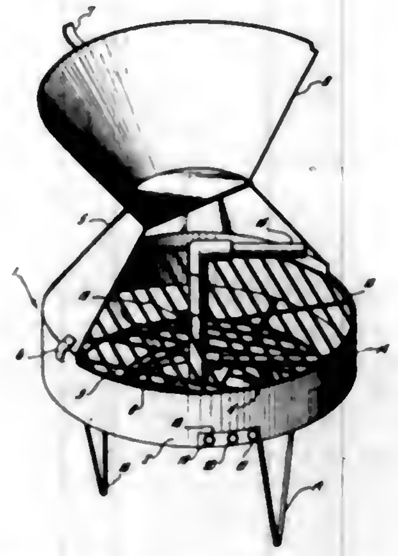


A gas fired barbeque grill which includes housing having a bottom portion with a burner and refractory body supporting grate disposed in the lower portion and a cooking grid is provided thereabove. A hinged cover is provided above the grid. An annular baffle is provided in the lower portion which extends about and above the burner. A plurality of circulation ports are provided through the sidewall of the lower portion of the housing. The baffle is spaced from the sidewalls and the upper edges extend above the ports so that combustion gases exit through the ports and are shielded from the burner by the grate so that carbon dioxide in the combustion gases does not contact and extinguish the fire. A compartmented burner is provided so that fuel gas can be selectively supplied to the compartments in order to regulate the heat and conserve gas. One side of the grid is adjustable in elevation so that meat juices may drain to one side. The lower wall of the bottom portion of the housing is slanted toward the center and a drainout trough is provided about the burner with a drainout hole therein.

3,386,433
DEVICE FOR COOKING FOOD

Jack M. Copeland, 803 Calabria, and Donald F. Adams, 228 Catherine Park Drive, both of Glendora, Calif. 91740

Filed July 18, 1966, Ser. No. 566,158
19 Claims. (Cl. 126—41)

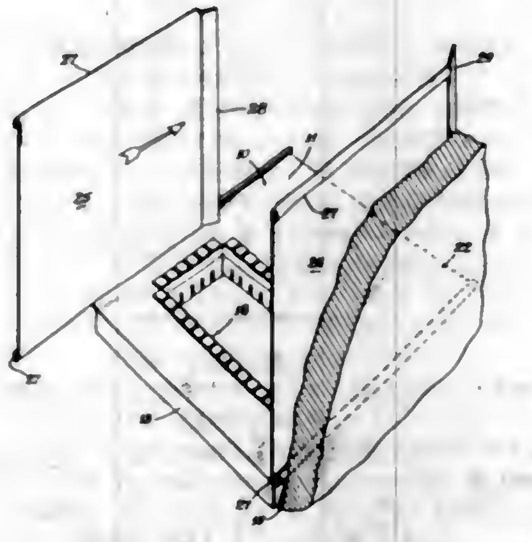


1. In a device for cooking food, the combination comprising: means for fixedly holding food to be cooked; means located in proximity to the holding means for producing heat to cook food; and means for completely and continuously rotating the heat producing means in a single direction such that heat is transmitted uniformly about the holding means.

3,386,434
METHOD OF AND APPARATUS FOR INSTALLING A FURNACE

Anthony M. Castello, Summit, N.J., and Robert R. Cooper, Wichita, Kans., assignors to The Coleman Company, Inc., Wichita, Kans., a corporation of Kansas

Filed Mar. 30, 1967, Ser. No. 627,023
10 Claims. (Cl. 126—114)

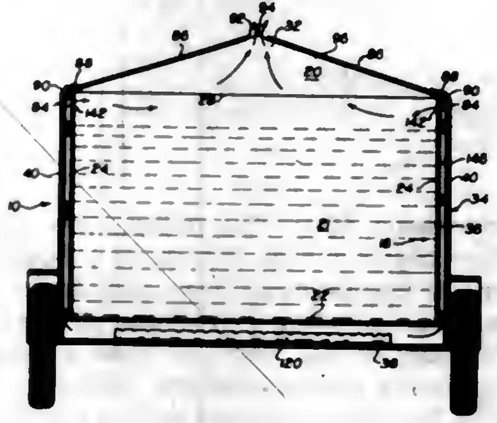


Method and apparatus for installing an outside wall, flush furnace in a trailer or the like, wherein the furnace receptacle is only slightly larger than the furnace itself. A coupling thimble is fitted into a knockout on a bottom plate of a duct boot and secured thereto by bendable tabs. The bottom plate of the duct boot is flat to form a metal-to-metal seal with the furnace under its weight. The thimble is attached to existing ductwork thereby securing the boot bottom plate to the receptacle. The sides and top of the duct boot are then assembled by slipping them into sliding lock seams. The rear ends of the top and sides of the duct boot are inclined inwardly to form a seal with the furnace when installed.

3,386,435
VEHICULAR ENCLOSURE FOR MAINTAINING MATERIAL THEREIN AT AN ELEVATED TEMPERATURE

Anton H. Heller, Levittown, N.Y., assignor to United Suffolk Corp., Hauppauge, N.Y., a corporation of New York

Filed Aug. 1, 1966, Ser. No. 569,423
10 Claims. (Cl. 126—343.5)

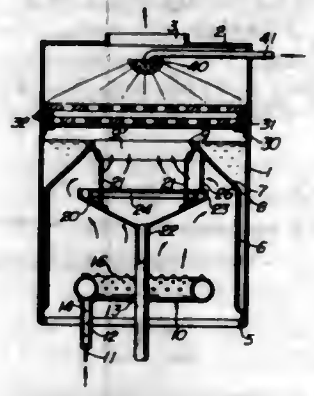


A vehicular enclosure having an interior space for maintaining material therein at an elevated temperature. The enclosure includes means providing heated air to an air space surrounding the interior so that the material is elevated in temperature and a flow of air is created over the material and constantly exhausted therefrom to the surrounding atmosphere.

3,386,436
WATER HEATERS

Kingo Miyahara, 7—4 Yagumo, 3-chome, Meguro-ku, Tokyo, Japan

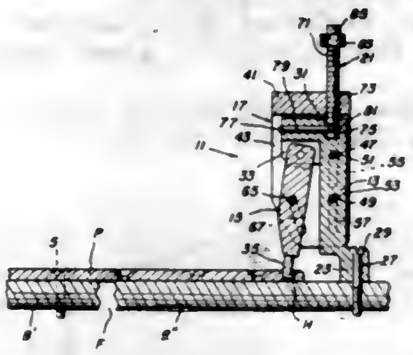
Filed Oct. 27, 1966, Ser. No. 589,872
Claims priority, application Japan, Oct. 28, 1965, 40/87,667; Nov. 5, 1965, 40/89,672; May 6, 1966, 41/28,600; June 22, 1966, 41/58,913
8 Claims. (Cl. 126—359)



A water heater including a casing having a water sprinkler at its top end, a plurality of stacked horizontal grate-like heat exchanging elements disposed below the sprinkler, a protective inner wall defining a water chamber, and a burner covering means wherein the water from the sprinkler passes through the heat exchanging elements and falls into the water chamber and the burner covering means and hot gasses from the burner ascend from the bottom to the top of the casing and heat the descending water via the heat exchanging elements, the inner wall, the burner covering means and by direct contact.

3,386,437
COMPRESSION DEVICE FOR USE WITH A BONE FRACTURE PLATE

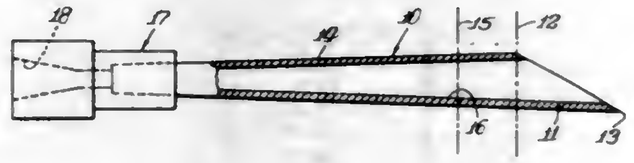
Harry T. Treace, Germantown, Tenn., assignor to Richard Manufacturing Company, Memphis, Tenn., a corporation of Tennessee
Filed Jan. 14, 1966, Ser. No. 520,610
7 Claims. (Cl. 128—92)



1. A compression device for pulling two pieces of a fractured bone together with the use of a bone plate attached to one of the pieces of bone, said device comprising a first member including a distal end adapted to be attached to the other of said pieces of bone, a movable second member having a distal end and including means at said distal end for connecting said second member to said bone plate, a movable actuating piece, means slidably interconnecting said movable actuating piece respectively with said first member and said second member for movement of said movable actuating piece in a direction substantially perpendicular to the bone plate and to the bone to which said device is adapted to be attached between retracted and extended positions, said interconnecting means including means for relatively moving said distal ends of said first and second members towards one another responsive to movement of said movable actuating piece towards one of said positions and for moving said distal ends of said first and second members away from one another responsive to movement of said movable actuating piece towards the other of said positions, and means for moving said movable actuating piece between said extended and retracted positions.

3,386,438
TAPERED NEEDLE

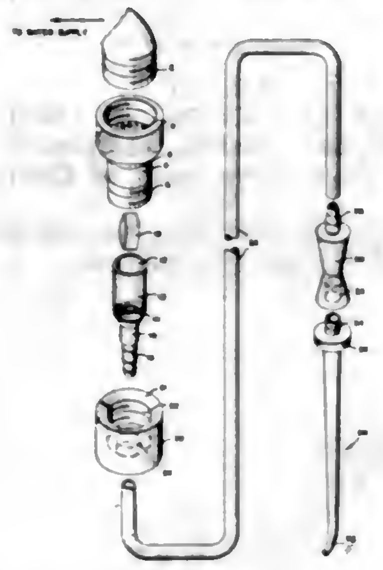
Peter A. Stevens, Middlebury, Conn., assignor to Roehr Products Company, Inc., a corporation of Delaware
Filed July 7, 1965, Ser. No. 470,113
10 Claims. (Cl. 128—221)



A cannula for cutaneous penetration having a sharp tip for cutting the skin. The shank of the cannula rearwardly of the tip decreases in diameter to provide a minimal friction penetration thereof through the skin by virtue of the enlarged cut made in the skin by the tip which has the maximum cross-sectional area.

3,386,439
DENTAL IRRIGATOR

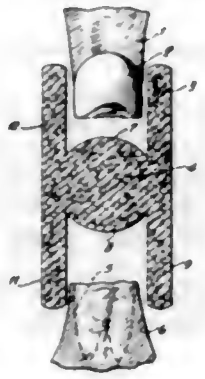
Thomas P. Harper, Alexandria, Va.
(7512 Murillo St., Springfield, Va. 22151)
Filed Oct. 19, 1965, Ser. No. 498,060
3 Claims. (Cl. 128—229)



A dental irrigator including an adapter for attaching one thereof to a standard faucet, a liquid treatment chamber adjacent to said adapter and maintained in place by a removable cap. An interconnecting passage in the treatment chamber connects the outlet of the adapter to hose which terminates in a nozzle. A screen is also provided in the treatment chamber so that only the dissolved portion of a pellet may pass therethrough.

3,386,440
DENTAL PAD

Milton J. Cohen, 711 Connecticut Ave., Chevy Chase, Md. 20015
Filed Oct. 19, 1965, Ser. No. 497,887
3 Claims. (Cl. 128—268)

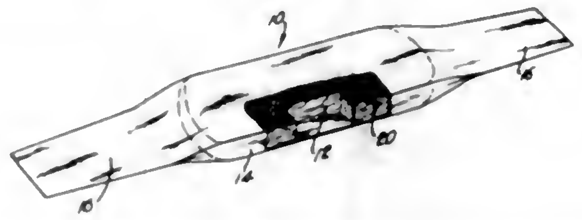


This disclosure relates to a compressible and flexible dental pad of H shape configuration with the cross piece of the H being adapted to overlay either the open socket created by a freshly extracted tooth or a tooth in pain and the wings of the H adapted to straddle the gums so as to hold the pad in place. The pad may also be impregnated or otherwise contain a drug to either control and stop bleeding or to alleviate pain.

3,386,441
CATAMENIAL PAD WITH AN ENZYME THEREON

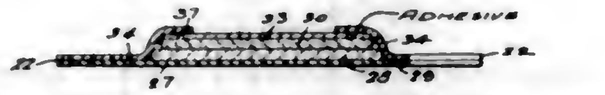
Leon J. De Merre, Highland Park, N.J., assignor to Johnson & Johnson, a corporation of New Jersey
Filed Feb. 28, 1966, Ser. No. 530,648
6 Claims. (Cl. 128—284)

1. An absorbent catamenial pad comprising a relatively thick absorbent core of fibrous material and a liquid pervious fibrous cover around said core, said pad containing within the fibrous structure on at least the portion of the surface area thereof first to intercept menstrual fluids in use, an enzyme having proteolytic, mucolytic or amylolytic activity in an amount ranging from about 0.3 mg./cm.^{2} to about 2.0 mg./cm.^{2}.



3,386,442
DISPOSABLE DIAPER

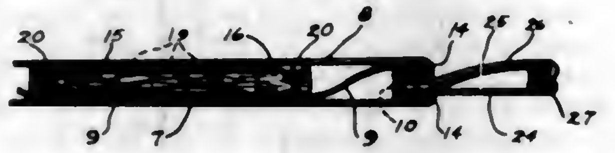
Reinhardt Sabee, 728 S. Summit St., Appleton, Wis. 54911
Filed Mar. 29, 1965, Ser. No. 443,298
15 Claims. (Cl. 128—287)



A disposable diaper made from stock of generally rectangular over-all outline has its intermediate portion of materially less width than end portions of the diaper. A moisture absorbent filler is centered on an impermeable backing and is anchored by a moisture permeable facing sheet which is fastened to the moistureproof backing beyond the filler. Side strips connected with the backing sheet beyond the filler are also connected with the facing sheet over the filler, thereby sealing and strengthening the side margins.

3,386,443
PROTECTIVE GARMENT

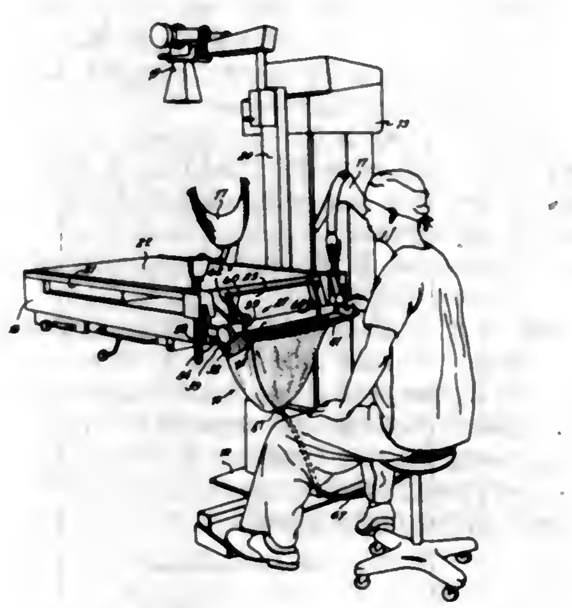
Eugene Goldstein, Kansas City, Mo., assignor to H. G. Enterprises, a copartnership
Filed Dec. 7, 1965, Ser. No. 512,171
8 Claims. (Cl. 128—287)

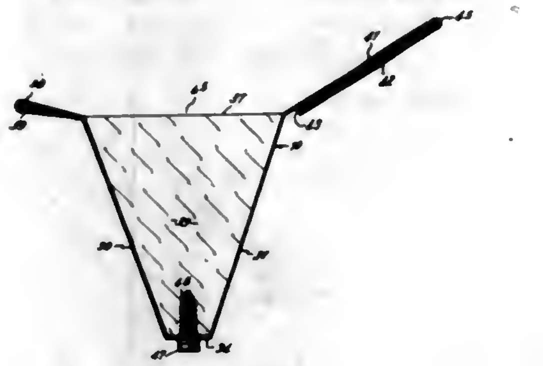


1. A protective garment comprising an elongated body portion having wide end portions and having concavely curved longitudinal side edges to form a gradually narrowing portion extending between said wide end portions having its minimum width midway of the length of said body portion, said body portion comprising a surface ply of moisture repellent material on one face thereof, a surface ply of moisture conducting material on the other face thereof and an intermediate ply of moisture absorbent material, stitching securing said plies together adjacent the marginal edges of said body portion, means on said wide ends cooperating to secure said garment in body encircling position with said narrowing portion positioned between the legs of the wearer, an absorbent pad extending through the major portion of the length of said narrowing portion mounted within said body portion, and a pair of side flaps each extending along one of the curved side edges of said body portion at the mid-portion of said narrowing portion thereof, said side flaps having a surface ply of moisture repellent material on one face thereof and a surface ply of moisture conducting material on the other face thereof.

3,386,444
SURGICAL DRAIN BAG AND SUPPORT THEREFOR

Orlestus R. Brenner and George L. Reser, Cincinnati, Ohio, assignors to Ritter Pfaudler Corporation, Rochester, N.Y., a corporation of New York
Continuation-in-part of application Ser. No. 311,741, Sept. 26, 1963. This application Nov. 7, 1966, Ser. No. 600,332
9 Claims. (Cl. 128—292)



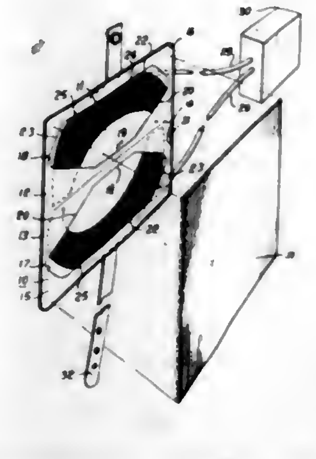


1. In combination, a surgical drain bag and support means therefor,
said drain bag being formed of flexible, water impervious sheet material and having front, rear, and side walls, said bag being closed at the bottom and open at the top thereof,
said sheet material extending contiguously above the front wall thereby presenting an apron leading into the opening at the top of said bag,
means defining a tunnel extending from side to side of said apron,
said sheet material extending contiguously above the rear wall of said bag and thereby presenting a splash surface leading into the opening at the top of said bag opposite said apron,
means presenting a pocket on the underside of said splash surface, said pocket opening downwardly and being closed along the sides and top thereof,
said support means comprising,
an elongated member inserted through said tunnel from side to side of said apron,
bracket means receiving the ends of said elongated member,
a bail having a U-shaped portion and legs extending upwardly from the limbs of said U-shaped portion,

said U-shaped portion having a shape and dimensions corresponding to the interior of said pocket, said U-shaped portion being inserted into said pocket,
pivot means journalling the legs of said bail for swinging movement about an axis parallel to said elongated member,
means limiting the movement of said bail about said axis such that said bail normally rests under gravity in an attitude holding said bag open,
frame structure supporting said bracket means,
structure supporting said pivot means,
said elongated member and bail respectively supporting said apron and splash surface in planes inclining downwardly to the opening at the top of the bag pendant therebelow.

9. A surgical drain bag formed of flexible, water impervious sheet material, said bag having front, rear, and side walls, said bag being closed at the bottom and open at the top thereof,
a transverse, horizontal tunnel formed across the top of said front wall,
the rear wall of said bag extending above the upper edges of said side walls to form a splash surface, said rear wall being folded under at the top of said splash surface and secured to the underside thereof along its side edges so as to present a downwardly opening pocket above said side walls,
and drain outlet means at the bottom of said bag.

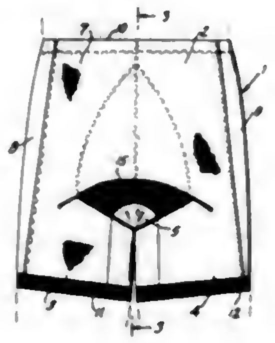
3,386,445
BODY CONTACT PADS
John D. McDonald, Richardson, Tex.
(6120 Sherry Lane, Dallas, Tex. 75225)
Filed Nov. 22, 1965, Ser. No. 509,115
5 Claims. (Cl. 128—417)



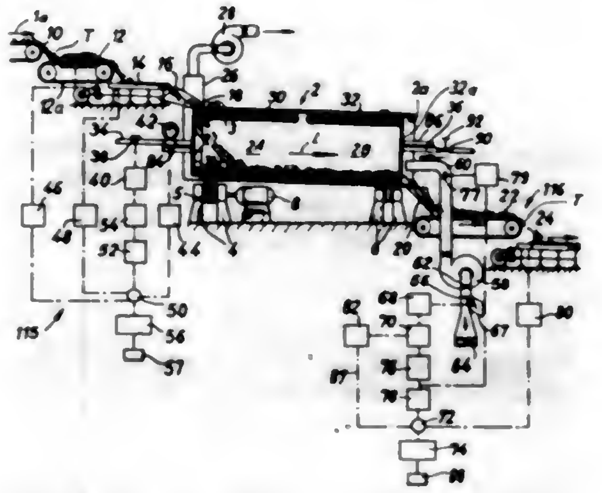
A body contact pad for use with electronic muscle stimulating devices having a nonconductive carrier divided into two sections for isolating a pair of conductive elements whereby electrical impulses applied to one of the elements may be conducted to the other element through the human body. The conductive elements may have direct contact with the skin or with a body engaging member capable of being rendered conductive. The pad is characterized by its thinness and flexibility as well as the relatively loose confinement and large area of exposure of the elements or the member and the removability of said member.

3,386,446
FOUNDATION GARMENT
Sol Sloan, 70 Poplar Drive, Roslyn, N.Y. 11576
Filed Nov. 26, 1965, Ser. No. 510,011
7 Claims. (Cl. 128—528)

A pantie girdle having front and rear panels of an elastic fabric with limited expansion and an insert of an elastic fabric having a greater degree of expansion and located at least in one of said panels adjacent to and above the crotch, and said insert having a greater dimension horizontally than vertically. In the illustrated embodiment such an insert is provided in both the front and rear panels.

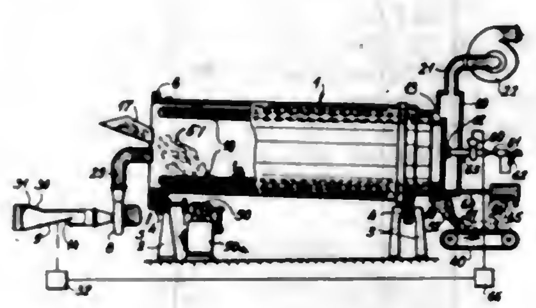


3,386,447
APPARATUS FOR CONDITIONING TOBACCO
Waldemar Wochnowski, Hamburg, Germany, assignor to Hauni-Werke, Koerber & Co. KG, Hamburg-Bergedorf, Germany
Filed July 6, 1966, Ser. No. 563,251
Claims priority, application Great Britain, July 13, 1965, 29,664/65
20 Claims. (Cl. 131—135)



14. A method of conditioning tobacco, comprising the steps of conveying a tobacco stream lengthwise toward, through and beyond a continuous conditioning zone composed of a plurality of adjoining sections including an upstream section and a downstream section, said tobacco stream entering the downstream section of said conditioning zone subsequent to passage through said upstream section; subjecting successive increments of said tobacco stream to independent heating actions during the passage of such increments through successive sections of said zone; measuring the moisture content of successive increments of said tobacco stream upstream and downstream of said zone; comparing the results of said measurements with first and second rated values; adjusting the heating action in said upstream section when the result of measurement upstream of said zone deviates from the first rated value; and adjusting the heating action in said downstream section when the result of measurement downstream of said zone deviates from the second rated value.

3,386,448
METHOD AND APPARATUS FOR CONDITIONING TOBACCO
Waldemar Wochnowski, Hamburg, Germany, assignor to Hauni-Werke Koerber & Co. KG., Hamburg-Bergedorf, Germany
Filed Sept. 2, 1966, Ser. No. 577,015
Claims priority, application Germany, Sept. 9, 1965, H 57,132
20 Claims. (Cl. 131—135)



13. A method of expelling moisture from tobacco, comprising the steps of conveying moist tobacco through a conditioning zone; circulating at least one current of fresh stream in a confining path extending into said zone whereby such steam expels moisture from tobacco and its pressure respectively rises and drops in response to indirect exchange of heat with tobacco of lower and higher moisture content; conveying through said zone a current of hot gas in direct heat exchanging relationship with tobacco to expel therefrom additional moisture; measuring the pressure of steam in said confiining path; and respectively raising and reducing the temperature of hot gas in response to decreasing and increasing steam pressure.

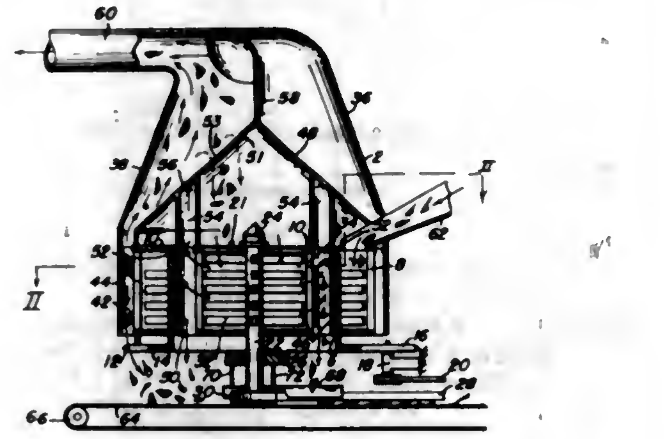
3,386,449
METHOD OF MAKING A RECONSTITUTED TOBACCO SHEET
John D. Hind, Richmond, Va., assignor to Philip Morris, Incorporated, New York, N.Y., a corporation of Virginia
No Drawing. Filed June 16, 1966, Ser. No. 557,927
3 Claims. (Cl. 131—140)

1. A method of making a reconstituted tobacco sheet which comprises reacting at a temperature of from room temperature to about 300° F. tobacco plant parts with an aqueous solution of diammonium acid phosphate, said phosphate comprising from 1 to 30 parts by weight per 100 parts of tobacco, the reaction being continued until a measurable amount of pectins are released from the tobacco, adding from 1 to 50 parts by weight per 100 parts of tobacco of an alkaline earth metal phosphate selected from the group consisting of calcium and magnesium phosphates, and casting the resulting material as a tobacco sheet.

3,386,450
METHOD OF MAKING RECONSTITUTED TOBACCO
Robert B. Seligman and John D. Hind, Richmond, Va., assignors to Philip Morris Incorporated, New York, N.Y., a corporation of Virginia
No Drawing. Filed June 16, 1966, Ser. No. 557,894
2 Claims. (Cl. 131—140)

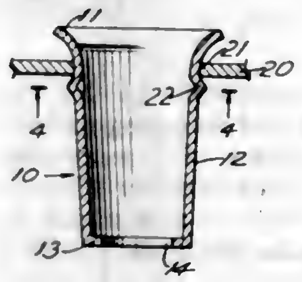
1. In the manufacture of reconstituted tobacco sheet from finely divided tobacco, the step of controlling sheet surface dustiness arising in the manufacture of sheets containing tobacco dust which comprises applying to the surface thereof at least 1% based on the weight thereof of a composition consisting essentially of a pectinaceous material and a sugar in the ratio, respectively, of from 1:1 to 1:25 by weight.

3,386,451
APPARATUS FOR TREATING FOLIATE MATERIAL SUCH AS TOBACCO
Andre Pietrucci, Fleury-les-Aubrais, France, and Georg Schrep, Hamburg, Germany, assignors to Service d'Exploitation Industrielle des Tabacs et des Allumettes, Paris, France, a French public establishment
Filed Dec. 21, 1965, Ser. No. 524,671
14 Claims. (Cl. 131—146)



Apparatus for stripping and separating tobacco comprises several coaxial stripping devices each having a cage and a drum bounding a stripping chamber. The cage and/or the drum of each stripping device is rotatable and the stripping chambers are concentric, each of these chambers being bounded by at least one rotary wall. The stripping devices are surrounded by a casing which is associated with a feed device for tobacco and communicates with a takeoff duct for stripped material.

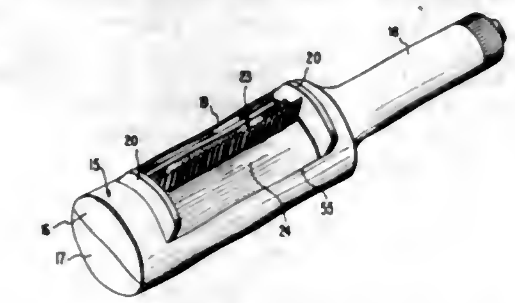
3,386,452
CIGARETTE EXTINGUISHER
Myron D. Davis, 2358 Lambourne Ave., Salt Lake City, Utah 84109
Filed Nov. 29, 1966, Ser. No. 597,702
6 Claims. (Cl. 131—256)



This invention relates to cigarette extinguishers having an extended tubular portion large enough to receive the lighted end of a cigarette. The cigarette engages the tubular portion and is extinguished by the cooling action of the tubular portion. A particular feature of the cigarette extinguisher is an inward flange at the lower end for preventing the cigarette from passing through the tubular portion and not being extinguished. Another feature is the upper end being flared and having dimples for securing the tubular portion to a supporting plate.

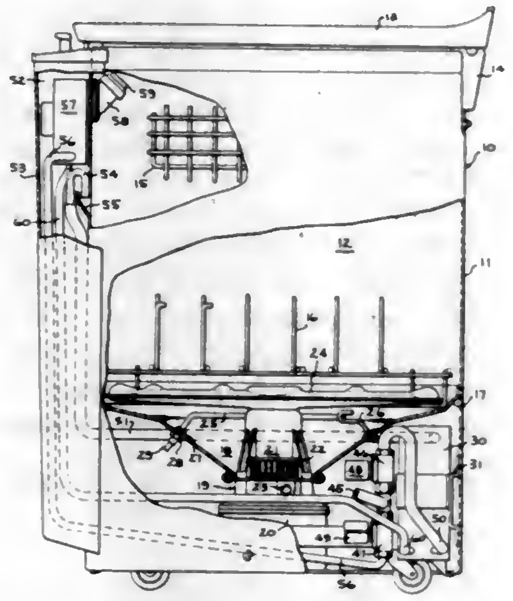
3,386,453
ROTARY HAIR COMBING DEVICE
William A. Roberts, 24 Eagle Ave., Paterson, N.J., 07503, and Arthur J. Woodell, 216 Madison Ave., Clifton, N.J. 07011
Filed Mar. 12, 1965, Ser. No. 439,224
6 Claims. (Cl. 132—11)

A rotary power-driven hair combing device in which a relatively stationary housing has a handle extension and a side opening through which individual combs of a plural comb rotor may momentarily emerge to briefly comb the hair during each revolution of the comb rotor. The individual combs are spring-biased to active combing positions and are retracted into the housing by camming means.



3,386,454
DISHWASHER WITH INTEGRAL WATER SOFTENER

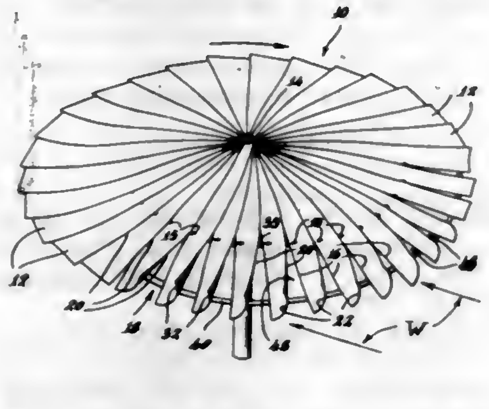
Norman L. Kendt, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed Mar. 30, 1966, Ser. No. 538,707
10 Claims. (Cl. 134—58)



An automatic dishwasher having a water softener integrated therewith and including means for automatically supplying two charges of regenerating solution to the softener without elongating the normal operational cycle of the dishwasher and yet minimizing the corrosive action of the solution on the dishwasher wash chamber.

3,386,455
WIND-RESISTANT UMBRELLA

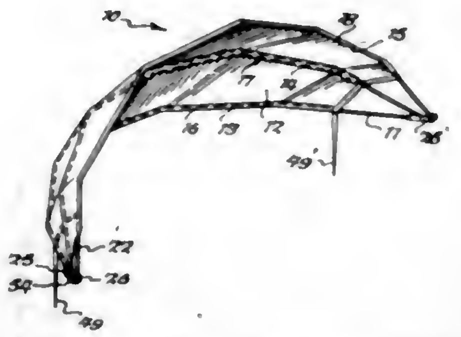
John D. O'Rear, Bee Tree Farm, R.F.D. 1, Woodstock, Vt. 05081
Filed Mar. 28, 1967, Ser. No. 626,466
11 Claims. (Cl. 135—20)



The invention relates to an umbrella having a top formed of a plurality of triangular shaped vanes which are joined together at their apexes and fanned out to serially overlap one another over an umbrella frame. Each vane is secured to the umbrella frame along one longitudinal edge so that they can lift partially free from the frame when subjected to wind currents to permit venting and relieve pressure on the umbrella as a whole. The umbrella also rotates to dissipate the force of the wind and may be made adjustable to permit variation in the curvature of the umbrella top.

3,386,456
PORTABLE SHELTER

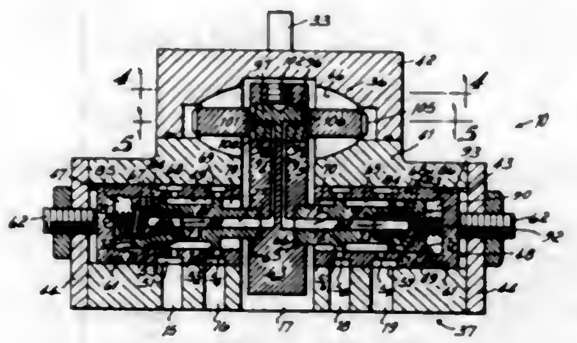
Robert O. Walker, Takoma Park, Md., assignor of fifty percent to Patent Management, Inc., Bethesda, Md., a corporation of Maryland
Filed Nov. 16, 1965, Ser. No. 508,061
3 Claims. (Cl. 135—7.1)



1. A frame for a portable shleter comprising first and second opposite ends, each end comprising a plate and at least three elongated legs having first and second ends, means pivotally coupling said first ends to said plate for permitting said second ends to occupy either a close collapsed, or an angularly spaced open relationship relative to each other, a spike coupled to a leg of each said end to permit said spikes to be driven into the ground or permitting said spikes to occupy a position parallel to said legs when said ends are collapsed, releasible means coupled to said legs for selectively retaining said legs in equally spaced angular relationship relative to each other, and at least six interchangeable ribs for coupling said ends together, said ribs being symmetrically curved and including coupling means at each end for mating with an adjacent rib or leg.

3,386,457
SERVOVALVE HAVING FLOATING RING PILOT STAGE

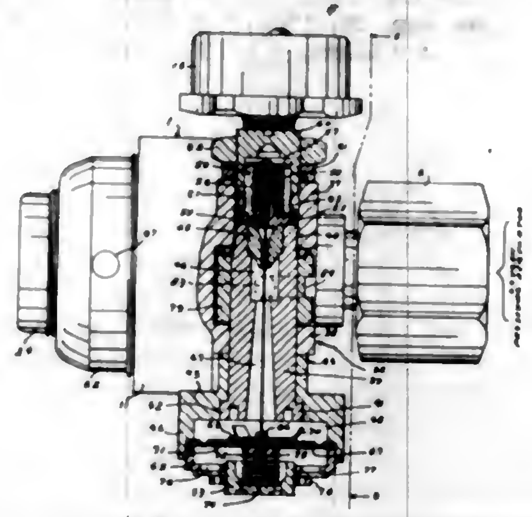
Cecil E. Adams, Columbus, Ohio, assignor to Abex Corporation, a corporation of Delaware
Filed Mar. 10, 1966, Ser. No. 533,350
9 Claims. (Cl. 137—85)



A pilot operated servovalve wherein the pilot valve which controls the operating pressures for opposed operating pressure chambers of a spool type main valve is comprised of a port carrying member extending angularly from the spool and movable therewith, and an annular pilot valve encircling the ports of the port carrying member. The annular pilot valve is perpendicularly shiftable relative to the axis port carrying member by a pair of gears, one of which is an input and the other of which is a feedback.

3,386,458
INTERNALLY ACTUATED COMBINED OXYGEN PRESSURE REGULATOR AND OXYGEN-AIR DILUTION VALVES FOR RESPIRATORY APPARATUS

Lee S. Wasserman and Adam J. Stolzenberger, Dayton, Ohio, assignors to the United States of America as represented by the Secretary of the Air Force
Filed June 18, 1965, Ser. No. 465,217
9 Claims. (Cl. 137—114)

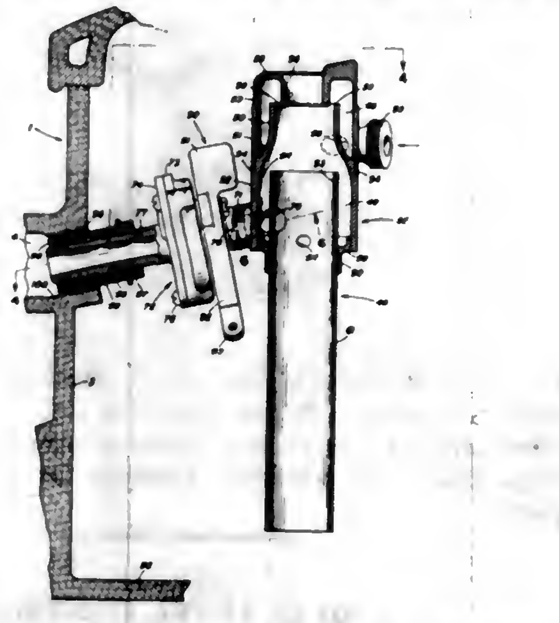


An oxygen-air positive pressure dilute valve structure having an oxygen supply valve means in one end with a controlling pressure demand diaphragm structure in its opposite end which is controlled by the differential pressure which is supplied by the valve structure to a breathing face mask or a respiratory apparatus. An oxygen supply air dilute chamber is disposed between the supply valve means and the pressure demand diaphragm structure with a flexible positive actuator which extends through the air dilution chamber with one end thereof connected to the oxygen supply valve and the opposite end thereof adjustably connected to the pressure demand oxygen supply diaphragm. This actuator adjusts the oxygen control valve by displacements of the pressure demand diaphragm. The air dilution chamber has a diverging mixing tube which extends from the air dilution mixing chamber into the oxygen pressure demand diaphragm chamber with an outlet from the oxygen pressure demand diaphragm chamber which is connected to a breathing resuscitator, or oxygen breathing mask, or other oxygen consuming enclosure.

3,386,459
FLUSHING APPARATUS

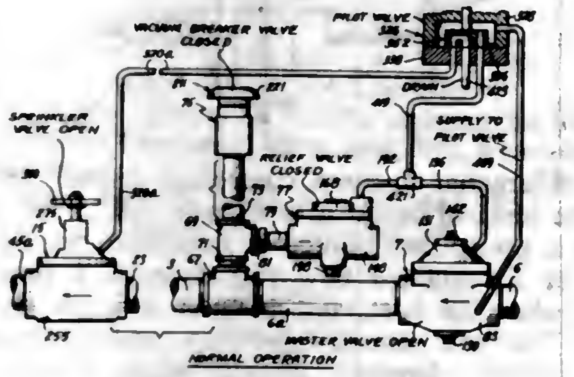
Richard G. Parkison and Paul J. Klein, Louisville, Ky., assignors to American Standard Inc., a corporation of Delaware
Filed Feb. 5, 1964, Ser. No. 342,613
1 Claim. (Cl. 137—216)

1. In a water closet flushing apparatus, a tank, vertically extending hollow tank filling means positioned within said tank, said means having an upper cylindrical swirl chamber and a lower cylindrical swirl chamber, the inner wall of said lower chamber comprising a discharge conduit, the inner wall of said upper chamber merging into the outer wall of said lower chamber, said discharge conduit discharging into said tank, said chambers each having the upper ends of their inner walls terminating below the upper ends of their outer walls whereby liquid supplied to said upper chamber can overflow its inner wall for discharge into said lower chamber and liquid supplied to said lower chamber can overflow its inner wall for discharge through said conduit into said tank, said upper chamber having a substantially tangential inlet through its outer wall, and said lower chamber having a substantially tangential outlet through its outer wall for supplying water to a closet.



3,386,460
SPRINKLER SYSTEM WITH AUTOMATIC PRESSURE RELIEF VALVE

Ralph K. Dean, Costa Mesa, Calif., assignor to Donald G. Griswold, Newport Beach, Calif.
Filed Feb. 1, 1965, Ser. No. 429,293
14 Claims. (Cl. 137—218)

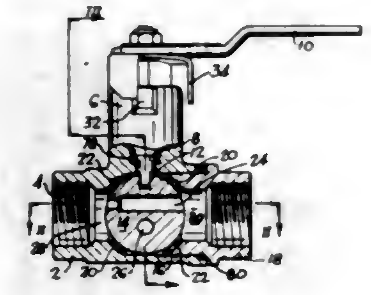


1. A ventable water distribution system, comprising: a master valve having an inlet for connection with a water supply pipe, said master valve also having an outlet; water distribution pipe means connected with said outlet of said master valve; a vent pipe connected with said distribution pipe means; a relief valve connected with said vent pipe at an elevation above said distribution pipe means; and means actuatable independently of the pressure conditions on the inlet side of the master valve and in said distribution pipe means connected with said master and relief valves and operable to effect closing of said master valve, to cut off the supply of water to said distribution pipe means and to simultaneously open said relief valve to relieve the pressure in said distribution pipe means through said vent pipe whenever said master valve is closed.

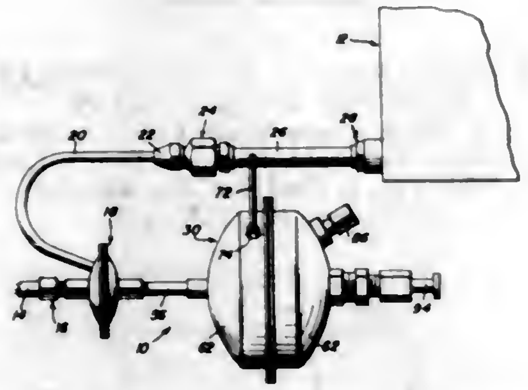
3,386,461
MULTI-PORT ORIFICE VALVE

Walter Fisher, Pointe Claire, Quebec, Canada, assignor to Texaco Canadian Limited, Montreal, Quebec, Canada
Filed July 2, 1965, Ser. No. 469,189
16 Claims. (Cl. 137—237)

A valve having inlet and outlet openings and defining a fluid flow path therebetween and having a rotatable valve member located in the fluid flow path. The valve member includes a plurality of non-intersecting orifice ports passing therethrough and arranged so that while one of said orifice ports completes the fluid flow path between the inlet and outlet openings, the other of said orifice ports registers with apertures in the sides of the housing and free from communication with the fluid flow path so that the said other orifice ports can be cleaned or otherwise maintained while fluid flow continues through the first said orifice port.

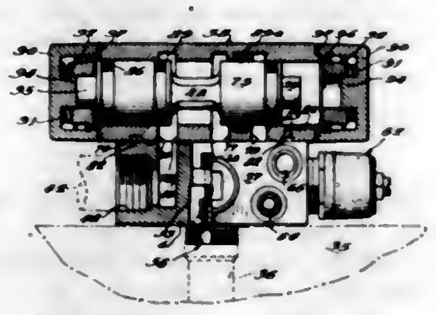


3,386,462
LIQUID LEVEL CONTROL
William R. Walters, 1300 Sunset Road,
Pawhuska, Okla. 74056
Filed June 14, 1965, Ser. No. 463,694
7 Claims. (Cl. 137—244)



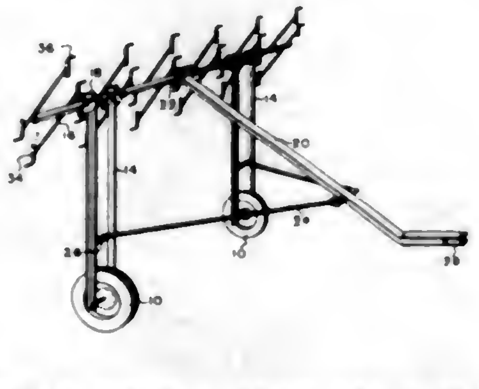
A differential pressure controlled system for regulating the level of liquid in a storage tank. Flow of liquid from a pressurized source is conducted to the storage tank at a regulated flow rate through a flow control valve when the inlet tank pressure is below an adjusted value. The flow control valve also conducts leakage flow to a control chamber communicating with a pressure limiting regulator to control the pressure bias exerted on the flow control valve.

3,386,463
VALVING STRUCTURE
Francis S. Flick, Oak Park, and Richard M. Morgan, River Forest, Ill., assignors to Flick-Reedy Corporation, a corporation of Illinois
Original application Nov. 8, 1963, Ser. No. 322,355, now Patent No. 3,272,221, dated Sept. 13, 1966. Divided and this application June 17, 1965, Ser. No. 472,752
2 Claims. (Cl. 137—270)



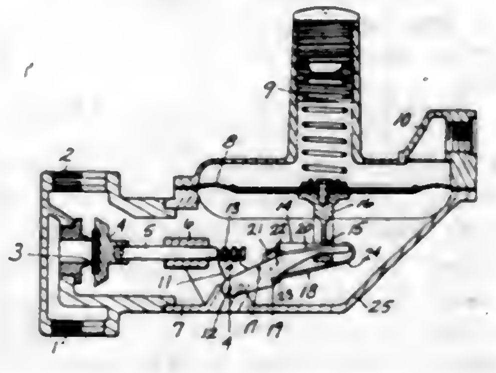
A spool type valve having a body of a single piece with a bore through the body for receiving a spool, a flat face on the body generally parallel to the bore with spaced ports within the confines of the flat face as well as pilot ports within the confines of the flat face connected internally of the body with the ends of the body to conduct pilot fluid pressure to within an end closure mounted on the body enclosing the respective end of the spool, there being fasteners through the body perpendicular to the flat face and within its confines arranged for mounting the valve in either of two end-for-end positions upon a subplate without disturbing any piping connections.

3,386,464
TRAIL TUBE MOVERS
Rufus J. Purtell, Brownfield, Tex., assignor, by mesne assignments, to Tri-Matic, Inc., a corporation of Texas
Filed Jan. 26, 1966, Ser. No. 523,125
6 Claims. (Cl. 137—344)



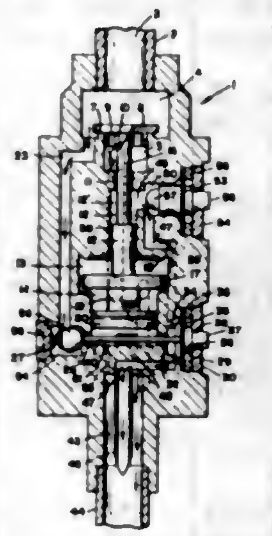
1. A mover for towing irrigation trail tubes comprising:
(a) a frame,
(b) at least two ground engaging wheels attached to the frame,
(c) means attached to the frame for moving the frame along the ground in a certain direction of travel,
(d) a plurality of connection point means attached to the frame for connecting a trail tube to each connection point means,
(e) said connection point means spread across the frame transversely of the direction of travel,
(f) said connection point means staggered along the frame longitudinally of the direction of travel, and
(g) said connection point means higher at the front than rear.

3,386,465
PRESSURE REGULATOR WITH INTERNAL LOW PRESSURE SHUTOFF
Dwight N. Johnson, Fullerton, Calif., assignor to American Meter Company, Philadelphia, Pa., a corporation of Delaware
Filed Nov. 22, 1965, Ser. No. 508,903
5 Claims. (Cl. 137—463)



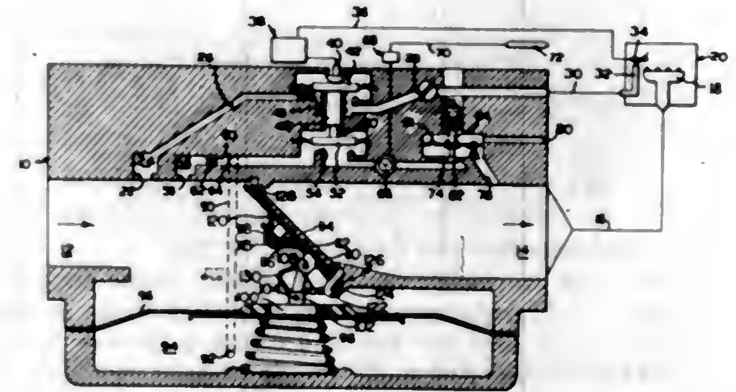
A gas pressure regulator having a rack and pinion actuated gas pressure regulating valve in which a lever is connected to the pinion through a latch which is tripped at low outlet pressure.

3,386,466
PILOT OPERATED VALVE WITH VENTURI
Rex L. Brunsing, 345 Golden Gate Ave.,
Belvedere, Calif. 94920
Filed Jan. 4, 1966, Ser. No. 518,577
5 Claims. (Cl. 137—484.8)



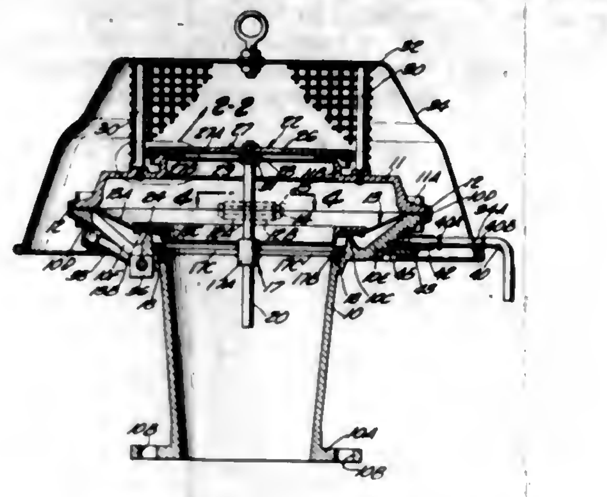
A valve having an imperforate body provided with a passageway therethrough having an inlet at one end and an outlet at the other end and a valve member in said body movable for opening and closing said passageway to flow of fluid therethrough solely under the influence of pressure differentials in the fluid within said passageway and it will remain open or closed solely under the influence of such pressure differentials according to the position of a manually actuatable member.

3,386,467
FLOW CONTROL AND REGULATING SYSTEM
Jay R. Katchka, Long Beach, Calif., assignor to Robertshaw Controls Company, Richmond, Va., a corporation of Delaware
Filed Oct. 24, 1965, Ser. No. 504,816
11 Claims. (Cl. 137—495)



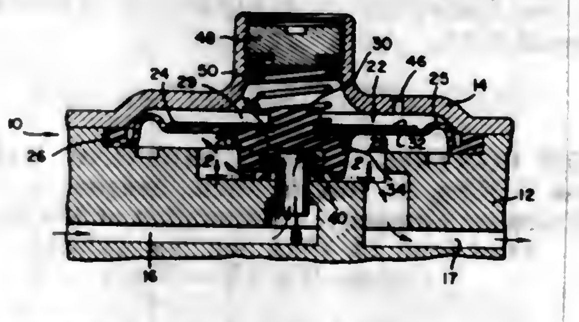
1. In a flow control and pressure regulating system, the combination comprising,
a casing having inlet and outlet means,
valve means pivotally mounted in said casing between said inlet and outlet means,
diaphragm means connected to said valve means for moving the same between on-off positions and regulating positions,
a bleed line in said casing controlling an operating pressure on said diaphragm means,
means controlling and regulating said bleed line to vary the operating pressure on said diaphragm means whereby said valve means is pivoted between on-off positions and regulating positions, and
spring means disposed between said valve means and said diaphragm means to stabilize movement of said valve means.

3,386,468
BREATHER VALVE CONSTRUCTION
Horace Dickinson, Southgate, and Clarence E. Stallard, Lakewood, Calif., assignors to Varec, Inc., a corporation of California
Filed Dec. 27, 1965, Ser. No. 516,381
4 Claims. (Cl. 137—496)



A pressure relief valve structure involves a special annular diaphragm having its outer peripheral portion secured to a housing and its inner peripheral portion of special two-part construction slidably mounted in an annular grooved portion of a ring-shaped pallet member. One of such diaphragm parts contacts a valve seat and forms an expansible pocket with the other diaphragm part. Such pocket increases in size with increase in differential pressure on opposite sides of the diaphragm until the pallet member ultimately pops from its seated condition to automatically relieve pressure.

3,386,469
PRESSURE REGULATOR
Samuel T. Kelly, Torrance, Calif., assignor to Robertshaw Controls Company, Richmond, Va., a corporation of Delaware
Filed July 29, 1966, Ser. No. 568,905
7 Claims. (Cl. 137—505.38)

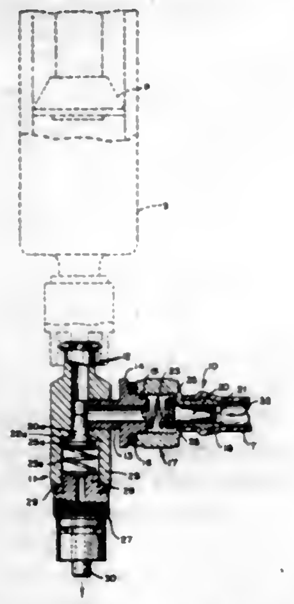


1. A pressure regulator comprising:
a housing having inlet and outlet passage means for permitting fluid flow therethrough,
a diaphragm valve means for regulating the fluid flow operatively disposed between said inlet and outlet passages to divide said housing into an upper and a lower chamber,
a central segment depending from said diaphragm valve means into said lower chamber,
a downwardly opening cavity formed in the bottom of said central section for communicating with said inlet passage means,
the upper end of said cavity being defined by a horizontally extending wall,
valve seat means disposed within said cavity below said wall,
means within said upper chamber for forcing said horizontal means into engagement with said valve seat means to terminate fluid flow, and

means within said lower chamber to permit minimum flow between said inlet and outlet passage means under low flow conditions.

3,386,470
LIQUID CHECK VALVE ASSEMBLY

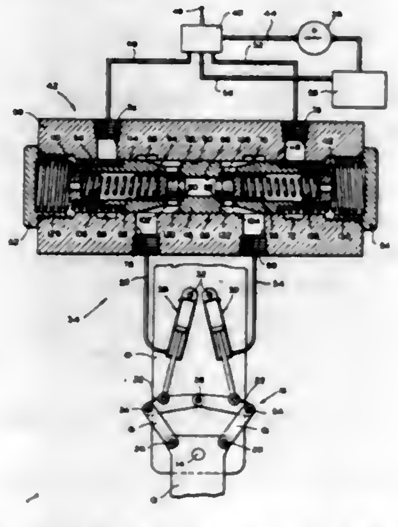
George G. Goda, New York, and Roy Coniglione, Maspeth, N.Y., assignors to Greiner Scientific Corporation, New York, N.Y., a corporation of New York
Filed Mar. 9, 1966, Ser. No. 532,904
3 Claims. (Cl. 137—512)



1. In a liquid pumping system, a check valve assembly comprising a valve housing formed with a liquid conduit and a valve seat, and an elongated valve slidably disposed in said conduit, said valve being of hollow conical shape and having an enlarged mouth portion adapted to close against said valve seat, and wherein said valve is substantially formed of thinwalled, chemically inert plastic material, the wall thereof including said mouth portion being resilient and deformable, and a relatively rigid disc-like annular base for said valve wall, and including a floating disc in said conduit normally adjacent to the mouth of said valve and of a diameter at least that of said mouth, and a valve spring in said conduit and bearing against said floating disc so as to apply valve closing pressure to said valve.

3,386,471
FLOW CONTROL AND CUSHIONING VALVE

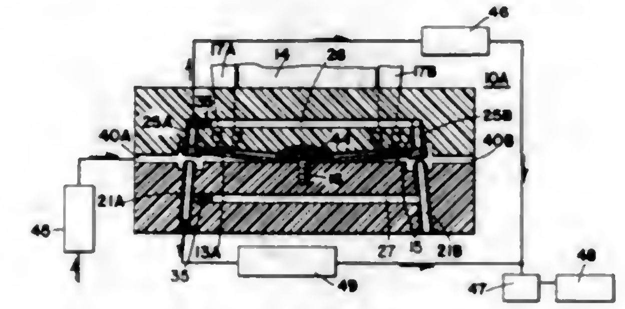
James F. King, St. Joseph, Mich., assignor to Clark Equipment Company, a corporation of Michigan
Filed Sept. 13, 1965, Ser. No. 487,018
7 Claims. (Cl. 137—596.2)



A flow control and cushioning valve have a spool slidable in a body to control fluid communication between a pair of supply and return ports and a pair of motor ports and valve means in the spool for connecting the motor ports when a predetermined pressure is reached.

3,386,472
VALVES FOR GAS CHROMATOGRAPHY

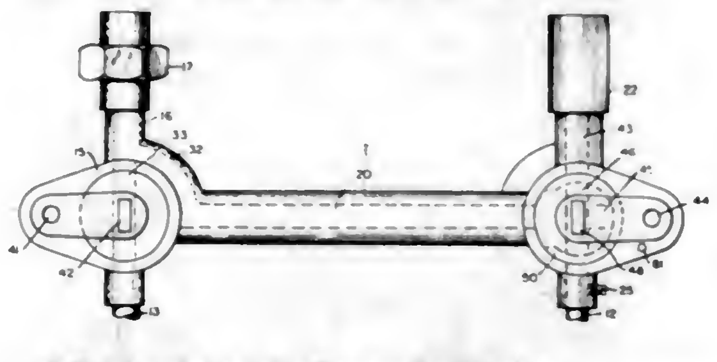
Eugene L. Szonntagh, Flourtown, Pa., assignor to Leeds & Northrup Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Mar. 25, 1965, Ser. No. 442,662
12 Claims. (Cl. 137—597)



Various gas-sampling valves for chromatographic systems: all sampling valves disclosed are of modular construction with a sampling cavity formed between opposed faces of valve body blocks which have internal flow passages extending to the cavity. The movable valve element, a flapper or reed, is mounted within the sampling cavity and is directly actuated by magnetic means including stationary pole-pieces extending to the sampling cavity and there adjacent the path of movement of the valve member.

3,386,473
BY-PASS GAS METER HANGER

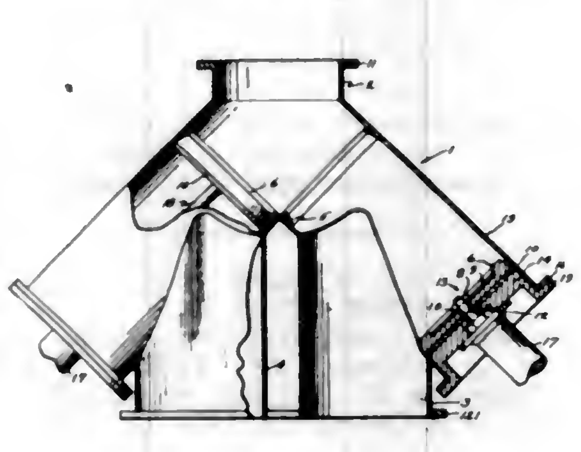
Albert A. Driscoll, % J. J. Mooney, Esq., 21 York St., Canton, Mass. 02021
Filed May 17, 1965, Ser. No. 456,379
1 Claim. (Cl. 137—599.1)



1. A fluid meter service hanger bar having:
an inlet and an outlet; first and second meter connections; a conventional two-way gas cock valve at the inlet end of said bar for controlling fluid flow from said inlet to said first meter connection;
interconnecting means between said inlet and said outlet bypassing said two-way gas cock and said meter connections;
a three-way gas cock valve at the outlet end of said bar having intersecting passageways in the core of said gas cock providing three spaced openings around the circumference of said core for controlling gas flow from said second meter connection to said outlet, and alternatively for controlling the flow of gas from said interconnecting means to said outlet;
a circumferential groove in the core of said three-way gas cock interconnecting the three openings for preserving outlet gas pressure when the gas supply is being transferred from feeding through the meter to feeding through the by-pass interconnecting means;
means for locking said three-way valve in place;
means for bleeding air from said system at said second meter connection.

3,386,474
DIVERTER VALVE FOR FINELY DIVIDED SOLIDS

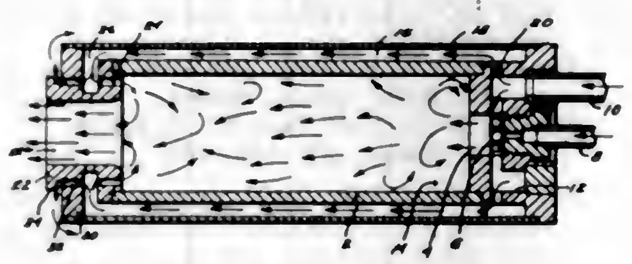
Richard L. Kimmel, Kansas City, Mo., assignor to Chemagro Corporation, New York, N.Y., a corporation of New York
Filed May 26, 1965, Ser. No. 459,029
11 Claims. (Cl. 137—608)



A valve for handling solids, whch is self-draining when the valve is installed in a vertical position, and which has a minimum deflection from a straight flow path of material passing through the valve, is disclosed. The valve unit comprises an inlet nozzle and a plurality of outlet nozzles. The inlet and outlet nozzles are constructed so that at least a portion of the flow of material through the valve is in a straight-line path.

3,386,475
FLAME JET BURNER CONSTRUCTION

William B. Horton, Concord, Mass., and Ernest Marshall Fitzgerald, Norwich, Vt., assignors to H. E. Fletcher Co., West Chelmsford, Mass., a corporation of Massachusetts
Filed Mar. 25, 1966, Ser. No. 541,913
6 Claims. (Cl. 431—158)



A flame jet burner having a combustion chamber for burning fuel and oxidant at superatmospheric pressure. A duct is provided for regulating the flow of oxidant to the combustion chamber at a plurality of points. Oxidant is guided around the discharge nozzle in such manner as to exert a heat shielding action.

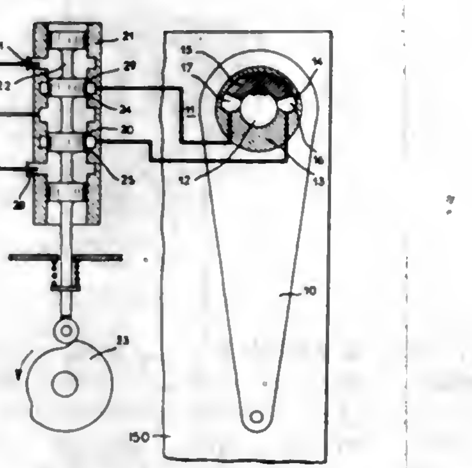
3,386,476
LAMINATES OF POLYETHYLENE TEREPHTHALATE

Howard Warner Starkweather, Jr., Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed July 12, 1965, Ser. No. 471,395
10 Claims. (Cl. 138—144)

A laminate for use in forming plastic pipes is produced by applying a suitable adhesive between two or more layers of a uniaxially oriented creep-resistant tape formed by extending a polyethylene terephthalate polymer, having a relative viscosity of between 25 and 80, to at least five times its original length.

3,386,477
HYDRAULIC DRIVE MEANS FOR THE WEFT INSERTING MEANS IN NEEDLE LOOM

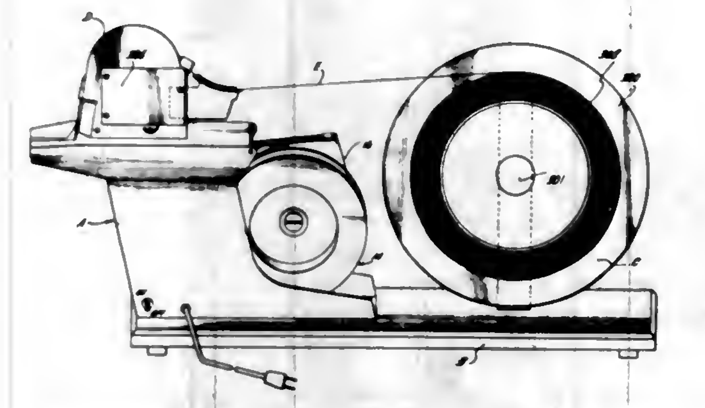
Marcel Durand, 26 Ave. Marechal-Leclerc, Grenoble, Isere, France
Filed Mar. 14, 1966, Ser. No. 534,063
Claims priority, application France, Mar. 27, 1965, 10,997; Apr. 24, 1965, 14,562; Dec. 18, 1965, 43,036
6 Claims. (Cl. 139—122)



A loom having a fluid-operated means to drive a needle into and withdraw the needle from a shed to lay filling. The fluid-operated means includes a fluid-operated motor controlled by a fluid distributor valve, which imparts a reciprocating movement to the motor, and a linkage connecting the needle to the motor. The distributor valve is operated in synchronism with the loom. Energy storage means are operatively connected to the valve to store energy which is then periodically imparted to the valve by release of electrically operated locking means.

3,386,478
TAGGING AND TYING APPARATUS

Alan R. Pitkanen, Los Angeles, Calif., assignor to Royal Industries, Inc., Pasadena, Calif., a corporation of California
Filed Apr. 25, 1966, Ser. No. 544,925
15 Claims. (Cl. 140—93.6)

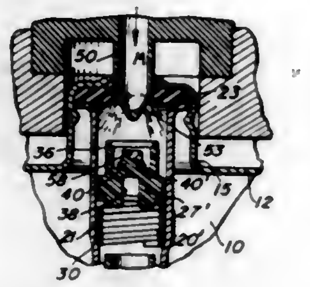


1. Apparatus for tagging and tying articles with tie material capable of being twisted to form a tie comprising:
means for automatically twisting and tying a preselected length of tie material around an article to be tied,
means for automatically positioning a tag adjacent the twisting and tying means to be carried by the tie material and tied to the article therewith, and

means coupled to said automatic means and responsive to a completed tagging and tying operation for actuating said automatic means.

3,386,479
METHOD OF FILLING AEROSOL CONTAINERS AND AEROSOL VALVE STRUCTURE ADAPTED FOR SUCH METHOD

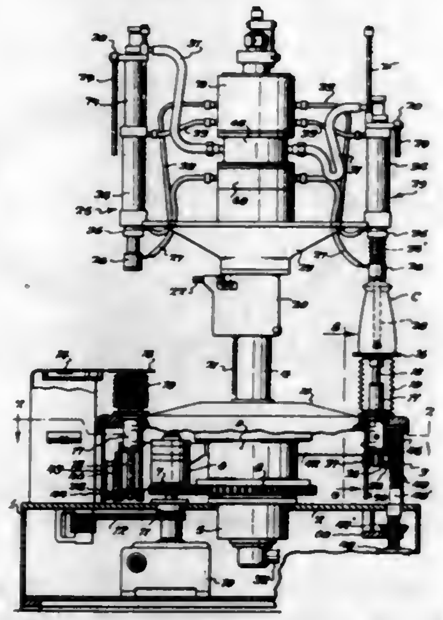
Edward H. Green, 11 Army Trail Road, Addison, Ill. 60101, and David S. Tillotson, 1260 Greenwood Ave., Deerfield, Ill. 60015
Filed Apr. 9, 1965, Ser. No. 446,900
7 Claims. (Cl. 141—3)



A valve assembly for use with aerosol canister, and a method of filling an aerosol canister adapted to said valve assembly. The valve assembly utilizing a valve housing connected to an aerosol canister; an apertured gasket associated with the housing; a valve plunger reciprocal within the housing under the influence of a spring such that the upper peripheral surface of the plunger sealingly engages the gasket; guide means on the valve plunger for cooperating with the tapered tip of a nozzle inserted in said housing for the introduction of pressurized product therein to axially displace the valve plunger and permit filling of the canister, the aforementioned cooperation of the guide means with the nozzle tip being effective to center the valve plunger with respect to the apertured gasket upon cessation of the introduction of pressurized product and the allowance of the valve plunger to return to sealing engagement with the gasket.

3,386,480
FILLING MACHINE WITH ADJUSTABLE FILL HEIGHT CONTROL

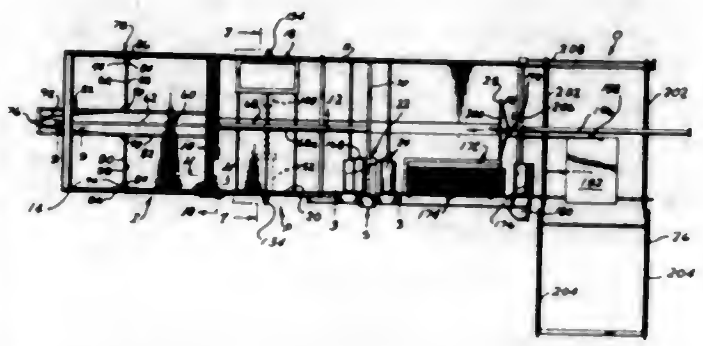
James H. Riesenberg, Amherst, N.Y., assignor to Consolidated Packaging Machinery Corp., Buffalo, N.Y.
Filed Nov. 12, 1965, Ser. No. 507,485
7 Claims. (Cl. 141—147)



A container supporting tray is mounted for movement into and out of filling position relative to a filling head, and the tray and head are mounted for movement through a predetermined path. As the tray and head are moved through the path, the tray is moved into filling position by means including a cam extending along the path and a cam follower connected to the tray. The cam includes first and second sections one of which is mounted for movement relative to the other and determines the spacing between the tray and the filling head when the tray is in filling position. Transfer cam means bridge the cam sections for smoothly transferring the cam follower from one section to the other, and means are provided automatically operable upon relative movement of the sections to adjust the position of the transfer cam means and thereby accommodate such relative movement.

3,386,481
STRIP GANG SAW

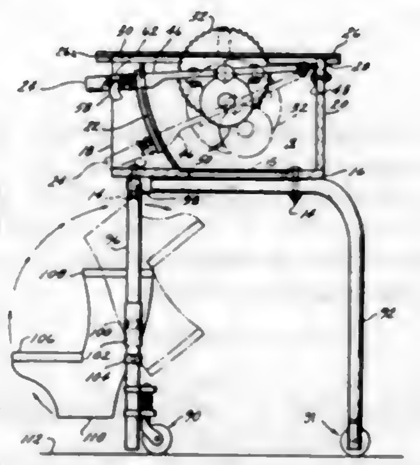
Guy W. Small, 5015 Elrovia Ave., El Monte, Calif. 91732
Filed Apr. 19, 1965, Ser. No. 464,257
11 Claims. (Cl. 143—33)



A gang saw for slitting sheet material into strips, having an infeed station, a slitting station, and an outfeed station.

3,386,482
PORTABLE ROTARY CUT-OFF SAW WITH GUIDE MEANS FOR ACCURATELY LOCATING A WORKPIECE THEREUPON

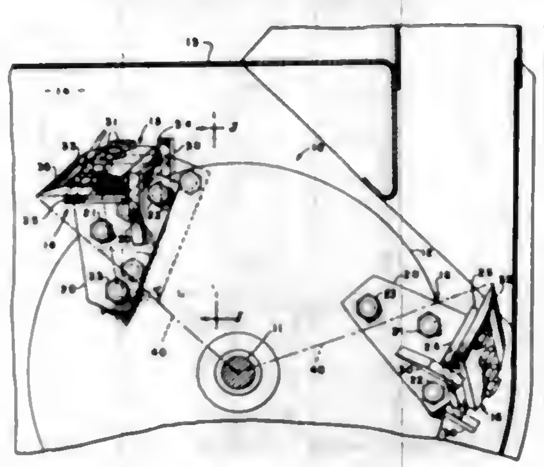
James Harold Nadeau, 271 Zion St., Hartford, Conn. 06106
Filed Jan. 11, 1966, Ser. No. 519,914
12 Claims. (Cl. 143—41)



A power saw unit having an electric motor with speed reducing means for the rotary saw blade to permit approximately one half the blade to be raised above the work surface. The motor is mounted on a lever which serves as a handle for raising the blade.

3,386,483
FORAGE HARVESTER

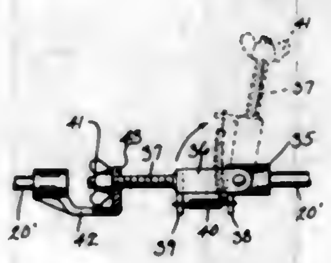
Thomas W. Waldrop, Ronks, and Allison W. Blanshine, Lititz, Pa., assignors to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware
Filed July 9, 1965, Ser. No. 470,866
4 Claims. (Cl. 146—117)



A forage harvester cutter of the reel or cylinder type in which the knife mounting fixtures are connected at each of the end plates by three bolts. The three bolts are arranged so that when a knife strikes an obstacle two of the bolts will shear, and the knife will pivot inwardly on the third bolt.

3,386,484
QUICK DEMOUNTABLE TIRE CHAIN ASSEMBLY

Eddie Moore, 5225 W. Stark St., Milwaukee, Wis. 53218
Filed Dec. 21, 1965, Ser. No. 515,340
1 Claim. (Cl. 152—242)

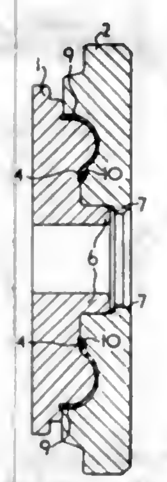


An apparatus providing a quick demountable type tire chain assembly for vehicles having an inner and outer ring lying adjacent the tire, the inner ring being of a larger circumference than the outer ring and the inner ring having a detachable latching member to provide for the quick assembly of the tire chains on the tire, the cross links being secured to each ring by means of a U-shaped strap welded in spaced relationship about the rings and a removable pin secured across the entrance throat of the strap so that cross-links may be replaced and repaired when needed.

3,386,485
FABRICLESS PNEUMATIC TIRES

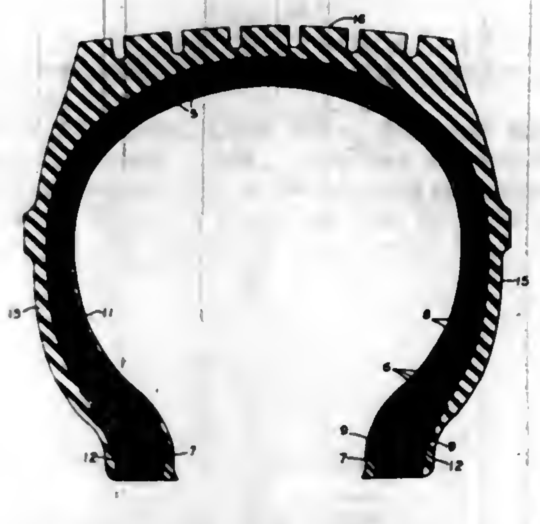
Stanley R. Harrison, Castle Bromwich, John V. Bennett, Redditch, Robert M. Broughton, Sutton Coldfield, and Clive S. Thawley, Tamworth, England, assignors to The Dunlop Company Limited, London, England, a British company
Filed Aug. 1, 1966, Ser. No. 569,388
Claims priority, application Great Britain, Aug. 12, 1965, 34,474/65
12 Claims. (Cl. 152—330)

1. A fabricless pneumatic tire comprising a pair of spaced beads and a shaped flexible composition extending from one bead to the other to form the sidewall portions and tread portion of the tire, said flexible composition having a Young's Modulus of at least 4.5×10^2 pounds per square inch and an elongation (creep) of not more than 15 percent in length when subjected to a load of 100 pounds per square inch of sectional area at a temperature of 30° C. over a period of one month.



3,386,486
TIRES

Frederick J. Kovac, Akron, and Grover W. Rye, Cuyahoga Falls, Ohio, assignors to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Filed Oct. 22, 1965, Ser. No. 500,958
1 Claim. (Cl. 152—354)

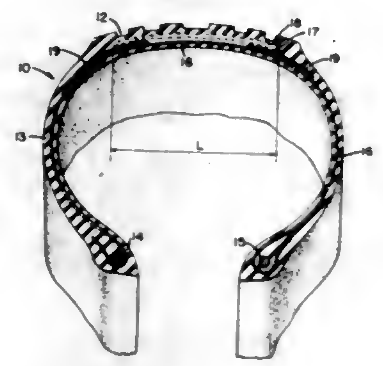


The invention relates to a pneumatic tire in which the carcass plies terminate short of the beads and bead plies overlap the edges of the carcass plies. In the preferred structure the body plies are bias plies of giant cords and the bead plies are radial plies composed of filaments and the edges of the body plies and bias plies are sandwiched between one another.

3,386,487
TIRE CASING WITH REINFORCED SIDEWALLS

Jean-Marie Massoubre, Clermont-Ferrand, France, assignor to Compagnie Generale des Etablissements Michelin raison sociale Michelin & Cie, Clermont-Ferrand, Puy-de-Dome, France
Filed Nov. 29, 1965, Ser. No. 510,183
7 Claims. (Cl. 152—361)

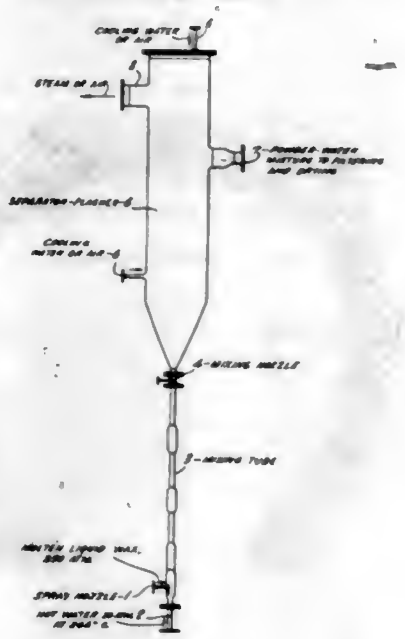
A pneumatic tire of the radial-cord type is provided with zones of transition between a tread rigidified by reinforcing cords crossing the radial cords and flexible sidewalls on either side of the tread. The zones of transition are defined by narrow plies in part overlapping the tread and in part extending beyond the tread.



3,386,488
PROCESS FOR PRODUCING POWDERS FROM PLASTIC AND WAX MASSES

Manfred Ratzsch and Hans-Friedrich Rockstuhl, Leuna, and Wolfgang Schaff, Bad Durenberg, Germany, assignors to VEB Leuna-Werke "Walter Ulbricht," Leuna, Germany

Filed Mar. 18, 1966, Ser. No. 536,946
5 Claims. (Cl. 159—48)



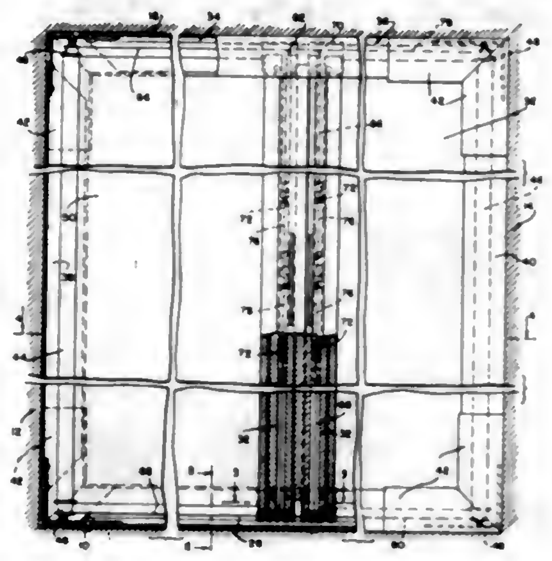
Hot water at 265° C. and molten liquid wax both at superatmospheric pressure are impinged and mixed in a mixing tube and then released thru an orifice into a flash separating chamber from which steam and air are removed and separated from a wax powder and water mixture which latter is sent to filtering and drying stages.

3,386,489
CLOSURE APPARATUS

James B. Denton and Benton J. Skuda, Alexandria, Va., assignors to Benton Williams Company, Inc., a corporation of Virginia

Filed Apr. 15, 1965, Ser. No. 448,454
1 Claim. (Cl. 160—25)

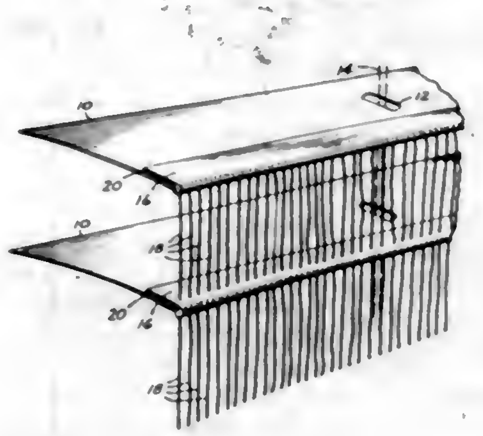
A flexible closure apparatus having a pair of flexible closure elements having edge supporting elements through which spring means are connected to tension elements on opposite sides of the closure to provide an ungrounded connecting path between the tension elements.



3,386,490
FRINGED VENETIAN BLIND

Walter Kandel, 4834 N. Interstate Ave., Portland, Oreg. 97217

Filed Jan. 30, 1967, Ser. No. 612,457
4 Claims. (Cl. 160—178)



A Venetian blind is provided with horizontal slats each mounting a screening element comprising a base and a fringe attached to the base. The fringe hangs freely across the space between the slat and the slat immediately below, thereby providing a screen when the slats are in their open position, while at the same time permiting ventilation through the blind.

3,386,491
CYANOMETHYLIDENE TETRAHYDROQUINOLINE COMPOUNDS

Max A. Weaver, John I. Dale III, and James M. Straley, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

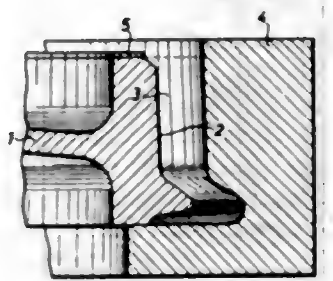
No Drawing. Filed Oct. 19, 1964, Ser. No. 404,955
7 Claims. (Cl. 260—287)

Tetrahydroquinoline compounds having two aromatic systems, each of which bears a cyanomethylidine group, at least one of the aromatic systems being a 1,2,3,4-tetrahydroquinolin-6-yl group, the two aromatic systems being joined by an ethylenesulfonylethylene group are useful as dyes for hydrophobic textile fibers such as polyester and cellulose acetate fibers.

3,386,492
METHOD OF REBUILDING WHEELS

Friedrich Wunder and Wilhelm Körner, Darmstadt, Germany, assignors to Wilhelm Hegenscheidt Kommanditgesellschaft, Erkelenz, Rhineland, Germany

Filed Mar. 23, 1965, Ser. No. 442,047
Claims priority, application Germany, Mar. 24, 1964, K 52,479
7 Claims. (Cl. 164—92)

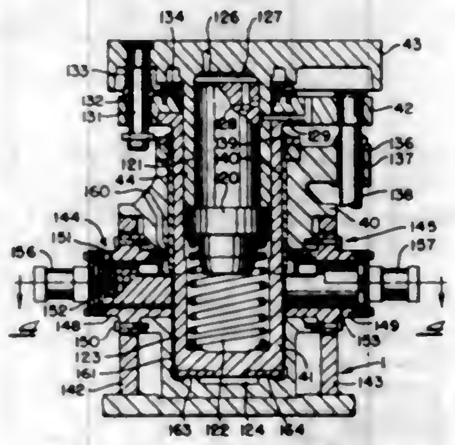


A process of rebuilding worn wheels of rail-supported vehicles comprising the steps of applying a scale resistant protective skin to the rim of the wheel; then preheating the rim; then introducing it into a casting mold and pouring molten metal into the mold and in contact with the rim, the preheating temperature being sufficiently high to permit formation of an intimate homogeneous welding bond by heat transfer between the molten metal and the wheel rim and the scale resistant skin being formed of a material which preserves its scale resistance at the welding temperature so as to prevent obstruction of the welding process and which substantially diffuses into the melt during the welding.

3,386,493
MECHANICAL LOCK MEANS FOR FOUNDRY MOLDING MACHINE

Gilbert J. Janke, Parma, and Warren A. Blower, Brecksville, Ohio, assignors to The Osborn Manufacturing Company, Cleveland, Ohio, a corporation of Ohio

Filed July 7, 1965, Ser. No. 469,981
17 Claims. (Cl. 164—173)

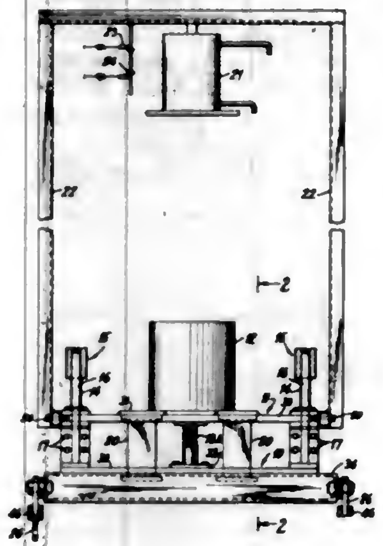


A completely pneumatic overhead squeeze molding machine utilizing opposed pneumatic piston-cylinder assemblies, one for supporting a sand filled flask and the other for squeezing the sand with the squeeze piston-cylinder assembly having a larger effective area and thus exerting a greater force, and two forms of mechanical lock means for the supporting piston to hold the same during squeeze, one comprising radially movable pins and the other a rotatably movable spline ring.

3,386,494
CONTINUOUS CASTING VIBRATING SYSTEM

Douglas C. Yearley, Westfield, N.J., and Henri H. Audi, Elmhurst, N.Y., assignors to Phelps Dodge Copper Products Corporation, New York, N.Y., a corporation of Delaware

Filed Feb. 18, 1966, Ser. No. 528,533
7 Claims. (Cl. 164—260)

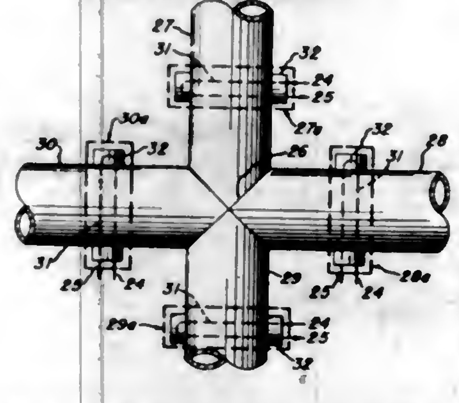


1. Apparatus for the continuous casting of metals comprising an open-ended mold, a first platform carrying said mold, a second platform attached to said first platform by a releasable rigid connection, a vibrating means for vibrating said second platform at a selected amplitude and frequency, and spring means for connecting said first and second platforms and for vibrating said first platform at a different amplitude than said second platform when said rigid connection is released.

3,386,495
APPARATUS AND METHOD FOR ALLOWING AND INTERRUPTING THE FLOW OF THERMOPLASTIC MATERIALS

John Lloyd McCurdy, Glen Ellyn, Ill., and Robert A. Wallace, Torrance, Calif., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana

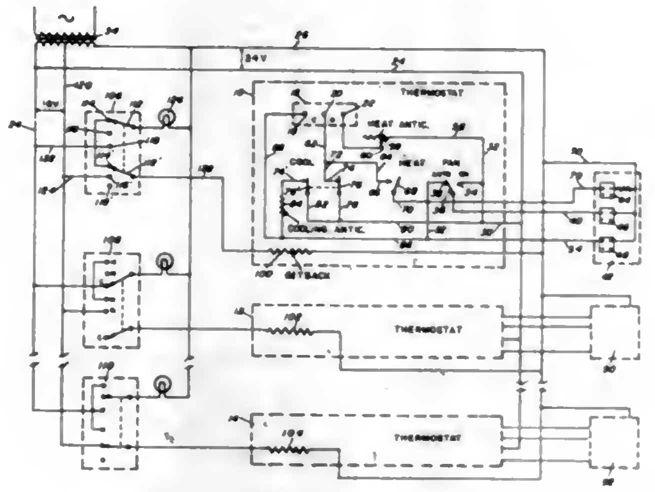
Filed May 27, 1966, Ser. No. 553,470
20 Claims. (Cl. 165—2)



A shaped means spanning an opening, the shaped means being a conduit having reverse loops for transporting a heat exchange medium back and forth across the opening, the opening having a periphery defining it for passing heat sensitive materials therethrough, and retaining means for holding the shaped conduit means so that the heat exchange medium may be circulated to regulate the flow of the heat sensitive materials passing through the opening. This novel apparatus for allowing, interrupting, and regulating the flow of heat sensitive materials can be utilized wherever an opening defined by a peripheral means for moving materials therethrough exists, such as pipelines, manifolds, storage tanks, etc.

3,386,496
REMOTE HEATING AND COOLING TEMPERATURE SETBACK DEVICE

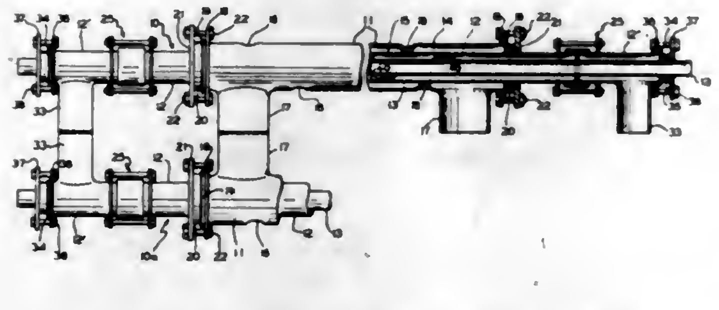
Thomas J. P. O'Connor, Jacksonville, Ill.
(9434 Estate Lane, Dallas, Tex. 75238)
Filed Sept. 12, 1966, Ser. No. 578,699
14 Claims. (Cl. 165—2)



A temperature control system for remote heating or cooling set back is provided. Two stages of false heat are provided at a thermostat to cause errors in the sensing of ambient temperature. The thermostat is then re-calibrated to compensate for one of the stages, whereby normal operation is obtained when one stage of false heat is applied to the thermostat. Application of two stages of false heat provides heating set back by causing the thermostat to maintain an ambient temperature below the temperature sensed by the thermostat. Removal of both stages of false heat provides cooling set back, by causing the thermostat to maintain an ambient temperature above the temperature sensed by the thermostat.

3,386,497
REGENERATIVE HEAT EXCHANGER FOR HEAVY LIQUIDS

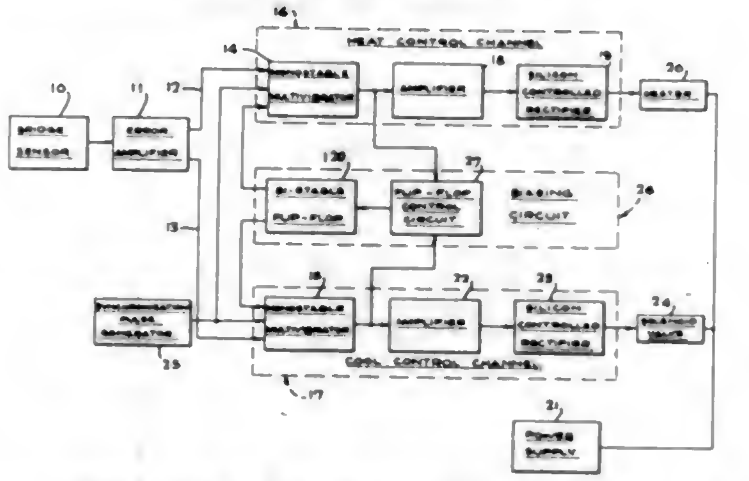
Robert H. Feldmeier, 405 Radcliffe Road,
De Witt, N.Y. 13214
Filed Sept. 26, 1966, Ser. No. 581,899
2 Claims. (Cl. 165—11)



A product to product regenerator, for cooling a viscous liquid product which has been pasteurized by a like raw product to be pasteurized, has three inclined, concentrically mounted, straight tubes forming two annular passages closed by seals at either end, each annular passage having an inlet and an outlet at opposite ends, the innermost tube being open at both ends for forming visual leak-detecting means and the seals being removable for easy disassembly for cleaning. Two oppositely inclined regenerators may be joined by connecting inlets and outlets at one end, the intermediate tubes being removably jointed between inner and outer passage seals for ease in cleaning.

3,386,498
TEMPERATURE CONTROL SYSTEM

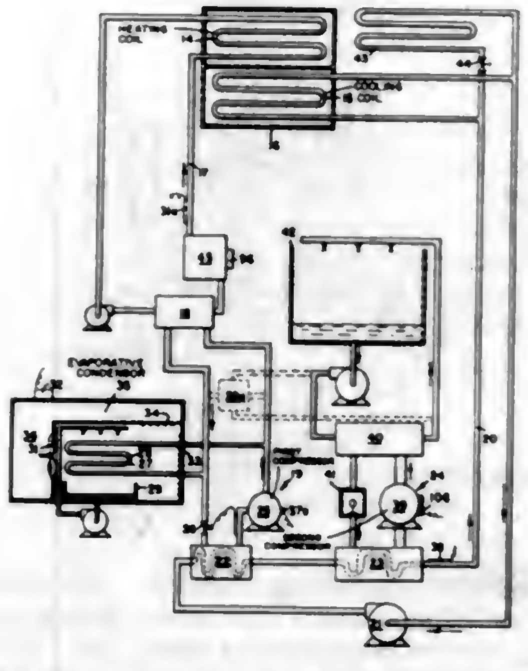
Horst Funfstuck, Los Angeles, Calif., assignor to Statham Instruments, Inc., Los Angeles, Calif., a corporation of California
Filed Feb. 18, 1966, Ser. No. 528,488
5 Claims. (Cl. 165—26)



A confined region, the temperature of which is to be controlled, includes a heater, a cooler and a temperature sensor, the latter providing an electric signal functionally related to the temperature of the region. Individual silicon controlled rectifiers are inserted in serial relation to the heater and a control device for the cooler. Each SCR is individually controlled by a one-shot (monostable) multivibrator, the input of which requires the simultaneous presence of a signal from the temperature sensor of prescribed value, a synchronizing pulse and a biasing level signal, the latter being provided to either the heater or cooler circuit as required. The biasing signal is provided on switching from either heating to cooling or vice versa after a time delay.

3,386,499
HEATING AND COOLING SYSTEM

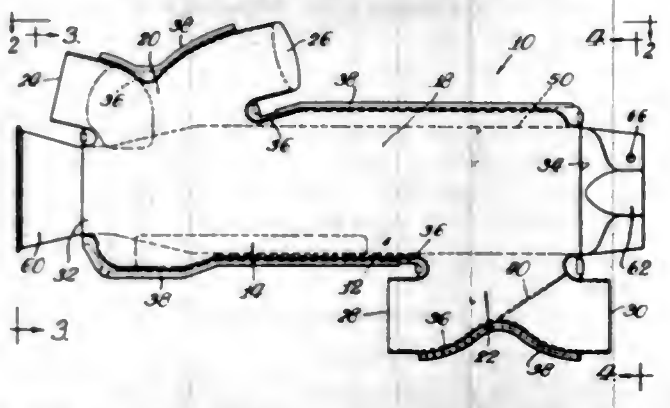
William S. Ostrander, Fayetteville, N.Y., assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware
Filed July 8, 1965, Ser. No. 470,496
5 Claims. (Cl. 165—29)



1. A heating and cooling system comprising a pair of refrigeration machines for cooling a load and including a centrifugal refrigeration machine operable at a relatively low refrigerent condensing temperature and a reciprocating refrigeration machine having unloaders providing stepped cooling capacity control, the last said machine having a first refrigerant condenser and an evaporative refrigerant condenser for operation at a relatively high condensing temperature, means for passing the heat rejected by said reciprocating machine condenser to a load to be heated, means connecting said evaporative condenser in circuit with said first condenser for regulating the tempertaure and quantity of heat rejected by said first condenser, said centrifugal refrigeration machine and said reciprocating refrigeration machine each having an evaporator with a chilled water circuit, means connecting the chilled water circuit in series, the reciprocating machine upstream of the centrifugal machine, for operation of said reciprocating machine up to its normal full cooling capacity to provide heat sufficient to heat the load to be heated before said centrifugal machine is effective for cooling the load to be cooled, and means for regulating the condensing capacity of said evaporative condenser responsive to the quantity of heat required by said load to be heated.

3,386,500
HEAT EXCHANGER

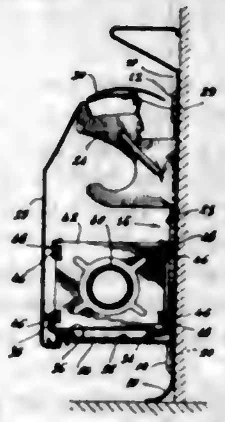
Gordon J. Fairbanks, Indianapolis, Ind., assignor to Stewart-Warner Corporation, Chicago, Ill., a corporation of Virginia
Filed Jan. 20, 1966, Ser. No. 521,960
4 Claims. (Cl. 165—51)



A heat exchanger housing including an elongated body portion, an inlet section having a pair of inlet extensions adjacent one corner of the body portion, and an outlet section having a pair of outlet extensions adjacent the diagonal corner of the body portion. A heat transfer tube having an elongated body portion of generally oblong cross section wherein the major cross sectional dimension is approximately eight times the minor cross sectional dimension.

3,386,501
FINNED TUBE HEAT TRANSFER UNIT WITH CONTROL GUIDES

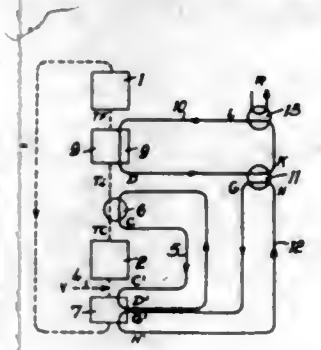
Michael W. Pastore, Hartford, Conn., assignor to Argo Industries, Incorporated, Hartford, Conn., a corporation of Connecticut
Filed June 1, 1966, Ser. No. 554,375
10 Claims. (Cl. 165—82)



A finned tube heating unit having plastic strip control guides along the corners. Each fin includes two dovetail notches in each side edge, one near the top, and the other near the bottom, of the fin. Each plastic strip has an E-shaped cross section. Two legs of the E extend into a notch in each fin, the remaining leg extends beyond the respective top or bottom edge of each fin.

3,386,502
HEAT RECOVERY SYSTEM

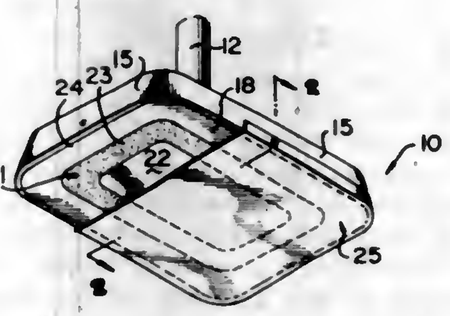
Michel Rostaing, Orsay, France, assignor to Commissariat à l'Energie Atomique, a French establishment
Filed July 8, 1965, Ser. No. 470,505
Claims priority, application France, July 22, 1964, 982,550
1 Claim. (Cl. 165—106)



A heat recovery system for a cold tower and a hot tower connected by a closed circuit circulating gas between the two towers. A first liquid circuit cools the hot gas at the output of the hot tower in an indirect exchanger and transfers this heat to the cold gas before it enters the hot tower in a direct contact exchanger. A second liquid circuit removes heat from the gas in a direct contact exchanger before it enters the cold tower and transfers the heat by an indirect liquid-to-liquid exchanger to a third liquid circuit which also is connected with the direct contact exchanger arranged before the input of the hot tower.

3,386,503
DIFFERENTIAL HEATING PLATE

Allan O. Corning, Lombard, Ill., and Lewis B. Woodland, Boyertown, Pa., assignors to Continental Can Company, Inc., New York, N.Y., a corporation of New York
Filed Feb. 24, 1966, Ser. No. 529,746
10 Claims. (Cl. 165—185)



This invention is directed to a differential heating plate in which a base member is provided with a recess within which is removably secured a heat conducting insert having a generally annular recess in which is housed nonheat conducting material. A metallic heat conductive sheet is removably secured in overlying relationship to the insert whereupon heating of the base member the heat conductive sheet produces a progressive temperature differential or gradient thereacross. Means are provided for releasably securing the insert to the base member whereupon the insert can be removed and replaced by similar inserts differing in the amount of heat conductive to non-heat conductive surface areas present.

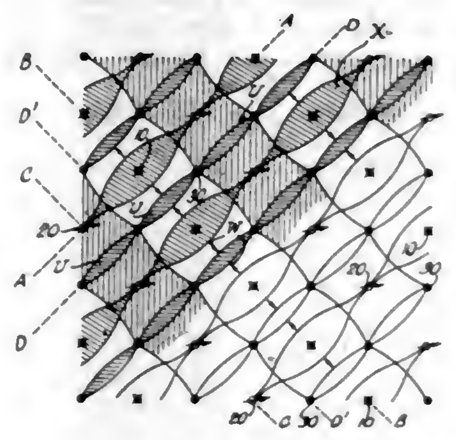
3,386,504

RECOVERY OF HYDROCARBONS FROM UNDERGROUND FORMATIONS BY IN SITU COMBUSTION

Robert E. Kunetka, Houston, Tex., assignor to Texaco Inc., New York, N.Y., a corporation of Delaware

Filed Dec. 29, 1965, Ser. No. 517,249

12 Claims. (Cl. 166—2)



A method of increasing the sweep efficiency across a pattern of wells by concurrent and/or countercurrent in situ combustion wherein the functions of the wells are changed at appropriate times in order to develop a line-like combustion front that approaches a row of production wells from both sides thereof.

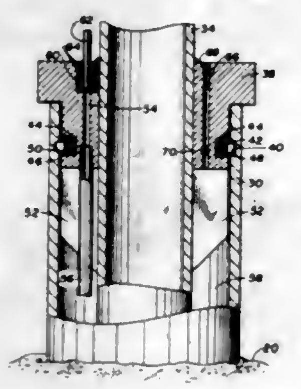
3,386,505

SUPPLEMENTARY CEMENTING ASSEMBLY FOR SUBAQUEOUS WELLS

Ernst Leonhardt, Jr., Celle, Germany, assignor to Mobil Oil Corporation, a corporation of New York

Filed June 8, 1966, Ser. No. 556,219

8 Claims. (Cl. 166—.5)



1. In the cementing of a surface casing into a subaqueous well having a conductor pipe set in the upper end thereof, apparatus comprising a circumferential landing collar fixed to the surface casing to coact with a axially said surface casing with respect to said conconductor pipe set in a subaqueous wellbore to locate ductor pipe; and a vertically oriented stab-in connection in said landing collar in operative engagement with a first passage extending through said landing collar whereby a grout line strapped to a drill string, lowering said surface casing into said conductor pipe, has its lower end in said stab-in connection forming a releasable operative connection with an annulus formed between said surface casing and said conductor pipe.

3,386,506

METHOD FOR SECONDARY RECOVERY OF PETROLEUM

Robert J. Quance, Tulsa, Okla., assignor to Pan American Petroleum Corporation, Tulsa, Okla., a corporation of Delaware

No Drawing. Filed Apr. 8, 1966, Ser. No. 541,126

11 Claims. (Cl. 166—9)

Residual oil saturations obtained by waterflooding in the presence of a gas phase are lower than those obtained in the absence of gas, and reduction in oil saturation is appreciably more for a water-wet reservoir. It is reasoned that the combination of the two would increase oil recovery. In addition, injection of gas with water tends to improve the mobility ratio and give better areal and vertical sweep efficiency. The injection of gas and water may be alternately done.

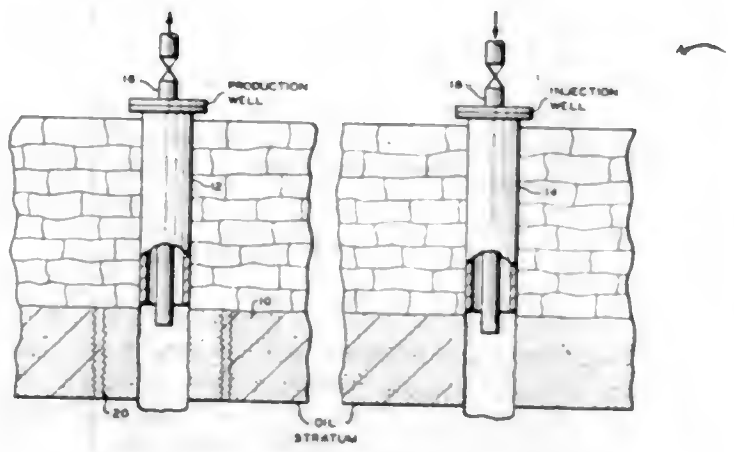
3,386,507

OIL WELL PERFORMANCE

William B. Lumpkin, Caracas, Venezuela, assignor to Phillips Petroleum Company, a corporation of Delaware

Filed Oct. 3, 1966, Ser. No. 583,625

5 Claims. (Cl. 166—11)



1. In a process for producing oil by fluid drive thru an oil stratum penetrated by an injection well and a production well wherein a driving fluid is injected into said stratum to drive oil into said production well and flow into said production well is impeded by combustible material occupying the pores of said stratum, the method of improving flow of said oil which comprises to steps of:
(a) injecting air into said injection well until air is being produced thru said production well;
(b) initiating combustion of carbonaceous material in said stratum adjacent said production well to establish a combustion zone;
(c) injecting air as in step (a) to feed the combustion zone of step (b), cause same to move away from said production well, and leave a coke deposit in the area traversed by said combustion zone;
(d) continuing step (c) until said zone has moved away from said production well a distance of at least 2 feet but not more than about 1/10 of the distance between said wells;
(e) following step (d), substantially reducing the air flow rate to said combustion zone for a period to terminate movement of said zone away from said production well;
(f) thereafter, again injecting air at a sufficient rate to drive said combustion zone back to said production well and burn out the coke deposit of step (c); and
(g) resuming the production of oil by fluid drive from said injection well to said production well.

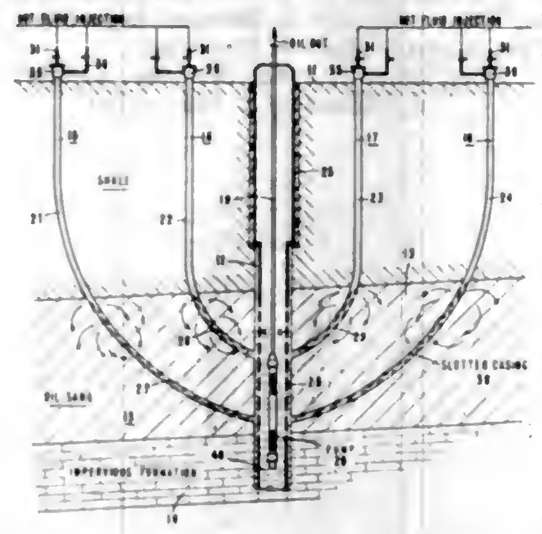
3,386,508

PROCESS AND SYSTEM FOR THE RECOVERY OF VISCOUS OIL

Walter J. Bielstein and Lawrence G. Rawl, Houston, Tex., assignors to Esso Production Research Company

Filed Feb. 21, 1966, Ser. No. 529,020

10 Claims. (Cl. 166—11)



A well bore is drilled into a subsurface formation containing viscous oil and then a plurality of wells is drilled to intersect the well bore and hot fluid is injected into the formation through the plurality of wells to cause viscous hydrocarbons to flow into the well bore.

3,386,509

PLUGGING HIGHLY PERMEABLE ZONES OF UNDERGROUND FORMATIONS

H R. Froning, Tulsa, Okla., assignor to Pan American Petroleum Corporation, Tulsa, Okla., a corporation of Delaware

No Drawing. Filed Sept. 30, 1966, Ser. No. 583,454

4 Claims. (Cl. 166—29)

A highly permeable zone between two wells is plugged by treating the zone at both wells. The treatment of the first well involves injecting a settable liquid at least substantially the entire distance between wells. At least the portion of the settable liquid near the first well forms a strong plug. Then, a strong plug is formed in the zone near the second well by injecting an agent through the second well. The agent may be an activator which sets the liquid injected from the first well, or it may be a batch of settable liquid. Preferably, the first liquid is displaced into the zone until it reaches the second well. Then, the plugging agent injected through the second well displaces the first liquid back toward the first well before any part of the first liquid sets.

3,386,510

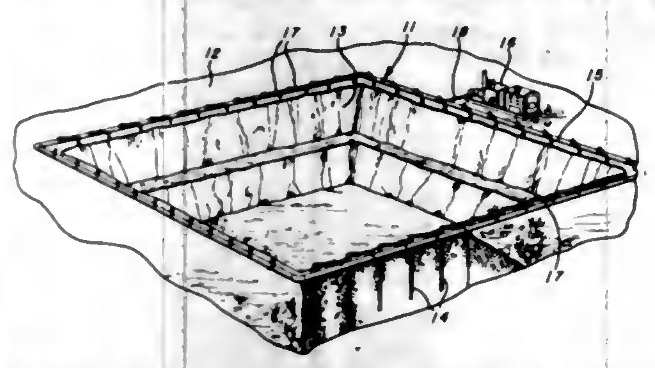
METHOD OF INSTALLING WELL POINTS

Harry Schnabel, Jr., 5210 River Road, Bethesda, Md. 20016

Filed Jan. 3, 1966, Ser. No. 518,430

12 Claims. (Cl. 166—34)

There is disclosed a method of installing a well point system in which each well point pipe has a continuous and uniform noncircular cross section, by drilling each noncircular pipe into the ground while simultaneously jetting water through the pipe. There is positioned in closely fitting relation with the pipe strainer a sleeve, insoluble in cold water but highly soluble in hot water, which sleeve is removed by passing hot water through the well point after it has been installed.



3,386,511

PRODUCTION STIMULATION METHOD FOR OIL WELLS

Frank J. Messina, 440 Granada Drive, La Habra, Calif. 90631

No Drawing. Filed June 27, 1966, Ser. No. 560,793

9 Claims. (Cl. 166—38)

1. The method of treating an oil well in which at least one string of casing is suspended therein, on the upper end of which means is provided that can be opened to permit access to the interior of said casing and the earth formation from which said well produces a fluid including oil, which means is capable of being closed to obstruct communication between the interior of said casing, said earth formation, and the ambient atmosphere, with said method comprising the steps of:
(a) opening said means and discharging a first solid or liquid material into said well, which upon being subjected to heat, is transformed into an inert gas;
(b) discharging a second material into said well through said means after said first material has been discharged therethrough;
(c) discharging a third material into said well through said means after said second material has been discharged therethrough, with said third material being of such composition that when in contact with said second material an exothermic reaction develops with the evolution of a gas, which second and third materials are added to said well in such quantitites as to transform all of said first material into a gas and heat in said formation, outwardly a substantial distance from said well;
(d) closing said means after said first, second and third materials have been added to said well to permit said gas evolved from said exothermic reaction and said gas evolved from the transformation of said first material to increase the fluid-carrying capability of said formation when the pressure from said gases is exerted on said formation, with said fluid flowing into said well from said formation at a faster rate than before said treatment of said well due to heating of said fluid to lower the viscosity thereof and lend a greater fluid-carrying capability thereto; and
(e) opening said means to remove said fluid from said well after said formation has been subjected to said pressure and heat for a substantial period of time.

3,386,512

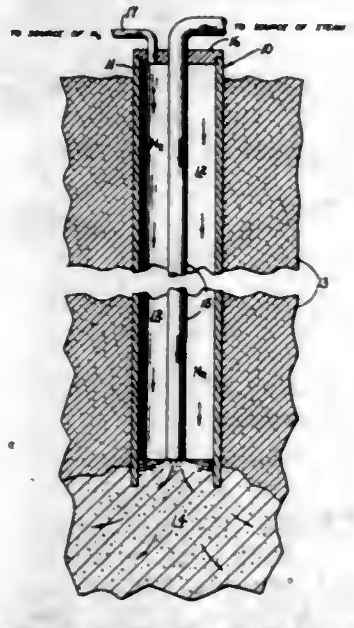
METHOD FOR INSULATING OIL WELLS

Dolores Floyd Bloom, Bakersfield, Calif., assignor, by mesne assignments, to Big Three Industrial Gas & Equipment Co., a corporation of Texas

Filed Sept. 24, 1965, Ser. No. 489,996

5 Claims. (Cl. 166—40)

The disclosure is of processes and apparatuses wherein insulation in wells is created by maintenance of a layer or zone of an inert gas such as nitrogen. Maintenance of the insulation may be accomplished by moderate flows of the inert gas through the insulation zone. The insulation is maintained about a zone containing hot fluid within the well.



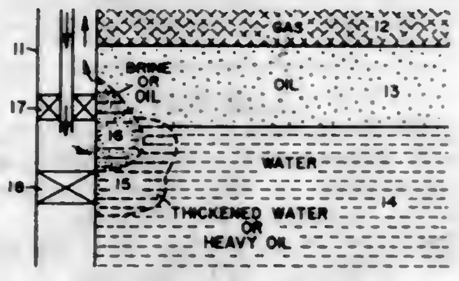
3,386,513
RECOVERY OF VISCOUS CRUDE BY FLUID INJECTION

Billy G. Holmes, Lancaster, Tex., assignor to Mobil Oil Corporation, a corporation of New York
No Drawing. Filed Apr. 20, 1965, Ser. No. 449,612
12 Claims. (Cl. 166—42)

A method for recovering oil from a formation having a low permeability to fluids, significant porosity and amounts of in-place oil, existing fractures and a finite gas saturation without a useful gas drive. Light hydrocarbon, in a liquid state, is injected from a well into the formation, without creating fractures, in an amount to fill up existing fractures, and then an additional amount not in excess of the gas saturation volume of the formation within the well's drainage radius exposed to the hydrocarbon. The well is shut in until the bottom hole pressure decline ceases for obtaining matrix invasion of the hydrocarbon in the formation. Thereafter, the hydrocarbon is produced with oil, in a liquid state, from the well. Oil is then removed from this produced fluid. By these steps, the liquid hydrocarbon is interspersed with the oil in the formation for ready co-production of these fluids. The reservoir geometery about the well is unchanged. Only the pressure distribution and fluid saturation are altered, but only in a manner that no oil bank is formed which would require a prolonged miscible displacement with a liquid or gas for its recovery.

3,386,514
METHOD FOR PRODUCTION OF THIN OIL ZONES

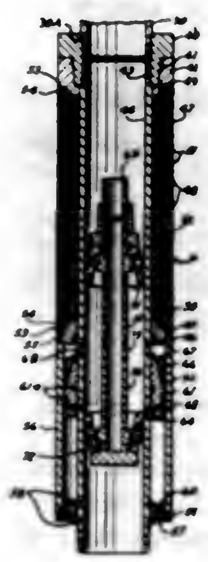
Alvin G. Weber, Houston, Tex., assignor to Esso Production Research Company, a corporation of Delaware
Filed Aug. 29, 1966, Ser. No. 575,726
8 Claims. (Cl. 166—42)



A method of preventing or alleviating water coning in oil-producing operations wherein a viscous liquid is introduced into the producing formation through an interval extending from a point near the oil-water contact to a point substantially below the oil-water contact. The upper portion of the viscous liquid is removed by displacement with a less viscous fluid, and oil is produced by downconing into the area where the viscous liquid has been removed. The viscous liquid tends to prevent the encroachment of water into the oil producing interval.

3,386,515
WELL COMPLETION APPARATUS

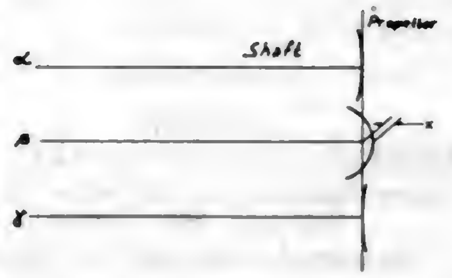
Morgan L. Crow, Joe D. Foster and Marion D. Kilgore, Dallas, Tex., assignors to Dresser Industries, Inc., Dallas, Tex., a corporation of Delaware
Filed Dec. 3, 1965, Ser. No. 511,547
6 Claims. (Cl. 166—120)



A casing packer assembly including a string of casing suspended in a well bore, a formation packer attached to the casing string and arranged to be set against the wall of the well bore, and a slip joint incorporated in the casing string above the packer whereby thermal changes in the casing are absorbed in the slip joint without disturbing the packer or imposing stresses on the casing.

3,386,516
METHOD FOR INCREASING THE PROPULSION EFFICIENCY OF A PROPELLER

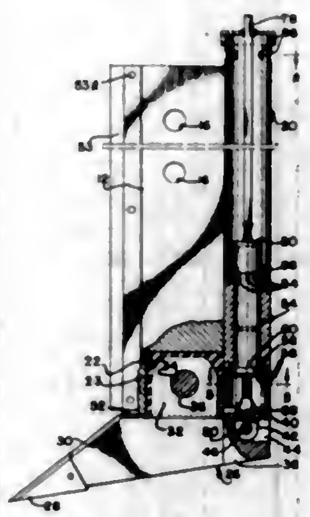
Leopold Nitzki and Volker Nitzki, Bremen, Germany, assignors to Aktien-Gesellschaft "Weser," Bremen, Germany
Filed Dec. 7, 1966, Ser. No. 600,697
Claims priority, application Germany, Dec. 7, 1965, A 50,999
7 Claims. (Cl. 170—135)



Axial control oscillations are produced in the propeller of a ship, and regulated and adjusted to compensate normally occurring thrust fluctuations of the propeller so that the axial propeller thrust is increased.

3,386,517
VIBRATOR RIPPER PLOWS

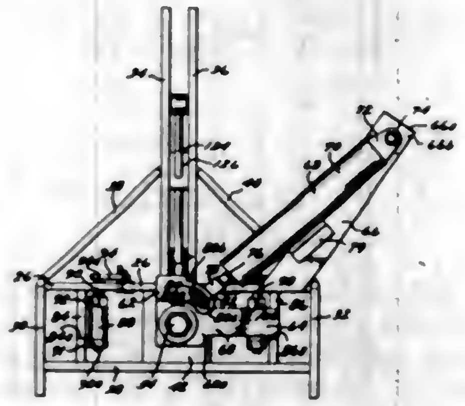
Leon O. Kelley, P.O. Box 488, Stamford, Tex. 79553
Filed June 28, 1965, Ser. No. 467,322
7 Claims. (Cl. 172—40)



A ripper plow, the point of which may be vibrated to make it more adaptable for plowing deep furrows. The impact hammer movement of the plow point makes the plow more efficient in hardpan and rock. The vibrating point is moved about a horizontal axis by pneumatically actuated means, from the operator's seat on the plow. The vibrating attachment may be readily attached to a conventional ripper.

3,386,518
PLOWS

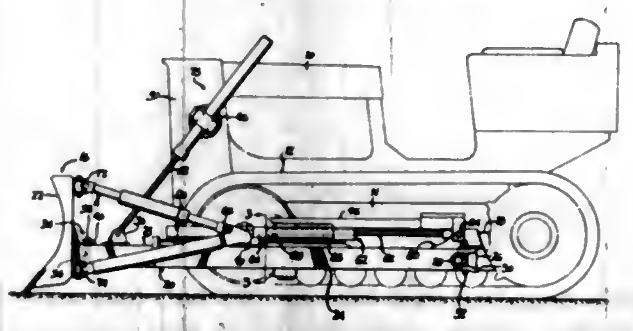
William Fisk Mellen, Anaheim, Calif.
(P.O. Box 488, Fullerton, Calif. 92632)
Continuation-in-part of application Ser. No. 437,797, Mar. 8, 1965. This application Oct. 22, 1965, Ser. No. 507,618
5 Claims. (Cl. 172—225)



Actuating means and stop means for rotating a two-way plow assembly between its two extreme operating positions. Said operating means comprises lost motion connecting means between a pair of hydraulic actuators and the plow assembly such that the actuators operate alternatively with one actuator moving the assembly approximately ninety degrees from one operating position, and thereafter the other actuator retarding the force of gravity in moving the plow assembly to its second operating position. The stop means includes latching means for blocking return movement of an arm or stop member connected to the plow assembly when the latter reaches one or the other of its extreme positions.

3,386,519
HYDRAULIC CYLINDER MOUNTING

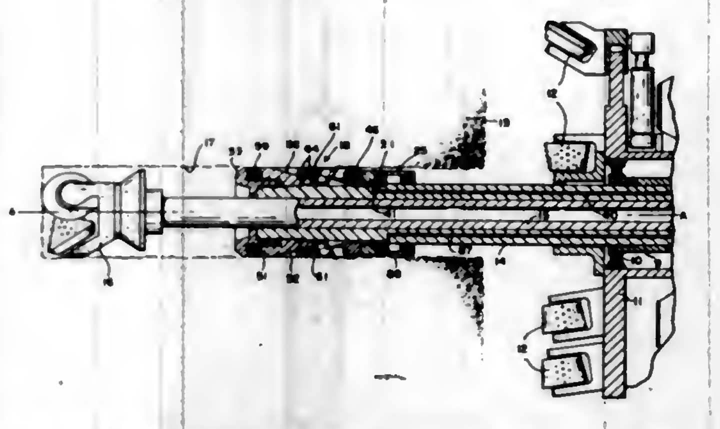
Elton B. Long, Burlington, Iowa, assignor to J. I. Case Company, Racine, Wis., a corporation of Wisconsin
Filed June 30, 1965, Ser. No. 468,426
3 Claims. (Cl. 172—805)



A hydraulic cylinder mounting assembly for angling a bulldozer blade, the dozer having a frame with guide means, a cylinder supported intermediate its ends and slidable along the guide means, and a cylinder rod secured to the frame. The rod remains in a fixed position and the cylinder moves in a fore and aft direction along the guide means to angle the blade.

3,386,520
APPARATUS FOR ANCHORING THE PILOT MEMBER IN A PILOT BORE

James Clifton Lawrence and William Heath Hamilton, Seattle, Wash., assignors to Alkirk, Inc., Seattle, Washington, a corporation of Delaware
Filed Apr. 1, 1966, Ser. No. 539,354
11 Claims. (Cl. 175—230)

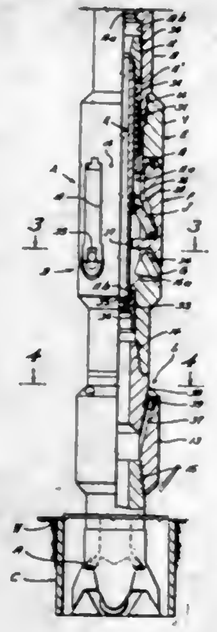


Apparatus for anchoring a pilot member of a tunnelling machine in a pilot bore. There is a conically shaped support mounted on the pilot member with a plurality of bore engaging elements slidably mounted thereon. A fluid pressure operated piston-cylinder arrangement moves the bore engaging elements on the conically shaped support so that the bore engaging elements move outwardly to engage the bore and anchor the pilot member. The bore engaging elements are shaped to permit rocking of the pilot member.

3,386,521
COMBINATION WELL DRILLING TOOL

Jack Chadderdon, Houston, Tex., and Kirk R. Shirley, Long Beach, Calif., assignors to A-Z International Tool Company, Houston, Tex., a corporation of Texas
Filed Nov. 26, 1965, Ser. No. 509,998
3 Claims. (Cl. 175—269)

This specification discloses a combination well drilling tool which includes a lower drill bit, an upper expansible reamer having a cone-type rock-bit cutter and a connecting sub therebetween with jet nozzles directed outwardly and upwardly to cause drilling fluid to lift cuttings from the lower drill bit through the narrow space between the body of the reamer and the wall of the well bore formed by the lower drill bit. This abstract is neither intended to define the invention of the application which, of course, is measured by the claims, nor is it intended to be limiting as to the scope of the invention in any way.

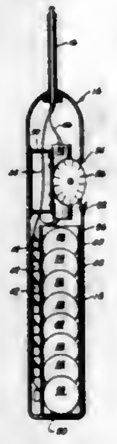


3,386,522
ROCK WALL SLICER

James A. Knupke, Corpus Christi, Tex., assignor to Continental Oil Company, Ponca City, Okla., a corporation of Delaware

Filed Feb. 28, 1966, Ser. No. 530,447

9 Claims. (Cl. 175—311)



An apparatus for obtaining rock samples from the wall of a well bore wherein the samples are sliced from said wall by converging saw blades and collected in a plurality of sample chambers of said apparatus so as to segregate said samples on the basis of the depth of said apparatus in said well bore.

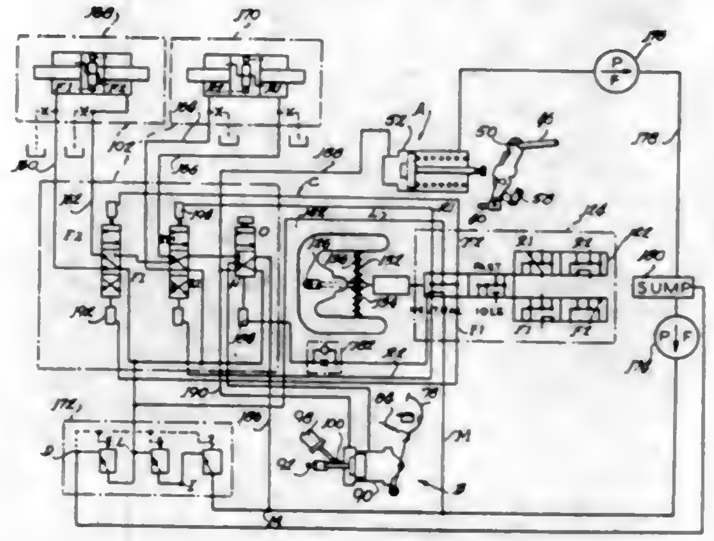
3,386,523
FORWARD-REVERSE, STEERING, BRAKING AND MOTOR CONTROL

Charles A. L. Ruhl, Wheaton, Ill., assignor to International Harvester Company, a corporation of Delaware

Filed Nov. 9, 1965, Ser. No. 507,010

25 Claims. (Cl. 180—6.66)

Forward-reverse drive control for a tractor having plural actuators for steering and for reversing the direction of motion of the tractor. The tractor is provided with a conventional engine, and an engine-driven power train comprising directional clutch packs, steering disks on one side including, e.g., a left drive disk and a left pivot disk, and similar steering disks on the other (right) side. A steering linkage is provided to release one drive disk upon actuation of one actuator and to apply the companion pivot disk upon further actuation of the one actuator, a similar linkage is provided between the other disks and another actuator, operator's brake means is provided operable upon actuation of the third actuator (foot brake) to apply both pivot brakes only, automatic brake means is provided, operable upon actuation of the fourth actuator (directional clutch selector actuator) as it passes through neutral, to neutralize the clutch packs and to apply both pivot brakes and to decelerate the engine, and a delay means, of a type effective after a delay period, is provided to reversely engage the clutch pack and release the pivot brakes and reaccelerate the engine.

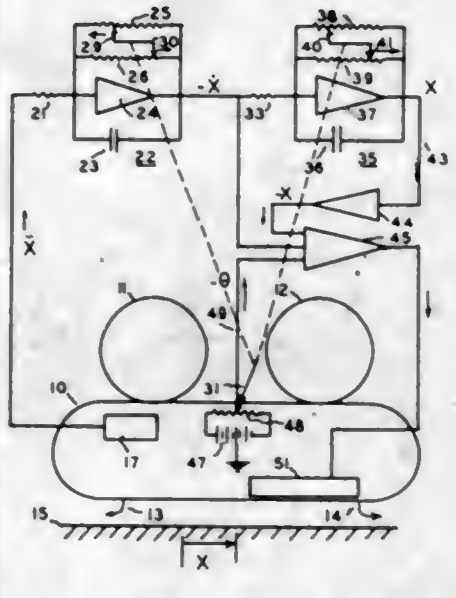


3,386,524
DRIFT STABILIZER FOR GROUND EFFECTS MACHINE

James B. Tiedemann, Lawrence, Kans., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Filed June 30, 1965, Ser. No. 468,651

9 Claims. (Cl. 180—117)



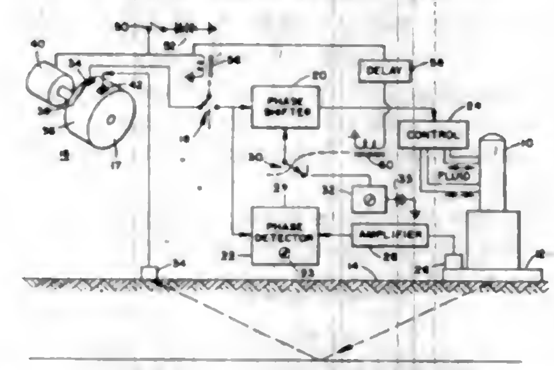
The improved control system for a ground effects machine disclosed by this application includes a lateral acceleration sensor for sensing lateral drift and producing a signal in response thereto, means for processing the signal to provide a group of signals including a negative velocity signal, a distance signal and a control signal that are fed into an amplifier circuit for controlling a lateral motion device. The control signals being reduced in magnitude as the controlling action is being performed to counteract the lateral drift.

3,386,525
SEISMIC EXPLORATION CONTROL METHOD

Ralph A. Landrum and Robert L. Geyer, Tulsa, Okla., assignors to Pan American Petroleum Corporation, Tulsa, Okla., a corporation of Delaware

Filed June 18, 1965, Ser. No. 465,036

14 Claims. (Cl. 181—.5)



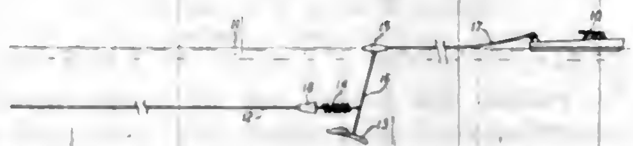
This is an improved method of using a long time duration (e.g., 6 seconds) seismic signal in which a control signal representative of the desired input signal controls a hydraulic vibrator. This invention discloses a method of causing the vibrator output to more quickly follow and be in phase with the control or pilot signal. It has been found that it is more desirable to use an upsweep signal than a downsweep signal. It has also been found that it takes longer with conventional systems to lock the vibrator to the upsweep control signal than to a downsweep control signal. To overcome this problem, a short duration (e.g., one second or less), weak lead signal starts at a high frequency and then drops rapidly to a lower frequency to smoothly enter the lowest frequency of the pilot signal. The vibrator is locked to the lead signal and is completely in phase by the time the pilot signal is reached. The vibrator imparts a low level of energy during the lead signal and a high level of energy during the pilot signal. Preferably, only the pilot signal is used in correlation with the received signal.

3,386,526
MULTIPLE SHORT STREAMER MARINE SEISMIC DETECTOR SYSTEM

Kenneth E. Burg, Dallas, Tex., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware

Filed Dec. 6, 1965, Ser. No. 511,677

5 Claims. (Cl. 181—.5)



A marine seismic detector system is disclosed which comprises a plurality of separate short streamers that are substantially in line with the output of each streamer being representative of information of one seismic data channel. Each streamer is connected to an acoustic insulator, a paravane and float, while the float, in turn, is connected to a towing boat via a seismometer cable.

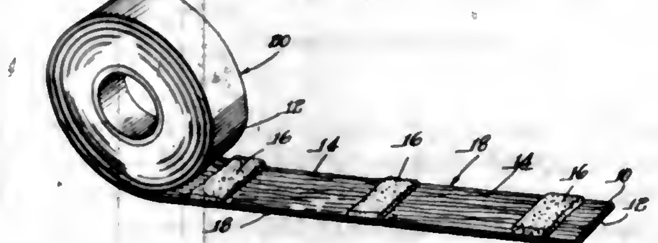
3,386,527
ADHESIVE SOUND DAMPING TAPE FOR APPLICATION TO VIBRATING PANELS

George A. Daubert, Chicago, Raymond F. Wollek, Palos Heights, and Zoltan Kutashy, La Grange Park, Ill., assignors to Daubert Chemical Company, Oak Brook, Ill., a corporation of Illinois

Filed Aug. 5, 1965, Ser. No. 477,406

14 Claims. (Cl. 181—33)

1. A sound damping tape for application to panels or the like, said tape comprising an elongated, pliable laminate including an essentially continuous, elongated strip of appreciable thickness of a sound dissipative material, a non-adhesive conversion material having one of its surfaces adhesively adhered to one side of said strip and covering at least mainly the entire width thereof, and a plurality of relatively narrow, panel-surface engaging bodies on said one side of said tape arranged along the length of said tape in longitudinally spaced relation with respect to one another, said bodies of said adhesive material largely lying in a plane outwardly from the plane of the exposed surface of said non-adhesive conversion material and being adhesively surfaced to enable said tape to be adhered to a panel or the like.



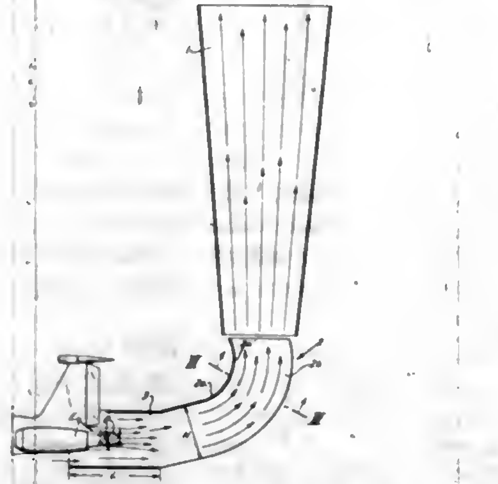
3,386,528
JET ENGINE SOUND SUPPRESSOR WITH COANDA EFFECT DEFLECTOR

Günter Kurtze, Mannheim-Kafertal, Germany, assignor to Grunzweig & Hartmann AG, Ludwigshafen (Rhine), Germany

Continuation-in-part of application Ser. No. 423,647, Jan. 4, 1965. This application July 5, 1967, Ser. No. 651,330

Claims priority, application Germany, Jan. 4, 1964, G 39,538; Aug. 1, 1964, G 41,243

21 Claims. (Cl. 181—51)



A deflector for streams of hot gases issuing from a jet engine. An elongated channel has a substantially horizontal first portion provided with an inlet, and a substantially vertical portion communicating with the first portion and provided with a substantially vertically directed outlet. Deflector means is arranged in the channel intermediate the inlet and the outlet so as to deflect a horizontal gas stream, entering the channel through the inlet, in vertical direction for passage toward and outwardly beyond the outlet.

3,386,529
UNIVERSAL MOUNTING SYSTEM FOR MUFFLERS

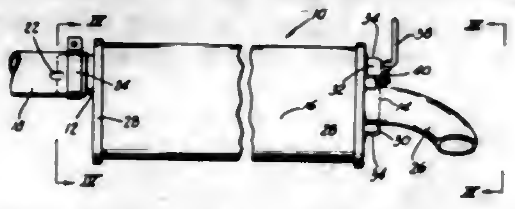
Richard F. Pannone, Jackson, Mich., assignor to Hayes Industries, Inc., Jackson, Mich., a corporation of Michigan

Filed Apr. 18, 1966, Ser. No. 543,158

4 Claims. (Cl. 181—72)

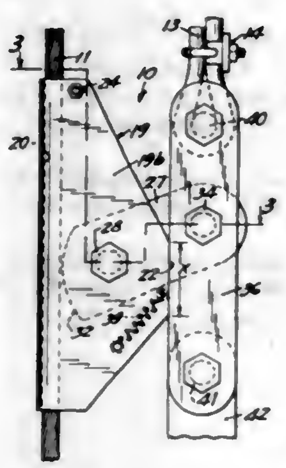
4. A muffler for the exhaust system of internal combustion engines of vehicles, said muffler being elongated

and having heads at opposite ends, inlet and outlet necks on said heads, a bracket on the head with the outlet neck and located to one side of said outlet neck, said bracket having a plurality of holes defined therein to receive muffler hanger fastener means, certain pairs of adjacent said holes being equally spaced, certain of said pairs of holes being located on axes angularly disposed to each other.



3,386,530
SAFETY CLAMP DEVICE

Harvey L. Thompson, Red Wing, Minn., assignor to Meyer Machine, Inc., Red Wing, Minn., a corporation of Minnesota
Filed Dec. 7, 1966, Ser. No. 599,917
7 Claims. (Cl. 182—112)



1. A safety clamp device adapted to be slidably mounted on an upright safety cable and connected to a supporting hoist line which is attached to and interchangeably raises and lowers a movable platform, said safety device comprising

a rigid body member adapted to be slidably mounted on the upright safety cable, said body member having an upright cable receiving cradle and a pair of spaced apart side walls extending outwardly therefrom and having an upright bar engaging edge of a predetermined length opposite the cable engaging cradle whereby the safety cable may be positioned between the pair of side walls to position the safety cable in the upright cable receiving cradle,

a lever arm shiftably mounted on said body member for movement about an axis which is transverse to the slidable movement of said body member relative to the safety cable, said lever arm shiftable between a safety cable engaging position, and a safety cable release position, and said lever arm member having a safety cable engaging portion adapted to engage the safety cable in the safety cable engaging position,

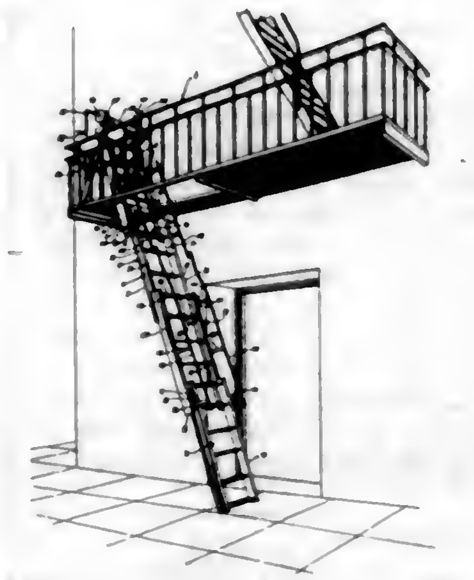
lever arm body mounting means shiftably attaching said lever arm to said body member,

at least one elongate bar member pivotally attached to said lever arm at the end of said lever arm opposite the end which is shiftably mounted on said body member said bar member having the hoist line attached to the upper portion and the movable platform attached to the lower portion of said elongate bar, said elongate bar positioned substantially upright in the normal release position and adapted to confront the parallel bar engaging edges of said body member along the edges thereof whereby the cable engaging portion of said lever arm is urged in the cable release position, said elongate bar adapted to shift downward at the time of hoist line failure thereby urging said lever arm downward and engaging the cable engaging portion thereof with the safety cable whereby the safety cable is clamped between the cable receiving cradle of said body member and the cable engaging portion of said lever arm thereby preventing movement of said body member on the safety cable and arresting downward movement of the platform and

lever arm bar mounting means shiftably attaching said lever arm to said elongate bar member.

3,386,531
RETRACTABLE LADDER

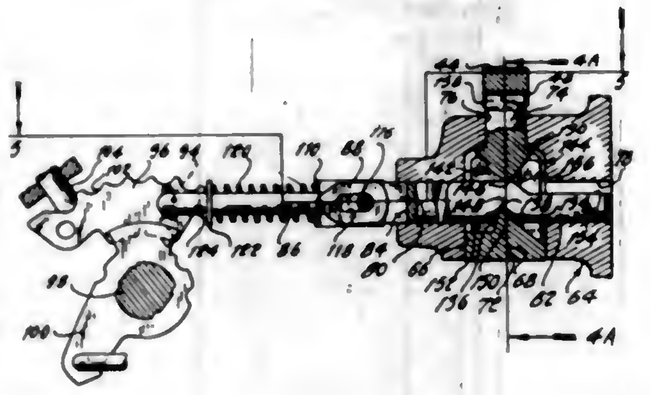
Werner J. Sallein, 2401 Ingalls St., San Francisco, Calif. 94124
Filed Oct. 11, 1965, Ser. No. 494,481
1 Claim. (Cl. 182—207)



1. A retractable ladder comprising, a plurality of interengaging slideably attached intermediate and adjacent ladder sections, each section comprising a pair of laterally spaced parallel longitudinally extending stringer members and uniformly longitudinally spaced transversely extending tread members secured at their opposite ends to said stringer members, said stringer members being of channel shaped cross-section to provide in each instance a web and parallel side flanges and the stringer members of successive sections being turned 180° with the flanges of the stringer members of said intermediate section positioned within the channels of the stringer members of said adjacent sections thereby providing telescopic engagement of said sections for movement between retracted and extended positions, said ladder being adapted for mounting in a vertically inclined atitude in its extended position and said sections being formed in such position to place all of the tread members of said intermediate section in horizontal juxtaposition to tread members of adjacent sections, said tread members being of inverted channel shaped cross-section to provide a flat top web and depending side flanges, the lower ends of one of said flanges of each of said treads being spaced from one of said flanges of the attached stringer member to provide a guideway slideably receiving the flange of the telescopically attached stringer member, said top webs of said juxtaposed tread members being positioned in said extended inclined position of the ladder in horizontal co-planar relation to cooperatively provide a flat horizontal double width tread.

3,386,532
PARKING BRAKE FOR USE IN A DRIVELINE

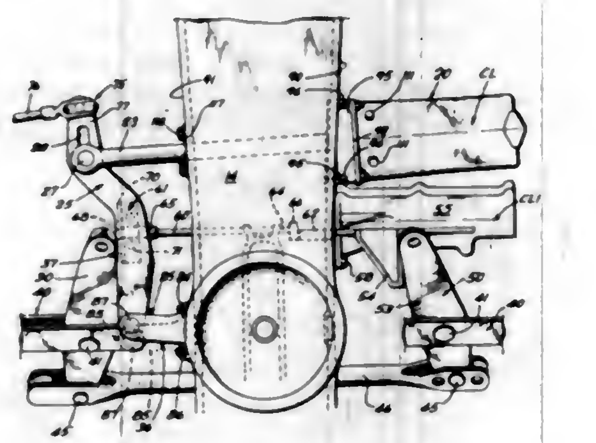
Jacques L. Moss, Southfield, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Jan. 5, 1966, Ser. No. 518,936
2 Claims. (Cl. 188—31)



This specification describes a parking brake mechanism for a transmission power output shaft. The brake includes a parking gear in the shaft and a driver actuated pawl. The pawl establishes a positive locking action both in the brake applying condition and in the brake releasing position.

3,386,533
BOLSTER-MOUNTED BRAKE

Thomas S. Taylor, Suffern, N.Y., and Frederick R. Ling, New Milford, N.J., assignors to Abex Corporation, a corporation of Delaware
Filed Oct. 22, 1965, Ser. No. 501,538
5 Claims. (Cl. 188—52)

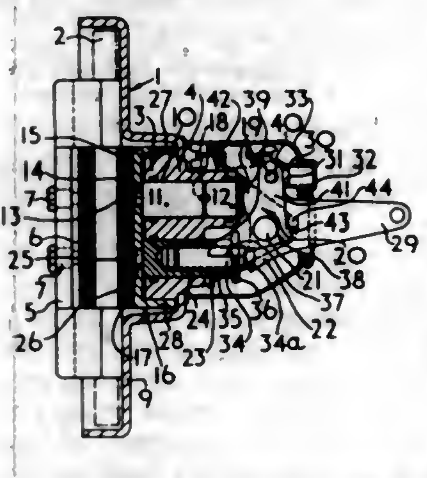


A bolster-mounted brake unit for a railroad car is afforded of such form as to cooperate with items of standard equipment such as live and dead levers and the so-called rod-under linkage. Various parts of the brake unit are constructed to enable cooperation to be achieved so that there can be easy conversion from the standard car-mounted brake to a brake unit of the present invention which can be easily adapted to cars of different tonnage.

3,386,534
SPOT TYPE DISC BRAKES

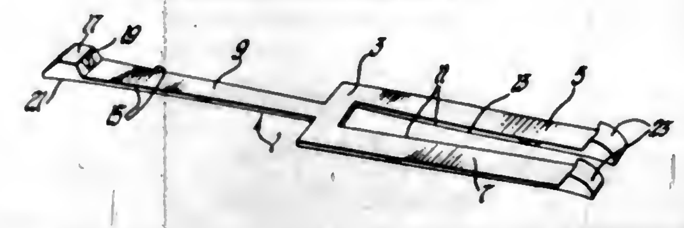
Carl Press, Wunsiedel, Germany, assignor to The Dunlop Company Limited, Erdington, Birmingham, England, a corporation of Great Britain
Filed Apr. 18, 1967, Ser. No. 631,720
10 Claims. (Cl. 188—73)

A disc brake wherein an axially aligned hydraulic brake-applying mechanism acts directly on an associated friction element, the brake-applying mechanism being also associated with a lever mechanism mounted on the brake housing, whereby the reaction thrust from the brake-applying mechanism is applied to an axially movable thrust member spaced apart from the brake-applying mechanism and to a friction element associated with the thrust member.



3,386,535
FRICTION BAND

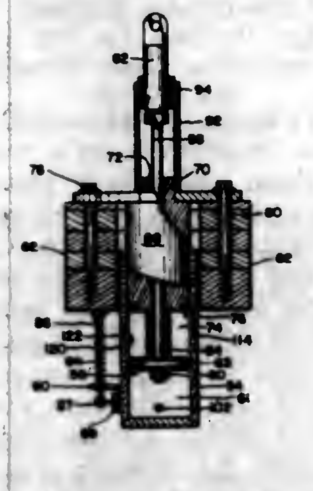
Gary E. Bishop, Warren, and Winlaw B. Bramley, Jr., Milford, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Oct. 26, 1966, Ser. No. 589,713
14 Claims. (Cl. 188—77)



A multi-wrap friction band in which the band legs are tapered so that they contact or are close to each other in a band-released position enabling them to mutually dampen leg vibrations and reduce rattle. When the band is moved to an apply position, the taper of the legs provides for increased clearance therebetween to insure full band apply to a friction surface.

3,386,536
BRAKE CONTROL MECHANISM

James C. Davidson, Sherbrooke, Quebec, Canada, assignor to Canadian Ingersoll-Rand Company Limited, Montreal, Quebec, Canada, a corporation of Canada
Filed Dec. 5, 1966, Ser. No. 599,034
10 Claims. (Cl. 188—174)



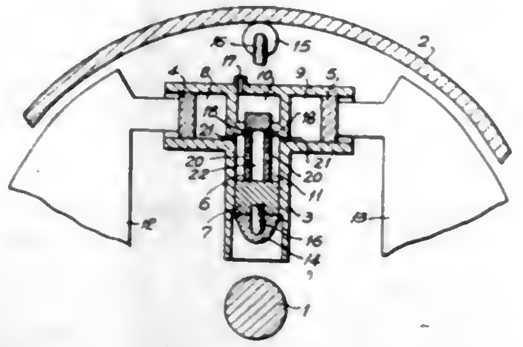
1. A mechanism for controlling the operation of fluid pressure operated brake apparatus, comprising:

cylinder means;

- a first piston disposed within said cylinder means for vertical movement therein;
- a second piston disposed within said cylinder means for vertical movement therein and in vertical alignment with the first piston;
- means for connecting said first piston to a brake apparatus such that vertical movement of said first piston controls the operation of such brake apparatus;
- means for supplying to said cylinder means pressurized fluid for causing vertical movement of said first piston;
- means for supplying to said cylinder means pressurized fluid for vertically supporting said second piston;
- means for biasing said second piston against the pressurized fluid supplied to said cylinder means by said latter pressurized fluid supplying means; and
- said first and second pistons being relatively arranged such that vertical movement of said second piston towards the pressurized fluid supplied to said cylinder means by said latter pressurized fluid supplying means causes conjoined vertical movement of said pistons.

3,386,537
BRAKING CONTROL APPARATUS

Mamoru Watanabe, Tokyo, Japan, assignor to Toyoju Mochizuki, Tokyo, Japan
Filed May 31, 1966, Ser. No. 554,095
Claims priority, application Japan, June 2, 1965, 40/32,192
6 Claims. (Cl. 188—181)

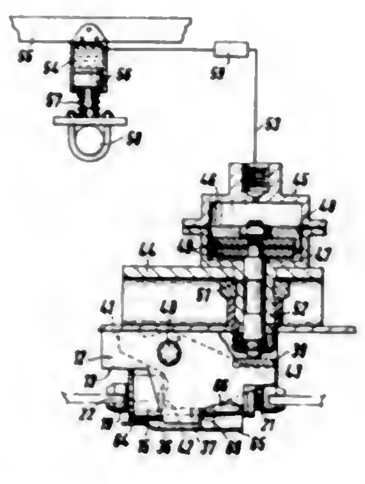


Brake mechanism is provided in which braking action provided by at least one shoe is dependent on rotation of drum, which if it stops rotating due to skidding or the like, releases the shoe due to control of a cam operated hydraulic system by drum rotation.

3,386,538
INTERNAL SHOE DRUM BRAKES FOR VEHICLES

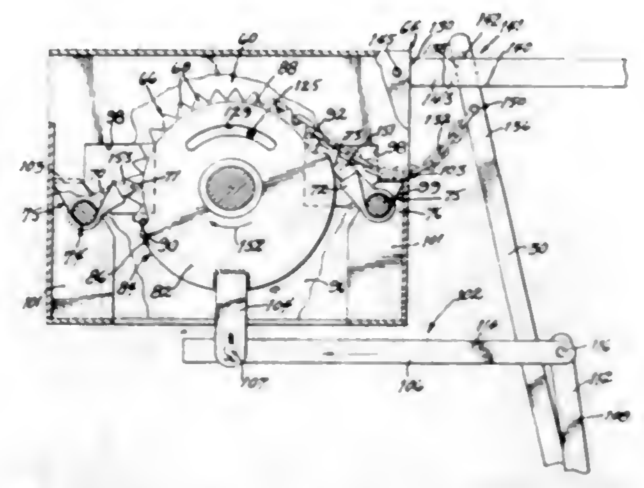
Wallace M. J. Cairns and Leslie C. Chouings, Warwickshire, England, assignors to Automotive Products Company Limited, Warwickshire, England
Filed Sept. 19, 1966, Ser. No. 580,219
Claims priority, application Great Britain, Sept. 28, 1965, 41,188/65
7 Claims. (Cl. 188—195)

An internal shoe drum brake for a vehicle wheel comprising a brake drum and a back plate, a pair of oppositely disposed brake shoes secured to said back plate and adapted to engage said brake drum including a leading brake shoe and a trailing brake shoe, liquid pressure wheel cylinder means disposed between one end of said shoes, a pair of piston means in said cylinder means adapted to act against said brake shoe ends to cause said shoe ends to engage said brake drum when a liquid pressure force is applied thereto, a brake shoe abutment housing disposed between the opposite ends of said leading and trailing brake shoes and in contact with said opposite brake ends, and resilient force applying means in contact with said abutment housing means and urging said housing means into engagement with the adjacent end of said leading shoe, and stop means on one of said piston means to limit the travel of said one piston means against said one end of said leading brake shoe, whereby the resistance of said resilient means will vary with the load supported by the vehicle wheel on which the brake acts and said stop means prevents further increase of the force applying load.



3,386,539
TWO-WAY AUTOMATIC BRAKE ADJUSTER ARRANGEMENT FOR HOPPER CARS

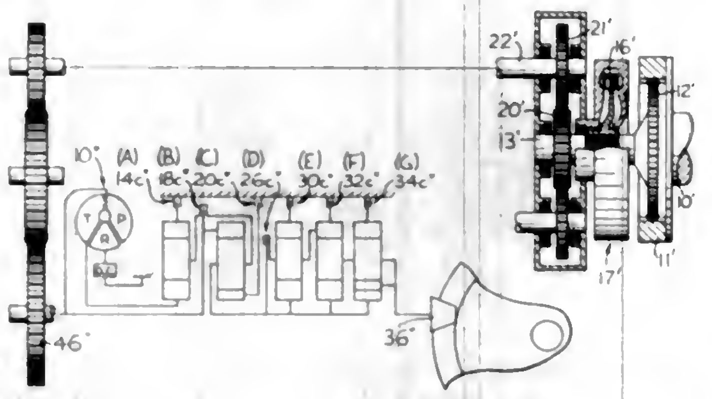
Thomas J. Macku, Bourbonnais, and Eldred H. Natschke, Worth, Ill., assignors to Universal Railway Devices Co., a corporation of Delaware
Filed Apr. 19, 1967, Ser. No. 632,094
3 Claims. (Cl. 188—198)



This invention relates to a brake adjuster arrangement for hopper cars arranged for automatic operation in both slack take up and let out directions and having the adjuster itself mounted at the end of the car under the end slope sheet but well above the center sill of the car. The brake adjuster itself includes a pair of control pawls cooperating with a ratchet wheel keyed to the drum and operated by a cam plate coupled to the rigging through a trigger mechanism that controls the positioning of the cam plate and thus the operation of the pawls in releasing the drum for movement in slack take up and let out directions and holding same against such movement during operation of the rigging. The adjuster arrangement involves an adjuster of this type mounted at each end of the hopper car in association with separate brake rigging for the wheels of each car truck, including a brake cylinder and cylinder lever for each adjuster, with the brake cylinders being operated through a common air reservoir.

3,386,540
TRANSMISSION AND CONTROL SYSTEM THEREFOR

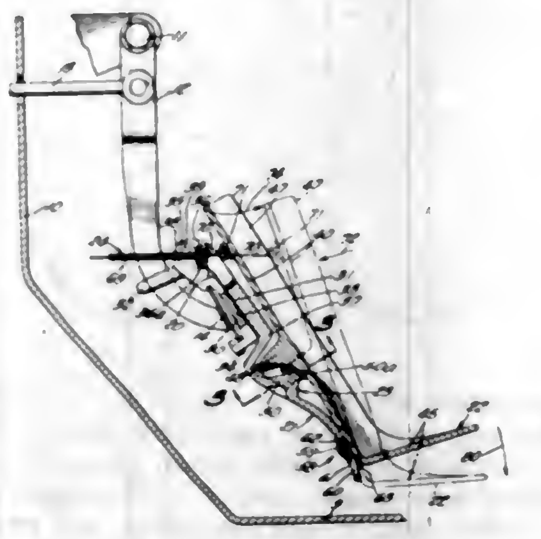
Joachim Horsch and Hugh C. Morris, Peoria, Shairyl I. Pearce, East Peoria, and Gerald D. Rohweder, Peoria, Ill., assignors to Caterpillar Tractor Co., Peoria, Ill., a corporation of California
Filed Jan. 18, 1966, Ser. No. 521,320
28 Claims. (Cl. 192—.09)



A multispeed transmission and control system combination including a selectively engagable torque converter and hydrodynamic retarder, the control system selectively engaging the multispeed transmission in each selected condition of operation by separate drive establishing means and including separate means for modulating the fluid pressure rise in one drive establishing means at a rate different than the other drive establishing means wherein the hydrodynamic retarder is positioned between the engine driven shaft and torque converter.

3,386,541
BRAKE-ACCELERATOR DEVICE

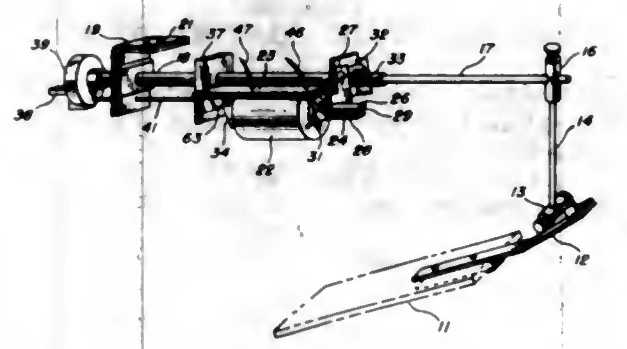
Hermanus N. Luijt, 4105 Glencoe Ave., Venice, Calif. 90291
Continuation-in-part of application Ser. No. 320,085, Oct. 30, 1963. This application Mar. 21, 1966, Ser. No. 535,895
17 Claims. (Cl. 192—3)



An apparatus having a foot pedal for selectively operating both the brake and accelerator of an automobile or the like by selective movement of the pedal where the pedal is mounted on a supporting base for longitudinal heel-toe movement and perhaps pivotal movement relative to the base with such movements causing actuation of the accelerator and a cam arrangement between the pedal and supporting base to automatically return the pedal to a non-accelerator-applying position when the pedal is urged in the natural, forward brake-applying direction whereby braking is accomplished by movement of the base.

3,386,542
ACCELERATOR SET AND RELEASE MECHANISM

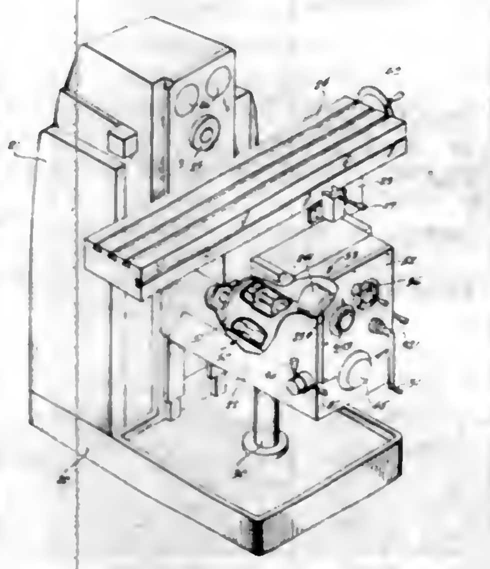
Warren M. Cummings, 3807 44th St., San Diego, Calif. 92105
Filed Mar. 14, 1966, Ser. No. 534,032
4 Claims. (Cl. 192—3)



An accelerator set and release mechanism comprising a rod adjustably attached to a vehicle accelerator, a slip tube frictionally and slidably engaged with a fixture in the automobile dashboard, the rod slidably carried by the slip tube, a one end of the rod being notched which cooperates with a recess and latch mechanism in the slip tube for setting the relative position of the rod and the slip tube and thereby setting the depression of the accelerator pedal. The amount of depression being determined by the position of the slip tube with its fixture on the automobile dashboard; a hand release mechanism attached to the slip tube, a solenoid release mechanism actuated by the brake light switch of the automobile.

3,386,543
MACHINE TOOL TRANSMISSION AND CONTROL MECHANISM

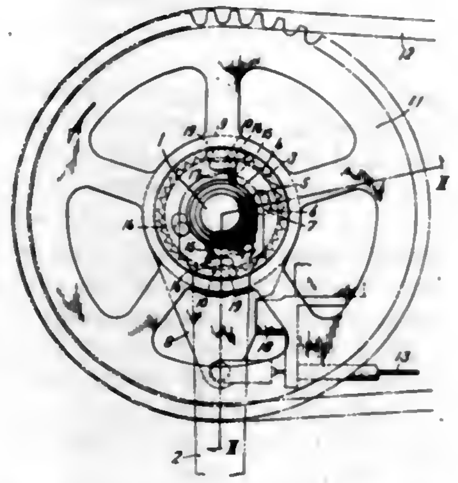
John G. Osburn, Milwaukee, Wis., assignor to Kearney & Trecker Corporation, West Allis, Wis., a corporation of Wisconsin
Filed Sept. 8, 1965, Ser. No. 485,783
6 Claims. (Cl. 192—3.5)



Interposed between the feed drive motor and the gearing of a shiftable feed transmission is a hydraulic clutch which is normally operable to connect the feed motor to the input of the transmission. The transmission includes hydraulic shifters to effect selective shifting of the shiftable transmission gearing. A rotary feed selector valve is utilized to effect the desired actuation of the hydraulic shifters for obtaining the proper gear combination for a desired output feed rate of the transmissioin. Included in the hydraulic circuit is a time delay valve which is automatically operable to provide a slight lead time for the hydraulic shifters to complete their operation in effecting the proper gear shift combination prior to the hydraulic clutch being energized to connect the feed motor output to the input of the transmission. This insures that gear shifting will be fully completed prior to the motor output being connected to the transmission input.

3,386,544
RATCHET TYPE COASTER BRAKE APPARATUS

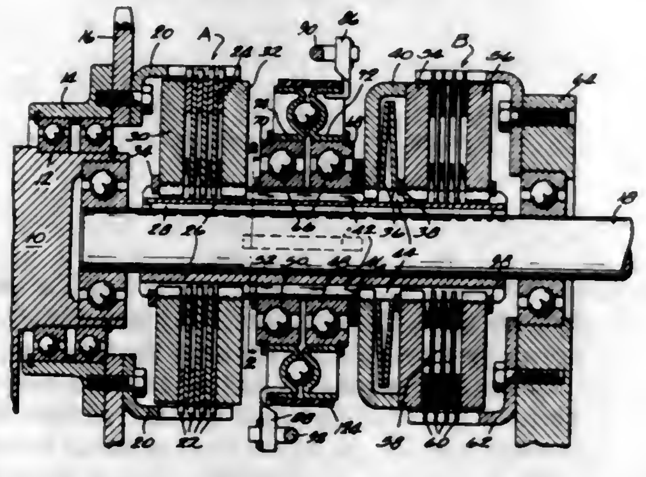
Minoru Matsuda, Tokyo, Japan, assignor to Kabushiki Kaisha Honda Gijutsu Kenkyusho, Kita-adachi-gun, Siatama-ken, Japan
Filed July 6, 1966, Ser. No. 563,226
Claims priority, application Japan, July 7, 1965, 40/40,313
9 Claims. (Cl. 192—6)



Brake apparatus for a two wheel vehicle with pedals in which a drive member operated by the pedals operates to drive a driven member with play and is engageable with a brake operating member through a ratchet mechanism which is automatically switched between an operative and an inoperative condition when the relative position of the drive member and the driven member is respectively delayed and advanced in phase within the range of said play as caused by forward or backward drive of the pedals by the operator.

3,386,545
ALTERNATIVELY OPERABLE COUPLINGS WITH INTERVENING ACTUATOR ENCIRCLING THRUST ROD IN SPLINE OF HUB

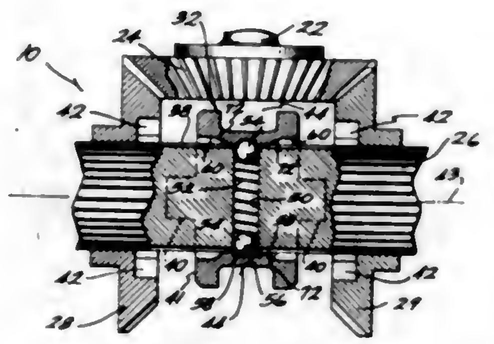
Quinten A. Hansen, 4338 Highway 38, Franksville, Wis. 53126
Filed May 18, 1966, Ser. No. 551,098
8 Claims. (Cl. 192—18)



Two couplings have disks splined to the same hub, their pressure plates being engaged by an intervening thrust rod reciprocable through one of the splines. The couplings are actuated in one direction by spring bias and in the other by a ball cam encircling the thrust rod.

3,386,546
REVERSIBLE CLUTCH TRANSMISSION

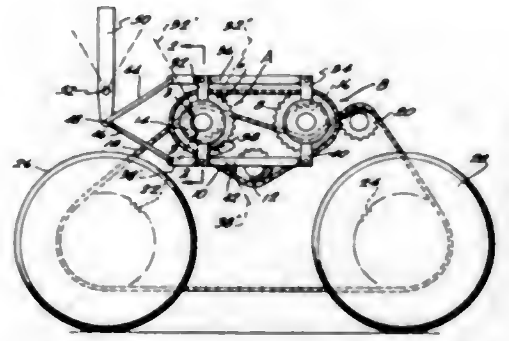
Adolph J. Yourich, Waukegan, Ill., assignor to Outboard Marine Corporation, Waukegan, Ill., a corporation of Delaware
Filed Mar. 2, 1966, Ser. No. 531,156
6 Claims. (Cl. 192—51)



Disclosed herein is a marine propulsion device having a shifter dog for selectively and respectively providing driving engagement with a pair of spaced driving gears in response to engagement of said shifter dog with said drive gears, together with detent means for holding said shifter dog in a neutral position and for affording movement of said shifter dog from said neutral position upon application of an external force on said shifter dog above a predetermined amount, and ramp means cooperating with a portion of said detent means to afford rapid movement of said shifter dog into selective respective engagement with said drive gears in response to application of said force.

3,386,547
ALTERNATELY OPERATED FORWARD AND REVERSE CAM CLUTCHES

Quinten A. Hansen, 4338 Highway 38, Franksville, Wis. 53126
Filed May 17, 1966, Ser. No. 550,757
4 Claims. (Cl. 192—51)

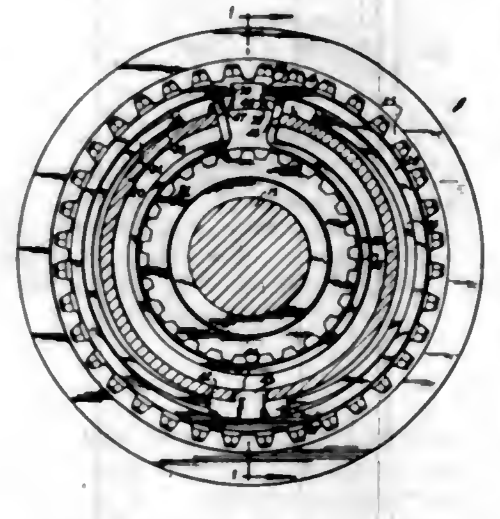


For concurrent actuation of a plurality of clutches in alternation with each other, oppositely acting ball cams are controlled by a single lever and so designed that each cam actuates its respective clutch to a neutral position midway of the range of cam movement, and retains the actuated clutch in neutral pending the reverse movement effected by the other clutch controlled by the lever.

In the preferred organization, whether applied to a single clutch or multiple clutches, the driving friction developed in the clutch is made to depend directly upon the pressure exerted by the operator on the controlling lever. Particularly when the clutch is used to control a motor vehicle, this gives a desirable "feel," meaning that the operator is able to determine tangibly by the tension he exerts on the clutch control lever the approximate effect produced by the clutch. This is particularly effective in a combination in which the clutch is actuated by a rolling ball type of cam.

3,386,548
SYNCHRONIZER CLUTCH MECHANISM WITH SPRING TO RETURN BLOCKER TO NEUTRAL

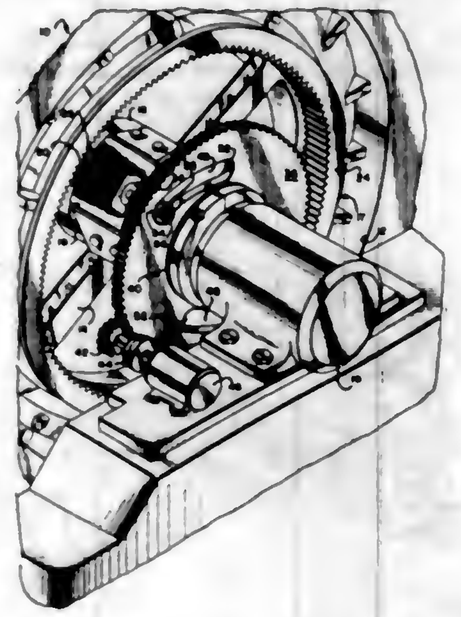
Clevoe D. Jones, Franklin, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed May 2, 1966, Ser. No. 546,858
5 Claims. (Cl. 192—53)



This specification describes a synchronizer clutch mechanism for use in a torque delivery gear system. The clutch mechanism includes engageable clutch parts having internal and external teeth. A blocker ring engages one clutch part as it is shifted toward engagement with the other clutch part. This causes a tangential friction force on the synchronizer ring which is transmitted to the other clutch part, thereby establishing synchronism in the motion of the clutch parts prior to completion of the clutching action. Spring means is included in the mechanism for rotating one clutch part with respect to the other to a neutral position in which the teeth of the clutch parts are aligned.

3,386,549
MINE HOIST CLUTCH

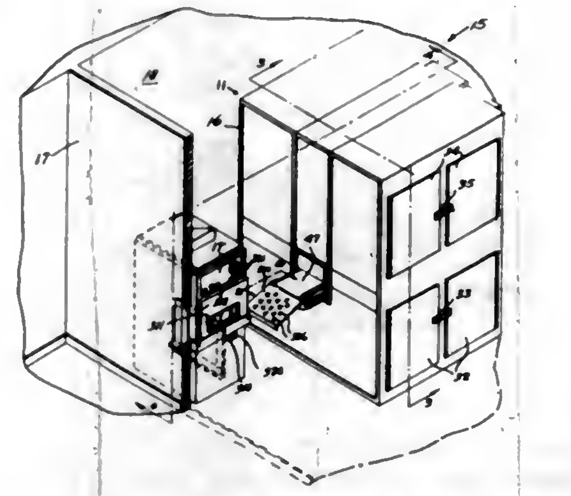
Bruce P. Clarke, Lennoxville, Quebec, Canada, assignor to Canadian Ingersoll-Rand Company, Limited, Montreal, Quebec, Canada, a Canadian corporation
Filed Jan. 6, 1966, Ser. No. 519,120
3 Claims. (Cl. 192—71)



A clutch mechanism for interconnecting a hoist drum to a drive shaft and including a radially slidable jaw block, a gear plate journalled on the drive shaft and containing an eccentric slot, a cam follower connected between the eccentric slot and the jaw block for moving the jaw block radially as the gear plate is rotated on the drive shaft, and a drive motor for selectively rotating the gear plate relatively on the drive shaft.

3,386,550
AUTOMATIC ELECTRONIC MICROWAVE COOKING AND VENDING MACHINE

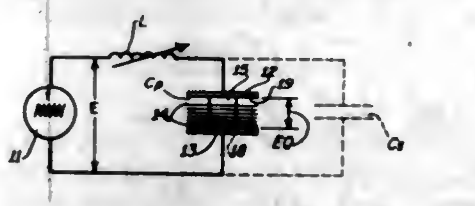
William R. Murray and William O. Murray, both of P.O. Box 88, Frankford, Del. 19945
Filed Nov. 15, 1966, Ser. No. 594,582
24 Claims. (Cl. 194—10)



1. A food article-dispensing machine comprising an oven having horizontally-reciprocable food article-receiving sliding tray means, means to at times moves said sliding tray means to an outwardly-extending position, conveyor means located to deliver food articles to said sliding tray means, means to activate said conveyor means, means to retract said sliding tray means into said oven for a predetermined period of time responsive to the activation of said conveyor means, and means to return said sliding tray means to an outwardly-extending position at the expiration of said predetermined period of time.

3,386,551
METHOD OF AND APPARATUS FOR USING RADIO OR HIGH FREQUENCY ENERGY TO PRODUCE PRINTED MATTER

Anthony D'Onofrio, West Hartford, Conn., assignor to Litton Business Systems, Inc., a corporation of New York
Continuation of application Ser. No. 448,051, Apr. 14, 1965. This application Nov. 14, 1966, Ser. No. 594,263
17 Claims. (Cl. 197—1)



A method and apparatus for recording printed matter in polar dielectric sheet material by directing high frequency alternating electric fields set up between electrodes through the sheet material to dielectrically heat the material. Character patterns define preferential paths for the electric field through discrete cross sections of the sheet material whose area configuration in the plane of the sheet material is that of a selected character pattern to provide a potential gradient across the discrete cross sections which will dielectrically heat the discrete cross sections to recording temperature in a predetermined time.

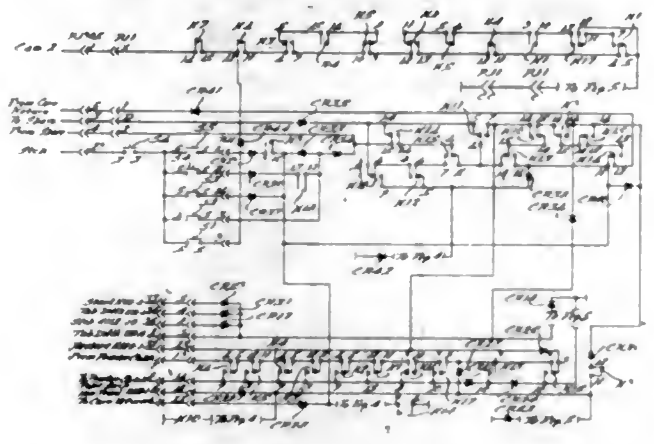
3,386,552

DATA EDITING AND REVISION SYSTEM WITH MARGIN CONTROL

Harold Lorber, Dayton, Ohio, and James D. Bungard, East Detroit, Thomas J. Hartley, Roseville, and Gerald J. Wensley, Warren, Mich., assignors, by mesne assignments, to Intercontinental Systems, Inc., Los Angeles, Calif., a corporation of California

Filed Feb. 17, 1966, Ser. No. 528,177

22 Claims. (Cl. 197—20)



There is herein disclosed apparatus for controlling the righthand margin of lines of type and apparatus for stopping an automatic typing operation upon the occurrence of predetermined grammatical conditions in the text being typed.

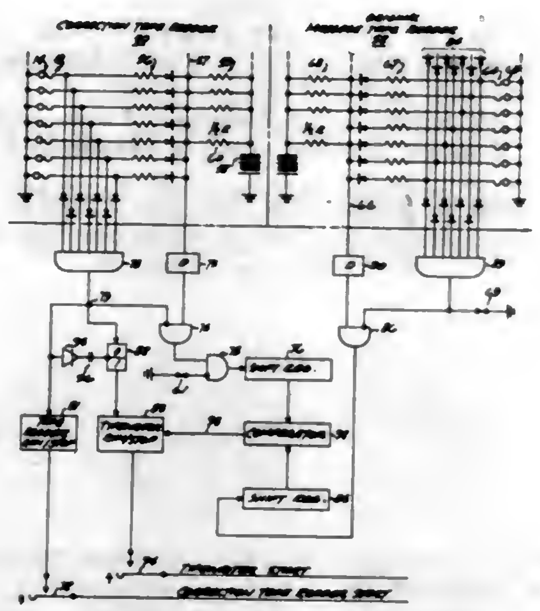
3,386,553

EDITORIAL CORRECTING TYPEWRITER UTILIZING DATA SEARCH AND INFORMATION RETRIEVAL TECHNIQUES

James Warren Whitesel, Western Springs, Ill., assignor to International Telephone and Telegraph Corporation, New York, N.Y., a corporation of Delaware

Filed Apr. 26, 1967, Ser. No. 633,905

10 Claims. (Cl. 197—20)



A typist stores a memory of data identifying a particular piece of typing. Then, she feeds a perforated tape into an automatic typewriter. Responsive to the command signals appearing on the tape, the typewriter types out until it comes to the piece of typing identified by the stored data. At that point, the typewriter stops, and she makes the necessary corrections.

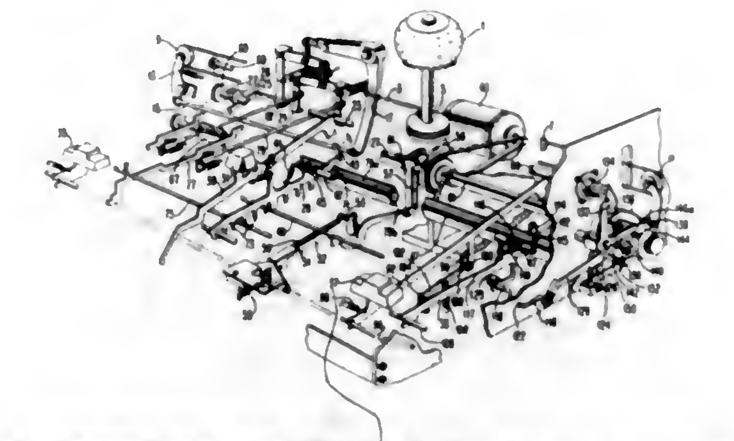
3,386,554

SHIFT-PRINT INTERLOCK

Paul R. Everhard, Lexington, Ky., assignor to International Business Machines Corporation, Armonk, N.Y., a corporation of New York

Filed Feb. 27, 1967, Ser. No. 618,691

14 Claims. (Cl. 197—71)



In the preferred embodiment shown structures are illustrated to prevent a printing function from being initiated once a case shift function is begun and vice-versa. A shift interposer is latched forward until it is freed by operation of a shift key. Depression of a shift key frees the shift interposer to move backward under the influence of a spring. Movement of the shift interposer causes it to enter a ballsometer interlock and to rotate a linkage which frees a cycle clutch to thereby initiate a shift operation. The cycling shift mechanisms carry two cams. The upper case cam is conformed to push the shift interposer out of the interlock and into a temporarily latched position which holds while the shaft key is down, but not into a fully latched position. The lower case cam is conformed to push the shift interposer both out of the interlock and into the fully latched position. Both cams push the linkage so that the linkage disengages the shift clutch after one shift cycle. When printing occurs before a shift operation, the ballsometer intrlock is initially effective and a cam on the pint shaft prevents movement of the shift interposer at a time well into the print cycle.

3,386,555

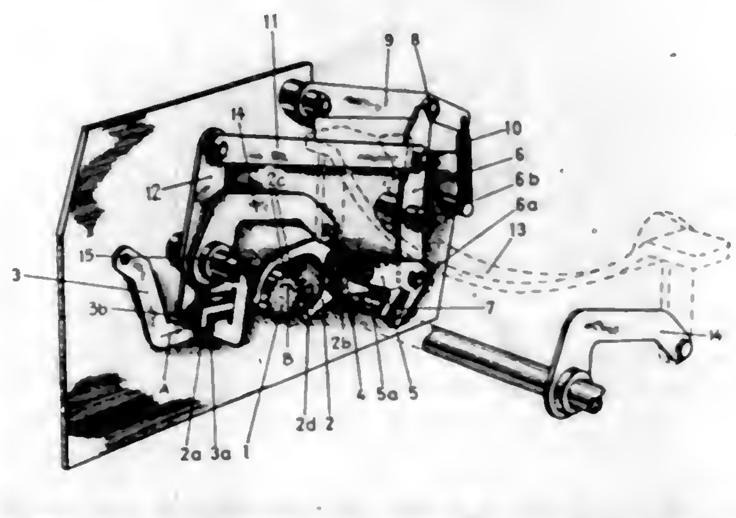
POWERED CASE SHIFT HAVING OVERCENTER SPRING

John Emil Stroberg, Svangsta, Sweden, assignor to Facit-Halda AB, Svangsta, Sweden, a Swedish joint-stock company

Filed Dec. 19, 1966, Ser. No. 602,976

Claims priority, application Sweden, Dec. 17, 1965, 16,369/65

2 Claims. (Cl. 197—74)



The within disclosure describes a simple and reliable mechanism for shifting the type basket of a typewriter from a lower to an upper case position, and vice versa, which mechanism is adapted to be used in a motor driven typewriter of the type having a toothed snatch roll normally used for actuating the type bars. The disclosure includes a mechanism which is particularly advantageous since it includes a simple, reliable over-center spring mechanism for reversing the position of a switch hook adapted to engage the snatch roll to initiate the shift, as well as a second overcenter spring mechanism for completing the shift movement initiated by the switch hook.

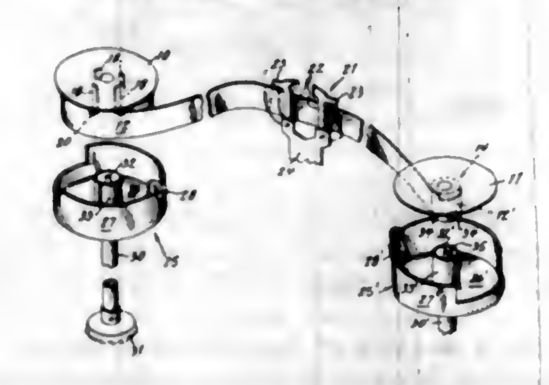
3,386,556

RIBBON PACKAGING DEVICE

Hugh St. L. Dannatt, Rochester, N.Y., and Jerome R. Fuld, Trumbull, Conn., assignors to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware

Filed Jan. 3, 1966, Ser. No. 518,074

1 Claim. (Cl. 197—151)



A printing ribbon packaging device comprising a spool for storing the ribbon in a coiled configuration. The spool is easily separated into a pair of individual units which cooperate with appropriate receptacles of a printing mechanism to function as supply and take-up reels for the ribbon as it feeds past a work station. Each end of the ribbon is attached to one of a pair of hub members which cooperate uniquely with each other to form the spool or with the receptacles when the ribbon is to be disposed in a work environment.

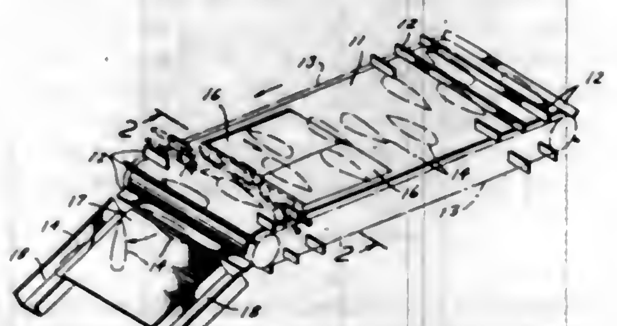
3,386,557

METHOD AND APPARATUS FOR ORIENTING ELONGATED TAPERED AGRICULTURAL PRODUCTS

Edward E. Ross, Lafayette, Calif., Jack Cunningham, Pittsburgh, Pa., and Fred Hartman, Toppenish, Wash., assignors to California Packing Corporation, San Francisco, Calif., a corporation of New York

Continuation-in-part of application Ser. No. 394,486, Sept. 4, 1964. This application Apr. 6, 1967, Ser. No. 628,971

6 Claims. (Cl. 198—30)



A method and apparatus for orienting elongated tapered agricultural products (e.g., corn). The products are conveyed over a table and then deposited upon the upper end of an inclined roll surface. While being conveyed along the table surface the products are arranged to control the areas of the roll surface upon which the products are deposited. The products roll down the roll surface in an arcuate manner and are received in means located along the side edges of the roll surface, with their largest ends pointing downwardly.

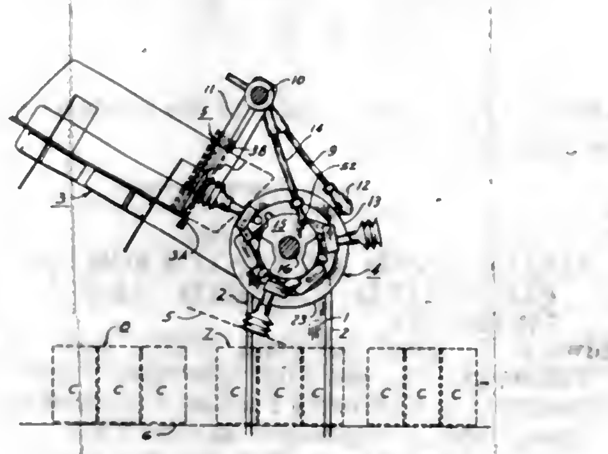
3,386,558

FEEDER MECHANISM

Victor Benatar, Atlanta, Ga., assignor to The Mead Corporation, a corporation of Ohio

Continuation of application Ser. No. 530,151, Feb. 25, 1966. This application May 23, 1967, Ser. No. 640,756

6 Claims. (Cl. 198—25)



A mechanism for feeding items such as carbon blanks from a hopper is of the rotary type and is provided with one or more suction cups spaced about its periphery for sequentially engaging the items to be fed. Each suction cup is manipulated while rotating both in a radial and in an angular direction and its path of movement momentarily arrested by means of a rotatable driving element which is interconnected with an elongated driven element at one end thereof by a pivotal connection, each suction cup being securely affixed to and movable with its driven element in such manner that each increment of movement of the driven element is imparted to the suction cup. Controlled angular, rotary and radial movement is imparted to the driven element and to the suction cup by means of a cam surface formed in a fixed cam disposed adjacent the path of movement of the driven element and in which a cam follower is arranged to ride, the cam follower being affixed to the driven element intermediate the ends thereof. Pneumatic suction is applied to the suction cups sequentially, suction pressure being supplied to the suction cups by cooperating cavities one of which is arranged with a pair of sub-chambers interconnected by a bleed port whereby vacuum pressure is quickly restored following partial loss thereof to improper contact between a suction cup and its associated blank during a feeding operation.

3,386,559

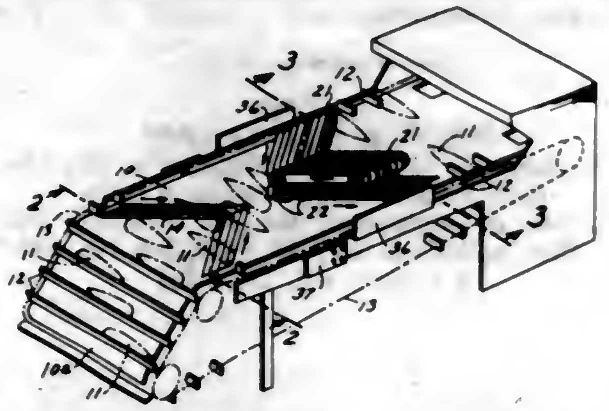
APPARATUS FOR ORIENTING ELONGATED TAPERED AGRICULTURAL PRODUCTS

Edward E. Ross, Lafayette, Calif., Jack Cunningham, Pittsburgh, Pa., and Fred Hartman, Toppenish, Wash., assignors to California Packing Corporation, San Francisco, Calif., a corporation of New York

Continuation-in-part of application Ser. No. 394,486, Sept. 4, 1964. This application Apr. 6, 1967, Ser. No. 628,972

9 Claims. (Cl. 198—30)

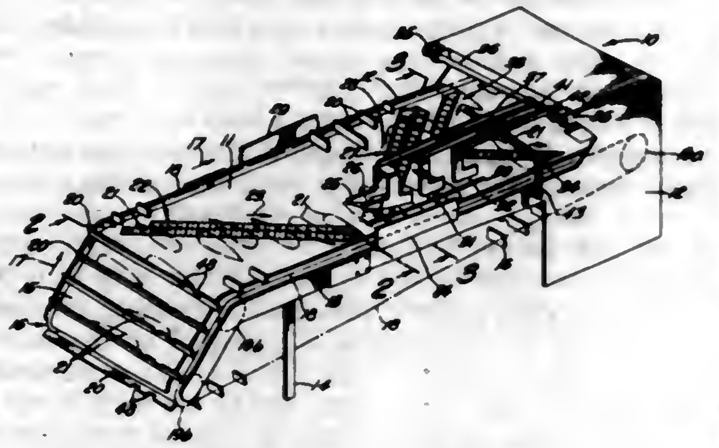
Apparatus for orienting elongated tapered agricultural products (i.e., corn). The products are moved across the upwardly faced surface of a table with their axes lateral to the direction of conveying movement. A second conveying means arranges the products in a row at the middle of the table, and a third conveying means selectively moves the products to the sides of the table in accordance with their endwise orientation. The means for the last operation employs spaced endless belt conveyers



which engage opposite sides of the products at their largest diameter ends.

3,386,560
METHOD AND APPARATUS FOR ORIENTING ELONGATED TAPERED AGRICULTURAL PRODUCTS

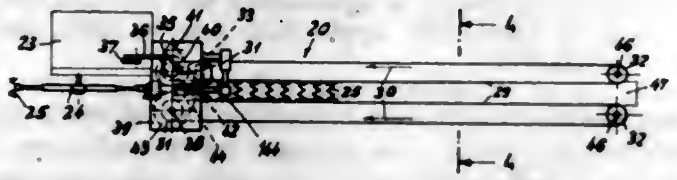
Edward E. Ross, Lafayette, Calif., Jack Cunningham, Pittsburgh, Pa., and Fred Hartman, Toppenish, Wash., assignors to California Packing Corporation, San Francisco, Calif., a corporation of New York
Filed Apr. 6, 1967, Ser. No. 628,973
40 Claims. (Cl. 198—31)



Method and apparatus for orienting elongated tapered agricultural products (e.g., unhusked corn). The products are moved one after the other through a sensing region where sensing means detects their orientation. Depending upon their orientation the products are separated into two groups, each having the largest diameter ends of the products pointing in the same direction.

3,386,561
MACHINES FOR MANUFACTURING SPRING INTERIORS

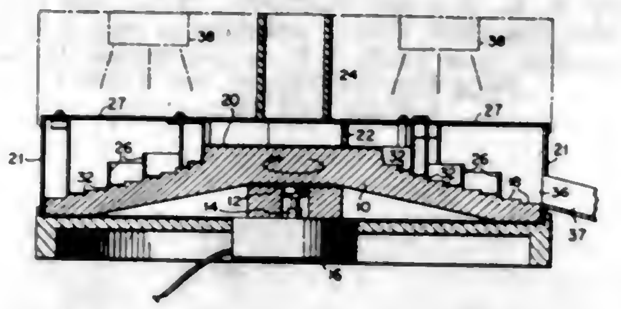
Walter Spühl, Saint Gall, Switzerland, assignor to Spuhl A.-G., Saint Gall, Switzerland
Filed Mar. 3, 1967, Ser. No. 620,370
Claims priority, application Germany, July 12, 1966, S 104,756
10 Claims. (Cl. 198—32)



Apparatus for feeding a row of coil springs to a spring interior manufacturing machine has a pivoted arm which picks up springs one at a time from a spring manufacturing apparatus and wedges them between a pair of stepwise driven endless belts. A plurality of grab arms pick up a row of springs simultaneously from the belts and presents this row for acceptance by a spring interior manufacturing machine.

3,386,562
APPARATUS FOR INVERTING GRANULAR ARTICLES, SUCH AS COFFEE BEANS

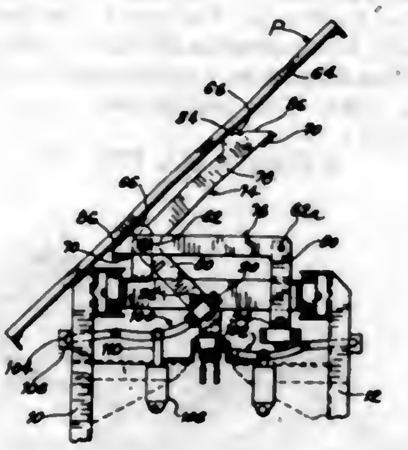
Harry L. Miller, 647 Magnolia Ave., Larkspur, Calif. 94939
Filed Mar. 14, 1967, Ser. No. 623,039
7 Claims. (Cl. 198—33)



An apparatus for inverting granular articles such as coffee beans as it conducts them along a predetermined path while subjecting them to radiant heat. The apparatus comprises a rotating table plate whose upper surface is formed into a plurality of coaxially arranged annular terraces cascading downwardly from an elevated center area towards the periphery of the table. Stationary semicircular fenders are arranged along the edges of the terraces at angularly displaced sectors thereof, and stationary deflection means are provided intermediately of said fenders. The granular articles are fed onto the elevated center area. The deflection means extend into the path of the approaching articles on the rotating terraces and topple them onto a lower terrace where they land in inverted position.

3,386,563
MACHINE FOR THE SORTATION OF MAIL AND OTHER PACKAGES

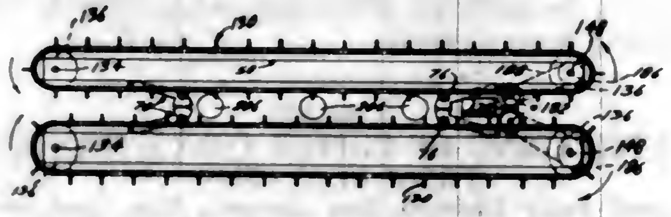
John Harrison, Lincolnwood, Ill., assignor to The Spra-Con Company, Chicago, Ill., a corporation of Illinois
Filed Dec. 19, 1966, Ser. No. 602,810
15 Claims. (Cl. 198—155)



The invention is addressed to an endless conveyor having a plurality of trucks transported therewith on which trays are mounted for rocking movement in either direction crosswise of the truck to tilt the trays for delivery of the mail or packages to selected stations. The improvement resides in the construction and mounting of the trays on the trucks whereby the trays are supported at their corner portions in position of rest and whereby the trays are tilted responsive to actuation means and shiftable into and out of operative position and whereby the tilting movement of the tray occurs about axes adjacent the lateral edges of the tray for minimizing the portion of the tray extending below the axis when in tilted position and to locate the center of gravity of the tray inwardly of the axis continuously to return the tray to the position of rest. The mounting of the tray on the supporting truck is in a manner which enables lifting of the tray from the truck for replacement or repair and which provides for a low silhouette to minimize the head room required for the sortation machine.

3,386,564
FEED TABLE

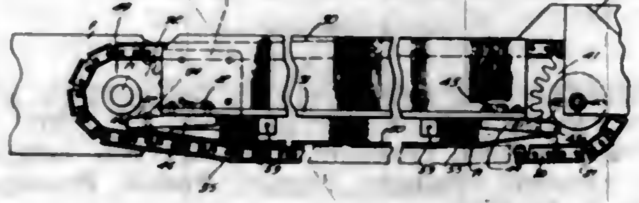
Lionel Pease, Seattle, Wash., assignor, by mesne assignments, to Thomas W. Secrest, Seattle, Wash., as trustee of the Creditors Committee of Mill Equipment Inc.
Continuation-in-part of abandoned application Ser. No. 339,504, Jan. 22, 1964. This application Apr. 23, 1965, Ser. No. 456,019
12 Claims. (Cl. 198—162)



This invention relates to a feed table or a feed mechanism for introducing small logs to log processing equipment. The feed table has means to accommodate logs of various sizes and configurations.

3,386,565
HOLD-DOWN BELT FOR LABELING MACHINES

Sidney T. Carter, Shrewsbury, Mass., assignor to Geo. J. Meyer Manufacturing Co., Cudahy, Wis., a corporation of Wisconsin
Filed Oct. 20, 1965, Ser. No. 498,538
4 Claims. (Cl. 198—162)

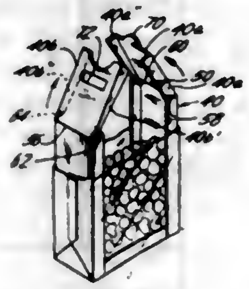


A hold-down belt as a constituent element of a labeling machine wherein a bottle, standing upright, is advanced by a conveyor toward and through a labeling zone while the hold-down belt applies downward pressure to the top of the bottle to prevent the latter from tipping, and wherein that surface of the hold-down belt which contacts the top of the bottle is flat and horizontal, and of a hard material of so low a coefficient of friction that the bottle may be oriented about its vertical axis without relieving the downward pressure applied by the belt.

3,386,566
PACKAGE

Jesse R. Pinkham, Winston-Salem, N.C., assignor to R. J. Reynolds Tobacco Company, Winston-Salem, N.C., a corporation of New Jersey
Filed Jan. 12, 1966, Ser. No. 520,244
8 Claims. (Cl. 206—45.33)

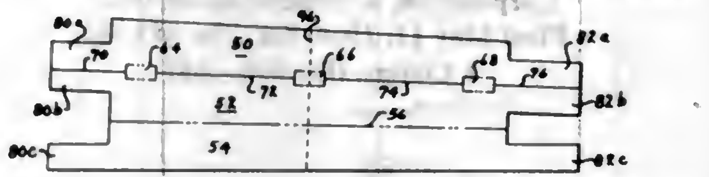
5. A package comprising:
- (a) a strip of bendable material defining a girth of the package and scored with transverse score lines to include an intermediate panel defining a first end of the package, side panels defining sides of the package, and first and second end panels defining a second end of the package opposite from the first end;
- (b) said first end panel of said strip including an outwardly extending tab;
- (c) said second end panel of said strip including a cut-out portion which receives said tab to close the second end of said package;



- (d) the distance between said tab and the adjacent one of said transverse score lines plus the distance between said cut-out portion and the transverse score line adjacent thereto being greater than the width of the package measured at said first end thereof, said width being defined by the distance between adjacent transverse score lines in the mid portion of said strip bounding said intermediate panel.

3,386,567
SHIPPING SUPPORT STRUCTURE FOR BATHTUBS AND BLANKS THEREFOR

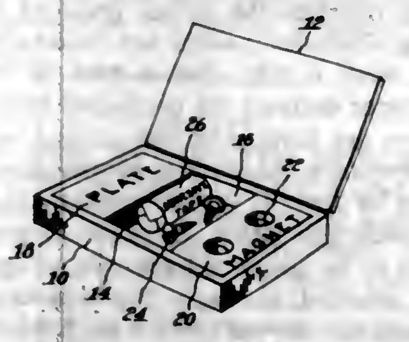
Richard Keith Smith, Benton Harbor, Mich., assignor to Twin Cities Container Corporation, Coloma, Mich., a corporation of Michigan
Filed May 29, 1967, Ser. No. 641,865
12 Claims. (Cl. 206—46)



A protective support for a bathtub designed for use with a shipping container or wrapper and consisting of three parallel, vertically positioned sections of corrugated fiberboard material for supporting the tub in the container. The structure includes tabs for retaining the structure in vertical position with the rear legs of the bathtub suspended from the bottom of the container or wrapper.

3,386,568
MAGNET KIT

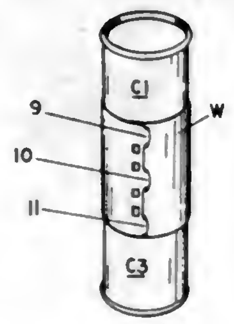
Ruby L. Harmon, Box 142, La Salle, Ill. 61301
Filed June 22, 1967, Ser. No. 648,027
5 Claims. (Cl. 206—47)



A kit containing a magnet, metal plate, screws and adhesive tape.

3,386,569
CAN WRAPPER

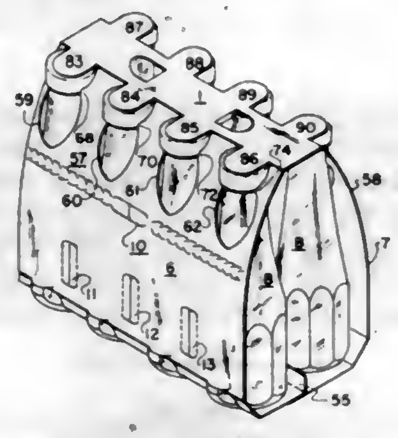
Hermond G. Gentry, Atlanta, Ga., assignor to The Mead Corporation, a corporation of Ohio
Filed Apr. 14, 1966, Ser. No. 542,530
3 Claims. (Cl. 206—65)



A wrapper is provided along its side edges with inwardly protruding holding tabs for engaging the end flanges of end-to-end primary packages so as to hold such packages in coaxial relation and a locking aperture is formed in one end of the wrapper blank which receives a locking tongue forming a part of the other end of the wrapper blank. One or more locking tabs are struck from the wrapper blank adjacent the locking tongue and are folded transversely with respect thereto so that the side edges thereof engage a locking edge of the associated locking aperture when the tongue is inserted therein.

3,386,570
ARTICLE CONTAINER HAVING INTEGRAL ARTICLE PROTECTING MEANS

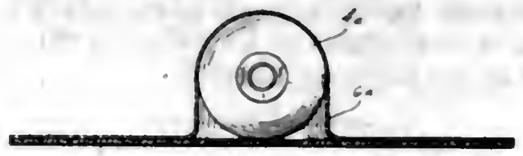
Joseph H. Lock, Mableton, Ga., assignor to The Mead Corporation, a corporation of Ohio
Filed May 11, 1966, Ser. No. 549,368
2 Claims. (Cl. 206—65)



A sleeve type open ended wrapper is adapted for packaging tubular articles which are tapered and in which the top panel overlies the upper ends of the packaged items. Sloping shoulder panels are interrelated with the top panel in such a way that a part of the top panel overlies the upper ends of the packaged articles and elongated apertures are formed in the sloping panel and provided with inwardly projecting protrusions disposed in such a way as to prevent inward movement of the upper ends of the packaged items. In order to form the package, the items to be packaged are spaced apart and their upper ends inserted through the apertures following which the items are moved toward each other as the sloping panels and side walls are folded downwardly following which the bottom lap panels are secured together.

3,386,571
SKIN-PACKAGED ARTICLE

Herman G. Kraut, New Britain, Conn., assignor to The Stanley Works, New Britain, Conn., a corporation of Connecticut
Original application Nov. 19, 1963, Ser. No. 324,692, now Patent No. 3,289,384, dated Dec. 6, 1966. Divided and this application May 23, 1966, Ser. No. 552,038
5 Claims. (Cl. 206—80)



There is disclosed a novel skin curl-resistant composite package having an air-pervious paperboard substrate with an article of merchandise on its upper surface and a covering of thermoplastic film forming a sheath about the article and bonded to the substrate. The package is relatively curl resistant by having the fibers in the lower surface portion of the substrate oriented more parallel to the plane of the substrate and compacted to produce compensating stresses therein.

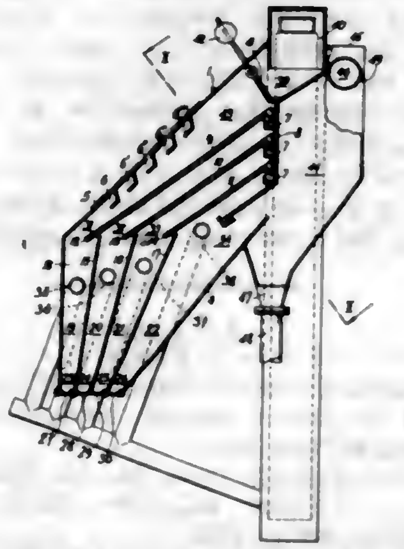
3,386,572
UPGRADING OF COPPER CONCENTRATES FROM FLOTATION

Edward Peter Cadwell, San Antonio, Tex., assignor to American Cyanamid Company, Stamford, Conn., a corporation of Maine
No Drawing. Filed Mar. 8, 1965, Ser. No. 438,119
7 Claims. (Cl. 209—3)

An iron containing copper ore is floated to yield a rougher copper concentrate which is upgraded by separating the rougher concentrate into sand and slime fractions. The sand fraction is conditioned with cyanides at high alkalinity, to remove the copper activation or filming on coarse pyrite particles, and permits the depression of a relatively copper-free pyrite product into a flotation tailing, and recovery of an upgraded copper fraction. The slime rougher fraction is treated by conventional flotation methods. The sands and slimes may be recombined after the cyanidation of the sands to permit floating the sands and slimes in a single operation.

3,386,573
APPARATUS FOR CONTINUOUS RECOVERY AND SEPARATION AND CLEANING OF GRIT

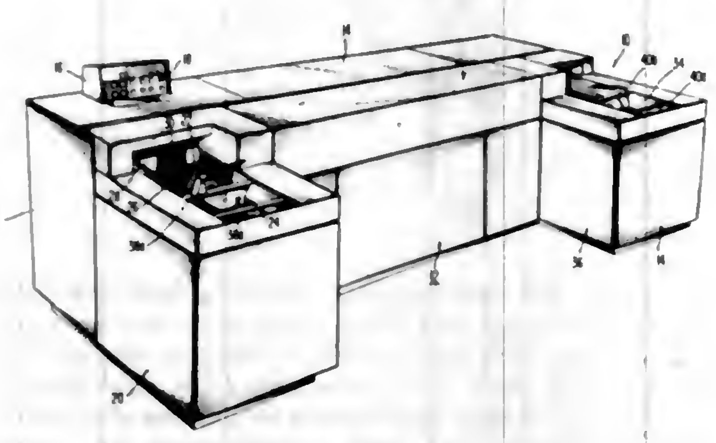
Bonifác Martinák, Prostejov, Czechoslovakia, assignor to Agrostroj Prostejov, Narodni Podnik, Prostejov, Czechoslovakia
Filed Feb. 21, 1967, Ser. No. 617,521
17 Claims. (Cl. 209—31)



Apparatus for the recovery and cleaning of grit used in the grit-blasting of metal objects which accomplishes the separation of contaminants from the grit particles by repeatedly passing the grit to be cleaned in a thin layer through a cleaning hopper and subjecting it therein to the separating action of an airstream, whereupon the airstream and material entrained thereby is itself subjected to further treatment for recovering grit particles entrained together with the contaminants.

3,386,574
HIGH SPEED ITEM HANDLING APPARATUS

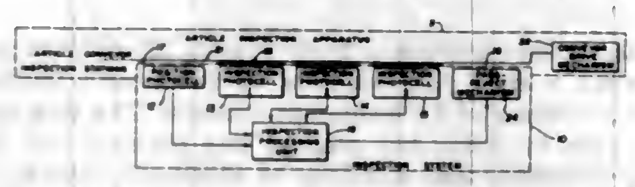
Donald E. Kaplan, Philadelphia, Pa., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed Dec. 14, 1965, Ser. No. 513,700
8 Claims. (Cl. 209—73)



The present invention relates to an electro-mechanical high speed item handling apparatus wherein there is provided a pair of pneumo-mechanical belt driven item feeders, each of which is capable of operation in either of two opposite item confronting positions, which are disposed on opposite sides of an item pathway extending between an input hopper and an output hopper. The item feeders are separated from one another by a confined guideway. Each item feeder includes a plurality of air and vacuum inlets and outlets operably associated with synchronously actuated rotary valves for opening and closing ports on each feeder face, and each is provided with means conjointly operable with the feeder control means for preventing multiple item feeds. The second of the two feeders includes a stopping mechanism located within the guideway and arranged to prevent item overlaps or multiple feeds.

3,386,575
INSPECTION SYSTEM FOR MULTI-STATION INSPECTION APPARATUS

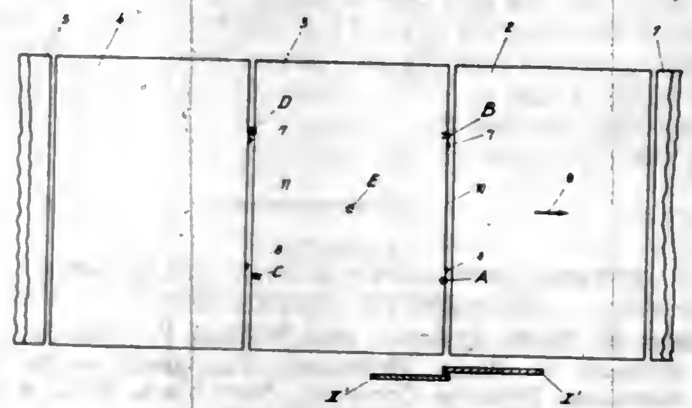
Richard M. Quinn, Muncie, Ind., assignor to Ball Brothers Company Incorporated, Muncie, Ind., a corporation of Indiana
Filed Apr. 18, 1966, Ser. No. 543,296
8 Claims. (Cl. 209—75)



1. An electronic inspection system for articles successively transferred to a plurality of inspection stations, said system comprising: first defect sensing means for sensing article defects at a first inspection station and producing an output signal indicative of article defect; at least one additional defect sensing means for sensing article defects at at least one subsequent inspection station and producing an output signal indicative of article defect; and electronic signal processing means including a plurality of cascaded electronic bistable means, position sensing means for sensing article transfer between inspection stations and providing an output signal indicative thereof, and timing means responsive to said output signal from said position sensing means for causing each said output signal from said defect sensing means to be shifted to the succeeding bistable means whenever article transfer occurs, said timing means causing transfer in a manner such that defect information is accumulated separately for each article inspected so that said electronic signal processing means produces a defect indicating output signal to reject an article if that article is sensed to be defective by any of said defect sensing means.

3,386,576
MACHINE FOR MANUFACTURING SACKS HAVING FOLDED BOTTOMS FROM TRANSVERSELY FED TUBE SECTIONS

Willy Niemeyer, Natrup-Hagen, Karl-Heinz Haneke, Tecklenburg, and Gottfried Espel, Lengerich, Germany, assignors to Windmoller & Holscher, North Rhine-Westphalia, Lengerich, Germany
Filed Feb. 7, 1966, Ser. No. 525,755
Claims priority, application Germany, Feb. 16, 1965, W 38,569
21 Claims. (Cl. 209—82)



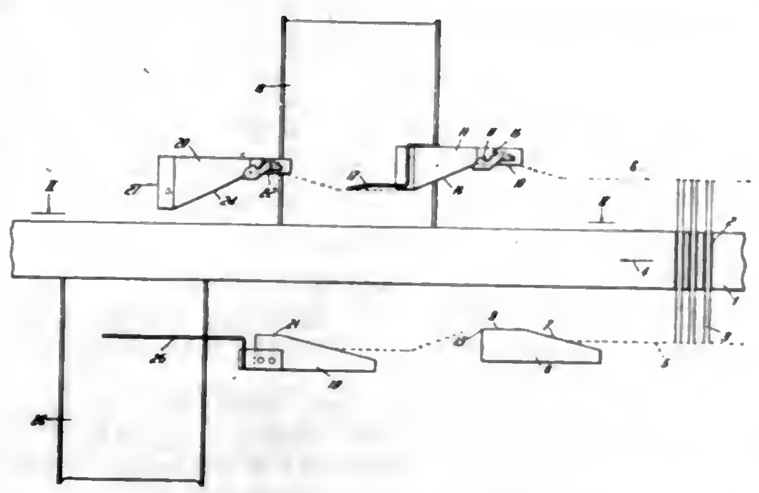
1. A machine for manufacturing sacks having folded bottoms, which sacks are made from transversely fed tube sections, particularly of plastic material, characterized by means which precedes the bottom-laying station and serves for automatically rejecting any tube section which differs from the desired width by more than a predetermined, allowable tolerance, said means consisting of a photoelectrical sensing station, at least one movable deflector, and electromagnetic means controlled in response to said sensing station and serving to reject defective tube sections, and wherein stops are provided to be engaged by one of the longitudinal edges of the tube section, preferably the leading edge of the tube section moving in the feeding direction, and signals indicating the actual passage of the other longitudinal edge of the tube section are compared in the photoelectric sensing station with two signals representing the desired passage times for the two tolerance limits of the respective longitudinal edge of the tube section.

3,386,577
METHODS AND APPARATUS FOR SORTING MEMBERS OF DIFFERENT LENGTHS

Maurice Alan William Nolan, Leeds, England, and Francis Anthony Murray, Montonette, Cork, Ireland, assignors to Chance Brothers Limited, Birmingham, England, a corporation of Great Britain
Filed June 22, 1966, Ser. No. 559,543
10 Claims. (Cl. 209—90)

1. A method of sorting from a series of members of different lengths being advanced on a conveyor those

members which differ in a given sense from a desired datum length, comprising the steps of advancing the members each in a transverse position on a conveyor, inclining from a horizontal position on the conveyor those members whose length exceeds a certain length, moving transversely of the conveyor those members which remain horizontal on the conveyor, and permitting the inclined members to resume a horizontal position on the conveyor so that the members having a length greater than the said certain length all project from one side of the conveyor beyond the members having a length equal to or less than the said certain length, the members of length equal to or less than the said certain length projecting beyond the members of the greater length on the other side of the conveyor.



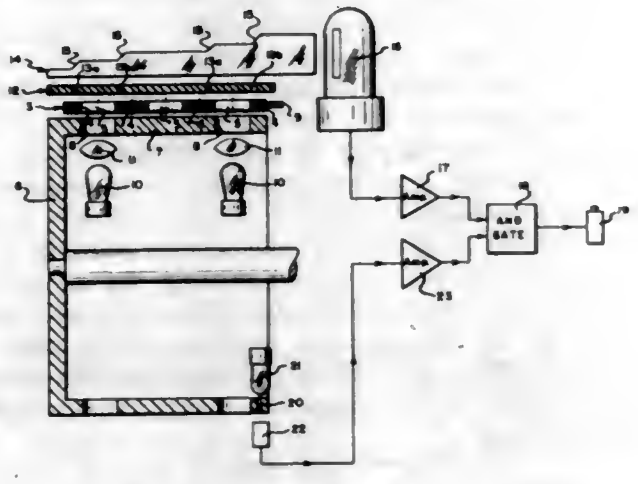
3,386,578

INSPECTION DEVICE FOR COMPOSITE CIGARETTE FILTER RODS

James H. Black, Quinton, and William P. Neal Jr., and Edward W. Reed, Richmond, Va., assignors to The American Tobacco Company, New York, N.Y., a corporation of New Jersey

Filed Nov. 5, 1965, Ser. No. 506,564

2 Claims. (Cl. 209—111.7)



An inspection device for detecting axially misplaced components of composite cigarette filter rods provides back illumination for the more translucent rod components and a tolerance mask having at least one opening so positioned that illumination of the translucent rod component is transmitted through the opening for detection whenever the translucent component is displaced axially of the rod from its proper position.

3,386,579

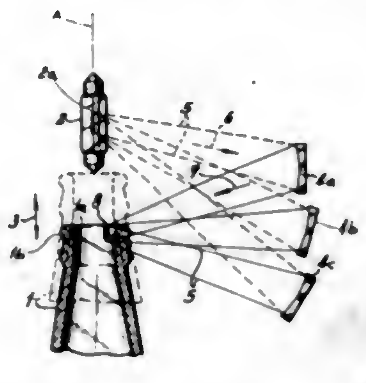
METHOD OF AND APPARATUS FOR DETECTING LIGHT-DEFLECTING FLAWS IN HOLLOW GLASS ARTICLES

Ernst Schulze, Harsewinkel 14, Gladbeck, Germany, and Gustav Becker, Am Bockler Baum 21, Essen-Kray, Germany

Filed Aug. 20, 1965, Ser. No. 481,179

Claims priority, application Germany, Aug. 22, 1964, St 22,575

13 Claims. (Cl. 209—111.7)



Method of and apparatus for detecting light-deflecting flaws in glass bottles and other round glass articles (e.g., cracks and chips) wherein a single lamp is provided in axial alignment with the article and from this lamp a plurality of light beams are reflected by mirrors of different angular orientation and axial spacing from the source tangentially against a region of the bottle, and a plurality of light detectors are trained on this region to generate respective signals arising from deflection of the light beams by the flows. Circuitry compares the output signal with a predetermined threshold to reject or pass the article.

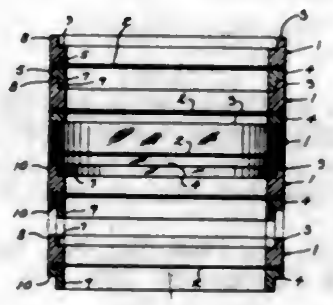
3,386,580

STACKABLE SIEVE CONSTRUCTION FOR USE IN RECIPROCATING AIR COLUMN SIFTERS AND THE LIKE

Frank A. Grabarczyk, Milwaukee, Wis., assignor to Allen-Bradley Company, Milwaukee, Wis., a corporation of Wisconsin

Filed July 22, 1965, Ser. No. 474,065

2 Claims. (Cl. 209—237)



A stackable sieve for a reciprocating air column sifter comprises a rigid ring member of substantial thickness which is formed of a transparent material. The ring member is split to define two aligned ring portions that have facing flat inner end surfaces of substantial width. The outer end of one portion is stepped to define an inner ledge and an outer rim and the outer end of the other portion is stepped to define an outer ledge and an inner rim. The outer and inner ledges and rims are all of approximately the same width, and the two rims are approximately of the same height so that two rings can be stacked one atop the other to define a tubular column with substantially continuous vertical walls. A screen is clamped between the two flat inner end surfaces, and extends outwardly to the outer circumference of the ring.

3,386,581

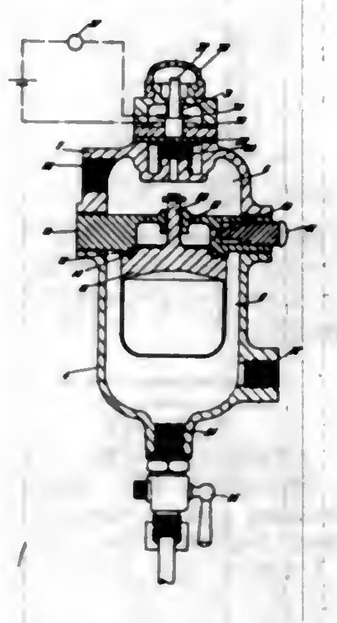
LIQUID SEPARATORS

Dick Valentine Gough, 40 Solent Road, Hill Head, Fareham, Hampshire, England

Filed Aug. 27, 1965, Ser. No. 483,077

Claims priority, application Great Britain, Sept. 3, 1964, 36,191/64

6 Claims. (Cl. 210—86)



The invention involves a liquid separation device that is particularly, but not exclusively, applicable to vehicle fuel systems for the removal of water from the fuel. The device has a lower inlet chamber and an upper outlet chamber separated by a partition having a valve that can be closed by a float body in the lower chamber as water accumulates there. When the valve is closed, continued running of the engine creates a vacuum depression in the upper chamber operating a warning device and, after draining the accumulated water in the lower chamber, the valve is opened by an externally operated reset device.

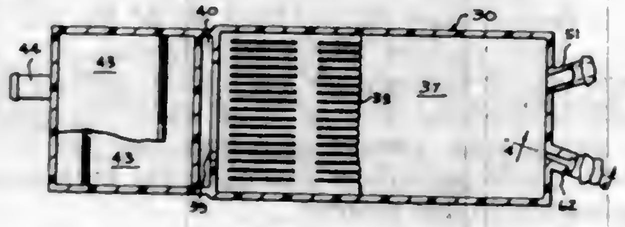
3,386,582

WATER SOFTENER FOR USE WITH AN AUTOMATIC WASHING MACHINE

Bernard J. Brezosky, Louisville, Ky., assignor to General Electric Company, a corporation of New York

Filed Mar. 30, 1966, Ser. No. 538,706

7 Claims. (Cl. 210—136)



An improved water softener for an automatic washing machine. The softener is of the regenerative ion-exchange resin type including a resin containing chamber and an adjacent liquid inlet chamber. The inlet chamber is made substantially rectangular and either or both of its respective inlet spouts for raw water and for regenerating solution are angularly oriented relative to the inlet chamber wall to provide uniform distribution of these liquids throughout the cross-sectional area of the adjacent resin chamber. The regenerating solution spout is restricted to give jet action and also includes a check valve to prevent back flow from the softener to the source of regenerating solution.

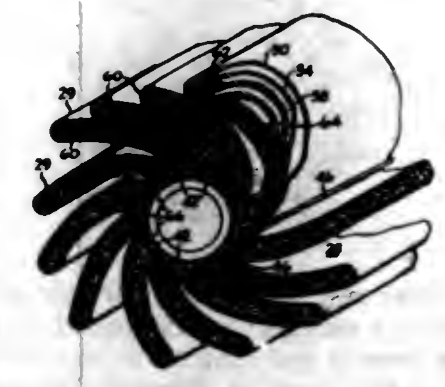
3,386,583

REVERSE OSMOSIS MEMBRANE MODULE

Ulrich Merten, Solana Beach, Calif., assignor, by mesne assignments, to Gulf General Atomic Incorporated, San Diego, Calif., a corporation of Delaware

Filed June 11, 1965, Ser. No. 463,112

6 Claims. (Cl. 210—321)



A device for separating a solvent from a solution via reverse osmosis and a method for making such device. An elongated sheet of semipermeable membrane material is flanked on opposite surfaces by a sheet of porous backing material and a sheet of spacer material to provide a three-ply layup, and the layup is convolutely folded and arranged around a central porous mandrel with the backing material layer in fluid communication with the center of the hollow mandrel. The individual folded flaps are spirally wound about the mandrel and wrapped with tape about the exterior circumferential surface thereof. The spacer material provides axially extending feed solution passageways between adjacent flaps while the permeating fluid travels spirally inward in the plane of the backing material to the central mandrel.

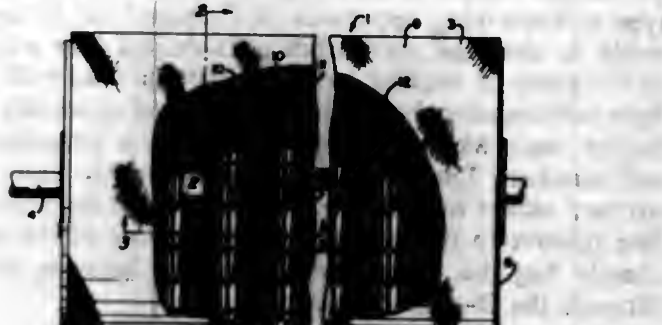
3,386,584

VALVELESS DRUM FILTER

Oscar Luthi, Hillsborough, N.H., assignor to Improved Machinery, Inc., Nashua, N.H., a corporation of Delaware

Filed May 5, 1967, Ser. No. 636,309

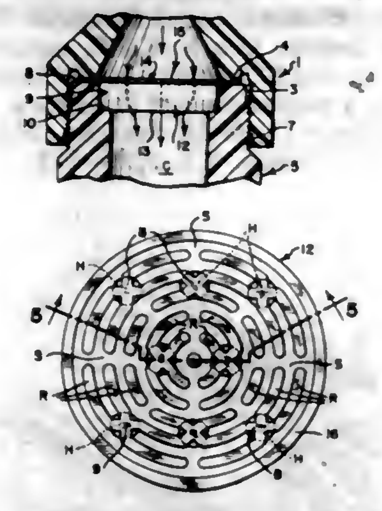
5 Claims. (Cl. 210—404)



A valveless rotary drum filter including a plurality of filtrate suction compartments located around the circumference of the drum and connected to individual passageways located inside of the drum for applying a vacuum to the compartments as the drum rotates. The passageways extend arcuately rearward relatively to the direction of rotation of the drum so that filtrate draining from the compartments through the passageways as the drum rises out of its slurry creates a suction in the compartments.

3,386,585
FILTER HOLDER AND SUPPORT

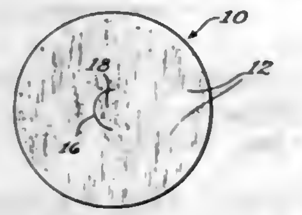
John E. Weyand, Needham, and Alfred S. Kent, Concord, Mass., assignors to Millipore Corporation, a corporation of Massachusetts
Filed Nov. 9, 1965, Ser. No. 506,952
7 Claims. (Cl. 210—445)



A filter holder unit comprising a female part having a hollow interior, a complementary shaped male part having a hollow interior and adapted to be connected to the female part, a filter support disposed internally between the male and female parts and having rib means thereon for supporting a filter, said rib means bridging outlet holes in said support, and opposed sealing surfaces disposed internally of said parts for sealing the filter to the filter support upon connection of the female and male parts together.

3,386,586
DUAL-PURPOSE FILTER DISK FOR COFFEEMAKERS

Irving Ackerman, 9256 N. Kolmar Ave., Skokie, Ill. 60076
Continuation-in-part of application Ser. No. 607,726, Jan. 6, 1967. This application Dec. 26, 1967, Ser. No. 694,354
1 Claim. (Cl. 210—477)

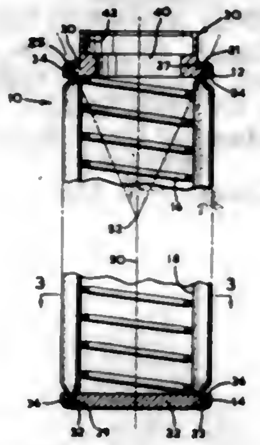


A circular filter disk useable interchangeably with the perforated basket of either of a drip-type or a percolator-type coffeemaking apparatus. A C-shaped slit formed centrally in the disk establishes a D-shaped flap which lies in the plane of the disk when the latter is used with a drip-type coffeemaker, but which is displaced upwardly by the basket stem when the disk is used in a percolator-type coffeemaker. The slit is truly semicircular and has an arcuate extent of 180° so that its ends lie on a diametric line relative to the arc so that all portions of the opening closely hug the basket stem when the latter is projected through the D-shaped opening.

3,386,587
TUBULAR FILTER ELEMENT END CAPS

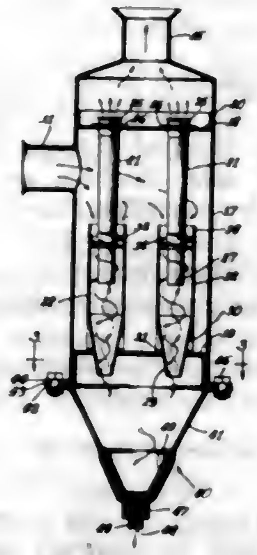
Andrew C. Mast, Brampton, Ontario, and Otto R. Havelka, Weston, Ontario, Canada, assignors to Aircraft Appliances and Equipment Limited, Rexdale, Ontario, Canada
Filed Oct. 22, 1965, Ser. No. 502,178
1 Claim. (Cl. 210—493)

A tubular filter element formed with a rim at at least one end, and having a head with a neck formed with an external rim engaging surface adapted to fit within the rim, and having a collar with an internal rim engaging surface adapted to fit around the external surface of the rim, the surfaces being of complementary conical shape and movable relative to one another to deform the rim therebetween forming a generally hollow truncated cone, the head, rim and collar being firmly clamped together and then sealed by welding.



3,386,588
COOLANT FILTER

Lewis B. Ades, Rockford, Ill., assignor to Sundstrand Corporation, a corporation of Illinois
Filed Oct. 14, 1966, Ser. No. 586,750
1 Claim. (Cl. 210—512)

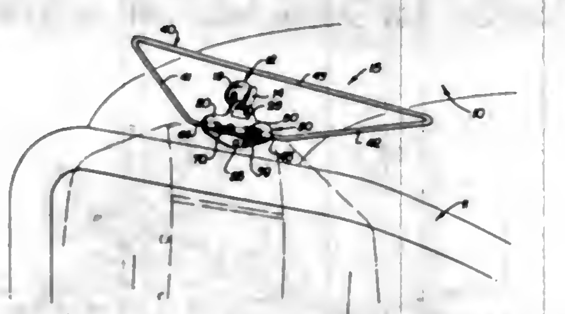


A coolant filter in which a plurality of centrifugal action separator units are mounted in a casing which has an inlet for coolant, a first outlet for clean coolant, and a second outlet for contaminated coolant. A generally conically shaped member is disposed at the second outlet with the large diameter end thereof adjacent the separator units to receive contaminants from all of the units and create a back pressure within the member. The small diameter end of the member has a small opening which provides a restricted passage from which the contaminants and a small amount of coolant are free to continuously discharge without destroying the back pressure of coolant within said member.

3,386,589
HANGER APPARATUS FOR USE IN MOVING VEHICLES

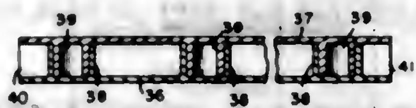
Ernest Prete, Jr., 21145 Mulholland Drive, Woodland Hills, Calif. 91364
Filed Mar. 7, 1966, Ser. No. 532,391
8 Claims. (Cl. 211—118)

A clothing hanger apparatus including a head member to be removably suspended in a vehicle below the vehicle headliner, a body portion to receive an article of clothing to be hung within the vehicle in a generally vertical position, journal means associated with the hanger body and head for pivotally mounting the body means for movement from a vertically depending clothes hanging position of use to a generally inverted, vertically upwardly extending, position of non-use adjacent the vehicle headliner while said hanger body is removably mounted within said vehicle and spring or resilient friction holding means for holding the body portion in its generally inverted, out-of-the-way, position of non-use within the vehicle when the apparatus is not being used for hanging clothing vertically therein.



3,386,590
CONSTRUCTION KIT

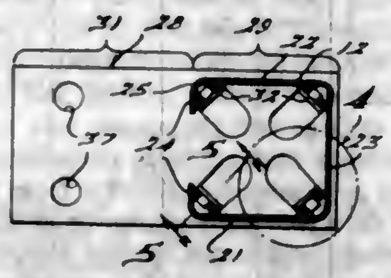
Charles Gretz, Calabasas, Calif., assignor to Life-Like Products, Inc., Baltimore, Md., a corporation of Maryland
Filed May 13, 1966, Ser. No. 550,019
8 Claims. (Cl. 211—177)



A construction kit is provided in the form of hollow tubular pieces of square cross section in various shapes and lengths. The tubular pieces are basic and comprise a channel which forms three sides and a panel which forms the fourth side. The panel is connected to the channel by interlocking members on the interior of the channel. The outermost of these interlocking members are recessed from the outer ends of the tubular pieces to form abutments for mating pieces. The pieces are made of a rigid plastic material, the surface of which is treated to simulate an artistic metal. These interlocking pieces may have two, three or more ends for various design configurations. Ancillary pieces are also provided, such as scrolls and plates, together with connectors for attaching them to the basic pieces.

3,386,591
REMOVABLE FOOT FOR ADJUSTABLE STORAGE RACKS

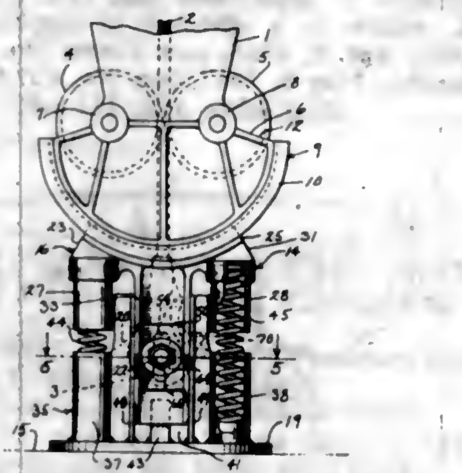
Harrison H. Cassel, Skippack, Pa., assignor to Palmer-Shile Company, Detroit, Mich., a corporation of Michigan
Filed Jan. 26, 1966, Ser. No. 523,097
2 Claims. (Cl. 211—183)



This invention relates to industrial storage racks of the collapsible type, and more particularly to a removable foot structure adapted for use with adjustable and collapsible storage racks which permits disposition of the foot in any one of four directions with respect to the post which it supports.

3,386,592
LOAD SNUBBER FOR A CRANE

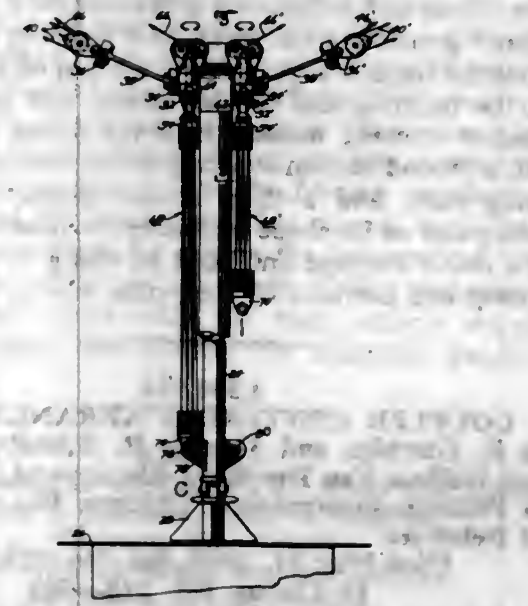
Karl E. Reischl, South Milwaukee, Wis., assignor to Bucyrus-Erie Company, South Milwaukee, Wis., a corporation of Delaware
Filed Apr. 13, 1967, Ser. No. 630,681
7 Claims. (Cl. 212—1)



Each of three embodiments employs a brake drum in two segments mounted on the end of a jib with a hoist cable passing between them. A brake shoe having two resiliently mounted brake surfaces is mounted on the load to engage the drum segments. In the first embodiment, an eye is formed between the brake surfaces to be engaged by a conventional hook. In the other two embodiments, a tubular socket is mounted on the load to receive a symmetrical hook, and the brake surfaces are mounted on the socket.

3,386,593
SHIP'S LOADING APPARATUS HAVING A CARGO BOOM WITH A PLURALITY OF PENDULUM PURCHASE BLOCK FITTINGS

Heinz Ferdinand Johannes Sprengel, Hamburg-Poppenbuttel, Germany, assignor to Blohm & Voss A.G., Hamburg-Steinwerder, Germany, a company of Germany
Filed Dec. 6, 1966, Ser. No. 599,592
Claims priority, application Germany, Jan. 20, 1966
St 24,876
1 Claim. (Cl. 212—3)



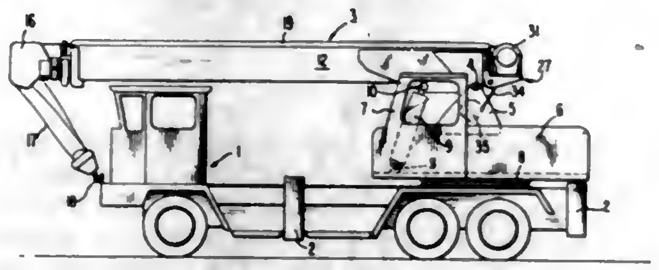
Ship's loading apparatus having a cargo boom which is pivotally mounted on deck and is capable of a swinging-through maneuver between two uprights, characterized by the fact that selectively the right or left lower purchase block of the respective purchase tackle half is secured to the lower end of the cargo boom.

3,386,594
METHOD OF AND APPARATUS FOR EXTENDING A TELESCOPIC CRANE BOOM

John L. Grove, Greencastle, Pa., assignor, by mesne assignments, to Grove Manufacturing Company, Shady Grove, Pa., a corporation of Pennsylvania and a wholly owned subsidiary of Walter Kidde & Company, Inc.

Continuation of application Ser. No. 521,329, Jan. 18, 1966, which is a division of application Ser. No. 446,602, Apr. 8, 1965, now Patent No. 3,243,052. This application May 8, 1967, Ser. No. 637,009

23 Claims. (Cl. 212—55)



A telescopic boom having at least three boom sections in which the outer two sections are selectively hydraulically extendible by a novel means and a single hydraulically extensible ram connected to the boom base section. The single hydraulic ram and novel means also provides a novel method for hydraulically extending a telescopic boom having at least three sections.

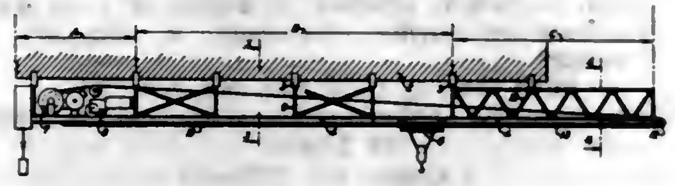
3,386,595
LIFTING APPARATUS

Gaston Louis Regnier, Montmorency, Seine-et-Oise, France, assignor to Richier, Paris, France, a company of France

Filed Dec. 14, 1966, Ser. No. 601,590

Claims priority, application France, Jan. 3, 1966, 46,780, Patent 1,469,647

1 Claim. (Cl. 212—71)



For lifting and positioning prefabricated floor slabs into prepared grooves in the walls of a building construction, a monorail track is supported by a beam of greater length than the building and divided into a first section of triangulated framing inside which the prime mover is located, a second section supporting the monorail from suspending rods, and a third section projecting from the building and of jib shape including the monorail as a part of the jib. A carriage and hoist traveling on the monorail is moved and powered by the prime mover.

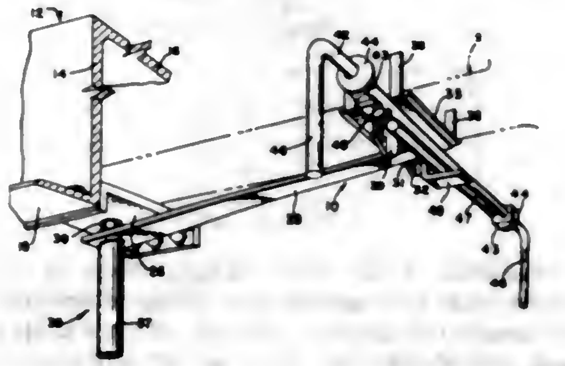
3,386,596
COUPLER CENTERING ARRANGEMENT

Jack E. Gutridge and Thomas R. Schmitz, Dyer, Ind., and William Van Der Sluys, Homewood, Ill., assignors to Pullman Incorporated, Chicago, Ill., a corporation of Delaware

Filed May 31, 1966, Ser. No. 555,646

11 Claims. (Cl. 213—20)

1. In a coupler mounting arrangement including a coupler having a coupler head and a shank pivotally connected at one end to a coupler pin mounted on a sill so that said coupler is laterally swingable thereabout, a coupler centering arrangement for yieldably maintaining said coupler in substantially aligned position with the longitudinal center line of said s.ll, said coupler center arrangement comprising bar means extending lengthwise of said coupler shank, means mounted on said coupler shank adjacent said coupler head and engageable with one end of said bar means, torsion means applying a twisting moment in a plane substantially parallel to the plane of swinging movement of said coupler mounted on said sill and the other end of said bar means, said torsion means being operative to apply a turning moment on said bar means when the latter is in engagement with said coupler mounted means and said coupler is turned out of alignment with said longitudinal center line.

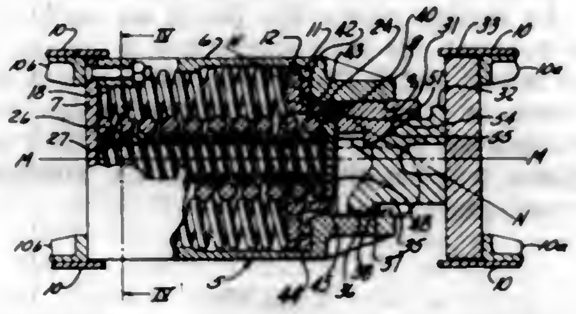


3,386,597
RAILWAY CAR FRICTION-TYPE DRAFT GEAR

Donald Willison, Lyndhurst, and Andrey L. Zanow, Cleveland, Ohio, assignors to Midland-Ross Corporation, Cleveland, Ohio, a corporation of Ohio

Filed Jan. 12, 1967, Ser. No. 608,812

10 Claims. (Cl. 213—32)



A draft gear having a friction clutch, springs for actuating the clutch, and a casing of which a rear compartment encloses the springs and a front barrel of rearwardly tapering bore substantially encloses the friction clutch mechanism. The clutch is of the type wherein shoes which seat within the bore slidably against the inner barrel surfaces and against spring seat means disposed between the springs and the shoes, and a wedge engages the shoes through rear surfaces in inclined relation with the shoes and protrudes frontwardly from the barrel. This invention is directed particularly to divided spring seat structure through which the springs selectively act on the shoes, and to a portion of the structure inclined with respect to the length of the gear to direct the forces acting on the shoes on a particular manner.

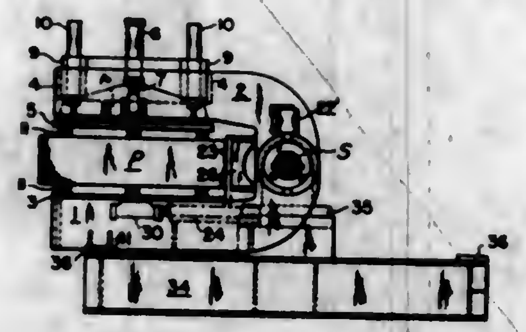
3,386,598
TURNOVER DEVICE

Alexander Ferko, East Palestine, Ohio, assignor to L. W. Nash Company, East Palestine, Ohio, a corporation of Ohio

Filed Oct. 25, 1966, Ser. No. 589,318

10 Claims. (Cl. 214—1)

This invention relates to a device for inverting material and more particularly to a fully opened device for turning packs of sheets and other elements such as plates and slabs so that the upper side of the pack or other element is rotated through 180° and becomes the bottom.

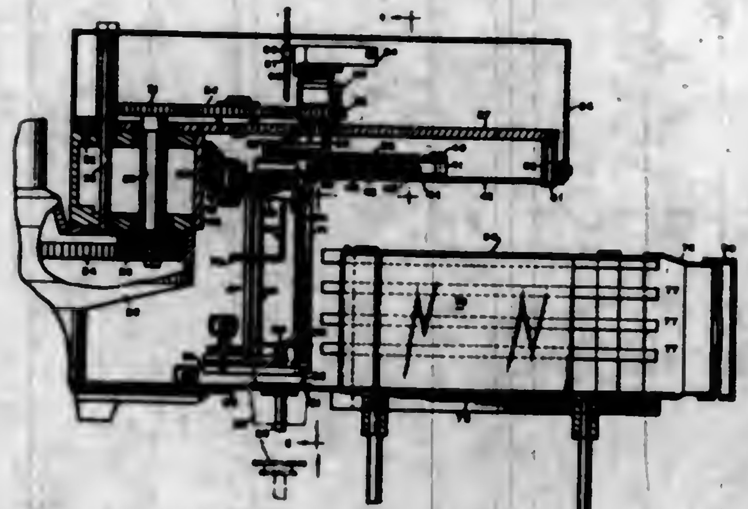


3,386,599
STACKING AND STACK ARRANGING DEVICE

Ralph D. Gerben, Baltimore, Md., assignor to Maryland Cup Corporation, Owings Mills, Md., a corporation of Maryland

Filed June 14, 1966, Ser. No. 557,447

7 Claims. (Cl. 214—6)



The invention comprises an auxiliary device in conjunction with a basic container filling machine. The device collects filled containers from the filling machine and arranges them in stacks. It includes a mechanism for placing filled containers one by one in stack formation. Another mechanism moves the stacks so formed into an enclosure. The enclosure has an adapted outlet for the stacks which can be engaged with an open carton to permit filling the carton directly with the stacks so formed.

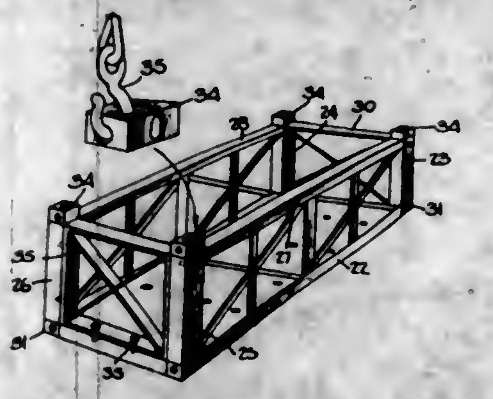
3,386,600
DEMOUNTABLE SHIPPING GONDOLAS

Christopher H. Betjemann, Rte. 1, Lambertville, N.J. 08530

Filed Sept. 26, 1966, Ser. No. 581,905

9 Claims. (Cl. 214—15)

This invention relates generally to shipping containers and more particularly to a demountable shipping gondola of adjustable height which is adapted to accommodate uncrated cargo, such as jeeps and ambulances, as well as smaller container units.



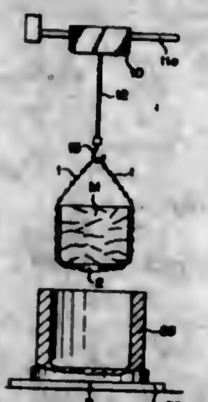
3,386,601
HOISTING SLING HAVING FUSIBLE CONNECTION AND METHOD FOR CHARGING MATERIALS INTO A FURNACE

Kunitoshi Tezuka, 34 7-chome, Minamisuna-machi, Koto-ku, Tokyo, Japan

Filed Sept. 2, 1966, Ser. No. 576,919

Claims priority, application Japan, Sept. 3, 1965, 40/53,642; Apr. 13, 1966, 41/22,934

13 Claims. (Cl. 214—18)



Device, such as a hoisting sling, for charging materials into a furnace, such as an electric furnace adapted for re-processing scrap-metal blocks, with cables and interconnecting means therefor, a securing member attached to one of the cables and releasably attached to the interconnecting means, and anchoring means between the securing member and the interconnecting means, having a melting temperature lower than that of the materials charged into the furnace, so that it will break off on effect of the heat applied within the furnace.

Also, method of charging materials into a furnace of the type described, with the steps of lifting the materials with cables, there being an interconnecting means between the ends of the cables, with an anchoring portion having the aforementioned lower melting temperature, introducing the materials into the furnace together with the cables and the interconnecting means, breaking off the anchoring portion by raising the temperature within the furnace to above the aforesaid melting temperature, lifting out the cables after the ends became detached from each other, and leaving the materials behind in the furnace.

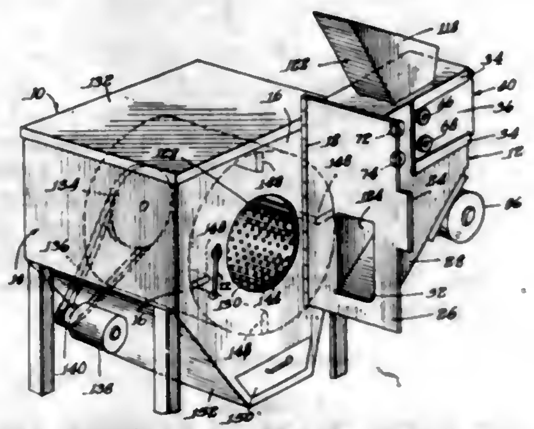
3,386,602
DE-PACKAGING APPARATUS AND METHOD

Joseph S. Kanarek, 5435 W. 63rd St., Chicago, Ill. 60638

Filed Apr. 26, 1966, Ser. No. 545,401

14 Claims. (Cl. 214—305)

Apparatus for removing and separating particulate, pulverulent, or liquid material from a severable wrapper or package which apparatus includes feed rollers and cutting rollers for automatically receiving and cutting or slitting the wrappers or packages to be processed to expose the contents thereof and for automatically delivering the cut or slit wrappers or packages to a de-packaging station which comprises a tumbler having a movable basket for distorting the cut or slit wrappers or packages and

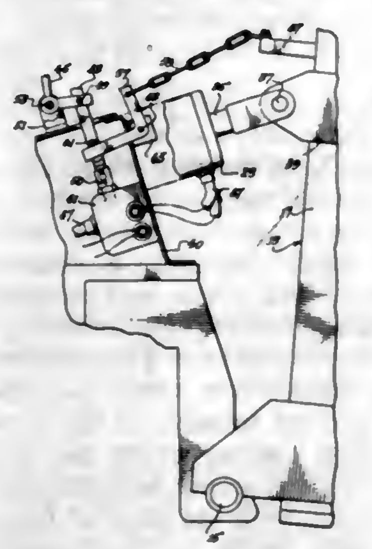


agitating the material therein to cause the same to pass through the openings in the cut or slit wrappers or packages without contaminating said material with fragments or the like from the wrappers or packages. The basket of the tumbler has perforations therethrough of a size to enable material removed from the cut or slit wrappers or packages to pass out of the basket into a receptacle.

3,386,603

MAST TILT SAFETY DEVICE FOR LIFT TRUCKS

Harold D. Rueb, Temple City, Calif., assignor to Champ Corporation, El Monte, Calif., a corporation of California
Filed Aug. 16, 1965, Ser. No. 480,067
3 Claims. (Cl. 214—673)



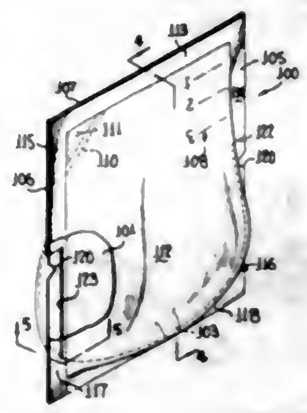
A lost motion linkage connected between the mast of a lift truck and the mast tilting control mechanism therefor, which stops the movement of the tilting control mechanism at a predetermined forward tilted position of the mast and mechanically moves said mechanism in the opposite direction if the mast tilts beyond the predetermined forward tilted position.

3,386,604

INFANT-NURSING POUCH

Charles M. Fields, La Grange, Ill., assignor to Continental Can Company, Inc., New York, N.Y., a corporation of New York
Filed Jan. 22, 1965, Ser. No. 427,450
8 Claims. (Cl. 215—11)

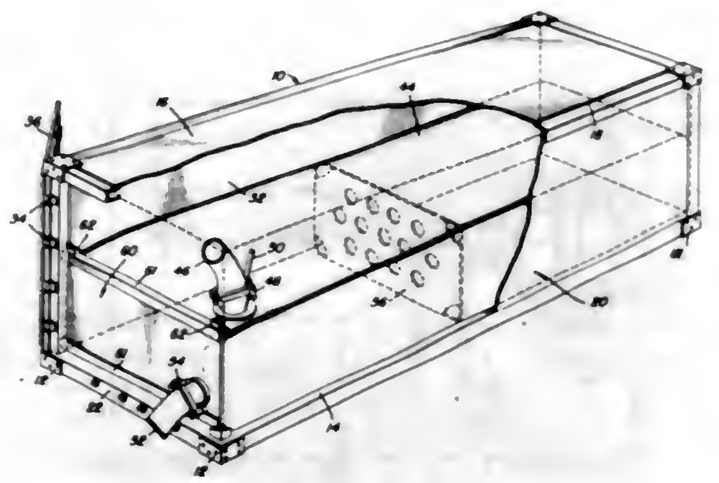
1. A pouch particularly adapted for dispensing a product adapted to be packaged therein, comprising a body of flat sheet material, an integral generally conical shaped drawn nipple projecting outwardly from a portion of said body, and an outer covering of flaccid sheet material totally hermetically encasing substantially all of said pouch and being secured thereto whereupon the removal of said covering and the puncturing of the nipple allows a product packaged therein to be dispensed.



3,386,605

THREE PURPOSE CONTAINER

Leopoldo C. Lafont, Newark, N.J., assignor to John J. McMullen Associates, Inc., New York, N.Y., a corporation of New York
Filed Oct. 21, 1966, Ser. No. 588,391
15 Claims. (Cl. 220—1.5)

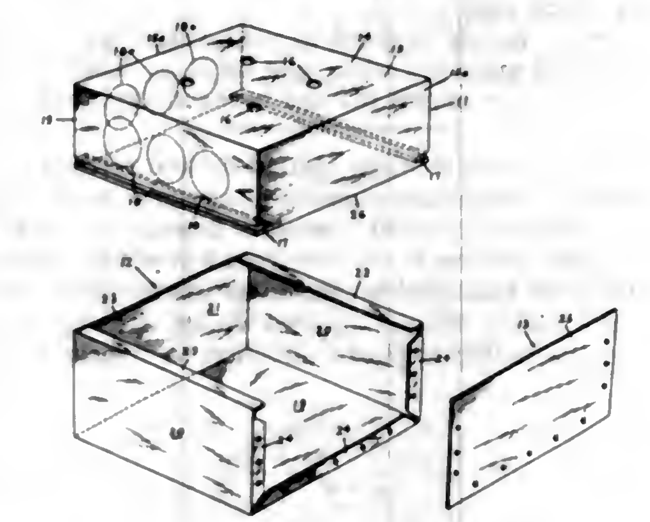


1. A shipping container comprising one end wall, side walls connected to the end wall, a top and bottom, a pair of upstanding corner posts at the end of the container opposite from the one end wall, said corner posts connected to opposite side walls and each having a part extending from the respective side wall toward the center line of the container, an opening for the container defined between the corner posts, a pair of doors each supported by the container on opposite sides of the opening for horizontal rotation, when closed said doors closing said opening outside said corner posts, locking means to secure the doors in a closed position, the improvement comprising a bulkhead having a width greater than the width of the opening measured between the corner posts, said bulkhead being upstandingly positioned generally between the side walls and just within the corner post location such that when pressure is applied on the inside surface of the bulkhead toward the opening and outside the container, the side parts of the bulkhead contact the side posts to resist the pressure.

3,386,606

JUNCTION BOX

Michael A. Pastrick, South Amboy, N.J.
(P.O. Box 307, Perth Amboy, N.J. 08862)
Filed Dec. 8, 1964, Ser. No. 416,813
3 Claims. (Cl. 220—3.94)

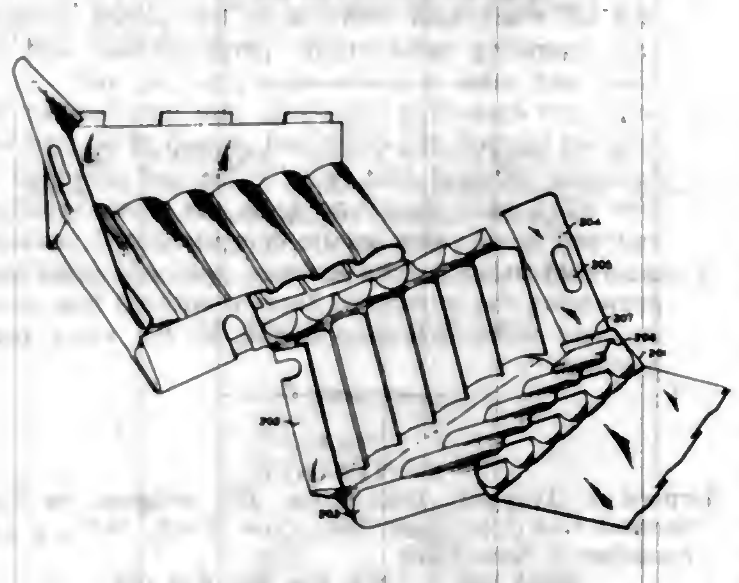


This invention is concerned with providing an improved electrical junction box. Briefly, the junction box comprises in combination a fixed housing member and a detachable housing member, both being provided with associated slidably engaging means, and said fixed housing member being further provided with cable-entry openings.

3,386,607

ARTICLE CARRIER FORMED FROM A SINGLE SHEET

William A. Keene, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Jan. 24, 1966, Ser. No. 522,712
18 Claims. (Cl. 220—21)



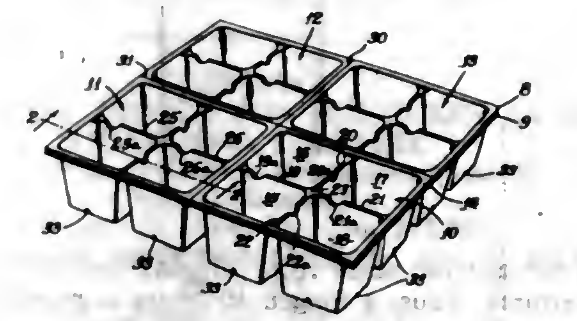
An article carrier is formed from a blank of a single continuum of thermoformed material. The completed carrier has a top panel, two vertical fluted interior wall panels, article supporting bottom panels, two fluted vertical exterior wall panels, interior and exterior end wall panels, and a top panel adapted to fold over the contents of the carrier.

3,386,608

MULTIPLE-CELL MOLDED PLASTIC TRAY

Kenneth Diller, Box 320, East Jordan, Mich. 49727
Filed May 15, 1967, Ser. No. 638,447
2 Claims. (Cl. 220—23.6)

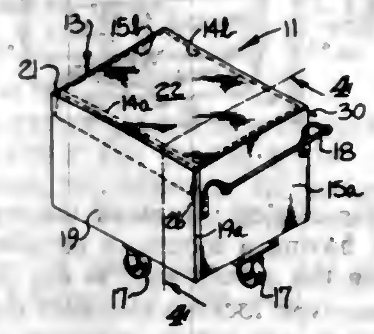
A multiple-cell molded plastic tray which is nestable with similar trays for shipment or storage, yet the trays are easily separated when desired for use. Each cell has a generally square cross section; and they are connected in parallel rows by means of an integral top edge. These connecting edges define crescent-shaped grooves which provide overflow channels communicating between adjacent cells. The grooves are spaced in the connecting edges such that the trays may be nested wherein the bottom of a groove of an upper tray engages the straight portion of the connecting edge of the tray beneath it. This structure prevents complete nesting of the trays.



3,386,609

RETRACTABLE COVER FOR STORAGE RECEPTACLES

Noah Walter Eurey, Lincolnton, N.C., assignor to Excel, Inc., Lincolnton, N.C., a corporation of North Carolina
Filed June 17, 1966, Ser. No. 558,493
9 Claims. (Cl. 220—24)



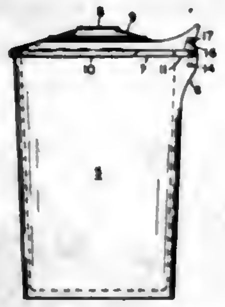
1. In a storage receptacle for textile bobbins and the like having a substantially rectangular, open top housing, the combination therewith of means positioned on one side of the housing defining a storage chamber having an opening adjacent the open top of said housing, a pliable cover normally occupying a retracted position within said chamber and withdrawable from said opening for covering the open top of said housing, and weight means in said chamber operatively connected to said cover and gravitationally biasing said cover toward said retracted position within said chamber when said cover is withdrawn therefrom.

3,386,610

HINGED COVER FOR GARBAGE RECEPTACLE

Robert H. Seultz, 552 NE. 34th St.,
Fort Lauderdale, Fla. 33308
Filed Jan. 30, 1967, Ser. No. 612,714
1 Claim. (Cl. 220—36)

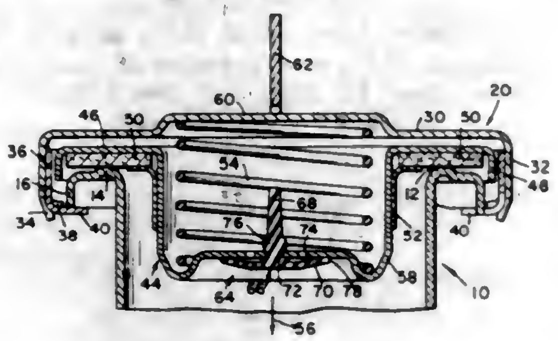
A combination concrete garbage receptacle and fiberglass cover wherein the cover is hinged to the garbage receptacle by structure including a metal strap bolted to a radial extension of the concrete receptacle, the strap having upstanding spaced brackets apertured to receive a pin, a hollow pedal integral with the cover fitting between the brackets and having holes in the side thereof registering with the apertures of the brackets, a metal pin extending through the holes and apertures in the brackets and pedal, a mastic material filling the hollow space within the pedal and encasing and holding the pin



to prevent the same from slipping out of the holes and apertures. Thus, a hinged structure is provided which is compatible with the concrete and fiberglass materials of the receptacle and cover.

3,386,611
VENT-CONTROLLING GAS CAP

Billy G. Crute, Connersville, Ind., assignor to Stant Manufacturing Company, Inc., Connersville, Ind., a corporation of Indiana
Filed May 31, 1967, Ser. No. 642,549
5 Claims. (Cl. 220—40)



A cap for closing a tank of the type provided with a filler neck having a mouth, a peripherally extending lip surrounding the mouth and, at the axially inner rim of the lip, cam-type locking elements defining conventional stop positions and safety positions. The cap comprises a generally discoid cap body which carries lugs for engaging the locking elements, a member which carries a gasket for sealably engaging the lip about the mouth of the filler neck, and a spring for urging the gasket-carrying member toward the mouth of the filler neck. The spring is calibrated so that, when the lugs are in the stop positions and a first predetermined pressure in the tank is exceeded, vapors can escape over the lip, and when the lugs are in the safety positions and a second predetermined pressure in the tank is exceeded, vapors can still escape over the lip, the first predetermined pressure being greater than the second predetermined pressure. In a preferred embodiment, the cap further comprises a valve arranged to admit air to the tank when the pressure in the tank drops below a predetermined level.

3,386,612
QUICK-OPENING LID FOR PRESSURE VESSELS

Creal E. Kirkwood, 1423 South 103rd East Ave. 74128, and Loren Hale, 3703 East 36th North 74115, both of Tulsa, Okla.
Filed July 20, 1966, Ser. No. 566,680
4 Claims. (Cl. 220—44)

1. A quick-opening lid for a pressure vessel having an opening therein comprising:

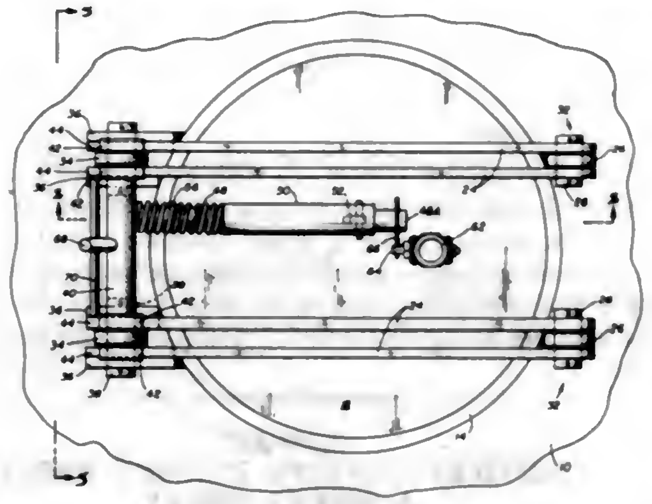
a lid closing said vessel opening, said lid having a small diameter opening therein,

pivot means at one edge of said lid pivotally supporting said lid to said vessel,

spaced apart latching members extending from the periphery of said lid at the edge thereof opposite said pivot means, each of said latching members having peripheries partially defined by an arcuate recessed area,

a closure means pivoted to said vessel adjacent said latching members when said lid is in closed position, said closure means pivoted between open and closed positions,

a rotatable cam member carried by said pivoted closure means, said cam member engaging said arcuate peripheries of said latching members when said closure means is in the closed position, said cam member rotatable in one direction to force said lid into sealed relation to said vessel opening and rotatable in the opposite direction to release said lid,

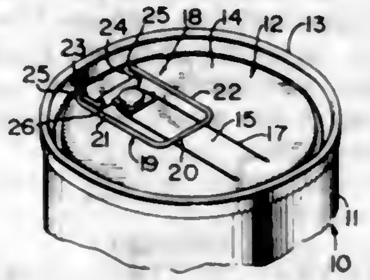


a relief valve extending from the exterior of said lid closing said opening therein, said relief valve having an actuating handle extending substantially parallel said lid when said valve is in the closed position and extending substantially perpendicular said lid when said valve is in the open position, and

a pivot arm extending from said cam member for the rotation thereof, the outer end of said pivot arm terminating adjacent said relief valve and arranged so that when said pivot arm is in the closed position and said relief valve handle is in the closed position, the relief valve handle extends over said pivot arm preventing the movement thereof without first rotating said valve actuating handle to the valve open position.

3,386,613
CONTAINER

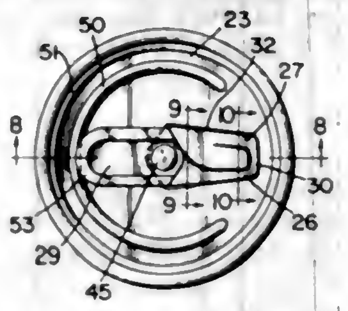
Bernard J. Traynor, Hometown, Ill., assignor to Continental Can Company, Inc., New York, N.Y., a corporation of New York
Filed Jan. 7, 1966, Ser. No. 519,380
8 Claims. (Cl. 220—54)



This disclosure relates to an easy opening container which is particularly adapted for dispensing liquids. The container has an end which is secured thereto by means of a seam which defines a peripheral projection. The container end is provided with a tear strip which remains attached to the end at all times and the tear strip is provided at the starting end thereof with a lever to effect the initial rupture and the tearing of the container end. The tear strip is so proportioned relative to the container end and to the lever whereby the lever is engageable beneath the projection and lockable behind the projection so as to retain the lever and the tear strip in an out of the way position when the container is opened.

3,386,614
EASY-OPENING MEANS FOR A CONTAINER

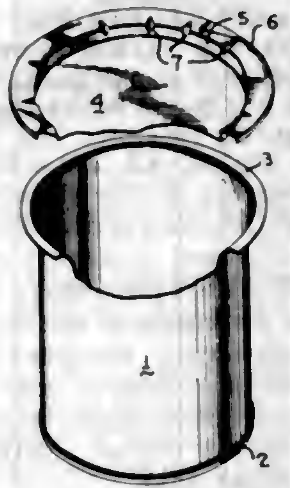
Horst F. W. Arfert, Richmond, and Frederik A. Siemonsen, Bon Air, Va., assignors to Reynolds Metals Company, Richmond, Va., a corporation of Delaware
Filed Feb. 23, 1966, Ser. No. 529,401
10 Claims. (Cl. 220—54)



This disclosure relates to an improved easy-open opening means for a cylindrical beverage can, or the like, which comprises a pair of elongated strips provided in an end wall thereof and arranged alongside each other so as to extend from the center portion of such end wall substantially radially toward the outer periphery thereof. A corresponding substantially radially extending dispensing opening is provided in the end wall of such can by severing first one of such strips and then the other in a sequential manner whereby a pulling force of comparatively small magnitude is sufficient to provide the dispensing opening.

3,386,615
END CLOSURE FOR CYLINDRICAL CAN

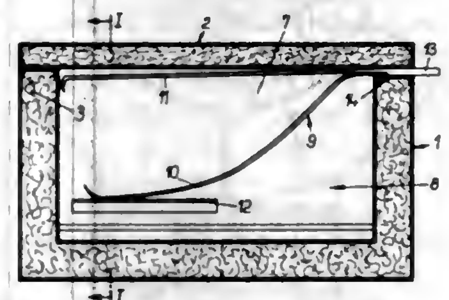
Kjell M. Jacobsen, Hohog, Sweden, assignor to AB Platmanufaktur, Malmo, Sweden
Filed Jan. 21, 1965, Ser. No. 427,187
Claims priority, application Sweden, Mar. 4, 1964, 2,642/64
15 Claims. (Cl. 220—67)



Disclosed herein is an end closure for cylindrical cans of the type which are to be evacuated and/or partially filled with gas prior to the sealing thereof. The end closure includes a central panel portion, a generally tubular portion extending from the periphery of the panel portion and a radially outwardly directed flange which is to be seamed to a corresponding flange on the can body. A plurality of grooves are formed in the closure and extend between the tubular portion and the flange for providing a separation between the container body and the closure member for the passage of gases therethrough. The grooves extend only partially along the length of the tubular portion and only partially radially outwardly along the flange and may be of varying configurations.

3,386,616
DISPENSING DEVICE FOR ICE CUBES, LUMP SUGAR AND THE LIKE

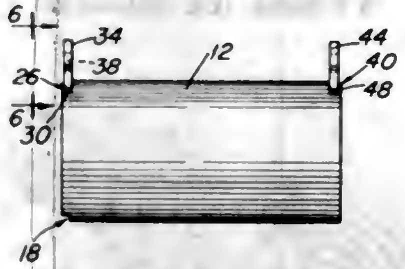
August Wilhelm Höwe, Gottelmanstrasse 8, Mainz, Germany
Filed Apr. 7, 1966, Ser. No. 541,006
Claims priority, application Germany, Apr. 9, 1965, H 51,693
8 Claims. (Cl. 220—85)



Dispensing device for ice cubes or lump sugar, comprising an open-top container including a hinged top cover which can be swung upward. In the container is a supporting rack to hold a tongs. The container is arranged with a clearance space so that the handle of the tongs, when the latter is racked, can project at the exterior while the cover remains closed.

3,386,617
STACKABLE CONTAINER WITH MOVABLE HANDLE ON EACH END

Ronald B. Shankland, Sr., Manteno, Ill., assignor to Bennett Industries, Inc., Peotone, Ill., a corporation of Delaware
Filed Apr. 18, 1966, Ser. No. 543,410
5 Claims. (Cl. 220—94)

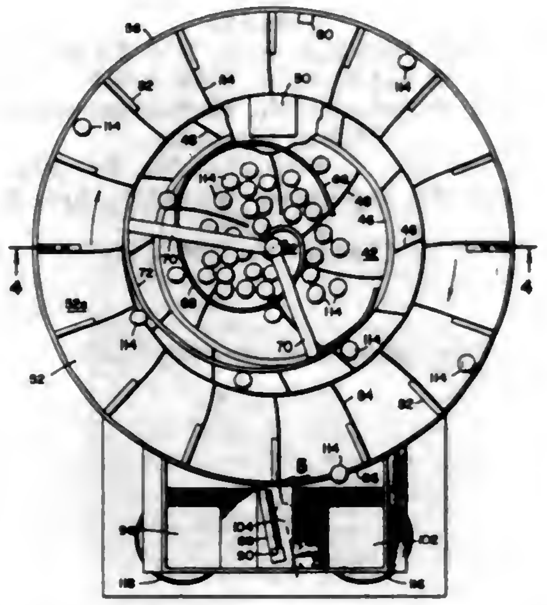


A shipping container having movable handle means on the top and bottom thereof may be fabricated from semi-rigid plastic. In their rest positions the handle means are aligned with the top and bottom of the container body, respectively, thereby permitting the containers to be stacked upon one another. In their carrying position, the handles extend outwardly from the side wall structure, whereby the container may be grasped by the handle means at each end thereof and carried by one man, two men, or by industrial handling equipment.

3,386,618
ARRANGING AND COUNTING APPARATUS

Richard S. Gilbert, 170–B Sotoyome St., Santa Rosa, Calif. 95405
Filed Apr. 10, 1967, Ser. No. 629,558
9 Claims. (Cl. 221—12)

Apparatus for arranging objects into single file which includes a rotating bowl into which the objects are placed, the bowl having an intermediate annular flat surface portion therein between its top and bottom designed to carry only a single row of objects, and which also includes a stationary guide which carries the objects riding along with the rotating bowl up the inside surface of the bowl and onto the substantially flat surface portion, the objects carried by other objects above the substantially flat surface portion being urged under their own weight onto the flat surface portion whereby the carrying objects may be urged off the substantially flat surface portion and down into the bottom of the bowl after they have traveled past the end of the stationary guide, allowing some of the objects to remain on the substantially flat surface and subsequently be urged up the second inclined surface.

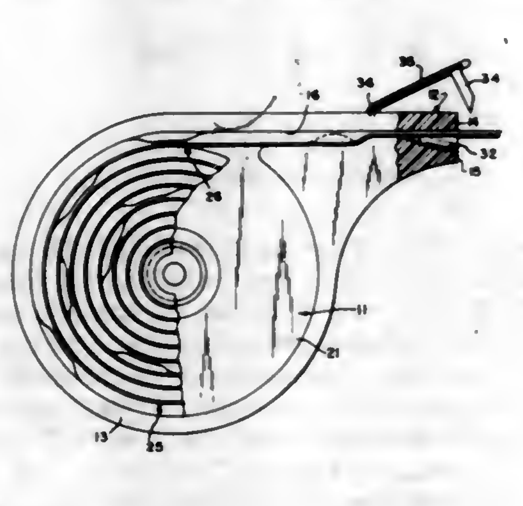


3,386,619
PREPACKAGED APPLICATOR DISPENSING

Livingston Carley Douglas, Leonia, N.J., assignor to Colgate-Palmolive Company, New York, N.Y., a corporation of Delaware

Filed Feb. 24, 1966, Ser. No. 529,883

5 Claims. (Cl. 221—135)



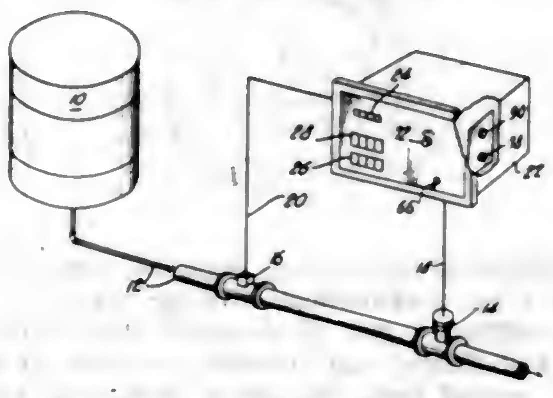
1. A device for dispensing a prepackaged applicator comprising in combination, a plurality of individual applicator sections spaced in succession and connected at transverse regions adapted to be severed as a strip, each of said applicator sections including a flexible uniform thickness moisture impervious backing sheet mounting on one side thereof, a rupturable cell containing fluent material to be applied to a surface and a body of fibrous carrier material mounted adjacent said cell on the said one side of said sheet and adapted to receive and retain distributed fluent material upon rupture of said cell, each said cell being located within its applicator section adjacent said transverse region nearest the leading end of the strip, means for mounting a supply of said strip comprising a housing provided with a restricted throat through which an end of said strip is adapted to project for withdrawal from said housing and means in said throat for automatically rupturing each said cell and for spreading said fluent material to permeate said carrier as each applicator section passes through said throat whereby said carrier, upon detachment at the transverse region, is adapted to apply the permeant material to a said surface.

3,386,620
ELECTRONIC VALVE CONTROL SYSTEM WITH REDUCED FLOW AT END OF CYCLE

William F. Smith, Saugus, Calif., assignor to The Foxboro Company, Foxboro, Mass.

Filed Oct. 14, 1966, Ser. No. 586,742

7 Claims. (Cl. 222—20)



A batch-controller system wherein a flow meter produces a series of electric pulses each representing a particular quantity of material, the controller including a series of stepping switches which are advanced by the pulses applied thereto so as to indicate total flow, the controller further including an amplifier producing a DC valve control signal which at the start of operations opens the valve to a maximum flow position, there being provided control means responsive to the indicated total flow and operative gradually to change the valve control signal to a pre-shutdown level where the valve is opened a very small amount, and thereafter change the control signal to a level shutting the valve fully when the desired batch amount has been transferred.

3,386,621
DISPENSING AND RECORDING APPARATUS

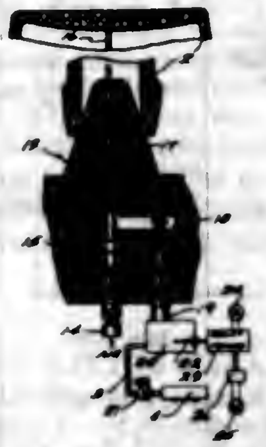
Milton J. Arps, P.O. Box 76, and Franklin James Grist, 24 Winona Court, both of Appleton, Wis. 54911, and Edward J. Rippl, 215 Broad St., Menasha, Wis. 54952

Filed Sept. 16, 1966, Ser. No. 580,125

18 Claims. (Cl. 222—30)

Pressurized liquids are directly dispensed from the individual bottles each of which is closed by a connector including a liquid outlet and a suitable pressure inlet. Individual solenoid valves are provided in the several liquor lines to control the dispensing of the liquor and the solenoid valves are individually energized through suitable devices by actuation of a series of push button switches. Certain push buttons control dispensing of the basic liquid and others simultaneously control a plurality of liquids to provide a desired mixed drink.

A computer and printing unit is interconnected to the discharge control circuit for the several solenoid valves or the like. Depressing of the push button for any given drink either straight or a blend transfers a related signal to a price selection device wherein the several drinks are grouped into different price groupings. The price selection device transfers a related charge signal to an adding and printing machine which prints the related charge on a receipt. The printer retains the last recorded drink and permits addition of the next and all subsequent drinks from the automatic dispenser. Additionally, a manual input is provided for recording other items sold. A totalizing unit totalizes the cost of the individual items and provides a totalized receipt.



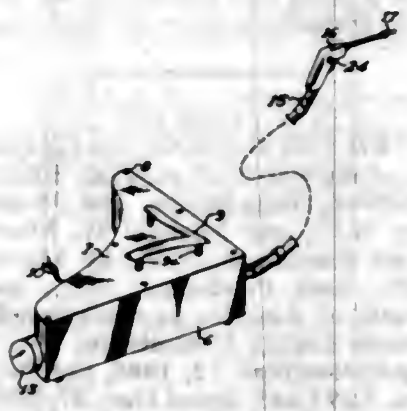
An interlocking timing relay prevents operation of the totalizing system while the printing machine is recording a drink then being dispensed. The drink selection button controls a relay which requires the button be depressed for a preselected time to lock in the discharging cycle and thereby insure that the computer and printer has been actuated to record the transaction.

3,386,622
PORTABLE, SELF-CONTAINED, ELECTRICAL PUMPING DEVICE

James H. Cox, 5232 Ewing Ave. S., Minneapolis, Minn. 55410, and Edwin B. Eisenegger, Bronschhofen-St.-G, Bildwed 657, Switzerland

Continuation of application Ser. No. 202,462, June 14, 1962. This application Apr. 12, 1965, Ser. No. 447,478

1 Claim. (Cl. 222—76)



1. A portable pumping device for pumping fluids comprising,

a small compact portable housing having an access opening therein and having a closure member for closing said opening,

a reservoir structure mounted within said housing for storing a quantity of fluid therein,

a cylinder mounted in said housing and connected in communicating relation with said reservoir structure for receiving fluid therefrom,

reciprocable means shiftable in said cylinder for forcing fluid therefrom comprising a soelnoid including an electromagnet,

a magnetic armature defining a piston and extensible in the cylinder under the influence of the electromagnetic field of said electromagnet through a forward stroke to force fluid from said cylinder,

spring means engaging said armature for retracting the same through a return stroke when the electromagnet is de-energized,

a normally open power circuit connected to said electromagnet to control the electromagnetic field thereof and connected to a source of electrical current,

a normally open control circuit interposed in circuit controlling relation with said power circuit and connected to said source of electric power and including a normally open primary switch which is energized and closed when said manual switch is closed to energize said power circuit and the electromagnet,

a secondary switch means in said control circuit being opened and closed in response to movement of said armature and having a switch arm, whereby when said manual switch is closed, said control and power circuits are operable to cause uninterrupted flow of intermittent electrical current to said electromagnet to reciprocate the armature and permit fluid to be continuously pumped from said cylinder, said electrical current continuing to flow through the power circuit when said control circuit is energized and said primary switch is in the closed condition,

a position holder switch mechanism in said control circuit operable to hold said secondary switch means in one of said closed and opened positions during movement of said armature until the armature has completed its return or forward stroke,

an actuating means comprising an annular yoke element on said armature and movable therewith, said yoke element circumscribing the switch arm of said secondary switch means and engaging the same to thereby cause opening and closing said secondary switch during movement of said armature.

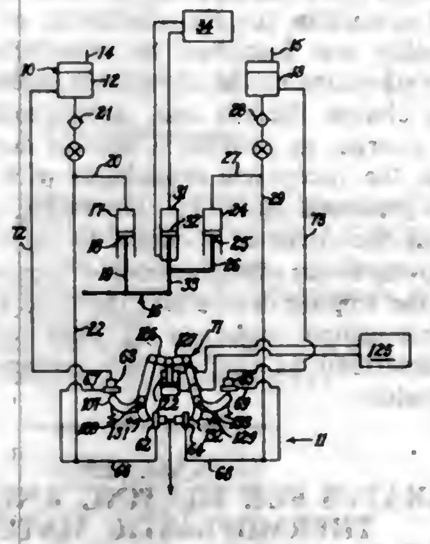
3,386,623
MIXING AND DISPENSING APPARATUS

William H. Berrill and Eric Blower, Leicester, England, assignors to United Shoe Machinery Corporation, Boston, Mass., a corporation of New Jersey

Filed Jan. 20, 1967, Ser. No. 610,588

Claims priority, application Great Britain, Feb. 5, 1966, 5,137/66

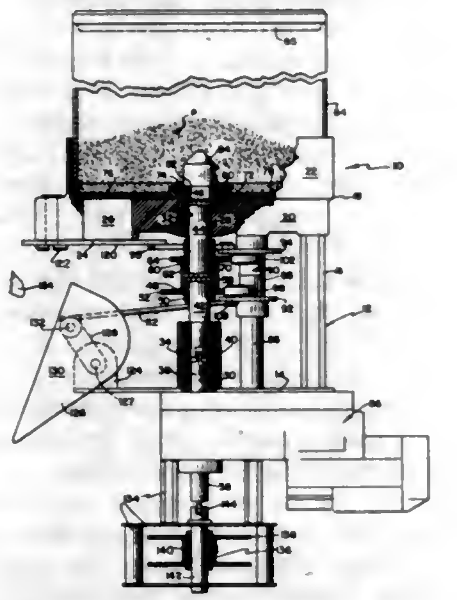
10 Claims. (Cl. 222—134)



A device for feeding the components of a composition in a predetermined adjustable ratio to a mixing chamber, mixing the components in a predetermined ratio, and dispensing the composition from a discharge orifice. The disclosed apparatus generally comprises a means for storing the components, a dispensing mechanism and first and second feeding means for feeding the components to the dispensing mechanism, the dispensing mechanism being movable from a first condition in which the components fed thereto are fed to the mixing chamber and dispensed therefrom, and a second condition in which the components are recirculated through the feeding means.

3,386,624
DISPENSING DEVICE FOR POWDERED MATERIAL

**Carlo E. Valente, Via G. Ventura 5,
Milan, Italy
Filed Sept. 21, 1966, Ser. No. 581,110
4 Claims. (Cl. 222—145)**

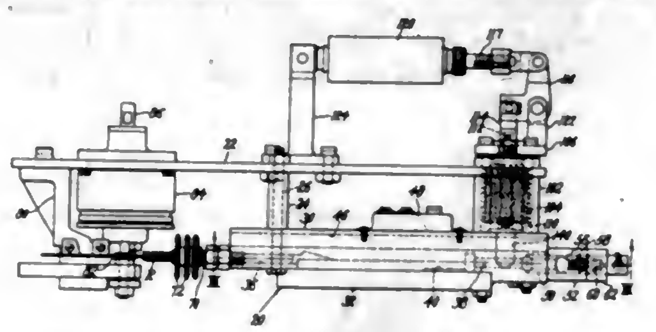


A dispensing device for powdered material capable of delivering metered charges of the powdered material to a receptacle for solving same and subsequent delivery to a predetermined location with rinsing of the receptacle: a metering chamber defined by a pair of driven opercula arranged to provide selective access to and egress from said metering chamber, which chamber is placed in intermittent communicating relation to a source of the powdered material: means are described to move one operculum relative to the other first to load the metering chamber with a charge of powdered material and then to discharge the charge to a receptacle: means are described selectively to tip the receptacle from an upright condition during receipt of powder and solvent to an inclined condition for the discharge of its contents and means also are described to introduce a first metered quantity of water to the receptacle prior to receipt of the metered charge therein and, subsequent to the delivery of said charge, to provide a second metered quantity of water to the receptacle coincident with the discharge of the first metered quantity. Operating and coordinating means in the form of a plurality of cams and linkages are provided for synchronously operating each operculum, the tipping device and the fluid metering device in a predetermined sequence of operation; the invention being described as used in the dispensing of powdered milk product.

3,386,625
APPARATUS FOR MELTING AND DISPENSING THERMOPLASTIC MATERIAL

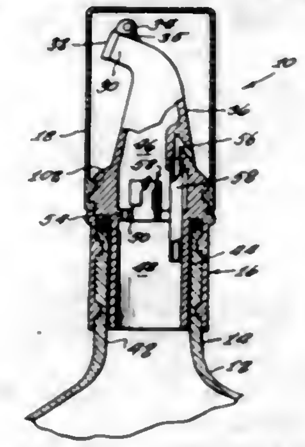
**Roland B. Lessard, Salem, Mass., assignor to United Shoe Machinery Corporation, Boston, Mass., a corporation of New Jersey
Filed Dec. 9, 1966, Ser. No. 600,460
2 Claims. (Cl. 222—146)**

Apparatus for melting and dispensing molten thermoplastic material supplied in the form of a solid rod which comprises a heated melt body formed with a melt chamber having an inlet passage and an outlet passage, a dispensing nozzle in communication with the outlet passage and a pair of feed wheels for feeding the leading end of a solid rod of thermoplastic material through the inlet passageway and into the melt chamber to cause the leading end of the rod to be melted and molten thermoplastic material to be forced through the outlet passageway and extruded through the dispensing nozzle.



3,386,626
NON-REFILLABLE BOTTLE AND POURER

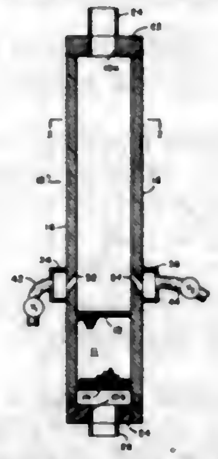
**Patrick Kearney, 38—11 217th St.,
Bayside, N.Y. 11361
Filed Feb. 9, 1967, Ser. No. 615,007
4 Claims. (Cl. 222—147)**



A non-refillable bottle having a neck to which there is permanently secured a spout provided with a one-way valve which allows liquid to be poured from the bottle, but not to be poured into bottle. An air vent in the spout is designed to prevent pouring of liquid into the bottle.

3,386,627
CONTROLLED UNLOADING OF GEOMETRICALLY ORDERED PACKED BEDS

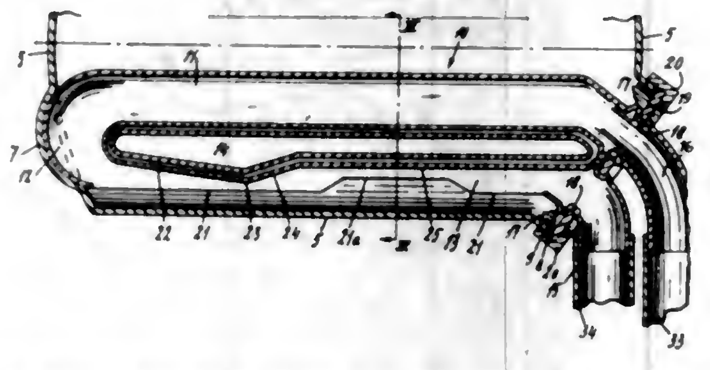
**Herbert Susskind, Huntington, and Walter W. Becker, Shoreham, N.Y., and Michael W. Maresca, deceased, late of East Patchogue, N.Y., by Marie Maresca, administratrix, East Patchogue, N.Y., assignors to the United States of America as represented by the United States Atomic Energy Commission
Original application Apr. 22, 1966, Ser. No. 545,803, now Patent No. 3,294,645, dated Dec. 27, 1966. Divided and this application July 22, 1966, Ser. No. 578,902
5 Claims. (Cl. 222—193)**



An arrangement for the removal of spherical elements from a container assembled into an ordered packed bed. Nozzles direct liquid into the container above the bed to fluidize the upper portion of the bed and carry the elements away. As flow through the nozzles is increased additional layers from the bed are removed.

3,386,628
DEVICE FOR DISCHARGING A POWDERED MATERIAL FROM A CONTAINER

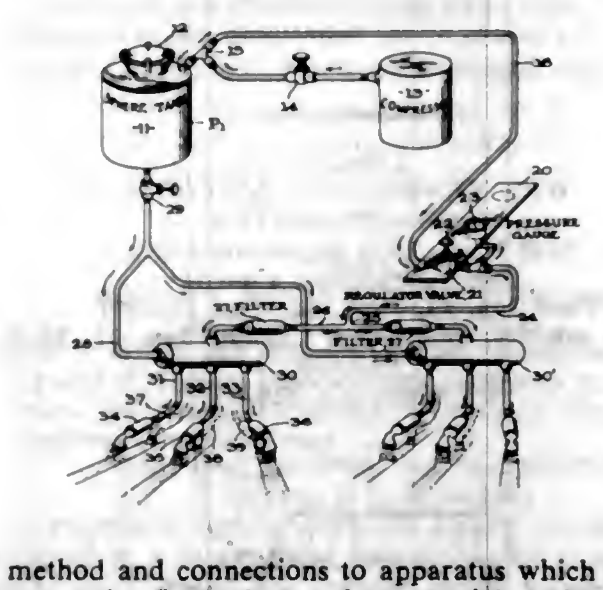
**Josephus Fredericus Dominicus Bruinsma, Dodewaard, Netherlands, assignor to Kiekens Wervelwind Holland N.V., Wadenoyen, Netherlands, a Dutch company
Filed Dec. 27, 1966, Ser. No. 604,970
Claims priority, application Netherlands, Dec. 28, 1965, 65—16,990
8 Claims. (Cl. 222—193)**



A device for discharging a powder from a container, comprising a channel member mounted longitudinally inside the container close to the bottom thereof and having a longitudinal slot at its lower side. The channel is connected at one end to a source of gas pressure and at its other side to a powder discharge conduit whereby a flow of carrier gas for the powder is passed through the channel. Near its gas inlet end the channel has a portion of first decreasing and then increasing cross-section followed by a second portion in which the slot has a greater width than in the first channel portion.

3,386,629
METHOD AND APPARATUS FOR CONTROLLING AND METERING THE FLOW OF GRANULAR MATERIAL

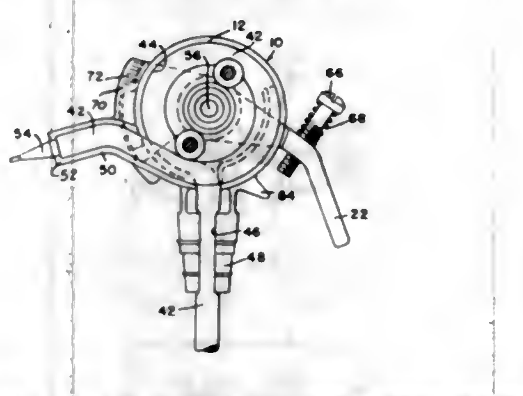
**Adam Currie, Huntingdon, Pa., assignor, by mesne assignments, to Wald Industries, Inc., Huntingdon, Pa., a corporation of Pennsylvania
Filed Feb. 28, 1967, Ser. No. 619,358
8 Claims. (Cl. 222—193)**



A method and connections to apparatus which control and meter the flow of granular material such as glass beads in road striping machinery, wherein the contents of a tank containing the granular material are under pressure and are caused to flow through a supply line of such dimensions that incremental pressure drops are created in said line between the tank and the receiving manifold, the total pressure drop being such that the pressure in the manifold is at or near zero so as to dampen the pulsations generated by the flow of glass spheres in the system.

3,386,630
DISPENSING APPARATUS

**Girard S. Haviland, 39 Uplands Drive,
West Hartford, Conn. 06107
Filed May 19, 1966, Ser. No. 551,279
10 Claims. (Cl. 222—309)**

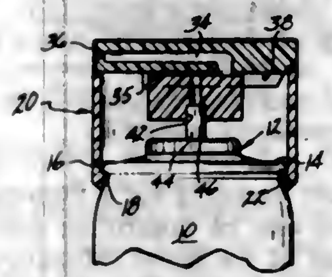


1. Apparatus for dispensing material, said apparatus being adapted for connection to a reservoir for the material to be dispensed, the apparatus comprising:

a housing having an internal wall, said wall having a portion concentric with an axis of the housing and an inwardly curved portion of progressively increasing radius with respect to said axis;
a flexible resilient tube abutting said portions of said housing wall and providing inlet and outlet ports for the material to be dispensed;
a housing cover mounted on said housing for rotation about said axis;
at least two members carried by said rotatable cover, said members being movable with said cover along a path occupied by said tube for compressing said tube, said members being spaced equidistant from said axis and arcuately displaced from one another so that one of said members will be adjacent said wall portion having an increasing radius when the other of said members is adjacent said concentric wall portion;
a lever pivotably carried by said housing; and
a one way clutch interconnecting said lever and cover whereby discharge from said tube is a direct function of movement of said lever in one direction.

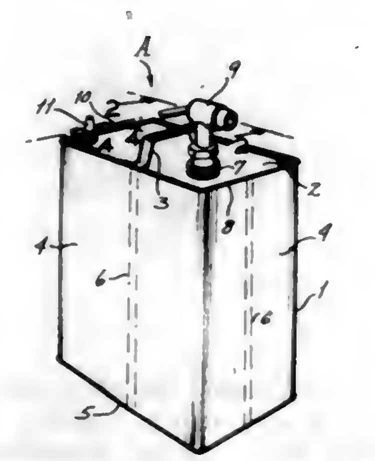
3,386,631
ACTUATOR-OVERCAP WITH SLIDABLY RETRACTING SIDE-PROJECTING NOZZLE

**Paul M. Kotuby, Naugatuck, Conn., assignor to The Risdon Manufacturing Company, Naugatuck, Conn., a corporation of Connecticut
Filed Mar. 21, 1967, Ser. No. 624,828
7 Claims. (Cl. 222—402.11)**



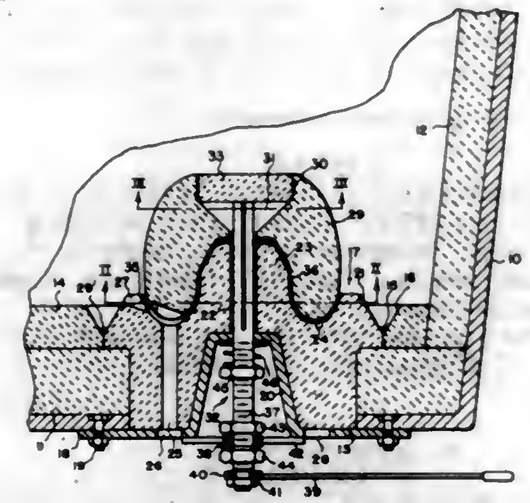
An actuator-overcap combination for dispensing containers, more especially self-pressurized or aerosol type containers, incorporating means for sliding an actuating member of the combination from a centered, nondispensing position in the overcap to a position eccentric of the cap to allow the actuator to be manually operated to release product from the container.

3,386,632
CONTAINER PROVIDED WITH A VENT AND SPOUT ASSEMBLY
Frederick Sager, 427 Belleview Ave.,
Alton, Ill. 62002
Filed Nov. 7, 1966, Ser. No. 592,383
2 Claims. (Cl. 222—482)



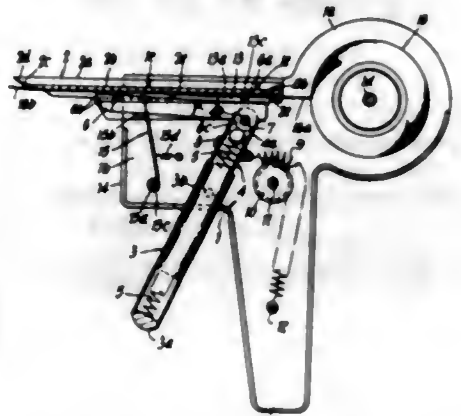
A dispensing unit including a container having a removable dispenser attached to one wall along an edge thereof, and a valve member connecting to said wall near the opposite edge. Both the dispenser and valve may be manipulated open to facilitate pouring of the container liquid. The unit may be constructed of a plastic-like material to enhance its utility.

3,386,633
CLOSURE FOR A BOTTOM POUR METALLURGICAL LADLE
John Nadrich, 2937 Roy St. 44509, and John A. Ericson,
732 Market St. 44502, both of Youngstown, Ohio
Filed Apr. 20, 1966, Ser. No. 544,009
10 Claims. (Cl. 222—548)



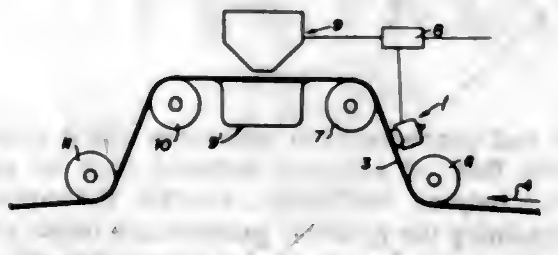
A valve and nozzle assembly for a bottom pour metallurgical ladle which can be controlled from below the ladle without the use of the usual refractory shield stopper rod. The nozzle has a pair of spaced concentric annular wells in its top surface with a discharge port extending downwardly from the lower surface of the inner well. The valve element is bell-shaped with its skirt portion fitted into the inner well. The valving element is rotated by a rod extending downwardly through the nozzle on the axes of the wells and has a notch in its skirt portion which is rotated into and out of registry with the discharge port thus opening and closing the valve.

3,386,634
ADHESIVE TAPE DISPENSING APPLIANCES
James Bruce Curry, 33 Eresby House, Rutland Gate,
London, England
Filed Apr. 25, 1966, Ser. No. 545,026
Claims priority, application Great Britain, Apr. 29, 1965,
18,000/65
17 Claims. (Cl. 225—16)



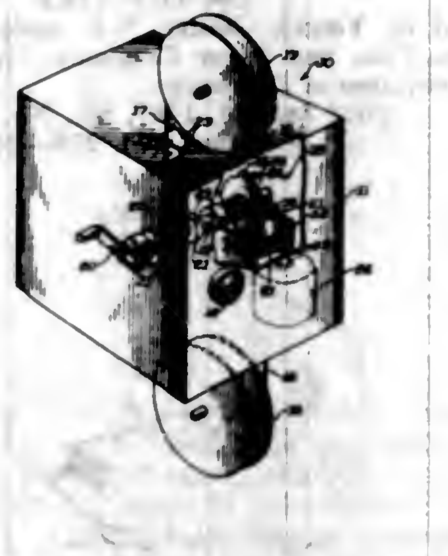
1. A dispensing device for adhesive tape comprising means for rotatably supporting a roll of adhesive tape, an arm, a sliding surface on said arm for the non-adhesive side of a length of tape from said roll, tape displacing means, actuating means coupled to said tape displacing means for displacing said displacing means in a first direction relatively to the slide surface away from said roll supporting means and a second direction opposite to said first direction and for urging said displacing means towards said slide surface when said displacing means is being displaced in said first direction so that said displacing means can engage and withdraw tape along said slide surface from said roll, and for removing said displacing means from said slide surface when said displacing means is being displaced in said second direction, unidirectional restraining means for the tape, and means urging said restraining means towards said slide surface so that said restraining means can engage tape on said slide surface with such a pressure that tape can be drawn past said restraining means by the displacing means during displacement of said displacing means in said first direction, but said tape is held in its moved position and detached from the displacing means by the restraining means on displacement of said displacing means in said second direction.

3,386,635
WEB TENSIONING METHOD AND APPARATUS
Paul Nash, 1071 Bakervale Drive,
Ottawa, Ontario, Canada
Filed Jan. 17, 1966, Ser. No. 521,201
Claims priority, application Canada, Jan. 22, 1965,
921,436
6 Claims. (Cl. 226—1)



A method and apparatus for applying tension to a moving web of sheet material such as paper so as to remove web flutter without damaging the web, and in which an elongated, movable shoe having an uninterrupted, smooth and flexible web contacting surface is held in contact with the moving web by fluid at a pressure sufficient to remove flutter, the fluid being contained in a pressure liner. There being available if required means to automatically regulate the fluid pressure in response to a web flutter detector.

3,386,636
LOW POWER INTERMITTENT DRIVE WITH GEAR ASSIST
Frank C. Badalich, Chicago, Ill., assignor to Bell & Howell Company, Chicago, Ill., a corporation of Illinois
Filed July 21, 1966, Ser. No. 566,840
5 Claims. (Cl. 226—76)



1. A web advancing mechanism adapted for a film strip projection apparatus in which individual film frames comprising said web are intermittently moved to projection position in response to separate controlled motivating torques, the web advancing mechanism comprising a sprocket shaft;

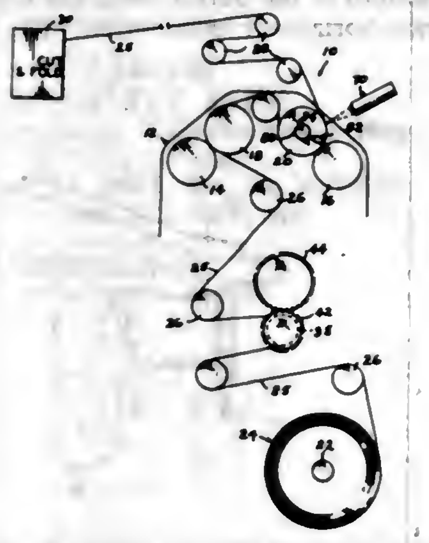
sprocket means mounted for corotation with said sprocket shaft and adapted for engagement with a film strip for advancement thereof;

a pair of gears arranged in driving and driven relationship to rotate said sprocket shaft, said gears respectively having a curved cam track and comprising cam follower means arranged for coaction to cause relative rotation of said gears only during a portion of each cycle of the driving of said gears, and

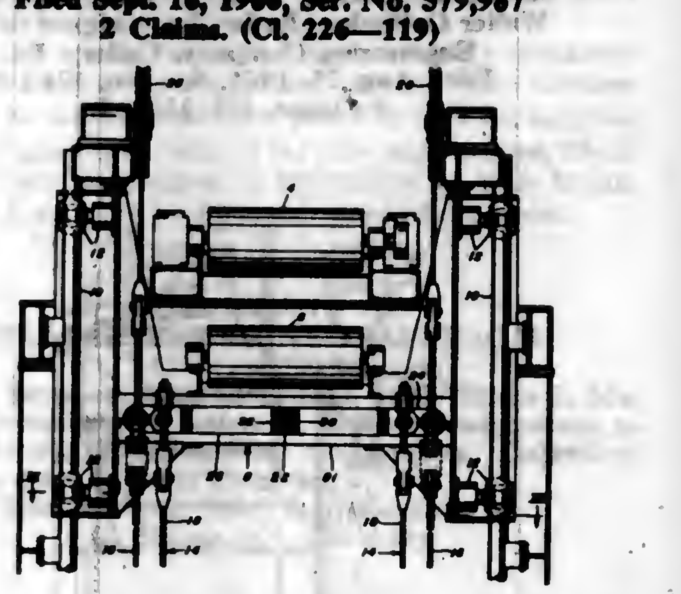
auxiliary gear control means arranged beyond said cam track to cause said gears to rotate together when in non-cam driving relationship and upon movement of the driven gear.

3,386,637
ROTARY PRESS PREPRINTED WEB REGISTERING DEVICE
James F. Green and Richard Hansen, Oklahoma City, and Lindell V. Raper, Moore, Okla., assignors to The Oklahoma Publishing Company, Oklahoma City, Okla., a corporation of Delaware
Filed Dec. 12, 1966, Ser. No. 601,075
7 Claims. (Cl. 226—100)

A preprinted web is entrained around an idling roller mounted in a rotary press and connected at one end by gears to a brake. A register mark locating pointer mounted on the press frame at one end of a press cylinder visually indicates "in" or "out" of registry of the preprinted web, by an electrical circuit, closed by a cam mounted on one end of the press cylinder, illuminating the position of register marks on the web with respect to the pointer. A manually operated control valve actuates the brake to longitudinally advance or retard the web movement and maintain registration.



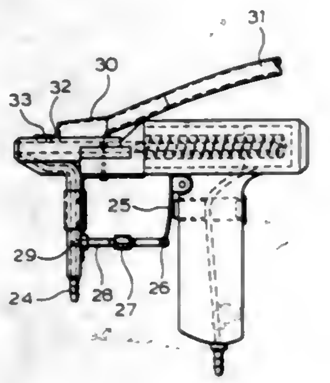
3,386,638
LOOPING TOWER CARRIAGE SUSPENSION
William A. Turner, Yardley, Pa., assignor to United States Steel Corporation, a corporation of Delaware
Filed Sept. 16, 1966, Ser. No. 579,987
2 Claims. (Cl. 226—119)



1. In a looping tower for accumulating strip, including a frame fixed to the tower, and a frame reciprocable toward and from the fixed frame, said frames having rolls journaled therein around which strip is trained, a pair of ropes for raising said reciprocable frame and a pair of ropes for lowering it, and beams carried by said reciprocable frame and pivoted thereto, to the ends of which said pairs of ropes, respectively, are secured, wherein the improvement comprises a single pivot shaft normal to said reciprocable frame, on which both beams are journaled.

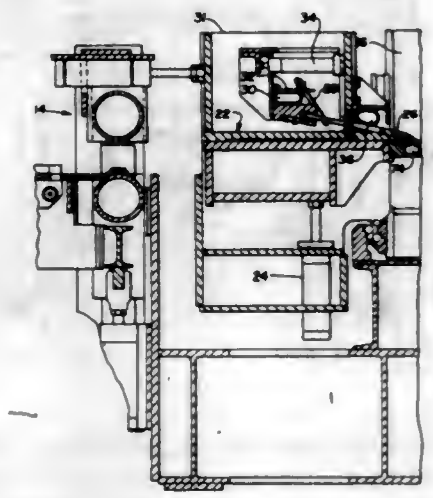
3,386,639
PORTABLE PNEUMATIC PEG-DRIVING MACHINE
Karl Unger, Hochstrasse 13, Alsfeld,
Hessen, Germany
Filed Dec. 22, 1965, Ser. No. 515,593
8 Claims. (Cl. 227—14)

A portable pneumatic peg-driving machine for first injecting glue or other adhesive into pre-drilled holes in workpieces and for then driving pegs or dowels into these holes, wherein the manipulation of a single element controls the consecutive operations of injecting an adhesive into the pre-drilled hole, shooting a peg into the hole, and returning the peg-shooting device to a position such that a new peg may be fed into the barrel of the machine, said machine having a resilient blocking member positioned within the barrel so as to prevent a peg from falling out of the mouth of the barrel when the machine is positioned in a non-horizontal orientation. The present invention further contemplates means for feeding a series of pegs consecutively to the barrel from which they are fired, said means including the provision of a positive driving force to position said pegs for firing.



3,386,640
SHEARING AND WELDING APPARATUS

Walter C. Booher, Butler, Pa., assignor to Voss Engineering Company, Callery, Pa.
Filed Aug. 25, 1966, Ser. No. 575,152
6 Claims. (Cl. 228—5)

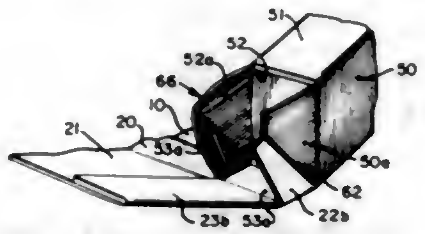


1. Apparatus for shearing and welding metal strips together in end-to-end relationship while the strips are temporarily stopped in their movement along a line, comprising a plurality of fingers disposed in spaced relationship along the widths of the end portions of the strips to be sheared and welded, rod means for pivotally lifting said fingers, hinge means for supporting the top end portions of said rod means, and a pneumatic tube in contacting relationship underneath said hinge means, whereby when air under pressure is introduced in said tube, the tube will lift the hinge means and rod means so as to lift the fingers from clamping engagement with the strips.

3,386,641
BOOK CARTON

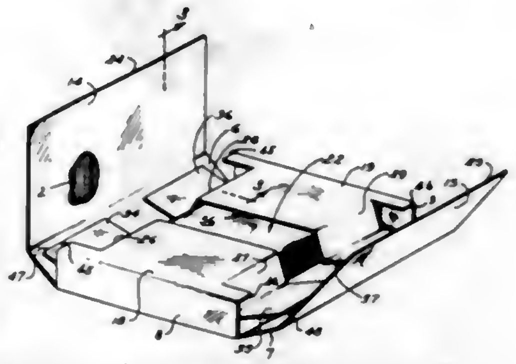
Benjamin Cassidy, Waldwick, N.J., assignor to Federal Carton Corporation, North Berger, N.J., a corporation of New York
Filed Mar. 13, 1967, Ser. No. 622,607
8 Claims. (Cl. 229—34)

The present application discloses a carton made from a blank of fiberboard and constructed with corner reinforcement so as to substantially increase the resistance to crushing and destruction under impact and thus protect items such as books during shipment thereof.



3,386,642
SHIPPING CONTAINER FOR BOOKS OR THE LIKE

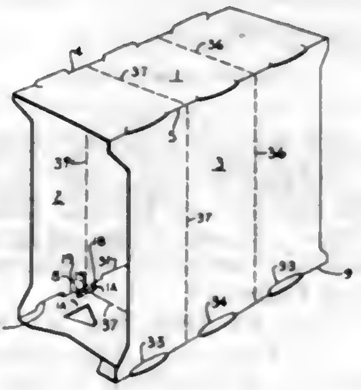
Gerald H. Young, Closter, N.J., assignor to West Virginia Pulp and Paper Company, New York, N.Y., a corporation of Delaware
Filed Jan. 26, 1967, Ser. No. 611,905
7 Claims. (Cl. 229—40)



A shipping container is provided formed from a single blank of paperboard wherein the arrangement of folding panels and flaps prevents the packaged object from being damaged during shipment. A cover flap is arranged to be folded over and secured to a retaining panel having different portions for restraining and bracing the packaged object within the container.

3,386,643
ARTICLE CARRIER

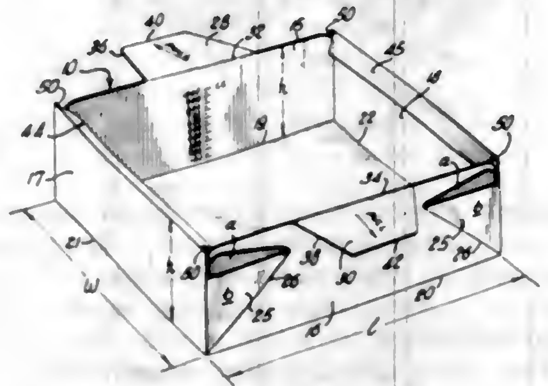
Hermond G. Gentry, Atlanta, Ga., assignor to The Mead Corporation, a corporation of Ohio
Filed July 24, 1967, Ser. No. 655,637
2 Claims. (Cl. 229—40)



An article carrier of the open-ended tubular type having top, bottom and side walls and wherein the bottom wall is formed of a pair of overlapping panels secured together by a pair of locks formed in the outer or lower panels which are disposed within an aperture formed in the inner overlapping panel is provided with at least one continuous longitudinal severance line which intersects the locking aperture in the inner bottom panel and extends between the locks formed in the outer locking panel so that the package may be separated into at least two parts, the locks being so arranged according to a feature of the invention that the packaged items are retained securely within the portions of the wrapper which are separated along the severance line.

3,386,644
COLLAPSIBLE CONTAINER

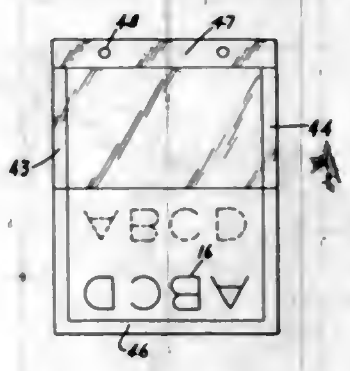
Eli A. Zackheim, Princeton, N.J., assignor to Johnson & Johnson, a corporation of New Jersey
Filed Apr. 18, 1966, Ser. No. 543,139
4 Claims. (Cl. 229—41)



This application discloses a disposable, collapsible container suitable as a sterile vessel. The container is provided with unique pull tabs that cooperate with the folded over end panels and side panels of the container to readily permit opening of the folded, collapsed container first into its partially erected position and thence into its fully erected position without contamination of the interior of the container.

3,386,645
PACKAGING SHEET MATERIAL

Milton L. Powell, San Carlos, Calif., assignor to Rap Industries Incorporated, Minneapolis, Minn., a corporation of Ohio
Filed Feb. 16, 1967, Ser. No. 616,681
14 Claims. (Cl. 229—55)

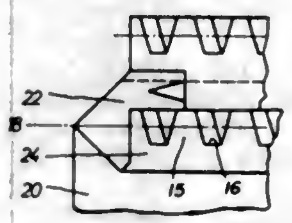


A laminated sheet material for making heat sealable packages having an external web of cellophane with reverse print on one surface of the cellophane. A film of polyethylene is bonded to and covers the printed surface of the cellophane. Covering a portion of the polyethylene film is a sheet of aluminum foil with the bright surface of the foil facing the polyethylene and reverse print. A second film of polyethylene covers the aluminum foil and polyethylene film forming the inside surface of the sheet material.

The package formed of this sheet material has a flexible front wall and a flexible rear wall interconnected along a common fold line. The peripheral edges of the walls are located in face-to-face relation and are sealed together whereby the aluminum foil forms a background for the print.

3,386,646
MULTI-PLY SACK

Hellmuth Arenbeck, Wilhelm-Raabe-Weg 3, Goslar, Germany
Filed Mar. 13, 1967, Ser. No. 622,585
8 Claims. (Cl. 229—55)



A multi-ply sack of paper, plastics material sheeting or the like has the following features:

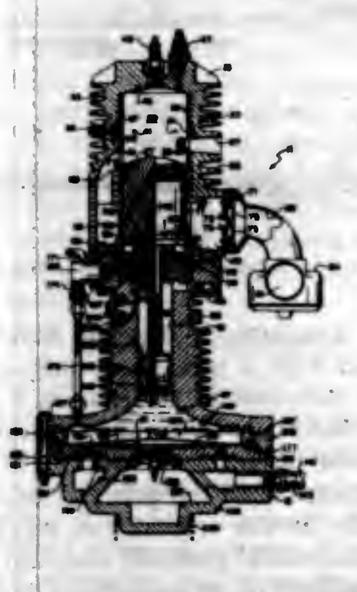
(a) The tube ends of the tube section used in the manufacture of the sack are provided in all plies with protruding, uniformly shaped tongues and with uniformly shaped recesses between the tongues;

(b) The tongues of the various plies of the sack are laterally staggered relative to each other in such a manner that the recesses of each sack ply are substantially covered by the tongues of other sack plies;

(c) The seam portions which are preferably adhesively bonded to each other are formed on both sides substantially by the tube end portions provided with the tongues, and the tongue center lines of the tube end portions, which lines intersect the tongues in the middle of their length, extend at least close to the center lines of the seams.

3,386,647
FREE-PISTON ENGINE DIAPHRAGM COMPRESSOR

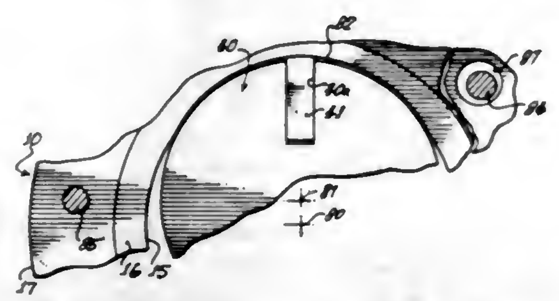
Svend E. Sorensen, King of Prussia, and William L. McHale, Broomall, Pa., assignors, by mesne assignments, to The Battelle Development Corporation, Columbus, Ohio, a corporation of Delaware
Filed Oct. 22, 1965, Ser. No. 501,719
10 Claims. (Cl. 230—49)



This invention concerns a compressor which includes a free-piston engine wherein the free-piston is connected by a piston rod to a working piston. The working piston reciprocates against a column of oil that in turn flexes a diaphragm. The reciprocations of the diaphragm compress a gas so that the apparatus is useful as a refrigeration system. Other features include: an ignition system that is triggered by the reciprocation of the pistons, overstroke control of the free-piston by automatically adding to the column of oil, a starting system based on storage of high pressure combustion gas, and a vibration sensing device that shuts off the starting system after the engine starts.

3,386,648
ROTARY VANE TYPE PUMP

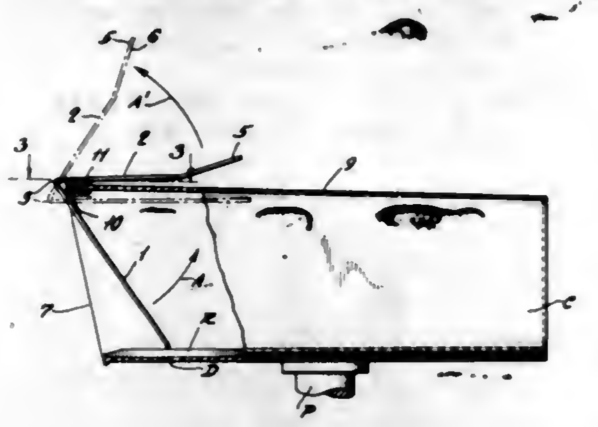
Walter J. Van Rossem, 1917 Thayer Ave., Los Angeles, Calif. 90025
Filed Jan. 31, 1967, Ser. No. 612,844
19 Claims. (Cl. 230—153)



The rotor is eccentric with respect to the axis of the rotor chamber. A housing section is shiftable relative to the end plates to regulate the minimum spacing between the rotor and housing wall and the degree of fluid seal at that location. The shaft bearings are radial type bearings arranged to transmit axial thrust to the housing to relieve the rotor and vanes of end loading; and the bearings, together with the fluid seals carried on a removable collar, are all easily removed from the housing for servicing.

3,386,649
PIVOTED INDICATOR FOR NEWSPAPER DELIVERY RECEPTACLE

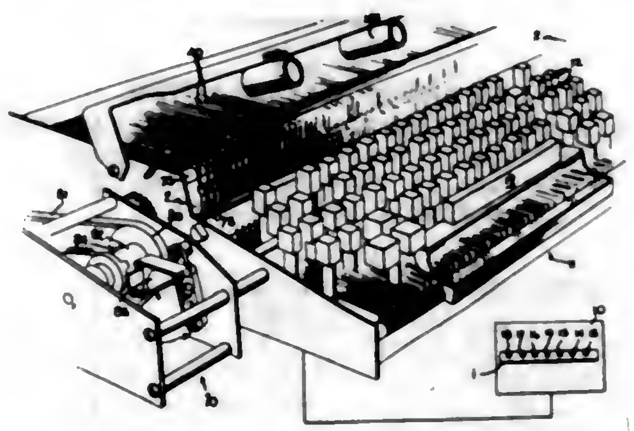
Maurice Joyce, 7054 Allentown Road, SE., Washington, D.C. 20031
Filed Sept. 20, 1967, Ser. No. 669,079
8 Claims. (Cl. 232—34)



The invention concerns a pivoted indicator or flag which is combined with a newspaper delivery receptacle for the purpose of automatically indicating the insertion of a newspaper into the receptacle. The indicator is formed of an integral plate having two arms bent at an acute angle with one shorter than the other. The shorter one is disposed externally of the top of the receptacle and is movable from a horizontal position when no newspaper is present in the container to an upstanding position when a newspaper is inserted thereinto. The plate is pivotally mounted on the upper wall of the receptacle through the intermediary of a simple straight strap hinge, one leaf of which is rigidly connected to said wall, while the other leaf is affixed to one of the arms so that the weight of the longer arm drops the latter into the path of the newspaper, which upon insertion moves the longer arm towards the upper wall and automatically swings the shorter arm to its upstanding indicating position.

3,386,650
CONTROL MECHANISM

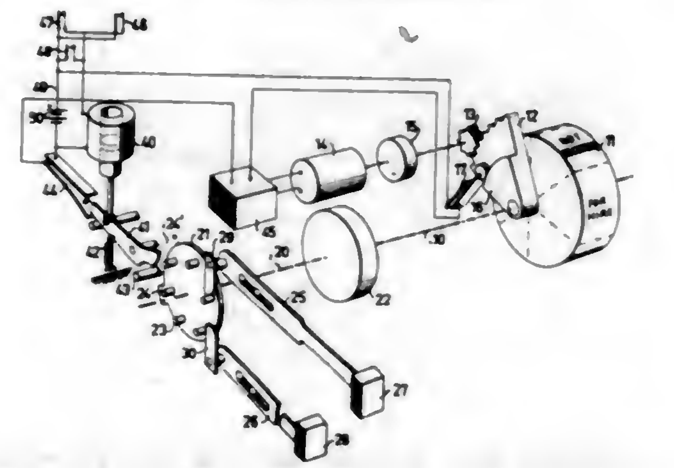
William J. Hildebrandt, Weatogue, Edward W. Lukstas, Windsor, Richard W. Yerks, Manchester, and Daniel A. Esakov, West Hartford, Conn., assignors to Powers & Eaton Industries, Inc., South Hackensack, N.J., a corporation of New Jersey
Filed Sept. 3, 1965, Ser. No. 484,969
34 Claims. (Cl. 234—123)



The present invention is directed to an improved perforating mechanism operable through a keyboard which has a plurality of code slides which are actuated upon depression of a key. Upon actuation of the code slide means are energized to rotate a code slide advancing means. The code slide advancing means moves the code slide forward to energize a circuit for actuating the perforator. Each code slide has a predetermined number of code fingers therein so that actuation of a single code slide will actuate a predetermined combination of code switches to apply a predetermined combination of data openings on a tape.

3,386,651
TAXIMETERS

Sven Hakan Wallqvist, Halmstad, Sweden, assignor to Haldex Aktiebolag, Halmstad, Sweden, a corporation of Sweden
Filed Jan. 17, 1967, Ser. No. 609,860
Claims priority, application Sweden, May 4, 1966, 6,130/66
2 Claims. (Cl. 235—30)



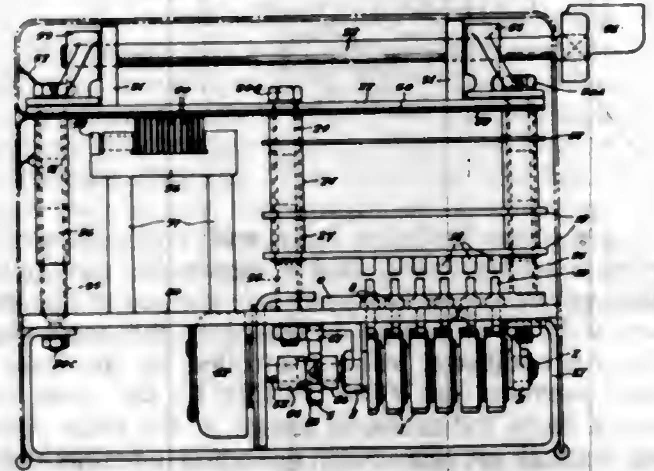
A taximeter having fare-indicating and setting mechanism actuated manually or automatically under control of sensing means which sense the presence of passengers in the taxicabs seats. The sensing means actuate the fare-setting mechanism after a time delay set by time delay means in control circuitry of the mechanism.

It often happens that taxicab drivers forget to place the taximeter in operating position after picking up a passenger (fare). This is particularly true in large towns or cities where there is heavy traffic and where the attention of the taxi driver, particularly when in a hurry, is completely absorbed with negotiating the traffic. Oversights of this type naturally means a loss in income to the owner of the taxicab. To avoid these disadvantages it is known to arrange sensing means in the passenger seats of taxis applying impulses to the taximeter, which automatically set it to a "fare" position when passengers seat themselves in the taxi, providing that the "flag" has not been moved into a manual operating condition by the taxi driver. Constructions of this kind are often such that a change to "for hire" position is prevented as long as the passengers are seated in the taxicab. In taximeters of hitherto known design it is, for instance, possible to place the taximeter in a "for hire" position direct from a "hired" position through a "not recording" position while the passengers are still seated in the taxicab and their journey is still uncompleted. The taximeter can thus be disconnected completely and as a result no record of the fare is made.

In devices of the aforementioned type the taxicab meter is immediately set into operation when the passengers seat themselves in their respective seats, or as soon as the taxicab driver puts the cab into gear when commencing to drive away his passengers. This means that the taxicab driver is given no opportunity to set the taximeter manually when commencing to drive his "fare" i.e. the passenger, to his destination. Such devices which automatically render the meter operative will ultimately mean that the driver of the taxicab ceases to watch the setting of the taximeter. In turn this can lead to possible failure in the automatic system which will not be immediately observed, and that readjustment of the taximeter to the correct fare, "hired" position, with respect to the number of passengers, will not be effected. The present invention is intended to avoid the last mentioned disadvantage.

3,386,652
APPARATUS FOR PRODUCTION OF PUNCHED RECORD CARDS

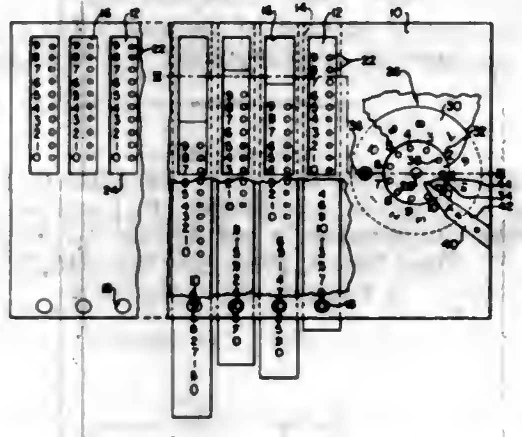
George Thomas Urwin, Durham, England, assignor to The Sunderland Forge & Engineering Company Limited, Durham, England, a company of Great Britain and Northern Ireland
Filed Jan. 26, 1965, Ser. No. 428,066
14 Claims. (Cl. 235—60.29)



A card punching apparatus useful for punching cards with a record of an additive process is constructed of a plurality of linearly displaceable actuators, a plurality of punch elements which extend laterally to the direction of displacement of the actuators so as to be selectively engageable by the actuators, a cumulative counting mechanism which comprises a plurality of rotary elements which represent different digits of a count and each of which is associated with one of the actuators for the purpose of displacing the actuators, rotary input means which drive the rotary elements in relation to the additive process which is being recorded, a die plate which is opposed to the punch elements, guide means on the plate to support and locate the card which will be punched with the information and means adapted to effect relative displacement of the punched elements and the die plate in a direction transverse to the direction of linear displacement of the actuators.

3,386,653
CHECK NUMBER EVALUATING DEVICE

Arthur F. Phipps, Potters Bar, England, assignor to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland
Filed Apr. 8, 1966, Ser. No. 541,198
Claims priority, application Great Britain, Dec. 17, 1965, 53,611/65
13 Claims. (Cl. 235—61)



1. A check-number-evaluating device adapted to evaluate a check number *x* for use with any given multidigit number having up to a predetermined number *m* of of digits such that the check number satisfies the mathematical rule:

$$x+\sum_{i=1}^{i=n} DiWi=0 \bmod p$$

where *n* is the number of digits in the given number, *n* being $\leqq m$, D*i* is the value of the *i*th digit of the given number, and W*i* is a weighting factor assigned to the *i*th digit, said device comprising a casing, a plurality of slides which are slidably mounted in said casing and which respectively correspond to the weighting factors which may be used in evaluating the check number, each said slide having marked thereon a first series of integers 1 to 9 arranged in succession along the direction of sliding movement of the slide and having marked thereon a second series of integers which are respectively related to the integers of said first series and which are also arranged in succession along the direction of sliding movement of the slide, the integers of said second series satisfying the mathematical rule:

$$AiW+Bi\equiv 0 \bmod p$$

where A*i* is the *i*th integer of said first series, W is the weighting factor corresponding to the slide, and B*i* is the *i*th integer of said second series, said casing having formed therein a series of slots respectively associated with said slides and a series of windows respectively associated with said slides, said first series of integers of each slide appearing through the respective slot when the slide is in a predetermined rest position,

said device having a reference point for each said slide
  so that when a selected integer of said first series is adjacent the respective said reference point, the related integer of said second series will appear in the respective said window,
said device further comprising
    a mod *p* counter having a dialling member rotatably mounted in said casing,

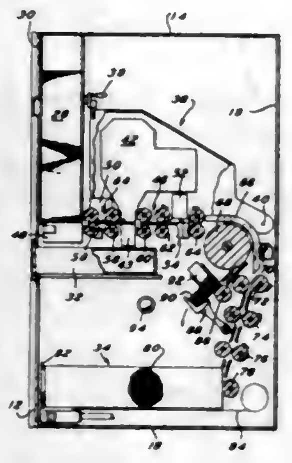
said dialling member having a portion of the surface thereof marked with at least one series of integers 0 to $(p-1)$ arranged at equally spaced intervals around the axis of rotation of said dialling member,

said portion of the surface of said dialling member being masked by said casing, which is further provided with a window which is associated with said dialling member and which is positioned in said casing so that when said counter is set to any selected count, there appears in said last-named window an appropriate one of said integers on said portion of said dialling member corresponding to the selected count,

said counter further comprising means whereby a number may be dialled in said counter by rotating said dialling member in a predetermined direction for a preselected angular rotation which is representative of the number dialled, the dialling of the number in said counter serving to increment the count therein by an amount corresponding to the number dialled.

3,386,654
CARD PUNCHING AND READING DEVICE

Richard A. Wallace, Norristown, Pa., assignor to Control Data Corporation, a corporation of Minnesota
Filed Jan. 7, 1964, Ser. No. 336,285
3 Claims. (Cl. 235—61.1)



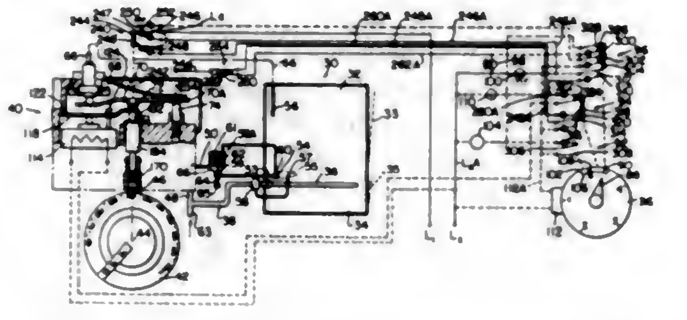
A card processor which has a card-path established by two card-transport structures confronting each other. One transport structure is pivotally movable relative to the other to a path-opening position to facilitate removal of jammed cards. Each transport structure supports complemental portions of card feeling sets of rollers, a punch mechanism, that is, the punch device and die respectively, and the sections of a check-read device.

The pivoted transport structure is normally locked in the position at which it, in cooperation with the other transport structure, establishes the card-path. To open the card-path, the pivoted transport structure is unlocked and pivotally actuated.

3,386,655
CONTROL SYSTEM FOR AN OVEN OR THE LIKE

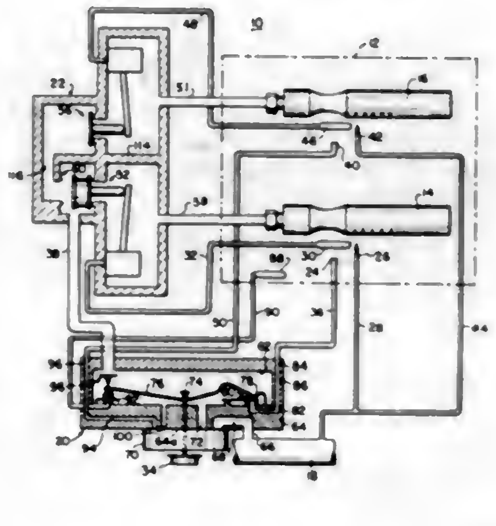
James R. Willson, Greensburg, Pa., assignor to Robertshaw Controls Company, a corporation of Delaware
Application Nov. 23, 1964, Ser. No. 416,184, which is a continuation of application Ser. No. 125,138, July 19, 1961. Divided and this application Dec. 5, 1966, Ser. No. 619,086
9 Claims. (Cl. 236—15)

This disclosure relates to a control means that can be manually set to tend to maintain the temperature effect of a heating means at a selected temperature effect until a heat motor of the control device is activated whereby the activated heat motor will automatically adjust the control device to tend to maintain a second temperature effect of the heating means until the manual manipulator means of the control device is moved to its off position, the manual manipulator means of the control device being adapted to set the control device in its off position to stop the operation of the heating means before and after the heat motor has adjusted to the control device to the different temperature setting thereof.



3,386,656
TWO BURNER OVEN SYSTEMS AND CONTROLS

Frank H. Bergquist, Justice, Ill., assignor to Harper-Wyman Company, Hinsdale, Ill., a corporation of Illinois
Filed Mar. 6, 1967, Ser. No. 621,016
21 Claims. (Cl. 236—15)

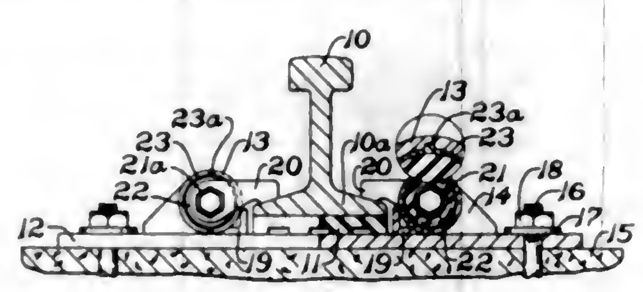


A gas oven includes bake and broil burners each having a control pilot, and a sensor for each pilot. A safety valve for each burner admits gas to the burner when a flame indication is sensed at the corresponding pilot. An additional valve controlled by the bake pilot sensor prevents gas from flowing to the broil burner when a flame indication is sensed at the bake pilot. An oven control provides bake operation wherein the bake burner cycles at a high rate; broil operation wherein the broil burner operates continuously at a high rate; and low broil or rotisserie operation wherein the broil burner operates continuously at a low rate.

3,386,657
RESILIENT RAIL HOLD-DOWN

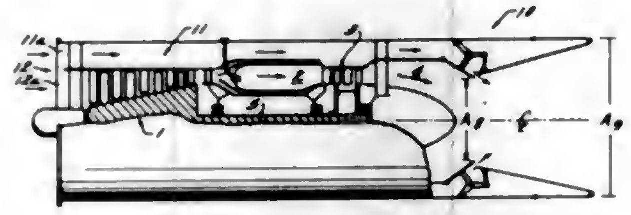
James H. Kramer, Akron, Ohio, assignor to The B. F. Goodrich Company, New York, N.Y., a corporation of New York
Filed Dec. 27, 1966, Ser. No. 604,835
11 Claims. (Cl. 238—310)

A rail hold-down means which receives a rail between a pair of elastomeric springs each having radially extending arm means adapted to contact and exert a resilient downwardly directed retaining force upon the rail when the springs have been pre-stressed.



3,386,658
CONVERGENT-DIVERGENT JET EXHAUST NOZZLE FOR SUPERSONIC AIRCRAFT

Hans P. Mehr, Mason, Ohio, assignor, by mesne assignments, to the United States of America
Filed Dec. 8, 1965, Ser. No. 512,343
4 Claims. (Cl. 239—127.3)

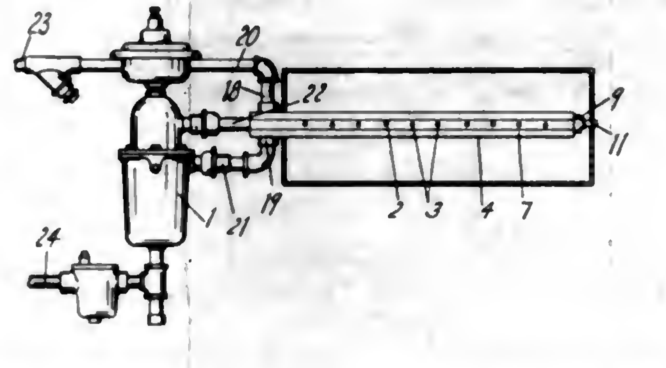


The disclosure shows a variable area convergent-divergent exhaust nozzle for a jet engine, having a fluid exhaust duct and an outer housing in surrounding spaced relationship therewith to form a secondary fluid passage. The nozzle comprises a first plurality of longitudinally-extending movable members, pivotally connected at their upstream ends to said housing. A second set of longitudinally-extending movable members is pivotally connected at their downstream ends to the downstream ends of the first set of movable members. The second set of movable members defines the divergent portion of the nozzle and is connected to the housing so that the second set of members may assume varying degrees of divergence in a downstream direction. The length of the first set of movable members to the second set of movable members is in a ratio of between .5 and .7/1 in order that the second set of movable members will be automatically positioned at the proper angle of divergence for operation at subsonic and supersonic regimes.

3,386,659
HUMIDIFIERS OF THE STEAM DISCHARGE TYPE

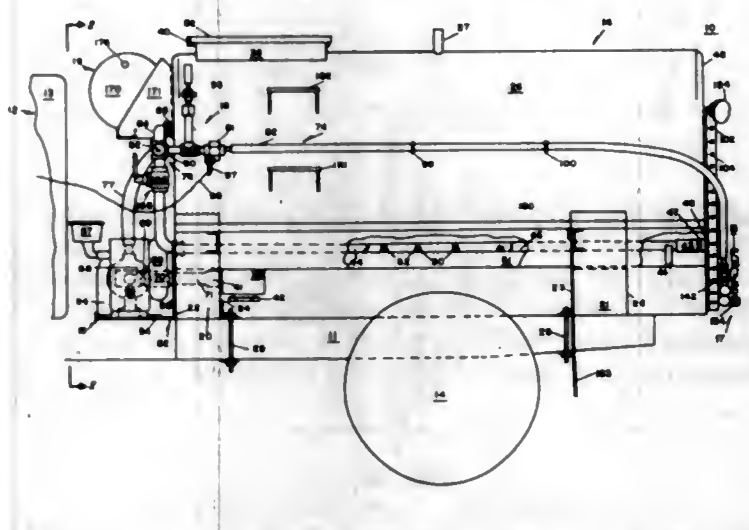
Thomas H. Rea, Three Rivers, Mich., assignor to Armstrong Machine Works, Three Rivers, Mich.
Continuation-in-part of applications Ser. No. 384,287, July 17, 1964, and Ser. No. 130,966, Aug. 11, 1961. This application Sept. 24, 1965, Ser. No. 496,234
17 Claims. (Cl. 239—132)

A humidifier for discharging dry steam in a duct comprising an elongated steam discharge conduit having a plurality of spaced discharge orifices along at least one side thereof. Elongated second conduit means extends lengthwise along the steam discharge conduit in heat transfer relationship therewith so that the steam discharge conduit can be heated by steam flowing the second conduit means. The second conduit means covers only a portion of the periphery of the steam discharge conduit and the discharge orifices are located in the uncovered portion of the steam discharge conduit so that a continuous lengthwise extending portion of the periphery of the steam discharge conduit including the discharge orifices is uncovered and exposed.



3,386,660
SLURRY FERTILIZER SPRAY APPARATUS

Robert R. Marriam, Decatur, Ill., assignor to W. R. Grace & Co., New York, N.Y., a corporation of Connecticut
Filed Sept. 27, 1965, Ser. No. 490,191
9 Claims. (Cl. 239—142)

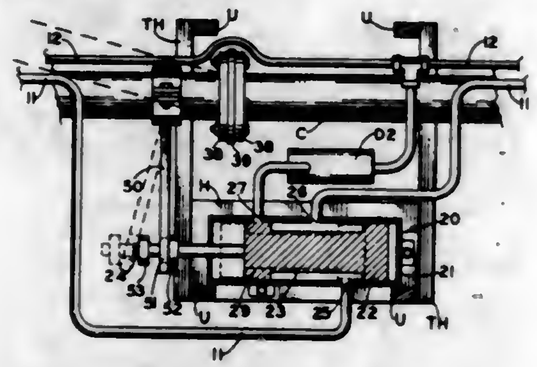


This invention is directed to a slurry fertilizer spray applicator and in one of its aspects to the unitary construction of said applicator mounted upon skid means, in another aspect to special power means for dispensing slurry, and still another aspect to a sparger line within the slurry tank adapted to circulate the slurry in the slurry tank, and in another aspect to a nozzle, boom and interconnecting line arrangement enabling wide utility with simple construction, all as further described hereinafter.

3,386,661
SELF-PROPELLED SPRINKLING IRRIGATION APPARATUS

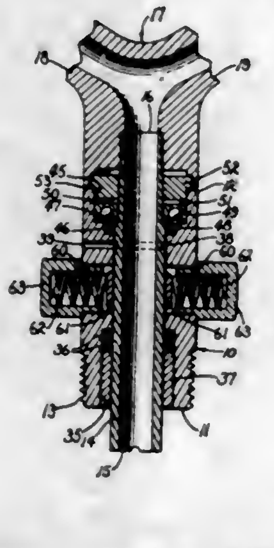
Carroll G. Olson, Atkinson, Nebr. 68713, and Theodore V. Olson, Spencer, Nebr. 68777
Filed Feb. 8, 1967, Ser. No. 614,733
10 Claims. (Cl. 239—177)

This invention relates to a self-propelled sprinkling irrigation apparatus comprising a relatively long water distributing conduit adapted to move around a central water supply pipe so as to spray water onto the land, said water distributing conduit being supported above the land in parallelism therewith by means of a plurality of spaced support members which are driven along the land laterally with respect to the conduit to cause the conduit to move around the central water supply pipe. In particular this invention provides an improved means for maintaining the alignment of the several support members as the



elongate conduit moves around the central water supply pipe, and specifically, the alignment means is based upon a closed-circuit hydraulic system that is wholly external to and divorced from the water carried by the elongate conduit.

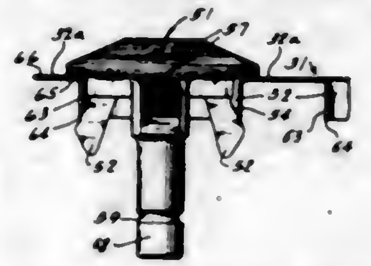
3,386,662
ROTARY SPRINKLER
Marcel J. Kennedy and William M. Royer, Fresno, Calif., assignors to Floway Pumps, Inc., a corporation of California
Filed Jan. 24, 1966, Ser. No. 522,750
10 Claims. (Cl. 239—259)



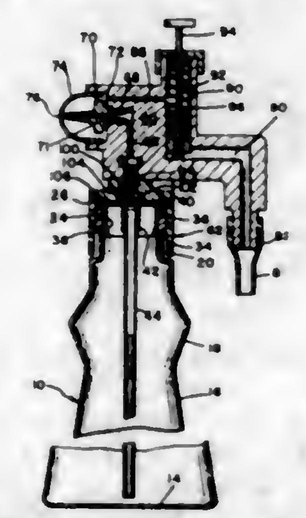
The invention consists essentially of a coupling in which a spindle is mounted for rotation on a rolling contact bearing, a pair of spaced apart water seals circumscribing the spindle and ported to the atmosphere therebetween, a sprinkler head secured to the spindle and having a discharge tube eccentric thereto, and a nozzle in the tube having a hemispherical chamber and an outlet orifice extending obliquely from the chamber and offset from the axis thereof.

3,386,663
ADJUSTABLE NOZZLE SUPPORT FOR WINDSHIELD CLEARING SYSTEMS
Robert R. Mandy and Edwin F. Clemett, Jr., Detroit, Mich., assignors to The Delman Company, Cookeville, Tenn., a corporation of Tennessee
Filed Apr. 13, 1966, Ser. No. 542,327
6 Claims. (Cl. 239—284)

A windshield washer nozzle having a nozzle head with an integrally formed abutting edge along its lower surface for engaging a vehicle cowl adjacent the opposite sidewall portions of a louvered opening in the cowl. The nozzle is adjustably positioned within the opening for longitudinal movement toward and away from the windshield and is held in an adjusted position by a pair of resilient members formed integral with and extended downwardly in a diverging relation from the lower surface of the nozzle head. On insertion of the resilient members within the louvered opening the abutting edge is engageable with the top surface of the opening sidewall, and the resilient members are frictionally engaged with the opening sidewall. A wedge member may be located between the resilient members to hold them against movement away from the opening sidewall.



3,386,664
BOTTLE CLOSURE ASSEMBLY FOR AN ATOMIZER
Leroy H. Knibb, 181 E. Lake Shore Drive, Chicago, Ill. 60610
Filed Dec. 20, 1965, Ser. No. 515,053
3 Claims. (Cl. 239—346)



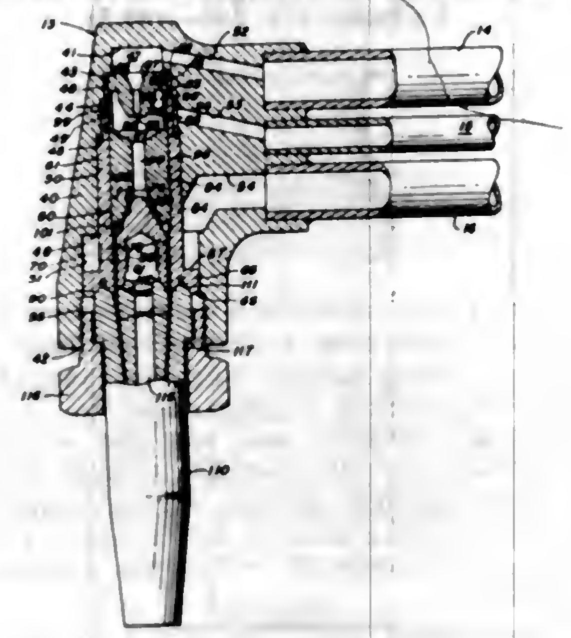
A bottle closure assembly for an atomizer in which provision is made for venting the bottle to the atmosphere at the time the stopper is pushed into the bottle neck so that there will be no entrapped air in the bottle which, otherwise, would force liquid up through the dip tube associated with the bottle stopper.

3,386,665
GAS TORCH
Anthony J. Iozzi, Moraga, and Rene A. Zakhour, San Francisco, Calif., assignors to Veriflo Corporation, a corporation of California
Filed May 31, 1966, Ser. No. 554,193
15 Claims. (Cl. 239—416.1)

12. A gas torch, including in combination

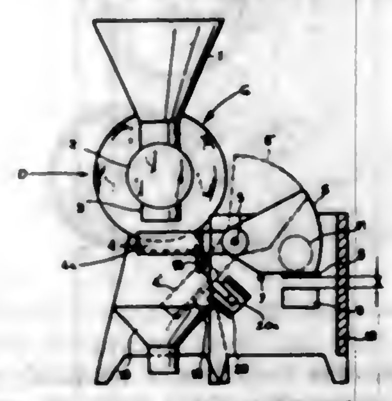
a torch head having a main stepped opening providing a series of successively wider cylindrical recesses connected by steps, extending from a dead end to an interiorly threaded open end, said head having a first passage for preheat oxygen leading into said head adjacent said dead end, and a second passage for fuel gas leading into a subsequent recess,

a mixer assembly in said main stepped opening, comprising a stepped body provided with a first central axially extending passage means therein and providing successively wider cylindrical body portions joined by shoulders, said stepped body having an inner end wall seating against the step in said head closest to said dead end, one said shoulder being spaced from one said step to provide an annular recess for receiving high-pressure oxygen, said mixer assembly having a radial passage connecting said second passage to said first central axially extending passage means, for mixing of said fuel gas and said preheat oxygen, said mixer also having mixing means therefor in said first central axially extending passage means said first central axially extending passage means branching into annularly distributed axially extending passage means downstream of said mixing means, said mixer further having a second central axial passage separated from said annularly distributed axially extending passage means, which lie radially outwardly therefrom at that location, and



a torch tip abutting said mixer assembly and having a central axial passage connected to the central axial passage of said mixer assembly and an axially extending passage means connected to the axially extending passage means of said mixer assembly.

3,386,666
ELECTRICAL COFFEE GRINDER WITH METERED DISPENSING DEVICE
Dondi Benelli Dore, Bologna, Italy, assignor to Carlo Ernesto Valente, Milano, Italy
Filed June 20, 1966, Ser. No. 558,966
Claims priority, application Italy, June 24, 1965, 14,562/65
6 Claims. (Cl. 241—33)



1. A machine for grinding coffee beans or the like and thereafter dispensing the ground coffee or like material including:

a housing;

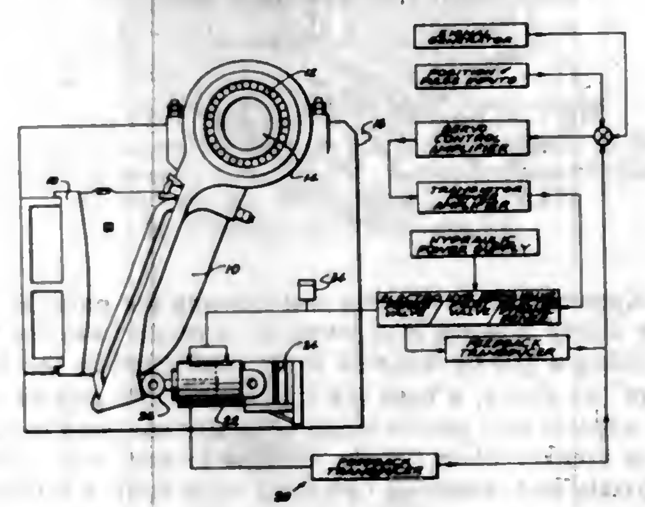
an electric grinder associated with said housing, said grinder having an outlet for discharging the ground material;

a first hopper mounted for feeding such coffee beans into said grinder;

a second hopper mounted to receive said material from said discharge outlet;

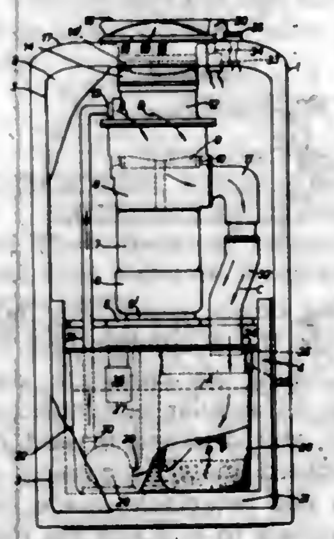
dispensing means affixed to said housing, said dispensing means being interposed between said grinder and said second hopper and being movable between a first position for receiving ground material from the grinder and a second position for discharging a metered quantity of ground material to said second hopper, said movement of the dispensing means being operative so as to enable consecutive dispensing of such metered quantities of ground material automatically; and electrical circuit means connected between said dispensing means and grinder controlled by said movement of the dispensing means.

3,386,667
HIGH FREQUENCY HYDRAULIC ACTUATED JAW CRUSHER
Clinton E. May, 649 E. Pleasant St., Amherst, Mass. 01002
Filed Oct. 22, 1965, Ser. No. 501,559
1 Claim. (Cl. 241—36)



A jaw type crusher including a pivotally mounted jaw adapted to pivot about its upper region and hydraulically operated to and from a crushing position. The hydraulic actuator is in the form of a piston motor that is double acting and that is controlled for relatively high frequency operation by means of a hydraulic and electrodynamic control device.

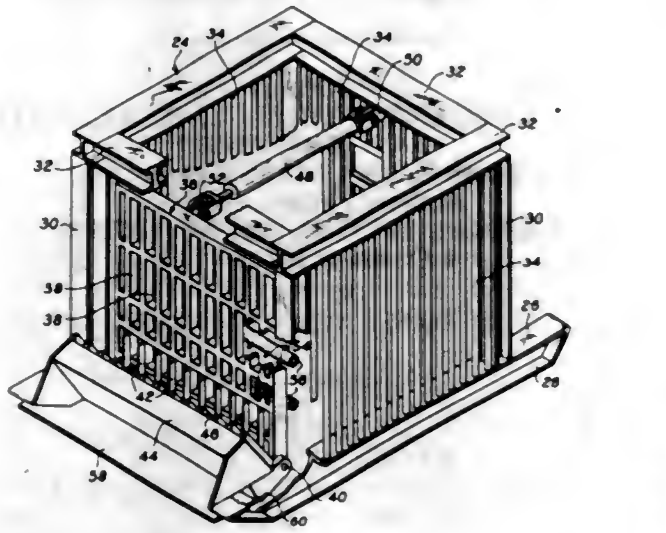
3,386,668
WASTE DISPOSAL APPARATUS
Thomas C. R. Shepherd, Marston House, Bridstow, near Ross-on-Wye, Herefordshire, England
Filed Aug. 16, 1965, Ser. No. 479,857
Claims priority, application Great Britain, Nov. 3, 1964, 44,692/64
8 Claims. (Cl. 241—46)



A disposable textile mesh bag is removably located within the liquid tank of the apparatus, and a pump recirculates liquid from the storage tank into a comminutor, from whence a slurry drains into the bag.

3,386,669
ORE SLURRY HANDLING APPARATUS

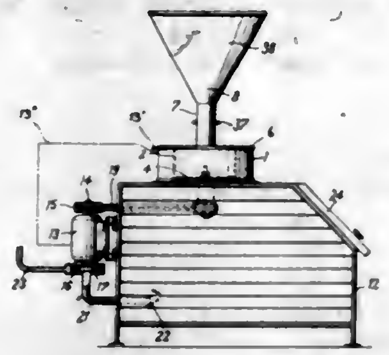
Lonnie G. Wood, Lakeland, Fla., assignor to The Borden Company, New York, N.Y., a corporation of New Jersey
Filed Apr. 25, 1966, Ser. No. 545,152
9 Claims. (Cl. 241—46.13)



1. Apparatus for reducing and limiting the particle size of ore slurry flowing in a sump to a pump inlet therein comprising a grizzly adapted to be positioned in the flow path of the slurry, a base for supporting said grizzly, the lower edge of said grizzly being pivotally mounted on said base, a breaker plate fixedly secured to said base facing said grizzly and extending upwardly at an angle therefrom, crushing means on the lower portion of said grizzly facing said breaker plate, and reciprocating means for pivoting said grizzly and thereby moving said crushing means into crushing cooperation with said breaker plate so as to crush oversize ore particles trapped therebetween.

3,386,670
COMMINUTING DEVICE

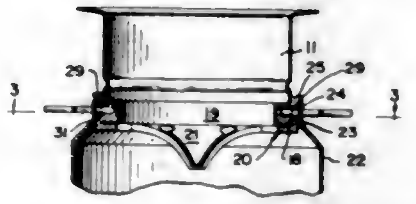
Alois Heger, Oberjesingen, Wurttemberg, Germany
Filed Feb. 23, 1966, Ser. No. 529,343
Claims priority, application Germany, Feb. 23, 1965, H 55,260
10 Claims. (Cl. 241—74)



1. A comminuting device comprising housing means forming a receptacle for a comminuted material, said housing means including an enclosure communicating with said receptacle; an annular sieve structure surrounding an upright axis and disposed in said enclosure for discharging comminuted material passing through said sieve structure into said receptacle; blade means extending generally transversely to said axis but rotatable thereabout within said sieve structure for comminuting a particulate mass to form the comminuted material traversing said sieve structure; and feed means for supplying said particulate mass to said blade means within said sieve structure said enclosure including a generally cylindrical shell with a downwardly open bottom communicating with and overlying said receptacle, said sieve structure including a plate disposed within said shell and along the open bottom thereof with annular clearance from said shell.

3,386,671
DISPOSER CHAMBER MOUNTING

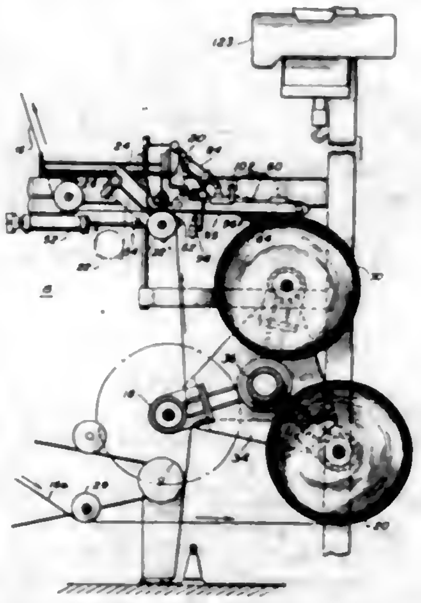
Phillip H. Turner, South St. Paul, Minn., assignor to Whirlpool Corporation, a corporation of Delaware
Filed June 13, 1966, Ser. No. 557,057
9 Claims. (Cl. 241—100.5)



1. Apparatus for mounting a waste disposer on a sink drain conduit comprising: projecting ledge means on said conduit; a mounting member normally arranged on said projecting ledge means; a disposer chamber portion normally arranged adjacent said mounting member; and fastener means normally extending through an opening in said disposer chamber portion into a cooperating opening in said mounting member and arranged above said projecting ledge means for locking the disposer on the drain conduit.

3,386,672
WEB SUPPLY

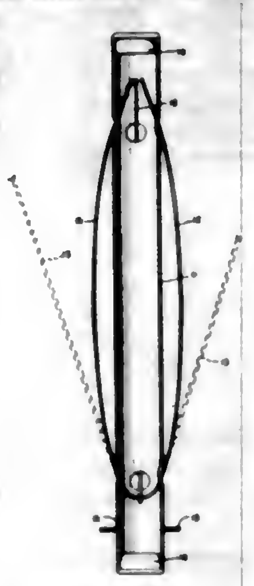
David E. Lamon and Gerald W. Scott, Appleton, Wis., assignors to Appleton Machine Company, a corporation of Wisconsin
Filed Aug. 16, 1965, Ser. No. 479,824
7 Claims. (Cl. 242—55)



Web supply apparatus including a rotatable roll support assembly for supporting three rolls of material, a supply roll, a replenishment roll and a take-up roll. When rotated to the threading position, web material from the replenishment roll is connected to the web from the expiring supply roll. This is effected by energizing a starter engaging the surface of the replenishment roll and by positioning a carrier assembly adjacent the replenishment roll to engage the leading edge of the web and transport it into contact with the expiring web. After replenishment, the old supply roll becomes the take-up roll, the replenishment roll becomes the supply roll, and the old take-up roll is replaced by a new replenishment roll.

3,386,673
WIRE SPRING PAPER SPINDLE

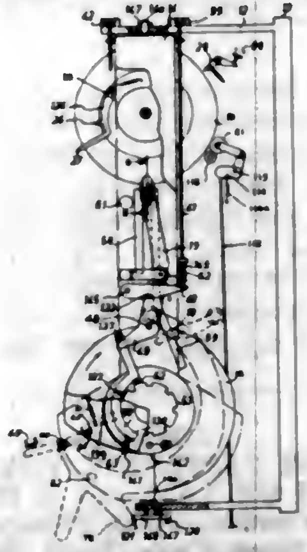
Jerome J. Mader, Des Plaines, Ill., assignor to Teletype Corporation, Skokie, Ill., a corporation of Delaware
Filed Mar. 30, 1967, Ser. No. 627,129
2 Claims. (Cl. 242—55.2)



A tube having two sets of diametrically opposed holes formed adjacent each of its ends and a pair of V-shaped stiff wires each threaded from a hole at one end of the tube through two opposed holes at the other end and into the hole at the one end opposite the starting hole.

3,386,674
AUTOMATIC FILM OR TAPE REPRODUCING APPARATUS

Jacques Guernet, Courbevoie, France, assignor to Campagnie d'Applications Mecaniques A l'Atomistique (C.A.M.E.C.A.), Paris, France, a corporation of France
Filed Aug. 27, 1965, Ser. No. 483,192
Claims priority, application France, Sept. 18, 1964, 988,681
22 Claims. (Cl. 242—55.12)



An automatic device for the threading of film through a projector, the projecting of that film, and the rewinding of the film from the receiving or take-up reel to the supply reel. The machine is simple in construction and requires no magazines, but utilizes instead, simple reels of the normal type and requires that no manual operation be involved in the operation of the device other than the simple placing of a reel upon a spindle and the actuation of a switch. In the machine the film to be projected is provided with a clip at its outer end, which clip is fixed upon the flanges of the supply reel and is taken therefrom to the take-up reel by means of an arm pivotally mounted on the take-up reel, this arm likewise serving to return the clip to the supply reel after the film has been projected. Additionally, the machine is arranged to automatically rewind a film which has been projected during the projection of a second film so that substantially no time is lost between the projection of a series of films wound on separate reels. The device may also be employed for the recording and reproducing of magnetic tapes.

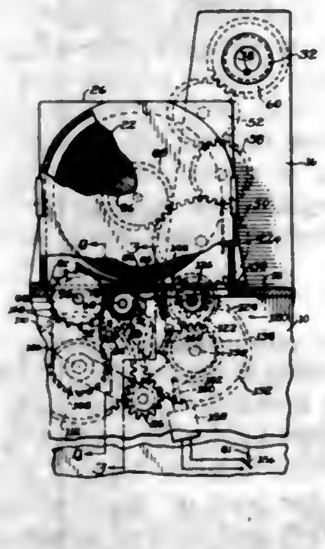
As indicated above, one of the most difficult problems in film projection is the automatic transfer of the end of the film from the supply reel to the take-up reel. A second problem is that of rewinding the projected film without interrupting the projection for an excessive length of time when a number of reels of film are to be projected in succession.

Another difficult problem consists in rewinding the projected film without thereby interrupting projection for an excessive length of time when a number of reels of film are to be projected in succession.

Many solutions to these problems have been proposed, especially in the similar case of mechanical pianos fitted with perforated strips which are wound onto spools, as well as in the case of magnetic tape recorders.

3,386,675
DRIVEN WEB SUPPLY DETECTOR

Jack W. Thomsen, La Grange Park, Ill., assignor to Bell & Howell Company, Chicago, Ill., a corporation of Illinois
Filed Oct. 21, 1965, Ser. No. 499,876
14 Claims. (Cl. 242—55.13)

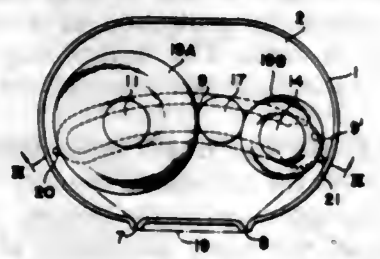


A web handling apparatus capable of alternatively handling a web material contained in a cartridge or on a reel. A drive is carried by the apparatus to drive the core of the cartridge to drive out the film end normally stored within the cartridge. A detector is carried by the apparatus to determine when the cartridge web supply is on the apparatus. Only when the detector detects a cartridge does it connect the drive to feed the film end from a cartridge. That is, the drive is not operated when a reel is supported on the apparatus.

3,386,676
CARTRIDGE FOR STRIP AND TAKE-UP MOTION THEREFOR

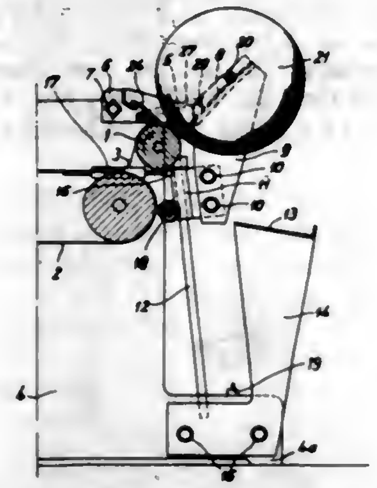
Tadashi Sotani, 21—1 5-chome, Denenchofu, Ota-ku, and Yasuo Sotani, 2241 4-chome, Kami-meguro, Meguro-ku, both of Tokyo, Japan
Filed June 23, 1966, Ser. No. 559,767
7 Claims. (Cl. 242—55.13)

A cartridge and a take-up motion therefor is provided for facilitating the winding and rewinding of tape, film or similar strip material. The cartridge includes a casing having a longitudinally extending slot therein terminating adjacent the casing edges. A pair of spools are shiftable along the slots such that the winding of the strip material on one spool increases while the winding on the other spool decreases. Drive means are also provided for transmitting rotational movement to the spools notwithstanding the relative positions of the spools along the slot whereby the strip material is adapted to be taken up from one spool to the other.



3,386,677
APPARATUS FOR CONTINUOUSLY WINDING UP A FLAT STRIP OF MATERIAL

Arno Becker, Bischoffstrasse 11, Stuttgart-Vaihingen, Germany
Filed Jan. 17, 1966, Ser. No. 521,064
Claims priority, application Germany, Jan. 20, 1965, T 27,854
8 Claims. (Cl. 242—56)

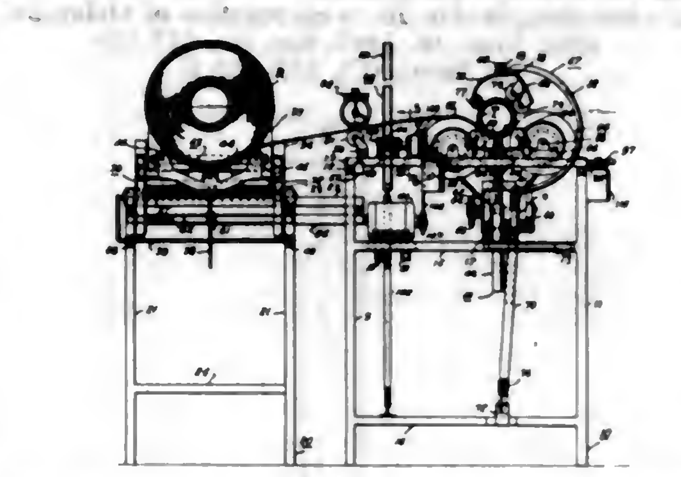


Apparatus for continuously winding up a flat strip of material, comprising a discharge roll over which the strip passes, a pair of upwardly sloping guide rails for supporting a wind-up roll in driven contact with the discharge roll, each of which rails is located entirely on the discharge side of the axis of the discharge roll, adjacent one end of the roll, and each of which comprises a lower fixed portion adjacent to the discharge roll and an upper portion that is carried on a support which is common to the upper portions of both rails, and a guide upon which the support is slidably mounted for downward movement relative to the fixed lower portions of the guide rails, to carry a completed roll on the upper portions of the guide rails to a lower unloading position.

3,386,678
ROLL WINDING APPARATUS

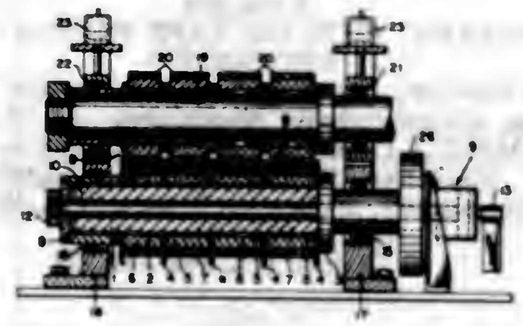
Fermer A. Malone, 824 Ray Andra, De Soto, Tex. 75115
Filed July 18, 1966, Ser. No. 565,904
15 Claims. (Cl. 242—56)

1. A roll winding apparatus including means (30) for supporting a roll (R) of material to permit unwinding thereof, a pair of roller means (55) mounted for rotation about substantially horizontal parallel spaced axes and coacting to provide a rotatable support (54) for receiving and permitting rewinding of the unwound material in a roll, means (58–64) for driving the pair of roller means (55) in the same direction to cause rewinding of the material, a holddown assembly (67) mounted for movement transversely of the rotatable support (54) and into and out of engagement with the rewound roll of material, an elevator assembly (81) extending longitudinally between said pair of roller means (55) and mounted for upright reciprocation relative thereto into and out of engagement with the rewound roll to lift and support the latter above said rotatable support (54) to facilitate removal of said rewound roll, and means (88–97) for reciprocating the elevator assembly (81).



3,386,679
MULTIPLE STRIP TENSIONING DEVICE

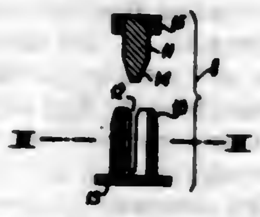
Fernand G. Foulon, Liancourt, and Jean A. Mouret, Creil, France, assignors to The Yoder Company, Cleveland, Ohio, a corporation of Ohio
Filed July 30, 1965, Ser. No. 475,962
Claims priority, application France, Feb. 4, 1965, 4,442
17 Claims. (Cl. 242—56.2)



A slitting line including a power driven recoiler with a tensioning device between the slitter and recoiler which tensioning device comprises a plurality of individual tensioning rollers in frictional driven engagement with each of the slit strips and which are mounted on a shaft provided with a drag brake, the rollers being free to rotate on the shaft but interposed between disks keyed to the shaft with axial compression of the disks and rollers providing controlled slippage between the rollers.

3,386,680
DEVICE FOR FASTENING THE END OF A FILM OR TAPE ON A SPOOL

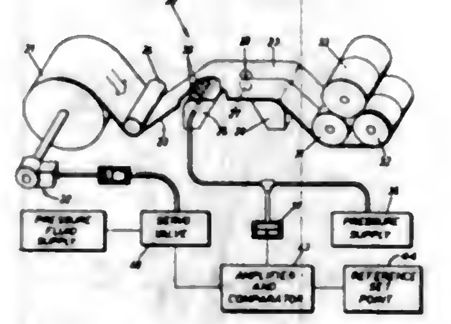
Bob Mouissie, Yverdon, Vaud, Switzerland, assignor to Paillard S.A., Sainte-Croix, Vaud, Switzerland, a corporation of Switzerland
Filed Dec. 20, 1966, Ser. No. 603,272
Claims priority, application Switzerland, Jan. 6, 1966, 153/66
3 Claims. (Cl. 242—74.1)



A fastener for securing the end of a strip member to a spool and adapted to be positioned within a spool hub. The fastener includes a slotted sleeve and a mating plug member adapted to wedge the strip end therebetween.

3,386,681
WINDER TENSION CONTROL

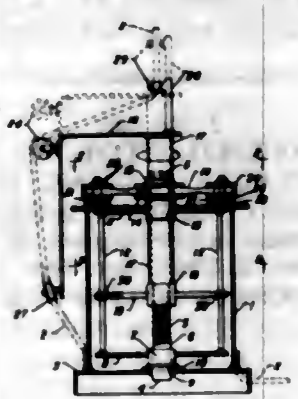
Peter Waterhouse, Montreal, Quebec, and Harold F. Tincombe, Lachine, Quebec, Canada, assignors to Dominion Engineering Works, Limited, Lachine, Quebec, Canada, a corporation of Canada
Filed Nov. 18, 1966, Ser. No. 595,441
5 Claims. (Cl. 242—75.44)



In a brake-controlled web tensioning arrangement for a moving web the variation in back-pressure of air supplied to an air bleed draw table traversed by the tensioned web is sensed by a pressure transducer connected to control the actuation of the brake.

3,386,682
AUTOMATIC CABLE REWIND ASSEMBLY

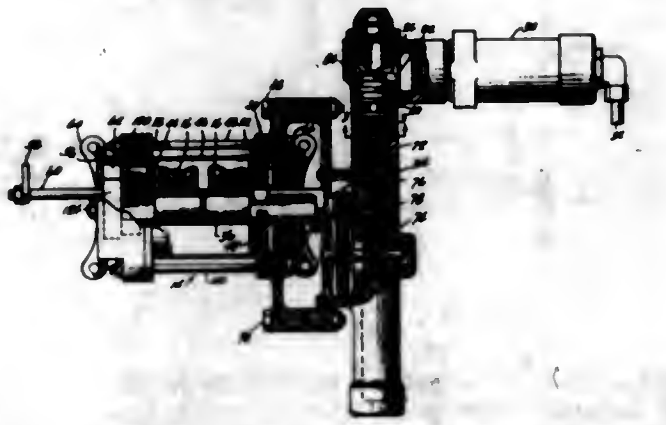
Walter A. Bajek, Lombard, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware
Filed Sept. 29, 1966, Ser. No. 583,013
5 Claims. (Cl. 242—107)



A flexible cable accumulating assembly including a fixed drum for externally holding an accumulated length of cable, a central threaded shaft member connected to the drum and positioned axially therein, a rotatable sleeve slidably mounted over the shaft member and having matching internal threading engaging the threads of the shaft member, the sleeve member being interconnected with a spring holding reel containing a spiral wound spring adapted to be wound and unwound thereon from a spring storage means mounted adjacent thereto, and a cable winding guide fixedly connecting with the sleeve member, the winding guide having a movable arm extended to circumscribe the side of the drum whereby to wind and unwind the flexible cable on the drum as the sleeve member and guide means are rotated in the wind and unwind directions respectively, and the sleeve member and attached cable winding means being operative to move longitudinally up and down with respect to the drum whereby to effect a spiral winding and unwinding of the flexible cable on the exterior of the drum.

3,386,683
POWER RETRACTION INERTIA REEL

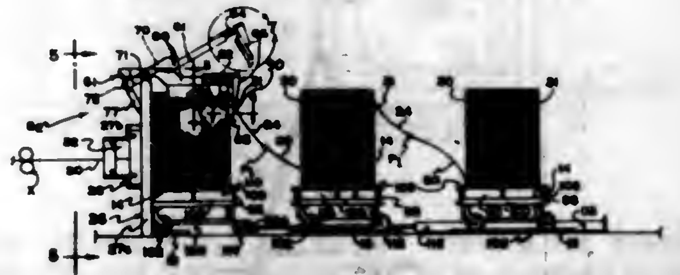
Orville E. Howland, Costa Mesa, Calif., assignor, by mesne assignments, to McDonnell Douglas Corporation, Santa Monica, Calif., a corporation of Maryland
Filed Feb. 10, 1966, Ser. No. 526,462
6 Claims. (Cl. 242—107.4)



A power actuated inertia reel is provided for restraining and positioning an occupant of a seat during emergency escape. A shoulder harness has a mechanism to permit unreeling of the straps so the occupant has freedom of activity in performing normal cockpit functions. Sudden deceleration of the vehicle, as in a crash, actuates a locking mechanism to prevent unwinding of the straps. A power take-up mechanism is actuated by the seat ejection structure during an emergency escape to wind up the harness straps and thus position the occupant for ejection.

3,386,684
ROD MATERIAL HANDLING AND UNCOILING SYSTEM

Richard E. Null, Spanish Fort, Ala., assignor to Kaiser Aluminum & Chemical Corporation, Oakland, Calif., a corporation of Delaware
Filed July 14, 1966, Ser. No. 565,170
15 Claims. (Cl. 242—128)

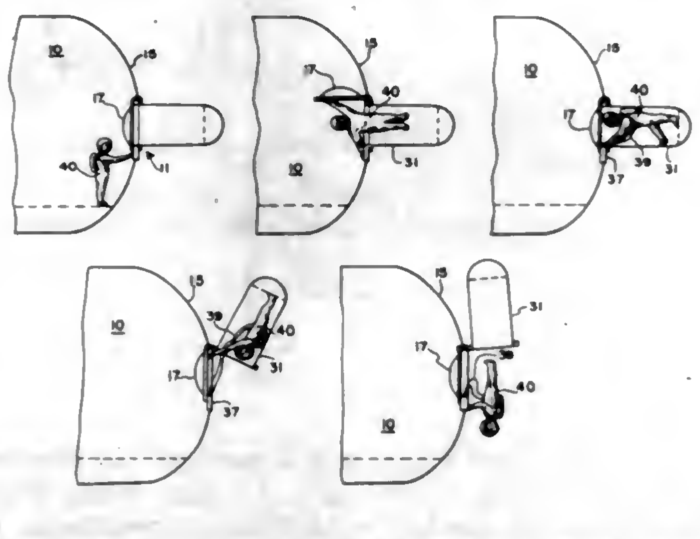


1. A system for handling and unwinding a coil body made up of a series of successive superposed helical windings of rod or rod-like material, said system including a fixed harness means at a given coil body handling station for engaging a first end face of the coil body and for loosely supporting said coil body in a stationary upright position, resilient latch means connected to said harness means for releasably engaging a portion of the outer periphery of the coil body and for retaining said coil body in a stationary upright non-collapsible position against said harness means upon the disposition of the coil body at the harness means, means for transporting a coil body to said harness means, and means associated with said harness means for uncoiling and directing successive portions of the coil body to a further material treating sta-

tion by withdrawing successive helical windings of the coil body from the body starting with the innermost helical winding thereof.

3,386,685
SPACECRAFT AIRLOCK

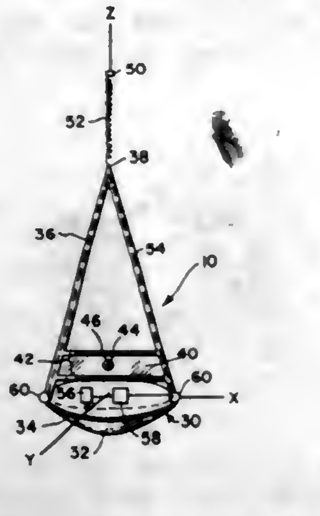
Joseph H. Judd, Newport News, Va., assignor to the United States of America as represented by the Administrator of the National Aeronautics and Space Administration
Filed July 26, 1966, Ser. No. 568,067
6 Claims. (Cl. 244—1)



An airlock permitting individual ingress and egress between one area of environment and another area of environment without subjecting the two areas to each other.

3,386,686
STATION KEEPING OF A GRAVITY-GRADIENT STABILIZED SATELLITE

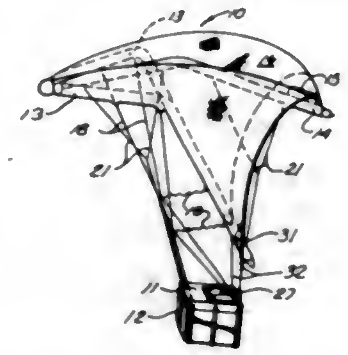
William H. Phillips, Hampton, Va., assignor to the United States of America as represented by the Administrator of the National Aeronautics and Space Administration
Filed Jan. 19, 1967, Ser. No. 610,728
7 Claims. (Cl. 244—1)



A satellite having a lenticular body with a solar sail extending therefrom which supports a damping device that cooperates with proper inertia distribution to stabilize the satellite in pitch and roll. Proper mass distribution provides a preferred orientation in yaw such that the period of oscillation of the satellite in yaw is twice the orbital period. The yaw oscillations permit the forces due to radiation pressure from the sun to feed energy into the orbit on both half cycles. A current-carrying coil is located in the plane of the solar sail and interacts with the earth's magnetic field to produce torque about the Z-axis of the satellite and is controlled by ground command. Alteration of the current direction effects modification of the orientation period and thereby permits control of the energy fed into the orbit to permit station keeping.

3,386,687
METHOD OF DEPLOYING A FLEXIBLE WING VEHICLE

Harry E. Rollins, Fullerton, Calif., assignor to North American Rockwell Corporation, a corporation of Delaware
Filed July 1, 1966, Ser. No. 562,226
19 Claims. (Cl. 244—49)

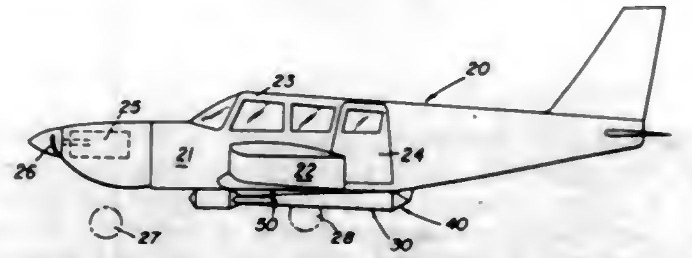


Deployment of a flexible wing gliding vehicle comprising three inflatable flexible booms forming a rigidifiable trifurcated frame and a fabric sail between the booms is described. Initially the sail and deflated booms are stored in a compartment in a payload. During the steps of deployment the wing is withdrawn from the compartment, and, while the wing is unfolding, the booms are inflated with the central boom inflating before the side booms. The ends of the two booms are reefed to the payload until all the booms are completely inflated to provide a transient bonnet-like shape of generally M-shaped transverse cross section.

After full inflation the reefing is released, permitting the booms to straighten quickly into a fully deployed position. A gas manifold at the leading end apex where the three booms are connected and a gas source on the center boom provide the sequential inflation of the booms.

3,386,688
AIRCRAFT PROVIDED WITH AN ENGINE AND A RETRACTABLE FAIRING THEREFOR

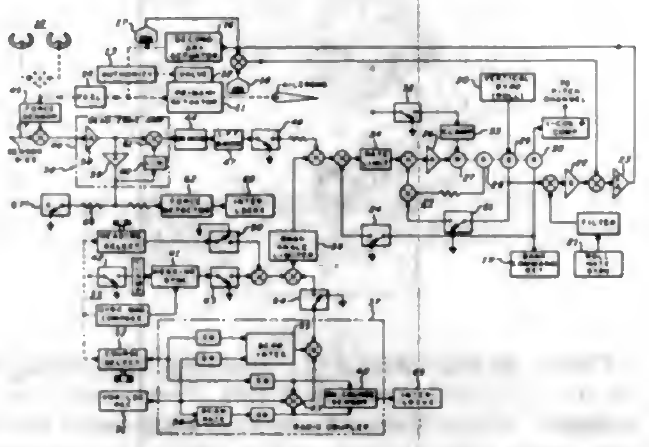
Deodat Clejan, Chicago, Ill., assignor to Pulse Jet Corporation, a corporation of Delaware
Filed Mar. 2, 1966, Ser. No. 531,101
5 Claims. (Cl. 244—53)



There is disclosed an aircraft having a fuselage within which is mounted a main engine driving a propeller to provide the primary motive power therefor, a pair of pulse jet engines fixedly mounted on the fuselage exteriorly thereof and disposed in the air stream of the aircraft in flight to provide auxiliary motive power therefor, the pulse jet engines each including intake air nozzle structure and exhaust gas nozzle structure, first fairings respectively associated with the intake air nozzle structures and movable between a fairing relation with the associated pulse jet engine and a storage position disposed in the fuselage, second fairings respectively associated with the exhaust gas nozzle structures and movable between a fairing relation with the associated pulse jet engine and a storage position disposed in the fuselage, and a controller for governing the movement of the fairings between the positions thereof.

3,386,689
AIRCRAFT AUTOPILOT WITH CONTROL WHEEL STEERING

Robert H. Parker, Bernard T. Devlin, and Edwin H. Purvis, Phoenix, Ariz., assignors to Sperry Rand Corporation, a corporation of Delaware
Filed Feb. 6, 1967, Ser. No. 614,277
8 Claims. (Cl. 244—77)



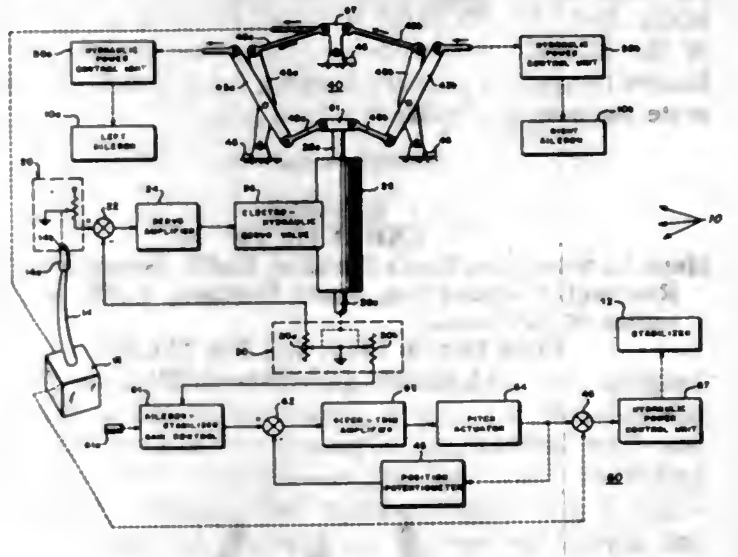
Automatic flight control apparatus operable in a plurality of modes, such as manual maneuvering and various guidance modes in which maneuvering commands by the pilot are generated through force signal generators on the aircraft control wheel. The pilot commands and the various guidance commands are supplied to the control surface actuators through an instrument servo loop. Pilot force signals are detected at different magnitude levels depending upon existing mode of operation, which levels determine the threshold of autopilot control by proportional force command signals through operation of the instrument servo.

A dual level force detector is controlled by interlock circuits whereby under normal manual maneuver modes, a low level force is detected such that unintentional forces applied to control wheel will not generate commands; while under certain external guidance and path modes, a higher level force is detected such as to require a positive and intentional override and termination of such modes and reestablishing normal manual maneuver modes with positive maneuver command. The operation of the instrument servo in response to control wheel force signals is controlled by interlocks such that for commanded attitudes less than a predetermined value the instrument servo operates as a position follow-up servo whereby the commanded attitude is proportional to the magnitude of the force signal; but when the commanded attitude is greater than said value, the instrument servo operates as an integrator whereby the commanded attitude is proportional to the integral of the force signal.

3,386,690
DIRECT LIFT CONTROL SYSTEM

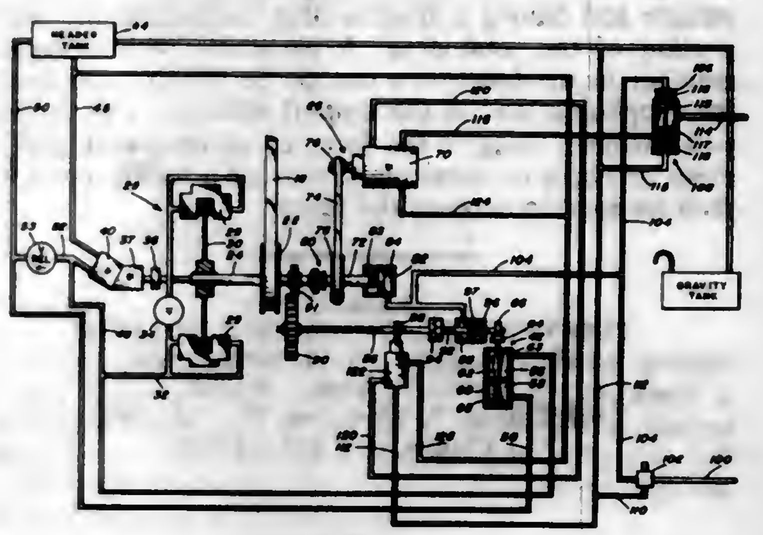
Floyd W. Prillman, Dallas, and James D. Etheridge, Irving, Tex., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Feb. 17, 1966, Ser. No. 529,595
3 Claims. (Cl. 244—83)

An aircraft direct lift control system for simultaneously causing deflection of right and left ailerons through similar angles in the same direction irregardless of their initial angular positions and simultaneously causing deflection of the leading edge of a horizontal stabilizer through a corresponding selected angle. The system includes a potentiometer-driven hydraulic piston for driving a mechanical, algebraic summing linkage connected between a pilot control stick and power control units which actuate the ailerons. The piston also drives a potentiometer-driven actuator system to correspondingly cause deflection of the horizontal stabilizer.



3,386,691
CONSTANT RUNOUT BRIDLE ARRESTER

James E. Scholl, Fairfax, Va., assignor to the United States of America as represented by the Secretary of the Navy
Filed Aug. 1, 1966, Ser. No. 569,524
6 Claims. (Cl. 244—110)

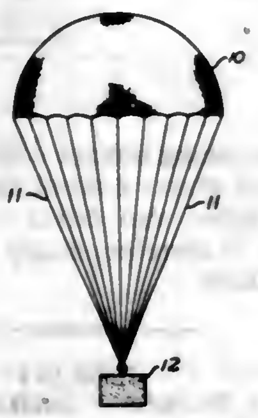


This invention is a system for arresting the bridles, which are used to connect aircraft to be launched to the catapult shuttles on the deck of an aircraft carrier, when the launch has been completed. The invention comprises an elongated metal strap having one end connected to the bridle and the other end wound on a drum which is fixed to a shaft rotatably mounted on the aircraft carrier. A brake disc is also fixed to the shaft and is provided with a pair of hydraulic brakes adapted to grip the brake disc and retard rotation of the shaft. A hydraulic system, including a pump coupled to and driven by the shaft, is provided for supplying hydraulic fluid under pressure to the brakes upon rotation of the shaft caused by strap runout during launch of an aircraft. The hydraulic system also contains a variable orifice valve located in a by-pass line so that when the valve is opened, the hydraulic fluid from the pump by-passes the brakes. A cam mechanism, driven by rotation of the shaft, operates the variable orifice valve.

The cam is so configured that (1) the valve is fully open and renders the brakes substantially ineffective during an initial portion of the acceleration of the aircraft and bridle, (2) the valve is partially closed to render the brakes partially effective to apply a secondary braking force during the terminal portion of acceleration of the aircraft and bridle and (3) the valve is fully closed upon separation of the aircraft and bridle to render the brakes fully effective to apply a primary braking force which will decelerate and stop the bridle at a fixed point.

3,386,692
PARACHUTE

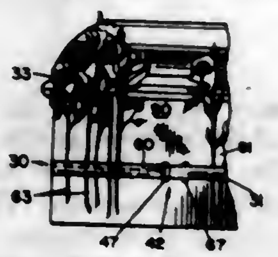
Hans U. Schuerch, Santa Barbara, Calif., assignor to Astro Research Corporation, Santa Barbara, Calif., a corporation of California
Filed Dec. 3, 1965, Ser. No. 511,395
12 Claims. (Cl. 244—138)



A parachute having a nearly constant descent rate during a fall from extreme high altitude to the earth's surface and having a friction drag comprising the major portion of the total drag. A parachute with a support member in the form of a canopy or the like and means for coupling a load to the support member, with the support member being in the form of an openwork grill or mesh of fibers or wires or ribbons of a width much less than the spacing between the fibers.

3,386,693
FLOWER ARRANGEMENT HOLDER

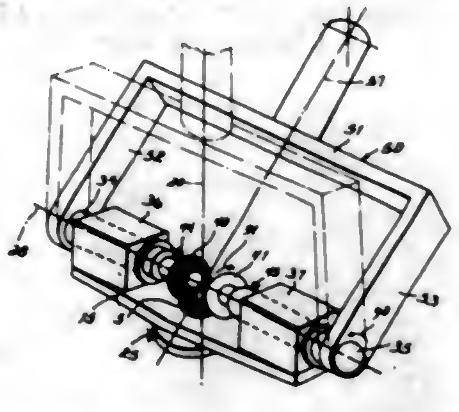
Marie I. Ring, 21 St. James Ave.,
Haverhill, Mass. 01830
Filed Mar. 7, 1966, Ser. No. 532,390
4 Claims. (Cl. 248—27.8)



A device for holding the stems of flowers in a desired arrangement on an object such as a mantlepiece, gravestone, or doorway, the holder being an elongated band, or tape, of flexible, resilient, stretchable material having narrow elongated slits spaced therealong from end to end, each slit being defined by at least two narrow integral stretchable strips normally in the plane of the band. When the slitted band is stretched taut on an object, the flower stems are inserted in the various slits, by laterally stretching the strips out of the plane of the band, thereby resiliently retaining the flowers of the arrangement in position.

3,386,694
POSITIONING MOUNT FOR ANTENNAS AND THE LIKE

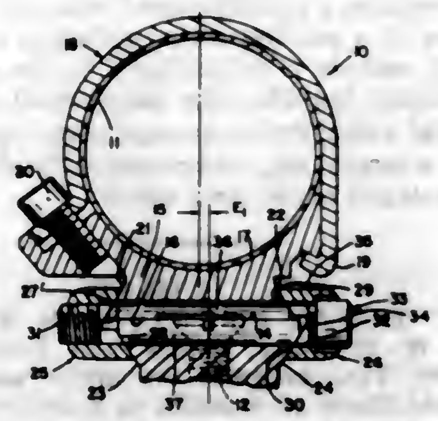
Homer G. Boyle, Yonkers, N.Y., assignor to Aeronca, Inc., Middletown, Ohio, a corporation of Ohio
Filed Aug. 22, 1966, Ser. No. 574,239
7 Claims. (Cl. 248—179)



A mount is disclosed for imparting azimuthal, elevational or combined azimuthal and elevational motion to an antenna or the like. The mount includes a stationary reaction gear about which is rotatably mounted an azimuthal yoke having a pair of upstanding arms which rotatably support a pair of oppositely disposed bevel gears in meshing engagement with the reaction gear, and an azimuthal yoke having a pair of arms stationarily mounting the stators of motors whose shafts drive the bevel gears. In operation, when the motors are driven at the same rate and in the same direction, pure azimuthal motion is imparted to an antenna mounted on the elevational yoke. Elevational antenna motion is produced by driving the motors in opposite directions and at the same speed. Combined elevational and azimuthal antenna motion is produced by driving the motors at different speeds.

3,386,695
GUN TELESCOPE MOUNTING HAVING A FIXED LATERAL ADJUSTMENT MEMBER

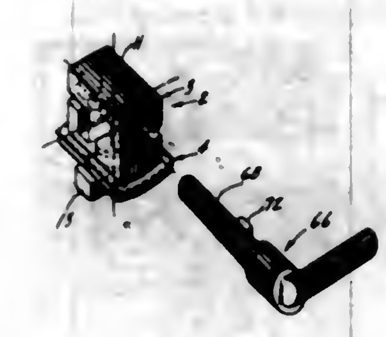
Charles H. Blood and John L. Goodyear, Rochester, and Herbert D. Korones, Brighton, N.Y., assignors to Bausch & Lomb Incorporated, Rochester, N.Y., a corporation of New York
Filed Nov. 25, 1966, Ser. No. 597,095
4 Claims. (Cl. 248—229)



A mounting for a gun telescope, the clamping mechanism thereof being constructed as a unit to provide a fixed lateral offset between the gun and the telescope axes on either side of center.

3,386,696
CONTAINER COUPLING MECHANISM

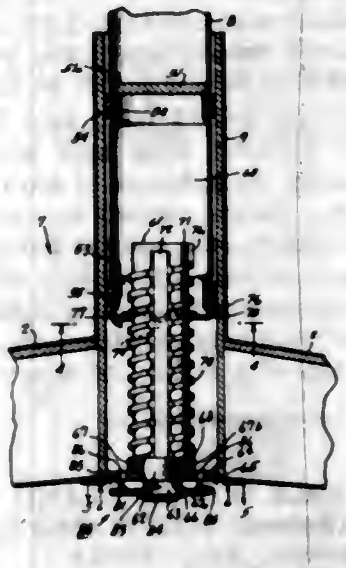
Daniel W. Duval, Lyndhurst, Robert A. Spear, Maple Heights, and Joseph A. Toth, Cleveland, Ohio, assignors to Midland-Ross Corporation, Cleveland, Ohio, a corporation of Ohio
Filed May 25, 1966, Ser. No. 552,977
7 Claims. (Cl. 248—361)



An adapter removably coupled to a support for securing a container to the support in nonshifting relation thereto.

3,386,697
ROTATABLE CHAIR HEIGHT-ADJUSTMENT MECHANISM

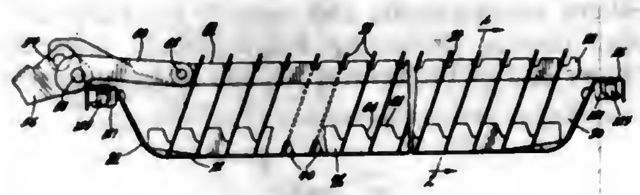
Charles Robert Helms, East Greenville, Pa., assignor to Knoll Associates, Inc., New York, N.Y., a corporation of New York
Filed Aug. 2, 1966, Ser. No. 569,641
6 Claims. (Cl. 248—406)



In a swivel-chair height-adjustment mechanism for adjusting the height of a chair seat relative to a chair base, including a hub connected to the chair base, a column telescopingly received within the hub and connected to the chair seat, a spindle mounted for rotation within the hub and having a helical thread on the exterior thereof, a nut connected to the column having a thread engaged with the spindle thread to support the chair seat on the chair base, and means for selectively locking the spindle against rotation relative to the chair base, the improvement, in combination with the foregoing, comprising an indentation (depression or aperture) in each of a number of turns of the spindle thread, and a detent portion of the nut thread protruding downwardly toward the chair base and essentially parallel to the nut thread axis disposed to engage within an indentation in the spindle thread. In a preferred form the nut thread detent portion includes a downwardly convex surface integrally formed by deformation of the nut thread.

3,386,698
FREEZING TRAY

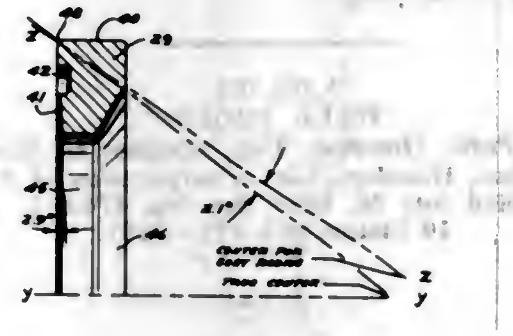
Bruce S. Albright, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Mar. 28, 1966, Ser. No. 537,850
7 Claims. (Cl. 249—131)



1. A freezing tray including a container pan adapted to contain liquid to be frozen, a grid for dividing the interior of the pan comprising a longitudinal wall and spaced movable transverse walls, and bars extending longitudinally beneath said liquid provided with a multitude of reoccurring macroscopic depressions therein imparting an undulated patterned surface thereto.

3,386,699
BALL VALVE SEAL

William J. Petter, Helmer A. Ronningen, and Robert M. Ronningen, Kalamazoo, Mich., assignors to Ronningen Manufacturing Company, Vicksburg, Mich., a corporation of Michigan
Filed Aug. 18, 1965, Ser. No. 480,719
3 Claims. (Cl. 251—315)

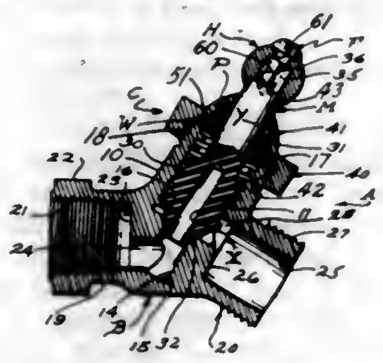


A ball valve sealing ring having a ball facing annular surface which is radially contoured on a radius equal to but offset from that of the ball and with the surface adapted to come into flush engagement with the ball as the ball is compressed against the ring to flex the latter about a circumferential axis.

3,386,700
PRESSURE SEAL BIB

Gordon Z. Greene, Arcadia, and Braham Benjamin, Chatsworth, Calif. (both of 2119 N. Rosemead Blvd., South El Monte, Calif. 91733)
Filed Jan. 7, 1965, Ser. No. 424,079
5 Claims. (Cl. 251—175)

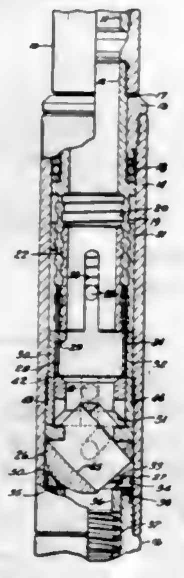
A pressure seal bib-type plug valve including, an elongate body with inner and outer ends, an elongate internally threaded valve chamber entering the outer end of the body and terminating at a bottom therein, a lateral inlet flow passage entering the body at one side thereof and terminating therein near the bottom of the valve chamber, a longitudinally outwardly disposed central, longitudinally and radially inwardly inclined, annular valve seat at the bottom of the chamber and communicating with the flow passage, and an outlet flow passage entering one side of the body and communicating with the valve chamber longitudinally outward of said seat, an elongate unitary fluid pressure actuated valve member molded of resilient plastic material having inner and outer ends and having an elongate externally threaded central portion freely engaged in the threaded valve chamber with sufficient radial clearance to permit limited radial expansion of said central portion, an elongate stem portion projecting longitudinally from the outer end of the central portion and from the outer end of the valve chamber, a resilient longitudinally and radially inwardly convergent plug portion projecting longitudinally inwardly from the inner end of the central portion and engageable



through and into seated engagement with the seat and an elongate central, inwardly opening pressure chamber entering the inner end of the plug portion and terminating in the central portion and communicating with the inlet passage whereby fluid under pressure in the inlet flow passage enters the valve member, yieldingly expands the plug portion radially outward to urge the plug portion into sealing engagement with the seat and yieldingly expands the central portion radially outward to permit greater radial expansion of the plug portion to establish snug engagement in the chamber.

3,386,701
WELL TOOLS

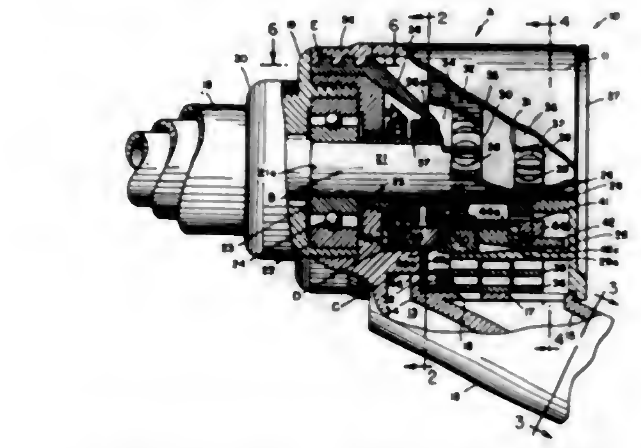
Ernest L. Potts, Houston, Tex., assignor to Brown Oil Tools, Inc., Houston, Tex., a corporation of Texas
Filed July 26, 1965, Ser. No. 474,812
10 Claims. (Cl. 251—229)



A valve device adapted to be connected in a tubing string and including a mandrel, a body rotationally connected to the mandrel, a valve seat, a valve and a sleeve adapted to be moved longitudinally by relative rotation of said mandrel and body and connected to position said valve on said seat. This abstract is neither intended to define the invention of the application which, of course, is measured by the claims, nor is it intended to be limiting as to the scope of the invention in any way.

3,386,702
AIR DRIVEN VARIABLE SPEED TURBINE FOR ANGULAR AND STRAIGHT HANDPIECES

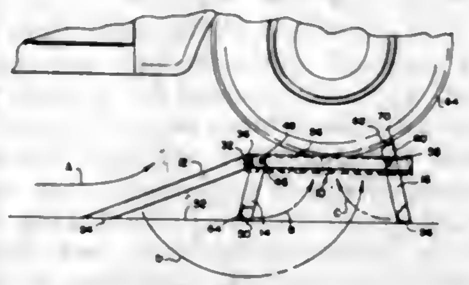
Edward Krzyszczuk, Chicago, Ill., assignor to American Hospital Supply Corporation, Evanston, Ill., a corporation of Illinois
Filed July 25, 1966, Ser. No. 567,759
10 Claims. (Cl. 253—3)



1. A dental handpiece, comprising a housing, a turbine shaft rotatably mounted within said housing, said housing providing a turbine chamber, impeller means mounted upon said shaft within said chamber for rotating said shaft when fluid under pressure is directed thereagainst, a stator for directing fluid under pressure toward said impeller means, movable fluid flow restricter means, disposed within said housing between said stator and said impeller, said fluid flow restricter means being movable between a first position and a second position lever means pivotally mounted upon said shaft for pivotal radial movement under the influence of centrifugal force when said shaft is rotated, clutch means interposed between said lever means and said fluid flow restricter means for urging said fluid flow restricter means from said first position toward said second position when said lever means is pivoted outwardly under the influence of centrifugal force, and counter-balancing means carried by said shaft and engaging said lever means, said counter-balancing means being shiftable axially to offset the effect of centrifugal force on said lever means, and adjusting means provided by said housing for manually shifting said counter-balancing means into any of a variety of selected positions.

3,386,703
PORTABLE WHEEL STAND

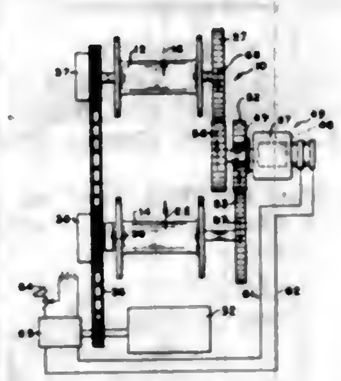
Francis L. Thumma, 3714 W. Rose Lane,
Phoenix, Ariz. 85019
Filed Feb. 23, 1967, Ser. No. 617,871
2 Claims. (Cl. 254—88)



A portable wheel stand, wherein a platform member is supported above the ground upon downwardly extending legs; a ramp member being pivotally mounted to the platform member and extending on an incline from the ground to the upper portion of the platform member; the leg members and ramp member being pivotally connected with the platform member so as to be foldable into compact relationship, such that the leg members and the ramp member are in substantially contiguous parallel relation with the platform member.

3,386,704
WINCH INTERLOCKING APPARATUS

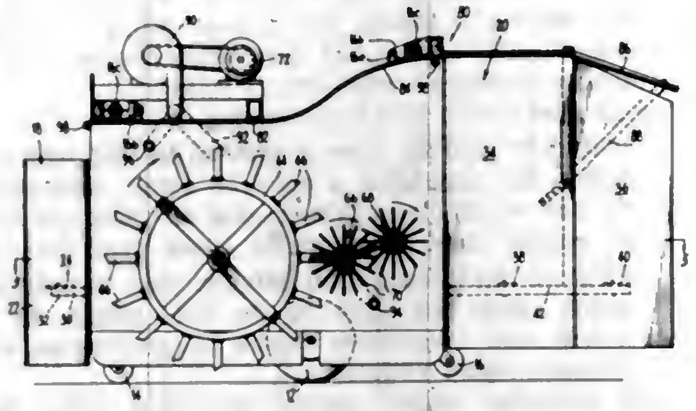
Edward F. Dawson, 3085 Comox Ave.,
Comox, British Columbia, Canada
Filed May 1, 1967, Ser. No. 635,240
17 Claims. (Cl. 254—185)



Winch interlocking apparatus in which an electric motor interconnected between two winch drums acts as a regenerative tensioner which opposes the rotation of one drum while a cable is being unwound therefrom and assists the rotation of the other drum which is power-driven to wind the cable thereon.

3,386,705
COMPOSTING MACHINE

Gordon D. Griffin, Roland Highway,
Spreyton, Tasmania, Australia
Filed Dec. 8, 1966, Ser. No. 600,250
Claims priority, application Australia, Dec. 13, 1965,
67,793/65
17 Claims. (Cl. 259—6)

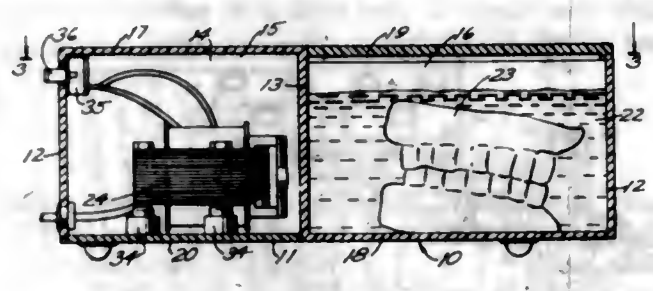


A composting machine having guide walls mounted at the forward end of a wheeled frame for contacting the sides of a stack of compost for guiding the machine during operation, a slowly rotatable tined roller being mounted between the guide walls to feed the compost rearwardly to at least one set of rapidly rotatable tines which throw the compost upwardly and rearwardly at high velocity.

3,386,706
DENTURE BATH

Harvey Leifman, Miami Beach, and Seymour D. Robinson, North Miami Beach, Fla., assignors to Prosonic Industries, Inc., Miami, Fla., a corporation of Florida
Filed Jan. 5, 1967, Ser. No. 607,494
2 Claims. (Cl. 259—72)

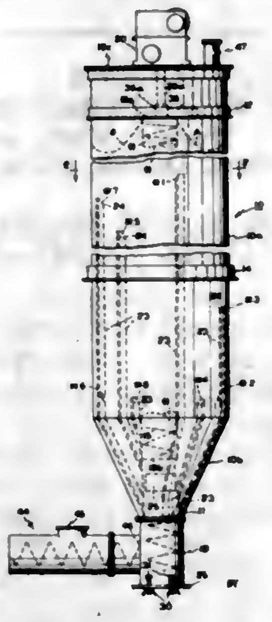
Denture cleaning apparatus having two side by side compartments with a separating partition, one containing liquid and a curved end wall and the other containing vibratory means, which arrangement generates mechanical shock waves through the liquid and through the side



walls and bottom of the second compartment, whereby denture plates placed in the liquid compartment are cleaned.

3,386,707
PROCESS AND APPARATUS FOR BLENDING

George N. Brown, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Mar. 9, 1965, Ser. No. 438,275
5 Claims. (Cl. 259—97)

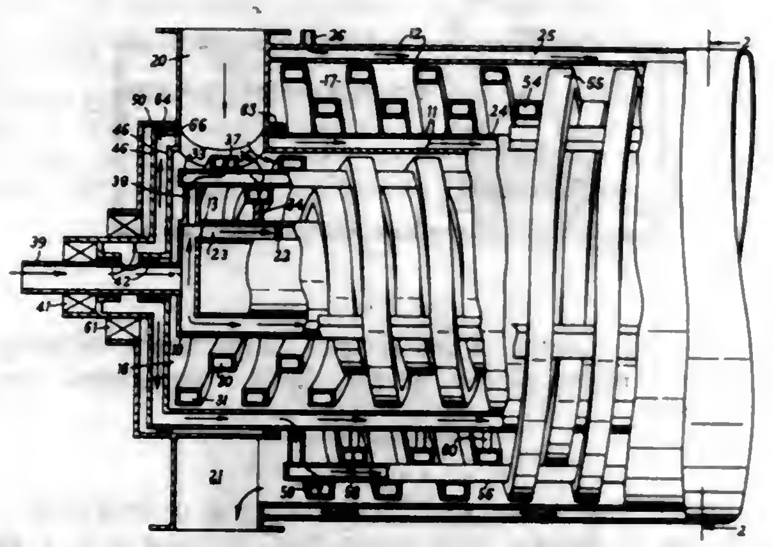


1. The method of blending solids comprising confining a mass of the heterogeneous solids in an elevated column of annular horizontal cross-section, withdrawing from said mass in a generally vertical direction substantially equal amounts of said solids per unit time simultaneously by gravity flow from a multiplicity of regions disposed peripherally of said mass and spaced angularly apart in progression lengthwise of said column, combining said substantially equal amounts of said solids to produce a solids blend having improved homogeneity of composition, and recycling said solids blend by elevation of said blend to the top of said elevated column co-axially thereof with discharge radially outwards of said annular horizontal cross-section.

3,386,708
APPARATUS FOR TREATING FLOWABLE MATERIALS

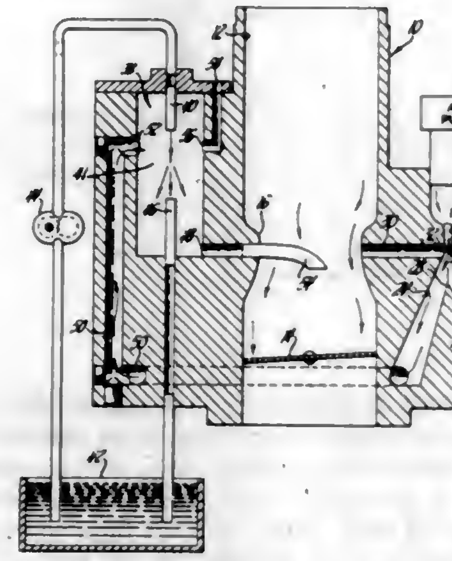
Joseph Dennis Christian, San Francisco, Calif., assignor to Packaged Power Terminals Inc., San Francisco, Calif.
Filed Nov. 24, 1965, Ser. No. 509,522
18 Claims. (Cl. 259—2)

This invention provides a heat exchange apparatus comprising three concentric cylinders, the inner two being rotatable and hollow to receive heat exchange fluid and between the inner cylinder and the intermediate cylinder is a double helical device for moving material to be treated in one direction, from one end of the apparatus to the other where the material falls into a space between the intermediate cylinder and the outer cylinder, said space also containing a double helical device for transferring the material back to an outlet at the first end of the apparatus.



3,386,709
FUEL SYSTEM AND METHOD OF OPERATION

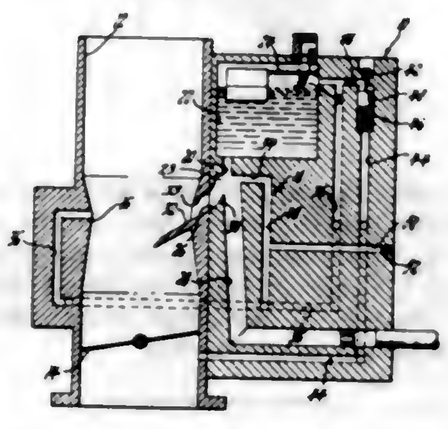
William L. Drayer, Warren, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Sept. 16, 1965, Ser. No. 487,757
12 Claims. (Cl. 261—29)



1. An internal combustion engine fuel system comprising
a nozzle adapted to discharge fuel for mixture with air,
fluid amplifier means having
an interaction region,
and including an inlet port opening into said interaction region,
a source of regulated fluid connected to said inlet port to issue a fluid stream along a predetermined path within said interaction region, said fluid stream having a predetermined energy state,
a source of regulating fluid connected to said interaction region and supplying fluid the characteristics of which provide a fluid signal indicative of an engine demand for fuel and having an energy state substantially lower than the energy state of the fluid stream and which causes a variation in the path of the fluid stream within said interaction region,
said amplifier means further including
outlet means opening from said interaction region for receiving the fluid stream and establishing a regulated fluid condition which varies in accordance with variations in the path of the fluid stream,
a source of fuel, and
means connecting said source of fuel to said nozzle and including means connected to said outlet means for governing flow through said nozzle in accordance with the regulated fluid condition.

3,386,710
FUEL SYSTEM

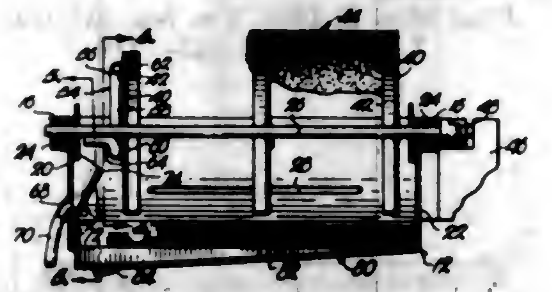
Jerome B. York, Jr., Royal Oak, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Sept. 16, 1965, Ser. No. 487,801
5 Claims. (Cl. 261—36)



1. An internal combustion engine fuel system comprising
a nozzle adapted to discharge fuel for mixture with air,
fluid amplifier means including
an interaction region
and an inlet port opening into said interaction region,
a source of liquid fuel connected to said inlet port for issuing a liquid fuel stream along a predetermined path within said interaction region, said fuel stream having a certain energy state,
an air inlet for air flow to the engine,
a venturi in said air inlet connected to said interaction region for supplying a pressure signal indicative of the rate of air flow through said air inlet and having an energy state substantially lower than the energy state of the liquid fuel stream and variations of which cause the path of the fuel stream to vary within said interaction region in proportion to the pressure signal variations,
said amplifier means further including outlet means opening from said interaction region for receiving the liquid fuel stream, said outlet means having
a pair of outlets
and a splitter for dividing the liquid fuel stream between said outlets in accordance with variations in the path of the fuel stream and for continuously varying the division of the fuel stream over the range of variations in the path of the fuel stream and for directing an increased flow of fuel to one of said outlets upon a change in the pressure signal indicative of increased air flow through said air inlet,
passage means connecting said nozzle to said one outlet for directing liquid fuel from said one outlet to said nozzle,
and regulating means for controlling the rate of fuel flow through said inlet port to compensate for the variations in pressure within said interaction region caused by the venturi pressure signal.

3,386,711
APPARATUS FOR MINIMIZING ACCUMULATION OF SOLIDS IN HUMIDIFIERS

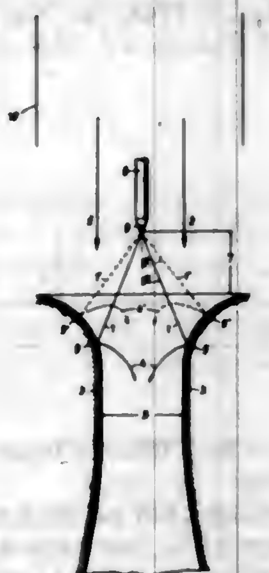
Lewiston C. Williams, 3202 Karnes Blvd., Kansas City, Mo. 64111
Filed Mar. 3, 1965, Ser. No. 436,817
1 Claim. (Cl. 261—70)



An airstream humidifier having a water remover to prevent accumulation of minerals and sediment in the receptacle. A tubular member is mounted on the humidifier shaft and includes interconnected axially and radially extending portions and an arcuate portion disposed to dip into the water on each revolution of the shaft. Water is picked up through the open end of the tubular member, transferred through the tube radially inwardly and then parallel with the shaft axis to a discharge including a collector plate mounted on the receptacle wall.

3,386,712
PROCESS FOR INTIMATELY CONTACTING TWO FLUIDS

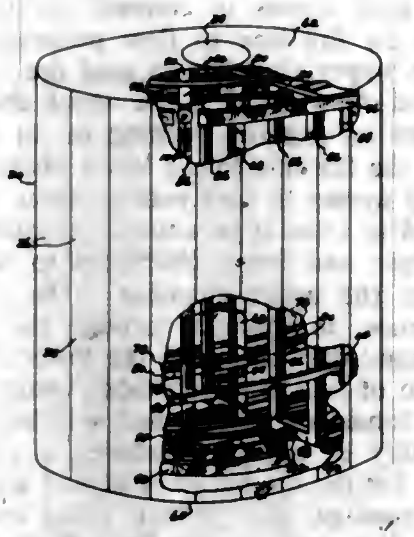
Gerhard Pafla, Vienna, Austria, assignor to Waagner-Biro A.G., Vienna, Austria
Continuation of application Ser. No. 255,425, Jan. 28, 1963. This application Apr. 26, 1966, Ser. No. 545,376
4 Claims. (Cl. 261—116)



1. A process for removing finely distributed solid particles from a gas stream, comprising the steps of moving a gas stream containing small solid particles at a high rate of speed through a Venturi tube substantially in direction of the axis thereof; and projecting liquid particles at a lower rate of speed along a first hollow conical path having an axis coaxial with said axis of said Venturi tube onto the annular inlet zone thereof so that said liquid particles projected along said hollow conical liquid path form a first curtain of liquid particles inclined to the path of said solid particles-containing gas stream, rebounding the thus-projected liquid particles then from said annular inlet zone of said Venturi tube along a second transverse path substantially into the neck zone of said Venturi tube and forming a second curtain of liquid particles extending transversely to the path of said solid particles-containing gas stream, whereby said solid particles-containing gas stream moving at a high rate of speed first intersects and collides with said first curtain of said slower moving liquid particles and thereafter intersects and collides with said second curtain of said slower moving liquid particles so that said solid particles in said gas stream moving at a high rate of speed are absorbed and removed from the gas stream by said slower moving liquid particles.

3,386,713
AUTOMATED KILN

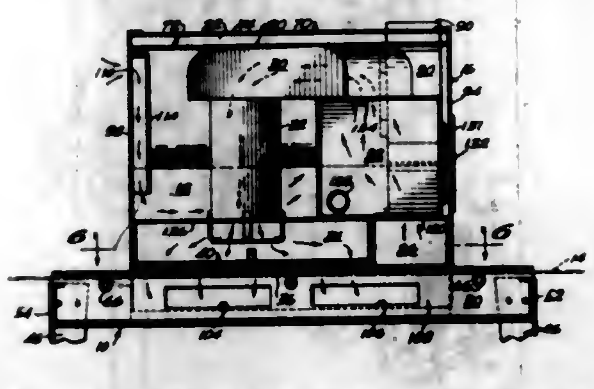
Willis Ford Karr, Warren, Mich., assignor to Stearns Manufacturing Company, Inc., Flat Rock, Mich., a corporation of Michigan
Filed Sept. 8, 1965, Ser. No. 485,867
8 Claims. (Cl. 263—6)



A cylindrical housing with a spiral track formed of a pair of horizontally spaced track sections for supporting a series of block carrying pallets for movement through a controlled curing atmosphere. Upper and lower circular tracks formed concentrically about the central vertical axis of the housing support a series of spaced pusher frames which extend vertically between the spiral track sections and are intermittently advanced along the circular tracks to progressively move the pallets along the spiral track from the inlet to the outlet of the housing.

3,386,714
DRYER FOR PRINTED SHEETS

Ralph B. Rose, Sr., 4370 SW. 5th St., Miami, Fla. 33134
Filed June 22, 1966, Ser. No. 559,582
10 Claims. (Cl. 263—8)



1. A dryer for use in heating air to dry inks or other pigments on a main surface of sheet material such as sign boards comprising:
an insulated housing including:
a bottom, roof and upstanding walls defining a closed interior having a main inlet opening above the bottom, said housing having an extension below the outer surface of the bottom and said extension having an inlet mouth and

an outlet opening immediately adjacent said bottom to define a tunnel or passage for sheet material between the mouth and the outlet opening;

conveyor means arranged to support a piece of sheet material on passage through the tunnel in close association to the bottom;

a divider wall to separate the interior into an upper and lower chamber between the divider wall and the roof and the divider wall and the bottom respectively;

a heated air path to connect the upper and lower chambers from the main inlet port in the upper chamber, said path including:

the upper chamber;

a fire box in the upper chamber;

first duct means to connect the upper chamber to the fire box to flow preheated gases from the upper chamber to said fire box;

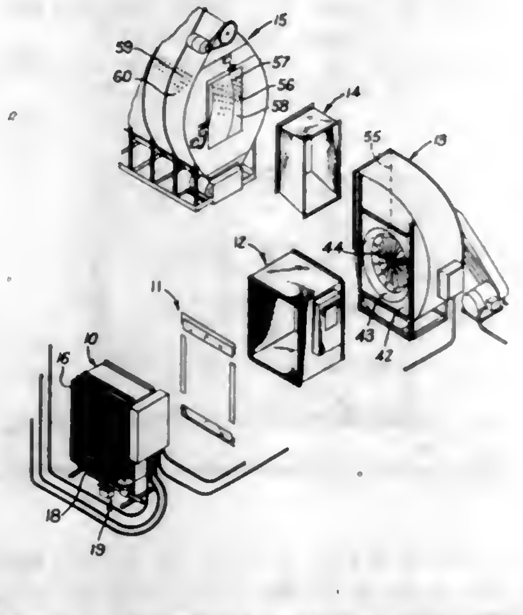
second duct means in the upper chamber to connect an exhaust opening in an upper portion of the fire box to the lower chamber; and

pump means in said path to force air therealong and to cause a pressure differential between the upper and lower chambers to draw fresh air into the upper chamber to be preheated and, thence, to force it through the fire box and second duct means to the lower chamber;

the bottom of said lower chamber comprising the roof of said tunnel of passage and said bottom including a plurality of openings defining a pattern as seen in plan for the discharge of heated air into the tunnel of passage, said pattern being such that every portion of a sheet passing through the tunnel is constrained to passage below at least one of said openings; and

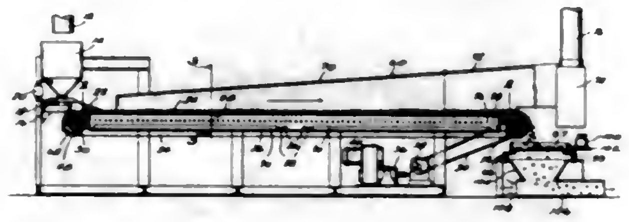
means arranged in the fire box to heat gases in the fire box.

3,386,715
AIR HEATING DEVICES FOR CROP DRYERS AND THE LIKE
Erhard E. Alms, Barrington, Ill., assignor to American Farm Equipment Co., Crystal Lake, Ill., a corporation of Delaware
Filed Apr. 25, 1966, Ser. No. 544,966
6 Claims. (Cl. 263—19)



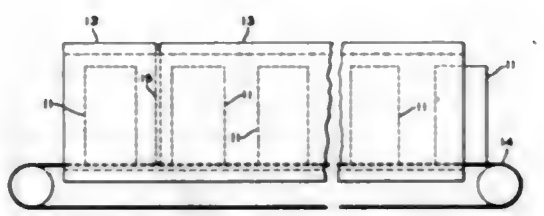
An air heating means for a crop dryer in which a more uniformly heated stream of air is supplied to the dryer by a combined fan, furnace, burner unit and air inlet control device, in which the fan is disposed downstream of the furnace outlet, the burner is substantially coextensive with the furnace inlet, and burner flame length is controlled by an adjustable auxiliary air inlet to the furnace.

3,386,716
APPARATUS FOR PREFOAMING OF EXPANDABLE SYNTHETIC RESIN SUCH AS STYRENE POLYMER COMPOSITION CONTAINING A VOLATILE ORGANIC LIQUID
Edward A. Doyle and Donald E. Stevens, Sheboygan Falls, Wis., assignors to Kohler General, Inc., a corporation of Wisconsin
Filed Mar. 5, 1965, Ser. No. 437,364
7 Claims. (Cl. 263—21)



Particulate foamable resin distributed in a thin layer on a screen belt is prefoamed in a progressively expanding chamber by concurrently subjecting it to steam and dry heat, the material being exposed to dry heat alone in a latter part of its traverse of the chamber, thus eliminating drying time previously required, the material being vibrated upon discharge to eliminate clumping.

3,386,717
PROCESS AND APPARATUS FOR HEAT TREATING ALUMINUM INGOTS
Thomas W. F. Foster, Walnut Creek, Calif., and John B. Elsee, Spokane, Wash., assignors to Kaiser Aluminum & Chemical Corporation, Oakland, Calif., a corporation of Delaware
Filed Apr. 1, 1965, Ser. No. 444,602
15 Claims. (Cl. 263—28)



1. The method of heat treating ingots of aluminum and its alloys comprising:

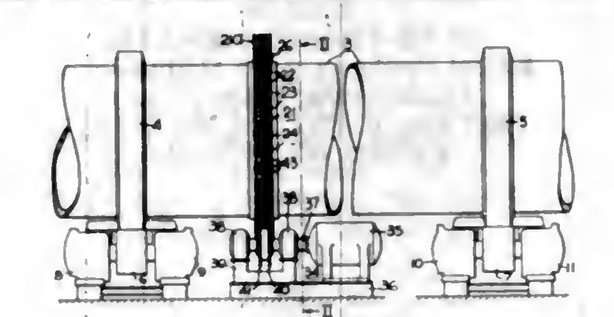
(a) heating the ingot out of contact with combustion product gases until at least the surface temperature of the ingot is above the dew point of the water vapor in the combustion product gases,

(b) thereafter heating the ingot in a direct fired furnace in contact with combustion product gases to the heat treat temperature,

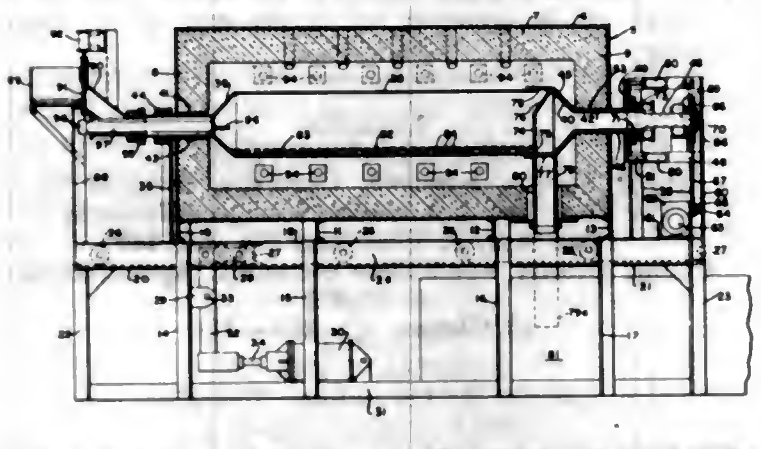
(c) holding the ingot at said temperature in contact with combustion product gases for the desired period of time.

3,386,718
ROTARY HEAT EXCHANGER WITH A CHAIN DRIVE
Thomson S. Abbott, Milwaukee, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed Aug. 8, 1966, Ser. No. 571,021
2 Claims. (Cl. 263—33)

A rotary kiln is disclosed which is provided with an assembly for rotating the kiln shell about a generally horizontal axis. The assembly includes a chain looped around the shell and a sprocket external of the chain loop but engaging the chain to turn the shell. The chain comprises a first series of links and a second series of links arranged alternately with the links of the first series. The links of the first series are each rigidly connected to the shell and the links of the second series are articulately connected to the links of the first series. The chain assembly is therefore rigidly attached to the kiln shell around the entire periphery of the shell and also articulately conforms to the shape of the shell as it is distorted due to thermal and other stresses applied to the shell.

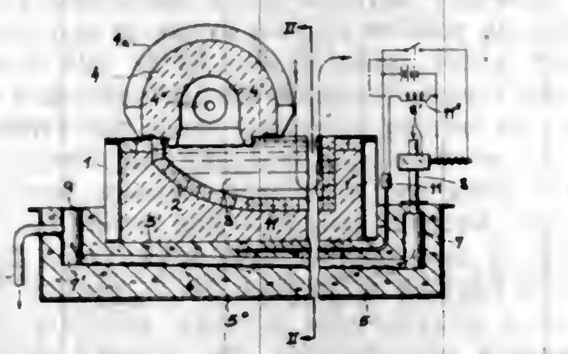


3,386,719
HEAT TREATING FURNACES
Joseph E. Martin, 19256 John R St., Detroit, Mich. 48203
Filed Sept. 14, 1965, Ser. No. 487,229
16 Claims. (Cl. 263—34)



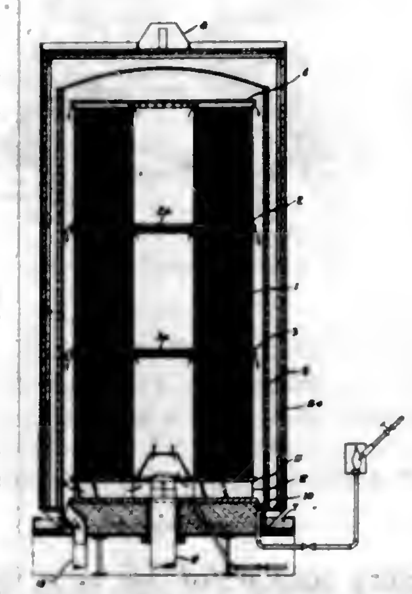
My invention comprises a rotary horizontal retort furnace having a hollow tumbling bar for tumbling the work while controlled atmosphere is introduced under the work through openings in the tumbling bar where it can only pass through the work, the retort capable of being rotated for simultaneously tumbling and progressing the work within the retort.

3,386,720
METAL-COATING FURNACE
Karl Fritz, Feithstrasse 25, Hagen, Germany
Filed Mar. 3, 1964, Ser. No. 349,027
Claims priority, application Germany, Mar. 8, 1963, F 39,195
8 Claims. (Cl. 263—44)



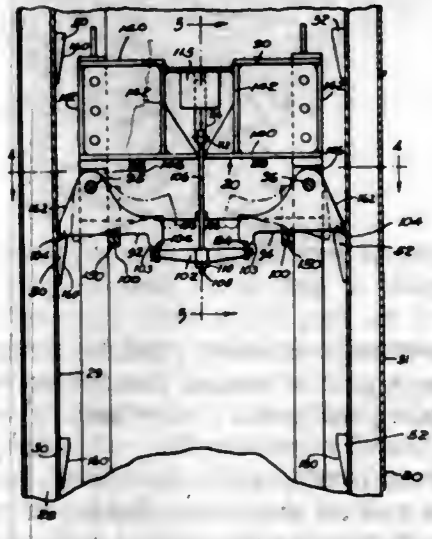
A furnace for the zinc and aluminum dip-coating of sheet-metal whose upwardly open trough is heated by a mantle disposed above and close to the surface of the melt but which has a separate foundation in coextensive contact with the trough and provided with cooling ducts through which a liquid is circulated. The trough is maintained at a temperature of about 550° C. and the cooling fluid is circulated through the concrete foundation so as to maintain the temperature therewithin at a level between 80° and 90° C.

3,386,721
CONVECTOR PLATES FOR COIL ANNEALING APPARATUS
Robert L. Jones and Frank D. Hazen, Pittsburgh, Pa., assignors to Hazen Engineering Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Dec. 20, 1965, Ser. No. 515,523
1 Claim. (Cl. 263—47)



This disclosure relates to new and useful improvements in convector plates for use in coil annealing apparatus, which, when stacked between or above coils of steel strips or sheets, provides for a constant velocity flow of the hot gases passing between the coils.

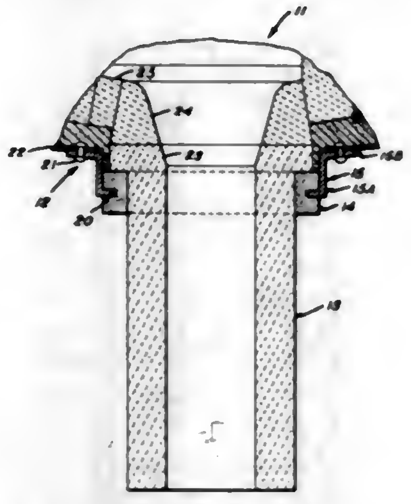
3,386,722
CARRIAGE FOR SUPPORTING LANCES IN STEEL MAKING OPERATIONS
Richard W. Brooks, 442 Bernice, Pittsburgh, Pa. 15237, and Arthur F. Kubli, 519 Cool St., Pitcairn, Pa. 15140
Filed May 27, 1965, Ser. No. 459,372
6 Claims. (Cl. 266—34)



This disclosure relates to an improved carriage for supporting a lance in the production of steel and more particularly, it relates to a safety device which insures that in the event of failure of the carriage raising and lowering mechanism, the carriage will become locked at a suitable level preventing damage to the plant equipment and injury to personnel. A safety feature is provided carriages for carrying lances in steel making operations wherein automatically operable means actuate stop members which can arrest the free fall of the carriage in the event of malfunctioning of the carriage lowering and raising apparatus. The mechanism can arrest the fall before excessive momentum develops in the fall.

3,386,723
VACUUM DEGASSER CONDUIT

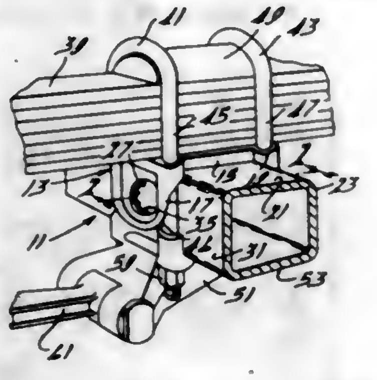
Eldon D. Miller, Bridgeville, Pa., assignor to Dresser Industries, Inc., a corporation of Delaware
Filed Sept. 10, 1965, Ser. No. 486,411
2 Claims. (Cl. 266—34)



A refractory conduit for use as a vacuum degasser snorkle having a very low permeability and being made from a high alumina refractory batch.

3,386,724
VEHICLE CONSTRUCTION SPRING-TO-AXLE MOUNTING

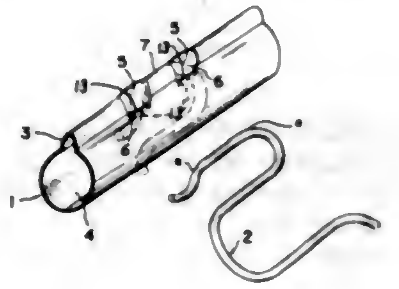
Keith W. Tantlinger, Grosse Pointe Shores, George Chieger, Birmingham, and Carl E. Blanchard, Grosse Pointe, Mich., assignors to Fruehauf Corporation, Detroit, Mich., a corporation of Michigan
Filed Nov. 4, 1965, Ser. No. 506,334
5 Claims. (Cl. 267—52)



A spring-to-axle mounting assembly comprising an axle tube having a pair of spaced parallel substantially vertically extending walls and a substantially horizontal wall extending laterally between the vertical walls; a bracket having a base overlying the horizontal wall of the axle tube and a pair of depending flanges extending parallel to and closely engaging the vertical walls of said axle tube, means on the lower side of the bracket defining a central relieved area and a pair of bearing surfaces substantially laterally aligned with and adapted to bear upon the upper edges of the side walls, whereby to leave the central portion of the horizontal wall substantially free from forces created upon vehicle loading, and means including plate means and bolt means removably securing the bracket and axle tube to a leaf-type suspension spring.

3,386,725
SEAT FRAME MEMBER

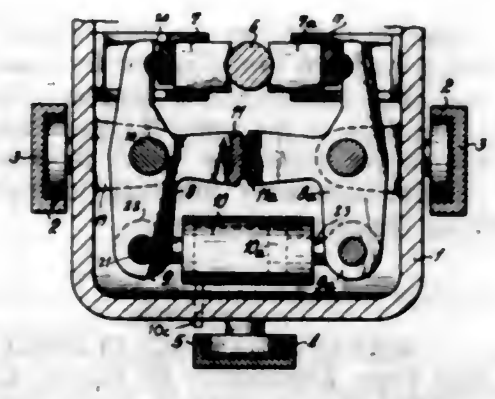
Koichi Fujikawa, 1696 Haijima-cho, Akishima-shi, Tokyo, Japan
Filed Apr. 3, 1967, Ser. No. 627,791
1 Claim. (Cl. 267—110)



A frame member for engaging the end of a zig-zag spring. The frame member includes a hollow base with a hollow ridge extending axially thereof. Two axially spaced openings are provided in the ridge so that a spring end can be inserted therein. Means at the lower edges of the openings aid in securing the spring end to the frame member.

3,386,726
CLAMPING DEVICE

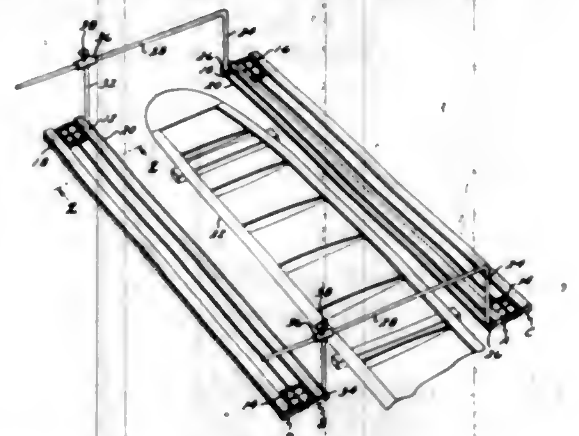
Horst Lorenz, Solingen, Germany, assignor to Th. Kieserling & Albrecht, Solingen, Germany
Filed Apr. 5, 1965, Ser. No. 445,440
Claims priority, application Germany, Apr. 4, 1964, K 52,573
10 Claims. (Cl. 269—31)



1. A clamping device comprising, in combination, a support; a pair of clamping members mounted on said support for movement toward and away from a plane of symmetry and between an inoperative position and a clamping position adapted to engage and clamp a workpiece whose center is located in said plane of symmetry; a pair of turnable members mounted on said support for turning movement about two parallel axes and having portions connected with said clamping members, respectively and arc-shaped meshing portions arranged in said plane of symmetry and having their centers located in said parallel axes respectively; fluid-operated means forming a chamber for a pressure fluid and including two movable pressure members having faces bounding said chamber, said pressure members being, respectively, connected with said turnable members for turning the same about said axes for moving said clamping members to said clamping position while said meshing portions connect said turntable members for turning movement at the same angular speed so that said clamping members move at the same speed toward each other and remain in said clamping position symmetrical to said plane of symmetry for yieldingly holding a workpiece.

3,386,727
MODEL COVERING TOOL

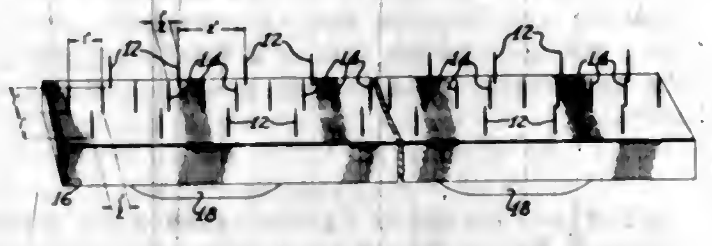
Eldon J. Lind, 11661 Newbury Road, Los Alamitos, Calif. 90720
Filed Sept. 7, 1965, Ser. No. 485,399
4 Claims. (Cl. 269—152)



The present invention comprises a device for holding a sheet of pliable material in pressure contact with a portion of a model to permit application of a film-forming liquid to the taut sheet material; each of the side edges of the sheet is clamped between a pair of hinged strips, and each pair of hinged strips is held in clamping position by resilient clips.

3,386,728
PIN MASTER

Harry J. Smakel, 1212 E. 4th St., Orange County, Calif.
Original application Mar. 11, 1965, Ser. No. 438,927. Divided and this application June 10, 1966, Ser. No. 557,344
3 Claims. (Cl. 269—289)

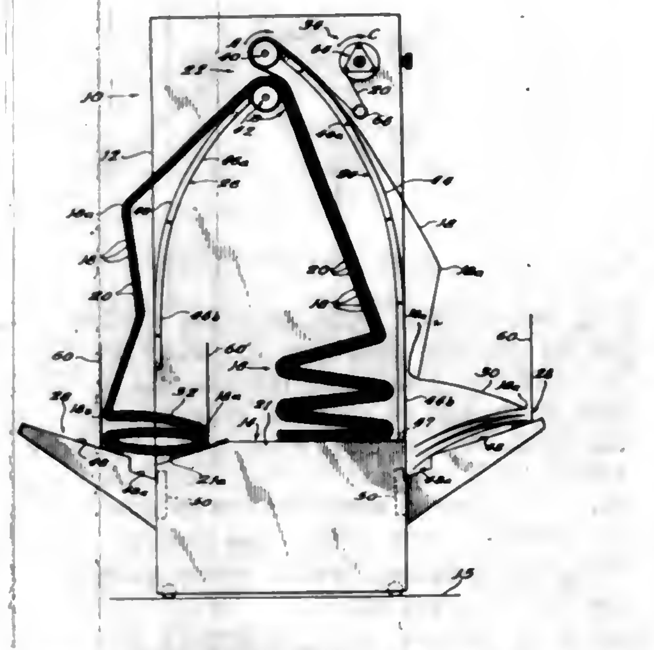


This invention comprises a light, flexible bar bearing on its undersurface several rows of pins arranged in a V-pattern and, on its upper surface, handles for lifting and placing the bar. The bar is used on a fabric covered work table to pin an entire length of fabric to the table in a single operation.

3,386,729
DELEAVER

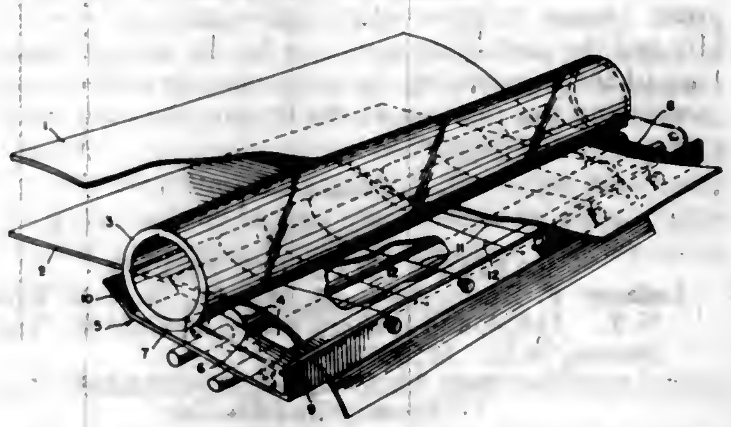
Robert M. Pine, Chicago, Ill., assignor to Uarco Incorporated, a corporation of Illinois
Filed July 16, 1965, Ser. No. 472,582
19 Claims. (Cl. 270—52.5)

An improved stationery deleaver having a stack supporting surface and driving and separating rollers mounted above the stack supporting surface in vertical tandem. Arcuate paper guides extend in opposite directions downwardly away from the rollers toward angled refold shelves which are recessed at their inner ends adjacent the guides. A wrap-around bar extends across one paper guide in close proximity thereto for winding carbon thereabout to urge a separated stationery ply against the paper guide. The supporting surface has a downwardly inclined surface adjacent one refold shelf for serving as a portion of the refold shelf when multiple plies are being refolded.



3,386,730
SHEET SEPARATING DEVICE FOR PHOTOCOPYING MACHINES

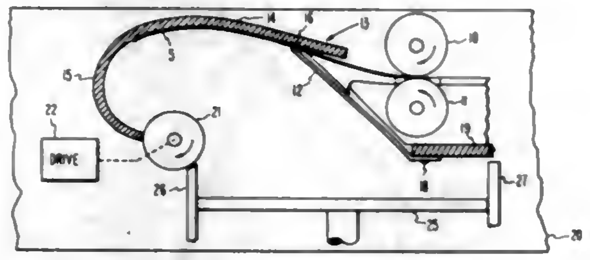
Alfred M. Hyosaka, Chicago, Ill., assignor to Speed-O-Print Business Machines Corporation, Chicago, Ill., a corporation of Illinois
Filed Oct. 14, 1966, Ser. No. 591,368
7 Claims. (Cl. 271—64)



1. The combination with a photocopy machine wherein an image-bearing original sheet and a charged photoconductor-coated copy sheet move past an exposure station in surface-to-surface contact, of sheet separating means for separating said original and copy sheets after exposure thereof, said means comprising a plurality of spaced-apart relatively thin filaments each having an elongated cross-sectional configuration located between said sheets at the exposure station and extending generally in the direction of movement of said sheets, at least one of said filaments being positioned in diverging relation with respect to the others of said filaments, said filaments being so positioned in the area of the exposure station that the surfaces thereof having the smaller dimension are in contact with said sheets.

3,386,731
CARD STACKER

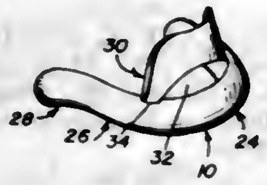
Paul R. Brinson, Rochester, Minn., assignor to International Business Machines Corporation, Armonk, N.Y., a corporation of New York
Filed Dec. 15, 1966, Ser. No. 601,886
8 Claims. (Cl. 271—71)



A deceleration plate including gradually and sharply curved sections functions to decelerate the cards prior to contacting a stop and fan roll and to control the location of storage of potential energy in the cards whereby the cards snap or eject away from the deceleration plate after the leading end of the cards strikes a stop and fan roll. A deflector which forms an entry throat with the deceleration plate deflects the trailing edge of the cards toward a stacking platform as the cards snap away from the deceleration plate.

3,386,732
ORAL FACIAL EXERCISER

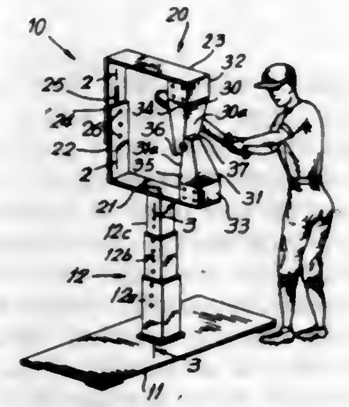
Betty N. Robins, 17365 Westover Road, Southfield, Mich. 48075
Filed July 29, 1966, Ser. No. 568,813
7 Claims. (Cl. 272—57)



An elongated slightly flexible generally non-compressible arcuate member which is insertable between either lip and the underlying gum area for use in the strengthening of the surrounding facial muscles through a selective tensioning and relaxing of the lip over the outward bulge created by the member.

3,386,733
BATTING PRACTICE DEVICE

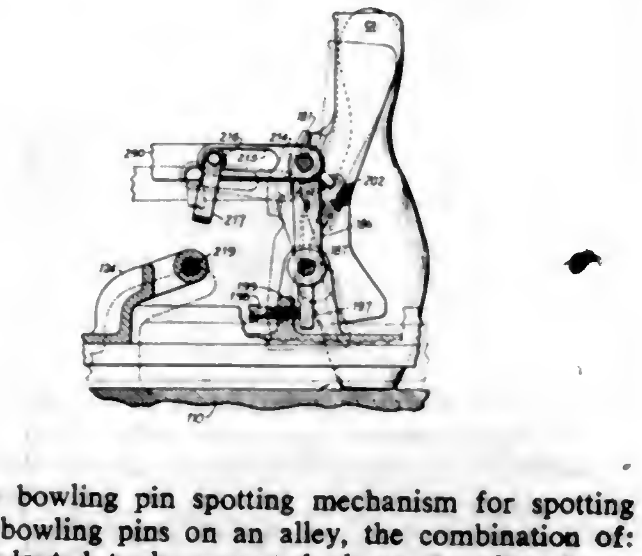
Anthony F. Russo, 164—16 88th St., Howard Beach, N.Y. 11414, and Richard Small, 24 Gold St., Valley Stream, N.Y. 11580
Filed Aug. 25, 1965, Ser. No. 482,399
7 Claims. (Cl. 273—26)



A batting practice device or the like comprising a frame defining a vertical clearance area, the clearance area including impact simulator means particularly in the form of downwardly and upwardly directed resilient target members, yieldably resisting passage of a bat or the like through said target area.

3,386,734
PINSPOTTING MECHANISM WITH SPOTTING CUPS PIVOTALLY MOUNTED ON MOVABLE YOKE

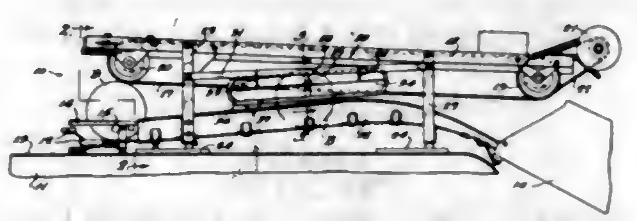
Henry C. Congelli and Gordon W. Hays, Richmond, Va., assignors to American Machine & Foundry Company, a corporation of New Jersey
Application June 28, 1965, Ser. No. 467,261, now Patent No. 3,315,961, dated Apr. 25, 1967, which is a division of Ser. No. 195,926, May 18, 1962, now Patent No. 3,245,684, dated Apr. 12, 1966. Divided and this application Sept. 12, 1966, Ser. No. 578,775
2 Claims. (Cl. 273—43)



In a bowling pin spotting mechanism for spotting a set of bowling pins on an alley, the combination of: a table adapted to be mounted above the alley for vertical movement relative thereto; means for moving said table through a spotting cycle; a yoke pivotally mounted on said table for movement relative thereto between first and second positions; means biasing said yoke toward said first position; a plurality of spotting cups, each mounted on said yoke for pivotal movement about a horizontal axis tangential thereto at a position intermediate the ends thereof between a pin receiving position and a pin depositing position; and means for moving said yoke to said second position subsequent to the movement of said cups to the pin deposition position to clear the cups from the pins, and means for moving said yoke and said spotting cups in a timed relationship with the movement of said table to spot a set of pins on the alley.

3,386,735
BOWLING BALL ACCELERATOR AND WIPERS

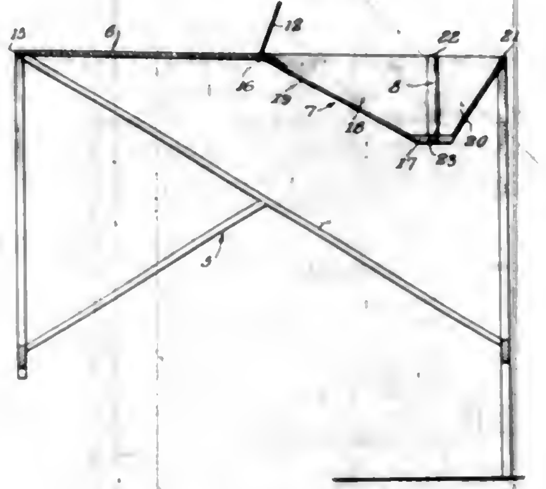
Albert P. Rogers, Spring Lake, Mich., assignor to Brunswick Corporation, a corporation of Delaware
Filed Mar. 25, 1965, Ser. No. 442,618
4 Claims. (Cl. 273—49)



A bowling ball accelerator and wiper combination in which cleaning elements act to clean a rotating bowling ball while the ball is being positively advanced and rotated by the driven belt of the ball accelerator.

3,386,736
PEG-TYPE TARGET GAME

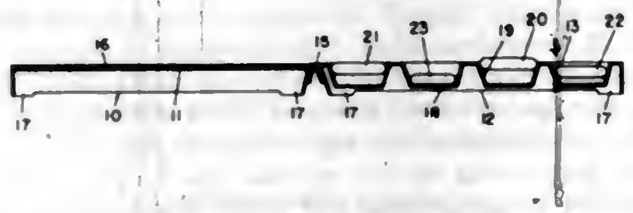
Harry L. Fong, 533 N. Virgil Ave., Los Angeles, Calif. 90004
Filed July 16, 1965, Ser. No. 472,480
4 Claims. (Cl. 273—100)



A game apparatus including a trough disposed at the rear of a generally horizontal table surface, said trough including a plurality of upstanding pegs disposed in the bottom thereof, and annular game pieces to be thrown about the pegs.

3,386,737
GAME BOARD WITH TAPERED POCKETS AND ROLLABLE DISCS OF DIFFERENT DIAMETERS

Richard H. Burgess, 214 N. Main St., Poynette, Wis. 53955
Filed Apr. 28, 1965, Ser. No. 451,501
4 Claims. (Cl. 273—126)

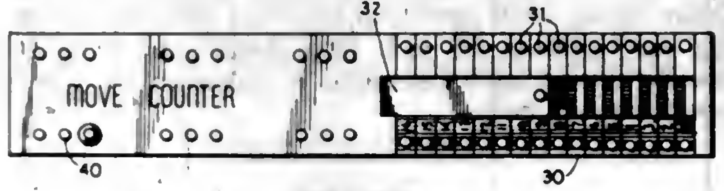


A game comprising a game board having a forward runway and a rearward pocket portion with a plurality of tapered pockets formed therein and a plurality of game pieces in the form of discs of various sizes adapted to be rolled along the runway and into the pockets. The purpose of the game is to cause the discs to be propelled along the game board so as to be lodged in the highest point-value pockets which are behind the lesser point-valve pockets. The relationship of the size of the discs to the pockets is such that each disc when lodged in a pocket will substantially alter the contour of the game board differently for discs subsequently propelled thereacross. The carton portion of the game comprises a gutter for catching game pieces projected beyond the end and off the sides of the pocket portion of the game board during playing of the game.

3,386,738
SIMULATED FOOTBALL GAME APPARATUS WITH BLOCKING PLAY CONTROL MEANS

Newton Wylie, 506 Kirkmore Drive, New Haven, Ind. 46774
Filed Mar. 10, 1965, Ser. No. 438,695
1 Claim. (Cl. 273—131)

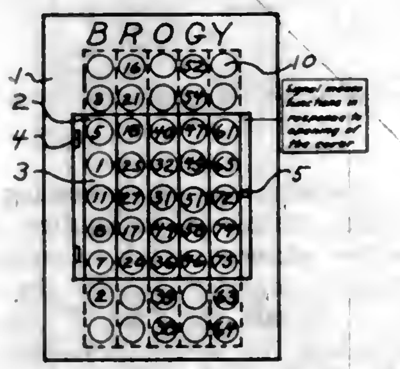
Football game which closely resembles the execution and strategy of an actual game of football, including a game board which is laid out in the form of a football field, playing pieces, identification cap members and a move counter which keeps track of the playing sequence and order of play. The counter determines the point at which blocked players can resume play, and the sequence in which certain plays must be completed.



The counter is provided with two rows of pegs which are visually distinguished from each other, a recess having bicolored areas being disposed between the two rows of pegs with each area in alignment with one peg in each row. A slide is movable in the recess to cover or uncover said areas. A number of colored cap members are provided to be placed on the game pieces or on the pegs.

3,386,739
GAME APPARATUS WITH ADJUSTABLE COLUMNS OF INDICIA

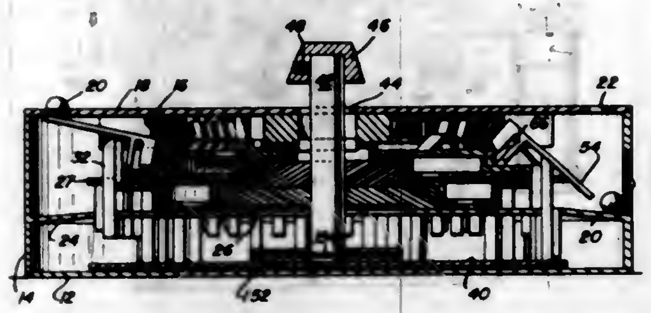
Joseph A. Lino, St. Petersburg, Fla., assignor to Brogy, Inc., St. Petersburg, Fla., a corporation of Florida
Filed Apr. 8, 1965, Ser. No. 446,540
4 Claims. (Cl. 273—135)



A game apparatus which has strips of indicia which may be adjusted by players prior to the determination of some of those indicia which shall be used to select the winner of the game, said strips being contained in a housing having a movable cover, said apparatus comprising means for preventing movement of the strips subsequent to the adjustment by locking said cover or by signal means which will alert other players in the event that the cover is moved.

3,386,740
RANDOMLY INDEXED TRAP DOOR OPERATED GAME DEVICE

Charles E. Neely, 3105 Douglas, and Walter R. Butler, 1307 S. Mineola, both of Midland, Tex. 79701
Filed May 17, 1965, Ser. No. 456,096
9 Claims. (Cl. 273—142)

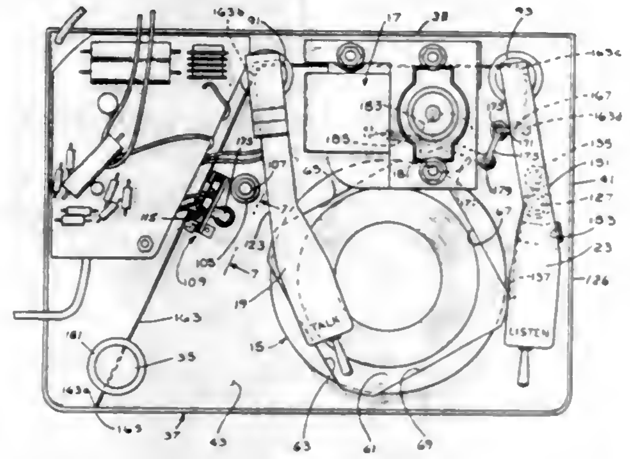


8. A game device comprising a housing having a playing surface with a plurality of openings therethrough, said openings being disposed in a curved path, closure

trap doors each individually and movably supported to underlie one of said openings, a plurality of game pieces disposed on at least some of said trap doors, means supporting all of said trap doors in closed position in said openings, and means disposed within said housing and operable exteriorly of the housing for removing a number of the support means and opening only some of said trap doors during each operation sequence whereby the number and location of such trap doors subject to being opened during each operation is unknown to a person operating said means.

3,386,741
ACTUATING MECHANISM FOR PORTABLE RECORDING APPARATUS

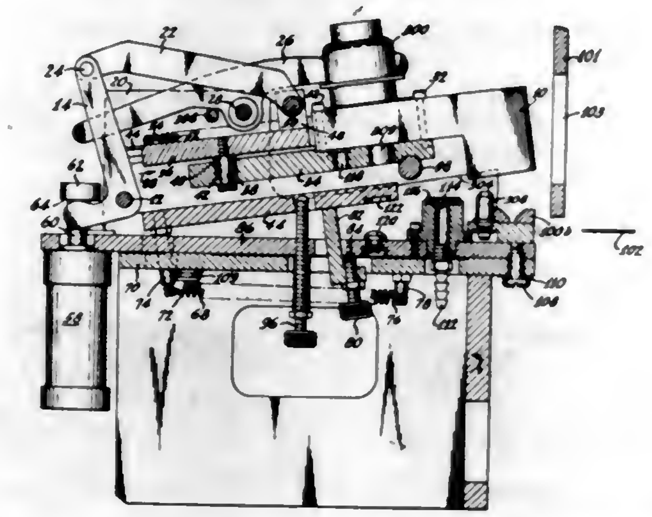
LC James Kingsbury, Decatur, Ill., assignor to General Electric Company, a corporation of New York
Filed Jan. 3, 1966, Ser. No. 518,381
3 Claims. (Cl. 274—1)



A pause mechanism for an embossing type recorder-reproducer which utilizes a pushbutton and a coacting elongated flexible element which is arranged in tension. The pushbutton is depressed against the tensioned flexible element to actuate the "pause" condition for the recorder-reproducer, in which condition the turntable driving member is out of driving engagement with the turntable. The pushbutton is returned to its outermost position by the flexible element when pressure is removed therefrom.

3,386,742
MECHANICAL MOVEMENT

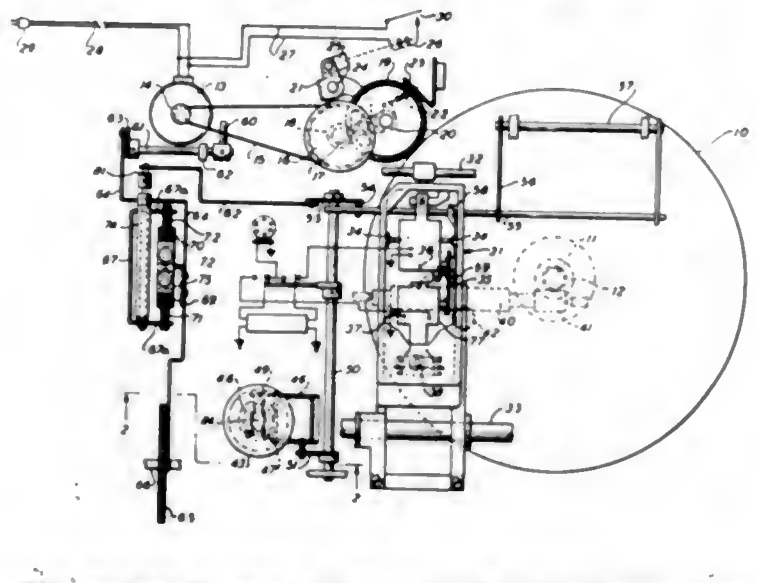
Ward Deighton, Glen Mills, Pa., assignor to Radio Corporation of America, a corporation of Delaware
Filed Mar. 3, 1965, Ser. No. 436,868
16 Claims. (Cl. 274—4)



An arrangement for moving a load, such as the magnetic head of a cartridge loaded type tape station, to one of a number of different positions. One of its features is the automatic centering of the head in its tape engaging position by means of a keyed, three point support onto which the head mounting plate is driven. Another feature of one embodiment of the arrangement described is the automatic withdrawal of the head to its retracted position in the event of power failure or other system malfunction.

3,386,743
COMBINATION DICTATING-TRANSCRIBING MACHINE

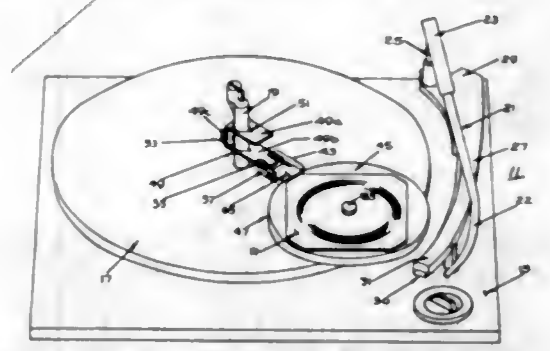
Harry E. Crocker, Irvington, N.J., assignor to McGraw-Edison Company, Elgin, Ill., a corporation of Delaware
Filed June 7, 1967, Ser. No. 644,398
4 Claims. (Cl. 274—9)



The present invention relates to dictating-transcribing machines which have a manual record-reproduce control and a manual speed control. The invention comprises a mechanism for such machines which resets the speed automatically to an optimum value for recording as the machine is conditioned for recording and which limits the reset mechanism to allow the speed to be manually adjusted to any desired value when the machine is conditioned for transcribing. The resetting is carried out by means of a spring-biased centering mechanism comprising two spring-biased plungers and a latch means to withhold the plungers into any off-center position into which they are moved by the manual speed control when the machine is conditioned for transcribing. When the machine is conditioned for recording the latch mechanism is released to allow the spring-biased plungers to return the speed control to the optimum setting.

3,386,744
PHONOGRAPH ADAPTOR

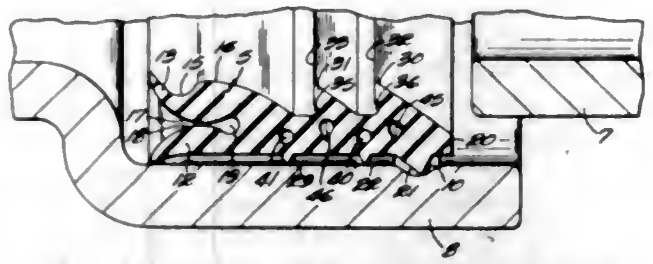
L C James Kingsbury, Decatur, and Roy Dally, Warrensburg, Ill., assignors to General Electric Company, a corporation of New York
Filed Jan. 3, 1966, Ser. No. 518,356
7 Claims. (Cl. 274—39)



An attachment for phonographs with velocity trip mechanisms to enable the play of relatively small diameter records by means of the conventional phonograph tone arm. This adaptor includes a bracket that supports a rotatably mounted secondary turntable. The bracket is fastened to a non-rotatable spindle on a phonograph turntable and positions the secondary turntable in offset relationship to the first turntable for operation in conjunction with the conventional tone arm. A resilient element rotatably mounted on the bracket is driven by the first turntable and drives the second turntable in response to rotation of the first turntable.

3,386,745
SOIL-PIPE GASKET

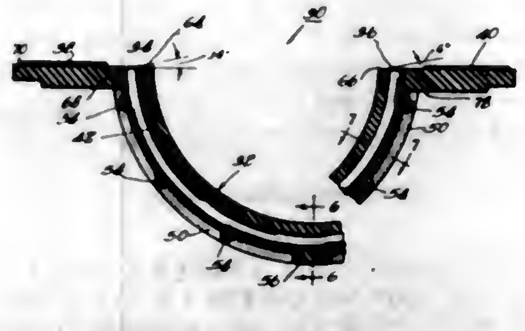
Roy C. Hein, Kent, Ohio, assignor to Hamilton Kent Manufacturing Co., Kent, Ohio, a corporation of Ohio
Filed Aug. 8, 1966, Ser. No. 570,782
7 Claims. (Cl. 277—168)



1. An extruded, generally cylindrical gasket for use between two sections of soil pipe, each of which sections is provided at one end with a spigot and at the other end with a bell having an indentation in its inner surface near its outer end, which gasket is of the clothespin type with two portions at its inner end, the tips of which flare away from one another with a space between the portions which widens as the distance from the tips increases, a first protuberance on its outer surface near its outer end adapted to project into said indentation, and at least one protuberance on its inner surface, the inner surface of said last-mentioned protuberance slanting toward the inner end of the gasket with the bottom of its opposite surface indented to facilitate flexing, and at least one opening in the portion of the gasket from which the protuberances extend which opening extends through the entire circumference of the gasket and facilitates its flowing under compression.

3,386,746
OIL SEAL

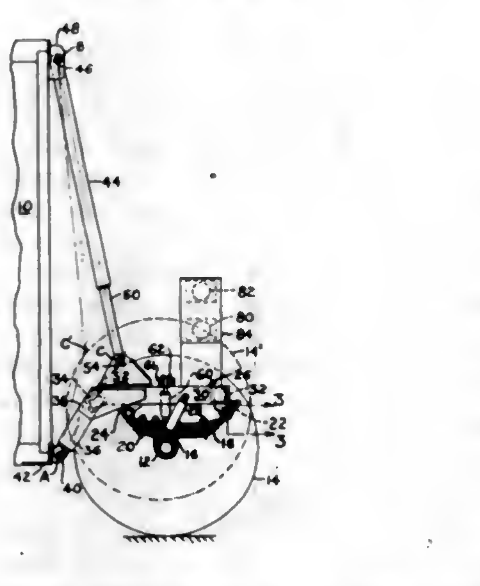
Joseph M. Liebig, Wheaton, Ill., assignor, by mesne assignments, to Vare Corporation, New York, N.Y., a corporation of Delaware
Filed June 14, 1961, Ser. No. 117,153
2 Claims. (Cl. 277—207)



1. A seal for preventing seepage of fluid from between the mating surfaces of complementary first and second housing members which are drawn together to form a circular opening through which a rotatable shaft concentrically projects, the first housing member having a spaced pair of recesses in the mating surface and an arcuate support groove in communication with the recesses, said seal comprising: an arcuate body having two free ends and adapted to be received in the support groove in a manner wherein said free ends are disposed adjacent to the mating surface of the first member and the body engages said shaft; a pair of arms extending radially outwardly of said body adapted to be received in the pair of recesses in the mating surface of the first member, each arm being integrally joined at one end thereof to said body adjacent to one of said free ends of said body, the other end of each arm having an enlarged tip portion.

3,386,747
LOAD-SUPPORTING DOLLY WITH TRANSVERSE AND LONGITUDINAL LEVELING MEANS

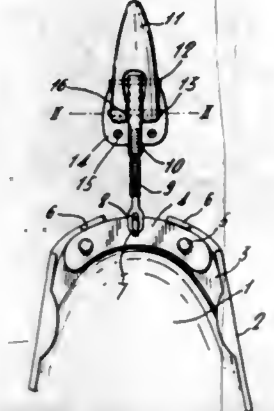
Charles E. Watt, Jr., Chelmsford, Mass., assignor to Craig Systems Corporation, Lawrence, Mass., a corporation of Massachusetts
Filed Mar. 18, 1966, Ser. No. 535,593
5 Claims. (Cl. 280—6)



A dolly for portable equipment which has a first set of jacks for longitudinal leveling and a second set for independent lateral leveling. This permits a frame rigid enough for very heavy equipment because the frame is not required to twist. The first jacks extend between the frame and the load, and maintain a fixed length in transit; while the second jacks extend between the axle and frame and act to distort the suspension springs forcibly for transverse leveling, but are disconnected in transit.

3,386,748
SKI FASTENING

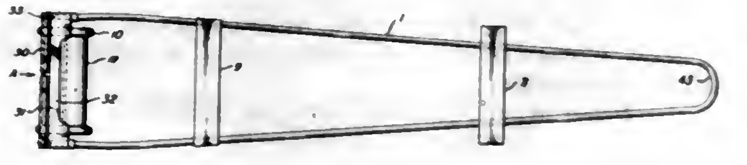
Nils Eie, Tennisveien 6, Oslo, Norway
Filed Apr. 1, 1966, Ser. No. 539,377
6 Claims. (Cl. 280—11.35)



A ski binding in which a tightener is secured to the ski in front of the ski boot for securing the toe portion of the boot to the ski by engagement of the toe portion with a toe iron secured to the ski wherein the toe iron is provided with at least one vertical projection having substantial transverse extent against which a fitting secured to the front part of the boot sole is in contact when the tighener is tightened.

3,386,749
SURFER'S SULKY

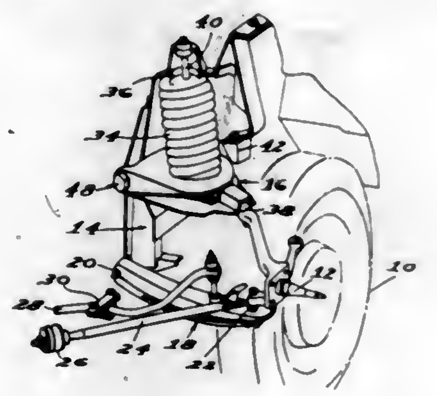
Georges Roudanez, Lawndale, Calif.
(26004 Narbonne Ave., Lomita, Calif. 90717)
Filed Oct. 22, 1965, Ser. No. 501,649
6 Claims. (Cl. 280—47.3)



The invention contemplates a sulky, or cradle for the protection and preservation of a surfboard at all times when the surfboard is not in the water. Said device comprises an elongated light weight metal tubular frame shaped exclusively for the resilient mounting of a surfboard thereon. The forward end of said frame arched so as to provide a pulling handle. Two narrow rubber tired wheels mounted at the rear end of said frame and which are freely rotatable around its axle for travel over hard surfaces, and additional means permitting said device to travel over soft surfaces. A pair of levers adjustably rotatable 90° outward from a folded horizontal position to a vertical position in relation to the axis of the device, said outward position of the levers enables the device with surfboard mounted thereon to stand in vertical position in relation to the ground. The device with surfboard mounted thereon can be strapped to any already known luggage carrier atop an automobile.

3,386,750
VEHICLE SUSPENSION SYSTEM HAVING A FLEXIBLE ARM

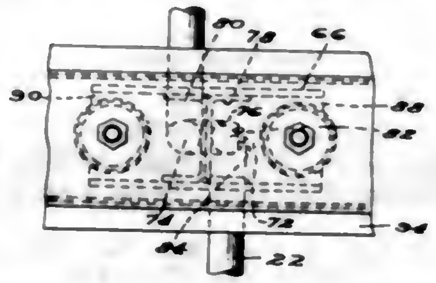
Walter Bergman and Robert A. Husen, Livonia, Mich., assignors to Ford Motor Company, Dearborn, Mich., a Corporation of Delaware
Filed Dec. 10, 1965, Ser. No. 512,964
15 Claims. (Cl. 280—96.2)



A vehicle suspension system having, in its presently preferred embodiment, a two-piece suspension arm with a plurality of rubber elements interposed between the pieces to cushion and isolate road shocks.

3,386,751
VEHICLE VARIABLY INTERCONNECTED SUSPENSION SYSTEM

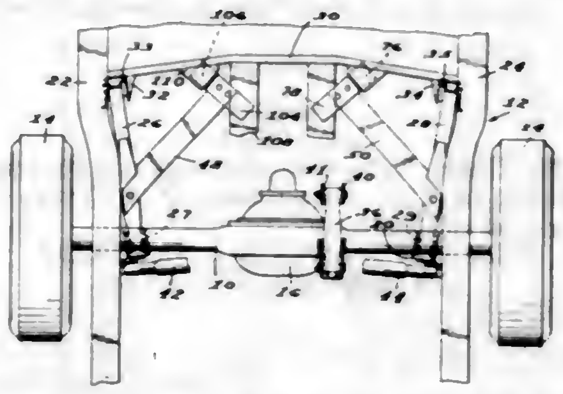
William D. Allison, Grosse Pointe Farms, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Apr. 25, 1966, Ser. No. 544,756
21 Claims. (Cl. 280—104)



1. An interconnecting means for controlling the transmittal of torque between the front and rear suspension systems of a motor vehicle having sprung and unsprung masses and a pair of essentially end-to-end longitudinally extending spring members substantially aligned with each other on each side of said vehicle connecting and supporting the vehicle sprung mass from the respective front and rear wheels, comprising, connecting means operably interconnecting the adjacent ends of said members and extending laterally thereof, and other means operably spacing said connecting means from and connecting said connecting means to said sprung mass, said other means including resilient means controlling the distribution of torque transmittal between one of said members and the other of said members and the reaction to said spring mass upon application of torque to said one of said members during movement of its associated wheel in jounce and rebound.

3,386,752
VEHICLE SUSPENSION SYSTEM HAVING TORSION SPRING

Sidney L. Freers, Dearborn Heights, and Clark A. Tea, Southfield, Mich., assignors to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Dec. 20, 1965, Ser. No. 514,821
11 Claims. (Cl. 280—124)

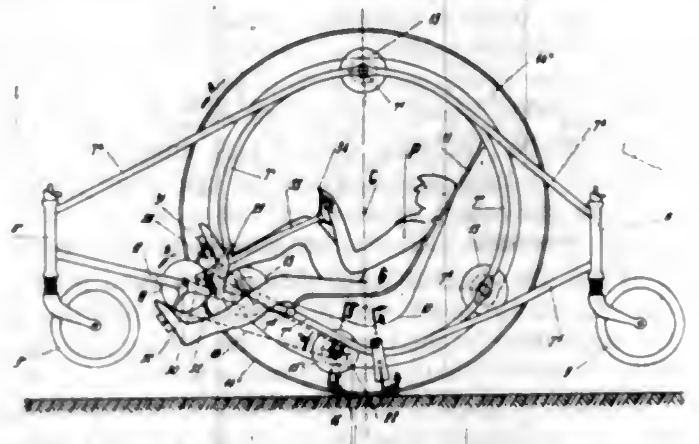


A suspension system for a motor vehicle having a leaf spring interposed between sprung and unsprung components and constructed to support the vehicle load in torsion.

3,386,753
OCCUPANT-PROPELLED VEHICLE THAT MOVES BY DISPLACEMENT OF ITS CENTER OF GRAVITY IN ADVANCE OF ITS GROUND SUPPORT

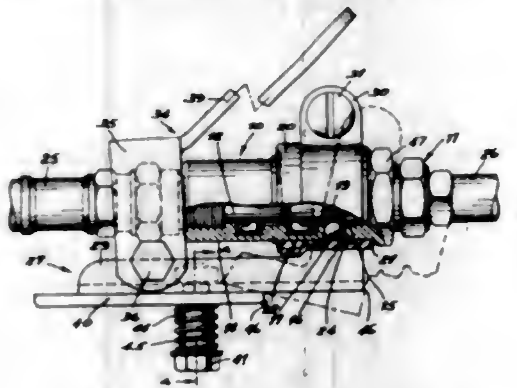
Edmond Quedreux, 56 Rue Henri Barbusse,
Argenteuil, France
Filed Apr. 12, 1966, Ser. No. 542,043
Claims priority, application France, Apr. 27, 1965, 14,781
1 Claim. (Cl. 280—208)

An occupant-propelled vehicle has two large laterally spaced coaxial wheels and a vehicle body supported on and within inner annular surfaces of the wheels. The occupant drives the vehicle body along those support surfaces, so that when the center of gravity of the vehicle body is horizontally displaced from the axis of the wheels in one direction, the vehicle will move in that one direction.



3,386,754
HOSE COUPLING CONNECT AND DISCONNECT MECHANISM

William S. Morrison, Royal Oak, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Oct. 24, 1965, Ser. No. 504,928
3 Claims. (Cl. 285—1)

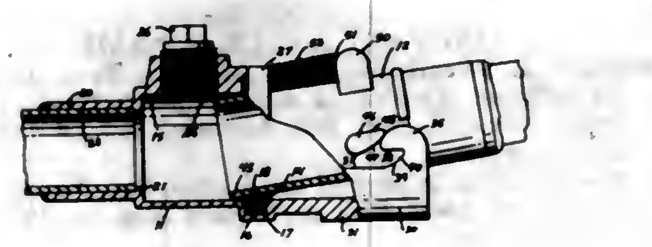


A hose coupling support and disconnect mechanism for housing couplings having male and female coupling halves retained coupled by displaceable balls engaged with the male half by a spring-biased sleeve for reciprocation of the female half, has a clamp for engaging the sleeve so that overload pull on the hose connected with the male half will separate the couplings. The coupling is supported on a vertical pivot to permit the coupling to swing as required and a lever is mounted on a horizontal pivot extending transversely of the coupling to engage the female half and displace it relative to the sleeve to facilitate uncoupling the male half. The lever is provided with a bifurcated coupling-engaging portion and an operating portion extending above the coupling sleeve at an acute angle to the axis of the coupling female half.

3,386,755
QUICK-DISCONNECT PIPE COUPLING

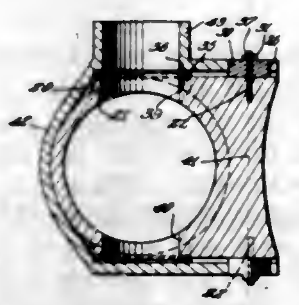
John D. Miller, Spokane, Wash., assignor to Anderson-Miller Manufacturing Company, Spokane, Wash., a corporation of Washington
Filed June 30, 1967, Ser. No. 650,285
4 Claims. (Cl. 285—6)

The disclosure describes a quick-disconnect pipe coupling for irrigation pipelines. The coupling has a female element 11 with a cradle that extends forward for guiding the male element 12 into the female element. The cradle has hook-shaped side walls that have longitudinal slots 40 formed therein that face the opening of the female element. The slots 40 receive lugs that are formed on the exterior of the male element 12 for preventing the disconnection of the coupling without first moving the elements together. A spring 53 is mounted between the elements to maintain the lugs in the slots 40.



3,386,756
PIPE FITTING ASSEMBLY

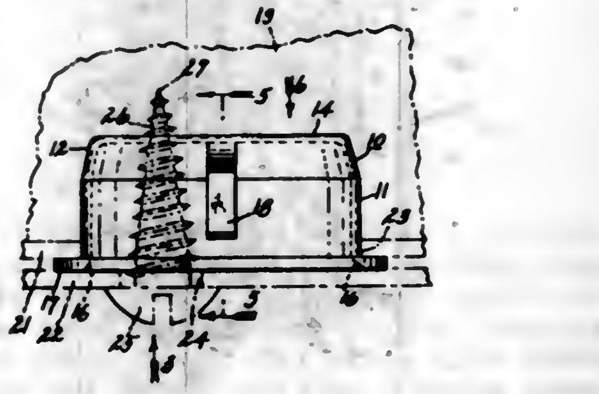
George Merle Primm, 4736 Forest Ave.,
Downers Grove, Ill. 60515
Filed Sept. 13, 1965, Ser. No. 487,022
9 Claims. (Cl. 285—197)



Pipe joint or coupling assemblies including means to establish selective branch connections on either or both sides of a fitting.

3,386,757
COMBINATION MOLD AND FASTENING MEANS

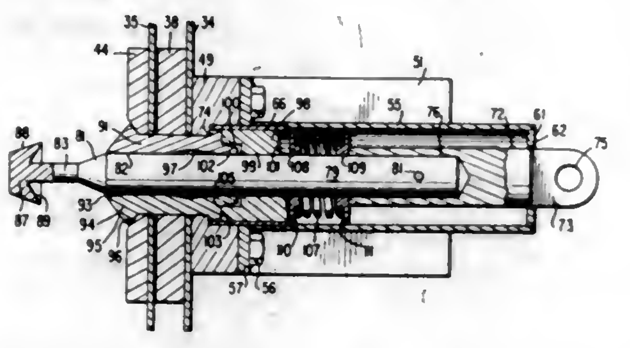
Robert W. Forward, Centerville, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Original application Feb. 23, 1965, Ser. No. 434,299, now Patent No. 3,334,410, dated Aug. 8, 1967. Divided and this application Feb. 23, 1967, Ser. No. 618,036
4 Claims. (Cl. 287—189.36)



A fastening arrangement for mounting bodies on panels, particularly panels which have coverings foamed onto them. A resilient plastic plug having an elongated recess for reception of a tapering screw is inserted through a hole in the panel and blocks the hole. The body to be fastened to the panel is held by a screw which enters between the converging walls of the recess in the plug and may penetrate the end of the plug. The elongation of the recess tolerates misalignment of the body and panel.

3,386,758
AIRCRAFT LATCH ASSEMBLY

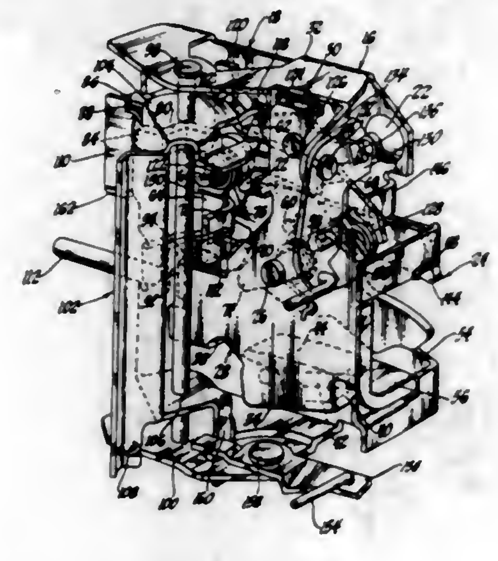
Edward J. Swearingen, San Antonio, Tex., assignor to Swearingen Aircraft, a general partnership of Swearingen Aircraft, Inc., San Antonio, Tex., a corporation of Delaware
Continuation-in-part of application Ser. No. 432,212, Feb. 12, 1965. This application Aug. 30, 1967, Ser. No. 667,040
7 Claims. (Cl. 292—53)



A bayonet latch assembly with a slidably mounted operating pin surrounded by a number of segments. The segments nest against the operating pin so that when it is moved forward the segments are urged forwardly to their fully extended position where they are cammed by the operating pin in a radially outward fashion to engage the periphery of a receiving opening in the opposed structure. The assembly also may include a retainer to prevent the segments from moving radially outwardly until they are fully extended.

3,386,759
CLOSURE LATCH

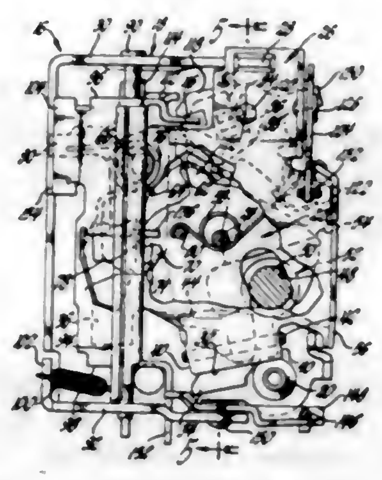
Stanley Kwasiborski, Jr., Hazel Park, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed July 18, 1966, Ser. No. 566,028
15 Claims. (Cl. 292—216)



A door lock includes a fork bolt rotatably mounted on a frame for movement between an unlatched position and primary and secondary latched positions. The bolt includes coplanar spaced shoulders defining each of the latched positions. A pair of detent members are coaxially pivoted on the frame and each includes an arm offset into the plane of the bolt for engagement with a respective shoulder to hold the bolt in the latched position defined by the one shoulder. A common torsion spring coaxial with the detent members biases both detent members opposite of each other toward detented position. An operating member is slidably mounted on a pin on the frame for shifting movement between locked and unlocked positions and rotation about the pin in each position. The operating member includes spaced tabs engageable with a tab or arm of each detent when the operating member is rotated in unlocked position to move the detents to undetented position against the action of the torsion spring. When the operating member is in locked position, only the secondary detent can be released. When the bolt is in the secondary latched position, the primary detent is partially rotated to block shifting movement of the operating member to locked position. Should the operating member be in locked position and the primary detent move into engagement with its respective bolt shoulder, the primary detent moves the operating member to unlocked position to accomplish automatic undogging. Keyless locking can be accomplished by rotating the operating member prior to the primary detent moving into engagement with its respective shoulder.

3,386,760
CLOSURE LATCH

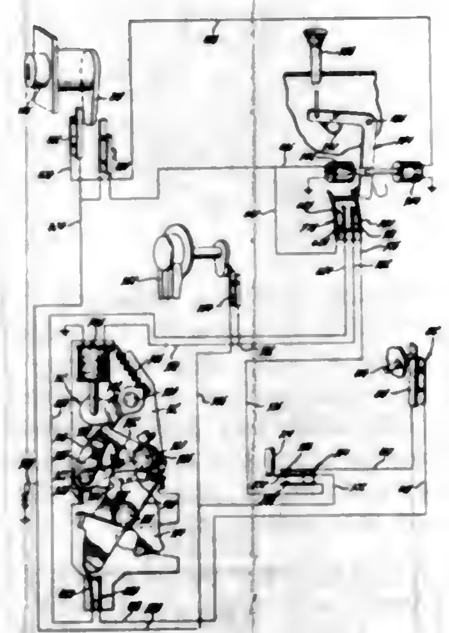
Ramon L. Bessette, East Detroit, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed July 18, 1966, Ser. No. 566,128
7 Claims. (Cl. 292—216)



A door lock includes a fork bolt mounted on a frame for movement between an unlatched position and intermediate and fully latched positions which are defined by the shoulders of the bolt. A pair of detents are coaxially mounted on the frame for movement oppositely of each other between detented and undetented positions with respect to one of the bolt shoulders. A torsion spring mounted on the detent pivot biases the detents oppositely of each other to detented position. The detent arm for the primary latched position includes a lateral arm engageable with one side of a common stop on the frame and the detent arm for the secondary latched position also includes a lateral arm engageable with the other side of the common stop means and extending generally in the same direction as the detent arm of the first detent to locate the detents against the action of the torsion spring. Each detent further includes a third arm which lie in the path of lateral tabs of an operating member and picked up by the operating member when it is rotated so as to move the detent to release position. The operating member is shiftable to a position wherein it will not pick up either detent and one of the detents includes a fourth arm for returning the operating member to its first position upon movement of the bolt relative to the one detent.

3,386,761
VEHICLE BODY DOOR LATCH AND LOCKING SYSTEM

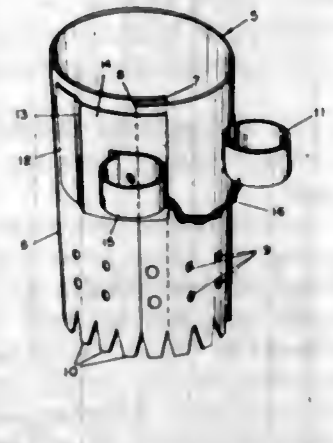
Theodore H. Johnstone, New Baltimore, Theodore F. Peters, Utica, and Craig D. Brown, Birmingham, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Nov. 22, 1965, Ser. No. 508,894
12 Claims. (Cl. 292—201)



A locking system which includes a bolt and a solenoid-released detent. The control circuit for the solenoid includes inside and outside selector switches and a manual locking control to selectively lock or unlock the system. Automatic undogging and keyless locking are provided.

3,386,762
SEEDLING TRANSPLANTING TOOL

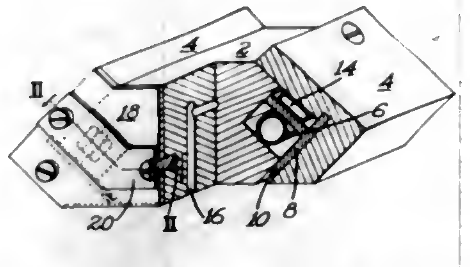
Robert R. Mendonca, 12672 Morgan Lane, Garden Grove, Calif. 92640
Filed May 2, 1967, Ser. No. 635,617
2 Claims. (Cl. 294—25)



This invention consists of a tube of light gauge spring steel, so constructed that its diameter may readily be changed by the squeezing together of two metal rings secured to the outside periphery of the tube. The bottom of the tube is so configurated as to provide trapezoidal-shaped teeth around its entire periphery, thereby providing means of easily pushing the tool down into the ground. The aforesaid tube is also provided with a plurality of openings in the side thereof just above the toothed edge.

3,386,763
FLAT PIECE PICKUP HEADS

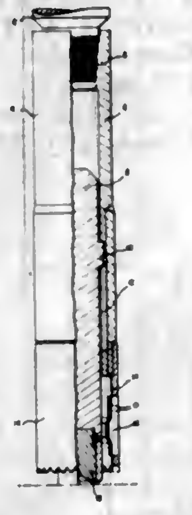
Robert W. Ottaway, South Hamilton, and Paul G. Rumball, Beverly, Mass., assignors to United Shoe Machinery Corporation, Boston, Mass., a corporation of New Jersey
Filed Oct. 21, 1966, Ser. No. 588,615
8 Claims. (Cl. 294—61)



1. A pickup head for use in lifting and transporting flexible, flat, air pervious sheet material from a stack of such material comprising a main body portion, material impaling means carried by said body portion for movement relatively thereto into and out of material engaging positions, and inflatable means acting directly on said impaling means to control the movement thereof into and out of material engaging position.

3,386,764
OVERSHOT FOR RETRIEVABLE BRIDGE PLUG

Robert T. Evans, Duncan, Okla., assignor to Halliburton Company, Duncan, Okla., a corporation of Delaware
Original application Dec. 26, 1963, Ser. No. 333,499, now Patent No. 3,308,886, dated Mar. 14, 1967. Divided and this application Dec. 15, 1966, Ser. No. 608,715
5 Claims. (Cl. 294—86.1)



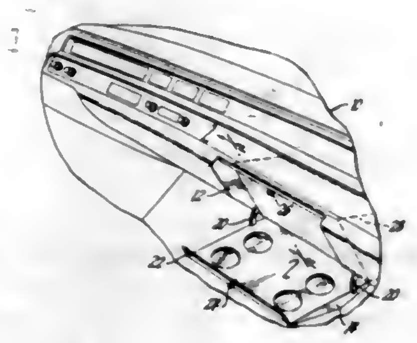
1. An overshot for selectively engaging a retrieving head on the control mandrel of a retrievable bridge plug, said retrieving head having a lug projecting radially outward from a side of said head, said overshot comprising an elongated hollow tubular body having screw thread means at one end thereof, said body including means forming a J-slot in the interior of the body, said body having a radial ridge adjacent the opposite end of said body, said J-slot means being between said ridge and said one end of said body and having an axially extending portion terminating in an open end adjacent said ridge, the internal diameter of said body at said ridge being substantially less than the internal diameter at said axially extending J-slot portion, whereby in forcing the lug across the ridge by axial force transmitted through the overshot, a positive indication of engagement or disengagement of the overshot with the retrieving head is provide.

3,386,765

GLOVE BOX COMPARTMENT FOR A MOTOR VEHICLE

George Drach, Jr., Warren, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Aug. 4, 1966, Ser. No. 570,287
8 Claims. (Cl. 296—37)



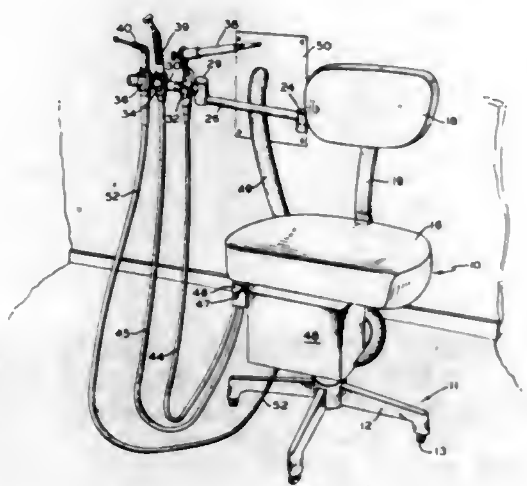
A glove compartment arrangement including an open-topped receptacle which is pivotally movable between a stored position in the compartment wherein said open top is inaccessible through said access opening, and an extended position wherein said open top is outside the access opening. A door is swingable between closed position in which it covers the access opening and open horizontal position in which it acts as a tray. The door and receptacle may be coupled to move together between the stored and extended positions of the receptacle, or may be uncoupled for independent movement.

3,386,766

DENTIST CHAIR COMBINATION WITH UTILITY SUPPORTING ATTACHMENT

Joseph Gorelick, 594 Merrick Ave., East Meadow, N.Y. 11554

Filed Dec. 8, 1966, Ser. No. 600,217
7 Claims. (Cl. 297—192)



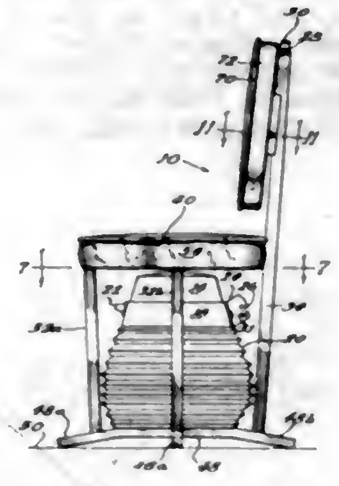
Chair for dentist for use, while operating on patient in reclining position, the chair being provided with special means supporting dentist's working tools formerly supported on dental unit positioned on the side of patient's chair opposite from the working position of dentist.

3,386,767

APPLIANCE STAND AND STORAGE DEVICE

Edward J. Petrick, Park Ridge, and Horst Genger, Chicago, Ill., assignors to Bretford Manufacturing, Inc., a corporation of Illinois

Filed Sept. 14, 1966, Ser. No. 579,270
8 Claims. (Cl. 297—193)



A combination appliance standard and seating device of the type having an upwardly extending telescoping rod for supporting a removable appliance, such as a hair dryer bonnet, characterized in that the chair portion thereof has a removable seat pad supported on a cage-like structure within which the appliance may be stored when not in use, and during which time the apparatus may still be used as a seating device.

ERRATUM

For Class 297—304 see:
Patent No. 3,386,770

3,386,768

MINING AND REFINING SOLUBLE MINERALS

Charles H. Jacoby, Grosse Ile, and Kurt F. Peyfuss, Southfield, Mich., assignors to International Salt Company, Clarks Summit, Pa.

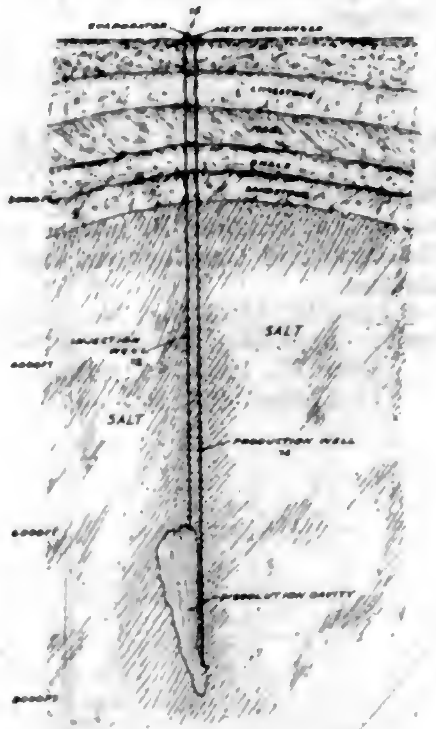
Filed Sept. 29, 1966, Ser. No. 583,020
7 Claims. (Cl. 299—4)

1. The method of concomitantly mining and beneficiating a deep underground high-temperature deposit of soluble mineral including impurities disposed at such depth beneath the earth's surface as to be surrounded by a high-temperature geological environment compared to the neighborhood earth surface rock temperature, to produce a relatively pure mineral product at the relatively low earth surface ambient temperatures, said method comprising,

forming a pair of openings extending downwardly in laterally offset relation from the earth's surface into said deposit,

pumping a solvent liquid downwardly through one of said openings in direct heat-exchange relation with the ambient geology thereby heating said solvent to an elevated temperature, and then directing said heated solvent to pass in dissolution-contact relation through said high-temperature mineral to provide a highly concentrated high-temperature solution of mineral, and thence to flow upwardly through the other of said openings to a treating plant operating under substantially earth's surface temperature and pressure conditions, for separation of purified mineral from the impurities in said solution,

while simultaneously circulating in heat-exchange relation with said upflowing mineral solution a heat-transfer fluid flowing in a closed conduit system including a heater, whereby to avoid mixing with said solution and to maintain said solution at a prescribed high-temperature condition until delivery to said treating plant.

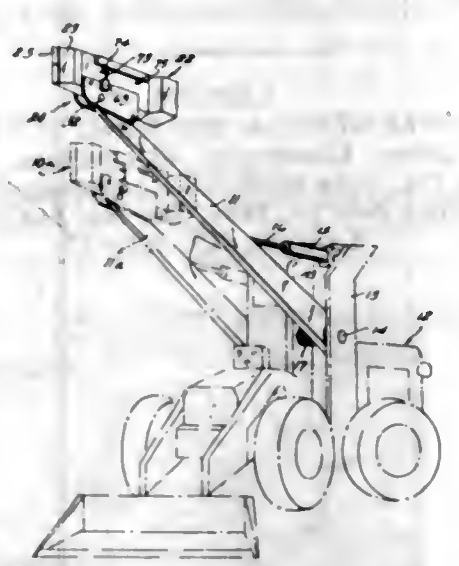


3,386,769

ROCK-BREAKING APPARATUS

Howard A. Wilmeth, % White Pine Copper Co., White Pine, Mich. 49971

Filed Jan. 7, 1966, Ser. No. 519,364
9 Claims. (Cl. 299—70)



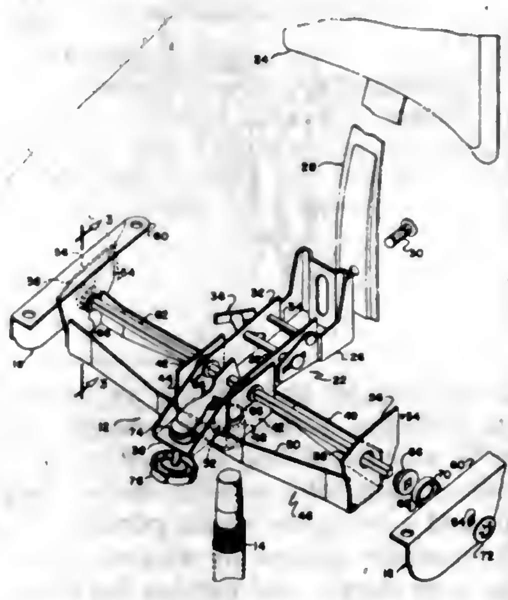
1. A rock-breaking apparatus having a bit and tooth structure assembly for engaging the rock, the bit being arranged in sliding relation to the tooth structure, a supporting housing in which the bit and tooth structure assembly is slidably mounted, impacting means for continuously subjecting the bit to rapidly repeated impacts, means for yieldingly urging the bit and tooth assembly to move forward in the supporting housing, means for advancing the housing to place the bit in engagement with the rock to be broken and cause the bit and tooth assembly to move rearwardly with respect to the housing against the force of the yielding urging means, and means actuated by the said movement of the bit and tooth assembly for bringing the impacting means into operation.

3,386,770

DOUBLE ACTION CHAIR CONTROL

Philip J. Williams, Bridgeport, Conn., assignor to Stewart-Warner Corporation, Chicago, Ill., a corporation of Virginia

Filed Sept. 18, 1967, Ser. No. 668,396
6 Claims. (Cl. 297—304)



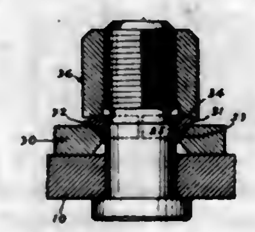
The following specification described a chair control using a single torsion bar to permit resilient backward tilting of the back and resilient forward tilting of the seat relative the chair control frame.

3,386,771

DEVICES FOR MOUNTING VEHICLE WHEELS

Henri Verdier, Beauregard-l'Eveque, Puy-de-Dome, France, assignor to Compagnie Generale des Etablissements Michelin, Clermont-Ferrand, Puy-de-Dome, France

Filed Apr. 28, 1966, Ser. No. 546,089
Claims priority, application France, May 4, 1965, 15,782
6 Claims. (Cl. 301—9)



A detachable mount for vehicle wheels including threaded studs mounted on the hub and passing through corresponding openings in the wheel, the outer ends of the openings of the wheels having concave (conical or spherical) ends receiving a biconvex split washer and a clamping nut having a face engaging the washer complemental to the opposing surface thereon for securing the wheel to the hub.

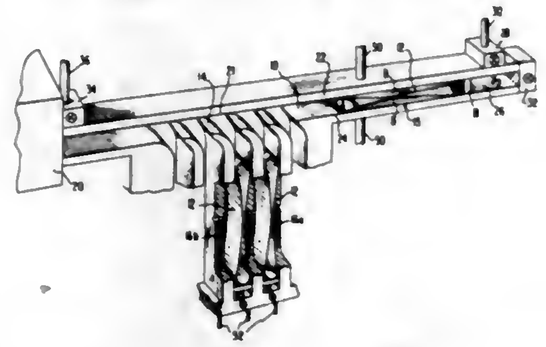
3,386,772

METHOD AND APPARATUS FOR TRANSPORTING A CLOSED TAPE LOOP

Sandford Platter, Boulder, Colo., and Michael J. Lowery, Jr., Poughkeepsie, N.Y., assignors to International Business Machines Corporation, Armonk, N.Y., a corporation of New York

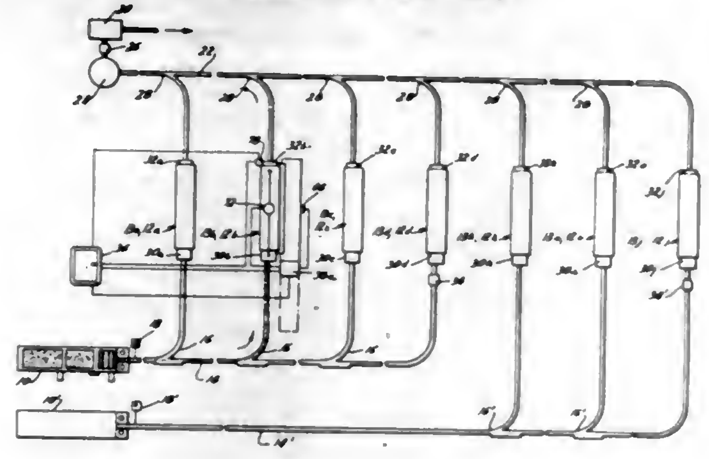
Filed Dec. 7, 1966, Ser. No. 599,749
9 Claims. (Cl. 302—2)

Apparatus for transporting a closed tape loop within a transport having a storage area and a working area comprising first pneumatic means located in said storage area for shaping said loop into a "Dog Bone" shape having bulged ends and a collapsed center portion and second pneumatic means for moving said shaped loop within said transport from said storage position to said working position.



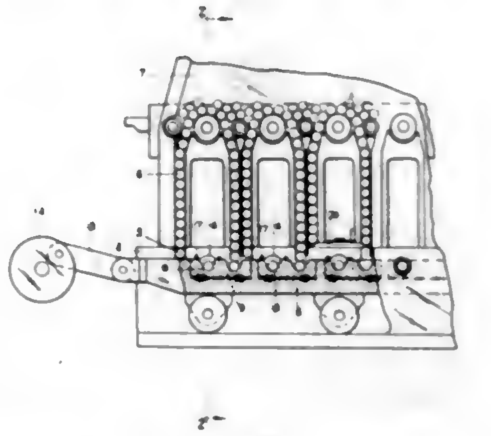
Also the method of transporting an endless loop of magnetic tape within a transport having a bin at one end thereof in which said loop is stored comprising forming the endless loop into a "Dog Bone" shape having bulged ends and a collapsed center portion by pneumatic pressure differentials applied to selected portions of the bin with the loop therein, and moving the loop by further differential pneumatic pressures from said bin into a connecting header.

3,386,773
PNEUMATIC FEED SYSTEM FOR CIGARETTE-MAKING MACHINES
Francis J. Ballard, Jr., Louisville, Ky., assignor to Brown & Williamson Tobacco Corporation, Louisville, Ky., a corporation of Delaware
Filed May 3, 1966, Ser. No. 547,333
17 Claims. (Cl. 302—28)



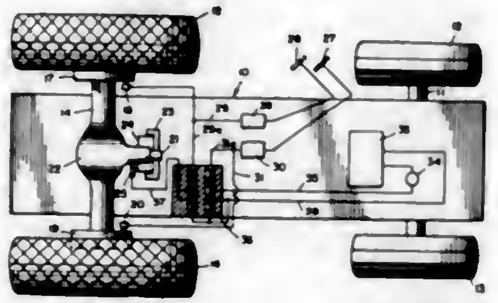
A pneumatic conveying system for cut tobacco is provided in which a tobacco feeder is adapted to supply tobacco for cigarette-making machines. A number of other feeders may be similarly employed for the making machines for the same or other brands. The operation of each feeder is controlled and will start to feed cut tobacco to a demanding making machine upon the attainment of a predetermined conveying velocity within the pneumatic system. A main feed pipe leads from the feeder with branch lines extending therefrom to the making machines to be supplied with cut tobacco by the feeder. A main suction line extends from the suction-producing equipment with branch lines similarly extending to the cigarette-making machines. The pneumatic system is designed to feed only one of the making machines at a time upon request for cut tobacco. A tobacco separator is associated with each of the making machines. A screen within the separator serves to separate the cut tobacco from the conveying air stream. As the cut tobacco fills the separator, the pressure drop across the separator progressively increases. When this pressure drop reaches a preset level, the suction side of the separator closes and a trap door of the separator will now swing open and the collective tobacco is permitted to fall into the selected making machine hopper.

3,386,774
VALVES FOR FEEDING ARTICLES INTO PNEUMATIC CONVEYANCE SYSTEMS
Mauritz L. Strydom, Stellenbosch, Cape Province, Republic of South Africa, assignor, by mesne assignments, to Tobacco Research and Development Institute Limited, Zug, Switzerland
Filed June 13, 1966, Ser. No. 556,975
Claims priority, application Republic of South Africa, June 17, 1965, 65/3,196
11 Claims. (Cl. 302—49)



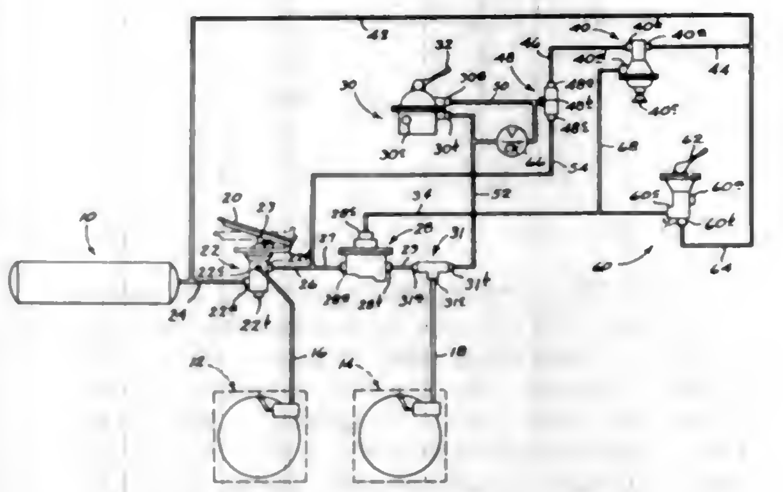
A device for feeding rod-shaped articles into pneumatic pipelines having a valve body, preferably a sliding plate, movable between two positions of dwell in the first of which it receives the lowermost of a stack of articles in a specially shaped groove and in the second of which the groove is in register with the pipeline so that the articles are axially propelled along the pipeline.

3,386,775
SUPPLEMENTAL BRAKING SYSTEM
Edwin L. Jones, Libertyville, Ill., assignor to The Hy-Dynamic Co., Lake Bluff, Ill., a corporation of Illinois
Filed July 27, 1966, Ser. No. 568,313
3 Claims. (Cl. 303—2)



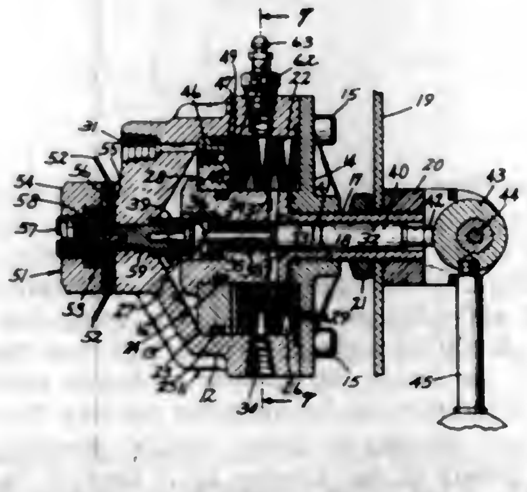
1. In a braking system for a vehicle comprising a frame, an axle journaled on said frame with wheels at the axle ends, a braking system for each wheel including an interconnected pedal operator, conduit, cylinder, and wheel brake, an improved supplemental braking system comprising valve means coupled to the conduits of said wheels system, fluid pressure means and supplemental brake cylinder means and brake means operably associated with said valve means, said valve means including a valve block defining bores therein, spool means associated with each of said wheel systems, each of said spool means being slidably received in one of said bores, said valve means being operative when both wheel systems are energized to couple said fluid pressure means and supplemental brake cylinder means for exerting braking force thereagainst.

3,386,776
VEHICLE BRAKING SYSTEM
Norman C. Williams, Portland, Oreg., assignor to Power Brake Equipment Company, Portland, Oreg., a corporation of Oregon
Filed June 13, 1966, Ser. No. 557,046
5 Claims. (Cl. 303—7)



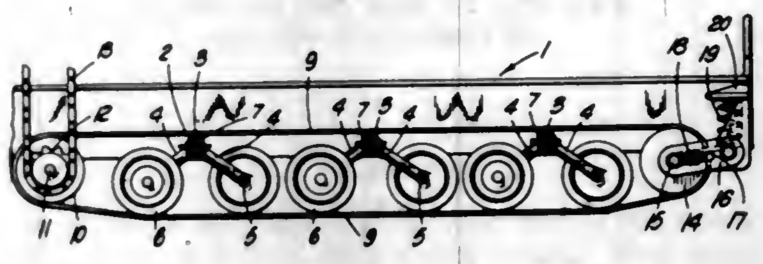
Apparatus for controlling the pressure of fluid supplied from a pressure tank to a vehicle wheel brake assembly including a line connecting the tank with a variable pressure regulating valve, and conduit means connecting the downstream side of the valve to the brake assembly, said conduit means including a second variable pressure regulating valve hydraulically in series with the first-mentioned valve. A circuit changing valve is provided which is actuatable to remove the second variable pressure regulating valve from its in-series relationship with the first-mentioned valve and to place it in parallel with the first-mentioned valve between the tank and the brake assembly.

3,386,777
AUXILIARY HYDRAULIC BRAKE LOCK
Fred W. Cords, Lake Crystal, Minn., assignor to Minnesota Automotive, Inc., Mankato, Minn., a corporation of Minnesota
Filed June 2, 1967, Ser. No. 643,115
11 Claims. (Cl. 303—89)



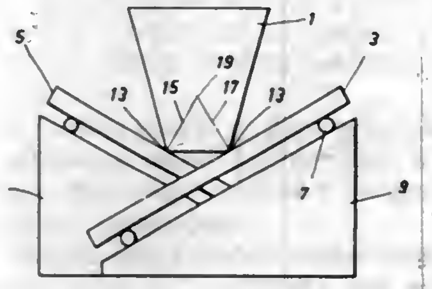
A brake lock for hydraulic brake systems and having a pair of sequentially operated valves for release of fluid pressure in a brake cylinder, a pressure control element for maintaining a predetermined fluid pressure in a brake cylinder, and a warning control device responsive to a predetermined pressure drop in a brake cylinder to initiate operation of an indicator therefor. A valve in the pressure control element is operative responsive to a predetermined increase of pressure in a brake cylinder, above a given operating pressure, to relieve the excessive fluid pressure in the brake cylinder.

3,386,778
WALKING BEAM SUSPENSION
John E. Rymes, Calgary, Alberta, Canada, assignor to Robin-Nodwell Mfg. Ltd., Calgary, Alberta, Canada
Filed July 1, 1965, Ser. No. 468,817
1 Claim. (Cl. 305—27)



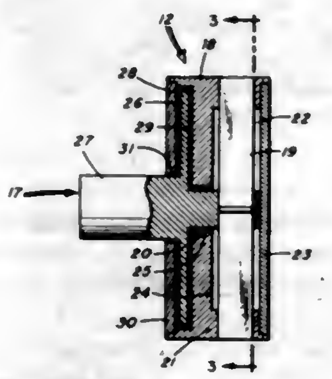
1. A suspension for a tracked vehicle having a chassis with a track mounted therebeneath, which system includes a plurality of transversely extending rod means rigidly connected to said chassis and spaced longitudinally thereof; a set of wheels mounted on each rod means, each set comprising a plurality of sleeves coaxially and rotatably mounted side by side on said rod means; a crank arm mounted on each sleeve extending downwardly and outwardly therefrom; a load carrying wheel mounted on the free end of each crank arm; an individual coil spring for each wheel surrounding the wheel carrying sleeve with one spring end being anchored to the rod means which carries that sleeve and the other spring end biasing its wheel downwardly into contact with the inside surface of the lower run of the track, the wheels of each set extending alternately fore and aft from adjacent sleeves.

3,386,779
KNIFE EDGE BEARING ASSEMBLY FOR MEASURING INSTRUMENTS
Ludwig Weickhardt, Gottingen, Germany, assignor to Sartorius-Werke vormals Gottinger Prazisionswaagenfabrik G.m.b.H., A.G., Gottingen, Germany
Filed Dec. 13, 1965, Ser. No. 513,370
Claims priority, application Germany, Jan. 13, 1965, S 94,992
8 Claims. (Cl. 308—2)



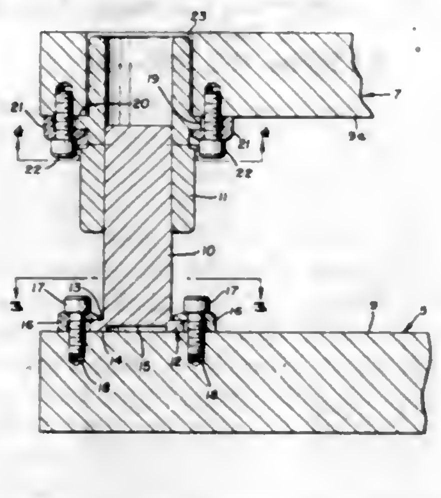
The invention relates to a knife edge bearing for a weighing scale in which two bearing plates are crossing each other. Two longitudinally aligned knife edges are assigned to the bearing plates. The faces defining the two knife edges are angularly staggered with respect to each other so that substantial clearance angles between each of the faces and the confronting bearing plates are obtained in the neutral position. Thus, the axis of rotation of the knife edge bar is exactly at the apex or nadir of the trough defined by the bearing plates. There is no shifting of the pivotal axis as in the prior art bearings. Nevertheless the invention enables the knife edges to be given obtuse angles. This facilitates manufacture with high precision and eliminates danger of destruction of the knife edges.

3,386,780
PAIR OF FLEXURAL PIVOTS WITH BUILT-IN DAMPING
Frank H. Durgin, Belmont, Mass., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed May 27, 1966, Ser. No. 554,294
10 Claims. (Cl. 308—2)



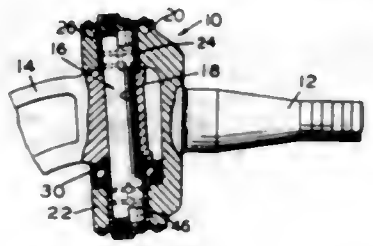
A flexural pivot assembly having an inclosed fluid containing chamber spaced from the flexure members to receive a disc on the shaft of the assembly to provide a predetermined damped motion about the shaft's axis of rotation.

3,386,781
DIE SET HAVING READILY DEMOUNTABLE GUIDE PINS AND BUSHINGS
William J. Blazek and Clinton D. Hillis, New Lexington, Ohio, assignors to Lempco Industries Inc., a corporation of Ohio
Filed Jan. 24, 1966, Ser. No. 522,520
7 Claims. (Cl. 308—4)



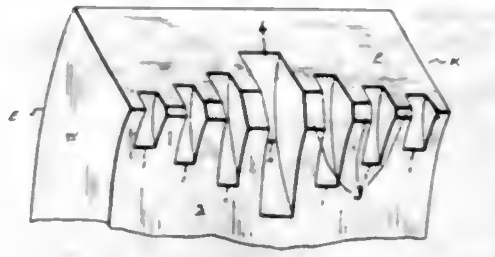
A die set in which relatively reciprocating die-supporting plates are maintained in exacting alignment by relatively telescoping guide pins and bushings detachably secured to the respective plates by quick-disconnect clamping means which provide for initial radial adjustment or indexing of the guide pins and bushings on their respective plates to insure proper axial alignment of the pins and bushings.

3,386,782
KINGPIN BEARING LUBRICATION SYSTEM
Donald G. Magil, Dearborn Heights, and Robert E. Spencer, Taylor, Mich., assignors to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed July 30, 1965, Ser. No. 475,942
9 Claims. (Cl. 308—120)



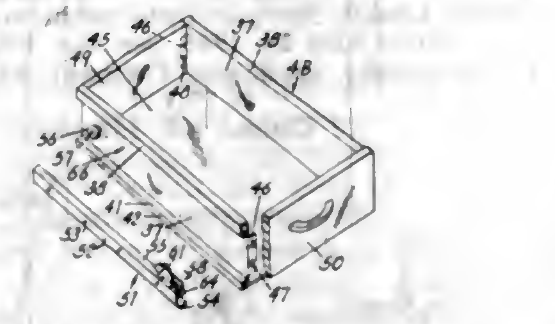
9. A vehicle axle construction comprising an axle, a steering knuckle, pivot means interconnecting said axle and said knuckle and constructed to permit and knuckle to turn about a steering axis, pumping means constructed to lubricate said pivot means comprising a first pumping surface nonrotatably fixed with respect to said axle and a second pumping surface nonrotatably fixed with respect to said knuckle, said pumping surfaces defining portions of double chambers, one of said chambers expanding in volume and the other of said chambers decreasing in volume in response to relative movement between said knuckle and said axle to force lubricant through a portion of said pivot means when said steering knuckle is turned about a steering axis.

3,386,783
ANTI-FRICTION BEARING
Roland Scheufler, Neckarsulm, Germany, assignor to Karl Schmidt, G.m.b.H., Neckarsulm, Germany, a corporation of Germany
Filed May 3, 1965, Ser. No. 453.243
Claims priority, application Germany, May 2, 1964, Sch 35,088
10 Claims. (Cl. 308—121)



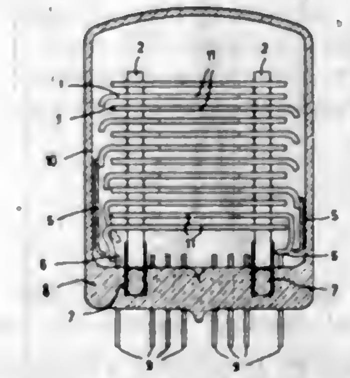
This specification discloses an anti-friction bearing having two shell halves with comb-like grooves disposed in each half at the intersection between the bearing face and the meeting face between the two bearing halves. In one preferred embodiment disclosed, the comb-like grooves pass completely through the bearing half from the bearing surface to the inside. In another preferred embodiment, the line of intersection between the meeting face and the bearing face referred to above, which constitutes one of the high points in the bearing shell between the above-referred-to grooves, is chamfered along the interior portion thereof with the front and rear ends being permitted to retain their full height so as to maintain oil in the system. In a most preferred embodiment disclosed, this referred to chamfer has an increasing or decreasing depth as it proceeds outward from the center of the bearing shell to the front and rear ends thereof.

3,386,784
DRAWER CONSTRUCTION INCLUDING PREFORMED SIDE MEMBERS AND SUPPORTING SLIDE RAILS THEREFOR
Simon W. Oppenhuizen and John O. Lockwood, Grand Rapids, Mich., assignors to Uniline Corporation, Grand Rapids, Mich.
Continuation-in-part of application Ser. No. 491,703, Sept. 30, 1965. This application Oct. 12, 1966, Ser. No. 586,287
7 Claims. (Cl. 312—348)



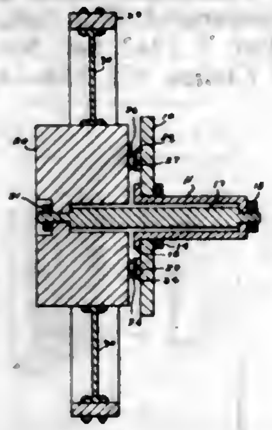
Laterally outwardly folded flanges on metal side walls of a drawer, forming support bars for the drawer, rear support rollers on the outer sides of the drawer near the back and spaced below the bars, fixed slide rails having tracks supporting the rear rollers, front rollers mounted in spaced relation over the front ends of the tracks to support the bars on the sides of the drawer, vertically swingable stop hooks on the slide rails located vertically between the front rollers and the tracks, and limit stop projections on the sides of the drawer towards its rear engageable behind the stop hooks to limit outward movement of the drawer.

3,386,785
METHOD OF MANUFACTURING A GAS DISCHARGE TUBE
Simon Mari Frouws, Emmasingel, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Apr. 12, 1966, Ser. No. 542,167
Claims priority, application Netherlands, Apr. 24, 1965, 65—5268
4 Claims. (Cl. 316—4)



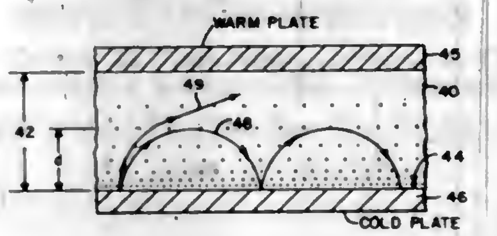
A character display gaseous discharge tube in which a plurality of character-shaped electrodes are arranged in a stack, each electrode being provided with a stay-rod, a cross-section of which is only partly embedded in a member of insulating material for supporting these electrodes which facilitates assembly thereof.

3,386,786
MIRROR RESONANT SPRING NUTATING DEVICE
Francis J. Kaisler, Ellicott City, and Gordon E. Lynn, Severna Park, Md., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Air Force
Filed Dec. 13, 1965, Ser. No. 513,914
5 Claims. (Cl. 350—6)



1. A device for providing nutating motion for image in an infrared search and tracking system, comprising an annular shaped mirror having a predetermined mass; a plurality of equiangularly spaced permanent magnets on the back surface of said mirror; electromagnetic means adjacent said permanent magnets for imparting nutating motion to said mirror at a predetermined frequency; a flexible beam resonant at said predetermined frequency; means for supporting said mirror at one end of said flexible beam; reaction means supported on the other end of said flexible beam for providing a reaction force for said mirror at least to the vibration forces of said mirror; a support frame; resilient means, for supporting said flexible beam on said frame and means for supporting said electromagnetic means on said flexible beam.

3,386,787
MACROSCOPIC OPTICAL WAVEGUIDES
Robert A. Kaplan, Flushing, N.Y., assignor to Hazeltine Research, Inc., a corporation of Illinois
Filed Oct. 25, 1963, Ser. No. 318,970
1 Claim. (Cl. 350—96)



1. A macroscopic optical waveguide for propagating predetermined modes in a band of optical frequencies having a maximum wavelength λ_c comprising:

a first horizontal planar surface maintained at a first temperature;

a second conductive planar surface arranged in spaced parallel relation a distance great than *d* below said first surface and maintained at a temperature lower than said first temperature;

and a gas maintained between said surfaces;

the waveguide being so constructed and arranged that

$$\frac{3\lambda_c(m'+\frac{3}{4})}{4\sqrt{k_0-k_d}}>d>\frac{3\lambda_c(m+\frac{3}{4})}{4\sqrt{k_0-k_d}}$$

where m is the number of the highest mode to be propagated, m' is the number of the next highest mode, k_0 is the dielectric constant of the gas at said second and k is the dielectric constant of the gas at said first surface;

whereby, if light of frequency within said band of frequencies is introduced into the waveguide, said predetermined modes will propagate along said waveguide while higher modes will be dissipated.

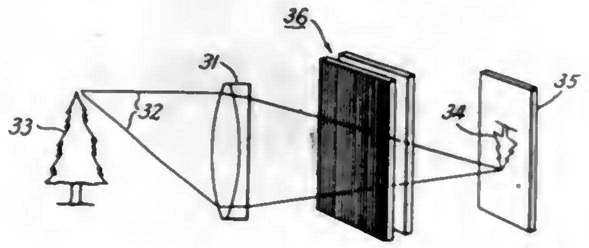
3,386,788

OPTICAL CHANGE DETECTION DEVICE

John F. Dreyer, Cincinnati, Ohio, assignor to Polacoat Incorporated, Blue Ash, Ohio

Filed Oct. 7, 1963, Ser. No. 314,197

6 Claims. (Cl. 350—160)



An optical device for detecting changes in a distribution pattern of actinic light by generation of an image of a changing light distribution pattern, wherein actinic light from said distribution pattern is intercepted by paired pellucid positively phototropic and negatively phototropic materials showing substantially equal but opposite changes in optical density upon illumination by said actinic light, said phototropic materials differing in their rate of phototropic response.

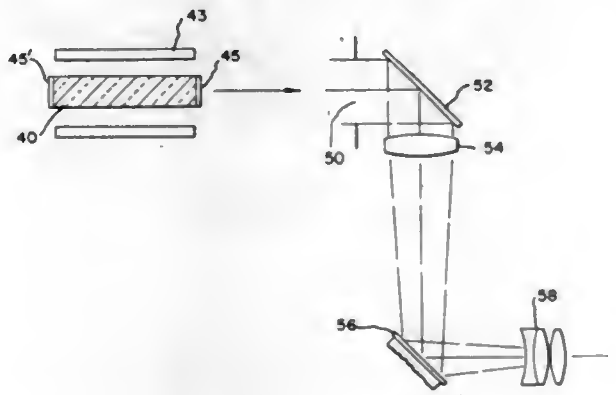
3,386,789

REFLECTIVE ELEMENT

Joseph R. Hensler, Rochester, and Eugene C. Letter, Penfield, N.Y., assignors to Bausch & Lomb Incorporated, Rochester, N.Y., a corporation of New York

Filed Feb. 12, 1965, Ser. No. 432,235

6 Claims. (Cl. 350—160)



1. An optical system including means for receiving incident light and directing the incident light along an optical axis of the system, a non-linear absorbing element consisting essentially of a cadmium sulfoselenide layer reflecting incident light along the optical axis of the system and transmitting a pulse of high intensity coherent radiation to thereby close the system to high intensity pulses of light.

3,386,790

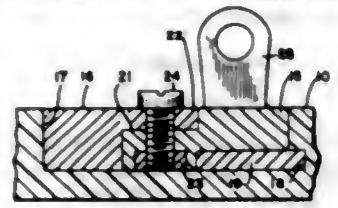
RECESSED TEMPLE HINGE MOUNTING FOR SPECTACLE FRAME

Donald J. McCulloch, Greece, N.Y., assignor to Bausch & Lomb Incorporated, Rochester, N.Y., a corporation of New York

Filed Mar. 23, 1964, Ser. No. 354,001

1 Claim. (Cl. 351—153)

Means for retaining a spectacle hinge member within a recess in a spectacle frame comprising an undercut around a portion of the periphery of the recess with the hinge member disposed in the recess with a flange seated in the undercut and a filler member seated in the recess to retain the hinge member locked therein.



3,386,791

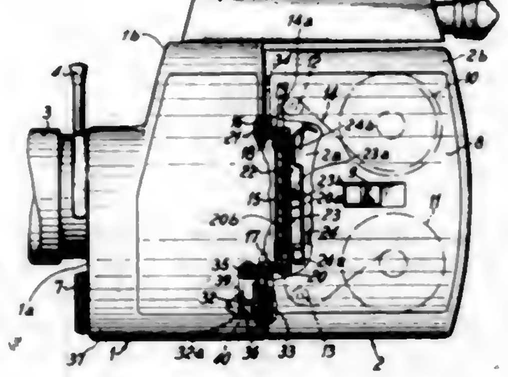
MOTION PICTURE CAMERA

Herbert Reinsch, Stuttgart, Germany, assignor to Eugen Bauer GmbH, Stuttgart-Unterturkheim, Germany

Filed May 24, 1965, Ser. No. 458,111

Claims priority, application Germany, Feb. 22, 1965, B 77,143

17 Claims. (Cl. 352—83)



A motion picture camera for use with double-eight film wherein the magazine is coupled to and is rotatable with reference to the housing about an axis which is parallel to the optical axis. The coupling comprises intermeshing rings provided on the rear wall of the housing and on the front wall of the magazine. The latter can be locked in two end positions and its presser plate is automatically disengaged from the film in response to unlocking.

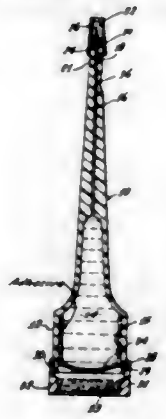
3,386,792

PAINT KIT

James Marshall Ireland, 401 Mercedes Ave., Pasadena, Calif. 91107

Filed Aug. 23, 1965, Ser. No. 481,754

3 Claims. (Cl. 401—40)



A touch-up paint kit to provide a bead of plastic paint-like substance for application to cover a chipped or otherwise uncovered area of a painted surface, such kit comprising a generally tubular container of solvent, such container having at least part of one wall inwardly displaceable and an exit passage at one end, and an impervious wall at the other end of the container, a brush disposed in the exit passage and a solid body of pigment base and binder in a receptacle detachably secured to the end of the tubular container having such impervious wall.

3,386,793

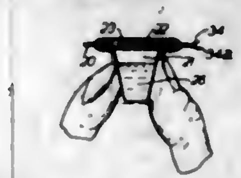
APPLICATORS FOR LIQUIDS, PASTES OR OTHER FLOWABLE SUBSTANCES

David Christopher Stanton, Chiswick, England, assignor to Reckitt & Colman (Overseas) Limited, Hull, England, a British company

Filed Mar. 11, 1966, Ser. No. 533,534

Claims priority, application Great Britain, Mar. 18, 1965, 11,492/65; July 20, 1965, 30,808/65

11 Claims. (Cl. 401—132)



A compressible reservoir of flexible sheet material has sides long enough to be gripped between a pair of fingers, is closed at one end and has a wide mouths, from which a flange extends essentially transversely and strong and wide enough to underlie the gripping fingers; an applicator pad, for example of foam or sponge material, is secured to the flange and across the mouth; by squeezing the reservior, flowable material can be squeezed through the sponge and applied by pressure against the flange, to apply shoe polish, oven cleaner, or similar materials.

3,386,794

LIQUID-FUEL BURNER

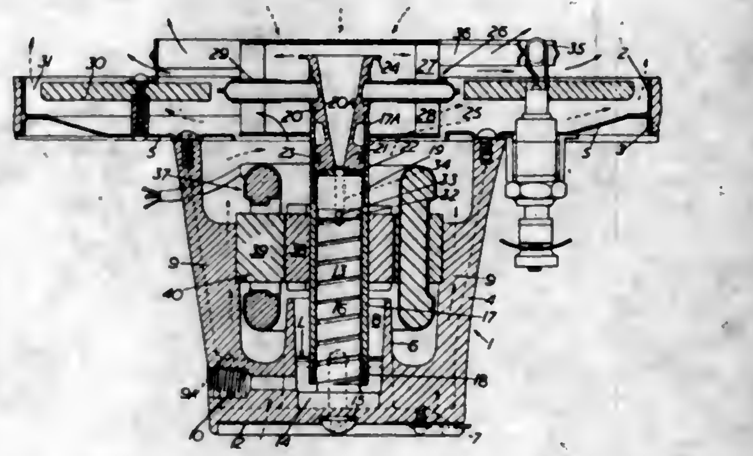
James C. Airth, Bishopbriggs, and William H. Findlay, Kirkintilloch, Scotland, assignors to James Howden & Company Limited

Filed May 17, 1966, Ser. No. 550,772

Claims priority, application Great Britain, June 8, 1965, 24,149/65

14 Claims. (Cl. 431—115)

A liquid-fuel burner includes a combustion chamber having a peripheral wall and a floor. Disposed at or near the floor of the combustion chamber is a double suction impeller having two side-by-side sets of blading namely a first set of blading to create a recirculatory flow of hot gas in the combustion chamber and through the blading and a second set of blading to create a flow of combustion air into the combustion chamber. In the combustion chamber is a rotary fuel distributor which is disposed so as to discharge fuel radially into the first set of blading into the combustion chamber towards the peripheral wall said blading atomizes the fuel and initially mixes same with the air and with hot gas after ignition. Fuel feed means are provided adapted to deliver fuel to the rotary fuel distributor.



ERRATUM

For Class 431—158 see:
Patent No. 3,386,475

CHEMICAL

3,386,795

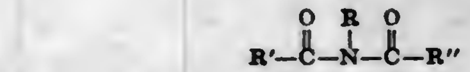
POLYESTERS HAVING IMPROVED DYEING PROPERTIES

John R. Caldwell and Russell Gilkey, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Oct. 5, 1964, Ser. No. 401,721

8 Claims. (Cl. 8—100)

5. The process for improving the dyeability of polyester fibers, comprising coating the fibers with at least substantially colorless compound having a molecular weight of from about 180 to about 1000 and containing at least one carboximide group, the valences of which are satisfied by various radicals as shown by the formula



$$R'-\overset{\overset{O}{\|}}{C}-\overset{\overset{R}{|}}{N}-\overset{\overset{O}{\|}}{C}-R''$$

wherein R is selected from the group consisting of H, monovalent and polyvalent aliphatic, alicyclic, and aromatic radicals containing from 1 to 20 carbon atoms, and combinations thereof, and wherein R' and R'' are selected from the group consisting of mono and polyvalent aliphatic, alicyclic, and aromatic radicals containing from 1 to 20 carbon atoms, and combinations thereof, and wherein R' and R'' may be combined to form ring structures, and thereafter heating the coated fibers at a temperature sufficiently high to fuse said compound and cause it to penetrate into the surface of said fibers.

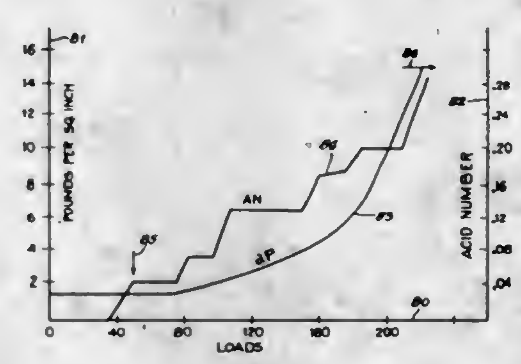
3,386,796

DRY-CLEANING OPERATION

Otis R. Videen, St. Paul, Minn., assignor to Conwed Corporation, a corporation of Delaware

Filed Mar. 17, 1964, Ser. No. 352,545

10 Claims. (Cl. 8—142)



In the operation of a dry-cleaning system the effective life of the filter is extended by (1) maintaining the acid number at or below 0.16 while simultaneously (2) maintaining the solvent free of water in excess of 50% of its capacity to dissolve water.

3,386,797

FIBROUS TEXTILE PRODUCTS

Fabian T. Fang, Fox Point, Wis., assignor to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 846,776, Oct. 16, 1959. This application July 19, 1965, Ser. No. 473,169

The portion of the term of the patent subsequent to Nov. 19, 1980, has been disclaimed

5 Claims. (Cl. 8—115.7)

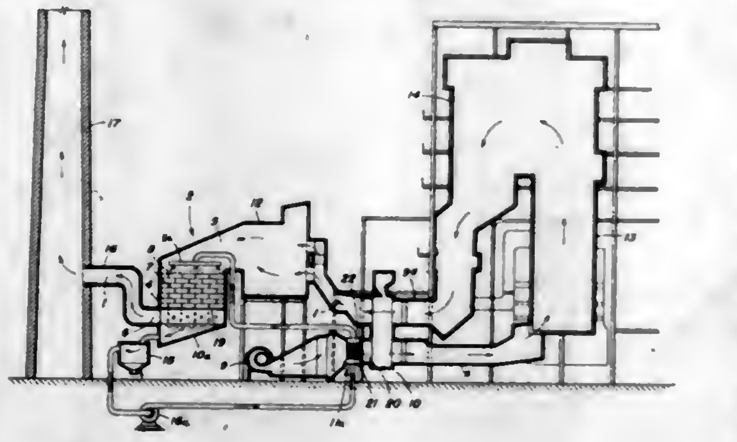
1. As an article of manufacture, a fibrous product having improved antistatic properties comprising a blend of (1) about 1% to 10% by weight of a fiber formed of linear polymer molecules, at least part thereof being formed of at least one monovinyl aromatic compound and at least part thereof being formed of at least one compound selected from the group consisting of linear aliphatic polyene monomers and alkenyl halides, the polymeric mass of which the fiber is formed having an apparent second order transition temperature of at least 20° C., the linear polymers showing orientation longitudinally of the axis of the fiber and being cross-linked in the fiber to a condition of solvent resistance by alkylation of aromatic nuclei by members selected from the group consisting of polymerized units of polyene and alkenyl halide compounds, said fiber containing at least one sulfonic group per 10 aromatic nuclei in the fiber, and (2) about 90% to 99% by weight of other fibers selected from the group consisting of natural and artificial fibers, said other fiber (2) having a surface electrical resistivity measured at 50% relative humidity at least 10^5 ohms greater than said fiber (1).

3,386,798

METHOD OF REMOVING SULFUR COMPOUNDS AND RECOVERING HEAT FROM COMBUSTION GASES

Rowland S. Bevans, Morristown, Peter N. Renzi, Mountainside, and Yashwant R. Loonkar, Hoboken, N.J., assignors to American Standard Inc., a corporation of Delaware

Filed Nov. 30, 1964, Ser. No. 414,759
5 Claims. (Cl. 23—2)



Method of removing sulfur compounds and recovering heat from combustion chamber stack gases comprising washing the gases with a solution of calcium chloride, neutralizing the resultant hydrochloric, separating the thus formed calcium sulfur salts from the solution and thereafter passing the solution into indirect heat exchange with air to be used in the combustion chamber.

3,386,799

GROWTH OF YTTRIUM IRON GARNET

William H. Grodkiewicz, Murray Hill, and Le Grand G. Van Uitert, Morris Township, Morris County, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
No Drawing. Filed Nov. 16, 1965, Ser. No. 508,151
3 Claims. (Cl. 23—51)

1. A method for growing crystals of $Y_3Fe_5O_{12}$ of substantial size, which comprises establishing a melt of a nutrient, comprising the constituent components of said crystals and containing CaO in an amount ranging from 0.05 to 5 percent by weight of said components, together with a flux selected from the group consisting of (a) lead fluoride and boron oxide and (b) lead fluoride, boron oxide and lead oxide and cooling the resulting melt until crystals of $Y_3Fe_5O_{12}$ are found, the weight ratio of lead oxide to lead fluoride in the flux ranging from 0 to 1.5:1, the amount of boron oxide in said flux being such that the weight ratio of $B_2O_3/PbO+PbF_2$ ranges from 1:20 to 1:200, the nutrient to flux weight ratio ranges from 1:2 to 1:2.5, and said cooling is conducted at a rate of about ½° C. to 10° C. per hour.

3,386,800

METHOD FOR THE PREPARATION OF CATALYSTS FOR THE SYNTHESIS OF HETEROCYCLIC DIAMINES

Walter H. Brader, Jr., Austin, Tex., assignor to Jefferson Chemical Company, Inc., Houston, Tex., a corporation of Delaware

No Drawing. Original application Aug. 31, 1964, Ser. No. 396,792, now Patent No. 3,342,820, dated Sept. 19, 1967. Divided and this application Mar. 28, 1966, Ser. No. 537,651

4 Claims. (Cl. 23—105)

Complex, amorphous phosphate salts of alkali metals and trivalent metals are prepared by mixing an aqueous solution of alkali metal phosphate with an aqueous solution of trivalent phosphate, removing water so as to provide a complex phosphate salt of alkali metal and trivalent metal and calcining the complex salt at a temperature of about 300° to 500° C.

3,386,801

ALKALI METAL AND ALKYLAMMONIUM PHOSPHATOALUMINATE COMPLEXES AND THE PREPARATION OF CRYSTALLINE ALUMINOSILICATES

Guenter H. Knehl, Morrisville, Pa., assignor to Mobil Oil Corporation, a corporation of New York

No Drawing. Continuation-in-part of application Ser. No. 294,229, July 11, 1963. This application Feb. 1, 1966, Ser. No. 523,936

19 Claims. (Cl. 23—105)

1. In a process for preparing a crystalline material selected from aluminosilicates, gallosilicates, aluminogermanates and gallogermanates wherein said material is formed from the interaction between (a) hydroxymetallate ions selected from hydroxyaluminate and hydroxygallate and (b) ions selected from silicate and germanate, the improvement comprising: creating an equilibrium condition by the presence of a complexing agent that provides under alkaline conditions a complex selected from an aluminum complex and a gallium complex in the mixture containing said ions to be interacted, which complexing agent maintains the concentration of said hydroxymetallate ions at a substantially constant level substantially throughout the period of formation of said crystalline material.

16. A complex of the formula $M_{3/n}[Al(PO_4)_2]$ wherein M is a cation that can form a soluble phosphate in an alkaline medium and *n* is the valence M.

18. A complex as defined in claim **16** wherein M is sodium, potassium or tetramethylammonium.

3,386,802

METHOD FOR PREPARING SPHERICALLY-SHAPED CRYSTALLINE ZEOLITE PARTICLES

Edward Michalko, Chicago, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 359,414, Apr. 13, 1964. This application July 28, 1967, Ser. No. 656,703

7 Claims. (Cl. 23—112)

Substantially spherically-shaped zeolites are prepared by treating a refractory inorganic oxide with an aqueous solution of alkali metal cations and anions including hydroxyls, silicates and aluminates. The crystalline zeolites are free from foreign binders—i.e. those of the clay type—and are of uniform size and spherically shaped. The spherical particles are prepared in the size range of 1/64-inch to ¼-inch, nominal diameter.

3,386,803

PREPARATION OF HYDROXYLAMINE AND ALDEHYDES FROM ALKALI METAL SALTS OF PRIMARY NITROPARAFFINS AND ORGANIC ACIDS

Lawrence R. Jones, Terre Haute, Ind., assignor to Commercial Solvents Corporation, New York, N.Y., a corporation of Maryland

No Drawing. Filed July 6, 1965, Ser. No. 469,927
12 Claims. (Cl. 23—190)

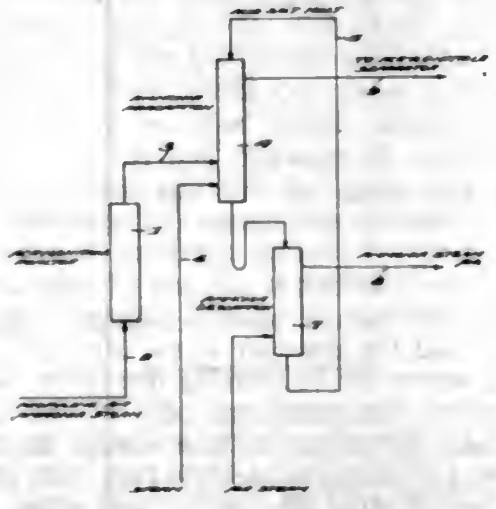
A process for preparing hydroxylamine and aldehyde by reacting a water-soluble alkali metal salt of a primary nitroparaffin, for example the alkali metal salt of 1-nitropropane, with formic acid or oxalic acid.

3,386,804

PROCESS FOR SEPARATING AMMONIA FROM NITRILES

Walter Neugebauer and Lothar Schmidt, Constance (Bodensee), Germany, assignors to Deutsche Gold- und Silber-Scheideanstalt vormals Roessler, Frankfurt am Main, Germany

Filed Aug. 25, 1966, Ser. No. 575,165
Claims priority, application Germany, Sept. 2, 1965, D 48,109
9 Claims. (Cl. 23—196)



Process for the separation of ammonia from a gas mixture containing ammonia and a gas phase organic nitrile preferably in the presence of water which comprises passing such gas mixture through an acid salt melt preferably in the presence of water at a temperature between about 90° C. and 300° C., the period of contact of said gas mixture with said acid salt melt being sufficiently long that the ammonia in the gas mixture is absorbed substantially completely and sufficiently short that substantially no hydrolysis of the nitrile occurs.

3,386,805

PROCESS OF SEPARATING NON-DIAMOND CARBONACEOUS MATERIAL FROM SYNTHETIC DIAMANTIFEROUS PRODUCTS

Francis J. Figiel, Boonton, N.J., assignor to Allied Chemical Corporation, New York, N.Y., a corporation of New York
No Drawing. Filed Apr. 21, 1966, Ser. No. 544,103
15 Claims. (Cl. 23—209.9)

1. A process for resolving an agglomerate mixture of (a) a synthetic diamantiferous material and (b) a non-diamond carbonaceous material which comprises treating said mixture with a sufficient quantity of an inorganic base selected from the group consisting of an alkali metal hydroxide, alkali metal carbonate and mixtures thereof at a temperature of at least the melting point of said base, thereby forming a liquid and a solid fraction, said liquid fraction comprising a melt containing said synthetic diamantiferous material suspended therein and said solid fraction, floating on the surface of the melt, comprising said non-diamond carbonaceous material, and thereafter, separating said liquid and solid fractions.

3,386,806

ASSAY METHOD

Robert D. Kross, Bellmore, N.Y., assignor, by mesne assignments, to Isolated Beef Protein Supplements Inc., a corporation of New York
No Drawing. Filed Nov. 25, 1964, Ser. No. 414,021
5 Claims. (Cl. 23—230)

A method of determining ethylenediamine tetraacetic acid concentration in comminuted meat products involving the steps of first removing the fat therefrom, then extracting said acid from the residue with water, treating the aqueous solution with a water soluble nickel salt, precipitating the excess nickel with dimethyl glyoxime, removing the precipitate, digesting the supernatant with heat and then testing the supernatant for nickel.

3,386,807

INDICATOR TAPE

Martin I. Edenbaum, Somerset, N.J., assignor to Johnson & Johnson, a corporation of New Jersey
No Drawing. Filed Dec. 24, 1964, Ser. No. 421,102
11 Claims. (Cl. 23—253)

An ink solution is disclosed which consists of a solution of zinc diethyldithiocarbamate and bismuth subgallate (or alternatively, zinc dimethyldithiocarbamate and bismuth oxalate and/or bismuth subgallate and/or bismuth subnitrate) and a film forming carrier, preferably vinyl chloride, in an organic solvent, suitably methyl isobutyl ketone. The ink is utilized to form white (or yellow) markings on various substrates by evaporating the organic solvent, markings which become green in color when exposed to a moist atmosphere and a temperature of 250° F. for 30 minutes. The ink is therefore particularly adapted for use as or on a device to be attached to articles which are to be steam sterilized, the device indicating whether or not steam sterilization has in fact occurred.

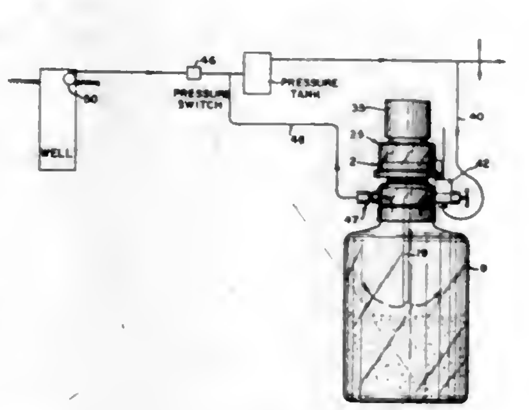
3,386,808

WATER TREATING APPARATUS

George A. Handeland, R.R. 1, Ringsted, Iowa 50578
Filed Dec. 10, 1965, Ser. No. 512,921
4 Claims. (Cl. 23—272.7)

1. A bypass water treating apparatus comprising a pressure vessel containing the treating agent;
  a distributor member having top, bottom and intermediate portions;
  the bottom portion of said distributor member being adapted for removable sealing attachment to the top of said pressure vessel;
  the top portion of said distributor having a circular cylindrical pump chamber;

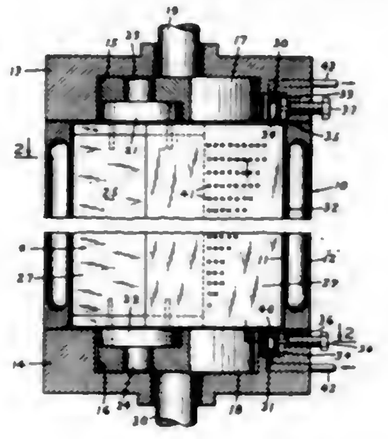
the bottom of said pump chamber being defined by the top surface of said top portion;
said distributor member having a water inlet passage extending from the outside of the intermediate portion thereof to the approximate center of the upper surface of said top portion;
a water inlet line connecting said water inlet passage with a water service conduit;
a water distribution tube attached to and depending downwardly into said pressure vessel from the approximate center of the under surface of said bottom portion;
a water passage extending downwardly from the periphery of the top surface of the upper portion of said distributor member and communicating with the top end of said distribution tube;
a liquid outlet passage extending from the under surface of said bottom portion to the outside of said intermediate portion;
a liquid outlet line connecting said liquid outlet passage with the water service conduit upstream of the connection of the water inlet line with said water service conduit;
a valve for controlling the amount of liquid flowing from said liquid outlet passage;
a cap for the top of said distributor member, the top of said distributor member and the bottom of said cap providing between them a pump chamber;
a cylindrical pump impeller mounted for rotation in said pump chamber;
shaft means attached to said impeller and extending through the top of said cap for enabling the driving of said rotary pump;
motor means mounted on the top of said cap and attached to said shaft means for driving said rotary pump;
a relief line establishing communication between the interior of said pump chamber and the atmosphere and a relief valve in said relief line.



3,386,809
REACTOR AND MIXER FOR CONTINUOUS POLYMERIZATION

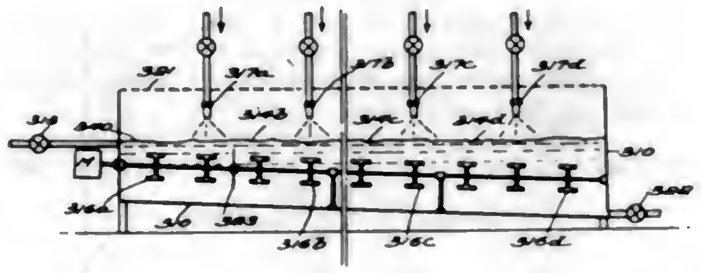
Jean-Marie Massoubre, Clermont-Ferrand, France, assignor to Compagnie Generale des Établissements Michelin, raison sociale Michelin & Cie, Clermont-Ferrand, France
Filed Jan. 27, 1966, Ser. No. 523,302
Claims priority, application France, Feb. 1, 1965, 3,890
3 Claims. (Cl. 23—285)

A reactor and mixer for continuous polymerization and the like, including a cylindrical reaction chamber and a partition structure therein capable of oscillating movement and as an incident of its movement wiping the walls of the reaction chamber and the partition to assure uniformity in the reaction mixture and uniform flow through the chamber, the partition being composed of a pivoted vane slidingly received in a rotor which is gyrated in the reaction chamber and the vane being provided with apertures therethrough which are progressively covered and uncovered during the gyration of the rotor to promote cross flow through the vane and mixing of the reagents in the chamber.



3,386,810
APPARATUS FOR THE PRODUCTION OF SILICA PIGMENTS

Oliver W. Burke, Jr., 506 Intracoastal Drive, Fort Lauderdale, Fla. 33304, and Carey B. Jackson, Pompano Beach, Fla.; said Jackson assignor to said Burke
Original application Oct. 3, 1961, Ser. No. 142,668, now Patent No. 3,256,068, dated June 14, 1966. Divided and this application Apr. 18, 1966, Ser. No. 543,378
1 Claim. (Cl. 23—285)



1. Apparatus for the continuous production of silica pigment by the acidulation of aqueous sodium silicate solution, said apparatus comprising (a) means defining a series of reaction zones, (b) means for turbulently flowing aqueous sodium silicate solution in a single pass through said zones in sequence, and (c) means in more than one of said zones for injecting thereinto acidulating fluid, and wherein: said means (a) comprises a series of reaction chambers having restricted communication therebetween, the chamber at one end of said series having means for introducing aqueous sodium silicate solution thereinto and the chamber at the other end of said series having means for discharging therefrom the slurry of silica pigment precipitate produced by the reaction: and said means (c) comprises inlet means for acidulating fluid located to discharge such fluid into said chambers and means for adjusting the flow of acidulating fluid to the respective ones of said chambers through said respective fluid inlet means relative to each other and to the rate of flow of said aqueous solution through said chambers, for regulating the relative rates of acidulation of said solution effected at respective chambers; wherein said means (a) comprises a continuous trough and baffles dividing said trough into said series of chambers and restricting communication between said chambers and thus guarding against channeling of the solution through said chambers; and wherein said means (b) comprises a shaft extending longitudinally of said trough and agitator means carried by said shaft, and said baffles are in the form of plates carried by said shaft and extending transversely of portions of said trough.

3,386,811
PREPARATION OF AN ACTINIDE METAL MONOCARBIDE FROM AN OXIDE THEREOF

Lloyd A. Hanson, Canoga Park, Calif., assignor to North American Rockwell Corporation, a corporation of Delaware
No Drawing. Filed June 3, 1966, Ser. No. 554,958
7 Claims. (Cl. 23—344)

A method for converting an actinide metal oxide to the monocarbide by carbothermic reduction, which may be performed at a lower temperature than heretofore and which removes trace impurities of fluorine and oxygen. The actinide metal oxide, typically UO_2, is heated together with carbon and a small amount of silicon under vacuum at a temperature of about 1700–1800° C. to convert the UO_2 to UC.

3,386,812
CASTABLE MACHINE TOOL BIT COMPOSITION OF BORON CARBIDE AND NICKEL

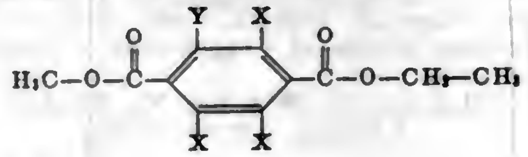
Haskell Sheinberg, Los Alamos, N. Mex., assignor to the United States of America as represented by the United States Atomic Energy Commission
No Drawing. Filed Dec. 23, 1965, Ser. No. 516,148
2 Claims. (Cl. 29—182.8)

A machine tool bit composition and method for making same in which 80 v/o Ni-20 v/o B_4C powders are mixed, pressed and heated to a temperature of about 1530° C. in argon or H_2 gas atmosphere.

3,386,813
METHOD OF DESTROYING UNDESIRABLE PLANTS

Alfred A. Levin, Skokie, and Sidney B. Richter, Chicago, Ill., assignors to Velsicol Chemical Corporation, Chicago, Ill., a corporation of Illinois
No Drawing. Original application Feb. 23, 1965, Ser. No. 434,653, now Patent No. 3,335,172, dated Aug. 8, 1967. Divided and this application May 24, 1967, Ser. No. 646,790
4 Claims. (Cl. 71—112)

A method of destroying undesirable plants which comprises contacting said plants with a herbicidal composition comprising an inert carrier, and as an essential active ingredient in a quantity which is injurious to said plants, a compound of the formula



wherein X is halogen.

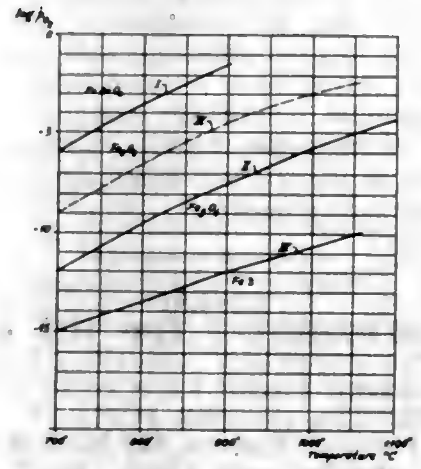
3,386,814
PROCESS FOR MAKING CHROMIUM, COBALT AND/OR NICKEL CONTAINING POWDER HAVING DISPERSED REFRACTORY METAL OXIDE

Guy B. Alexander, Brandywine Hundred, Del., Sherwood F. West, Euclid, Ohio, and Paul C. Yates, Brandywine Hundred, Del., assignors, by mesne assignments, to Fansteel Metallurgical Corporation, a corporation of New York
No Drawing. Continuation-in-part of application Ser. No. 170,093, Jan. 31, 1962. This application Oct. 22, 1965, Ser. No. 502,461
4 Claims. (Cl. 75—.5)

Powder metal alloy compositions comprising by weight about from 10 to 30 percent of chromium and at least about 50 percent of cobalt, nickel, or a combination of cobalt and nickel, and having dispersed in the metal a plurality of particles of a refractory metal oxide having a free energy of formation at 1000° C. more than 103 kilocalories per gram atom of oxygen, said particles having an average size of 5 to 250 millimicrons, the proportion of such particles being about from 0.3 to 20 percent by volume, are made by processes which a precipitate containing basic oxygen-containing compounds of the chromium and other metal components of the alloy having dispersed therein an oxygen compound of the metal of the refractory oxide particles, is first formed, and said basic compounds are reduced to metal, said processes employing the improvement which comprises (1) effecting formation of said precipitate at a pH in the range of about 6.4 to 7.5, and (2) heating said precipitate prior to 80 percent completion of reduction of the nickel-containing or cobalt-containing compound, at a temperature in the range of 300 to 500° C., the maximum temperature of said heating, T, in ° C., being further limited in the pH of formation range of 7.2 to 7.5 by the expression: T=4100−500 (pH).

3,386,815
PROCESS FOR ROASTING IRON SULFIDE MATERIALS

Karl Göran Görling, Lidingo, and Sven Anders Lundqvist, Skelleftehamn, Sweden, assignors to Boliden Aktiebolag, a limited joint-stock company of Sweden
Filed Nov. 4, 1965, Ser. No. 506,381
Claims priority, application Canada, May 21, 1965, 931,310
14 Claims. (Cl. 75—9)



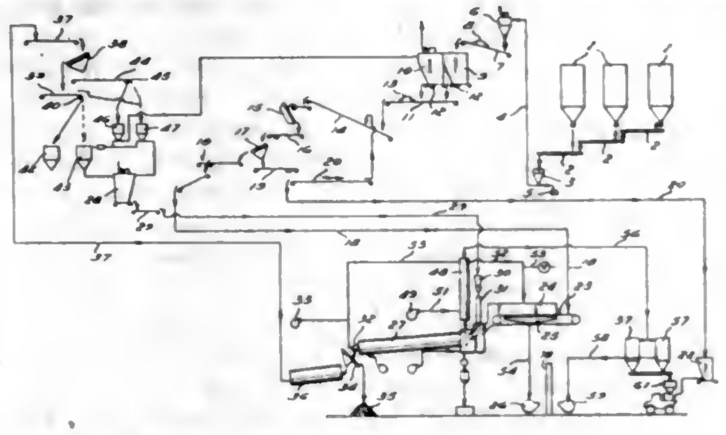
Arsenic-containing iron sulfidic material, alone or in admixture with iron oxides, is roasted in the presence of an oxygen-containing gas wherein the partial pressure of oxygen is below a curve, in a log P_{O_2}-temperature binary coordinate graph, passing through the points:

Log P_{O_2} (P in atm.)—	Temp., ° C.
−9.0	700
−6.5	800
−4.5	900
−3.0	1000
−2.3	1050

3,386,816
AGGLOMERATION OF IRON OXIDE MATERIAL

Alan English, Cleveland Heights, Ohio, assignor to Arthur G. McKee & Company, Cleveland, Ohio, a corporation of Delaware
Filed June 22, 1965, Ser. No. 466,048
15 Claims. (Cl. 75—33)

Process and apparatus for agglomerating and reducing finely divided solid materials such as iron oxide by making green balls of the material, then heating the green balls while they travel in a quiescent state in a body to dry them but not harden them by recrystallization, and then heating the balls under reducing conditions in a kiln. Preferably the balls are then cooled in an atmosphere containing carbon dioxide and carbon monoxide that causes reoxidation of the surface of the balls by reaction of carbon dioxide with reduced metal to form a weather-resistant coating. The disclosure also includes the concept of removing undesirable materials such as zinc from the finely divided material.



3,386,817

PROCESS FOR THE REDUCTION OF METAL OXIDES

Gilbert S. Layne and James O. Huml, Midland, Mich., and Richard D. Smith, Madison, Conn., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Sept. 10, 1965, Ser. No. 486,556

6 Claims. (Cl. 75—84)

1. A process for the reduction of refractory metal oxides which comprises admixing said metal oxide with Al_2S_3 and a reducing agent selected from the group consisting of aluminum, magnesium, calcium, and silicon at a temperature between the melting point and the boiling point of Al_2S_3 at the pressure employed for a period sufficient to affect such reduction.

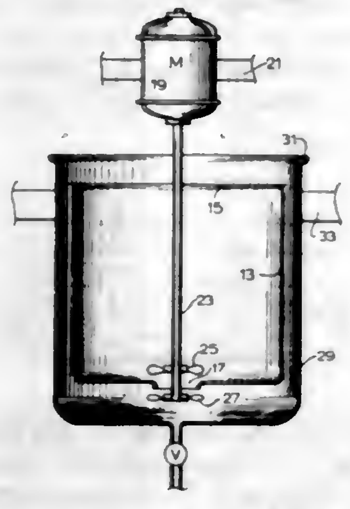
3,386,818

USE OF HYDROMIXER FOR THE RECOVERY OF SUBSTANTIALLY IMPURITY-FREE COPPER POWDER FROM LEACHED MALACHITE AND AZURITE COPPER POWDER

Percy W. Hudson, 305 Main St.,
Old Saybrook, Conn. 06475

Filed Aug. 23, 1965, Ser. No. 481,647

1 Claim. (Cl. 75—117)



1. A method of recovering substantially impurity-free copper powder from chloride-containing copper powder, comprising the steps of treating the impurity containing powder with water in an elongated first enclosed zone of curvilinear cross-section having a large top opening and a small bottom aperture; propelling the water and powder slurry through said aperture into a second zone which closely surrounds said first zone so that said water and powder slurry rise along said first zone in said second zone, over said large top opening back into said first zone and recycling said slurry until the chlorides are dissolved in the water.

3,386,819

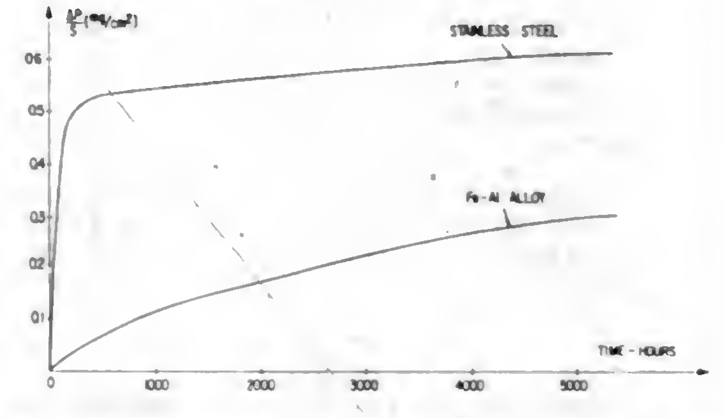
IRON-ALUMINUM ALLOYS CONTAINING LESS THAN 84% BY WEIGHT IRON AND AN ADDITIVE AND PROCESS FOR PREPARING THE SAME

Gérard Cabane, Fontenay-aux-Roses, Pierre Mouturat, Grenoble, Jean F. Petit, Montelimar, Gérard Sainfort, Grenoble, and Marc Salesse, Gif-sur-Yvette, France, assignors to Commissariat à l'Energie Atomique, Paris, France

Continuation-in-part of application Ser. No. 261,152, Feb. 26, 1963. This application Mar. 17, 1965, Ser. No. 440,441

Claims priority, application France, Mar. 17, 1964, 967,787

4 Claims. (Cl. 75—124)



Iron-aluminum alloys of greater than 16% by weight aluminum and less than 84% by weight iron and containing from 0.4% to 4% by weight, preferably 1% to 4% by weight, of an additive selected from the group consisting of zirconium, niobium, titanium, yttrium, the rare earths and boron and a process for preparing said alloys. Advantageously, the amount of iron ranges from 69% to 82% by weight, and the amount of aluminum from 18% to 31% by weight.

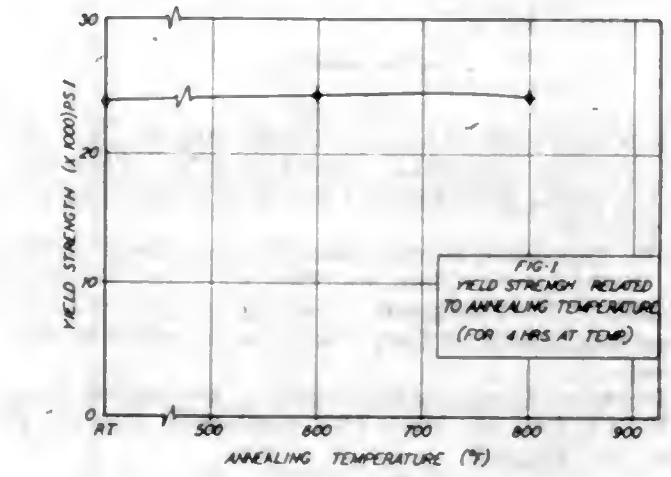
3,386,820

ALUMINUM BASE ALLOY CONTAINING ZIRCONIUM-CHROMIUM-MANGANESE

George J. Jagaciak, Milford, Conn., assignor to Olin Mathieson Chemical Corporation, a corporation of Virginia

Filed Jan. 26, 1966, Ser. No. 523,073

3 Claims. (Cl. 75—138)



1. An aluminum base alloy consisting essentially of zirconium from 0.2 to 0.7% by weight; chromium from 0.1 to 0.35% by weight; manganese from 0.3 to 1.5% by weight; balance essentially aluminum.

3,386,821

POWDER METALLURGY

Richard E. Rice, Arlington, and George Warren Webb, Revere, Mass., assignors to Comstock & Wescott, Inc., Cambridge, Mass., a corporation of Massachusetts

Filed Apr. 26, 1967, Ser. No. 633,781

6 Claims. (Cl. 75—226)

Method of making articles of powdered iron which involves only a single pressing at moderate temperature with inexpensive powder containing no carbon, quick quenching and no sintering.

3,386,822

SOLVENT CAPSULE FIXING OF POWDER IMAGES

Carl Brynko, West Webster, N.Y., assignor to Xerox Corporation, Rochester, N.Y., a corporation of New York

Filed Feb. 28, 1964, Ser. No. 348,062

15 Claims. (Cl. 96—1.4)

Permanent images are formed by electrostatically depositing a pattern of electroscopic developing particles on a substrate bearing a uniform coating of capsules containing a liquid which will dissolve, adhere to or react with the electroscopic developing particles and then releasing the liquid in the capsules by applying sufficient pressure over the entire surface of the substrate to rupture the capsules. Optionally, a second substrate bearing a uniform coating of capsules containing a solvent, adhesive or coreactant may be applied over the deposited toner pattern prior to the capsule rupturing step thereby forming a positive image on one sheet and a negative image on the other sheet.

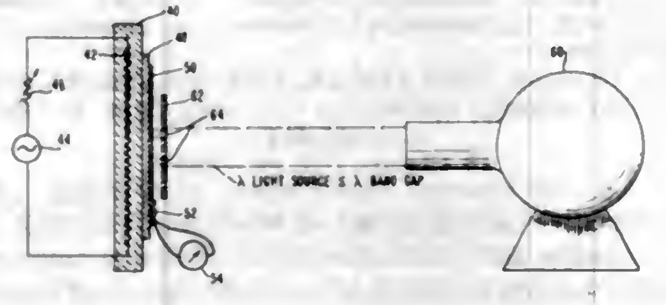
3,386,823

PHOTOTHERMIC IMAGE PRODUCING PROCESS

Seymour P. Keller, Chappaqua, and Gabor A. Somorjai, Montrose, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed June 1, 1964, Ser. No. 371,553

9 Claims. (Cl. 96—27)



A photothermic image producing process comprising the steps of projecting a radiation image onto a layer of photothermically responsive material comprising a II–B—VI–A compound, concurrently subjecting said material to an elevated temperature for an extended period of time, and selecting the wavelength of said radiation forming said image to be less than or equal to the bandgap of said II–B—VI–A compounds.

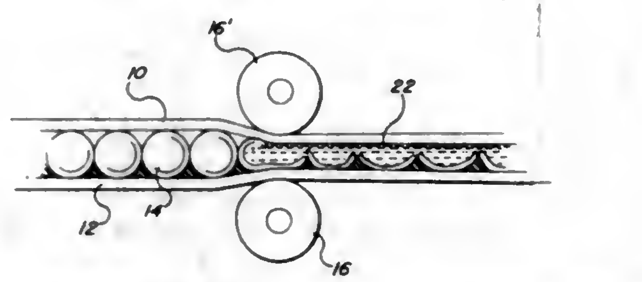
3,386,824

PHOTOGRAPHIC PROCESSING FILM LAMINATE STRUCTURE UTILIZING PLASTIC MICROCAPSULES

Alan Miller, Hallandale, Fla., assignor to Chicago Aerial Industries, Inc., Barrington, Ill., a corporation of Delaware

Continuation-in-part of application Ser. No. 335,232, Jan. 2, 1964. This application Mar. 27, 1967, Ser. No. 632,879

5 Claims. (Cl. 96—50)



A photographic contact processing carrier material having densely distributed layer of pressure, temperature or signed to the same assignee which application is now embedded in a nonporous support matrix.

3,386,825

PHOTOGRAPHIC PRODUCT CONTAINING ZINC

Edwin H. Land, Cambridge, Mass., assignor to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware

Continuation-in-part of application Ser. No. 249,922, Jan. 7, 1963, which is a continuation-in-part of application Ser. No. 705,845, Dec. 30, 1957. This application Dec. 30, 1966, Ser. No. 606,290

6 Claims. (Cl. 96—66)

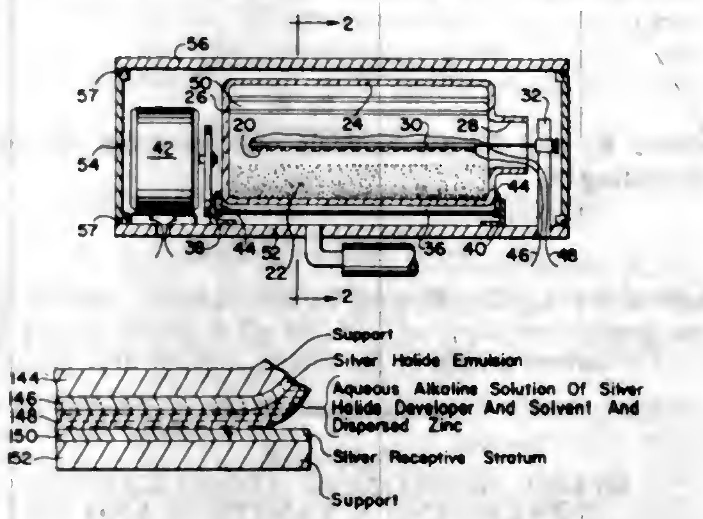


Image-receiving elements and processing compositions for use in diffusion transfer photographic processes and containing finely dispersed zinc are disclosed. Such zinc dispersions may be prepared by vacuum depositing zinc upon an organic plastic material and blending the materials to disperse the zinc within the organic plastic material. The finely dispersed zinc may be used as an antioxidant in photographic processes and products.

3,386,826

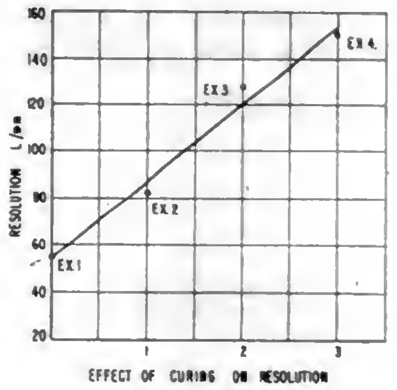
PROCESS FOR PRODUCING IMPROVED DIAZOTYPE ELEMENTS

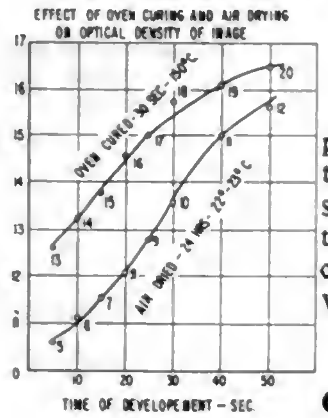
Claude M. Aebi, Endicott, N.Y., and Bernard J. Serafin, Taylor, Pa., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed May 8, 1964, Ser. No. 366,074

8 Claims. (Cl. 96—91)

A method for improving the resolution and density of images obtained upon the development of thermally developable light-sensitive diazotype elements containing a resinous film-forming material comprising drying and curing said elements prior to exposure and development for at least 5 seconds at a temperature in the range of from 40° to 150° C.





3,386,827

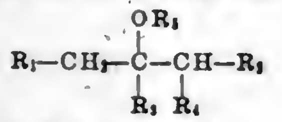
THERMO-DEVELOPABLE LIGHT-SENSITIVE DIAZO COMPOSITIONS AND ELEMENTS

Claude M. Aebi, Endicott, and Harry F. Herbrandson, Schenectady, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York

No Drawing. Filed Aug. 17, 1964, Ser. No. 390,240

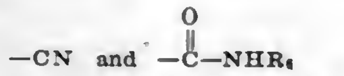
4 Claims. (Cl. 96—91)

1. A light-sensitive, thermo-developable composition comprising a light-sensitive diazonium compound and a compound having the following general formula:



$$R_1-CH_2-\underset{R_3}{\overset{OR_5}{C}}-\underset{R_4}{CH}-R_2$$

where R_1 and R_2 are radicals selected from the group consisting of



$$-CN \text{ and } -\overset{O}{\overset{\|}{C}}-NHR_6$$

and where R_3, R_4, R_5 and R_6 are radicals selected from the group consisting of —H, an alkyl group having from 1 to 8 carbon atoms in the chain, and an aryl group.

3,386,828

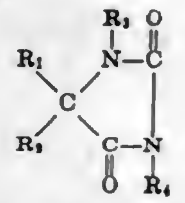
DIAZO SENSITIZING FORMULATIONS CONTAINING A XANTHINE AND AN IMIDAZOLEDIONE

Chester E. Slimowicz, Vestal, N.Y., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Oct. 19, 1965, Ser. No. 498,110

13 Claims. (Cl. 96—91)

1. A two-component light-sensitive diazo composition comprising a compatible aqueous solution of a light-sensitive diazo compound and a coupling component, said solution further containing as essential ingredients (a) a xanthine compound and (b) an imidazoledione compound of the formula:



wherein R_1, R_2, R_3, and R_4 are independently selected from the group consisting of hydrogen, lower alkyl, aryl, aralkyl, alkaryl, and cycloalkyl.

3,386,829

PHOTOREPRODUCTION PROCESS UTILIZING PHOTOSENSITIVE THIANTHRENE COMPOSITIONS

Gordon C. Newland, Kingsport, Tenn., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Mar. 15, 1965, Ser. No. 439,936

5 Claims. (Cl. 96—90)

A photosensitive composition comprising, before exposure, a cellulose ester or polyolefin having dispersed therein a photosensitive thianthrene compound which is substantially insensitive to visible light but is permanently transformed from a substantially colorless form into a compound having a visible color upon exposure to ultraviolet radiation.

3,386,830

COLOR PHOTOGRAPHIC SILVER HALIDE EMULSION CONTAINING A MAGENTA COLORED CYAN COUPLER

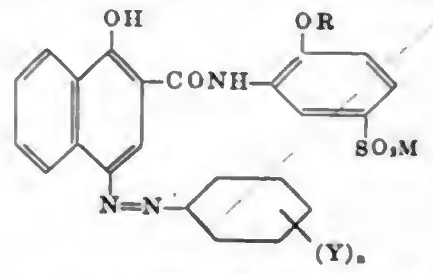
Makoto Yoshida, Odawara-shi, Keisuke Shiba, Minamiashigara-machi, and Akio Okumura, Yugawara-shi, Japan, assignors to Fuji Shashin Film Kabushiki Kaisha, Kanagawa-ken, Japan, a corporation of Japan

Filed Nov. 17, 1964, Ser. No. 411,743

Claims priority, application Japan, Nov. 21, 1963, 38/62,440

11 Claims. (Cl. 96—100)

A color photographic silver halide emulsion containing a magenta-colored cyan coupler having a remarkable auto-masking action, represented by the following formula:



wherein R is an alkyl group having more than 10 carbon atoms; M is a hydrogen atom, an alkali metal, an ammonium group of $—H\cdot NH_p(R'')_q$, wherein $p+q=3$, p and q are 0–3, and R″ is a lower alkyl group; Y is —COOM, $—SO_3M$, or a carboalkyoxy group wherein M has the above significance; and n is 1 or 2.

3,386,831

STABILIZING OF PHOTOGRAPHIC SILVER HALIDE EMULSIONS WITH ACYL PHENYL HYDRAZIDES

Hans Ludwig Honig, Leverkusen, Günter Kolb and Franz Moll, Cologne-Stammheim, and Bernhard Morcher, Leverkusen, Germany, assignors to Agfa Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Feb. 24, 1965, Ser. No. 435,067

Claims priority, application Germany, Mar. 5, 1964, A 45,411

10 Claims. (Cl. 96—109)

1. An after-ripened photographic silver halide emulsion the silver halide grains of which are essentially surface-sensitive and which contains a stabilizing amount of a β-mono-phenylhydrazde of an aliphatic carboxylic acid.

3,386,832

METHOD FOR AGING WHISKEY

John T. McCabe, Jenkintown, Pa., assignor to Continental Distilling Corporation, Philadelphia, Pa., a corporation of Delaware

No Drawing. Filed Nov. 26, 1963, Ser. No. 326,250

2 Claims. (Cl. 99—48)

Method for aging whiskey in which the whiskey is aged in used charred oak barrels in the presence of charred slabs of oak having a minimum cross sectional dimension of at least ¾ of an inch and having a total combined surface area equal to from 25 to 50% of the interior surface of the barrel.

3,386,833

SIMULATED MILK COMPRISING SOY BEAN FLOUR, SESAME SEED FLOUR AND COCONUT MEAL

George W. Johnson, 18841 Via Sereno,
Yorba Linda, Calif. 92686

No Drawing. Filed June 14, 1965, Ser. No. 463,931

6 Claims. (Cl. 99—64)

1. A substitute milk powder comprising soy bean flour, sesame seed flour, and coconut meal, said soy bean flour being present in an amount within the range of 2 to 6 parts by weight, the sesame seed flour in an amount within the range of 2 to 6 parts by weight, and the coconut meal in an amount within the range of 1 to 2 parts by weight.

3,386,834

INFUSER WEB MATERIAL, METHOD OF PREPARING SAME AND INFUSION PACKAGE

Willy R. Noiset, Tariffville, and Louis R. Busche, West Hartford, Conn., assignors to The Dexter Corporation, a corporation of Connecticut

No Drawing. Filed July 17, 1964, Ser. No. 383,492

10 Claims. (Cl. 99—77.1)

Infuser web material impregnated in discrete areas with water repellent material, said impregnated areas covering from 0.1 percent to 40 percent of the total surface area of said infuser material.

3,386,835

METHOD OF PREPARING OIL-WATER EMULSIONS

Jacob Arie Schaap, Dordrecht, Netherlands, assignor to Lever Brothers Company, New York, N.Y., a corporation of Maine

No Drawing. Filed May 28, 1964, Ser. No. 371,125

Claims priority, application Great Britain, June 5, 1963, 22,315/63

12 Claims. (Cl. 99—118)

This invention provides a process which enables a water-in-oil emulsion to be prepared by means of a proteinaceous emulsifier of the type which is ineffective in markedly acid media. The aqueous phase used initially provides the relatively alkaline media required for effectiveness of the proteinaceous emulsifier; an acidogenic substance in the emulsion acidifies the emulsion for higher microbiological keepability at a sufficiently slow rate to permit the emulsifying agent to produce the emulsion.

3,386,836

PROCESS FOR THE PRODUCTION OF CURED MEAT PRODUCTS

Benjamin Borenstein, Teaneck, and Ernest Gordon Smith, Hawthorne, N.J., assignors to Hoffmann-La Roche Inc., Nutley, N.J., a corporation of New Jersey

No Drawing. Filed Sept. 9, 1964, Ser. No. 395,290

2 Claims. (Cl. 99—159)

The use of ethylenediamine tetraacetic acid, or a salt thereof, in combination with (1) a nitrite curing agent, or gaseous nitric oxide, and (2) ascorbic acid, an isomer of ascorbic acid or a salt of either, to accelerate the formation of cured meat pigments, is described.

3,386,837

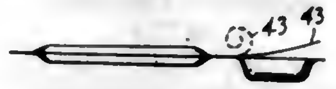
FOODSTUFF PACKAGING

Alfred Erwin Reginald Arnot, The Bell House, Baughurst, Basingstoke, Hampshire, England

Continuation-in-part of application Ser. No. 222,999, Sept. 10, 1962. This application Oct. 22, 1965, Ser. No. 502,159

Claims priority, application Great Britain, Sept. 12, 1961, 32,598/61

15 Claims. (Cl. 99—171)



A unit package comprising a spoon with a consumable concentrate therein and a substantially impermeable, adhesively secured cover hermetically enclosing said concentrate in said spoon with said adhesive releasing said cover from said spoon upon immersing in hot water, thereby releasing said concentrate.

3,386,838

PROCESS FOR THE PRODUCTION OF PARTIALLY DEHYDRATED FRUITS ESPECIALLY OF THE GENUS MUSA

Luis Jose Abalo, Box 622, Guanica,
San Juan, Puerto Rico 00653

Continuation-in-part of application Ser. No. 392,290, Aug. 26, 1964. This application Nov. 27, 1967, Ser. No. 685,853

11 Claims. (Cl. 99—204)

Process for preserving natural fruit products such as bananas for edible consumption. Peeled bananas are slightly compressed between juice absorbent boards while exposed to the sun, rested periodically as at night and the process continued until the preserved product is thus naturally created, free of caramelization, tissue deterioration and the like. Mild sulphitization may precede the process to enhance the non mold quality of the product.

3,386,839

DRAFTING LEAD AND METHOD OF PREPARATION

David Juelss, Brooklyn, and Henry L. Ross, Bronx, N.Y., assignors to Venus Esterbrook Corporation, New York, N.Y., a corporation of New York

No Drawing. Filed Oct. 24, 1965, Ser. No. 505,019

2 Claims. (Cl. 106—19)

This invention is directed to calcined drawing leads formed from graphite and clay and impregnated with abietyl alcohol, ester gum or combinations thereof; and to a method for producing same by subjecting the lead blanks to a vacuum at an elevated temperature followed by a pressure impregnation at an elevated temperature with a pre-heated impregnant and removal of the excess impregnant, after which the impregnated leads are cooled preparatory to further processing.

3,386,840

ARTICLE CONTAINING SILICON CARBON FIBERS

Bernard A. Gruber, Boxford, Mass., assignor to Monsanto Company, a corporation of Delaware

Application Jan. 3, 1961, Ser. No. 80,402, now Patent No. 3,246,950, dated Apr. 19, 1966, which is a continuation-in-part of application Ser. No. 803,176, Mar. 31, 1959. Divided and this application Nov. 24, 1964, Ser. No. 413,496

1 Claim. (Cl. 106—44)

1. A fabricated article of improved strength which comprises a continuous material selected from the group consisting of oxides, ceramics and polymerized organic monomers having dispersed therein fibrous beta silicon carbide.

3,386,841

PROCESS FOR THE MANUFACTURE OF PLASTIC ARTICLES DYED IN THE MASS

Oskar Braun and Richard Gross, Frankfurt am Main, Heinz Müller, Burgkirchen, Upper Bavaria, Herbert Nakaten, Bad Soden, Taunus, and Josef Weissert, Frankfurt am Main, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning, Frankfurt am Main, Germany, a corporation of Germany

No Drawing. Filed May 8, 1964, Ser. No. 366,182
Claims priority, application Germany, May 11, 1963, F 39,723
5 Claims. (Cl. 106—165)

1. A process for the mass coloration of regenerated cellulose or polyvinyl chloride structures shaped from aqueous solutions, which process comprises mixing said solutions before shaping with an aqueous alkaline pigment solution comprising (a) a dissolved pigment selected from the group consisting of normally water-insoluble azo-pigments having at least one weakly acid radical and normally water-insoluble azo-pigments having at least one radical which can be converted into a weakly acid radical by means of a strong base, and normally water-insoluble phthalocyanine pigments having at least two radicals selected from the group consisting of sulfonic acid aryl amide and sulfonic acid alkyl amide radicals, and (b) a quaternary cationic surface-active compound solubilizing said normally water-insoluble pigments, the weight of said compound being from 3 to 40 times the weight of the pigment.

3,386,842

CELLULOSE ACETATE SPINNING SOLUTIONS AND PROCESS OF SPINNING DOPE-DYED YARNS THEREFROM

Alden W. Hay, Madison, N.J., assignor to Celanese Corporation, a corporation of Delaware

No Drawing. Filed May 5, 1966, Ser. No. 547,784
13 Claims. (Cl. 106—180)

Pigmented cellulose acetate spinning solutions containing peracylated saccharides for producing dope-dyed yarns.

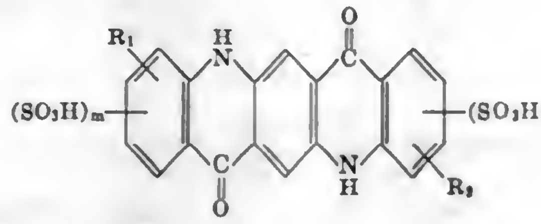
3,386,843

QUINACRIDONE PIGMENTS

Edward E. Jaffe, Union, and William J. Marshall, Scotch Plains, N.J., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 312,863, Oct. 1, 1963. This application Oct. 23, 1965, Ser. No. 504,223
8 Claims. (Cl. 106—288)

Metal salts of quinacridone sulfonic acids which have the structural formula,



wherein m and n are integers of 0 to 1, the sum of m and n being 1 to 2 inclusive, R_1 and R_2 are hydrogen, a lower alkyl, lower alkoxy or halogen and the metal ions are from the group consisting of aluminum, magnesium, zinc, divalent copper, cadmium, nickel, trivalent chromium, cobalt, and divalent manganese. These compounds improve the properties of quinacridone pigment dispersions in coating compositions.

3,386,844

ALUMINUM FLAKE PIGMENT COMPOSITION

Rolf Rolles, Apollo, and Kenneth E. Luyk, Lower Burrell, Pa., assignors to Aluminum Company of America, Pittsburgh, Pa., a corporation of Pennsylvania

No Drawing. Filed Feb. 21, 1966, Ser. No. 528,829
3 Claims. (Cl. 106—290)

Aluminum flake pigments for and in admixture with compatible vehicles in the production of dried paint films have been found to be superior to chemical spotting attack on exposure to industrial atmospheres and tree sap deposits when the purity of the aluminum flake pigmentation thereof is controlled within specified limits.

3,386,845

AMINO SALTS OF DIMERIZED FATTY ACIDS USED AS AUXILIARIES FOR LACQUERS

Wilhelm Offermann, Dusseldorf, and Heinrich Linden, Dusseldorf-Holthausen, Germany, assignors to Dehydag Deutsche Hydrierwerke, G.m.b.H., Dusseldorf-Holthausen, Germany, a corporation of Germany

No Drawing. Filed Nov. 16, 1965, Ser. No. 508,158
Claims priority, application Germany, Nov. 17, 1964, D 45,866; Nov. 18, 1964, D 45,878; Mar. 18, 1965, D 46,826
9 Claims. (Cl. 106—308)

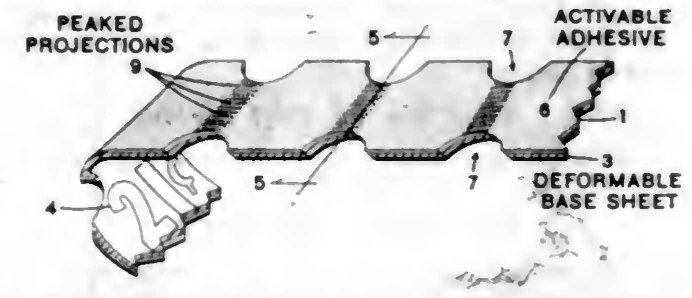
Novel use of amine salts of dimerized fatty acids as agents of multiple effectiveness for influencing the characteristics of pigments in organic media. The universal usefulness of the products is manifested in that they have an extraordinary effect as sedimentation preventing agents, as auxiliary grinding agents as well as serving to prevent the pigments from "floating out."

3,386,846

ACTIVATABLE ADHESIVE SHEETS WITH PEAKED AREAS OF LESSER POTENTIAL ADHESIVE TENACITY

Harry E. Lones, Hudson, N.H., assignor to Nashua Corporation, Nashua, N.H., a corporation of Delaware

Filed June 19, 1963, Ser. No. 288,964
5 Claims. (Cl. 117—11)



1. A potentially adhesive label comprising a paper base sheet bearing on the whole of a surface thereof a substantially continuous coating of a normally non-tacky composition activatable to adhesive tackiness, the coated face of said label comprising definite areas of greater and lesser potential adhesive tenacity, said coated surface of said base sheet being deformed in said area of lesser potential adhesive tenacity to present a plurality of peak-like projections extending beyond the level of a portion of the surface of said coating disposed within said area of lesser potential adhesive tenacity whereby contact of said projections with an adherend surface will prevent contact of said portion of coating surface with said adherend surface when said composition is in the activated tacky state.

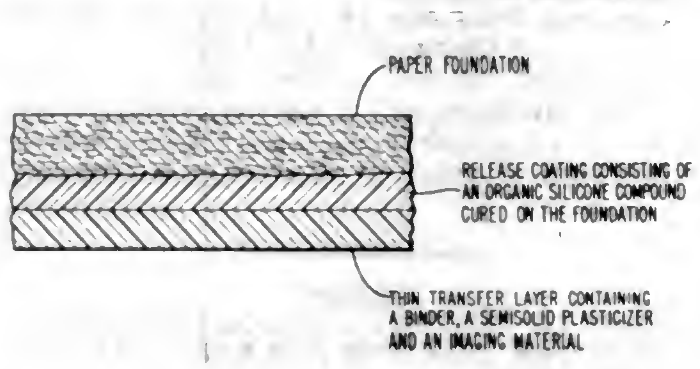
3,386,847

SILICONE RELEASE COATING TRANSFER PAPER

John J. McDermott, Northvale, and Joseph C. Clausl, River Vale, N.J., assignors to Burroughs Corporation, Detroit, Mich., a corporation of Michigan

Filed Oct. 16, 1964, Ser. No. 404,481
11 Claims. (Cl. 117—36.4)

The combination of a flexible paper foundation, an organic silicone compound coating cured on the foundation, and an ink transfer layer releasably adhered to the cured silicone coating. The ink transfer layer contains a wax or non-wax binder, a semi-solid plasticizer and a magnetic or non-magnetic imaging material. The combination may be used, for example, as a high quality, inexpensive "carbon paper."


PAPER FOUNDATION
RELEASE COATING CONSISTING OF AN ORGANIC SILICONE COMPOUND CURED ON THE FOUNDATION
THIN TRANSFER LAYER CONTAINING A BINDER, A SEMISOLID PLASTICIZER AND AN IMAGING MATERIAL

3,386,848

EPOXY RESIN INK FOR PRINTING ON GLASS

John E. Dereich, Pittsburgh, Pa., assignor to Neville Chemical Company, Pittsburgh, Pa., a corporation of Pennsylvania

No Drawing. Filed Oct. 5, 1964, Ser. No. 401,724
6 Claims. (Cl. 117—38)

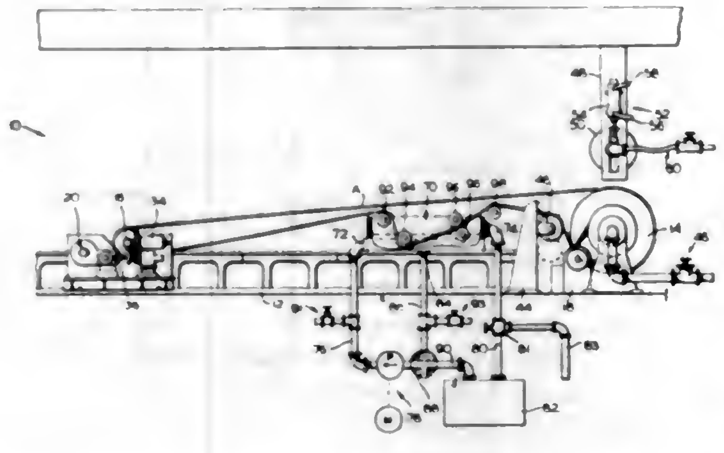
An initially fusible printing composition suitable for printing on substrates such as glass bottles comprises a normally solid epoxy resin, solid octadecyl alcohol, a dicarboxylic acid anhydride such as hexahydrophthalic anhydride as a hardener and a tin salt of a monocarboxylic acid such as stannous oleate as a cure accelerator. The composition is applied or printed as a hot melt which solidifies immediately after contact with the cool substrate to form a dry, adherent film and which is thereafter cured to an infusible form at a more elevated temperature than that used in the printing stage.

3,386,849

METHOD OF MAKING PRE-BROKEN-IN PAPERMAKERS' FELT

Charles G. Tewksbury, Neenah, Wis., and Louis R. Mizell, Montgomery County, Md., assignors to Appleton Mills, Appleton, Wis., a corporation of Wisconsin

Continuation-in-part of application Ser. No. 523,493, Dec. 21, 1965. This application Nov. 29, 1966, Ser. No. 604,109
6 Claims. (Cl. 117—65.2)



1. A method of making a pre-broken-in papermakers' felt from a predominately wool fabric which comprises indurating the fabric with an aqueous solution of a polymerizable heat settable composition to partially polymerize the composition within the fibers of the fabric, rinsing the indurated fabric, to remove heat settable composition from the surface of the fibers, and then heat curing the partially polymerized composition within the fibers of the fabric at a temperature between about 200 to 375° F. while maintaining the fabric in a compressed configuration between coacting pressure members at a pressure between about 100 to 300 lbs./square inch thereby fixing the fabric substantially in the compressed configuration.

3,386,850

PLATE BASE ADAPTED TO RECEIVE LIGHT-SENSITIVE COATING

Dolor N. Adams, Cleveland Heights, and Daniel C. Thomas, Warrensville Heights, Ohio, assignors, by mesne assignments, to Lithoplate, Inc., a corporation of Illinois

No Drawing. Original application Feb. 1, 1963, Ser. No. 255,673, now Patent No. 3,307,951, dated Mar. 7, 1967. Divided and this application July 13, 1966, Ser. No. 574,851
5 Claims. (Cl. 117—75)

A plate base is adapted to receive a light-sensitive coating to provide a sensitized lithographic plate by treating a substantially clean metal support member preferably (1) with a resin of the class consisting of amino modified urea-formaldehyde resins, sulfonated urea-aldehyde resins, alkylated methylol melamine resins, and polyalkylenepolyamine-melamine - formaldehyde resins, (2) coating on the resin (or on the support member, if the resin is omitted) a composition comprising a cycloaliphatic polyphosphoric acid of the nature of phytic acid, and (3) preferably applying to the acid coating a metal salt insolubilizing agent, as a water-soluble salt of zirconium, hafnium, titanium or thorium.

3,386,851

PREPARATION OF POLYMER-COATED SOLID MATERIALS SUITABLE AS FILLERS FOR ORGANIC POLYMERS

Jerry W. Harlan, R.R. 2, Spring Creek Woods, Lockport, Ill. 60441

No Drawing. Continuation-in-part of application Ser. No. 231,312, Apr. 28, 1960. This application Sept. 16, 1965, Ser. No. 492,684
9 Claims. (Cl. 117—93.31)

1. A process for coating a finely divided solid material with an adherent surface coating of a polymerized hydrocarbon, which process comprises adsorbing a radiation-polymerizable hydrocarbon while in vapor form onto the surface of said finely divided solid material, subjecting said finely divided solid material with adsorbed hyrocarbon thereon to a dosage of from about 10^6 to about 10^{10} rep of high energy ionizing radiation selected from the class consisting of beta and gamma rays during a time sufficient to effect polymerization of said radiation-polymerizable hydrocarbon and at a temperature of at least about 70° F., and recovering finely divided solid material with an adherent surface coating of radiation bonded and crosslinked hydrocarbon thereon.

2. Process of claim 1 wherein said finely divided solid material comprises carbon.

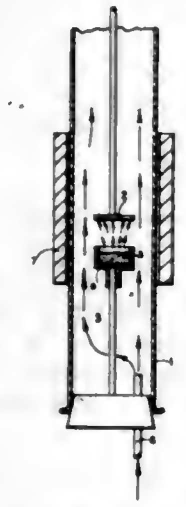
3,386,852

EPITAXIAL DIELECTRIC MgO CRYSTALS

Jack E. Mee and George R. Pulliam, Anaheim, Calif., assignors to North American Rockwell Corporation, a corporation of Delaware

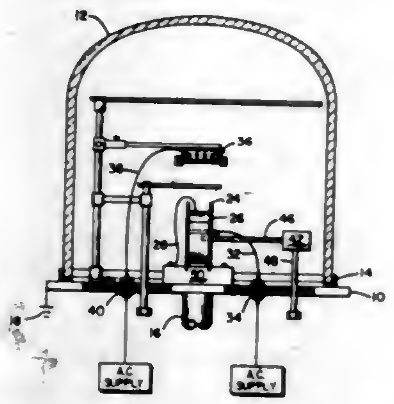
Filed Jan. 8, 1965, Ser. No. 424,417
8 Claims. (Cl. 117—106)

A process for epitaxially growing a single crystal of MgO. The process comprises the steps of heating a single crystal MgO substrate in a chamber in the presence of water vapor and at least one vaporized Mg halide. The vaporized halide is transported, in the presence of an inert carrier gas, toward the MgO substrate, resulting in epitaxial growth of MgO on the substrate.



3,386,853
SPIRAL VACUUM DEPOSITION APPARATUS AND METHOD

Paul E. Oberg and Maynard C. Paul, Minneapolis, Minn.
(both of Univac Park, St. Paul, Minn. 55116)
Filed Dec. 28, 1965, Ser. No. 516,893
10 Claims. (Cl. 117—106)



1. A method of vacuum depositing material upon a substrate free of larger particles comprising the steps of:
   (a) subjecting an enclosed curved resistance heating element having a plurality of convolutions on a diminishing radius and containing a material to be evaporated to a source of energy in order to raise the temperature of said material to its evaporating temperature whereby said material is directed along the heating element enclosure in a tortuous path by impinging upon said element and being re-evaporated therefrom as the evaporant proceeds toward an exit.

3,386,854
SURFACE TREATMENT OF FRESHLY POURED CONCRETE AND CEMENT MORTAR

Francis Sautier, Fontainebleau, France, assignor to Société Anonyme dite: Les Oxydes Francais, Paris, France
No Drawing. Filed Dec. 9, 1963, Ser. No. 329,315
Claims priority, application France, Dec. 10, 1962, 918,036
4 Claims. (Cl. 117—123)

To avoid flaking and cracking due to sweating in freshly poured concrete and to improve its hardening and appearance, an aqueous emulsion of a resin is applied to the surface of the concrete prior to setting but during the sweating. About 1.1 to 1.5 mg. of resin per cm.^{2} of surface is desirable. Suitable resins include polyvinyl acetate, polyvinyl chloride, acrylic, copolymers thereof, and mixtures thereof.

3,386,855
LUBRICOUS COATING FOR GLASS

Addison B. Scholes, Muncie, Ind., assignor to Ball Brothers Company Incorporated, Muncie, Ind., a corporation of Indiana
No Drawing. Filed May 14, 1965, Ser. No. 455,962
9 Claims. (Cl. 117—124)

This invention pertains to glass coating composition, method and articles so coated wherein coating compositions including a polyolefin and a polyethylene derivative of a fatty acid is applied to glassware at a temperature above about 160° F.

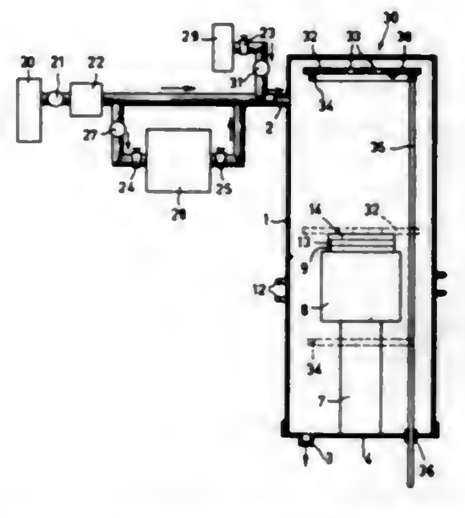
3,386,856
METHOD OF MAKING A MANGANESE OXIDE DIELECTRIC COATING FOR BARRIER-LAYER CAPACITORS

Willem Noorlander, Emmasingel, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
No Drawing. Filed Nov. 12, 1964, Ser. No. 410,794
Claims priority, application Netherlands, Dec. 13, 1963, 301,822
12 Claims. (Cl. 117—200)

A method of making a device of the type comprising a body of sintered semiconductive oxidic dielectric material having electrodes and a barrier-layer between the electrodes, useful especially as a barrier-layer capacitor. Preferred materials are alkaline earth titanates containing an additive for rendering same semiconductive. The method involves including in the electrode material or under the electrode material manganese or a manganese compound, and heating in an oxygen-containing atmosphere to oxidize the surface of the body to produce an insulating junction layer. The resultant device exhibits a high reverse voltage without any substantial reduction in capacitance. Improved capacitors are obtained especially in miniature form.

3,386,857
METHOD OF MANUFACTURING SEMICONDUCTOR DEVICES SUCH AS TRANSISTORS AND DIODES AND SEMICONDUCTOR DEVICES MANUFACTURED BY SUCH METHODS

Walter Steinmaier, Mollenhutseweg, Nijmegen, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed June 9, 1964, Ser. No. 373,755
Claims priority, application Netherlands, June 10, 1963, 293,863
6 Claims. (Cl. 117—212)



The method of manufacturing a semiconductor device having a semiconductor body on a surface of which is provided a silicon oxide layer. The method involves subjecting the silicon oxide covered semiconductor to a silicon compound containing gas at a flow rate and while heating the semiconductor at a temperature which thermally decomposes the gas liberating silicon which selectively removes those oxide portions contacted. A further feature of the invention is that by continuing the process until the underlying semiconductor is exposed, silicon will deposit as a growth onto the semiconductor. A further feature of the invention is to carry out in a single reaction vessel the selective removal of an oxide layer from a semiconductor and the epitaxial growth on the exposed semiconductor surface portions of another semiconductor.

3,386,858
METHOD AND MEANS FOR PRODUCING ELECTRICAL ENERGY UTILIZING A BACTERIAL ORGANISM

Martin B. Cavanagh, Kensington, and Burton J. Wilson, Bethesda, Md., assignors to the United States of America as represented by the Secretary of the Navy
Filed Dec. 26, 1961, Ser. No. 162,297
3 Claims. (Cl. 136—83)

1. A method for potentiating the electrical energy produced by iron electrodes, comprising the steps of;
   coating a first iron electrode with anaerobic Desulfovibrio bacteria,
   placing said first electrode in spaced relationship with a second iron electrode which is substantially free of bacteria,
   submerging said electrodes in media containing soluble salts of calcium, magnesium and sodium, and
   forming an external circuit between said electrodes for a time sufficient to form a saline deposit on the submerged electrode which is substantially free of bacteria, said substantially bacteria free electrode functioning as a cathode to produce substantially increased electrical potential between the electrodes.

3. In a battery for operating submerged in sea water of which each cell includes:
   a first iron electrode coated with an anaerobic bacteria *Desulfovibrio aestuarrii* in an insulated receptacle; and
   a second iron electrode substantially free of bacteria disposed in spaced relationship with said first bacteria coated electrode;
   said second electrode having a coating of a first and dense saline deposited containing calcium and magnesium.

3,386,859
POROUS ELECTRODE COMPRISING HYDROPHOBIC BINDER AND HYDROPHILIC MATERIAL INCORPORATED THEREIN AND METHOD OF FABRICATING SAME

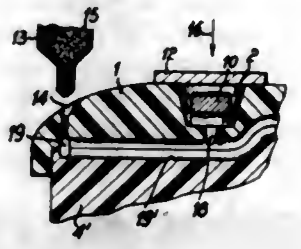
Royce E. Biddick, Edina, Minn., assignor, by mesne assignments, to Union Oil Company of California, Los Angeles, Calif., a corporation of California
No Drawing. Filed Nov. 4, 1964, Ser. No. 408,724
12 Claims. (Cl. 136—120)

1. In an electrochemically reactive porous electrode comprising a body of electrically conductive substrate having adhering thereto a layer including catalyst particles and a hydrophobic binder comprising a fluorocarbon resin, the improvement in which said layer also includes a filler of asbestos fibers incorporated therein to form fluid-conducting paths substantially coextensive with said body.

5. A method of producing an electrochemically reactive porous electrode comprising the steps of:
   (a) treating electrochemical catalyst particles with a hydrophobic material comprising a fluorocarbon resin;
   (b) mixing the treated catalyst with asbestos fibers comprising at least 0.1 weight percent of said catalyst to obtain a pliable mixture; and
   (c) applying an adherent layer of said pliable mixture to an electrically conductive support.

3,386,860
METHOD OF ASSEMBLING STORAGE BATTERIES

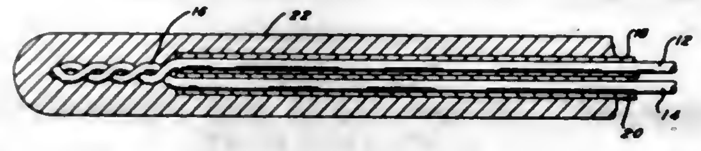
Oskar Maier, Hildesheim-Wald, Germany, assignor to Robert Bosch G.m.b.H., Stuttgart, Germany
Filed Mar. 16, 1965, Ser. No. 440,248
Claims priority, application Germany, Apr. 11, 1964, B 76,298
6 Claims. (Cl. 136—176)



A multi-cell storage battery is assembled by placing grooves provided in upper edge portions of its thermoplastic housing into spaced registry with grooves in the underside of a thermoplastic apertured cover and simultaneously causing portions of terminals, which are provided in the housing, to extend through the apertures in the cover and into recesses provided in the upper side of the latter. A metallic cell connector is inserted into each recess and welded to the respective terminal. The cover and edge portions are moved into engagement so that the registering grooves form channels. A hardenable liquid material is injected into each channel to form a sealing connection between cover and housing, and a hardenable liquid insulating material is filled into each recess to embed the cell connectors.

3,386,861
THERMOCOUPLE WITH CAST IRON CONTACTING JUNCTION

Edward R. Stroik, 535 Dehaven Ave.,
Penndel, Pa. 19047
Filed Oct. 23, 1964, Ser. No. 406,082
4 Claims. (Cl. 136—233)



A thermocouple comprised of a first metal wire and a second metal wire. The metals of the first and second wires are dissimilar from each other, with one end of each being joined together to form a measuring junction. The wires are otherwise insulated from each other and are integrally secured in an elongated cast iron member.

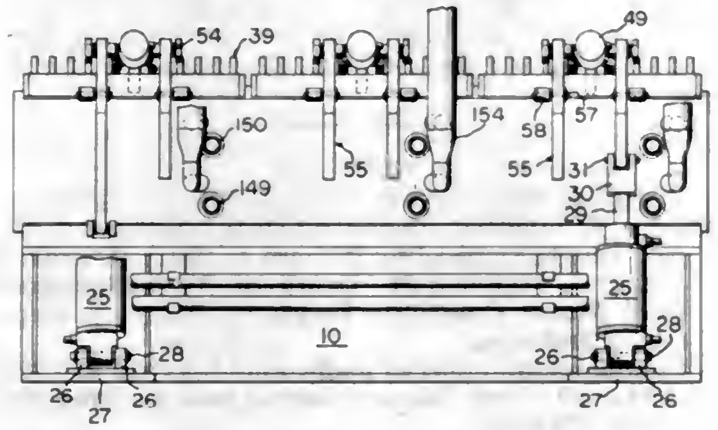
3,386,862
HIGH STRENGTH STRUCTURAL STEEL

Thomas L. Johnston, Bloomfield Hills, Raymond C. Boettner, Dearborn Heights, Richard H. Bush, Detroit, and Arthur J. McEvily, Jr., Dearborn, Mich., assignors to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Continuation-in-part of application Ser. No. 459,320, May 27, 1965. This application June 22, 1966, Ser. No. 560,049
6 Claims. (Cl. 148—12)

1. The process of producing a weldable structural steel object having in the as-rolled condition, a massive martensitic structure essentially free of equiaxed ferrite, a minimum yield strength of 80K s.i. and a minimum impact energy absorption value at —40° F. of 40 foot

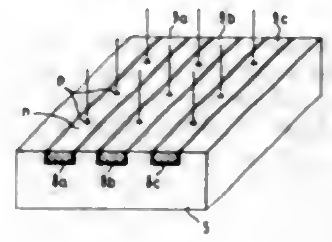
pounds comprising fabricating an alloy having a maximum carbon content of 0.07%, a content of alloying metal selected from the group consisting of nickel, molybdenum, chromium, manganese and silicon in an amount not substantially in excess of 7%, the sum of combinations of the nickel, molybdenum, chromium and manganese not exceeding about 6%, the alloy containing significant amounts of metal selected from the group consisting of nickel, manganese and combinations of nickel and manganese such that the transformation of austenite to massive martensite is retarded at temperatures above 1300° F., the alloy further containing significant amounts of metal selected from the group consisting of chromium, molybdenum and combinations of chromium and molybdenum such that the transformation of austenite to equiaxed ferrite is essentially absent at temperatures above the austenite to massive martensite transformation temperature, the chemistry of the object being adjusted to exhibit an austenite to massive martensite transformation temperature below 1300° F. and a rate of transformation of austenite to massive martensite such that essentially no equiaxed ferrite is produced in air cooling from the austenite to massive martensite transformation temperature to room temperature, hot working the alloy and finishing the hot working operation at a temperature sufficiently low to inhibit substantial austenite grain growth during working and cooling down to the austenite to massive martensite transformation temperature, said object exhibiting a microstructure of massive martensite containing a high density of dislocations and metallurgically indistinguishable from the structure in FIGURE 1.

3,386,863
METHOD AND APPARATUS FOR FABRICATING A HOLLOW PART
Donald C. Rowe, Glen Mills, Pa., assignor to The Boeing Company, Seattle, Wash., a corporation of Delaware
Filed Jan. 13, 1964, Ser. No. 337,448
24 Claims. (Cl. 148—12.1)



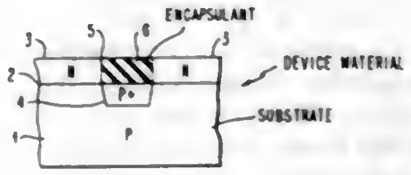
1. A process for forming a hollow part comprising the steps of heating the part until the material of the part is readily deformable, maintaining an inert atmosphere about the part when it is heated, supplying high pressure fluid to the interior of the part when the material is deformable to form the part to its desired shape, and cooling the part rapidly after it has been formed to its desired shape.

3,386,864
SEMICONDUCTOR-METAL-SEMICONDUCTOR STRUCTURE
Victor J. Silvestri, Mount Kisco, Vincent J. Lyons, Poughkeepsie, and John C. Marinace, Yorktown Heights, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 9, 1963, Ser. No. 329,079
6 Claims. (Cl. 148—175)



A thin metallic layer interconnecting corresponding portions of several active circuit elements is defined beneath the surface of a high resistivity crystalline semiconductor substrate, or wafer. Initially, a plurality of spaced trenches are etched in the substrate surface, and the substrate surface including such trenches is plated with a thin metallic layer which is discontinuous on a microscopic scale. Semiconductor material is vapor deposited over the metallic layer which nucleates with the substrate material along discontinuities in the metallic layer to form an epitaxial deposit having a same periodicity and orientation as the substrate material. The semiconductor wafer is lapped and polished to remove the epitaxial deposit and the metallic layer from over the substrate surface whereby only the metallic layer and epitaxial deposit in the spaced trenches remains. Active circuit elements are formed in the remaining epitaxial deposit by typical techniques, e.g., diffusion, alloying, etc., whereby corresponding portions thereof are connected along the recessed metallic layer.

3,386,865
PROCESS OF MAKING PLANAR SEMICONDUCTOR DEVICES ISOLATED BY ENCAPSULATING OXIDE FILLED CHANNELS
Ven Y. Doo, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, Armonk, N.Y., a corporation of New York
Filed May 10, 1965, Ser. No. 454,374
4 Claims. (Cl. 148—175)



1. The process of providing an isolated planar semiconductor device structure comprising the steps of providing a protective coating on a substrate of a first conductivity type semiconductor material;

opening apertures in said coating in a configuration serving to encompass for isolation a discrete portion of a major surface of said semiconductor substrate on which a semiconductor device is to be fabricated;

diffusing a first conductivity type determining impurity through said openings thereby converting portions of said first conductivity type substrate adjacent to said openings to a higher first conductivity type region;

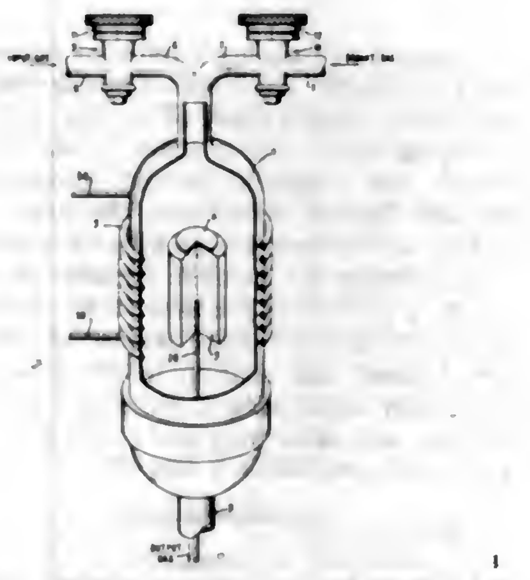
providing a protective coating over said regions of higher conductivity type on said substrate;

epitaxially growing at least one opposite conductivity type region on said major surface of said semiconductor substrate;

providing an encapsulant coating over the epitaxially grown and protected portions of said major surface of said substrate;

and removing said protective coating down to the exposure of the surface of said epitaxially grown semiconductor material.

3,386,866
METHOD OF EPITAXIALLY GROWING A LAYER OF SILICON CARBIDE ON A SEED BY PYROLYTIC DECOMPOSITION OF HYDROCARBONS OR MIXTURES OF SILANES AND HYDROCARBONS
Ekkehard Ebert, Boblingen, and Werner Spielmann, Dachtel, Germany, assignors to International Business Machines Corporation, Armonk, N.Y., a corporation of New York
Filed Nov. 29, 1965, Ser. No. 510,276
Claims priority, application Germany, Dec. 5, 1964, J 27,053
18 Claims. (Cl. 148—175)



1. Method of growing in a reaction chamber a monocrystalline layer of silicon carbide on a monocrystalline seed having silicon as a constituent therein comprising the steps of:

maintaining a vacuum in said reaction chamber;

applying an input gas stream comprising SiH_4 and C_3H_8 to said evacuated chamber; and

decomposing pyrolytically said gas stream in said chamber to effect said growing of said layer on said seed.

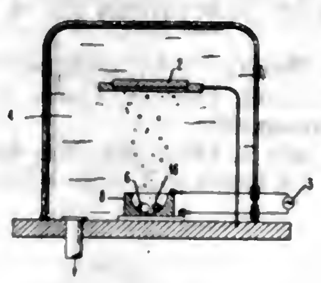
11. Method of growing in a reaction chamber a monocrystalline layer of silicon carbide on a monocrystalline seed of silicon comprising the steps of:

maintaining a vacuum in said reaction chamber during said growing of said layer;

applying an input gas stream consisting essentially of hydrocarbons to said evacuated chamber; and

decomposing pyrolytically said hydrocarbons in the immediate vicinity of the surface of the silicon seed, such that resulting carbon atoms combine with silicon atoms of the seed to form a monocrystalline silicon carbide layer.

3,386,867
METHOD FOR PROVIDING ELECTRICAL CONTACTS TO A WAFER OF GaAs
John L. Staples, Pearl River, N.Y., assignor to International Business Machines Corporation, Armonk, N.Y., a corporation of New York
Filed Sept. 22, 1965, Ser. No. 489,271
7 Claims. (Cl. 148—180)



1. A method for providing electrical contacts to a wafer of GaAs comprising the steps of maintaining said wafer in an evacuated chamber,

vapor depositing a eutectic mixture of gold-germanium onto said wafer,

vapor depositing a metal onto said eutectic mixture, said metal having a higher melting point than said eutectic mixture and a low solubility therein, and

alloying said gold-germanium to said wafer.

3,386,868
HEAT RESISTANT PROPELLANTS CONTAINING ORGANIC OXIDIZERS
John R. Gimler, Succasunna, and Stephen E. Jurman, Ledgewood, N.J., assignors to Hercules Incorporated, Wilmington, Del., a corporation of Delaware
Filed June 9, 1966, Ser. No. 556,432
10 Claims. (Cl. 149—2)

A heat resistant granulated propellant composition containing a crosslinked polyacrylic rubber binder and particulate organic oxidizer. The oxidizer is HMX or RDX and the composition is non-corrosive and substantially free from residue when fired.

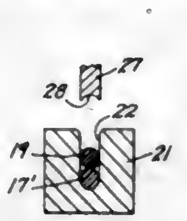
3,386,869
SOLID COMPOSITE PROPELLANTS CONTAINING BURNING RATE CATALYSTS
Joseph Green, Fair Oaks, Calif., and Earl C. Klanbert, Sparta, and Ronald John Smith, Dover, N.J., assignors, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission
No Drawing. Filed Mar. 15, 1962, Ser. No. 180,420
4 Claims. (Cl. 149—19)

1. A solid propellant composition comprising: from 12 to 26 weight percent of a binder component wherein said binder comprises one member selected from the group consisting of polybutadiene, polyisobutylene, polyisoprene, copolymers of isobutylene and isoprene, and polyurethanes comprising a liquid polyester containing 5.9±0.5% by weight of isocyanate end groups and having a viscosity of 80,000±15,000 centistokes at 25° C., a fully saturated polybutylene oxide liquid polymer containing 4.0±0.3% isocyanate groups by weight and having a viscosity of 14,000–19,000 centistokes at 25° C., fully saturated polypropylene glycol liquid polymers containing 3.2±0.4% isocyanate groups by weight and having a viscosity of 14,000–19,000 centistokes at 25° C. and a polybutadiene liquid polymer containing 1.6% by weight of carboxy groups and having a molecular weight of 55,000 and a viscosity of 59,000 centistokes at 25° C.; 2 to 10 weight percent of a catalyst for increasing the burning rate of the said propellant composition wherein said catalyst is se-

lected from the group consisting of decaborane; a mixture of alkyl-decaboranes consisting on a weight basis of 67% monoethyldecaborane, 26% diethyldecaborane, 2.5% triethyldecaborane and 4.5% decaborane; isopropenylcarborane and ferrocene; and the balance being an oxidant component of a solid inorganic oxidizing salt.

3,386,870
METHOD OF ULTRASONIC BONDING OF OVERLYING PORTIONS OF A FISHHOOK SNELL

Louis H. Morin, Bronx, N.Y., assignor of one-fourth to Madeline F. McGill, Denver, Colo., and one-fourth to J. R. Hanna, Bronxville, N.Y.
Filed July 2, 1965, Ser. No. 469,221
4 Claims. (Cl. 156—73)



A method of supporting a tail end of a nylon snell upon a body part of the snell adjacent a loop in the snell and then applying supersonic vibration blows upon the tail end and body part while confined in an anvil in producing a weld between engaged surfaces of said tail end and body part.

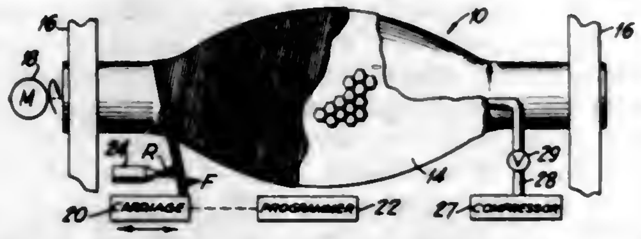
3,386,871
METHOD OF SPLICING POLYAMIDE YARN AND BONDING COMPOSITION THEREFOR

Grady N. Dulin, Jr., and John I. Scott, Chester, Va., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York
No Drawing. Filed May 10, 1963, Ser. No. 279,615
5 Claims. (Cl. 156—158)

The invention provides a bonding composition useful for uniting multifilament polyamide yarns, wherein a polyamide of formic acid relative viscosity at least about 50 is dissolved at 8%–17% concentration in a solvent of boiling point between 90° C. and 115° C. to form a solution of viscosity at room temperature between 2500 and 6000 cps. Such composition can be applied with no more than slight warming whereby it can be applied by hand. It forms a permanent bond in a few seconds which sets in a few hours to a strength such as 70% of the breaking strength of the yarn and which is flexible allowing a textured effect at the bond and withstands elevated temperatures and moisture.

3,386,872
METHOD OF MAKING FILAMENT WOUND, COMPOUND CURVED SHELLS

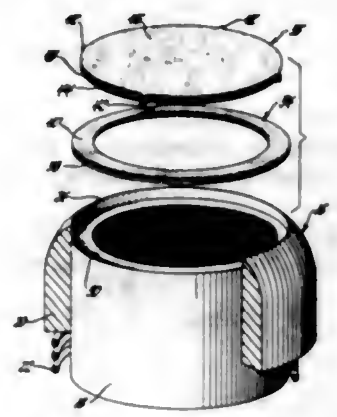
Jonas Medney, Oceanside, N.Y., assignor to Koppers Company, Inc., a corporation of Delaware
Filed Oct. 15, 1964, Ser. No. 403,974
6 Claims. (Cl. 156—173)



A mandrel having circular transverse cross sections is covered by a flexible bag and a layer of resin impregnated filaments are wound over the bag to form a shell, a band is secured around the mid portion of the shell and the band, the shell, and the bag are cut to form two separate shells. Each shell and bag portion is placed on and conformed to a mandrel having a compound curved surface; the shell is rigidized; the shell and bag removed; the bag removed from the shell; the shell is replaced on the mandrel; and the resin of the shell is cured to produce a filament reinforced resin shell having a compound curved surface.

3,386,873
METHOD OF DIELECTRICALLY EMBOSSING A REFLECTOR BUTTON ON A TRIM PANEL

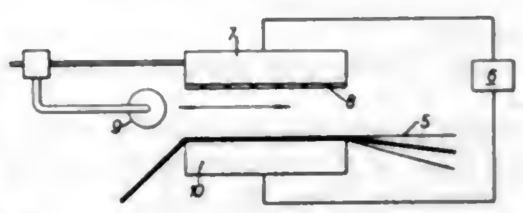
John J. Mance, Huntington Woods, and Ralph M. Stallard, Rochester, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed May 15, 1963, Ser. No. 280,681
6 Claims. (Cl. 156—219)



1. A method of forming a reflector button on a dielectrically embossable thermoplastic base material from a preform comprising a sheet of acrylic resin bonded to a layer of glass beads and a sheet of vinyl bonded to the glass beads, and a metallic element having a vinyl coating on one side thereof, comprising the steps of placing the vinyl sheet of the preform in contact with the base material, positioning the metallic element so as to have its vinyl coating contacting the base material, applying a high frequency alternating voltage across the assembly to bond said vinyl sheet and coating to the base material, and simultaneously embossing a plurality of grooves in said acrylic sheet and deforming said metallic element to simulate a lens mounted within a support.

3,386,874
WELDING OF PLASTICS SHEET MATERIAL

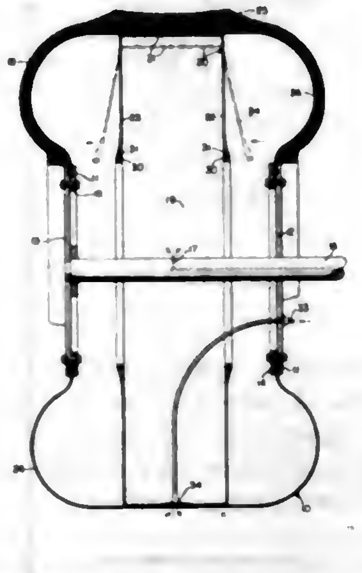
Chajim Gros, 39 Alexandra Road,
London NW. 8, England
Filed Mar. 18, 1964, Ser. No. 352,876
Claims priority, application Great Britain, Mar. 20, 1963, 10,968/63
10 Claims. (Cl. 156—220)



1. A method of producing a quilted plastics sheet in which colouring matter is applied to at least part of the quilted pattern, which comprises the steps of
forming a die having the pattern embossed thereon,
applying wet colouring matter directly to the embossed pattern only on the die,
placing a first sheet of solid plastics material on top of a second sheet of foamed plastics material,
pressing the die on said first sheet to transfer the wet colouring matter thereto and
heating the plastics material in the regions in which it is contacted by the embossed pattern of the die by means of high frequency to effect welding of the two sheets.

3,386,875
EXPANDABLE TIRE BUILDING BLADDER APPARATUS

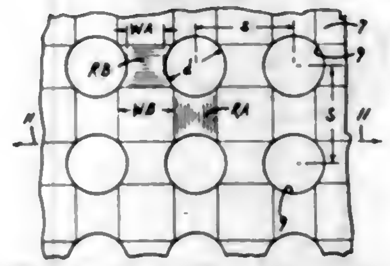
Warren B. Grote, Cuyahoga Falls, Ohio, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Filed Jan. 8, 1965, Ser. No. 424,410
10 Claims. (Cl. 156—416)



An expansible bladder device for tire building apparatus comprising a fluid impervious bladder member having in unexpanded condition a generally cylindrical configuration and an inextensible bead ring at each of its ends adapted to be secured to a tire building drum end member, and at least one inner annular member disposed coaxially within the bladder and having one annular portion only attached to the bladder circumferentially intermediate its ends and having at a predetermined distance from said portion an inextensible bead ring, whereby the radial expansion of the bladder is restricted by said inner member.

3,386,876
NON-WOVEN NET MANUFACTURE

Harold W. Wyckoff, Middletown Township, Delaware County, Pa., assignor, by mesne assignments, to Avisun Corporation, Philadelphia, Pa., a corporation of Delaware
Filed June 2, 1961, Ser. No. 114,476
16 Claims. (Cl. 161—109)

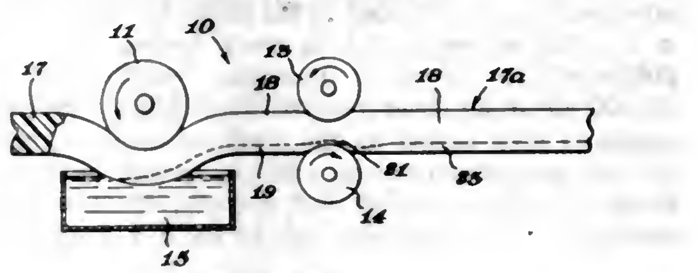


3. A web of thermoplastic polymeric material having a plurality of ribs, certain of said ribs extending along directions generally parallel to the longitudinal axis of said web and at least some of the remainder of said ribs extending generally parallel to the transverse axis of said web, at least certain of the ribs which are parallel to said respective axes being uniaxially drawn and terminating at undrawn web portions.

5. A web as defined in claim 3 wherein adjacent parallel ribs are separated by an opening extending through said web.

3,386,877
CELLULAR THERMOPLASTIC ARTICLE HAVING SELECTED OPEN CELLS AND ITS MANUFACTURE

Richard E. Skochdopole and Demetrius Urchick, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed Nov. 2, 1964, Ser. No. 408,257
9 Claims. (Cl. 161—160)



Foam bodies having open cell and closed-cell portions are obtained from a closed-cell foam by maintaining the portion which is to have closed cells at a temperature above the second order transition point of the foamed polymer, maintaining the portion which is to have open cells at a temperature at least 20° C. below the second order transition point and crushing the foam to selectively provide at least two zones, one having open cells, the remaining zone having closed cells.

3,386,878
METHOD OF MAKING EXPANDED PLASTIC ARTICLES AND LAMINATES INVOLVED IN SUCH METHOD

Robert W. Pooley, Mishawaka, Ind., assignor to Uniroyal, Inc., a corporation of New Jersey
No Drawing. Filed June 18, 1964, Ser. No. 376,247
9 Claims. (Cl. 161—188)

Expanded ABS or other plastic is made by laminating (I) a first layer of plastic containing undecomposed blowing agent such as azodicarbonamide to (II) a second layer of plastic containing a migratory activator for the blowing agent such as zinc oxide. After lamination, the activator diffuses or migrates from layer (II) into layer (I) thereby lowering the temperature at which the laminate can be expanded by application of heat. The method increases the processing safety during compounding and lamination of the layers, since the blowing agent and activator are not present together in the same stock until subsequent to lamination.

3,386,879
PROCESS FOR FORMING BOARD CONTAINING CELLULOSIC FIBERS, THERMOSETTING BINDER AND PINEWOOD RESIN

Maxwell M. Yan and Stanley H. Baldwin, Sault Ste. Marie, Ontario, Canada, assignors to Abitibi Power & Paper Company, Limited, Iroquois Falls, Ontario, Canada, a corporation of Canada
No Drawing. Filed Apr. 12, 1965, Ser. No. 447,561
Claims priority, application Canada, Mar. 9, 1965, 925,164
4 Claims. (Cl. 162—127)

A method for making a medium density building board by forming an aqueous slurry of lignocellulosic fibres, incorporating in the slurry a thermosetting binder and a thermoplastic pine wood resin, partially dewatering to provide a wetlap, hot pressing the wetlap and baking the product to provide a building board having a specific gravity between 0.45 and 0.80.

3,386,880
PROCESS OF FORMING PAPER CONTAINING POLYETHYLENEIMINE CROSS-LINKED WITH METHYLENE-BIS-ACRYLAMIDE AND PAPER THEREOF

Harold Lomas, Dundas, Ontario, Canada, assignor to Ontario Research Foundation, Toronto, Ontario, Canada

No Drawing. Filed Mar. 22, 1965, Ser. No. 441,868
7 Claims. (Cl. 162—168)

The wet strength properties of paper can be improved by the incorporation of polyethyleneimine which is cross-linked with methylene-bis-acrylamide. The polyethyleneimine has a molecular weight in its uncross-linked form of greater than about 10,000. The cross-linked polyethyleneimine is provided in the paper by a process wherein a cellulose paper making stock having uncross-linked polyethyleneimine of a molecular weight greater than 10,000 adsorbed therein is provided. Methylene-bis-acrylamide is then added to the stock as cross-linking agent for the polyethyleneimine and the treated paper stock is dried to both cross-link the polyethyleneimine with the methylene-bis-acrylamide and to form a paper product.

3,386,881
CHLORINATED HYDROCARBON INSECTICIDES SYNERGIZED WITH ALIPHATIC AMINES

Walter W. Abramitis, Downers Grove, Ill., assignor, by mesne assignments, to Armour Industrial Chemical Company, a corporation of Delaware

No Drawing. Filed Oct. 22, 1965, Ser. No. 502,296
5 Claims. (Cl. 167—22)

A synergistic insecticide combination of a chlorinated hydrocarbon insecticide and 5 to 10 parts by weight per part insecticide of an amine.

3,386,882
PURIFIED VACCINE FROM BRAIN TISSUE

Carl M. Eklund and Leo A. Thomas, Hamilton, Mont., assignors to the United States of America as represented by the Secretary of the Department of Health, Education, and Welfare

No Drawing. Filed July 22, 1964, Ser. No. 384,556
3 Claims. (Cl. 167—78)

1. In a process of preparing a vaccine by freeing an arbovirus from secondary encephalomyelitis virus impurities by adsorbing said arbovirus on calcium phosphate, selectively eluting said arbovirus with sodium phosphate (Na_2HPO_4) solution and subsequently recovering purified arbovirus, and killing said purified arbovirus to produce a killer arbovirus and adding a carrier to produce a vaccine, the step which comprises selectively eluting a CTF arbovirus with about 0.2 M sodium phosphate (Na_2HPO_4) eluant.

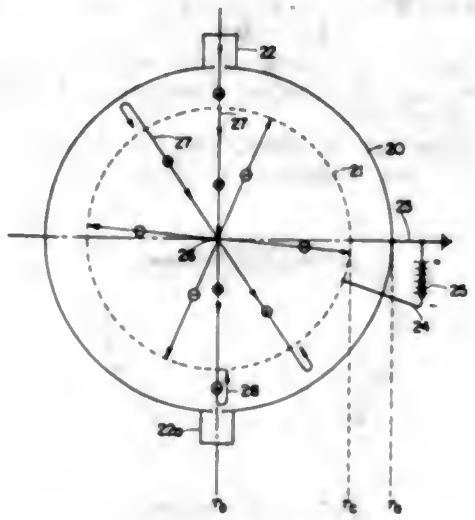
3,386,883
METHOD AND APPARATUS FOR PRODUCING NUCLEAR-FUSION REACTIONS

Philo T. Farnsworth, Fort Wayne, Ind., assignor to International Telephone and Telegraph Corporation, a corporation of Delaware

Filed May 13, 1966, Ser. No. 549,849
19 Claims. (Cl. 176—1)

A method and apparatus for producing controlled nuclear-fusion reaction by use of self-generated electric fields and inertial ionized-gas containment. The apparatus comprises a spherical anode which concentrically surrounds a cathode. A plurality of ion guns are mounted on the exterior of the anode in spherically spaced and diametrically aligned relationship such that the beam axes intersect at the center of the cathode. Appropriate apertures are provided in the cathode for passage of the ions. Other apertures permit passage of positively charged particles outwardly from the cathode interior, but are biased negatively to prevent the flow of electrons into the interelectrode space.

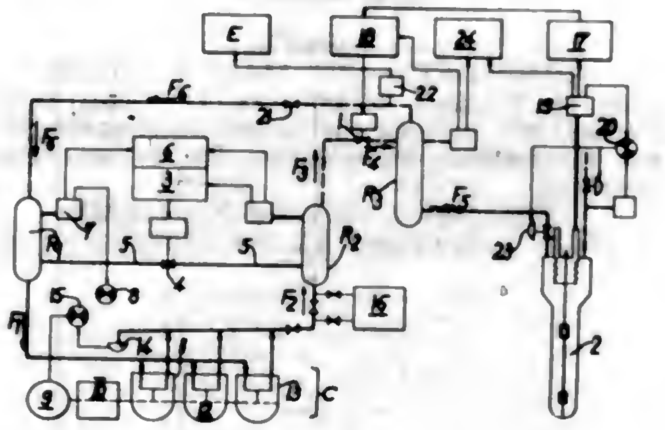
A voltage is applied between the anode and cathode. Ions from the guns are propelled and focused into the center of the cathode establishing in the cathode interior a series of concentric spherical sheaths of alternating maxima and minima potentials called "virtual electrodes." The ions in the innermost "virtual electrode" have fusion energies, and are contained at a density sufficient to produce a self-sustained fusion reaction.



3,386,884
PRESSURE CONTROL

Antoine Bret and Robert Marinot, Aix-en-Provence, France, assignors to Commissariat à l'Energie Atomique, Paris, France

Filed July 22, 1966, Ser. No. 567,248
Claims priority, application France, July 24, 1965, 25,921
8 Claims. (Cl. 176—19)

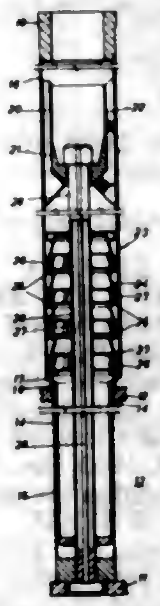


A pressure controlled system for a creep cell has a loading system and a strain gauge measuring the deformations of the test piece. The control system has a first stage having a compressor, a first buffer tank, a second buffer tank and a second stage connected to the second buffer tank, a control valve in the second stage, a tank connected to the creep cell and a return to the compressor intake. A pressure control loop connected to the strain gauge actuates the control valve to hold the pressure in the tank at the required value.

3,386,885
LIQUID-COOLED NUCLEAR REACTOR WITH COUNTERFLOW BRAKE DEVICE

James Rostron Wright, Appleton, Warrington, England, assignor to United Kingdom Atomic Energy Authority, London, England

Filed June 20, 1966, Ser. No. 558,974
Claims priority, application Great Britain, June 28, 1965, 27,283/65; Sept. 20, 1965, 40,078/65
4 Claims. (Cl. 176—37)

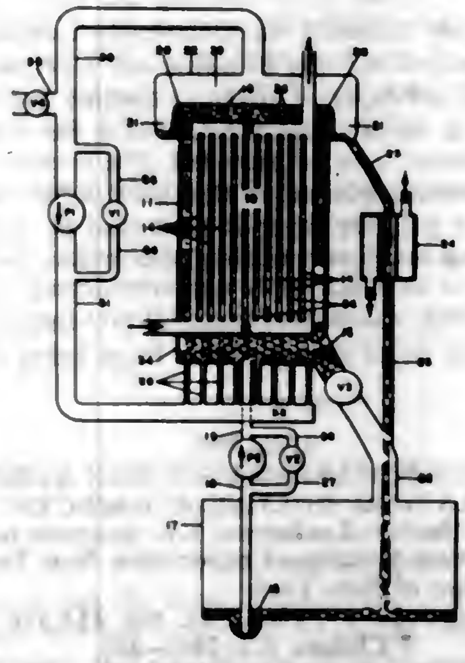


A core support structure of a liquid-cooled nuclear reactor has interposed in each of the passages by which the coolant passes from an inlet plenum to fuel-containing channels a hydraulic counterflow brake device arranged to resist reverse flow toward the inlet plenum so as to limit to a single channel the voiding of coolant which may occur because of the surge of released gas upon a sudden and large scale reservoir failure in fuel members of the type which have fission product gas reservoir spaces adjacent the inlet ends of the channels.

3,386,886
NUCLEAR REACTOR REACTIVITY CONTROL BY BUBBLING GAS THROUGH MODERATOR LIQUID

Angus Charles Whittier, Peterborough, Ontario, Canada, assignor to Canadian General Electric Company Limited, Toronto, Ontario, Canada, a corporation of Canada

Filed Aug. 26, 1966, Ser. No. 575,434
3 Claims. (Cl. 176—42)

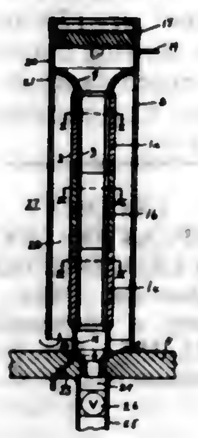


To vary the effective neutron capture cross section of the moderating liquid in a heavy water moderated reactor, helium gas is bubbled through the moderator at a controlled rate, the level of moderator being maintained constant in the reactor to avoid diminution of the bubbling effect.

3,386,887
FUEL ELEMENT FOR A NUCLEAR REACTOR

Johan Hilding Mogard, Lidingo, Sweden, assignor to Aktiebolaget Atomenergi, Stockholm, Sweden, a Swedish company

Continuation of application Ser. No. 469,490, July 6, 1965. This application Sept. 26, 1966, Ser. No. 582,093
Claims priority, application Sweden, July 24, 1964, 9,022/64
1 Claim. (Cl. 176—72)



A nuclear reactor fuel element of the combined boiler-superheater type comprises a fissile fuel body having spaced recessed portions on its surface and a cladding over the fuel body which contacts those portions of the body surface which are not recessed. The resulting recesses are either gas-filled or vacated so as to constitute a heat insulation. A desired control of the heat flux is effected by varying the width or depth of the recesses in one zone of the fuel body with respect to the recesses in a second spaced zone. Preferably, the said zones are axially disposed along the fuel element, whereby, for example, the heat flux on the steam side of the element may be graduated in its intensity from one zone to another in series.

3,386,888
RESOLUTION OF RACEMIC AMINO ACIDS

Ichiro Chibata, Toyonaka-shi, and Tetsuya Tosa and Noriko Endo, Kyoto-shi, Japan, assignors to Tanabe Seiyaku Co., Ltd., Higashi-ku, Osaka, Japan, a corporation of Japan

No Drawing. Filed July 15, 1965, Ser. No. 472,324
7 Claims. (Cl. 195—2)

Racemic amino acids are resolved into an optically active component by contacting a solution of an alpha-N-acyl derivative of the racemate with an acylase complexed with a polysaccharide anion exchanger to form free L-amino acid.

3,386,889
NEOMYCIN FERMENTATION MEDIA AND PROCESS

William Moses, Haworth, and Frederick A. Cassello, Lyndhurst, N.J., assignors, by mesne assignments, to Corn Products Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed June 12, 1964, Ser. No. 374,842
10 Claims. (Cl. 195—114)

1. A process for the production of neomycin which comprises cultivating a neomycin producing microorganism in a nutrient fermentation medium comprising essentially a nitrogen source, salts and at least 7% of starch as the source of carbohydrate, said starch having been

modified by the action of an alpha-amylase, said alpha-amylase being present in said fermentation medium in a concentration of at least about 0.01% by weight of the starch in said medium.

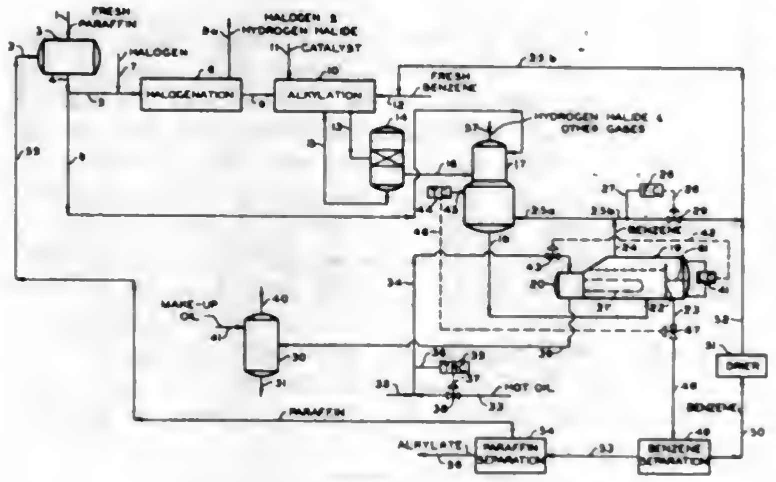
3,386,890
PROCESS FOR PREPARING EQUILIN

Claude Vezina, Oka, Quebec, David J. Marshall, Hampstead, Quebec, and Romano Deghenghi, Montreal, Quebec, Canada, assignors to American Home Products Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed July 12, 1965, Ser. No. 471,415
2 Claims. (Cl. 195—51)

There is disclosed a process for the preparation of equilin from 5(10),7-estradiene-3,17-dione; 3,17β-dihydroxy-5(10),7-estradiene; or 17β-hydroxy-5(10),7-estradien-3-one wherein the starting material is incubated with a viable culture of a microorganism of the genera Bacterium, Mycobacterium, Corynebacterium and Nocardia.

3,386,891
ALKYLATE PURIFICATION BY TEMPERATURE CONTROLLED DISTILLATION

Walter C. Hart, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Dec. 31, 1964, Ser. No. 422,856
9 Claims. (Cl. 203—1)

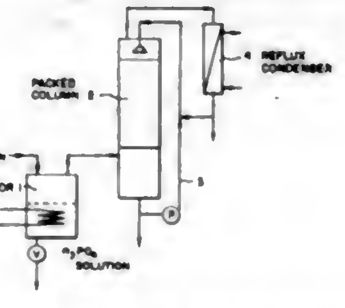


An alkylate is stripped of undesired light materials such as hydrogen halide and heated substantially to but not above dealkylation temperature by a combination of heating fluids which are combined in response to the temperature of said combination of heating fluids, and feeding the heating fluids to a heat exchange zone containing alkylate in relation to the amount of alkylate in said heat exchange zone.

3,386,892
PURIFICATION OF FLUOSILICIC ACID SOLUTION BY DISTILLATION WITH PHOSPHORIC ACID SOLUTION

Alfred Schmidt, Linz (Danube), Walter Müller, Leonding, near Linz (Danube), and Ferdinand Weinrotter, Linz (Danube), Austria, assignors to Osterreichische Stickstoffwerke Aktiengesellschaft, Linz (Danube), Austria
Filed June 22, 1966, Ser. No. 559,449
Claims priority, application Austria, June 22, 1965, A 5,622/65
1 Claim. (Cl. 203—42)

The continuous purification of dilute aqueous fluosilicic acid solution comprises distilling at atmospheric pressure a mixture of the solution and aqueous phosphoric acid solution, the boiling point of which mixture is at least 120° C., and continuously adding fresh dilute aqueous fluosilicic acid during the distillation in such amounts that the boiling point of the mixture of at least 120° C. is kept constant.



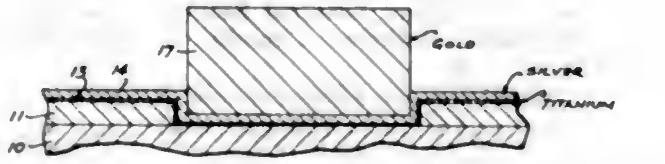
3,386,893
METHOD OF PRODUCING SEMICONDUCTOR MEMBERS BY ALLOYING METAL INTO A SEMICONDUCTOR BODY

Martin Hornig and Hartmut Seiter, Munich, Germany, assignors to Siemens Aktiengesellschaft, Munich, Germany, a corporation of Germany
Filed Sept. 13, 1963, Ser. No. 313,139
Claims priority, application Germany, Sept. 14, 1962, S 81,455
14 Claims. (Cl. 204—15)

Method of producing semiconductor members by alloying metal into a semiconductor crystal. Workpiece is a monocrystal of semiconductor compound having a zinc-blende lattice with surfaces in 111-planes. The crystal is subjected to electrolysis in an alkaline electrolyte containing a complex compound of the metal to be alloyed, whereby the metal selectively precipitates only upon the $\overline{111}$-surface of the crystal. Thereafter, the precipitated metal layer is alloyed into the crystal.

3,386,894
FORMATION OF METALLIC CONTACTS

Christian Heinrich Maximilian Steppat, Ottawa, Ontario, Canada, assignor to Northern Electric Company Limited, Montreal, Quebec, Canada
Filed Sept. 28, 1964, Ser. No. 399,923
11 Claims. (Cl. 204—15)

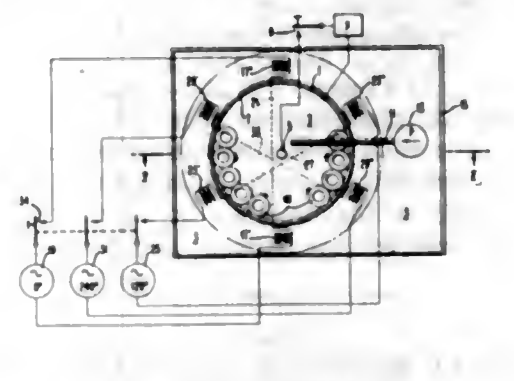


On a carrier material an electrically conducting primary layer, e.g. consisting of a first sub-layer of titanium and a second sub-layer of silver, is applied and this layer is masked, e.g. by a photo-resist, except for that area at which the contact is to be provided. The contact material, e.g. gold, is then deposited on that area. After removal of the mask, the primary layer is destroyed by a step comprising etching away part of this layer and converting the remainder into an electrically non-conducting layer. During this last step, the contact material prevents the portion of the primary layer that it covers from being destroyed.

3,386,895
METHOD AND APPARATUS FOR ELECTROPLATING ROLLABLE OBJECTS

Meredith A. Hunter, Lexington, Ky., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Nov. 27, 1964, Ser. No. 414,310
7 Claims. (Cl. 204—23)

Rollable objects are electroplated in an apparatus comprising a non-magnetic electrically conductive tank acting as cathode and including an anode for passing a plating current from the anode to the cathode and having means fixedly surrounding the tank for inducing a high speed rotating magnetic field through the tank. The magnetic field causes rollable objects within the tank to move around the walls of the tank and thereby become plated. The magnetic field means comprise a plural phase, plural oil electrical circuit.



3,386,896
ELECTROPLATING ONTO MOLYBDENUM SURFACES

Ronald M. Finne, Plainfield, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
No Drawing. Filed Nov. 5, 1964, Ser. No. 409,304
5 Claims. (Cl. 204—37)

1. A method for electroplating gold onto a substrate comprising molybdenum by the steps of oxidizing the surface to be plated in the presence of water to form molybdenum oxide hydrate, electroplating a strike film of gold and into the molybdenum oxide hydrate said film being less than 0.08 mils in thickness, treating the electroplated surface with a reducing agent to completely reduce the hydrated molybdenum oxide and electroplating gold onto the strike film to the desired thickness.

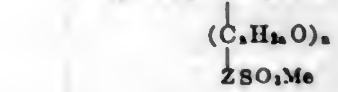
3,386,897
ELECTROPLATING BRIGHT NICKEL

Barnet D. Ostrow, 125 Redwood Drive, and Fred I. Nobel, 75 Fern Drive, both of Roslyn, N.Y. 11576
No Drawing. Filed Sept. 15, 1964, Ser. No. 396,703
23 Claims. (Cl. 204—49)

1. A method of electroplating nickel to produce a bright deposit on a basis metal which comprises providing an aqueous acid nickel bath having nickel ions therein introducing into said bath an effective amount of brightening agent taken from the class consisting of

$$R—SO_2NY—(C_aH_{2a}O)_n—Z—SO_3Me;$$

$$R—SO_2N[(C_aH_{2a}O)_n—Z—SO_3Me]_2$$



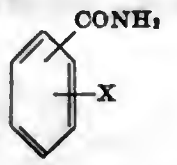
$$\begin{array}{c} R—SO_2—N—SO_2—R \\ | \\ (C_aH_{2a}O)_n \\ | \\ ZSO_3Me \end{array}$$

wherein R is a radical taken from the class consisting of phenyl, alkyl, and alkenyl, having from 1 to 6 carbon atoms; Y is hydrogen; *a* is a numeral from 1 to 3; *n* is a numeral from 0 to 20; Z is a radical taken from the class consisting of straight chain hydrocarbons having 1–3 carbon atoms; and Me is a metal imparting water solubility to said agent; and passing an electric current through said bath to deposit a bright nickel low stress coating on said basis metal.

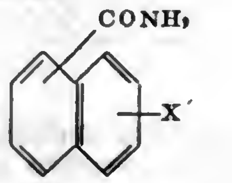
3,386,898
ALKALINE, CYANIDE ZINC ELECTROPLATING BATH PROCESS, AND ADDITIVE THEREFOR

John D. Rushmere, Grand Island, N.Y., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Continuation-in-part of application Ser. No. 393,777, Sept. 1, 1964. This application July 17, 1967, Ser. No. 653,619
13 Claims. (Cl. 204—55)

A process of electrodepositing bright zinc from an aqueous alkaline cyanide solution. The solution contains as a brightener an aromatic amide of the formula



and



wherein *x* is —OH, —COOH or —SO₃H. The solution may also contain organic polymers such as polyvinyl alcohol, polyethyleneimine, glue, gums, and protein substances.

3,386,899
ELECTROLYTIC PRODUCTION OF AROMATIC CONDENSATION PRODUCTS

Alvin F. Shepard and Bobby F. Dannels, Grand Island, N.Y., assignors to Hooker Chemical Corporation, Niagara Falls, N.Y., a corporation of New York
No Drawing. Filed Nov. 29, 1963, Ser. No. 327,125
24 Claims. (Cl. 204—59)

A process for producing aromatic condensation products comprises passing an electric current between a cathode and an anode in contact with liquid phase hydrogen fluoride, wherein the hydrogen fluoride is also in contact with an aromatic compound having a hydrogen atom substituted in at least one position of the aromatic ring. The process is capable of producing novel aromatic condensation products from benzene, alkyl-substituted benzenes, halogen-substituted benzenes, naphthalene, diphenyl, terphenyl, phenol, alkyl-substituted phenols and halogen-substituted phenols. The hydrogen fluoride can be substantially pure, or it can contain various additives, especially water, depending on the results desired in the process. The polymer products have excellent heat resistance and electrical insulation properties and can be coated on other types of polymers to modify the surface characteristics thereof. The polymers can be converted to sulfonated polymer products.

3,386,900
ELECTROLYTIC PROCESS OF MAKING DIETHYLSTILBESTROL

James Edward Slager, Edwardsburg, Ind., assignor to Miles Laboratories, Inc., Elkhart, Ind., a corporation of Indiana
No Drawing. Filed June 24, 1964, Ser. No. 377,482
10 Claims. (Cl. 204—75)

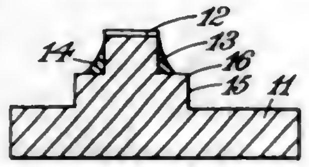
1. A process for the production of diethylstilbestrol which comprises dehydrating and rearranging 3,4-bis(p-hydroxyphenyl)-3,4-hexanediol to form 3,3-bis(p-hydroxyphenyl)-4-hexanone, electrolytically reducing the 3,3-bis(p-hydroxyphenyl)-4-hexanone in a catholyte in admixture with a salt selected from the class consisting of tetraalkylammonium salts, tetraalkylphosphonium salts

and trialkylsulphonium salts to form 3,3-bis(p-hydroxyphenyl)-4-hexanol, and dehydrating and rearranging the 3,3-bis(p-hydroxyphenyl)-4-hexanol to form diethylstilbestrol.

3,386,901
METHOD OF FORMING AN ELECTROLYTICALLY ETCHED PLATE

Lawrence John Young, Woodbridge, Suffolk, England, assignor to Young Research Laboratories Limited, London, England, a British company

Filed Feb. 19, 1965, Ser. No. 434,749
Claims priority, application Great Britain, Feb. 27, 1964, 8,275/64
10 Claims. (Cl. 204—143)



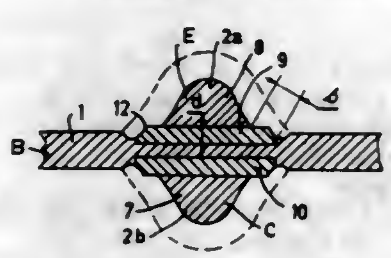
1. A method of forming an etched plate having a raised pattern, which method comprises applying to the face of a plate of etchable metal a coating of a resist in a pattern corresponding to that of the desired raised pattern, etching away metal from those areas not covered by the resist to form etched areas which are connected by side walls to the areas covered by the resist, stopping the etching process before a significant amount of undercutting has taken place, providing the newly formed side walls with a protective surface, etching away further metal from those areas not covered by the resist to form further etched areas and further side walls, stopping the second etching process before a significant amount of undercutting has taken place and thereafter subjecting the etched plate to a further etching step whereby the shoulder which is formed between the first and second sidewalls is etched away to provide an etched plate having the desired raised pattern and a substantially smooth surface between the face of the raised pattern and the general level of the etched plate.

4. A method of forming an etched plate as claimed in claim 1 wherein the etching steps are carried out electrolytically, the metal plate with its coating of resist being made an electrode in an electrolytic bath.

3,386,902
METHOD OF ETCHING THE CONTACTS ON A TRANSISTOR TO IMPROVE THE POWER OUTPUT THEREFOR

Raymond Launay, Caen, Calvados, France, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed Mar. 9, 1965, Ser. No. 438,192
Claims priority, application France, Mar. 10, 1964, 966,820
3 Claims. (Cl. 204—143)



An etching process for reducing the size of an alloying pellet at the surface portion of a semiconductor so that the original boundary portion between the pellet and an alloyed portion is exposed over a width at least equal to the thickness of the alloyed portion.

3,386,903
METHOD FOR PREPARING OXIMINOMETHYL BENZOIC ACID

Yoshikazu Ito, Mizuho-ku, Nagoya, Shigeru Wakamatsu, Midori-ku, Nagoya, and Yoichi Shimokawa, Minami-ku, Nagoya, Japan., assignors to Toyo Rayon Kabushiki Kaisha, Tokyo, Japan, a corporation of Japan

Filed July 24, 1964, Ser. No. 384,874
Claims priority, application Japan, July 26, 1963, 38/37,566
10 Claims. (Cl. 204—158)

A method for preparing oximinomethyl benzoic acid by contacting an inert solvent solution of o-, m-, or p-toluic acid, or mixtures thereof with a nitrosating agent such as nitrosyl chloride in the presence of light at atmospheric pressure and a temperature between about 0° C. and 30° C.

3,386,904
DESYL ARYL SULFIDES AS POLYMERIZATION INITIATORS

Constantine C. Petropoulos, Dayton, Ohio, assignor to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland

No Drawing. Filed Dec. 31, 1964, Ser. No. 422,532
14 Claims. (Cl. 204—159.24)

A chemical composition containing a monomer, tetraethylene glycol dimethylacrylate, and a compound of the class of desyl aryl sulfides, for example, desyl phenyl sulfide, which catalyze the photopolymerization of the monomer. A process for polymerizing a monomer, tetraethylene glycol dimethylacrylate, in which a desyl phenyl sulfide is dissolved in the monomer and the solution is exposed to ultraviolet light.

3,386,905
PREPARATION OF 1,1,1,3 - TETRACHLOROPROPANE WITH HIGH ENERGY IONIZING ELECTROMAGNETIC RADIATION

Charles F. Kohl, Forrest O. Stark, and George E. Vogel, Midland, Mich., assignors to Dow Corning Corporation, Midland, Mich., a corporation of Michigan

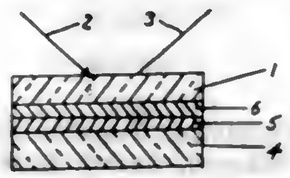
No Drawing. Filed Aug. 19, 1964, Ser. No. 390,737
8 Claims. (Cl. 204—163)

An economical method for preparing 1,1,1,3-tetrachloropropane by mixing carbon tetrachloride and ethylene in a mole ratio of 1:1 to 10:1 with the initial ethylene pressure being 2 to 15 atmospheres and free from free radical acceptors, heating the mixture to 60° to 130° C. and thereafter radiating the mixture with electromagnetic radiation to provide a dosage of 0.1 to 4.2 megarads. The process provides 70 to 100% 1,1,1,3-tetrachloropropane and any unreacted starting materials can be recycled.

3,386,906
TRANSISTOR BASE AND METHOD OF MAKING THE SAME

Robert L. Bronnes, Irvington, N.Y., assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed Nov. 26, 1965, Ser. No. 509,937
3 Claims. (Cl. 204—192)

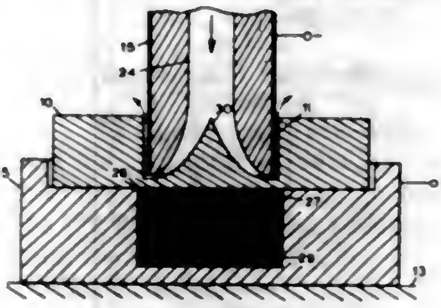


1. A method of manufacturing a conductive base for a semi-conductive body comprising the steps of depositing on the surface of a ceramic body by cathodic sputtering successive layers of niobium and nickel, heating the so-coated surface of the ceramic in a non-oxidizing atmosphere to interdiffuse the niobium and nickel, and applying to the so-coated surface a layer of gold by cathodic sputtering.

3,386,907
ELECTRO-EROSIVE MACHINING APPARATUS

Ronald C. Abt, Cincinnati, Ohio, assignor to The Cincinnati Milling Machine Co., Cincinnati, Ohio, a corporation of Ohio

Filed Mar. 24, 1965, Ser. No. 442,287
6 Claims. (Cl. 204—224)

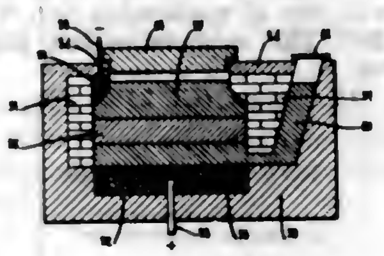


An electrochemical machining apparatus for producing holes extending completely through a workpiece. The work supporting structure or bolster includes an area directly in line with the hole to be produced that is adapted to support a center slug or trepanned cut-out. The bolster has a recess therein that is covered over by a rigid member that is yieldably supported so as to move into the recess when a sufficient force is applied against it. This rigid closure member supports the center slug or cut-out portion of the work during and after break-through of the tool.

3,386,908
CELL FOR REFINING ALUMINUM BY FUSION ELECTROLYSIS

André Daurat, Auzat, Ariege, France, assignor to Pechiney, Compagnie de Produits Chimiques et Electrometallurgiques, Paris, France

Filed Nov. 27, 1964, Ser. No. 414,140
Claims priority, application France, Dec. 3, 1963, 956,021
7 Claims. (Cl. 204—243)

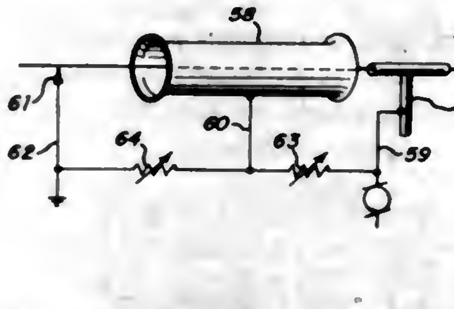


A cell for the electrolytic refining of aluminum which comprises an enclosure of refractory material having an access opening at the top and a cover dimensioned to span the access opening formed of a first stationary portion which is fixed to the housing and a movable portion which is adapted to be received in fitting relationship in an opening defined by the fixed stationary portion, an anodic sole plate at the bottom of the enclosure having an electrical connection, an anode layer of aluminum alloy to be refined overlying the anodic sole plate layer, a layer of electrolytic liquor overlying the anode layer, a cathode layer of refined metal substantially of frusto-conical shape having the base portion of larger cross-sectional dimension at the bottom in contact with the electrolytic liquor and an upper exposed portion of lesser dimension, and a cathode in contact with the cathode layer having an electrical lead extending through the housing into contact with the cathode layer.

3,386,909
APPARATUS FOR DEPOSITING MATERIAL ON A FILAMENT FROM IONIZED COATING MATERIAL

Ralph L. Hough, Springfield, Ohio, assignor to the United States of America as represented by the Secretary of the Air Force

Filed Dec. 8, 1964, Ser. No. 416,936
4 Claims. (Cl. 204—312)

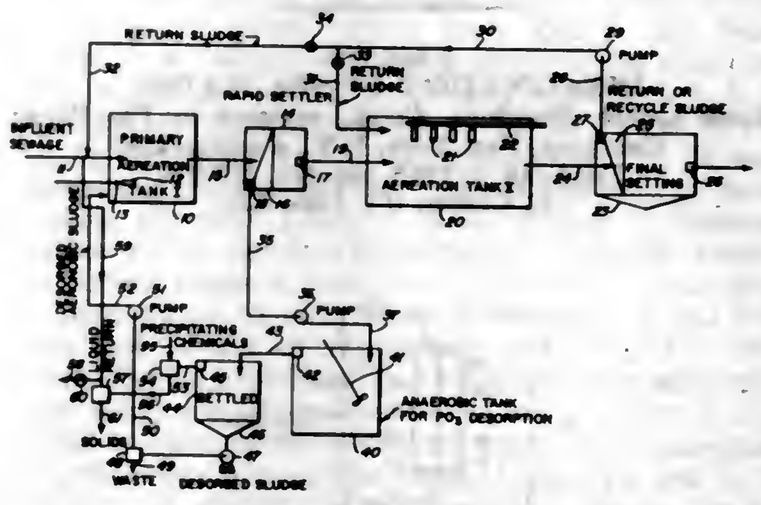


Method and apparatus for the deposition of a conductive or nonconductive material on a conductive or nonconductive moving filamentary substrate in a chamber filled with a gaseous suspension of ionized particles or plasma of the material by establishing an electrical field that continuously increases in intensity from an electrode situated in the plasma to the substrate in the case of a conductive substrate or to an electrode positioned as close as possible to the substrate in the case of a nonconductive substrate.

3,386,910
PROCESS FOR TREATMENT OF SEWAGE AND NUTRIENT REMOVAL

Tom H. Forrest, Evanston, Ill., assignor to FMC Corporation, a corporation of Delaware

Filed May 25, 1965, Ser. No. 458,689
6 Claims. (Cl. 210—5)



The process of this invention deals with the treatment of sewage to produce an effluent having a low biochemical oxygen demand and a markedly reduced content of nutrients, such as phosphorus compounds. In the illustrative embodiment, sewage is subjected to two stages of aeration and settling. Sludge recovered by settling the mixed liquor of the first aeration stage is either discharged to waste, or if needed for recycle is treated to remove its phosphate content. Sludge recovered by settling the mixed liquor of the second aeration stage is a low phosphate content sludge and is used for seeding the aeration stages.

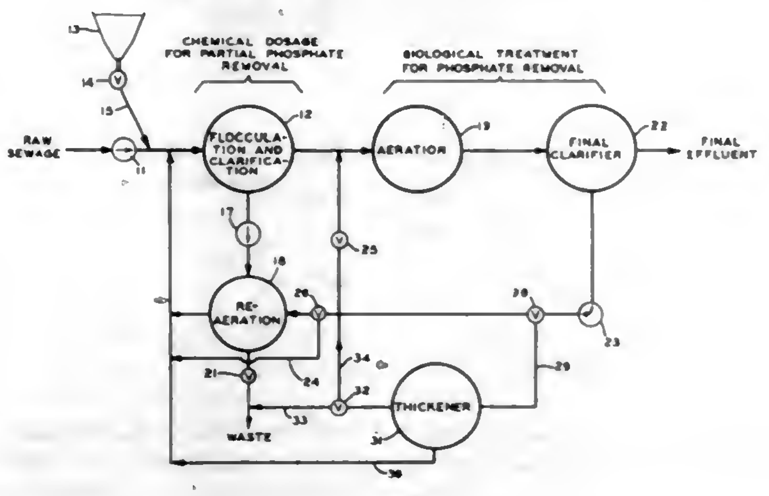
3,386,911

WASTE TREATMENT FOR PHOSPHOROUS REMOVAL

Orris E. Albertson, Norwalk, Conn., assignor to Dorr-Oliver Incorporated, Stamford, Conn., a corporation of Delaware

Filed Aug. 3, 1966, Ser. No. 570,017

17 Claims. (Cl. 210—18)


CHEMICAL DOSAGE FOR PARTIAL PHOSPHATE REMOVAL
BIOLOGICAL TREATMENT FOR PHOSPHATE REMOVAL
RAW SEWAGE
FLOCCULATION AND CLARIFICATION
AERATION
FINAL CLARIFIER
FINAL EFFLUENT
RE-AERATION
THICKENER
WASTE
11
12
13
14
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34
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1. A combined chemical and biological process for treating liquid organic waste material containing phosphorous, to decrease the phosphorous content to a predetermined minimum concentration, comprising the steps of dosing the raw waste material with a limited amount of a chemical precipitant for phosphorous substantially less than the amount required to remove phosphorous to the predetermined concentration to form an insoluble precipitate of phosphorous; subjecting the dosed waste material to a first sedimentation to separate the material into sludge and an effluent; aerating the effluent to produce phosphorous consuming cell growth, subjecting the aerated effluent to a second sedimentation to remove the phosphorous-bearing biological sludge and produce a final effluent of the predetermined minmium phosphorous concentration.

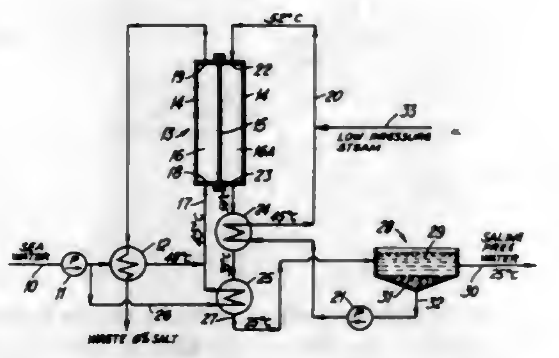
3,386,912

DESALINATION OF SEA WATER

Leon Lazare, Stamford, Conn., assignor to The Puraq Company, New York, N.Y., a partnership

Filed Jan. 7, 1965, Ser. No. 423,976

12 Claims. (Cl. 210—22)



A method of desalinating sea water comprising passing by osmosis part of the water from the sea water through a semipermeable membrane into an aqueous solution of partially water soluble copolymer of hydrophilic and hydrophobic monomers, and cooling the diluted solution to separate the product water.

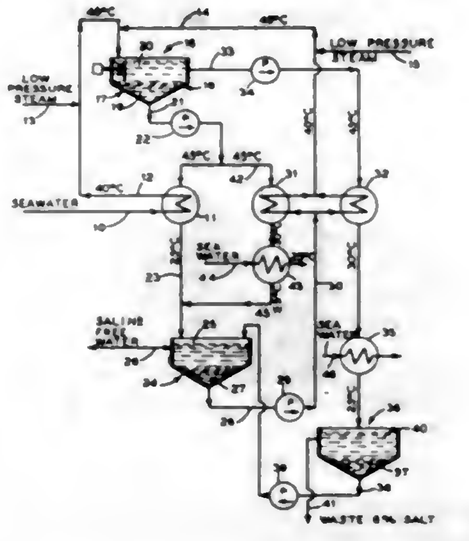
3,386,913

PROCESS FOR REDUCING SALT CONTENT OF SALT CONTAINING WATER

Leon Lazare, Stamford, Conn., assignor to The Puraq Company, New York, N.Y., a partnership

Continuation-in-part of application Ser. No. 423,975, Jan. 7, 1965. This application Dec. 30, 1965, Ser. No. 517,625

17 Claims. (Cl. 210—22)



1. The method of reducing the salt content of salt containing water comprising mixing such water with an aqueous solution of a polymeric solvent compound, said solvent compound being used in an amount to maintain said solution in a liquid state at all times, at a given temperature to form a liquid body having a stratum of water enriched solvent compound solution and a stratum of salt enriched water, drawing off the stratum of water enriched solvent compound solution and changing the temperature thereof with respect to said given temperature whereby said water enriched solution forms an aqueous phase substantially free of solvent compound and an enriched solvent liquid phase, and drawing off said aqueous phase.

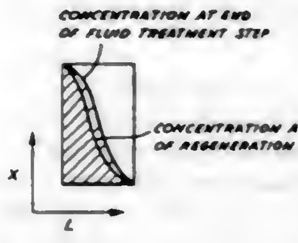
3,386,914

PROCESS OF REMOVING A COMPONENT FROM A FLUID

Robert Frederick Hunter, 2351 1st St., Burlington, Ontario, Canada

Continuation-in-part of application Ser. No. 428,901, Jan. 29, 1965. This application Jan. 24, 1966, Ser. No. 522,741

19 Claims. (Cl. 210—35)



Process of treating a fluid such as tap water or sea water to remove a component such as calcium or magnesium ion from the fluid in which the fluid is passed through a fixed bed of particles such as ion exchange resin particles and the bed is regenerated by passing a regenerant fluid through the bed. The fluids used in the process are passed through the bed at a rate of flow and for a period of time such that at least 50% of the length of the bed in contact with the fluid to be treated during the fluid treatment step is actively taking up the component from the fluid to be treated and/or at least 50% of the length of the bed in contact with the regenerant fluid during the regeneration step is actively giving up the component to the regenerant fluid.

3,386,915

PROCESS FOR THE MANUFACTURING OF CHLORINE DIOXIDE IN SOLUTION AND THE USE OF THE SOLUTION THUS OBTAINED

Robert Rutschi, Schlieren, Zurich, and Rudolph Gehring, Rekingen, Aargau, Switzerland, assignors to Solvay & Cie, Societe Anonyme, Brussels, Belgium, a Belgian corporation

No Drawing. Continuation-in-part of application Ser. No. 438,101, Mar. 8, 1965. This application Aug. 23, 1967, Ser. No. 662,563

Claims priority, application Switzerland, Mar. 18, 1964, 3,464/64

11 Claims. (Cl. 210—62)

An at least 5% solution of $NaClO_2$ is mixed with a 250 to 300% molar excess of an at least 5% solution of HCl in the presence of catalyst to produce ClO_2, useful for disinfecting swimming pool water.

3,386,916

LUBRICATING GREASE COMPOSITION

Howard D. Moore, Chester, Norris A. Scarlett, Eastham, Wirral, and John A. Jones, Ellesmere Port, England, assignors to Shell Oil Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed June 28, 1965, Ser. No. 467,728

Claims priority, application Great Britain, July 1, 1964, 27,172/64

9 Claims. (Cl. 252—21)

Greases useful in a non-oxidizing atmosphere comprising a lubricating oil base gelled to grease consistency with an inorganic gel coated with a surfactant of esterifying and polymerizable silicon compounds and containing 1–10% of a C_{10-20} metal soap and 1–10% of an alkali or alkaline earth metal nitrite.

3,386,917

FLUOROALKYLPOLYSILOXANE LUBRICANTS CONTAINING ORGANOPHOSPHORUS ADDITIVES

Harry M. Schiefer, Midland, Mich., assignor to Dow Corning Corporation, Midland, Mich., a corporation of Michigan

No Drawing. Filed July 13, 1966, Ser. No. 564,756

9 Claims. (Cl. 252—49.9)

Small amounts of organophosphorus lubricant additives mixed with fluoroalkylmethylpolysiloxane exhibit marked enhancement of anti-wear characteristics of metal-on-metal.

3,386,918

HIGH TEMPERATURE DIELECTRIC REINFORCED COMPOSITE

Ralph L. Hough, Springfield, and Herbert S. Schwartz, Trotwood, Ohio, assignors to the United States of America as represented by the Secretary of the Air Force

No Drawing. Filed Oct. 6, 1965, Ser. No. 493,586

2 Claims. (Cl. 252—63.5)

Composition of matter comprising a low modulus boron nitride matrix firmly bonding together a multiplicity of high modulus aluminum oxide whiskers by a process comprising the steps of compacting crystalline aluminum oxide whiskers into a mat of desired configuration and dimensions and then impregnating the mat with a boron nitride vapor under a pressure of 0.01 mm. to 10 mm. of mercury at a temperature maintained of 800° C. to 1500° C.

3,386,919

PREPARATION OF ORIENTED MONOCRYSTALS

Francis Forrat, Marcoussis, France, assignor to Compagnie Generale d'Electricite, Paris, France

Filed Aug. 5, 1963, Ser. No. 299,833

Claims priority, application France, Aug. 10, 1962, 906,663

17 Claims. (Cl. 252—301.1)

Process for the preparation of oriented homogeneous monocrystals having the generic formula $ALnO_3$ and having a crystalline structure similar to the Perovskite structure, Ln designating trivalent rare earths and A designating trivalent metals. Basically, the crystal is obtained from a powder of the substance to be crystallized. First, a homogeneous and perfectly crystallized powder is obtained. A monocrystal is then formed therefrom in a hot flame by a modified Verneuil method. The obtained monocrystal is then subjected to appropriate chemical and thermal treatments to eliminate mechanical stresses therein and to modify its coloration as desired. Coloration may be obtained by diffusion or doping with positive ions.

3,386,920

PROCESS FOR FLUORESCENCE DETECTION OF EXTREMELY SMALL FLAWS

James R. Alburger, 5007 Hillard Ave., La Canada, Calif. 91011

Continuation-in-part of application Ser. No. 323,529, Nov. 13, 1963. This application Oct. 4, 1965, Ser. No. 492,674

23 Claims. (Cl. 252—301.2)

1. In an inspection process in which thin films of a fluorescent tracer are revealed by a fluorescence response, the step of preparing a fluorescent tracer by dissolving at least one sensitizer in a solvent carrier, said fluorescent tracer consisting essentially of at least one sensitizer selected from the group consisting of fluorescent (di)aminostilbine(di)sulfonic acid dyes, fluorescent dibenzothiophene dyes, fluorescent monoazole dyes, fluorescent bisazole dyes, fluorescent coumarin dyes, fluorescent perylene dyes, fluorescent naphthalic acid imide dyes, fluorescent pyridotriazole dyes, fluorescent di-hydrocollidine dyes, pyrene, 1′-hydroxy-2′-acetonaphthone, fluorescent acridine dyes having Color index designations of 46000, 46025, 46050, 46055, 46060, 46065, 46080, Basic Orange 14, 15, 16, and 23, and Basic Yellow 6 and 9, fluorescent xanthene dyes having Color Index designations of 45000, 45005, 45006, 45010, 45015, 45020, 45050, 45090, 45100, 45105, 45155, 45165, 45210, Basic Red 8, and Basic Violet 11, fluorescent brightening agents having Color Index designations of C. I. Brightening Agent 2, 3, 4, 5, 6, 8, 9, 22, 24, 25, 26, 29, 30, 46, 47, 53, 54, 55, 56, 57, 59, 60, 61, 65, 66, 67, 68, 69, 70, 71, 74, 75, 76, 77, 78, and fluorescent dyes having Color Index designations of Basic Orange 10, Acid Yellow 7, Basic Yellow 7, Disperse Yellow 11, 13, and 31, Direct Yellow 59, Solvent Yellow 44, Solvent Green 5, Acid Red 50, 52, and 87, Basic Red 1, Basic Violet 10, Acid Violet 7, Developer 8, and Solvent Red 36 and 45, respectively, and a liquid solvent carrier for said sensitizer, said sensitizer being selectively used singly and in combination and being present in said liquid solvent carrier within the range of proportional concentrations from at least about 15 grams per pint up to the limit of solubility of said sensitizer, whereby the dimensional threshold of fluorescence is adjusted to an operational value below about 250 millimicrons.

3,386,921

GELS AND METHODS OF PRODUCING SAME

Richard G. Schweiger and John J. O'Connell, San Diego, Calif., assignors to Kelco Company, San Diego, Calif., a corporation of Delaware

No Drawing. Filed Apr. 25, 1963, Ser. No. 275,504

7 Claims. (Cl. 252—316)

1. A composition of matter consisting essentially of

water, from 0.3 to 3.0% of a water soluble algin alkylcarboxylate having a D.S. within the range 0.1 to 1.1, and a compound furnishing a divalent ion chosen from the group consisting of calcium, zinc, cobalt, nickel, copper, and barium at a concentration of said divalent ion of at least 0.5 milliequivalent/gram of algin alkylcarboxylate.

6. The process of producing an aqueous gel materially less sensitive to the addition of divalent ions which comprises, adding to water from 0.3 to 3.0% of a water soluble algin acetate having a D.S. within the range 0.1 to 1.1 and, without respect to the order of addition, adding a compound furnishing a divalent ion chosen from the class consisting of calcium, zinc, cobalt, nickel, copper, and barium to an extent sufficient to provide a concentration of said divalent ion of at least 0.5 milliequivalent/gram of algin acetate.

3,386,922

WET AIR OXIDATION OF COMBUSTIBLE MATERIALS ADSORBED ON CARBONACEOUS ADSORBENT

Eugene Wilhelm Schoeffel, Rothschild, and Frederick John Zimmermann, Wausau, Wis., assignors to Sterling Drug, Inc., New York, N.Y., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 854,247, Nov. 20, 1959. This application Nov. 23, 1962, Ser. No. 239,790

4 Claims. (Cl. 252—416)

Regenerating spent carbonaceous adsorbent by suspending in water, and oxidizing with a gas containing free oxygen at a temperature of 125° C. to 300° C. and at a pressure sufficient to maintain a portion of said water in the liquid phase.

3,386,923

CATALYST AND PROCESS FOR THE PREPARATION OF UNSATURATED NITRILES

Howard S. Young and Edgar L. McDaniel, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Original application June 15, 1964, Ser. No. 375,304, now Patent No. 3,293,280, dated Dec. 20, 1966. Divided and this application Apr. 26, 1966, Ser. No. 574,836

13 Claims. (Cl. 252—432)

Novel catalyst composition comprising a heteropoly acid of molybdenum containing chromium as the central atom, an oxide of arsenic, a supporting carrier, and optionally one of an oxide of chromium, an oxide of manganese, an oxide of iron, and an oxide of boron. The catalyst is useful in the ammoxidative conversion of propylene to acrylonitrile.

3,386,924

CURING POLYEPOXY COMPOUNDS WITH TETRAHYDROTRICYCLOPENTADIENYLENE DIAMINE

Franz Steden, Mannheim, Hugo Schaedler, Maikammer, Pfalz, and Oskar Lissner and Ludwig Schuster, Ludwigshafen (Rhine), Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

No Drawing. Filed Nov. 15, 1965, Ser. No. 507,695
Claims priority, application Germany, Nov. 20, 1964, B 79,418

5 Claims. (Cl. 260—2)

1. A curable composition comprising
(A) a poly-1,2-epoxide compound and
(B) tetrahydrotricyclopentadienylene diamine,
(C) being present in about 1 to 3 times the equivalent amount of (A).

3,386,925

THERMOPLASTIC RUBBER BLENDS COMPRISING RECLAIMED RUBBER AND AN ETHYLENE/VINYL ACETATE COPOLYMER

James R. Dillhoefer, Cleveland Heights, Ohio, assignor to The Eagle-Picher Company, Cincinnati, Ohio, a corporation of Ohio

Filed Nov. 30, 1965, Ser. No. 510,654

9 Claims. (Cl. 260—2.3)

1. A composition comprising a blend of (1) a copolymer of ethylene and vinyl acetate containing from 12 to 25 weight percent based on the copolymer of vinyl acetate and having a melt index within the range of 0.1 to 10 dg. per minute and (2) reclaimed rubber characterized by an acetone extract content of 7 to 25 weight percent, an ash content of 6 to 40 weight percent, a carbon content of 10 to 25 weight percent, and a rubber hydrocarbon content of 40 to 65 weight percent, said copolymer being present in a concentration of 20 to 85 weight percent based on the blend.

3,386,926

METHOD OF MAKING EXPANDABLE PEARLS OF STYRENE COPOLYMER

Juliette Gavoret, Paris, France, assignor to Produits Chimiques Pechiney - Saint - Gobain, Neuilly-sur-Seine, France

No Drawing. Filed May 18, 1964, Ser. No. 368,319
Claims priority, application France, May 20, 1963, 935,402

14 Claims. (Cl. 260—2.5)

The invention is addressed to expandable pearls of styrene copolymer and to the method for the preparation of same wherein a styrene component is copolymerized in aqueous suspension with at least one unsaturated aliphatic hydrocarbon, at least one of which is gaseous under normal temperature and pressure and is introduced after the polymerization has been initiated but before it is completed and is retained at least in part in the formed particles of the copolymer to function as the expansion agent.

3,386,927

METHOD FOR MAKING POROUS POLYURETHANE FOAMS

Alfred E. Rosecrans and Calvin N. Goeders, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Filed Aug. 31, 1964, Ser. No. 393,046

10 Claims. (Cl. 260—2.5)

1. In a process for making a flexible polyurethane foam by reacting a polyhydroxyl-containing organic compound having an OH equivalent weight of at least 500 with an organic polyisocyanate in the presence of an amine catalyst and a stannous salt of a fatty acid catalyst, the improvement for making a flexible polyurethane foam containing predominantly open and interconnecting cells which comprises carrying out the reaction of (1) a polyether polyol having an OH equivalent weight of at least 500 and consisting principally of the reaction product of (i) propylene oxide or propylene oxide and a minor proportion of ethylene oxide, with (ii) an aliphatic polyol having from 2 to 8 hydroxyl groups in the molecule, and (2) an approximate chemically equivalent amount of an organic polyisocyanate in admixture with (a) from 6 to 12 parts by weight of water, (b) from 20 to 120 parts by weight of an inert volatile organic fluid blowing agent boiling below 110° C., and (c) from 1 to 8 parts by weight of a silicone surfactant, per 100 parts by weight of said polyether polyol starting material, said polyisocyanate being within the range of from 0.90 to 1.10 NCO groups per chemically equivalent hydrogen and OH groups in the polyether polyol and water starting materials and with the proviso that said mixture of starting materials (1), (2) and (a), (b), and (c) absent said catalysts, has an absolute viscosity between about 20 and about 40 centipoises at 25° C.

3,386,928

PROCESS OF FOAMING A POLYMERIZABLE CYCLIC VINYL ETHER

Georges Emile Bernier, Beloeil Station, Quebec, Thomas Gilchrist, St. Lambert, Quebec, and Robert Harris Pallen, Beloeil, Quebec, Canada, assignors to Canadian Industries Limited, Quebec, Quebec, Canada, a corporation of Canada

No Drawing. Filed Sept. 4, 1964, Ser. No. 394,625
Claims priority, application Great Britain, Oct. 3, 1963, 38,977/63

5 Claims. (Cl. 260—2.5)

Foamed cellular polymeric materials prepared by the reaction of dihydropyranyl compounds with phenols employing as catalyst an aqueous solution of fluosilicic and fluoboric acids. A halogenated hydrocarbon foaming agent is employed. The proportions of dihydropyranyl ingredient to phenolic ingredient lies in the range 20:3 and 20:7 by weight. The catalyst contains 3% to 50% by weight of fluosilicic acid and 97% to 50% by weight of fluoboric acid. The cellular products have a smooth silky texture and low friability with increased time of rise during foaming.

3,386,929

SEALING COMBINATION COMPRISING BUTYLENE POLYMER, FILLER, ACID AND POLYVINYL ACETATE

Henri Brunel, 9 Rue du General Niox,
Paris 16eme, France

No Drawing. Filed Oct. 8, 1963, Ser. No. 319,915
Claims priority, application France, Oct. 12, 1962, 942,844

6 Claims. (Cl. 260—4)

1. A combination of sealants for building materials, whereby a stable, leakproof seal that is especially useful for joints between glass and metal is obtained, comprising
(1) a bedding material comprising 100 parts of butylene homopolymers having molecular weights of about 1500 to 2500 and 180–230 parts of a filler, said filler consisting essentially of
  (a) 100–160 parts of neutral powdered rock,
  (b) 55–65 parts of powdered calcium carbonate, and
  (c) 13 to 17 parts of acidic materials selected from the group consisting of fatty acids, rosin and naphthenic acids and mixtures thereof, and
(2) an obturating material that is applied over said bedding material, said obturating material comprising 100 parts of polyvinyl acetate latex and 40–50 parts of neutral powdered rock, said latex comprising 50–60 parts of polyvinyl acetate having a particle size of about 0.2 micron, at least about 10 parts of dibutyl phthalate and 40–50 parts of water, all parts being by weight.

3,386,930

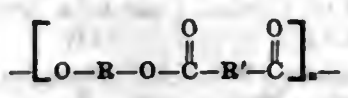
SYNTHETIC FILAMENTS OF POLYANHYDROGLUCOSE TRIESTER COPOLYMERS

Joseph G. Santangelo, Morristown, N.J., and Henry W. Steinmann, Sparta, N.H., assignors to Celanese Corporation, a corporation of Delaware

No Drawing. Filed Sept. 25, 1964, Ser. No. 399,373

20 Claims. (Cl. 260—13)

A synthetic filament comprising a copolymer consisting of soft and hard segments, said hard segment comprising a polyanhydroglucose triester, preferably cellulose triacetate having an average molecular weight of from about 1000 to about 5000, an inherent viscosity of about 0.05 to about 0.04 dl./g., an acetyl value of at least 56 percent, said soft segment being represented by a formula selected from the group consisting of



$$-\left[O-R-O-\overset{O}{\overset{\|}{C}}-R'-\overset{O}{\overset{\|}{C}}\right]_n-$$

and

$$-[O-R]_n-O-$$

wherein R and R′ are organic divalent radicals containing terminal functional groups possessing active hydrogen, preferably a compound selected from the group consisting of low molecular weight polyesters and low molecular weight polyethers, and *n* is such that the molecular weight ranges from about 250 to about 5000 and a process of producing said filament which comprises extruding an organic solvent solution of an elastomeric, segmented copolymer through at least one jet opening, preferably at a temperature ranging between about 50° C. and about 250° C. into an evaporative atmosphere.

3,386,931

COPOLYMERS OF CELLULOSE TRIESTERS AND ISOCYANATE CONTAINING POLYMERS

Charles L. Smart, Millington, and Donald K. Keel, Westfield, N.J., assignors to Celanese Corporation, a corporation of Delaware

No Drawing. Filed Aug. 16, 1965, Ser. No. 480,193

14 Claims. (Cl. 260—13)

A composition comprising a copolymer which is the reaction product of reactants including a soluble non-cellulosic polymeric material having unreacted isocyanate end groups and a high-molecular weight cellulose triester of a lower aliphatic acid, containing some free hydroxyl groups, in a substantially undegraded state, the reactants being employed in weight percentages ranging from about 10:90 to about 90:10.

3,386,932

NOVEL CELLULOSICS, SEGMENTED COPOLYMERS, AND METHODS OF PREPARING SAME

Henry W. Steinmann, Sparta, N.J., assignor to Celanese Corporation, a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 379,386, June 30, 1964. This application Dec. 22, 1965, Ser. No. 515,713

23 Claims. (Cl. 260—16)

1. A process for preparing copolymers which comprises depolymerizing a high molecular weight polyanhydroglucose triester while maintaining the ester groups thereof substantially intact to form a low molecular weight polyanhydroglucose triester by contacting said high molecular weight triester in a solvent therefor with an acid catalyst, recovering the low molecular weight triester, reacting the low molecular weight triester with an organic diisocyanate and a polymer having terminal functional groups possessing active hydrogen, and recovering copolymers of low molecular weight polyanhydroglucose triester.

2. The process of claim 1 wherein said polymer having terminal functional groups possessing active hydrogen is selected from the group consisting of low molecular weight polyesters and low molecular weight polyethers, said polyesters and polyethers having an average molecular

weight of from about 250 to about 5000 and melting below about 60° C.

3,386,933

COATING COMPOSITION FOR ERASABLE PAPER COMPRISING POLYVINYL ACETATE EMULSION, HYDROXYETHYLATED STARCH DISPERSION AND COLLOIDAL SILICA AND ERASABLE PAPER COATED THEREWITH

John C. Genzabella, Pittsfield, Mass., assignor to The Budd Company, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed May 26, 1964, Ser. No. 370,362

4 Claims. (Cl. 260—17.4)

A coating for an erasable paper includes polyvinyl acetate, chemically modified starch and an anti-blocking agent mixed in approximately 14:5:1 proportions, respectively.

3,386,934

PAINTS COMPRISING ALUMINUM OXIDE THAT CONTAINS LESS THAN 30% ALPHA ALUMINA

Leon Aguadisch, Sevres, Jacques Charrier, La Courneuve, and Claude Miguet, Paris, France, assignors to Produits Chimiques Pechiney-Saint-Gobain, Neuilly-sur-Seine, France

No Drawing. Filed June 9, 1965, Ser. No. 462,714

Claims priority, application France, June 15, 1964, 978,325

10 Claims. (Cl. 260—23.7)

The invention is addressed to a paint composition formulated of a binder selected from the group consisting of a drying oil or a polymeric material in the form of a homopolymer or copolymer of vinyl acetate, vinyl chloride, vinylidene chloride, acrylic and alkyl acrylic derivatives and styrene-butadiene copolymers, a transition alumina having less than 30% by weight alpha alumina, a specific area within the range of 20 to 250 $m^2/g.$, a microporosity determined by absorption of carbon tetrachloride within the range of 3 to 30 $cm.^3$ of carbon tetrachloride per 100 grams of alumina, and a grain size of less than 65 microns, and in which the alumina particles may be coated with an oleophilic material or a hydrophilic material and which may contain finely divided organic pigments such as titanium dioxide.

3,386,935

HIGH MODULUS POLYESTER AND POLYCARBONATE COMPOSITIONS

Winston J. Jackson, Jr., and John R. Caldwell, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Continuation-in-part of application Ser. No. 445,686, Apr. 5, 1965, which is a continuation-in-part of application Ser. No. 137,979, Sept. 14, 1961, now Patent No. 3,254,047, dated May 31, 1966. This application June 29, 1966, Ser. No. 561,370

3 Claims. (Cl. 260—26)

1. A thermoplastic composition comprising from about 98% to about 50% by weight of a thermoplastic polymer selected from the group consisting of polyesters resulting from the condensation of an alicyclic secondary diol of from 4 to 14 carbon atoms and a member of the group consisting of aromatic dicarboxylic acids, alicyclic dicarboxylic acids, carbonic acid, and the esterifiable derivatives of said acids; and from about 2% to about 50% by weight of an antiplasticizer compound selected from the group consisting of polystyrene thioglycols having molecular weights from 440 to 3400, chlorinated aromatic polynuclear hydrocarbons containing from 30% to 75% nuclear chlorine, abietyl alcohol, hydrogenated abietyl alcohol, mono and diesters from condensation of unsaturated and hydrogenated abietyl alcohols with monocarboxylic and dicarboxylic acids having up to 19 carbon atoms, said antiplasticizer being further characterized by (1) containing at least 2 nonbridged rings containing from 4 to 8 carbon atoms wherein said rings are either carbocyclic or heterocyclic rings, (2) containing at least one atom selected from the group consisting of halogen, oxygen, nitrogen, and sulfur, (3) having in at least 65% of the length of its molecule one cross-sectional dimension less than about 5.5 angstrom units, and (4) having a glass transition temperature of greater than —50° C.

3,386,936

CARVEABLE COMPOSITIONS COMPRISING PARAFFIN WAX, ETHYLENE-VINYL ACETATE OR ETHYLENE-ETHYL ACRYLATE COPOLYMER AND PLASTICIZER

Travis L. Gordy, Francis J. Higgins, and Olen L. Riggs, Jr., Ponca City, Okla., assignors to Continental Oil Company, Ponca City, Okla., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 273,829, Apr. 18, 1963. This application Jan. 27, 1964, Ser. No. 340,527

13 Claims. (Cl. 260—27)

Wax-containing composition which is easily carveable and particularly suitable for use as carving or sculpturing blocks. The composition comprises paraffin wax, wax-extendible copolymer (e.g., ethylene-vinyl acetate copolymer) and plasticizing agent (e.g., methyl stearate).

3,386,937

NON-EXUDING RUBBERS

Lyle O. Amberg, Landenberg, Pa., assignor to Hercules Incorporated, Wilmington, Del., a corporation of Delaware

No Drawing. Continuation-in-part of abandoned application Ser. No. 416,609, Dec. 7, 1964. This application Jan. 23, 1967, Ser. No. 610,736

12 Claims. (Cl. 260—27)

Vulcanizates prepared from high-rosin rubber compositions have not proved entirely satisfactory because the rosin has a tendency to exude from the vulcanizate upon aging. A material such as triethanolamine, n-octylamine, diethanolamine, morpholine, diphenylguanidine, hexamethylenetetramine, a rosin amine and mixtures thereof is added to high-rosin rubber compositions prior to vulcanization to eliminate this tendency of rosin to exude.

3,386,938

ACRYLIC WAX ABRASION RESISTANT FIBER FINISH COMPOSITION

Neil Lamar Finch, Sr., Kinston, N.C., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Feb. 16, 1966, Ser. No. 527,774

1 Claim. (Cl. 260—28.5)

1. An aqueous finish emulsion for application to yarn of synthetic fibers of a polymer of the group consisting of polyamides and polyesters, and consisting essentially of an emulsifier, about 7.9 parts by weight of a soft, paraffin wax, about 7.9 parts by weight of a partially oxidized, hard, microcrystalline wax, about 1.3 parts by weight of an acrylic resin of esters of acrylic or methacrylic acids with alcohols containing 1 to 10 carbon atoms, and about 70 parts by weight of water, the paraffin wax having a melting point of about 52° to 55° C., and a needle penetration of 13 at 25° C., the microcrystalline wax having a melting point of 96° C., a needle penetration at 25° C. of 3, an acid number of 10 to 15, and a saponification number of 25 to 35.

3,386,939

ACRYLIC DISPERSIONS FOR WIRE ENAMELS

Kenneth J. Mesec, Arlington Heights, Ill., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 414,440, Nov. 27, 1964. This application Sept. 22, 1967, Ser. No. 669,673

13 Claims. (Cl. 260—29.3)

An aqueous dispersion of a water-insoluble interpolymer prepared by

(1) treating a latex with air wherein the polymer of the latex consists essentially of 1–15% by weight of an α,β-unsaturated carboxylic acid, 30–80% by weight of a nitrile of the formula

$$CH_2=\overset{\overset{\displaystyle R^1}{|}}{C}-CN$$

where R^1 is either hydrogen or methyl and 15–65% of acrylic acid ester or a methacrylic acid ester; and

(2) reacting the air treated latex with an alkylene imine to form a polymer having pendent aminoester radicals, or hydroxyamide radicals or a mixture of these radicals.

3,386,940

STABLE AQUEOUS DISPERSIONS OF POLYAMIDES

Donald Edgar Tuites, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Apr. 29, 1965, Ser. No. 451,989

3 Claims. (Cl. 260—29.4)

A wash and wear textile treating bath comprising

(a) Water,

(b) 4–12% by weight of a n-methylol condensate of a member of the group consisting of melamine and urea,

(c) 0.5–2% by weight of an acid salt of a metal,

(d) 0.5–5% by weight of a dispersed polyamide of a diamine and a dicarboxylic acid,

(e) A modifier selected from the group consisting of phenols, aromatic alcohols and aromatic glycols, which at least swells the said polyamide, and whose solubility in water does not exceed about 6% by weight at room temperature, the amount of said modifier being 20–30% based on the total weight of said polyamide and said modifier, and

(f) 5–15%, based on the total weight of said polyamide and said modifier, of a polyvinyl alcohol having a percent hydrolysis of 78–90% and a 4% water solution viscosity of 20–45 centipoise as determined at 20° C. by the Hoeppler falling ball method.

3,386,941

GLASS TINTING LACQUER COMPOSITIONS

John S. Kane, 218 W. Summit St.,
Somerville, N.J. 08876

No Drawing. Filed Aug. 12, 1965, Ser. No. 479,316

5 Claims. (Cl. 260—31.2)

A sprayable transparent tinted film-forming sun screen composition consisting of approximately 3–10 parts by weight of an acrylic resin selected from the group consisting of isobutyl poly methacrylate, n-butyl poly methacrylate, ethyl poly methacrylate and a 50/50 copolymer of n-butyl methacrylate/isobutyl methacrylate dissolved in approximately 90–97 parts by weight of a solvent medium comprising a blend of solvents selected from the group consisting of naphtha, isobutanol, n-butanol, n-propanol, xylene, methyl isobutyl ketone, butyl acetate, amyl acetate, cyclohexanone, ethylene glycol monoethyl ether, ethylene glycol monomethyl ether, ethylene glycol monomethyl ether acetate and ethylene glycol monoethyl ether acetate and approximately .35% solvent dye. The lacquers formulated in accordance with this invention are particularly suited for utilization as transparent sun-screen film-forming compositions for the aerosol application of optically distortion-free, tenaciously adherent films such as for the interior of automobile windshields and the like.

3,386,942

STABILIZATION OF NON-YELLOWING SEGMENTED POLYURETHANE COPOLYMERS OF POLYMERIC DIOLS, FUNCTIONALLY ALIPHATIC DIISOCYANATES AND FUNCTIONALLY ALIPHATIC DIAMINES

Alan Bell, Charles J. Kibler, and James G. Smith, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed June 29, 1964, Ser. No. 378,963

19 Claims. (Cl. 260—37)

Non-yellowing stabilized elastomeric linear poly(ether or ester-urethane-ureas) suitable for spandex fibers and films containing as an additive (1) a 2,4,6-trialkylphenol wherein the total number of carbon atoms in the three alkyl radicals is from 20 to 60, or (2) said trialkylphenol in combination with one or more of (a) a mono or dihydric alcohol ester of thiodipropionic or thiodibutyric acid, including polyesters thereof which may be terminated with a monohydric alcohol, (b) an organic phosphite which may be monomeric or polymeric and may contain intralinear —O— or —S— atoms, (c) an aliphatic amine having a molecular weight above 280, (d) an inorganic pigment.

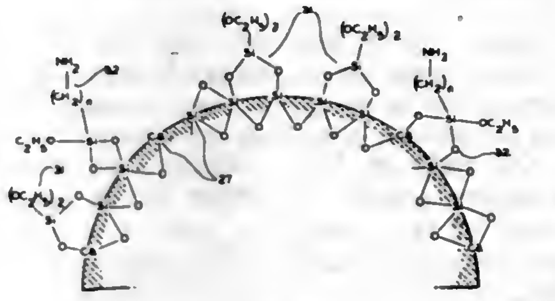
3,386,943

PROCESS FOR POLYMERIZING LACTAMS IN THE PRESENCE OF FILLER OR REINFORCING AGENT

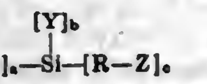
Ross M. Hedrick and Paul A. Tierney, St. Louis, and William R. Richard, Jr., Kirkwood, Mo., assignors to Monsanto Company, St. Louis, Mo., a corporation of Delaware

Filed Nov. 24, 1964, Ser. No. 413,456

12 Claims. (Cl. 260—37)



1. In a process for conducting a base-catalyzed, substantially anhydrous lactam polymerization in the presence of a filler or reinforcing agent having hydroxyl groups present on its surface, said filler or reinforcing agent being present in a quantity sufficient to provide a finished composition containing from about 5 to about 95% by weight of said filler or reinforcing agent, the improvement comprising using sufficient catalyst both to react with substantially all said hydroxyl groups and to catalyze the polymerization in combination with an organosilane of the formula



$$[X]_a-\overset{\overset{\displaystyle [Y]_b}{|}}{Si}-[R-Z]_c$$

where X is an inorganic-reactive group, Y is a non-reactive group, Z is a group capable of incorporation into a growing polylactam chain, R is an alkylene or alkenylene chain of from 2 to about 20 carbon atoms, *a* is an integer from 1 to 3, *b* is an integer from 0 to 2, *c* is an integer from 1 to 3, and the sum of *a*+*b*+*c* is 4.

3,386,944

WATER BINDING AGENTS FOR POLYURETHANES BASED ON MIXTURES OF PHOSPHOROUS PENTOXIDE WITH PIGMENTS OR FILLERS

Friedrich Blomeyer, Cologne-Stammheim, Germany, assignor to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany
No Drawing. Filed Sept. 10, 1965, Ser. No. 486,537
Claims priority, application Germany, Sept. 18, 1964, F 44,008
12 Claims. (Cl. 260—37)

Water binding agents which are mixtures of phosphorous pentoxide and a pigment or filler such as zinc oxide, aluminum oxide, silicic acid, magnesium oxide or calcium oxide. The water binding agents are used to dry the components of polyurethanes including coating compositions based on organic polyisocyanates and active hydrogen containing compounds.

3,386,945

THERMALLY STABLE SEALANTS FROM FLUOROALKYL SILOXANES, ZIRCONIUM SILICATE, AND CERIC HYDRATE

James F. Bartell and Marcus E. Ross, Midland, Mich., assignors to Dow Corning Corporation, Midland, Mich., a corporation of Michigan
No Drawing. Filed Jan. 12, 1966, Ser. No. 520,065
3 Claims. (Cl. 260—37)

1. A room temperature vulcanizable composition consisting essentially of

(1) 100 parts by weight of a polysiloxane of the general formula

$$HO([CF_3CH_2CH_2)CH_3SiO]_x[(CH_3)_2SiO]_yH$$

in which x and y are positive intgers such that the viscosity is from 25,000 to 350,000 cs. at 25° C. and y is no more than 10 percent of the sum of $x+y$,

(2) from 5 to 15 parts by weight of vinyltriacetoxysilane,

(3) from 5 to 25 parts by weight of a reinforcing silica,

(4) from 50 to 100 parts by weight of zirconium silicate and

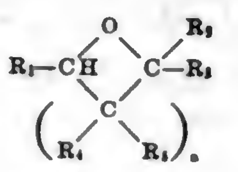
(5) from 1 to 5 parts of ceric hydrate wherein the cerium atoms are in the tetravalent state, the other atoms of the compound are hydrogen atoms and oxygen atoms, said hydrogen atoms are present as —OH radicals, H_2O molecules or both, and said hydrogen atoms are present in an amount, determined as H_2O molecules, from 1 to 10 weight percent inclusive based on the total weight of ceric hydrate.

3,386,946

FILLED EPIHALOHYDRIN POLYMERS

William D. Willis, Limestone Acres, Delaware, assignor to Hercules Incorporated, a corporation of Delaware
No Drawing. Filed Apr. 26, 1966, Ser. No. 545,253
6 Claims. (Cl. 260—37)

1. In the process of cross-linking a polymer of epihalohydrin which comprises heating said polymer in admixture with a cross-linking agent selected from the group consisting of urea, thiourea, ammonia, ammonium salts, polyamines, hydrogen halide salts of polyamines, polyamine carbamates and a combination of at least one metal compound selected from salts of aromatic carboxylic acids, salts of aliphatic carboxylic acids, salts of carbonic acid, salts of phosphorous acid, salts of silicic acid and oxides of the metals of Groups II–A, II–B, and IV–A of the Periodic Table and an agent selected from the group consisting of 2-mercaptoimidazolines and 2-mercaptopyrimidines the improvement of compounding said polymer with from about 10% to about 40% by weight of a silica having a surface area of at least about 300 sq. m./g., said epihalohydrin polymer being selected from the group consisting of homopolymers of epihalohydrins, copolymers of at least two different epihalohydrins and copolymers of an epihalohydrin with at least one other epoxide having the formula



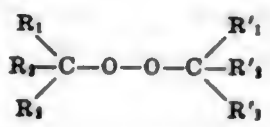
where R_1, R_2 and R_3 are radicals selected from the group consisting of hydrogen, alkyl, alkoxyalkyl and phenyl, but at least one being hydrogen, R_4 and R_5 are radicals selected from the group consisting of hydrogen and alkyl and n is 0 to 1.

3,386,947

VULCANIZATION OF POLY(VINYL ALKYL ETHERS) BY A SULFUR BEARING CURING AGENT AND AN ORGANIC PEROXIDE

Joginder Lal and Kenneth W. Scott, Cuyahoga Falls, Ohio, assignors to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
No Drawing. Filed Apr. 5, 1960, Ser. No. 20,028
1 Claim. (Cl. 260—41)

1. A curable poly(vinyl alkyl ether) composition comprising 100 parts of poly(vinyl alkyl ether), a sulfur bearing curing agent, from 0.5 to 10 parts by weight of an organic peroxide of the following formula:



where R_1, R'_1, R_2 and R'_2 are alkyl groups having less than 10 carbon atoms, and R_3 and R'_3 are aryl groups selected from the class consisting of phenyl, chlorophenyl and naphthyl, at least one part of carboxylic acid and at least an equivalent amount of a reticulator selected from the class consisting of metal oxides, metal hydroxides, glycols and diamines.

3,386,948

POLYMERIC COMPOSITION

Donald G. Needham and George R. Hill, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware
No Drawing. Filed July 1, 1965, Ser. No. 468,914
2 Claims. (Cl. 260—41)

Stabilized polymeric compositions having good weathering properties are provided by blending a solid polymer of 1-olefins, an oxide of zinc, magnesium or calcium or barium sulfate and an ultraviolet stabilizer.

3,386,949

CHEMICAL CROSSLINKING OF ETHYLENE COPOLYMERS WITH DI-t-BUTYL DIPEROXYOXALATE

Edward C. Stivers, Atherton, Calif., assignor to Raychem Corporation, Redwood City, Calif., a corporation of California
No Drawing. Filed Oct. 22, 1965, Ser. No. 502,413
10 Claims. (Cl. 260—41)

Olefin polymers are crosslinked in the solid state by sequentially diffusing a first complementary-reactive material such as a hydroperoxide and a second complementary-reactive material such as an acid halide of a lower carboxylic acid into the polymer and then heating the polymer at a temperature below its melting point to crosslink the polymer.

3,386,950

STABILIZED POLY(ARYLENE SULFIDES)

Elizabeth G. Horvath and Bertalan Horvath, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware
No Drawing. Filed Aug. 31, 1965, Ser. No. 484,107
13 Claims. (Cl. 260—45.7)

The discoloration of poly(arylene sulfide) resins is reduced or prevented by contacting the resins with a monothiol or polythiol.

3,386,951

MICROBICIDAL AGENTS FOR PAINT AND SYNTHETIC RESIN COATINGS

Otto Pauli, Krefeld, Engelbert Kuhle, Bergisch-Gladbach, and Erich Klauke, Cologne-Flittard, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a German corporation
No Drawing. Filed Mar. 15, 1965, Ser. No. 439,970
Claims priority, application Germany, Apr. 11, 1964, F 42,596
4 Claims. (Cl. 260—45.9)

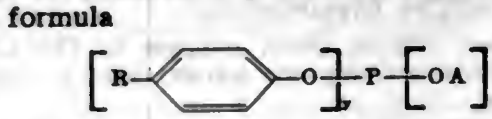
Stable coating compositions having resistance to mold and bacteria, said compositions having incorporated therein about .5–2% by weight of a particular active compound. More specifically the present invention relates to microbicidal agents for paint.

3,386,952

POLYESTER RESIN STABILIZED WITH PHENOLIC PHOSPHITES

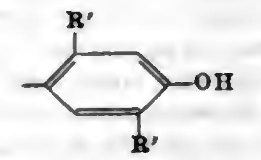
Clyde E. Gleim, Bath, and Ronald B. Specht, Kent, Ohio, assignors to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
No Drawing. Filed July 9, 1964, Ser. No. 381,552
11 Claims. (Cl. 260—45.95)

1. The stabilized polyester composition comprising a highly polymeric linear condensation polyester resin derived from glycols and organic dicarboxylic acids and ester forming derivatives thereof containing a stabilizing amount of a hindered phenolic phosphorus compound of the formula

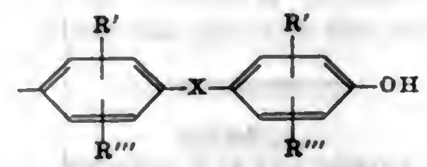


in which R is a hydrocarbon radical containing from 4 to 10 carbon atoms, P represents the phosphorus atom, and y and z are integers selected from 1 and 2 and the sum of y plus z equals 3 and A is selected from the group consisting of

(I)

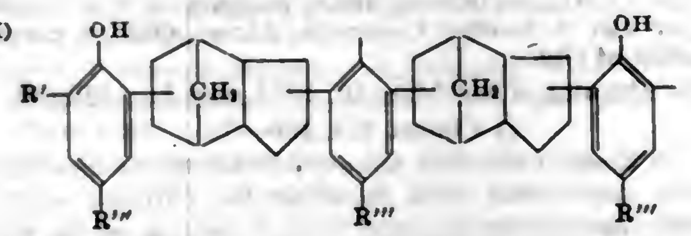


(II)



and

(III)



wherein R' and R'' are selected from the group consisting of the same and different tertiary alkyl radicals containing from 4 to 8 carbon atoms, R''' is selected from hydrogen and alkyl radicals containing from 1 to 10 carbon atoms and X is a saturated aliphatic divalent radical containing from 1 to 4 carbon atoms.

3,386,953

LATENT CURING OF EPOXY RESINS

Herbert Neal Dunning, St. Paul, and John R. Nazy and Harold Wittcoff, Minneapolis, Minn., assignors to General Mills, Inc., a corporation of Delaware
No Drawing. Filed Aug. 26, 1963, Ser. No. 304,658
24 Claims. (Cl. 260—47)

This relates to the curing of epoxy resins by the use of a latent curing agent that is a Schiff's base formed by reaction of (a) carbonyl compound and an adduct of (c) a fatty aliphatic polyamine and (b) a mono-epoxy compound.

3,386,954

PRODUCTION OF HIGH MOLECULAR WEIGHT LINEAR POLYCARBONATES FROM OLIGOMERIC CYCLIC CARBONATES

Hermann Schnell, Krefeld-Uerdingen, and Ludwig Bottenbruch, Krefeld-Bockum, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany
No Drawing. Continuation-in-part of applications Ser. No. 213,033 and Ser. No. 213,037, July 27, 1962. This application Oct. 3, 1963, Ser. No. 313,456
Claims priority, application Germany, Aug. 2, 1961, F 34,590; Oct. 6, 1962, F 39,436
4 Claims. (Cl. 260—47)

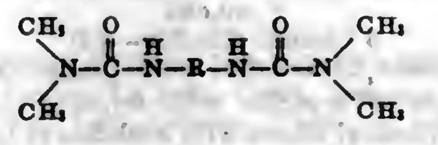
1. A process for the production of high molecular weight linear polycarbonates having an extremely low heterogeneity which comprises heating, in the presence of a composition selected from the group consisting of water, phenols, alcohols, and mixtures thereof, oligomeric cyclic carbonates derived from a binuclear, aromatic dihydroxy compound, wherein the nuclei are joined by a member selected from the group consisting of lower alkylene, lower alkylidene, oxygen, sulfur, SO and SO_2 in a position para to the hydroxy groups, said oligomeric cyclic carbonates being obtained from the reaction of a binuclear aromatic dihydroxy compound with a carbonic acid derivative selected from the group consisting of phosgene and bis-chlorocarbonic acid esters of said binuclear aromatic dihydroxy compounds in the presence of an acid binding agent in a highly dilute solution.

3,386,955

SUBSTITUTED UREAS AS LOW TEMPERATURE EPOXY CURING AGENTS

Aleksandra Chrobok Nawakowski, Fairfield, and Samuel Shan-Ning Wang and Arthur Maurice Schiller, Stamford, Conn., assignors to American Cyanamid Company, Stamford, Conn., a corporation of Maine
No Drawing. Filed Jan. 14, 1966, Ser. No. 520,630
4 Claims. (Cl. 260—47)

1. A composition of matter comprising (A) an organic polyepoxide material having a plurality of reactive 1,2-epoxy groups and (B) as a curing agent for said polyepoxide an effective amount of the composition of matter having the structure:



wherein R represents a divalent aromatic radical selected from the group consisting of unsubstituted phenylene, methyl substituted phenylene, dimethyl diphenylene and methylene diphenylene.

3,386,956

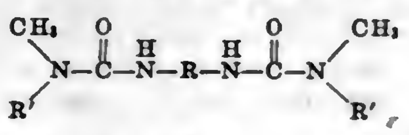
LOW TEMPERATURE CURABLE EPOXY RESIN ADHESIVE COMPOSITIONS WITH LONG STORAGE STABILITY

Aleksandra Chrobok Nawakowski, Glenbrook, and Artur Maurice Schiller and Samuel Shan-Ning Wang, Stamford, Conn., assignors to American Cyanamid Company, Stamford, Conn., a corporation of Maine

No Drawing. Filed Apr. 25, 1966, Ser. No. 544,693

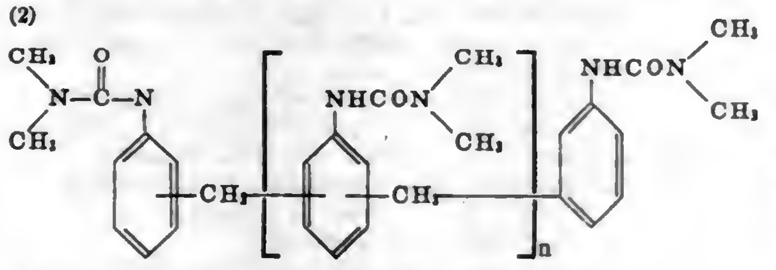
6 Claims. (Cl. 260—47)

1. An adhesive composition comprising (A) an organic polyepoxide material having a plurality of reactive 1,2-epoxy groups (B) an effective amount of a curing agent selected from (1) a bis-urea of the structure:



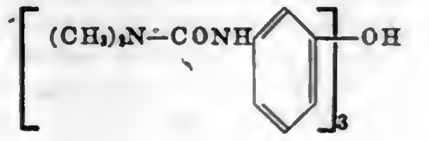
wherein R represents a divalent radical selected from the group consisting of methyl substituted phenylene, methylene diphenylene, dimethoxydiphenylene, and dimethyl diphenylene, R′ represents a substituent selected from the group consisting of methyl and hydroxyethyl;

(2)



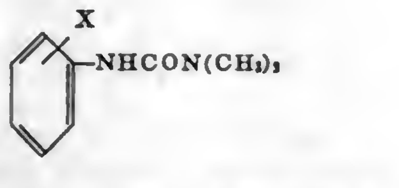
wherein *n* represents an integer from 2 to 5;

(3)



and

(4)



wherein X represents a group selected from the group consisting of OCH_3, Cl, H, CH_3 and NO_2 and (C) as a promoter for said curing agent (B) from 1 to 20 parts per 100 parts of organic polyepoxide of a promoter substance selected from the group consisting of dicyandiamide, stearic hydrazide, succinimide and cyanoacetamide.

3,386,957

COPOLYMERS OF α-ALKYLENARYL ETHERS WITH α-OLEFINS

Manfred Feldhoff, Oberseelbach, Albert Gustav Martin Gumboldt, Frankfurt am Main, and Jürgen Helberg, Kelkheim, Taunus, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany

No Drawing. Filed Aug. 26, 1964, Ser. No. 392,151

Claims priority, application Germany, Aug. 28, 1963, F 40,602

4 Claims. (Cl. 260—62)

Polymerization of α-olefins with Ziegler catalysts; copolymerization of α-olefins with styrene; copolymerization of α-alkylenaryl ethers with α-olefins at low temperatures and pressures in the presence of organometal mixed catalysts obtained from halogen compounds of sub-group 4 to 8 metals and metals, alloys, hydrides or organometal compounds of elements of main or sub-groups 1 to 3 of Periodic Table.

3,386,958

PROCESS OF PREPARING POLY(METHYLENE SULFIDE)

Nathaniel L. Remes, Yonkers, N.Y., and Jesse C. H. Hwa, Stamford, Conn., assignors to Stauffer Chemical Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Nov. 15, 1965, Ser. No. 507,678

9 Claims. (Cl. 260—67)

Process of preparing poly(methylene sulfide) having recurring $—CH_2S—$ units comprising reacting hydrogen sulfide with formaldehyde in the presence of a catalyst amount of an alkali metal or alkaline earth metal trithiocarbonate.

3,386,959

THERMOSETTING RESINOUS COMPOSITIONS

Cyrille van Eygen and Arthur Weerens, Watermael-Boitsfort, Belgium, assignors to UCB (Union Chimique-Chemische Bedrijven), Brussels, Belgium

No Drawing. Filed May 14, 1965, Ser. No. 455,950

Claims priority, application Great Britain, May 14, 1964, 20,649/64

8 Claims. (Cl. 260—67.5)

Thermosetting resinous compositions consisting of (a) copolymer of at least one olefinic compound (e.g., an ester of acrylic or methacrylic acid, etc.) and an unsaturated carboximide which is not substituted on the nitrogen (e.g., maleimide, etc.) and (b) a cross-linking agent which is hexamethylenetetramine or an addition compound thereof (e.g., with chloral), yield transparent colorless films or masses of exceptionally high resistance to water, dilute alkalis and organic solvents. The cross-linking agent advantageously amounts to about 0.25 to 20% by weight, based on the copolymer.

3,386,960

PROCESS OF PREPARING POLYESTERS IN THE PRESENCE OF A CATALYTIC AMOUNT OF A PRASEODYMIUM COMPOUND

Maria V. Wiener, Akron, Ohio, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

No Drawing. Filed Jan. 10, 1963, Ser. No. 250,485

1 Claim. (Cl. 260—75)

1. In a process for preparing a polymeric linear polyester by subjecting at least one bis ester of a dicarboxylic acid to alcoholysis in the presence of an excess of a glycol and thereafter subjecting the bis glycol ester formed to self-condensation with the removal of glycol, the improvement which comprises carrying out both the alcoholysis and condensation in the presence of a catalytic amount of a praseodymium compound selected from the group consisting of praseodymium metal, praseodymium oxide, praseodymium alcoholate, praseodymium glycolate, praseodymium acetate, praseodymium formate, praseodymium oxalate and praseodymium chloride.

3,386,961

COPOLYESTER RESINS

Maria V. Wiener, Akron, Ohio, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

No Drawing. Filed Mar. 10, 1964, Ser. No. 350,655

11 Claims. (Cl. 260—75)

1. A random ethylene terephthalate-ethylene 2,6-naphthalate copolyester resin in which the ethylene terephthalate units comprise from 70 to 5 percent of the sum of the ethylene terephthalate and ethylene 2,6-naphthalate units and the ethylene naphthalate units comprise from 30 to 95 percent of said sum.

3,386,962

LOW MODULUS NCO-TERMINATED URETHANE COMPOSITIONS

Adolfas Damusis, Detroit, Mich., assignor to Wyandotte Chemicals Corporation, Wyandotte, Mich., a corporation of Michigan

No Drawing. Filed May 13, 1964, Ser. No. 367,223

10 Claims. (Cl. 260—77.5)

The specification discloses an ordered NCO-terminated urethane composition useful in coating applications produced by (1) mixing and reacting an organic compound containing two active hydrogen atoms and having a molecular weight in the range of about 500 to 5,000 with an organic polyisocyanate to produce an isocyanato-terminated prethane intermediate and (2) mixing and reacting in the absence of a solvent the intermediate with a polyether polyol having from 3 to 6 hydroxyl groups and a molecular weight of about 300 to 6,000 (for each hydroxyl group), the mixing and reacting of the intermediate and the polyol being conducted in the presence of a medium consisting essentially of an excess of at least 25 weight percent, based on the total weight of the polyol and intermediate which interreact in step (2), of the intermediate.

3,386,963

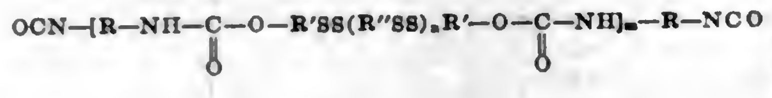
ISOCYANATE-TERMINATED POLYSULFIDE POLYMERS

Anthony F. Santaniello, Newtown, Pa., assignor to Thiokol Chemical Corporation, Bristol, Pa., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 313,434, Oct. 3, 1963. This application Jan. 19, 1967, Ser. No. 610,233

8 Claims. (Cl. 260—77.5)

This is a disclosure of storage-stable isocyanate-terminated polysulfide polymers that are curable at room temperature by atmospheric moisture, with or without additional curing agents or catalysts, to elastomers having good properties for a variety of applications. The polymers are believed to have the structure



$$OCN-[R-NH-\underset{\overset{\|}{O}}{C}-O-R'SS(R''SS)_nR'-O-\underset{\overset{\|}{O}}{C}-NH]_m-R-NCO$$

in which R is an alkylene or arylene radical, R′ and R″ are the same bivalent aliphatic radical wherein the carbon chain may contain oxygen atoms, *n* is 1 to 100 and *m* is 1 or more, preferably up to 15. The polymers can be made by reacting a polyisocyanate of the formula

$$R(NCO)_x$$

in which *x* is at least 2 with a polymer of the formula

$$HO—R'SS(R''SS)_nR'—OH$$

at ratios of NCO:OH greater than 1.0, preferably up to 4.

3,386,964

TERPOLYMERS OF ε-CAPROLACTAM, m-XYLYLENEDIAMINE, AND A DICARBOXYLIC ACID

Ian C. Twilley, Petersburg, Va., assignor to Allied Chemical Corporation, New York, N.Y., a corporation of New York

No Drawing. Filed Dec. 19, 1963, Ser. No. 331,940

2 Claims. (Cl. 260—78)

1. A linear random interpolymer of 75% to 95% by weight ε-caprolactam, and essentially equimolar proportions of m-xylylenediamine and a linear aliphatic dicarboxylic acid having seven to ten carbon atoms in the chain.

3,386,965

AROMATIC POLYAMIDES HAVING PENDENT CARBOXYL GROUPS AND PROCESS THEREFOR

William A. H. Huffman, deceased, late of Durham, N.C., by Ernestine H. Huffman, executrix, Antioch, Tenn., and Ralph W. Smith, Parkwood, and Helmuth E. Hinderer, Durham, N.C., assignors to Monsanto Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Aug. 31, 1964, Ser. No. 393,816

10 Claims. (Cl. 260—78)

Aromatic polyamides having pendent carboxyl groups as an aid to solubility are described together with a process for their preparation. These polyamides are useful as films and fibers.

3,386,966

FULLY CONJUGATED ALICYCLIC POLYMERS AND PROCESS OF MAKING SAME

Hartwig C. Bach, Durham, N.C., assignor to Monsanto Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Nov. 23, 1964, Ser. No. 413,314

18 Claims. (Cl. 260—78)

Fully conjugated alicyclic polymers containing carbon to carbon double bonds are prepared by oxidative coupling of the two methylene groups of four member cyclic ring monomers which contain carbonyl and nitrogen ring members in addition to the methylene groups. These polymers have high thermal resistance and are useful as insulators.

3,386,967

POLYCAPROAMIDE HAVING EXCESS NUMBER OF CARBOXYL END GROUPS OVER AMINO END GROUPS

Ian C. Twilley, Petersburg, Va., assignor to Allied Chemical Corporation, New York, N.Y., a corporation of New York

Continuation-in-part of application Ser. No. 368,028, May 18, 1964. This application Jan. 19, 1965, Ser. No. 426,632

6 Claims. (Cl. 260—78)

1. A linear fiber-forming e-polycaproamide wherein the end groups are substantially all primary amino groups and carboxyl groups; wherein the total end groups analyze between about 50 and about 80 milliequivalents per kilogram of polycaproamide; the primary amino groups analyze not above about 10 milliequivalents per kilogram of polycaproamide; and the melt viscosity in Brabender units at 265° C. is not above about 500.

3,386,968

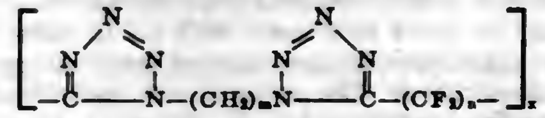
TETRAZOLE POLYMERS

Wayne R. Carpenter, Ridgecrest, Calif., assignor to the United States of America as represented by the Secretary of the Navy

No Drawing. Filed Nov. 15, 1962, Ser. No. 238,057

9 Claims. (Cl. 260—78.4)

2. Polymers of the general formula



wherein *m* is one of the numbers 5 to 10 and *n* is one of the numbers 3 to 8 and *x* represents an average value greater than 9.5.

3,386,969

FUSIBLE POLYBENZIMIDAZOLES

Harold H. Levine, La Jolla, Calif., assignor to Whittaker Corporation, Los Angeles, Calif., a corporation of California

Continuation of application Ser. No. 238,697, Nov. 19, 1962. This application June 27, 1966, Ser. No. 561,645

11 Claims. (Cl. 260—78.4)

This patent describes novel substantially fusible polybenzimidazole polymers having an inherent viscosity in the range of about 0.03 to 0.10 as measured in a 0.5% solution of dimethyl sulfoxide and having a fusion temperature less than about 400° C. These novel fusible polymers are prepared by heat polymerizing an ester of an aromatic dicarboxylic acid with an aromatic tetramine to a point short of that at which substantial infusibility occurs.

3,386,970

PROCESS FOR THE COPOLYMERIZATION OF CARBON BISULFIDE AND A FREE RADICAL POLYMERIZABLE MATERIAL

Harold M. Pitt, Lafayette, Calif., assignor to Stauffer Chemical Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed June 20, 1966, Ser. No. 559,678

8 Claims. (Cl. 260—79)

The process for the copolymerization of carbon bisulfide and a free radical polymerizable material in the presence of a free radical initiator and an alkyl aluminum halide.

3,386,971

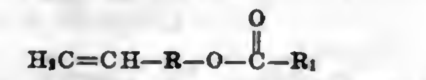
MOLDABLE POLYSULFONES

John B. Gardner, Billy G. Harper and William S. Pickle, Lake Jackson, Tex., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed July 16, 1965, Ser. No. 472,655

4 Claims. (Cl. 260—79.3)

A moldable thermoplastic copolymer comprising the reaction product of sulfur dioxide and an ethylenically unsaturated ester having the formula



$$H_2C{=}CH{-}R{-}O{-}\overset{\overset{O}{\|}}{C}{-}R_1$$

wherein R is selected from the group consisting of alkylene and cycloalkylene groups having from 1 to 10 carbon atoms and R_1 is selected from the group consisting of alkyl, cycloalkyl and aryl groups having 1 to 20 carbon atoms.

3,386,972

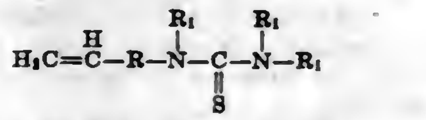
COPOLYMERS OF SULFUR DIOXIDE AND ALLYLTHIOUREAS

John B. Gardner and Billy G. Harper, Lake Jackson, Tex., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed July 16, 1965, Ser. No. 472,675

3 Claims. (Cl. 260—79.3)

Polysulfones are prepared by reacting sulfur dioxide with allylthioureas having the general formula



$$H_2C{=}\overset{H}{C}{-}R{-}\overset{\overset{R_1}{|}}{N}{-}\underset{\underset{S}{\|}}{C}{-}\overset{\overset{R_1}{|}}{N}{-}R_1$$

wherein R is an alkylene group having 1 to 4 carbon atoms and R_1 is either hydrogen or an alkyl radical having 1–4 carbon atoms. Ternary copolymers are prepared by reacting the above monomers with 0.1 to 5 percent by weight of a diethylenically unsaturated cross-linking agent, such as, 1,7-octadiene. The polymers are useful to chelate copper ions from solution.

3,386,973

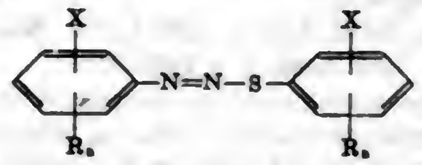
PROCESS OF PREPARING CONJUGATED DIENE POLYMERS AND RESULTANT PRODUCT

Carl A. Uraneck and Ollie G. Buck, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Original application Mar. 30, 1959, Ser. No. 802,616, now Patent No. 3,083,191, dated Mar. 26, 1963. Divided and this application Feb. 4, 1963, Ser. No. 256,096

11 Claims. (Cl. 260—79.5)

1. A process which comprises preparing a polymer selected from the group consisting of homopolymers of conjugated dienes and copolymers of conjugated dienes with vinylidene compounds by emulsion polymerization at a temperature in the range of about 10 to 175° F. in the presence of about 0.05 to 5 parts by weight per 100 parts of monomer of a diazothioether having the formula



wherein each X is a carboalkoxy radical containing not more than 10 carbon atoms; R is an alkyl group containing from 1 to 3 carbon atoms and *n* is an integer from 0 to 2, and in the absence of auxiliary modifiers, reacting said polymer at a temperature above −100° F. with about 0.5 to 5 equivalents of a polyfunctional organic compound selected from the group consisting of polyfunctional alcohols, amines, hydrazides of mercapto-substituted aliphatic acids, semicarbazides, and thiosemicarbazides capable of reacting with X and recovering a polymer product.

3,386,974

OLEFIN COPOLYMERS

Janine Ourgaud, Paris, France, assignor to Societe Nationale des Petroles d'Aquitaine Tour Aquitaine, Courbevole, France

No Drawing. Filed June 2, 1966, Ser. No. 554,692

Claims priority, application France, June 9, 1965, 20,032

6 Claims. (Cl. 260—79.5)

The present invention relates to a new type of olefine copolymers, in particular to copolymers formed by α-olefines with polythioether-dienes. Among the new copolymers, the invention especially concerns the ternary polymers obtained from ethylene, an aliphatic α-olefine, and a polythioether, the molecule of which contains $—CH_2S$ groups and two alkylene groups. The products primarily concerned in the present invention are high-molecular, substantially linear, amorphous unsaturated and vulcanizable polymers.

The ternary polymers most valuable according to the term of the invention are obtained from monomers, namely ethylene, an aliphatic α-olefine of the general formula $R—CH{=}CH_2$, the alkyl group of which contains 1 to 6 carbon atoms, and a polythioetherdiene.

3,386,975

TERPOLYMERS OF A POLYCYCLIC DIOLEFIN AND TWO MONO-OLEFINS

Walter Marconi, Sebastiano Cesca, and Giorgio Della Fortuna, Milan, Italy, assignors to SNAM S.p.A., Milan, Italy, a corporation of Italy

No Drawing. Filed May 22, 1964, Ser. No. 369,618

Claims priority, application Italy, May 24, 1963, 10,727/63

13 Claims. (Cl. 260—80.7)

1. Process for the preparation of linear, amorphous, unsaturated terpolymers comprising two mono-olefinic monomers and a polycyclic diolefine having an endomethylenic bridge which terpolymer can be vulcanized, wherein the monomers are brought in contact with a binary catalyst system wherein the components are selected in the following classes:

(a) transition metal compound of the IV*a* and V*a* Group of the Periodic System according to Mendeleeff;

(b) aluminum hydrides, soluble in organic solvents, said aluminum hydride being complexed with a Lewis base or having a secondary aminic radical, as defined below, directly attached to Al, said aluminum hydride having the general formula HAlXY, wherein X and Y, equal or different, are each a hydrogen atom, a halogen atom or a secondary aminic radical of the type $—NR_1R_2$ wherein R_1 and R_2, equal or different, are each alkyls, aryls, alkylaryls, cycloalkyls or part of a nitrogen-containing heterocyclic nucleus.

3,386,976

ALKYLATION OF POLYACRYLATE ESTERS

Ashot Merijan, Rahway, and Frederick Grosser, Midland Park, N.J., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Sept. 17, 1964, Ser. No. 397,299

16 Claims. (Cl. 260—86.1)

Homopolymers of an acrylate ester monomer of the formula:

$$CH_2{=}CHCOOR$$

wherein R is an alkyl of from 1 to 18 carbon atoms or an alkoxyalkyl in which the total number of carbon atoms in the alkyl groups is from 3 to 6 and copolymers of from 5 to 95% by weight of said acrylate ester monomer and from 95% to 5% by weight of a non-heterocyclic and non-α-olefinic hydrocarbon polymerizable monoethylenically unsaturated monomer are alkylated by heating one mole of such homopolymer or copolymer with 0.05 to 12 moles of an α-olefin of the group consisting of chlorofluoro-α-olefin and fluoro-α-olefin of 2 carbon atoms and an α-olefinic hydrocarbon of at least 4 carbon atoms in solution of an organic solvent common to said homopolymer, copolymer and α-olefin in the presence of 0.025 to 0.30 mole of an organic peroxide catalyst per mole of said α-olefin at a temperature ranging from about 80° C. to 200° C. As a result of such alkylation, homopolymers and copolymers are obtained in which some or all of the individual monomers or comonomers constituting the polymer contain one or more chloro-fluoro-alkyl or fluoro alkyl of at least 2 carbon atoms or alkyl of at least 4 carbon atoms to as many carbon atoms as are contained in the α-olefinic hydrocarbon employed in the alkylation reaction.

3,386,977

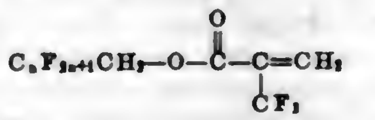
COPOLYMERS OF PERFLUOROALKYL α-TRIFLUOROMETHACRYLATES

Eduard K. Kleiner, New York, N.Y., assignor to Geigy Chemical Corporation, Greenburgh, N.Y., a corporation of Delaware

No Drawing. Filed Aug. 13, 1965, Ser. No. 479,644

2 Claims. (Cl. 260—86.1)

1. Copolymers of compounds of the formula:



$$C_nF_{2n+1}CH_2{-}O{-}\overset{\overset{O}{\|}}{C}{-}\underset{\underset{CF_3}{|}}{C}{=}CH_2$$

wherein *n* is a whole number of from 3 to 17, and comonomers which contain an ethylenic linkage.

3,386,978

PREPARATION OF HYDROLYZED ETHYLENE/VINYL ACETATE COPOLYMER

Ival O. Salyer, Dayton, Ohio, assignor to Monsanto Research Corporation, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Mar. 30, 1964, Ser. No. 355,928

16 Claims. (Cl. 260—87.3)

Ethylene/vinyl acetate copolymer is hydrolyzed in presence of a water-soluble, inorganic hydrolyzing agent and in an inert, liquid solvent for the copolymer consisting essentially of a liquid, aromatic hydrocarbon, methanol and ethanol. A preferred embodiment comprises recovering the hydrolyzed copolymer from the hydrolysis reaction mixture by gradually adding the mixture to steaming hot or boiling water while withdrawing volatilized material by distillation, whereby the hydrolyzed copolymer is precipitated by the water and the solvent is removed in the distillate.

3,386,979

ULTRAVIOLET LIGHT POLARIZERS FROM VINYL MONOMERS POLYMERIZED IN THE PRESENCE OF POLYPHENYL CHAIN TRANSFER AGENTS

Howard C. Haas, Arlington, Mass., assignor to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware

Continuation-in-part of application Ser. No. 154,338, Nov. 22, 1961. This application May 15, 1963, Ser. No. 280,578

10 Claims. (Cl. 260—89.1)

1. An ultraviolet light polarizer comprising a molecularly oriented film comprising a polymer prepared by polymerizing a vinyl monomer selected from the group consisting of vinyl chloride and vinyl acetate in the presence of a free radical catalyst and a polyphenyl chain transfer agent comprising less than five phenylene groups.

9. An ultraviolet light polarizer comprising a molecularly oriented film comprising a vinyl polymer selected from the group consisting of polyvinyl chloride and polyvinyl alcohol containing linear polyphenyl chain terminating groups comprising less than five phenylene groups.

3,386,980

POLYMERIZATION OF VINYL ALKYL ETHERS WITH METAL OXIDE-SULFURIC ACID COMPLEX CATALYSTS

Joginder Lal and James E. McGrath, Cuyahoga Falls, Ohio, assignors to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

No Drawing. Filed May 4, 1964, Ser. No. 364,753

16 Claims. (Cl. 260—91.1)

1. The process of polymerizing a vinyl alkyl ether to form a high molecular weight polymer which comprises carrying out the polymerization in the presence of a catalytic amount of the reaction product of (1) concentrated H_2SO_4 and (2) the oxide of a polyvalent metal which is a member of the group consisting of the metals of group III*a*, IV*b*, V*b*, VI*b*, VII*b* and group VIII of the periodic table, and wherein the molar ratio of metal oxide to H_2SO_4 is between 50:1 and 1:10 and the polymerization temperature is between −100° C. and 100° C.

3,386,981

METHOD OF MIXING A RELATIVELY VISCOUS LIQUID WITH A RELATIVELY NON-VISCOUS LIQUID

Michijiro Akaboshi, Moto-machi, Toyonaka, Tsuguo Kominami, Nishinomiya, and Seigo Fukuda and Kikuji Uragami, Toyama, Japan, assignors to Kurashiki Rayon Co., Ltd., Kurashiki-shi, Japan, a corporation of Japan

Original application Feb. 5, 1959, Ser. No. 791,384, now Patent No. 3,186,803, dated June 1, 1965. Divided and this application Sept. 25, 1964, Ser. No. 411,955

Claims priority, application Japan, Feb. 11, 1958, 33/3,463, 33/3,464, 33/3,465

3 Claims. (Cl. 260—91.3)

1. The method of mixing a relatively viscous alcohol solution of polyvinyl acetate with a relatively non-viscous solution of aqueous sodium hydroxide which comprises forming an alcohol solution of polyvinyl acetate into a continuously downwardly flowing cylindrical film, form-

ing the aqueous sodium hydroxide solution into a fine spray interiorly of said continuously flowing cylindrical film, and contacting the inner surfaces of said continuously flowing film with said fine spray of said aqueous sodium hydroxide solution.

2. The method of producing polyvinyl alcohol which comprises forming an alcoholic polyvinyl ester solution into a continuously flowing cylindrical film forming a solution of a basic catalyst effective to catalyze saponification of said polyvinyl ester into a fine spray, contacting the inner surfaces of said cylindrical film with said fine spray thereby to initiate saponification of the polyvinyl ester solution, forming the saponifying film into fine, discrete droplets, and subsequently recovering fine, uniform particles of polyvinyl alcohol.

3,386,982
ALKOXYLATED POLYVINYL ALCOHOL AND ALKOXYLATED AMINE COMPOSITIONS

Philip L. Gordon, Lexington, James L. Diedrich, Leominster, and Donald E. Dean, Fitchburg, Mass., assignors to The Borden Company, New York, N.Y., a corporation of New Jersey

No Drawing. Original application May 12, 1961, Ser. No. 109,528. Divided and this application Sept. 23, 1965, Ser. No. 505,215

7 Claims. (Cl. 260—91.3)

1. A plastic characterized by water solubility, release from rigid non-porous surfaces against which the plastic is shaped, and resistance to cracking at temperatures as low as —20° F., the plastic being a blend of alkoxylated polyvinyl alcohol with an alkoxylated amine, the alkylene oxide represented in the alkoxylated materials being a C_2–C_4 alkylene oxide having an oxirane ring and the proportion of the alkoxylated amine being about 2–20 parts by weight for 100 parts of the polyvinyl alcohol represented in the alkoxylated polyvinyl alcohol.

3,386,983
PROCESS FOR THE POLYMERIZATION OF ISOPRENE IN SOLUTION EMPLOYING AlR_3+TiCl_4 IN THE PRESENCE OF A POLYHALOGENATED LOWER OR CYCLOALIPHATIC HYDROCARBON

Josef Witte, Cologne-Stammheim, and Nikolaus Schön and Gottfried Pampus, Leverkusen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Oct. 7, 1965, Ser. No. 493,908
Claims priority, application Germany, Nov. 10, 1964, F 44,401; Jan. 30, 1965, F 45,109; Apr. 1, 1965, F 45,701

14 Claims. (Cl. 260—94.3)

Solution polymerization to obtain predominantly 1,4-cis-linkages employing aliphatic, cycloaliphatic and aromatic hydrocarbons as solvents and organometallic mixed catalyst of aluminum trialkyl and titanium tetrachloride, the polymerization being effected in the presence of 0.05 to 100 mols per mol of titanium tetrachloride of a polyhalogenated lower aliphatic or cycloaliphatic hydrocarbon.

3,386,984
PROCESS FOR THE PRODUCTION OF HYDROCARBON-SOLUBLE MIXED CATALYSTS FOR THE POLYMERIZATION OF BUTA-1,3-DIENE

Nikolaus Schon and Gottfried Pampus, Leverkusen, and Josef Witte, Cologne-Stammheim, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed July 9, 1965, Ser. No. 470,932
Claims priority, application Germany, Oct. 1, 1964, F 44,113

18 Claims. (Cl. 260—94.3)

Catalyst based on aluminum alkyls reacted with the reaction products of titanium tetraiodide and a 1,2-epoxide to produce polymers of high cis-1,4-bond content.

3,386,985
TRIAZENOMETAL COMPOUNDS AND METHOD OF PREPARATION

Frederick E. Brinckman, Jr., Washington, D.C., and Hermann S. Haiss and Robert A. Robb, Indian Head, Md., assignors to the United States of America as represented by the Secretary of the Navy

No Drawing. Filed June 12, 1964, Ser. No. 374,860

5 Claims. (Cl. 260—140)

1. An organometallic compound selected from the group consisting of:

Tris(1-methyl-3-phenyltriazeno)aluminum,
Tris(1-methyl-3-perfluorophenyltriazeno)aluminum,
Tris(1-methyl-3-p-tolytriazeno)aluminum,
Tris(1-methyl-3-p-chlorophenyltriazeno)aluminum,
Tetra(1,3-dimethyltriazeno)zirconium,
Tris(1,3-dimethyltriazeno)boron,
Tris(1,3-dimethyltriazeno)aluminum,
Bis(1,3-dimethyltriazeno)dimethyl silicon,
1,3-dimethyltriazeno trimethyl silicon,
Bis(1,3-dimethyltriazeno)dimethyl tin,
1,3-dimethyltriazeno dimethyl tin iodide,
1,3-dimethyltriazeno dimethyl tin bromide,
Tetra(1,3-dimethyltriazeno)titanium,
Tris(1,3-dimethyltriazeno)phosphorus,
Bis(1,3-dimethyltriazeno)phenyl phosphorus.

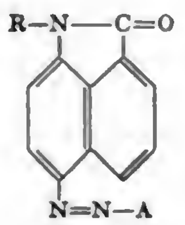
3,386,986
MONO AND DISAZO DYESTUFFS

Alfred Brack, Leverkusen, Germany, assignor to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

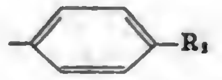
No Drawing. Filed Mar. 27, 1964, Ser. No. 355,442
Claims priority, application Germany, Apr. 26, 1963, F 39,593

11 Claims. (Cl. 260—152)

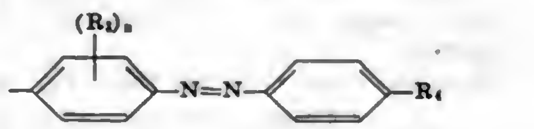
1. An azo dyestuff which is free of sulfonic acid groups and carboxylic acid groups and which has the formula:



wherein R stands for a member selected from the class consisting of hydrogen, lower alkyl, allyl, lower alkoxy carboxy methyl, benzyl, methylbenzyl, methoxybenzyl, ethoxybenzyl, phenoxybenzyl, nitrobenzyl, chlorobenzyl, dichlorobenzyl, phenylbenzyl, dimethylaminoethyl, diethylaminoethyl, N-phenyl-N-ethylaminoethyl, N-phenyl-N-n-butylaminoethyl, and phenylsulfonyl-2-ethyl; and A stands for a radical selected from the group consisting of:



and



wherein R_2 is hydrogen, methyl, methoxy, ethoxy, chlorine, or acetamino; R_3 is hydrogen, methyl, methoxy or ethoxy; R_4 is hydrogen, chlorine, or ethoxy; and $n=1$ or 2.

3,386,987
AZO DYES FOR CONTAINING DICARBOXIMIDO GROUPS

Max A. Weaver and David J. Wallace, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Oct. 8, 1965, Ser. No. 494,247

8 Claims. (Cl. 260—152)

Azo compounds having a phenyl-azo-aniline nucleus containing a substituted dicarboximidoalkyl group on the aniline nitrogen atom are useful as dyes for hydrophobic textile materials.

3,386,988
DISAZO DYES CONTAINING DICARBOXYLIC ACID IMIDOETHYL SULFONYL GROUPS

Max A. Weaver and John I. Dale III, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Oct. 22, 1965, Ser. No. 502,431

7 Claims. (Cl. 260—152)

Azobenzene-azo-aniline compounds having a dicarboximidoalkylsulfonylalkyl group attached to the aniline nitrogen atom are useful as dyes for hydrophobic textile materials.

3,386,989
PROCESS FOR CONTINUOUS PRODUCTION OF CARBON TETRAFLUORIDE

Peter Karl Baumgarten, Holiday Hills, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Aug. 23, 1966, Ser. No. 574,321

9 Claims. (Cl. 260—653)

A continuous process for producing carbon tetrafluoride comprising in combination a first particular arrangement for passing molten calcium fluoride downwardly through a bed of specific size carbon particles while passing a stream of chlorine gas upwardly through the bed, the first arrangement also providing for removal of a molten by-product from the bottom of the bed under certain specific conditions; and a second particular cooperating arrangement for recovering and recycling calcium fluoride from the molten by-product.

3,386,990
AZO DYES CONTAINING VINYLSULFONYLETHYL TETRAHYDROQUINOLINE GROUPS

John I. Dale III, James M. Straley, and Max A. Weaver, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Oct. 4, 1965, Ser. No. 492,923

13 Claims. (Cl. 260—155)

Water-insoluble benzene-azo-tetrahydroquinoline compounds containing a vinylsulfonyl ethyl group are useful as dyes for hydrophobic textile materials.

3,386,991
PROCESS FOR REDUCING ORGANIC NITROGEN OXIDES TO AMINES USING IRON AND ACTIVE CARBON IN A SOLVENT

Samuel Michael Gerber, Martinsville, N.J., assignor to American Cyanamid Company, Stamford, Conn., a corporation of Maine

No Drawing. Filed May 26, 1965, Ser. No. 459,095

3 Claims. (Cl. 260—156)

Organic nitrogen oxide compounds are reduced to the corresponding amine compounds by refluxing a water or aqueous lower alkanol solution thereof containing defined proportions of suspended iron and activated carbon particles for a time to effect the reduction reaction.

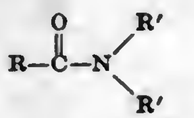
3,386,992
SULFATION OF GUAR AND LOCUST BEAN GUM

Richard G. Schweiger, San Diego, Calif., assignor to Kelco Company, San Diego, Calif., a corporation of Delaware

No Drawing. Filed Feb. 14, 1966, Ser. No. 527,103

18 Claims. (Cl. 260—234)

Sulfate esters of relatively undegraded polymeric guar gum and locust bean gum having a degree of substitution ranging up to about 1.0, and salts thereof. Process for producing sulfate esters of guar gum or locust bean gum by hydrating said gum, removing water from said hydrated gum by treating it with a water-miscible organic solvent which is essentially a non-solvent for said gum, and then reacting said gum with a sulfur trioxide-amide complex in which the amide has the formula



$$R-\overset{\overset{\displaystyle O}{\|}}{C}-N\begin{matrix}\diagup R'\\ \diagdown R'\end{matrix}$$

in which R′ is a lower alkyl radical and R is selected from the group consisting of lower alkyl radicals and hydrogen.

3,386,993
PROCESS FOR DRYING WATER-WET HMX WITH LOWER ALKANOLS

Madhav R. Bhagwat, Indian Head, Md., assignor to the United States of America as represented by the Secretary of the Navy

No Drawing. Filed Mar. 18, 1965, Ser. No. 440,958

4 Claims. (Cl. 260—239)

A process for removing water from water-wet HMX which includes forming a homogeneous mixture of water-wet HMX with a lower alkanol solvent of the type in which HMX is relatively insoluble and water is infinitely soluble, and thereafter filter separating free flowing HMX.

3,386,994
PREGNA-4,6-DIENE- AND 19-NORPREGNA-4,6-DIENE-3β,16,17α-TRIOL STEROIDS, DERIVATIVES THEREOF, AND PROCESSES FOR THEIR PREPARATION

Alexander D. Cross and Ian T. Harrison, Mexico City, Mex., assignors to Syntex Corporation, Panama, Panama, a corporation of Panama

No Drawing. Filed May 5, 1965, Ser. No. 453,511

14 Claims. (Cl. 260—239.55)

Novel pregna-4,6-diene- and 19-norpregna-4,6-diene steroids of the pregnane series and derivatives thereof containing substitution at the C–3, C–6, C–16, and C–17α positions which compounds are progestational and anti-inflammatory agents and processes for the preparation of such compounds.

3,386,995
1-SUBSTITUTED-3-(5-NITROFURFURYLIDENEAMINO)-2-IMIDAZOLIDINONES

Frank Frederick Ebetino, Norwich, N.Y., assignor to The Norwich Pharmacal Company, a corporation of New York

No Drawing. Continuation-in-part of application Ser. No. 305,214, Aug. 28, 1963. This application June 18, 1964, Ser. No. 376,199

The portion of the term of the patent subsequent to May 31, 1983, has been disclaimed

2 Claims. (Cl. 260—240)

Antibacterially active 1-substituted-3-(5-nitrofurfurylideneamino)-2-imidazolidinones and methods for their manufacture.

3,386,996

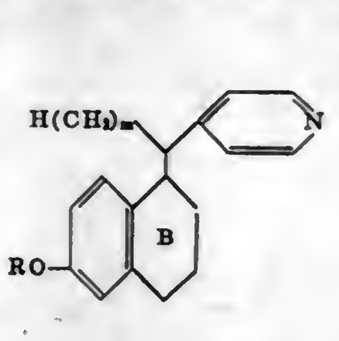
PROCESS FOR PRODUCING CERTAIN 8-HYDROXY OR LOWER - ALKOXY - (4 - PYRIDYL LOWER-ALKYLIDENE) - 1,2,3,4 - TETRAHYDRO - NAPHTHALENES; 8-HYDROXY OR LOWER-ALKOXY-(4 - PYRIDYL LOWER - ALKYL) - 3,4 - DIHYDRONAPHTHALENES AND DERIVATIVES THEREOF

Don M. Lynch, Waukegan, and John W. Cole, Deerfield, Ill., assignors to Abbott Laboratories, North Chicago, Ill., a corporation of Illinois

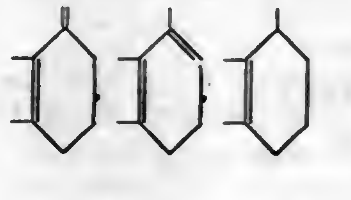
No Drawing. Filed Dec. 30, 1965, Ser. No. 517,818

10 Claims. (Cl. 260—240)

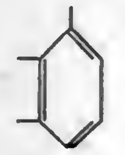
4. A naphthalene derivative of the formula



wherein the B-ring has a partial structure of



or



and wherein R is $H(CH_2)_n$ or $H(CH_2)_nCO$, *n* is an integer from 0 to 4 and *m* is an integer from 0 to 2 inclusive, and an acid addition salt thereof.

3,386,997

2 - (3 - HYDROXY - 5 - HYDROXYMETHYL - 2-METHYL - 4 - PYRIDYL)-TETRAHYDRO - 1,3-THIAZINE-4-CARBOXYLIC ACID AND THE PREPARATION THEREOF

Kentaro Okumura, Minami-machi, Kobe-shi, Keiji Kodera, Itami-shi, Toji Nishihara, Sakai-shi, and Tatsuo Oda, Osaka-shi, Japan, assignors to Tanabe Seiyaku Co., Ltd., Osaka, Japan, a corporation of Japan

No Drawing. Filed Dec. 30, 1965, Ser. No. 517,852

Claims priority, application Japan, Jan. 12, 1965, 40/1,699

1 Claim. (Cl. 260—243)

The invention consists in the compound 2-(3-hydroxy-5-hydroxymethyl - 2 - methyl-4-pyridyl)-tetrahydro-1,3-thiazine-4-carboxylic acid. The compound has not only the activity of both vitamin B_6 and homocysteine, but also their synergistic activity, particularly for the prevention of hypohepatia such as hepatitis, serum hepatitis or hepatocirrhosis.

3,386,998

N - ALKENOYLOXY - 2 - MORPHOLINONES AND THEIR CORRESPONDING HYDROLYSIS PRODUCTS

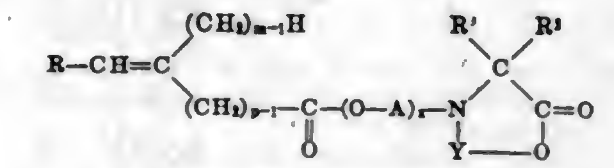
William D. Emmons, Huntingdon Valley, Pa., assignor to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

No Drawing. Filed May 19, 1964, Ser. No. 368,737

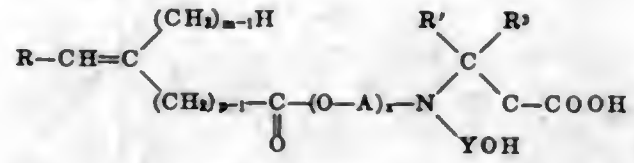
10 Claims. (Cl. 260—247.2)

7. N-(β-methacryloxyethyl)-2-morpholinone.

10. A compound selected from the group consisting of those having the following Formula I, those having the following Formula VI, and mixtures thereof



(I)



(VI)

wherein:

R is selected from the group consisting of H and methyl,
m is an integer having a value of 1 to 3,
p is an integer having a value of 1 to 4,
x is an integer having a value of 1 to 4,
A is an alkylene group having 2 to 4 carbon atoms,
R′ and R² are selected from the group consisting of (1) a composite group which forms a cyclic (C_5 to C_7)-hydrocarbon group with the adjoined C atom and (2) separate groups in which R′ is selected from the group consisting of H, (C_1–C_8)-alkyl, and phenyl, and R² is selected from the group consisting of H and (C_1–C_8)-alkyl, and
Y is an alkylene group having 2 to 4 carbon atoms, A having at least two carbon atoms extending in a chain between the adjoined O and N atoms and Y having 2 carbon atoms extending in a chain between the adjoined O and N atoms, with the provisos that when *p* is greater than 1, *m* is 1 and when *m* is greater than 1, R is H.

3,386,999

SYNTHESIS OF MELAMINE

Milton Manes, Pittsburgh, Pa., assignor to Chemical Construction Corporation, New York, N.Y., a corporation of Delaware

Filed Feb. 10, 1966, Ser. No. 526,491

9 Claims. (Cl. 260—249.7)

1. In the process of melamine synthesis from urea wherein vaporized urea is catalytically converted at a temperature above 320° C. to form a gaseous mixture principally consisting of melamine, ammonia, carbon dioxide and a minor proportion of cyanic acid, said gaseous mixture is cooled to condense solid melamine from the residual gas phase, and residual mixed off-gas comprising ammonia and carbon dioxide is separated from the product solid melamine, the method of eliminating cyanic acid from said gaseous mixture and thereby producing pure melamine free of urea, urea decomposition products, and melamine precursors which comprises adding a small proportion of water vapor to said gaseous mixture prior to said cooling of the gaseous mixture to condense solid melamine, whereby said cyanic acid is hydrolyzed in said gaseous mixture at an elevated temperature above 320° C. to form ammonia and carbon dioxide, and thereafter cooling said gaseous mixture, whereby said product melamine is condensed as pure solid melamine substantially free of urea and melamine precursors.

3,387,000

FLUORIMINO PIPERAZINES

James Andrew Gibson, Prestwick, and James Brown Parker, Kilwinning, Scotland, assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

No Drawing. Filed Mar. 24, 1966, Ser. No. 538,898

Claims priority, application Great Britain, Apr. 28, 1965, 17,898/65

9 Claims. (Cl. 260—268)

1. The compound 2,3,5,6-tetrafluoriminopiperazine.

4. A process for the preparation of 2,3,5,6-tetrafluoriminopiperazine which comprises reacting a compound selected from the group consisting of 2,3,5,6-tetrahydroxypiperazine-1,4-disulphonic acid and an alkali metal salt thereof, with difluoramine in an inert atmosphere in the presence of an acidic condensing agent selected from the group consisting of strongly water-absorbent acidic agents and strongly water-reactive acidic agents.

3,387,001

NOVEL AMINOACYL ESTERS OF DESACETYL VINCALEUKOBLASTINE

William W. Hargrove, Indianapolis, Ind., assignor to Eli Lilly and Company, Indianapolis, Ind., a corporation of Indiana

No Drawing. Filed Oct. 19, 1964, Ser. No. 404,928

4 Claims. (Cl. 260—287)

α-Substituted-α-aminoacylated esters of certain desacylated polynuclear indoles are provided. These compounds are useful in affecting the growth of transplanted tumor cells in host animals.

3,387,002

PROCESS FOR PREPARING 5-(AMINOALKYL)-5,11-DIHYDRODIBENZOXAZEPINES AND DIHYDRODIBENZOTHIAZEPINES

Harry L. Yale, New Brunswick, and Albert R. Restivo, Belleville, N.J., assignors to E. R. Squibb & Sons, Inc., New York, N.Y., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 437,560, Mar. 5, 1965. This application Sept. 17, 1965, Ser. No. 488,266

10 Claims. (Cl. 260—327)

5 - (aminoalkyl) - 5,11 - dihydrodibenzoxazepines and 5 - (aminoalkyl) - 5,11 - dihydrodibenzothiazepines are prepared by reacting 5,11 - dihydrodibenzoxazepines or 5,11 - dihydrodibenzothiazepines with an aminoalkyl halide in the presence of either an excess of sodium hydroxide in acetone or an excess of sodium hydride in dry tetrahydrofuran.

3,387,003

PROCESS FOR THE PRODUCTION OF 3-METHYL-2-CYCLOPENTENE-4-OL-1-ONES

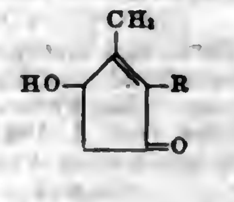
Jacques Martel, Bondy, Chanh Huynh, Villemomble, and Gerard Nomine, Noisy-le-Sec, France, assignors to Roussel - UCLAF, Paris, France, a corporation of France

No Drawing. Filed Jan. 19, 1966, Ser. No. 521,531

Claims priority, application France, Jan. 22, 1965, 2,966

6 Claims. (Cl. 260—343.5)

Novel process for the preparation of 3-methyl-2-cyclopentene-4-ol-1-ones of the formula



I

wherein R is selected from the group consisting of hydrogen and aliphatic hydrocarbons of 1 to 8 carbon atoms by preparing a novel 4-R-5-diloweralkoxymethyl-5-methyl-3-oxo-8-valerolactone, wherein R has the above definition and treating said lactone with an aqueous strong acid.

3,387,004

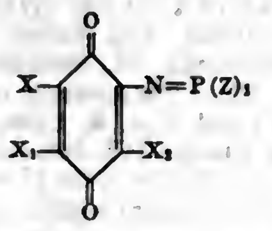
CERTAIN SUBSTITUTED QUINONES AND THEIR PREPARATION

William Lindsay Mosby, North Plainfield, and Mary-Louise Silva, Somerville, N.J., assignors to American Cyanamid Company, Stamford, Conn., a corporation of Maine

No Drawing. Filed May 2, 1963, Ser. No. 277,472

11 Claims. (Cl. 260—349)

1. A compound of the formula:



wherein X_2 is a radical selected from the group consisting of $—N=P(Z)_3$, hydrogen, azido, halogen, lower alkyl, lower alkoxy, phenyl, benzyl, phenethyl, amino, cyano, thiocyano, lower alkanoyl, benzoyl, naphthoyl, lower alkanoyloxy, nitroso, lower alkylsulfonyl, phenyl sulfonyl, naphthyl sulfonyl, lower alkanoylamino, lower alkythio, phenylthio and nitro;

each Z represents a radical selected from the group consisting of secondary amino, tertiary amino, alkyl of up to 18 carbon atoms, alkenyl of up to 18 carbons, benzyl, phenethyl, naphthylmethyl, cinnamyl, styryl, phenyl, naphthyl, alkoxy of up to 18 carbon atoms, alkenoxy of up to 18 carbons, benzyloxy, phenylethoxy, 2-naphthylmethoxy, 6-phenylhexyloxy, cinnamyloxy and styryloxy; said secondary amino and tertiary amino carrying, respectively, one and two substituents selected from the group consisting of lower alkyl, lower alkenyl, phenyl, naphthyl, benzyl, phenethyl, cinnamyl and styryl; and

X and X_1 are individually selected from the group consisting of hydrogen, halogen, lower alkyl, lower alkoxy, phenyl, phenylethyl, amino, cyano, thiocyano, lower alkanoyl, benzoyl, naphthoyl, lower alkanoyloxy, nitroso, lower alkylsulfonyl, phenyl sulfonyl, naphthyl sulfonyl, lower alkanoylamino, lower alkylthio, phenylthio, nitro, and together, a benzo group, said benzo group bearing substituents, if any, selected from the group consisting of halo, nitro, amino and lower alkanamido.

3,387,005

STEROIDAL 4,6-DIEN-3-ONES HAVING A SUBSTITUTED METHYL GROUP AT C_6 AND PROCESS FOR PRODUCING SAME

Derek Burn, Robert Victor Coombs, and Vladimir Petrow, London, England, assignors to The British Drug Houses Limited

No Drawing. Filed Mar. 14, 1966, Ser. No. 533,779

Claims priority, application Great Britain, Mar. 31, 1965, 13,601/65

4 Claims. (Cl. 260—349)

New steroidal 4,6-dien-3-ones, particularly of the androstane and pregnane series, having a $—CH_2X$ substituent on C_6, wherein X is an anion such as cyano-, thiocyanato-, selenocyanato-, azido-, nitro-, and phthalimido-, produced by reaction of the corresponding 6-halomethyl steroids with a metallic salt of the formula MX, where X is defined above.

3,387,006

17β-FLUOROALKOXY-3-KETOESTRENES

Gerhard R. Wendt, Havertown, and Kurt W. Ledig, Philadelphia, Pa., assignors to American Home Products Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Jan. 28, 1964, Ser. No. 340,819

4 Claims. (Cl. 260—397.4)

The invention concerns 17β-fluoroalkoxy-3-ketoestrenes, particularly those having the Formulae I and II as described below, and a process for their preparation. The products possess useful therapeutic properties as orally or parenterally active androgenic agents.

3,387,007

6β-METHYL-5α-ANDROST-2-EN-17-ONE AND DERIVATIVES THEREOF

Raymond E. Counsell, Ann Arbor, Mich., and Paul D. Klimstra, Northbrook, Ill., assignors to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Filed Mar. 8, 1966, Ser. No. 532,556

9 Claims. (Cl. 260—397.5)

6β - methyl - 5α - androst-2-en-17-one and derivatives thereof useful as hormonal agents as evidenced by their anabolic and androgenic properties and useful also as inhibitors of dicotyledonous seed germination.

3,387,008

PROCESS FOR MAKING A SUBSTANTIALLY ESTER FREE FATTY ACID ALKANOLAMIDE PRODUCT

John D. Cawley, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed June 28, 1965, Ser. No. 472,073

10 Claims. (Cl. 260—404)

Alkanolamides of fatty acids of particular utility as surfactants are prepared by reacting a fatty acid ureide, such as palmitic ureide, with a primary alkanolamine, such as ethanolamine, or a secondary alkanolamine, such as diethanolamine.

3,387,009

THIOLCARBOXYLATE ESTERS OF CYCLOPENTADIENYL METALS

Donald E. Bublitz and Guy H. Harris, Concord, Calif., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Dec. 4, 1964, Ser. No. 416,103

7 Claims. (Cl. 260—429)

The present invention is directed to a group of new and novel thiolcarboxylate esters of certain of the cyclopentadienyl metals and to the method of preparing these compounds.

3,387,010

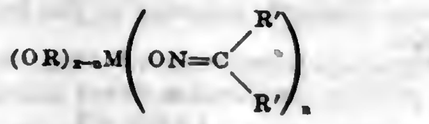
METAL OXIME COMPOUNDS

Kailash Chandra Pande, Adrian, Mich., assignor to Stauffer Chemical Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Dec. 27, 1965, Ser. No. 516,755

5 Claims. (Cl. 260—429.5)

1. A compound conforming to the formula:



$$(OR)_{x-n}M\left(ON{=}C\begin{matrix}R'\\ \\R'\end{matrix}\right)_n$$

where R is from the class consisting of aliphatic radicals containing 1–6 carbon atoms, aromatic radicals and such hydrocarbon radicals when halo- or cyano-substituted, R' is hydrogen or a member of said class, M is from the group consisting of aluminum, and titanium, *n* is an integer from 1 to 3 when M is aluminum and from 1 to 4 when M is titanium, and *x* is 3 when M is aluminum and 4 when M is titanium.

3,387,011

PRODUCTION OF ORGANOTIN HALIDES

Harold Coates, Wombourn, and Peter Albert Theodore Hoye, Stourbridge, England, assignors to Albright & Wilson (Mfg.) Limited, Oldbury, England, a British company

No Drawing. Filed Dec. 21, 1964, Ser. No. 420,100

Claims priority, application Great Britain, Dec. 31, 1963, 51,322/63

19 Claims. (Cl. 260—429.7)

In accordance with certain of its aspects, the novel process of this invention for producing aliphatic tin halide may comprise reacting metallic tin with aliphatic halide, wherein the halide has an atomic number of at least 17, in the presence of a catalyst containing a divalent chalcogen of atomic number of 16–34 thereby forming aliphatic tin halide.

3,387,012

PRODUCTION OF DIALIPHATIC TIN DIHALIDES

Wolfgang Jasching, 26a Richard-Wagner-Strasse, Konigsbrunn, Germany, and Volker Franzen, 24 Panorama-Strasse, Heidelberg, Germany

No Drawing. Filed Sept. 10, 1965, Ser. No. 486,564

Claims priority, application Germany, Sept. 12, 1964, D 45,397

8 Claims. (Cl. 260—429.7)

Organotin halides are prepared by reacting at elevated temperature metallic tin with an aliphatic halide, whose hydrocarbon group contains 4 to 12 carbon atoms, in the presence of a catalyst of the formula

$$MeX_n$$

wherein Me is a member of the group consisting of arsenic and antimony, X is a halogen of the group consisting of chlorine, bromine, and iodine, and *n* is an integer corresponding to the valance of Me.

3,387,013

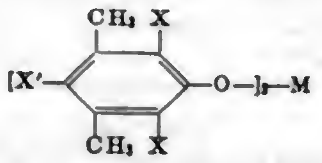
SELECTED SALTS OF SUBSTITUTED 3,5-DIMETHYLPHENOLS

Donald W. Kaiser, North Haven, Conn., assignor to Olin Mathieson Chemical Corporation, New Haven, Conn., a corporation of Virginia

No Drawing. Filed Apr. 30, 1965, Ser. No. 452,362

7 Claims. (Cl. 260—429.9)

Salts of substituted 3,5-dimethylphenols having the formula



wherein X represents chlorine or bromine; X' is chlorine, bromine or a nitro group; and M is a metal selected from Groups I–B and II–B of the Periodic System are provided by reacting a water soluble salt of the substituted 3,5-dimethylphenol with a water soluble salt having one of the above-mentioned metals as the cation. These salts are useful soil fungicides.

3,387,014

PROCESS OF OXIDIZING ORGANO-ALUMINUM COMPOUNDS

Emile Trebillon, Paris, and Georges Wetroff, Le Thillay, France, assignors to Produits Chimiques Pechiney-Saint-Gobain, Neuilly-sur-Seine, France

No Drawing. Filed Dec. 3, 1964, Ser. No. 415,807

Claims priority, application France, Dec. 4, 1963, 956,016

13 Claims. (Cl. 260—448)

The invention is concerned with the process for oxidation of alkyl aluminum compounds to provide for substantially total transformation of the organo-aluminum molecules into useful oxidized products which are free of AlR groups comprising reacting an oxygen containing gas with the aluminum alkyl compound until the oxidation proceeds to a product formed at least in part of compounds which become more difficult further to oxidize, as represented by the compound $AlR(OR)_2$ in which R is an aliphatic hydrocarbon radical containing from 2 to 30 carbon atoms and progressively adding at least one organo aluminum derivative having an average degree of oxidation which is less than that of the compound of the type $AlR(OR)_2$ to the first reaction product while continuing the introduction of oxygen containing gas.

3,387,015

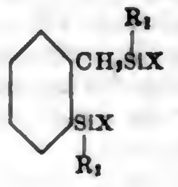
SILTOLYLENE COMPOUNDS

William A. Piccoli, Pittsburgh, Pa., assignor to Dow Corning Corporation, Midland, Mich., a corporation of Michigan

No Drawing. Filed Apr. 26, 1965, Ser. No. 451,061

6 Claims. (Cl. 260—448.8)

1. A composition of the formula



in which R is selected from the group consisting of monovalent hydrocarbon radicals and radicals of the formula $R'CH_2CH_2$— where R' is a perfluoroalkyl radical and X is selected from the group consisting of hydrogen, hydroxyl and hydrocarbonoxy radicals.

3,387,016

AMINOORGANOSILANES

Siegfried Nitzsche and Paul Buchheit, Burghausen, Bavaria, Germany, assignors to Wacker-Chemie, G.m.b.H., Munich, Bavaria, Germany

No Drawing. Filed Sept. 14, 1964, Ser. No. 396,386

Claims priority, application Germany, Sept. 20, 1963, W 35,288

3 Claims. (Cl. 260—448.8)

Aminoorganosilanes useful as intermediates in the preparation of and modification of organic and organosilicone compounds and polymers and as adhesives, binding agents and sizing agents are defined by the general formula

$$R_aX_{3-a}SiR'OR'NH_x[\underline{CH_2CH(OH)Y}]_{2-x}$$

where *x* is 1 or 2, *a* is 0, 1 or 2, *b* is 1 or 2, R is a monovalent hydrocarbon radical, R' is a divalent hydrocarbon radical, Y is H or certain organic radicals, halogenated organic radicals or epoxy derivatives of such organic radicals, particularly R and R'.

3,387,017

PENTALENE DERIVATIVES AND THEIR PRODUCTION

Marcel Joseph Celestin Lefort, Lyon, France, assignor to Rhone-Poulenc S.A., Paris, France, a French body corporate

No Drawing. Filed Oct. 15, 1964, Ser. No. 404,158

Claims priority, application France, Oct. 17, 1963, 950,922

6 Claims. (Cl. 260—448.8)

New silyl-pentalenes, useful as additives for organosilicone resins and as intermediates in the production of pentalene, are made by reacting 1,5-cyclooctadiene with a tri-substituted silane in the presence of a free radical catalyst.

3,387,018

ORGANIC COMPOUNDS OF BORON

Leo P. Parts, Dayton, Ohio, assignor to Monsanto Research Corporation, St. Louis, Mo.

No Drawing. Filed Nov. 27, 1964, Ser. No. 414,405

4 Claims. (Cl. 260—453)

A process for preparing a dialkylboryl alkyl peroxide, R_2BOOR, wherein R contains 1 to 5 carbon atoms whereby a solution of a trialkylborane in an inert organic liquid is contacted at 70° K. to 150° K. with gaseous oxygen.

3,387,019

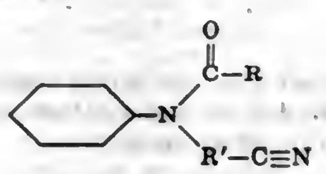
N-ACYL-N-CYANOALKYL-CYCLOHEXYLAMINES

Alexander Gaydasch, Chicago, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Filed Dec. 1, 1965, Ser. No. 510,954

3 Claims. (Cl. 260—464)

1. N-acyl-N-cyanoalkyl-cyclohexylamine of the following general formula:



where R is hydrogen or alkyl and R' is alkyl.

3,387,020

PREPARATION OF AROMATIC ESTERS BY CATALYTIC DISMUTATION OF AROMATIC ALDEHYDES

Carl E. Handlovits, Midland, and James B. Louch, Coleman, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Oct. 7, 1964, Ser. No. 402,332

8 Claims. (Cl. 260—473)

Aromatic esters are prepared by the dismutation of aromatic aldehydes, e.g., $2ArCHO \rightarrow ArCOOCH_2Ar$, catalyzed by an alkali metal complex prepared in situ by interaction of the aromatic aldehyde, an alkali metal and certain aliphatic and heterocyclic ethers.

3,387,021

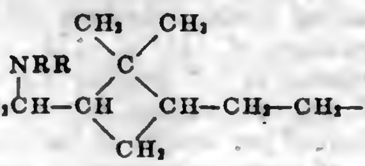
AMINO HYDROXYETHYL CYCLOBUTANES

Robert W. White, Willingboro, N.J., and Stella W. King, Elkins Park, Pa., assignors to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

No Drawing. Filed Apr. 8, 1965, Ser. No. 446,691

5 Claims. (Cl. 260—574)

Pinene derivatives having the formula



wherein R may be hydrogen, alkyl of 1 to 12 carbon atoms, phenyl, alkyl substituted phenyl, aralkyl and alkyl-substituted aralkyl. The compounds are useful in the preparation of polyester amides by reaction with dibasic acids.

3,387,022

2,2,4-TRIMETHYL-1,3-PENTANEDIOL METHACRYLATE COMPOSITIONS

Hugh J. Hagemeyer, William J. Gammans, and Alfred G. Robinson, Longview, Tex., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Oct. 14, 1964, Ser. No. 403,911

1 Claim. (Cl. 260—486)

Mono- and di-methacrylate esters of 2,2,4-trimethyl-1, 3-pentane diol found to have special utility as adhesives in the preparation of coatings, molded articles and the like.

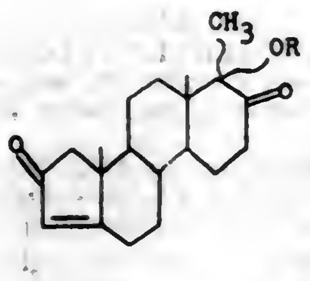
3,387,023
A-NOR-D-HOMOSTEROIDS

Seymour D. Levine, North Brunswick, N.J., assignor to E. R. Squibb & Sons, Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Mar. 17, 1966, Ser. No. 535,055

5 Claims. (Cl. 260—488)

1. A compound having the formula



wherein R is selected from the group consisting of hydrogen and acyl derived from hydrocarbon carboxylic acids having less than 12 carbon atoms.

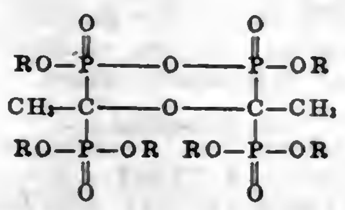
3,387,024
CLASS OF ORGANO-PHOSPHOROUS COMPOUNDS AND PROCESS FOR PREPARING MEMBERS THEREOF

Oscar T. Quimby, Cincinnati, Ohio, assignor to The Procter & Gamble Company, Cincinnati, Ohio, a corporation of Ohio

No Drawing. Filed Mar. 30, 1965, Ser. No. 444,030

5 Claims. (Cl. 260—502.4)

Cyclic tetraphosphonate compounds having the formula



$$\begin{array}{ccccc} & \overset{O}{\|} & & \overset{O}{\|} & \\ RO- & P & —O— & P & -OR \\ & | & & | & \\ CH_3- & C & —O— & C & -CH_3 \\ & | & & | & \\ RO- & P-OR & RO- & P & -OR \\ & \underset{O}{\|} & & \underset{O}{\|} & \end{array}$$

in which R represents hydrogen, sodium, potassium, ammonium, tri(ethanol)ammonium, and lower alkyl radicals containing from 1 to 6 carbon atoms. A process for preparing a cyclic tetraphosphonic acid having the foregoing formula by reacting acetic anhydride with phosphorous acid at a temperature of 135° C.–155° C., for 4 to 13 hours, in the presence of 1–5 weights of a solvent selected from acetic acid, n-propyl sulfone, tetramethylene sulfone, and mixtures thereof per weight of the reactant mixture, the molar ratio of acetic anhydride to phosphorous acid being .5:1 to 1.3:1, and recovering the cyclic tetraphosphonic acid.

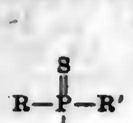
3,387,025
ARYLPHOSPHINODITHIOIC ACIDS

John P. Chupp, Kirkwood, Mo., and Peter E. Newallis, Morris Plains, N.J., assignors to Monsanto Company, a corporation of Delaware

No Drawing. Filed Sept. 28, 1962, Ser. No. 227,064

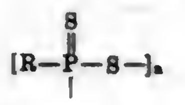
8 Claims. (Cl. 260—502.4)

1. The method of making an arylphosphinodithioic acid of the formula



$$R-\overset{\overset{S}{\|}}{\underset{\underset{SH}{|}}{P}}-R'$$

wherein R is a hydrocarbyl radical free of aliphatic unsaturation and having from 1 to 18 carbon atoms and wherein R′ is an aromatic radical having a resonant carbocyclic aromatic ring structure directly attached to the phosphorus atom which comprises reacting in the presence of an aluminum halide catalyst selected from the group consisting of aluminum chloride and aluminum bromide a hydrocarbylthionophosphine sulfide of the formula



$$[R-\overset{\overset{S}{\|}}{\underset{|}{P}}-S-]_n$$

wherein R has the aforedescribed significance and wherein *n* is a whole number with an aromatic compound of the formula R′H wherein R′ has the aforedescribed significance, said aromatic compound being free of aliphatic unsaturation, the reaction temperature being in the range of from about 50° C. to about 300° C., the ratio of reactants being at least *n* moles of R′H wherein *n* and R′ have the aforedescribed significances per mole of said hydrocarbylthionophosphine sulfide, the ratio of said aluminum halide catalyst to said hydrocarbylthionophosphine sulfide being from *n* up to 4*n* moles of the former per mole of the former per mole of the latter wherein *n* has the aforedescribed significance.

3,387,026
CATALYTIC METHOD OF PREPARING KETO-ACIDS

Harry Chafetz, Poughkeepsie, and Theodore C. Mead, Glenham, N.Y., assignors to Texaco Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Sept. 24, 1964, Ser. No. 399,108

4 Claims. (Cl. 260—514)

A process of producing keto-monocarboxylic acids via selective oxidation of alpha-hydrocarbon substituted cyclohexanone in the presence of alkali metal fluoride catalyst, said acids being useful as starting reactants in the preparation of keto-acid ester, amide and N-substituted amide derivatives, the latter being useful as detergent dispersant additives for lubricating oils.

3,387,027
PROCESS FOR MANUFACTURING TEREPHTHALIC ACID

Jacob Alagy, La Celle-Saint-Cloud, France, assignor to Institut Francais du Petrole des Carburants et Lubrifiants, Rueil-Malmaison, Hauts-de-Seine, France

No Drawing. Continuation of application Ser. No. 336,638, Sept. 9, 1964. This application Feb. 8, 1967, Ser. No. 614,750

Claims priority, application France, Jan. 16, 1963, 921,778

3 Claims. (Cl. 260—524)

Terephthalic acid has previously been produced by reacting with molecular oxygen an organic solvent solution of a terephthalic acid precursor, such as a p-dialkyl benzene or p-alkylbenzoic acid, in the presencve of an oxidation catalyst such as a heavy metal compound. Applicant has discovered that both the purity and the yield of terephthalic acid thus produced can be materially increased by comminuting the particles of solid terephthalic acid, substantially as they are formed, to a size such that at least 90% by weight of the particles are of a size smaller than 50 microns.

3,387,028
RECOVERY OF GLUTAMIC ACID FROM A FERMENTATION BROTH CONTAINING THE SAME

Yoshihisa Sugita, Kawasaki-shi, Kanagawa-ken, and Isamu Komori and Yoshio Tsuchiya, Yokohama-shi, Kanagawa-ken, Japan, assignors to Ajinomoto Co., Inc., Tokyo, Japan

No Drawing. Filed Aug. 7, 1963, Ser. No. 300,658

Claims priority, application Japan, Aug. 25, 1962, 37/35,127

1 Claim. (Cl. 260—527)

1. A method of recovering glutamic acid from an approximately neutral aqueous fermentation broth containing said glutamic acid and bacterial cells, which comprises:

(a) admixing to a portion of said broth a solution of zinc glutamate in an amount of a strong acid sufficient to make the pH of the resulting mixture between 4.0 and 2.5, whereby a portion of said glutamic acid is crystallized, the remainder of said mixture constituting a mother liquor containing said cells;

(b) separating the crystallized glutamic acid from said remainder;

(c) raising the pH of said mother liquor in the presence of said cells to a value between 5.5 and 7.5, whereby another portion of said glutamic acid is crystallized from said remainder in the form of zinc glutamate crystals;

(d) separating said zinc glutamate crystals from said mother liquor and from said cells;

(e) dissolving said zinc glutamate crystals in an excess of a strong acid, whereby an acid solution of zinc glutamate is obtained;

(f) admixing said acid solution to another portion of said broth in an amount sufficient to adjust the pH of the resulting mixture to a pH value between 4.0 and 2.5, whereby yet another portion of said glutamic acid is crystallized; and

(g) recovering the last mentioned portion of said glutamic acid.

3,387,029
OXIDATION OF POLYACROLEINS

Heinz Hartel and Ilse Ursula Nebel, Oberlar, Germany, assignors to Dynamit Nobel Aktiengesellschaft, Troisdorf, Bezirk Cologne, Germany, a corporation of Germany

No Drawing. Filed July 16, 1965, Ser. No. 472,737

Claims priority, application Germany, July 22, 1964, D 45,008

16 Claims. (Cl. 260—530)

A method of oxidizing polyacroleins to form polyacrylic acids or their salts is disclosed in which said polyacrolein is reacted in an alkaline aqueous medium with a Cu (II) oxide or hydroxide in the presence of metallic silver, mercury, gold, platinum, osmium, iridium, ruthenium, rhodium or palladium or an oxide of hydroxide thereof. The oxidation product is thereafter recovered either in the form of the acid or its salt.

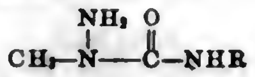
3,387,030
PRODUCTION OF METHYLSEMICARBAZIDES AND MONOMETHYLHYDRAZINES

Charles R. Walter, Jr., Hopewell, Va., assignor to Allied Chemical Corporation, New York, N.Y., a corporation of New York

No Drawing. Continuation-in-part of application Ser. No. 104,222, Apr. 20, 1961. This application Oct. 23, 1961, Ser. No. 147,087

5 Claims. (Cl. 260—554)

4. A process for the production of monomethylhydrazine which comprises hydrogenating a nitrosomethylurea compound selected from the group consisting of N-nitroso-N-methylurea and N-nitroso-N,N′-dimethylurea mixed with water in the presence of an alumina-supported, platinum catalyst in a concentration of about 10 to about 125 grams of said catalyst per mole of said nitrosomethylurea under a hydrogen pressure of about 50 p.s.i. to about 2000 p.s.i., said hydrogenating mixture having a pH value ranging from about 6.2 to 6.8 and a temperature of about 20° to about 60° C., recovering from said hydrogenation reaction mixture an N-amino derivative of the general formula



$$CH_3-\underset{}{\overset{\overset{NH_2}{|}}{N}}—\overset{\overset{O}{\|}}{C}-NHR$$

wherein R is a member selected from the group consisting of hydrogen and methyl, and hydrolyzing said amino derivative with aqueous, mineral acid to isolate the salt of monomethylhydrazine.

3,387,031
SYNTHESIS OF ALPHA-AMINO ACID AMIDE HYDROHALIDES

Herbert E. Johnson, South Charleston, W. Va., and Donald G. Crosby, Davis, Calif., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Original application June 8, 1961, Ser. No. 115,609, now Patent No. 3,190,917, dated June 22, 1965. Divided and this application Jan. 20, 1964, Ser. No. 338,631

5 Claims. (Cl. 260—561)

An alpha-amino nitrile is reacted with a hydrogen halide and an alcohol to produce the corresponding alpha-amino acid amide hydrogen halide. The course of the reaction is critically dependent upon the alcohol, with a primary alcohol being required when the alpha-amino nitrile is disubstituted at the 2-position carbon atom or branched at the 3-position carbon atom and a secondary alcohol being required when the alpha-amino nitrile is aminoacetonitrile, a straight-chain-alpha-amino nitrile, or an alpha-amino nitrile which is branched only beyond the 3-position carbon atom.

3,387,032
PROCESS FOR THE MANUFACTURE OF METHYLAMINES

**Jackson D. Leonard, 437 5th Ave.,
New York, N.Y. 10016**

No Drawing. Filed June 8, 1965, Ser. No. 462,399

5 Claims. (Cl. 260—585)

A process for the manufacture of methylamines by reacting ammonia with a compound selected from the group consisting of methanol, dimethyl ether and mixtures thereof wherein a catalyst is used which consists of a silica gel base carrying alumina which had partially been steam-deactivated at pressures of 1 to 50 atmospheres and then impregnated with 0.05 to 0.95 weight percent silver phosphate, rhenium heptasulfide, molybdenum- or cobalt sulfide. This catalyst promotes the formation of dimethylamine in preference to mono- and trimethylamines.

3,387,033
DIFLUORAMINO COMPOUNDS

Richard L. Talbott, White Bear Lake, and Robert J. Koshar, Lincoln Township, Washington County, Minn., assignors to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

No Drawing. Filed Apr. 4, 1966, Ser. No. 540,478

7 Claims. (Cl. 260—583)

Very high fluorinated compounds consisting essentially of carbon, nitrogen, oxygen, fluorine and, in some cases also chlorine or bromine, having nitro and difluoramino substitution on a single carbon atom and up to a total of only six carbon atoms. Examples include

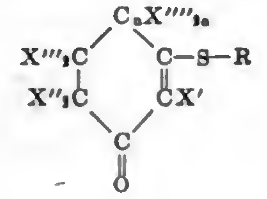
$$O_2N—CF_2—NF_2$$

and $O_2N—CF(NF_2)_2$.

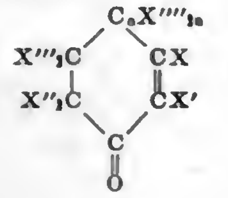
3,387,034
NOVEL HALOGENATED SULFIDES

Louis G. Anello, Basking Ridge, and Richard F. Sweeney, Dover, N.J., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York
No Drawing. Filed Apr. 5, 1965, Ser. No. 445,711
14 Claims. (Cl. 260—590)

Novel sulfides having the formula



wherein X′–X′′′′ may be F or Cl and may be the same or different provided that there is present at least one fluorine atom and one chlorine atom in the molecule, *n* may be 0 or 1 and R is an aryl radical selected from the group consisting of phenyl, phenylalkyl and alkylphenyl radicals are prepared by reacting a perhalocycloalkenone of the formula



wherein X–X′′′′ may be F or Cl and may be the same or different provided that there is present at least one fluorine atom and one chlorine atom within X′–X′′′′, and *n* may be 0 or 1, with a thiol of the formula:

$$R—SH$$

wherein R is an aryl radical selected from the group consisting of phenyl, phenylalkyl and alkylphenyl radicals.

The novel sulfides are useful as solvents for various polymers of trifluorochloroethylene, as sealing adjuvants for films of such polymers, and as intermediates for the preparation of fluorocarbon resins.

3,387,035
FLUORINE SUBSTITUTED BENZOPHENONE ULTRAVIOLET ABSORBERS

Don Norman Gray, Baltimore, Md., and Roger Dale Knight, Phoenix, Ariz., assignors to the United States of America as represented by the Secretary of the Air Force
No Drawing. Filed Nov. 4, 1963, Ser. No. 321,378
8 Claims. (Cl. 260—591)

1. The compound 2′-trifluoromethyl-2-hydroxy-4-methoxybenzophenone.

3,387,036
PRODUCTION OF BENZYL ALCOHOL AND BENZALDEHYDE

Jacques Bonnart and Georges Poilane, Lyon, Rhone, France, assignors to Rhone-Poulenc S.A., Paris, France, a French body corporate
No Drawing. Filed May 13, 1964, Ser. No. 367,225
Claims priority, application France, May 22, 1963, 935,749
15 Claims. (Cl. 260—599)

Benzyl alcohol and benzaldehyde are produced by oxidizing liquid toluene at 170° C.–220° C. with gas containing less than 21% of oxygen until not more than 10% of the toluene has been oxidized, then preferably decomposing the hydroperoxides formed, and isolating the benzyl alcohol and benzaldehyde produced.

3,387,037
p-(TRICHLOROMETHYLTHIO)BENZALDEHYDE

James B. Buchanan and Walter A. Gregory, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Application Feb. 1, 1962, Ser. No. 170,508, now Patent No. 3,207,792, dated Sept. 21, 1965, which is a division of application Ser. No. 788,499, Jan. 23, 1959, now Patent No. 3,061,645, dated Oct. 30, 1962. Divided and this application Jan. 28, 1965, Ser. No. 428,837
1 Claim. (Cl. 260—599)

The invention relates to p-(trichloromethylthio)benzaldehyde. This compound is a useful intermediate which can be prepared by the direct chlorination of p-(methylthio)-benzaldehyde.

3,387,038
PROCESS FOR OXIDIZING PROPYLENE AND ISOBUTYLENE TO UNSATURATED ALDEHYDE

Theodore A. Koch, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington Del., a corporation of Delaware
No Drawing. Continuation of application Ser. No. 226,454, Sept. 26, 1962. This application Feb. 23, 1966, Ser. No. 529,254
4 Claims. (Cl. 260—604)

Propylene or isobutylene are oxidized in the presence of water and oxygen at conversions of at least 25 percent to yield the corresponding aldehydes as principal olefin oxidation products over molybdenum oxide/group II–A metal oxide catalysts in which the molybdenum/group II–A metal ratio is in the range of at least 1 to 1 to 16 to 1.

3,387,039
PREPARATION OF DISULFIDES

Richard C. Doss, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
No Drawing. Filed Apr. 8, 1965, Ser. No. 446,744
3 Claims. (Cl. 260—608)

An organic disulfide is prepared by contacting a thiol such as 1-butanethiol with a mixture of an alpha-halo aldehyde such as chloroacetaldehyde and an alkyl sulfoxide such as methyl sulfoxide.

3,387,040
BROMINATED DIPHENYL SULFIDES

Zvi Enrico Jolles, St. Albans, England, assignor to Berk Limited
No Drawing. Filed Sept. 22, 1964, Ser. No. 398,428
Claims priority, application Great Britain, Sept. 23, 1963, 37,288/63
5 Claims. (Cl. 260—609)

Halogenated diphenylsulphides including tetrabromodiphenylsulphide, hexabromo-diphenylsulphide, tetrabromo-dichloro-diphenylsulphide and dibromo-dichloro-diphenylsulphide and polymer compositions containing said compounds and having fire retardant properties imparted thereby.

3,387,041
PROCESS FOR PREPARING DINITRODIPHENYL ETHERS

John A. Oscar, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Continuation-in-part of application Ser. No. 224,497, Sept. 18, 1962. This application Apr. 6, 1967, Ser. No. 628,851
9 Claims. (Cl. 260—612)

The preparation of dinitrodiphenyl ethers from substantially anhydrous alkali-metal nitrophenolates and halomononitrobenzenes in the presence of selected amides. Yields are improved by the use of the selected amide solvent and by the use of anhydrous reactants.

3,387,042
BUTYL NITROPHENOLS

Warren W. Kaeding, Concord, Calif., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Original application Dec. 4, 1961, Ser. No. 156,982. Divided and this application Aug. 23, 1965, Ser. No. 505,199
2 Claims. (Cl. 260—622)

1. 4-nitro-3-tertiarybutylphenol.
2. 2-nitro-5-tertiarybutylphenol.

3,387,043
HOMOLOGATION PROCESS

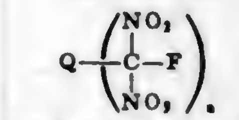
Michio Kuraishi, Setsunobu Asano, and Yoshiaki Shinozaki, Niigata, Japan, assignors to Commercial Solvents Corporation, New York, N.Y., a corporation of Maryland
No Drawing. Filed Dec. 28, 1964, Ser. No. 421,675
2 Claims. (Cl. 260—642)

A process for the production of an n-alcohol from an n-alcohol having 1 less carbon atom by reacting an n-alcohol of from 2 to 4 carbon atoms with hydrogen and carbon monoxide under conditions of elevated pressure and temperature in the presence of a catalyst, wherein water is added to the starting alcohol before introducing it in the reaction zone.

3,387,044
PROCESS FOR FLUORINATING COMPOUNDS CONTAINING A GEM-DINITRO GROUP

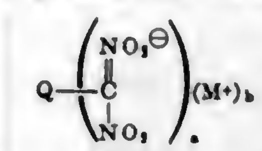
Vytautas Grakauskas, Arcadia, and Edward E. Hamel, Citrus Heights, Calif., assignors to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio
No Drawing. Filed July 27, 1962, Ser. No. 214,169
21 Claims. (Cl. 260—644)

1. The method of preparing organic compounds of the formula



$$Q-\left(\begin{array}{c}NO_2\\ |\\ C-F\\ |\\ NO_2\end{array}\right).$$

which comprises reacting fluorine, in about a stoichiometric amount, with a compound of the formula



$$Q-\left(\begin{array}{c}NO_2^{\ominus}\\ \|\\ C\\ |\\ NO_2\end{array}\right)(M^+)_b.$$

wherein in the above formulae Q is selected from the group consisting of monovalent and polyvalent organic radicals, M is selected from the group consisting of hydrogen and a metal cation, and *a* and *b* are small whole numbers of from 1 to 5, in the presence of a substantially inert moderator.

21. A method of preparing 1-fluoro-1,1-dinitroethane which comprises reacting fluorine, in about a stoichiometric amount, with the potassium salt of 1,1-dinitroethane in a water moderator.

3,387,045
ISOMERIZATION OF CYCLOOCTADIENES WITH A CATALYST COMPLEX OF A NOBLE METAL HALIDE AND A NITRILE

Ernest A. Zuech, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
No Drawing. Filed Dec. 31, 1964, Ser. No. 422,508
5 Claims. (Cl. 260—666)

1. A process for isomerizing an unconjugated cyclooctadiene to a conjugated cyclooctadiene which comprises contacting said unconjugated cyclooctadiene under isomerizing conditions including a temperature in the range of about 100 to 200° C. and a reaction time in the range of about 0.5 to 24 hours with a catalyst complex of a nitrile of 2 to 12 carbon atoms selected from the group consisting of alkanenitriles, cycloalkanenitriles, and aromatic nitriles with at least one metal halide of the formula MX_2 wherein M is selected from the group consisting of Pt and Pd and X is selected from the group consisting of chlorine and bromine to produce said conjugated cyclooctadiene; and recovering the conjugated cyclooctadiene.

3,387,046
PRODUCTION OF SOLUBLE POLYCYCLOPENTADIENES

James W. Cleary, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
No Drawing. Filed Nov. 5, 1965, Ser. No. 506,594
7 Claims. (Cl. 260—666)

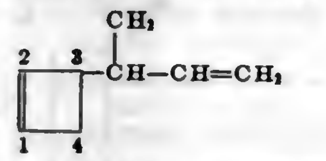
A soluble polycyclopentadiene is produced by the polymerization of a cyclopentadiene in the presence of an alkylbenzene, a solvent for said cyclopentadiene and an aluminum halide or organo aluminum halide catalyst; the cyclopentadiene, solvent and alkylbenzene having been scavenged prior to contact with the catalyst by the use of a compound represented by the formula $M(R)_y$ wherein M is a Group I–A, II–A, II–B or III–A metal, R is alkyl, cycloalkyl, aryl or combinations thereof having from 1 to 16 carbon atoms.

3,387,047
ALKENYLCYCLOBUTENES AND METHOD OF PREPARING SAME

Vittorio Turba, Milan, Italy, Guido Sartori, Roselle, N.J., and Alberto Valvassori, Milan, Italy, assignors to Montecatini Edison S.p.A., Milan, Italy
No Drawing. Filed Apr. 17, 1967, Ser. No. 631,150
Claims priority, application Italy, Apr. 22, 1966, 9,312/66; Oct. 26, 1966, 29,296/66
9 Claims. (Cl. 260—666)

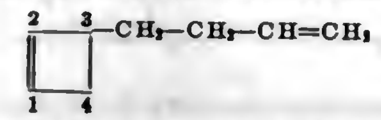
Alkenylcyclobutenes of the following formulas:

(I)



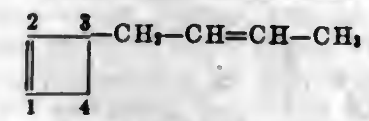
3-(1-methyl-allyl)-cyclobutene

(II)



3-(3-butenyl)-cyclobutene

(III)



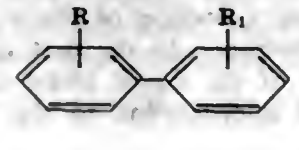
3-(trans-2-butenyl)-cyclobutene

prepared by subjecting butadiene dimers to ultraviolet light radiation. To obtain compound I, initial butadiene dimer is 3-methyl-1,4,6-heptatriene; for compound II, initial dimer is 1,3,7-octatriene; for compound III, initial dimer is 1,3,6-octatriene.

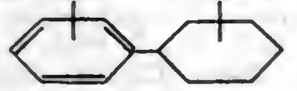
3,387,048
PROCESS FOR THE SELECTIVE HYDROGENATION OF BIPHENYL AND DIPYRIDYL AND DERIVATIVES THEREOF

Paul N. Rylander and Duane R. Steele, Newark, N.J., assignors to Engelhard Industries, Inc., Newark, N.J., a corporation of Delaware
No Drawing. Filed Oct. 28, 1964, Ser. No. 407,218
5 Claims. (Cl. 260—667)

1. A process for the selective hydrogenation of a compound having the formula



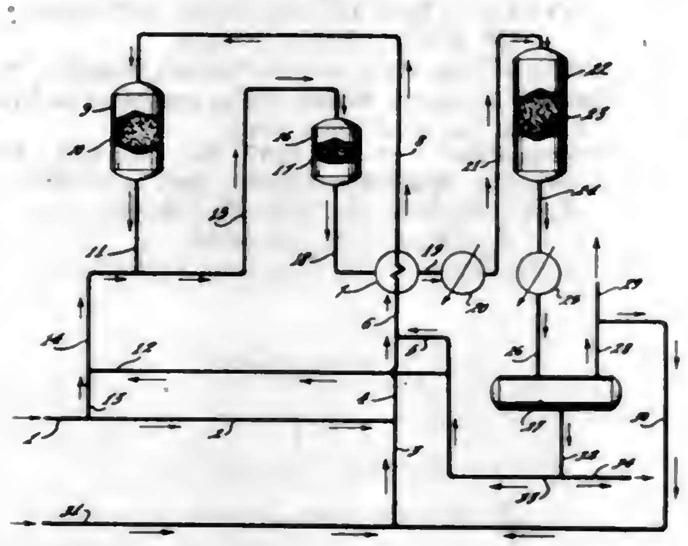
wherein R and R_1 are hydrogen or lower alkyl radicals, which comprises subjecting said compound in solvent comprising normally liquid paraffinic hydrocarbon having from 5–12 hydrocarbons per molecule or a saturated aliphatic hydrocarbon monocarboxylic acid having from 2–10 carbon atoms per molecule in the presence of a catalyst consisting of palladium supported on a solid catalytic carrier at a reaction temperature and pressure until sufficient hydrogen is taken up to saturate one aromatic ring of the compound, thereby obtaining a reaction product comprising predominantly a compound having the formula



wherein R and R_1 are as defined as above.

3,387,049
CATALYTIC HYDROGENATION OF AROMATIC HYDROCARBONS

Robert G. Craig, Fairfax, Wilmington, Del., and Javier Zulueta, Philadelphia, Pa., assignors to Air Products and Chemicals, Inc., Philadelphia, Pa., a corporation of Delaware
Filed Oct. 6, 1965, Ser. No. 493,415
8 Claims. (Cl. 260—667)



1. The process for the catalytic hydrogenation of an aromatic hydrocarbon to the corresponding cycloaliphatic hydrocarbon in thre reaction zones which comprises: mixing 20 to 35 weight percent of the aromatic hydrocarbon feed stock with its corresponding cycloaliphatic hydrocarbon and hydrogen; contacting the resulting admixture with hydrogenation catalyst in the first reaction zone to effect substantially complete hydrogenation of said aromatic feed stock; cooling the effluent from the first reaction zone by admixture with the remaining total balance of 65 to 80 weight percent of the aromatic hydrocarbon feed stock and additional cycloaliphatic hydrocarbon corresponding to the aromatic hydrocarbon feed stock; contacting the resulting cooled effluent admixture with hydrogenation catalyst in a second reaction zone, which zone contains but from ¼ to ⅓ the volume of catalyst in said first zone, to effect 35 to 60 percent hydrogenation of the aromatic hydrocarbon present; cooling the effluent from the second reaction zone; contacting the cooled effluent from the second reaction zone in a third combined polishing and reaction zone with hydrogenation catalyst to effect complete hydrogenation of the remaining aromatic hydrocarbons; separating the effluent from the third reaction zone into liquid and vapor phase materials; recycling a portion of the vapor phase material comprising hydrogen to the first reaction zone; recycling a portion of the liquid phase material comprising cycloaliphatic hydrocarbon to the first and second reaction zones; and recovering the remaining portion of the liquid phase material as cycloaliphatic hydrocarbon product material.

3,387,050
PRODUCTION OF STILBENE AND BIBENZYL

John R. Norell, Donald L. Crain, and Roger F. Kleinschmidt, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware
No Drawing. Filed Oct. 22, 1965, Ser. No. 502,525
3 Claims. (Cl. 260—668)

Unsaturated compounds such as 1,2-bis(3-cyclohexen-1-yl) ethylene are dehydrogenated to form other unsaturated compounds such as stilbene and bibenzyl.

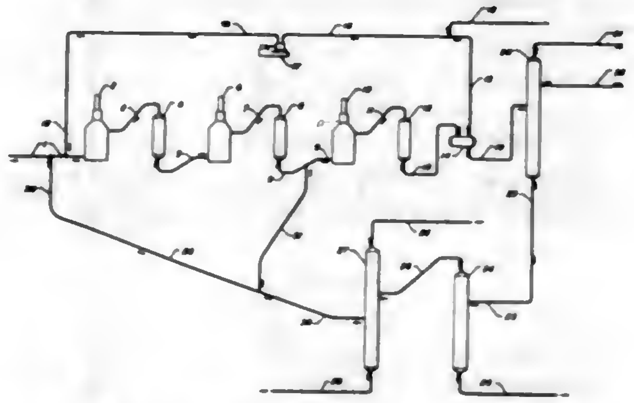
3,387,051
METHOD OF PREPARATION OF SUBSTITUTED ARYL ETHANE COMPOUNDS

John R. Norell, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
No Drawing. Filed Oct. 22, 1965, Ser. No. 502,631
8 Claims. (Cl. 260—668)

Substituted aryl ethane compounds are formed by contacting alkenyl-substituted cycloalkenes with a palladium or palladium supported catalyst.

3,387,052
PROCESS FOR PRODUCTION OF AROMATIC HYDROCARBONS

George E. Addison, Mount Prospect, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware
Filed May 11, 1966, Ser. No. 549,288
8 Claims. (Cl. 260—668)



Process which comprises charging naphtha to a catalytic reforming unit to produce aromatics and hydrogen, recovering high purity aromatics from the resulting reformate, fractionating the resulting raffinate to provide a selected paraffinic fraction, and recycling the selected paraffinic fraction to the reformer for dehydrocyclization to provide additional aromatics. The selected paraffinic fraction is comprised of C_8+ hydrocarbons and has substantial freedom from polycyclic aromatics. Where the catalytic reformer comprises a series of reaction zones, the selected paraffinic fraction is preferably recycled only to the last reaction zone.

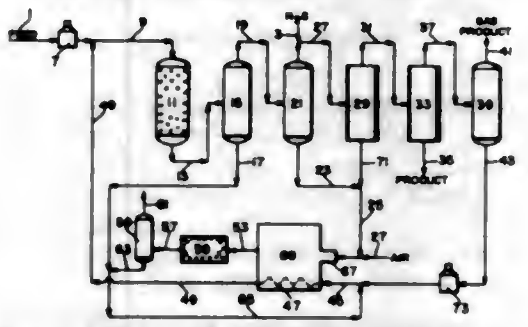
3,387,053
DEHYDROGENATION CATALYST AND PROCESS

Emerson H. Lee, Creve Coeur, Mo., assignor to Monsanto Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed Nov. 12, 1965, Ser. No. 507,514
15 Claims. (Cl. 260—669)

More saturated hydrocarbons are dehydrogenated to less saturated hydrocarbons in the presence of steam and a catalyst containing iron oxide as the major active catalytic agent together with from about 1% to about 8% by weight of either zinc oxide or copper oxide intimately dispersed in the matrix of the iron oxide to a degree such as to characterize the catalyst prior to use by a magnetic susceptibility of from about 30×10^{-6} to about 300×10^{-6} c.g.s.u., and an alkali promoter, said catalyst having a surface area of from about 1 to about 5 square meters per gram.

3,387,054
CONVERSION OF C_4, C_5 HYDROCARBONS WITH ELEMENTAL SULFUR AND METAL SULFIDE CATALYST

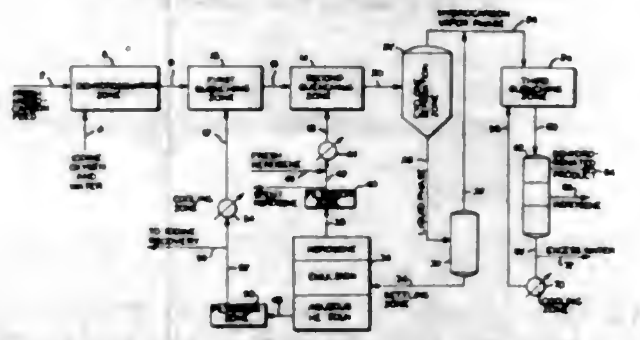
Seymour C. Schuman, Rocky Hill, N.J.
(360 Jefferson Road, Princeton, N.J. 08540)
Filed June 7, 1965, Ser. No. 461,767
19 Claims. (Cl. 260—680)



An aliphatic hydrocarbon containing 4 or 5 carbon atoms (e.g., n-butane) is reacted with elemental sulfur in contact with a solid metal sulfide catalyst at a temperature between 650° F. and 1100° F. to produce, as a major reaction product, a hydrocarbon having the same number of carbon atoms but at least one more ethylenic bond (e.g., butadiene).

3,387,055
PROCESS FOR QUENCHING IODINE-EFFECTED DEHYDROGENATION EFFLUENT

Lynn D. Harber, Moore, Okla. (% El Paso Products Co., P.O. Box 3896, Odessa, Tex. 79760)
Filed Sept. 29, 1966, Ser. No. 600,676
11 Claims. (Cl. 260—681.5)



The effluent, e.g., butadiene, from dehydrogenation with added iodine, is progressively reduced in temperature and purified by successive contact with aqueous HI and with kerosense, followed by separators and settling zones.

3,387,056
PROCESS FOR PREPARING STRAIGHT CHAIN ALKYL AROMATIC COMPOUNDS USING HF AND A FLUORIDE CATALYST MODIFIER

Gilbert J. McEwan, Webster Groves, and Sidney G. Clark, Creve Coeur, Mo., assignors to Monsanto Company, a corporation of Delaware
No Drawing. Filed Nov. 18, 1963, Ser. No. 324,208
9 Claims. (Cl. 260—671)

1. In the method for preparing straight chain alkylaryl compounds by the alkylation of an aromatic compound with a straight chain olefin containing between about 6 to about 20 carbon atoms per molecule using a substantially anhydrous hydrogen fluoride catalyst, said aromatic compound being selected from the group consisting of benzene, phenol, toluene, naphthalene, and xylene, the improvement comprising carrying out said alkylation in the presence of said catalyst having dissolved therein a basic inorganic fluoride catalyst modifier selected from the group consisting of alkali metal fluorides and alkaline earth metal fluorides in amounts of a molar ratio basis of catalyst to catalyst modifier of from about 1:.001 to 1:.01.

3,387,057
PHENOLIC RUBBER ANTIOXIDANTS

Martin B. Neuworth, Pittsburgh, and Frederic W. Hammesfahr, Bethlehem, Pa., assignors to Consolidation Coal Company, Pittsburgh, Pa., a corporation of Delaware
No Drawing. Continuation of application Ser. No. 479,303, Aug. 12, 1965. This application Apr. 26, 1967, Ser. No. 637,314
3 Claims. (Cl. 260—810)

The use of 4,6-dinonyl-o-cresol as a deterioration retarder for rubber is described.

3,387,058
FUSIBLE AND INFUSIBLE POLYMERS FROM CARBOCYCLIC AROMATIC POLYCARBOXYLIC PHENYL ESTERS AND CARBOCYCLIC AROMATIC TETRAMINES

Harold H. Levine, San Diego, Calif., assignor to Whittaker Corporation, a corporation of California
No Drawing. Continuation-in-part of application Ser. No. 238,697, Nov. 19, 1962. This application Dec. 23, 1963, Ser. No. 332,971
18 Claims. (Cl. 260—823)

7. The process comprising reacting at least one diphenyl ester of a carbocyclic aromatic acid with a carbocyclic aromatic tetramine at a temperature from about 150° C. to about 400° C. to produce a fusible linear polybenzimidazol, reacting a carbocyclic aromatic polycarboxylic phenyl ester having an ester functionality greater than 2 with a carbocyclic aromatic tetramine at a temperature of from about 150° C. to about 400° C. to produce a second polybenzimidazole, and mixing said linear polybenzimidazole and said second polybenzimidazole.

3,387,059
POLYESTERS PREPARED FROM BRANCHED CHAIN MONOCARBOXYLIC ACIDS

Pierre Theodore Camille Pajot, Chantilly, France, assignor to Etablissements Kuhlmann, Paris, France
No Drawing. Filed Dec. 24, 1964, Ser. No. 421,085
Claims priority, application France, Dec. 28, 1963, 958,763
4 Claims. (Cl. 260—842)

Polyesters have been prepared using branched aliphatic monocarboxylic acids wherein the carboxyl group is linked directly to a $—CH_2—$ group. The polyesters have good chemical resistance and may be blended with aminoplast or phenoplast resins.

3,387,060
POLYESTERS PREPARED FROM MALEIC ANHYDRIDE AND 2,2,4,4 - TETRACHLORO - 1,5-DIHYDROXY-3-PENTANONE

Michael Kokorudz and William K. Langdon, Grosse Ile, Mich., assignors to Wyandotte Chemicals Corporation, Wyandotte, Mich., a corporation of Michigan
No Drawing. Filed May 4, 1966, Ser. No. 547,440
18 Claims. (Cl. 260—869)

This invention relates to flame retardant polyesters prepared from maleic anhydride, one or more additional dicarboxylic acids and anhydrides, and 2,2,4,4-tetrachloro-1,5-dihydroxy-3-pentanone having the formula

$$HOCH_2—CCl_2—CO—CCl_2—CH_2OH$$

The polyesters can be cross linked with unsaturated monomers to obtain hard resins.

3,387,061
CHEMICAL REACTION PRODUCT OF POLYCARBOXYLIC ACID AND A POLYMERIC POLYETHER

Keith L. Smith, South Charleston, Alfred E. Winslow, Scott Depot, and Edward C. Seltzer, St. Albans, W. Va., assignors to Union Carbide Corporation, a corporation of New York

Continuation of application Ser. No. 295,860, June 21, 1963, which is a continuation-in-part of application Ser. No. 759,656, Sept. 8, 1958. This application May 4, 1966, Ser. No. 547,673

13 Claims. (Cl. 260—874)

1. The product of chemical reaction of a polymeric polycarboxylic acid and a polymeric polyether; said acid contains at least an average of about 10 carboxylic acid groups, an average molecular weight of at least about 600, and an average of from about 0.3 to about 1.7 free carboxylic acid groups per 100 molecular weight of said polymeric polycarboxylic acid, and said polymeric polyether has an average molecular weight of at least about 4000, possesses from about 0.5 to about 3.33 non-cyclic aliphatic ether groups per 100 molecular weight, and is from the groups consisting of poly(alkenyl alkyl ether) and a polyether possessing a plurality of recurring alkylene oxide radicals, the oxide moieties of which are said non-cyclic aliphatic ether groups, said product of chemical reaction being insoluble in hot and cold water.

3,387,062
COMPOSITIONS OF POLYVINYL CHLORIDE AND GRAFT POLYMERS OF CHLORINATED BUTYL RUBBER ON POLYVINYL CHLORIDE AND METHOD FOR PREPARATION

Jean-Claude Thomas and Michel Marbach, Lyon, France, assignors to Produits Chimiques Pechiney-Saint-Gobain, Neuilly-sur-Seine, France

No Drawing. Filed Feb. 18, 1965, Ser. No. 433,800

Claims priority, application France, Feb. 25, 1964, 965,053

3 Claims. (Cl. 260—876)

The invention is addressed to the preparation of polyvinyl chloride-graft polymer of polyvinyl chloride grafted with chlorinated butyl rubber in which the latter is present in an amount up to 20% by weight of the polymer and in which the composition is prepared by mixing the polyvinyl chloride and graft polymer with working at an elevated temperature to form the materials into a homogeneous system and wherein the polyvinyl chloride and the graft polymer of polyvinyl chloride and polyvinyl butyl rubber are preferably polymerized by bulk polymerization with the polymerization of the graft polymer being carried out at a higher temperature than for the polyvinyl chloride.

3,387,063
SULFUR-VULCANIZABLE BLENDS OF ETHYLENE-BUTADIENE COPOLYMER AND BUTYL OR EPD RUBBER

Fay W. Bailey, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed Mar. 29, 1966, Ser. No. 538,244

6 Claims. (Cl. 260—888)

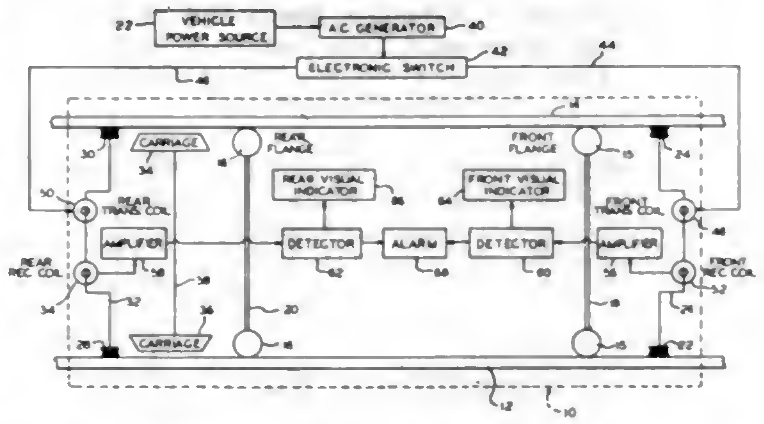
1. A sulfur vulcanizable blend of an ethylene-butadiene copolymer comprising from about 0.5 to about 5 weight percent polymerized butadiene and a rubbery copolymer selected from (a) ethylene-propylene-diene terpolymer, and (b) isobutylene-isoprene copolymer wherein said rubbery copolymer is present in an amount in the range of 1 to 50 percent by weight and said ethylene-butadiene copolymer is present in an amount in the range of 99 to 50 weight percent, based on the total of these components in the mixture.

3,387,064
RAIL SHUNT RESISTANCE INDICATING SYSTEM

Ivan L. Joy, 1616 W. 29th St. 66611; Gary M. Hoffsommer, R.F.D. 4 66603; Donald L. Muyskens, 245 E. 29th St. 66605; and Merlin G. Reiter, 1901 Wilcox Court 66608, all of Topeka, Kans.

Filed May 2, 1966, Ser. No. 546,691

9 Claims. (Cl. 264—1)



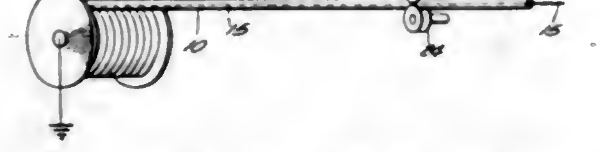
A circuit continuity checking and indication system for use on railway vehicles whose wheel and rail contact may not provide the proper shunt characteristics needed to actuate the block signal system. The circuit checking and indicator system is located on the vehicle and uses signal circuit means in series with the two rails so that the wheels and axles of the vehicle may complete said circuit. An indication is given whenever the circuit is not properly completed.

3,387,065
PRODUCTION OF IRRADIATED MATERIAL

Rodney L. Derbyshire, Menlo Park, and Fred W. Schernig, San Carlos, Calif., assignors to Raychem Corporation, Redwood City, Calif., a corporation of California

Filed Mar. 3, 1966, Ser. No. 531,458

12 Claims. (Cl. 264—22)



12. In a process of producing an irradiation cross-linked polymeric tube, the steps of inserting an electrical conductor substantially smaller in cross-section than the interior of said tube within said tube substantially along the entire length of said tube, connecting said conductor to ground, and crosslinking said tube by irradiating with electrons while said conductor is grounded.

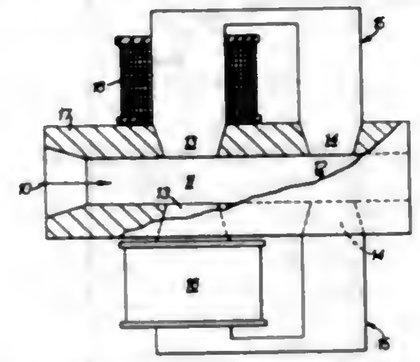
3,387,066
METHOD FOR PRODUCING SINTERED NON-METALLIC MAGNETIC MATERIALS

Gerald Martin, Towcester, and Laurie Walker, Blisworth, England, assignors to Plessey-UK Limited, Essex, England

Filed Aug. 10, 1964, Ser. No. 388,543

4 Claims. (Cl. 264—24)

A method for producing bodies of sintered non-metallic magnetic material by extruding a mixture of the material with binder and during extrusion subjecting the plastic mixture to an artificial orientating magnetic field to impart anisotropic magnetic properties, subjecting the extruded material to a demagnetizing field to prevent material dimensional changes in the extrudate, and thereafter firing the extruded mass to sinter the non-metallic material and remove the plastic binder.

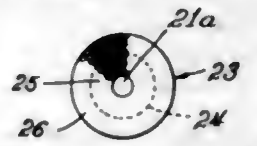


3,387,067
LOW DENSITY PLASTIC FOAM ARTICLE AND PRODUCTION TECHNIQUE

John Lloyd McCurdy, Palos Verdes Estates, Calif., assignor to Standard Oil Company, Chicago, Ill., a corporation of Indiana

Continuation-in-part of application Ser. No. 215,738, Aug. 8, 1962. This application May 20, 1965, Ser. No. 463,446

2 Claims. (Cl. 264—53)



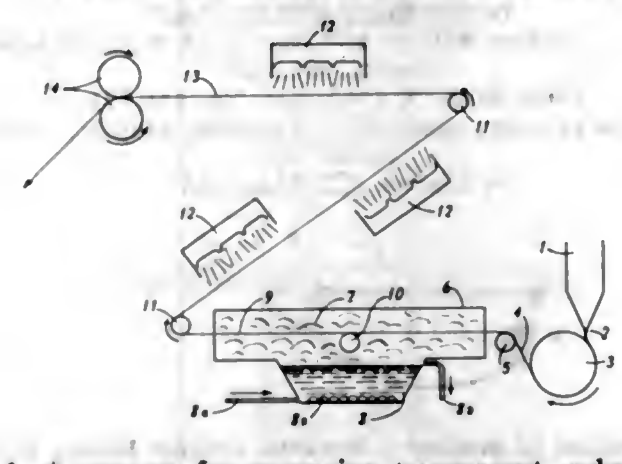
1. A method of making a solid mass of uniform low density foam which comprises heating a plurality of hollow, thin-walled elements made of a thermoplastic containing in the thermoplastic a volatile expanding agent having a boiling point lower than the sofening point of the thermoplastic, to a temperature above the sofening point of the thermoplastic, so as to incompletely expand the elements, both outwardly and inwardly from their walls, into individual foam masses and thereafter collectively further expanding and coalescing within a confining means, by further application of heat, said individual masses into an integral mass of foam said thin walls being of sufficient dimension so as to completely fill, upon expansion, said elements and said confining means.

3,387,068
PROCESS FOR FORMING TRANSPARENT UNORIENTED POLYAMIDE RESIN FILMS

William C. Scudder, North Plainfield, N.J., assignor to Allied Chemical Corporation, New York, N.Y., a corporation of New York

Filed Mar. 26, 1965, Ser. No. 442,884

10 Claims. (Cl. 264—83)



1. A process for preparing transparent, substantially haze-free unoriented films of 0.4 to 2 mil thickness having high mechanical strength from a molten polyamide resin which comprises:

(1) extruding the molten resin at a temperature above its melting point onto a smooth moving support;

(2) controlling the temperature of the support so that the molten resin is cooled during its contact with the support to a temperature not greater than about 210° F. to form a coherent film;

(3) subjecting the film to water vapor laden atmosphere at a temperature of at least about 125° F. for a time sufficient to obtain a film having a water content of 1.3 percent to 4.0 percent based on the weight of the film; and

(4) heating the moisturized film at a temperature of at least about 125° F. for a time sufficient to reduce the water content of the film to between 0.4 percent and 3.5 percent based on the weight of the film.

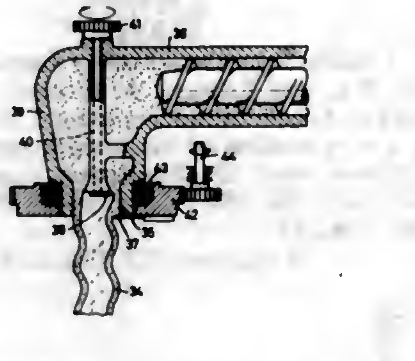
3,387,069
METHOD FOR THE MANUFACTURE OF TUBE PROFILES FROM THERMOPLASTICS

Christian Stöhr, Zeyern, near Kronach, Germany, assignor to Anita Stöhr, Bazenheid, Switzerland

Filed Dec. 16, 1963, Ser. No. 330,718

Claims priority, application Germany, Dec. 24, 1962, St 20,128

8 Claims. (Cl. 264—145)



A method for producing various profiled and apertured tubes from thermoplastic material by cutting into an extruded form under continuous tension as it issues from an extrusion press while still in the warm plastic state. A smooth tube or form **34**, as it issues from the extrusion press, is cut into or carved simultaneously on the inside and outside thereof by means of rotating knives **37** and **38**, located respectively outside and inside of the extrusion form. As a result of continuous tension applied, a stretching or expansion of the non-cut portions of the tube takes place. Subsequently, after the extruded form is set, the entire stretched form is cooled to solidify it.

3,387,070
METHOD FOR PRODUCING SHAPED ARTICLES OF WATER-INSOLUBLE POLY-DL-ALANINE

Ryoichi Wakasa, Shinichi Ishida, and Chihiro Oizumi, Tokyo, Japan, assignors to Asahi Kasei Kogyo Kabushiki Kaisha, Osaka, Japan, a corporation of Japan

Filed Apr. 13, 1964, Ser. No. 359,364

Claims priority, application Japan, Apr. 15, 1963, 38/18,084; 38/18,085

6 Claims. (Cl. 264—178)

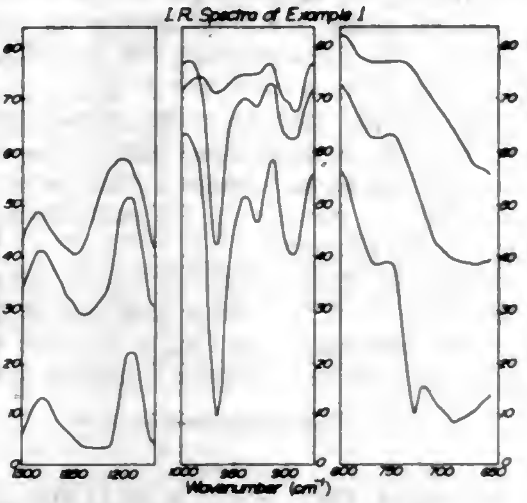
A process for producing shaped articles, especially fibers, of water-insoluble poly-DL-alanine from water-soluble poly-DL-alanine by way of wet spinning in which:

(i) Phenols containing an acid having a pKa below 5.0 are used as a solvent to produce a solution of poly-DL-alanine;

(ii) Aromatic hydrocarbons (more than 50% by volume of the total amount) are used as a coagulating bath with or without an acid having a pKa below 5.0 and other organic solvents;

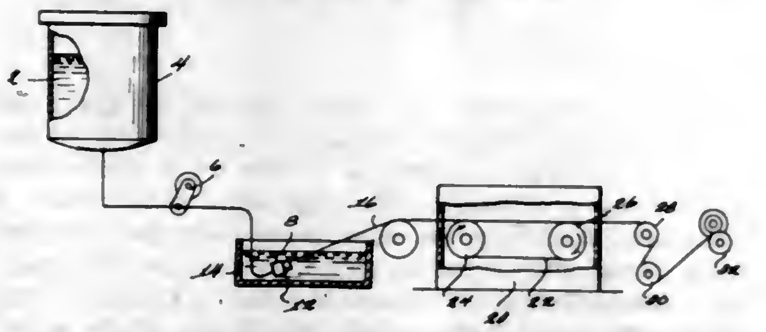
(iii) The shaped article obtained by extruding the polymer solution into the coagulating bath is stretched from 2–10 times its original length in the coagulation bath;

(iv) The shaped article obtained in (iii) above may be further subjected to a thermal treatment including thermal stretching at a temperature of 40° to 250° in an aromatic hydrocarbon, a halogenated hydrocarbon, carbon disulfide or the like or a mixture of two or more thereof.



3,387,071
FIBERS

John W. Cahill, Somerset, Mass., James L. Powell, Barrington, R.I., and Edward A. Gartner, Somerset, Mass., assignors to Globe Manufacturing Company, Fall River, Mass., a corporation of Massachusetts
Continuation-in-part of abandoned application Ser. No. 290,129, June 24, 1963. This application May 5, 1964, Ser. No. 365,082
17 Claims. (Cl. 264—184)

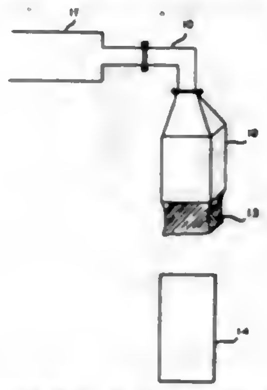


1. A process of preparing an elastic thread comprising the steps of providing a liquid polyurethane prepolymer selected from the group consisting of polyesters and polyethers having terminal groups selected from the group consisting of organic isocyanate groups and chloroformate groups said prepolymer having been prepared from a member of the group consisting of polyesters and polyethers having a functionality of above 2.1, extruding said liquid prepolymer into an organic solvent solution of up to 10 normal of a polyamine selected from the group consisting of primary and secondary aliphatic and heterocyclic amines and thereby forming a filament in said solvent solution, said organic solvent being the sole solvent, and thereafter removing the solvent and excess polyamine and curing the thread in hot air.

3,387,072
PROCESS FOR THE PRODUCTION OF VOID-FREE BLOCKS FROM THERMOPLASTIC MATERIAL

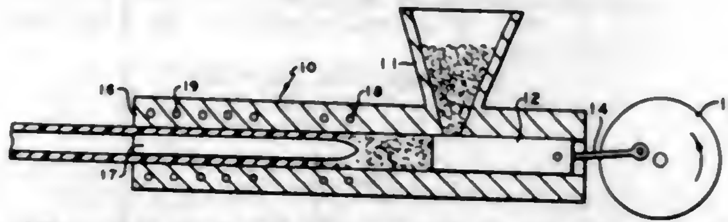
Archibald Carmichael Leitch, Penarth, Glamorgan, Wales, assignor to The Distillers Company Limited, Edinburgh, Scotland, a British company
Filed Jan. 24, 1964, Ser. No. 339,984
4 Claims. (Cl. 264—210)

Solid, void-free blocks of polymeric, thermoplastic material are prepared by extruding said material, stretching the resulting hot extrudate and thereafter forming same to a desired shape in a mold.



3,387,073
POLYETHYLENE EXTRUSION

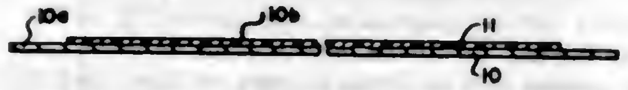
Olaf E. Larsen, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Jan. 10, 1964, Ser. No. 337,003
4 Claims. (Cl. 264—211)



Glycerol is used as a processability additive in the extrusion of thermoplastic polymers by dynamic extrusion.

3,387,074
INK TRANSFER MEMBER

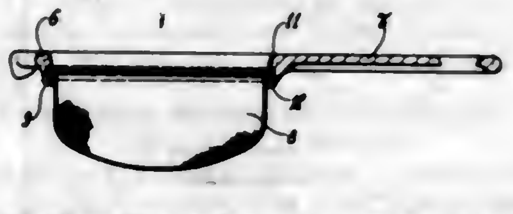
Edward D. Hill, 3140 W. 32nd St., Cleveland, Ohio 44109
Filed Dec. 16, 1963, Ser. No. 330,675
5 Claims. (Cl. 264—259)



The method of making an ink transfer member comprising a metallic sheet having a layer of a soft, resilient, ink-attractive, ink-resistant, non-foamed elastomeric polyurethane overlying and adhered to the sheet, the polyurethane layer having an as-formed, underground and unmachined exposed surface made by reacting the polyurethane in a horizontal mold against a superposed backing member.

3,387,075
METHOD FOR THE MANUFACTURE OF DOMESTIC STRAINERS

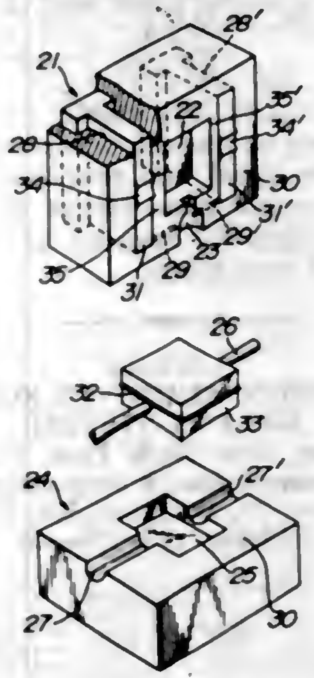
Stanley Robert Wilcox, 197 Bay Road, Sandringham, Victoria, Australia
Filed May 19, 1965, Ser. No. 456,991
Claims priority, application Australia, May 25, 1964, 44,909/64
4 Claims. (Cl. 264—263)



A method of making a domestic strainer having a cup-shaped wire straining element attached to a plastic handle in which a lip on the straining element is sandwiched between ring elements composed of plastic material having a melting point no higher than the melting point of the plastic material before the handle is moulded onto the straining element in a die.

3,387,076
METHODS OF MOLDING PLASTIC OBJECTS WITH INSERTS

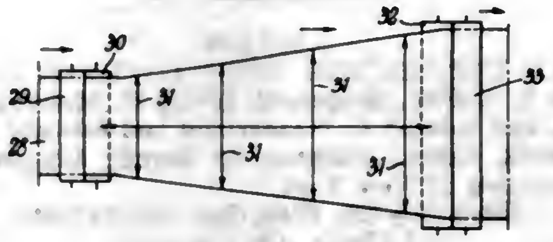
Hideyasu Murooka, Yokohama, Japan, assignor to Hitachi, Ltd., Tokyo, Japan
Filed Aug. 9, 1965, Ser. No. 478,114
Claims priority, application Japan, Aug. 14, 1964, 39/45,595
1 Claim. (Cl. 264—276)



The present disclosure relates to an improved method and apparatus for molding objects made of synthetic materials wherein flash-restraining members comprising, for example, synthetic polymers or soft metal are embedded in a one-half section of a two-piece mold in the vicinity of the cavity formed therein, for the purpose of stopping up the clearances usually formed along the parting line of the mold and between the inserts and the walls of the insert-receiving grooves communicating with the mold cavity.

3,387,077
METHOD FOR THE PRODUCTION OF OPEN-WORK STRUCTURES

William Albert Sammons, Sawbridgeworth, and Albert Neville May, Hunsdon, England, assignors to T. J. Smith & Nephew Limited, Hull, England, a British company
Filed Aug. 21, 1964, Ser. No. 391,215
Claims priority, application Great Britain, Aug. 27, 1963, 33,949/63
4 Claims. (Cl. 264—289)

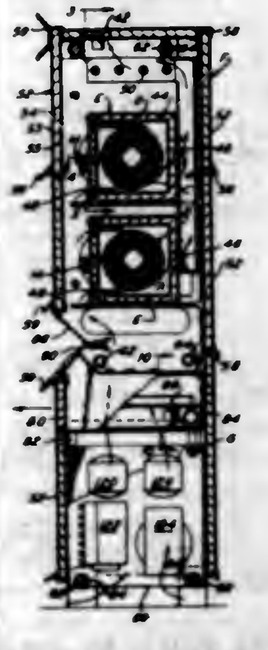


A method of producing open-work structures by stressing an embossed sheet of thermoplastic polymer in two distinct directions simultaneously until the material is permanently stretched and splits in regular positions between the bosses.

ELECTRICAL

3,387,078
DIFFUSION FURNACE WITH FLAT RECOVERY

William S. Montgomery, Jr., Wayne, and Ronald E. Erickson, King of Prussia, Pa., assignors to Centigrade Systems, Inc., Fort Washington, Pa., a corporation of Pennsylvania
Filed June 15, 1966, Ser. No. 557,786
22 Claims. (Cl. 13—24)

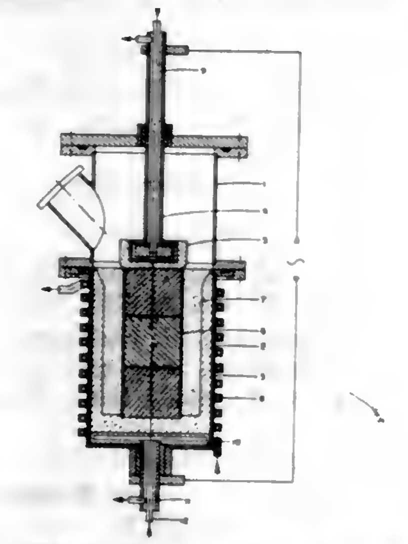


A diffusion furnace with rapid flat recovery profile and operative at a uniform elevated temperature across the treatment zone comprising a plurality of independently controlled heating zones with means to cut-off the heat to the end zones for predetermined periods of time after the material to be treated enters the furnace. Insulation selected for incorporation about the heating zones operate at minimum K-factor for the anticipated mean temperature of operation and in the flat portion of the temperature versus K curve so as to provide low mass and thereby avoid overshooting.

3,387,079
PROCESS FOR THE FUSION OF METAL OXIDES

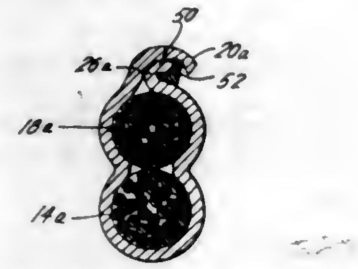
Walter Hoppe, Grossauheim uber Hanau, Norbert Müller, Wolfgang uber Hanau, and Wilhelm in der Schmitten, Hanau am Main, Germany, assignors to the United States of America as represented by the United States Atomic Energy Commission
Filed Feb. 23, 1965, Ser. No. 434,720
Claims priority, application Germany, Mar. 24, 1964, E 26,696
5 Claims. (Cl. 13—34)

Metal oxide compacts are placed in a furnace to form a column. The column of compacts is preheated until electrical conduction is established between the compacts. After preheating, the compacts are surrounded by a powder of the metal oxide to provide an insulation around the compacts. Diametrically opposed electrodes are employed to pass an alternating current through the compacts to fuse the compacts together.



3,387,080
SPLICE CONNECTOR WITH LOCKING INSERT

Charles E. Dibble, Ridgefield, Irving F. Matthysse, Danbury, and Adolph C. Neaderland and Edward S. Raila, Norwalk, Conn., assignors to Burndy Corporation, a corporation of New York
Filed July 25, 1966, Ser. No. 567,443
1 Claim. (Cl. 174—94)

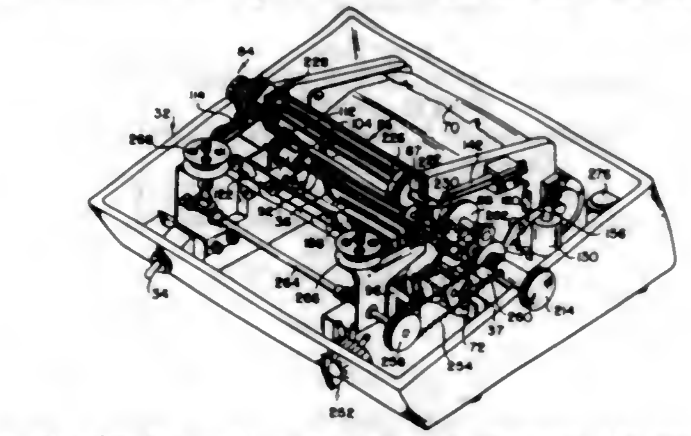


A splice connector for joining two cables in substantially parallel, side-by-side relationship. A body formed of malleable metal is shaped to be wrapped around a pair of cables so as to bring the ends of the body into substantially overlapping relationship, and a locking shoulder such as a rigid metal insert is provided to prevent the two ends from sliding apart after the body has been tightly compressed into the cables.

3,387,081
TELEGRAPHIC PROGRESSIVE PRINTING SYSTEM

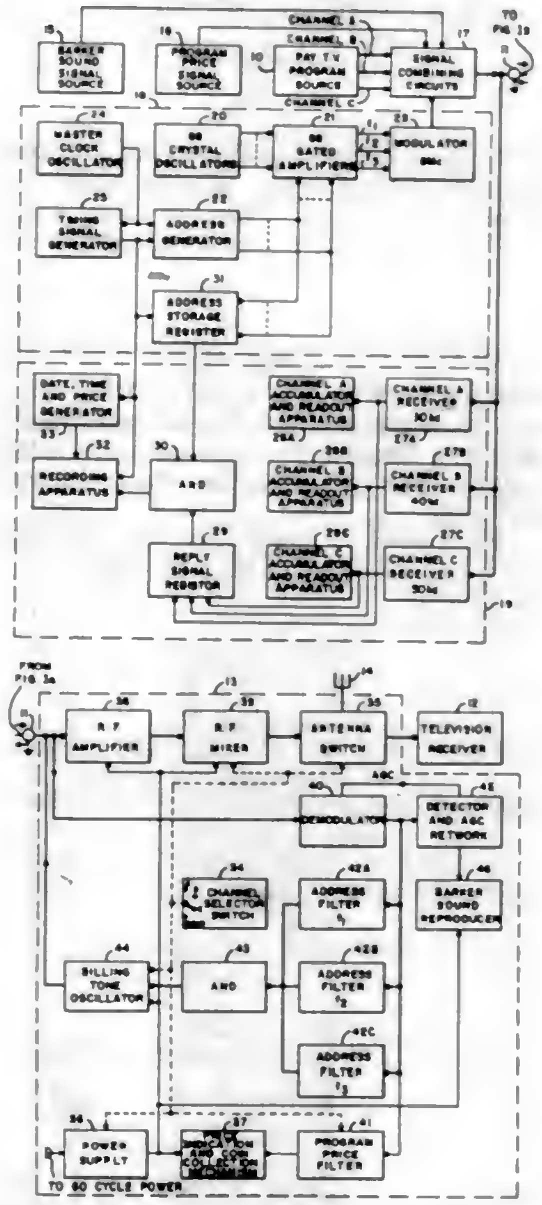
Edward E. Kleinschmidt, Salisbury, Conn., and Wilburn F. Bradbury, Northbrook, and Kurt Taubmann, Lake Bluff, Ill., assignors to SCM Corporation, New York, N.Y., a corporation of New York
Original application May 6, 1963, Ser. No. 278,241, now Patent No. 3,324,240, dated June 6, 1967. Divided and this application May 5, 1967, Ser. No. 636,489
11 Claims. (Cl. 178—4)

There is disclosed a telegraphic progressive printing system with a transmitter unit, a receiving recording unit and a communications channel connecting the two units. A diode matrix system and commutator device in the transmitter unit originate and transmit each signal with its pulse units in a predetermined order representing the symbol being transmitted. The signal comprises a multiplicity of sequential intra-signal pulse units including initiating start and terminating stop pulse units and a multiplicity of symbol pulse units equal in number to a predetermined number of blocks constituting a grid block arrangement of a symbol encompassing rectangular space, each specific symbol to be transmitted comprising pulse units corresponding to specific grid block locations in the symbol rectangular space which, when visually reproduced in a symbol rectangle space on a record medium will depict the specific symbol. The receiving recording unit receives the signal and has means for recording by progressive scribing or transcription printing, the symbol represented by the signal, and provision for starting the scribing of the symbol upon receipt of the start pulse unit. There are means for stopping the recording means after each symbol recordation.



3,387,082
PAY TELEVISION AUDIENCE SURVEY AND BILLING SYSTEM

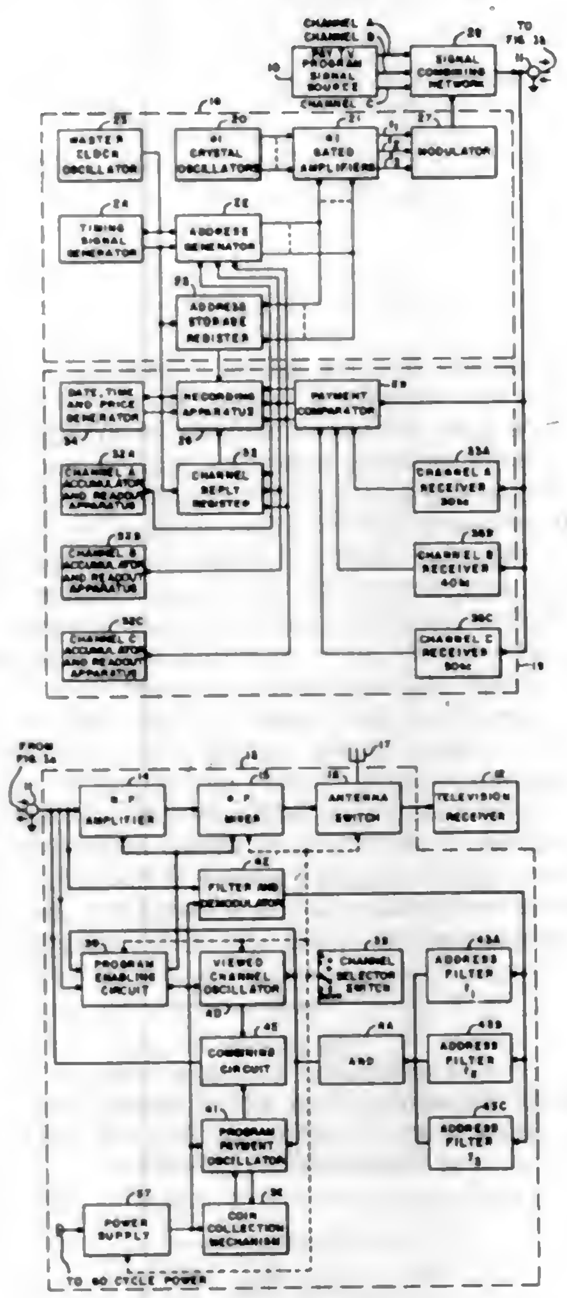
Richard J. Farber, New Hyde Park, N.Y., assignor to Hazeltine Research, Inc., a corporation of Illinois
Filed Dec. 23, 1963, Ser. No. 332,680
9 Claims. (Cl. 178—6)



An audience survey system for use in a pay television system including apparatus for supplying a plurality of interrogation signals individually coded to correspond to a single one of a plurality of receiving stations. When applicable, each receiving station responds to its respective interrogation signal with a reply signal acknowledging acceptance of a particular program. Each reply signal is correlated with its respective interrogation signal and each correlation is recorded to obtain audience billing information. The reply signals are also accumulated and displayed in order to obtain audience interest information. Alternative arrangements are also covered.

3,387,083
PAY TELEVISION SYSTEM WITH BILLING TRANSPONDER

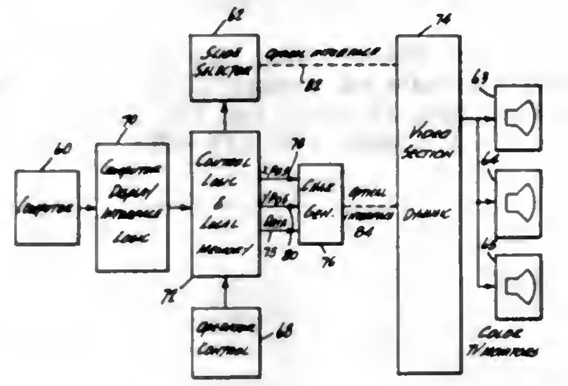
Richard J. Farber, New Hyde Park, and Francis H. Boos, Jr., Great Neck, N.Y., assignors to Hazeltine Research, Inc., a corporation of Illinois
Filed Dec. 23, 1963, Ser. No. 332,681
14 Claims. (Cl. 178—6)



A pay television system having a transmitter which supplies one or more television signals and a plurality of interrogation signals individually coded to correspond to a single one of a plurality of receivers. In response to its unique interrogation signal each receiver sends back to the transmitter a signal indicative of the desire to receive a particular program. The transmitter compares these signals with their respective interrogation signals and for each correlation transmits a second signal to the corresponding receiver which permits reception of the desired program signal. Each correlation is also recorded for billing purposes and the signals indicative of a desire to receive a program are accumulated in order to provide audience interest information. Alternative arrangements are also covered.

3,387,084
COLOR TELEVISION DATA DISPLAY SYSTEM

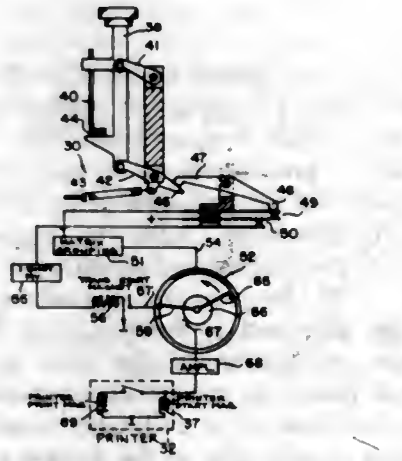
Joseph T. Hine, Rancho Cordova, and John R. McDaniel, Los Alamitos, Calif., assignors, by mesne assignments, to McDonnell Douglas Corporation, Santa Monica, Calif., a corporation of Maryland
Filed Nov. 23, 1964, Ser. No. 413,256
11 Claims. (Cl. 178—6.8)



Photographic slide changer is controlled manually or by computer to select a color slide which is electrically converted and displayed on a color television screen as static data. Dynamic data is continuously supplied to the computer and relates to various parts of the system displayed by any selected slide. Control means including a multiple channel magnetic memory operatively functions in response to the selection of any particular slide to cause the transfer and suitable reproduction of the correct and instantaneous dynamic data at appropriate locations on the television screen to provide a composite display of static and dynamic data thereon.

3,387,085
TRANSMITTER

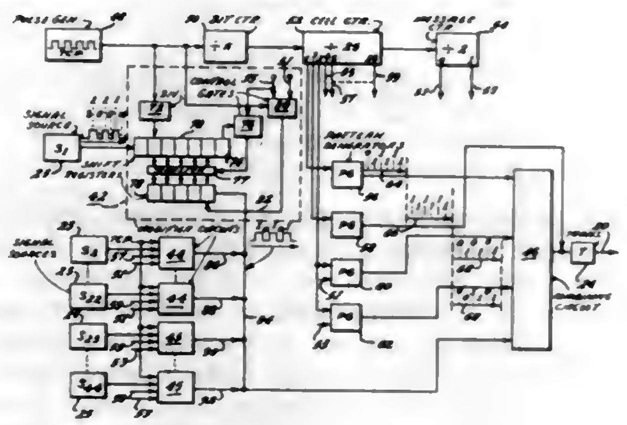
Edward E. Kleinschmidt, Salisbury, Conn., and Kurt Taubmann, Lake Bluff, Ill., assignors to SCM Corporation, a corporation of New York
Original application May 6, 1963, Ser. No. 278,241. Divided and this application May 5, 1967, Ser. No. 636,496
15 Claims. (Cl. 178—17)

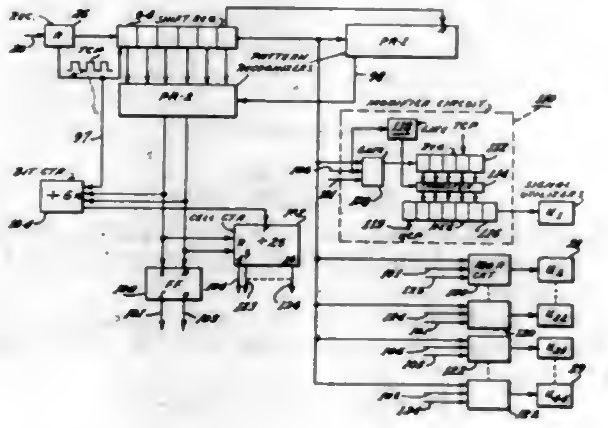


There is disclosed a keyboard transmitter with symbol key operated switches, a diode matrix with multiple inputs connected to the switches and with multiple circuits connected individually to a commutator. The diode matrix is capable of being energized by operation of a selected one of the switches to place potential on selected portions of the commuator in accord with a grid block pattern. The commutator effects cyclical read-out for each symbol of a single electrical signal comprising sequential intra-signal pulse units including a start pulse unit and a multiplicity of symbol pulse units. This signal is usable to start progressive transcription printing and to continue such printing until a symbol has been completely scribed on a record medium.

3,387,086
MULTIPLEXING SYSTEM FOR SYNCHRONOUS TRANSMISSION OF START-STOP SIGNALS AFTER REMOVAL OF THE START AND STOP BITS

Peter W. Beresin, Philadelphia, Pa., assignor to Ultronic Systems Corporation, a corporation of Delaware
Filed June 29, 1964, Ser. No. 379,071
9 Claims. (Cl. 178—50)

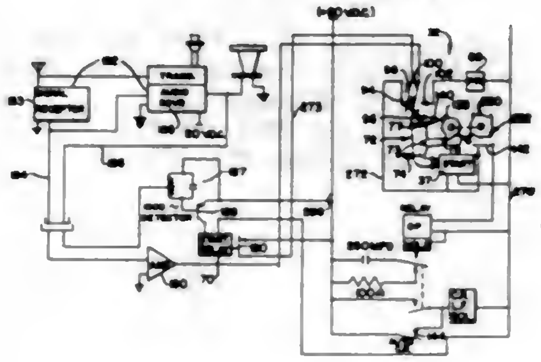




This system multiplexes a plurality of low-speed digital data sources and a high-speed digital data source on a common high-speed transmission line. Each multiplex message has a predetermined synchronizing bit pattern and a plurality of information cells. A cyclic distributor allocates predetermined cells to respective low-speed sources and a predetermined plurality of cells to the high-speed source. At the receiver, a generator produces clock pulses at bit rate and is synchronized by received messages. Upon recognition of the sync pattern, a counter counts clock pulses in groups corresponding to the number of bit intervals in a cell, and produces distribution signals which supply data in the proper cells to low-speed and high-speed output message channels. Cell parity is employed which clearly distinguishes data cells from a cell of the sync pattern. Odd and even messages with differing sync patterns may be employed for respective groups of low-speed sources, with both type messages used for the high-speed source.

3,387,087
TELEGRAPHIC RECEIVING AND RECORDING APPARATUS

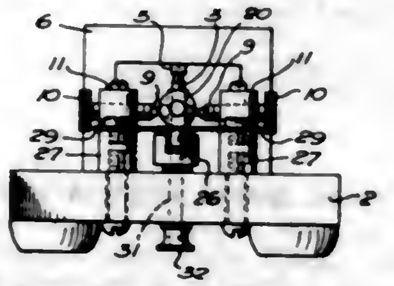
Edward E. Kleinschmidt, Miami Beach, Fla., assignor to SCM Corporation, New York, N.Y., a corporation of New York
Filed Nov. 23, 1964, Ser. No. 413,162
12 Claims. (Cl. 178—89)



A reproducing receiver having a printing mechanism to progressively inscribe a symbol by a group of intra-signal pulse unit current conditions in a symbol signal having a point printing operation magnet for receiving and accomplishing printing of the symbol portions of said signals by cooperation with a line platen. The receiver has a cycling start-stop device including a start-stop magnet for starting and stopping the printing mechanism once for each complete inscribed symbol. A special circuit starts the start-stop device upon reception and detection of a signal in which at least one initial pulse unit has a frequency higher than the frequency of the following intra-signal pulse units to enable starting the operation of said point printing operating magnet during and responsive to the subsequent intra-signal pulse units of said signal. The stop operation of the start-stop device occurs subsequent to a predetermined operating period of the driven printing mechanism and places starting control for the receiver back under command of the special frequency detecting circuit.

3,387,088
TELEGRAPH SINGLE KEY

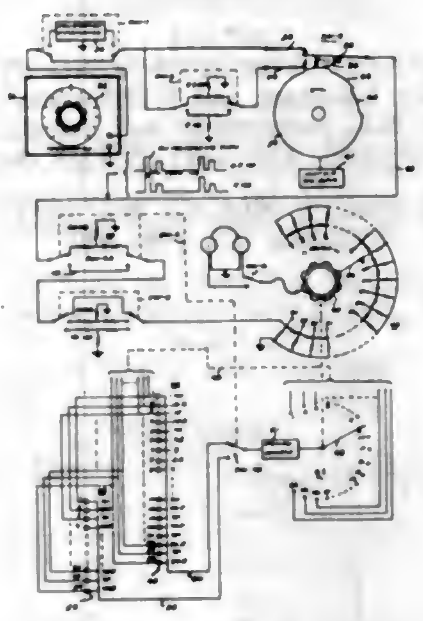
William H. Stout, P.O. Box 415, Imperial, Pa. 15126
Filed Mar. 15, 1965, Ser. No. 439,709
6 Claims. (Cl. 178—108)



1. In a telegraph key that includes a base, a lever above the base having front and rear ends, means pivotally mounting the lever on the base on a vertical axis, stationary electric contacts mounted on the base on opposite sides of the lever near its front end, electric contacts carried by the opposite sides of the lever between the fixed contacts and normally spaced therefrom, and manually operable means at the rear end of the lever for swinging it back and forth to move either of the contacts thereon into engagement with the adjacent stationary contact; the improvement comprising a roller in front of the lever, means connected to the front end of the lever and extending forward therefrom for supporting the roller with its axis extending lengthwise of the lever, a magnet mounted on the base beneath the roller and having a pair of laterally spaced poles at its top, a pair of metal strips substantially parallel to the base projecting between the roller and magnet, and means rigidly supporting the strips with a gap between them that is disposed above the center of the magnet and extends lengthwise of the lever, the roller being adapted to roll on said strips when the lever is swung back and forth, and said magnet normally holding the roller in engagement with the opposite sides of said gap to center the lever between said stationary contacts.

3,387,089
AUDIOMETRIC METHOD AND APPARATUS

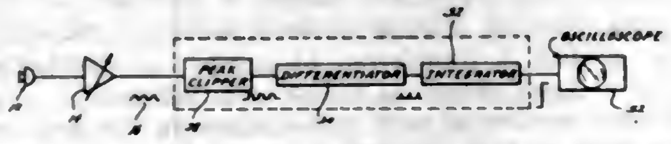
Francis A. Brogan, 433 Brees Blvd., San Antonio, Tex. 78209
Filed Mar. 23, 1965, Ser. No. 442,216
8 Claims. (Cl. 179—1)



Audiometric method and apparatus in which the subject receives periodically a pair of equal duration time spaced pulses of sound of the same audio frequency but having levels differing by from 2.5 to 5 db, and is instructed to reduce the sound level by means of a calibrated attenuator until only one pulse is heard. The attenuator setting at which only one pulse is heard is taken as the subject's threshold at that frequency. Provision is also made for a dual range attenuator and coupled dual range remote indicator of attenuator position.

3,387,090
METHOD AND APPARATUS FOR DISPLAYING SPEECH

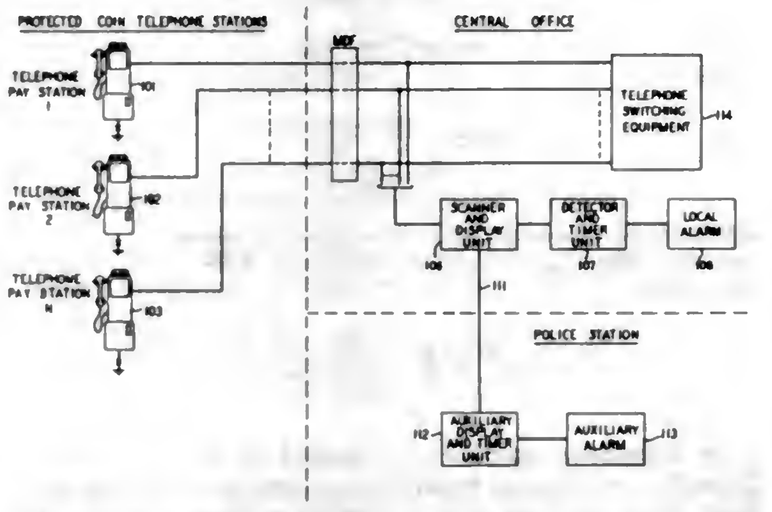
Cecil C. Bridges, Fort Worth, Tex., assignor to Tracor, Inc., Austin, Tex., a corporation of Texas
Filed Sept. 11, 1964, Ser. No. 395,876
16 Claims. (Cl. 179—1)



This application discloses apparatus for analyzing speech sounds by converting the acoustic energy to electrical signals, preemphasizing the high frequencies, and producing a voltage related to the phase reversals or zero axis crossings in the signal per unit time. This voltage is displayed as a function of time, for visual correlation with a standard, or the deviation from a standard voltage may be detected.

3,387,091
ALARM SYSTEM FOR TELEPHONE PAY STATIONS

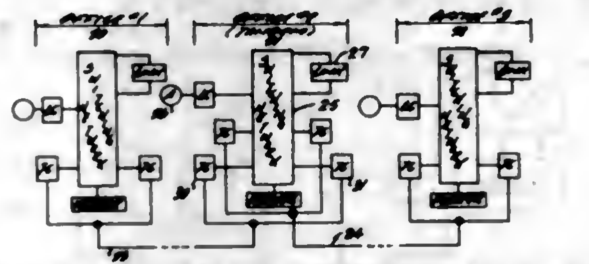
Robert W. Deiker, Villa Park, Ill., assignor to American Telephone and Telegraph Company, New York, N.Y., a corporation of New York
Filed Oct. 5, 1964, Ser. No. 401,338
9 Claims. (Cl. 179—5)



An alarm system is disclosed wherein a plurality of remote coin pay telephone stations is continuously scanned from a central location to detect an abnormal condition. Detection of an abnormal condition, such as removal of the telephone housing by thieves or vandals, triggers the alarm system. As each station is scanned, a corresponding lamp is lighted at the central location and also at a second location, such as a police station. Upon being triggered, the alarm system halts the scanning, sounds an audible alarm at both locations, and maintains the lamp corresponding to the detected abnormal station in a steadily lighted condition for identification. The interconnecting line between the two locations is so arranged that it may also be used as a talking path.

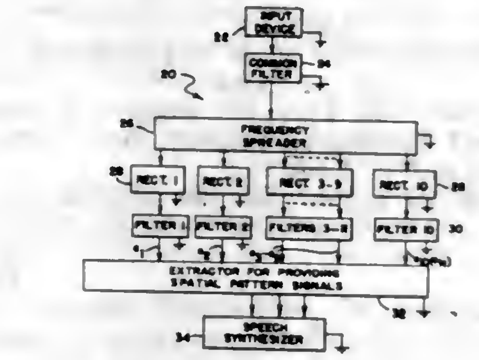
3,387,092
TANDEM TRUNKING HAVING INCOMING AND OUTGOING APPEARANCES IN A CROSSBAR MATRIX

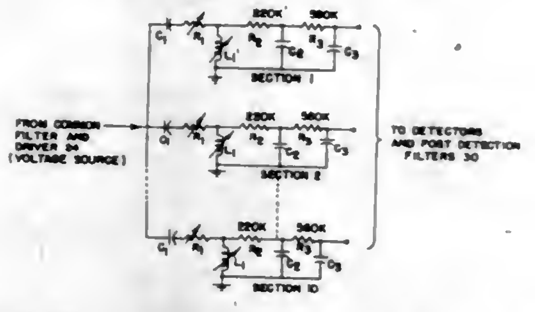
Joseph Patrick Field, Hato Rey, San Juan, Puerto Rico, assignor to International Telephone and Telegraph Corporation, a corporation of Delaware
Filed July 16, 1965, Ser. No. 465,510
9 Claims. (Cl. 179—18)



A tandem trunk circuit is given both an incoming and an outgoing appearance in a crossbar switching matrix. When the incoming call digital information representing a subscriber line is received, the same digital information establishes the outgoing call. Thus, there is no need to generate artificial digital information for placing an outgoing call.

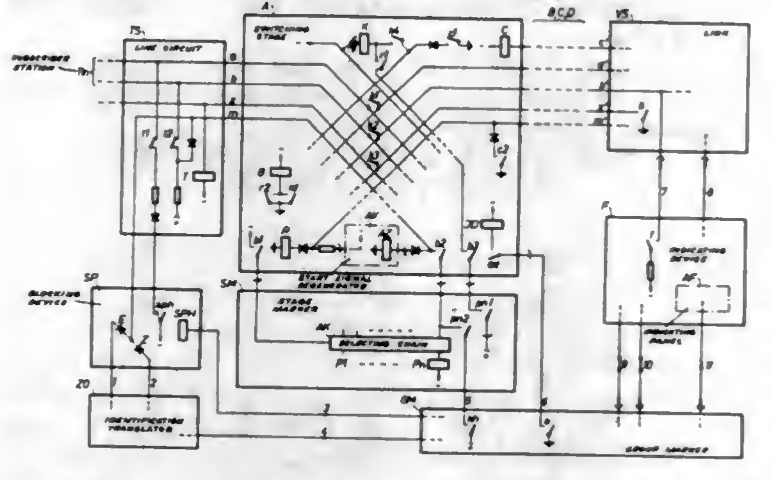
3,387,093
SPEECH BANDWIDTH COMPRESSION SYSTEM
John L. Stewart, Menlo Park, Calif., assignor to Santa Rita Technology, Inc., Menlo Park, Calif., a corporation of Arizona
Filed Apr. 22, 1964, Ser. No. 361,809
24 Claims. (Cl. 179—15.55)




280K
560K
SECTION 1
FROM COMMON FILTER AND DRIVER 24 (VOLTAGE SOURCE)
TO DETECTORS AND POST DETECTION FILTERS 30
SECTION 2
SECTION 10

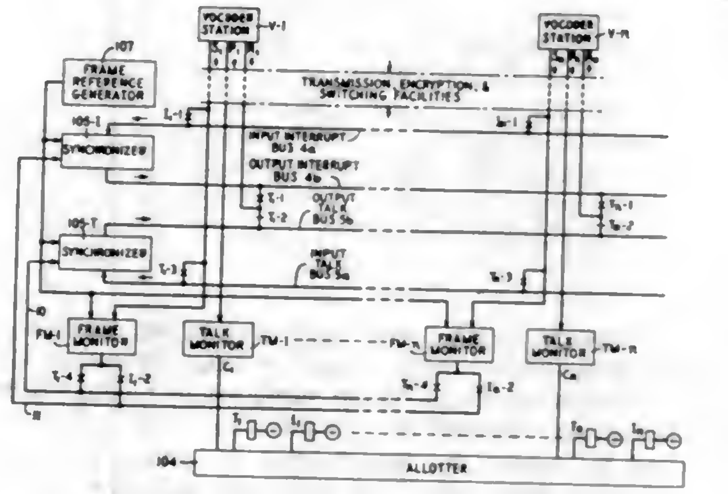
A frequency spreader composed of filters having extremely overlapping bandwidths together with post-detection filters provide slowly varying voltage outputs. With the band overlap, a frequency component in a signal to be analyzed contributes to the response of several outputs simultaneously. Patterns due to speech are rendered so simple that only a few pattern measures derived from the voltage outputs are needed to reconstitute the speech into intelligible form.

3,387,094
CALL NUMBER INDICATING CIRCUITS
Herbert Siegel and Heinz Bubber, Munchingen, Germany, assignors to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware
Filed Dec. 30, 1964, Ser. No. 422,118
Claims priority, application Germany, Jan. 9, 1964, St 21,535
5 Claims. (Cl. 179—18)



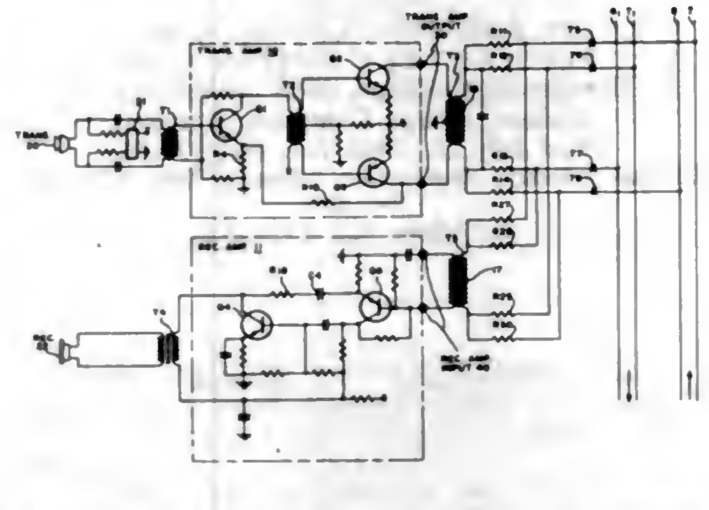
1. A circuit arrangement for indicating the call numbers of subscriber lines in telephone exchanges in which connections are established from said subscriber lines to available links through several switching stages by means of stage markers and group markers using control signals on guide wires, means responsive to an off-hook condition of a calling one of said subscriber lines for initiating a start signal, means for transmitting said start signal to said guide wires, start signal regenerating means in said switching stages for transmitting regenerated start signals to an available link and for seizing one of said stage markers, selecting chain means in said stage marker for selecting a designated one of said guide wires for marking said calling line circuit, crosspoint relay means operated responsive to the operation of said selecting chain for connecting said calling line circuit through said switching stages to said available link, means operated responsive to said cut-through for dropping said stage marker, means for connecting an indicating device between a group marker controlling the signals on the selected guide wire and the available link, means in said indicating device for causing the initiation of a start signal in order to reseize the stage marker, said initiation means comprising means for simulating the start signal transmitted initially, blocking means under the control of said indicating device for preventing the group marker from establishing a call through other subscriber lines, means responsive to the reseizing of said stage marker to one of said several switching stages for identifying the calling subscriber line comprising translator means for providing subscriber numbers and means responsive to the identification of the calling subscriber line by the stage marker for causing said translator to transmit the calling subscriber number to the indicating device.

3,387,095
CONFERENCE SYNCHRONIZING SYSTEM
Ralph L. Miller, Chatham, and William Rae Young, Jr., Middletown, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Apr. 13, 1965, Ser. No. 447,822
9 Claims. (Cl. 179—18)



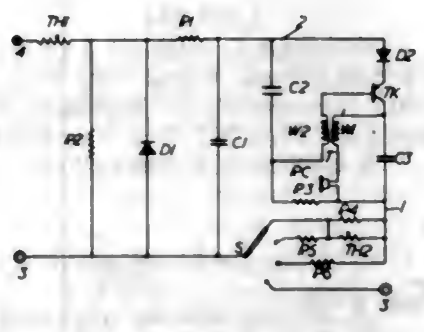
A conference call communication system for subscriber stations equipped with vocoders is arranged to prevent interference between coded signals from talkers speaking simultaneously. The system includes an "allotter" which recognizes only one subscriber as the talker at a given time, and which causes coded signals from the talker station to be delivered over a unidirectional path to all other stations. Receiver stations are connected to the talker station via a separate unidirectional path. Each listener may communicate a request to interrupt the talker without interfering with the talker's coded signal, and the talker may signal the allotter to transfer control of the talk channel. Frame synchronization is maintained when control is transferred to another station by supplying a frame reference signal to all stations. A frame reference monitor at each station serves to interpose sufficient delay in each channel as required to maintain synchronization.

3,387,096
OPERATOR'S TRANSMISSION COUPLING CIRCUIT
Otho D. Grandstaff, Oak Park, and Vernon F. Weber, Elmhurst, Ill., assignors to Automatic Electric Laboratories, Inc., Northlake, Ill., a corporation of Delaware
Filed Dec. 23, 1964, Ser. No. 420,736
3 Claims. (Cl. 179—81)



A substation is bridged resistively onto a four-wire or two-wire line such that side tone suppression occurs by cancellation.

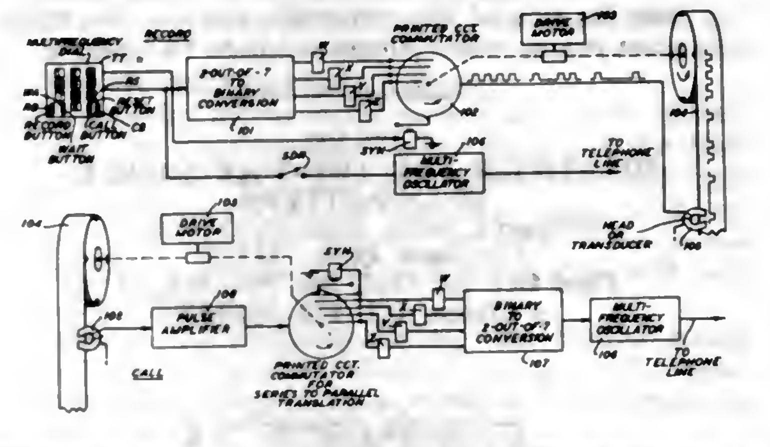
3,387,097
TELEPHONE TONE RINGER
Anthony Crisp Beadle and Ralph William Parrish, London, England, assignors to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware
Filed Nov. 10, 1964, Ser. No. 410,220
Claims priority, application Great Britain, Nov. 27, 1963, 46,851/63
9 Claims. (Cl. 179—84)



A telephone tone ringer comprising a transistorized oscillator energized by low frequency ringing currents. The output of the oscillator circuit is coupled to a transducer. The application of the low frequency ringing current is controlled by a pair of thermistors. The first thermistor is used to delay the application of the full volume of audible calling signals while the second thermistor is used to prevent noise signals from unduly biasing the first thermistor to thereby cancel out the beneficial effects of the first thermistor.

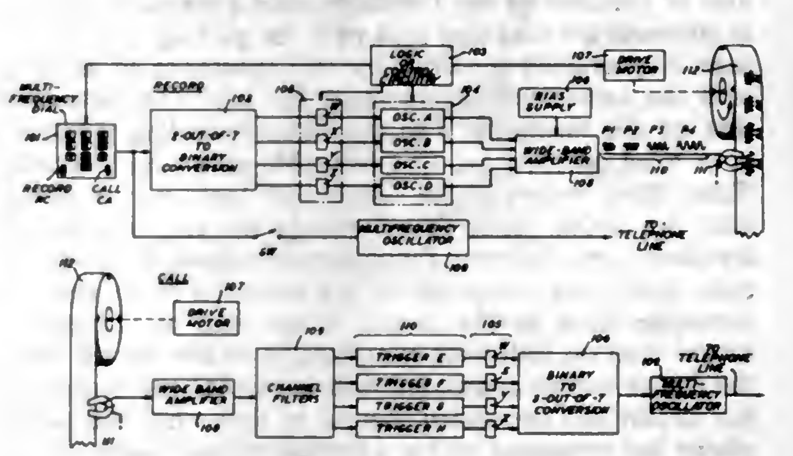
3,387,098
TELEPHONE REPERTORY DIALER
James L. Fischer, Carmel, and Lawrence A. Strommen, Indianapolis, Ind., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 28, 1964, Ser. No. 421,456
12 Claims. (Cl. 179—90)

In a telephone repertory dialer, operation in the RECORD mode is effected by translating conventional dial generated signals into binary code form and then employing only a single recording head for sequentially



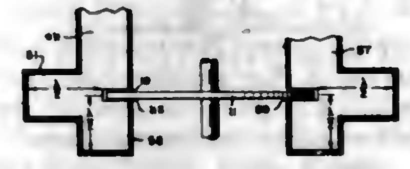
recording all of the binary elements corresponding to each dialed digit longitudinally on a recording medium.

3,387,099
TELEPHONE REPERTORY DIALER
James L. Fischer, Carmel, and Lawrence A. Strommen, Indianapolis, Ind., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 28, 1964, Ser. No. 421,457
12 Claims. (Cl. 179—90)



In a repertory dialer telephone set multifrequency signals generated conventionally in the CALL mode of operation are translated into binary language to energize *n*-out-of-4 oscillators. The combined output from the oscillators is recorded as a single multifrequency burst—the presence or absence of relevant frequencies being indicative in binary terms of the dialed number.

3,387,100
MEANS OF RECORDING AND READING MICROWAVE ENERGY
Gerald Chipman, Madison, Richard L. Pierce, McFarland, and Walter Grengg, Madison, Wis., assignors to the United States of America as represented by the Secretary of the Navy
Filed July 30, 1964, Ser. No. 387,550
6 Claims. (Cl. 179—100.2)



1. Apparatus for recording the frequency of microwave energy by radiation magnetization comprising:

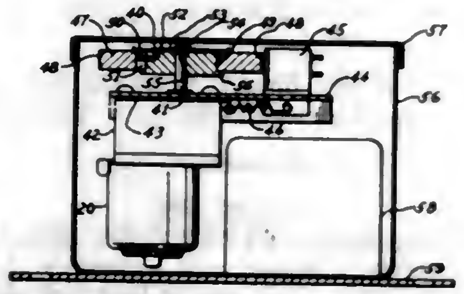
a waveguide; and

a continuously moving recording medium passing through a slot in the side of the waveguide;

said waveguide having a stub with a shorted end forming a cavity whose longitudinal axis is aligned with the aforementioned slot, said cavity being connected into the side of the waveguide carrying the microwave energy whose frequency is to be recorded.

3,387,101
IDENTIFIER FOR TWO-WAY MOBILE TRANSMITTERS

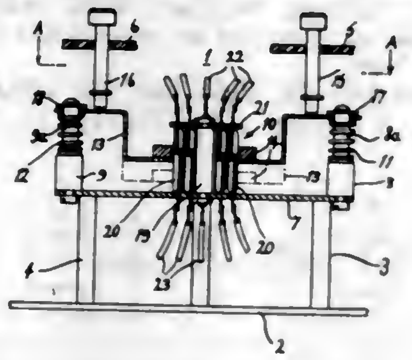
**William J. Skiles, 4329 W. 131st St.,
Cleveland, Ohio 44135
Filed Oct. 20, 1965, Ser. No. 498,532
3 Claims. (Cl. 179—100.2)**



The identifier of the present invention comprises a power driven turntable by which is carried a magnetic recording substance disposed in a path coaxial with the axis of rotation of the turntable, and a magnetic pick-up is disposed for scanning said path for picking up the message magnetically recorded by said substance so as to repeat the same recorded message for each complete rotation of the turntable. The magnetic recording substance is in fixed position on, and rotatable with, the turntable. Time delay means in the circuit are operative to disconnect the circuit from the source at the end of a predetermined time interval following energization of the circuit. Also, time delay means are provided to connect the turntable drive in the circuit at the end of a predetermined interval following energization of the circuit. Thus, the device can be associated with a microphone broadcasting circuit and connected thereto so that when the microphone has remained on for a predetermined length of time the identifier starts operating and after the microphone circuit has been energized for a predetermined length of time after the identifier has started, the identifier stops.

3,387,102
SUBSCRIBER'S TELEPHONE INSTRUMENTS

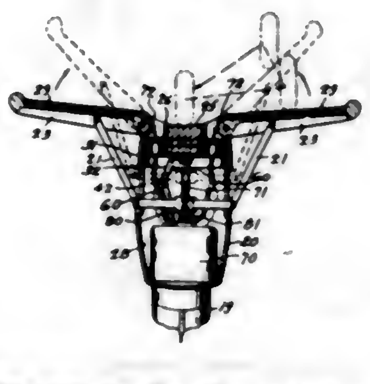
**Ronald Ernest Charles Brown, Orpington, England, assignor to Associated Electrical Industries Limited, London, England, a British company
Filed Nov. 27, 1964, Ser. No. 414,137
Claims priority, application Great Britain, Nov. 29, 1963, 47,270/63
3 Claims. (Cl. 179—165)**



In a subcriber's telephone instrument a gravity switch of the character in which magnetisable reed contacts are arranged for operation by a permanent magnet under control of a gravity mechanism of the switch. In one embodiment, the gravity mechanism controls movement of a magnetic shield into and out of a flux diverting position between the permanent magnet and the reed contacts. In a second embodiment, the gravity mechanism controls angular movement of the permanent magnet for directing its flux into and out of operating relationship with the reed contacts.

3,387,103
GUIDE FOR CONTACTING SHOE ON ELECTRICALLY DRIVEN CARS

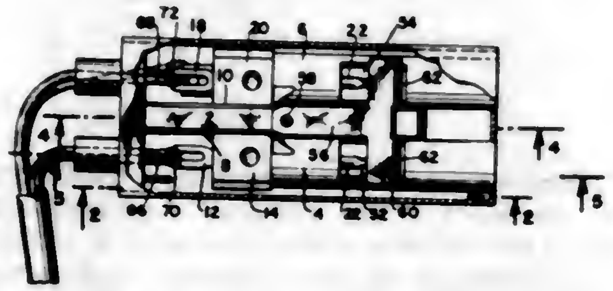
**Douglas R. Williston, 4605 Arthur Drive,
Ladner, British Columbia, Canada
Filed July 13, 1965, Ser. No. 471,553
Claims priority, application Canada, July 17, 1964, 907,526
4 Claims. (Cl. 191—83)**



A guide arrangement for the contacting shoe of an electric car trolley and having abutment members movably mounted on and normally projecting laterally from a trolley head and relative to a conductor engaged by the shoe, and means connected to said members and operable when the shoe becomes disengaged from the conductor to shift the members out of their normal positions into positions on opposite sides of the conductor to guide the shoe back into engagement with said conductor.

3,387,104
TWO-HOLE VIDEO JACK

**Lindsay Carlton Friend, Camp Hill, Pa., assignor to AMP Incorporated, Harrisburg, Pa.
Filed Feb. 14, 1967, Ser. No. 616,029
8 Claims. (Cl. 200—51.1)**

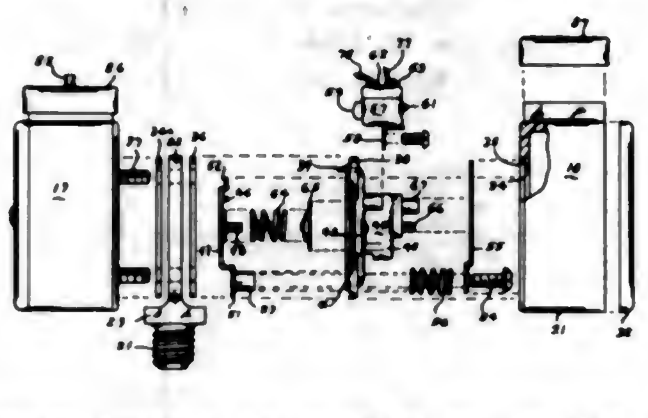


A two-hole jack which normally connects two input cables to each other. By inserting a plug carrying an output cable in one hole of the jack, both input cables are connected to the output cable. By inserting a similar plug in the other hole, one input cable is connected to the output cable. By inserting plugs in both holes each input cable is connected to a separate output cable.

3,387,105
PRESSURE AND DRY TANK SWITCH ASSEMBLY

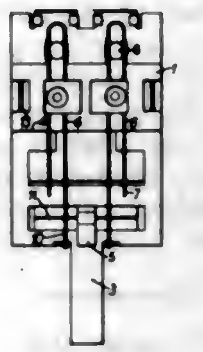
**Linus E. Russell, Springfield, Ohio, assignor to Peters & Russell, Inc., Springfield, Ohio, a corporation of Ohio
Filed Mar. 18, 1965, Ser. No. 440,804
17 Claims. (Cl. 200—81.4)**

Switch control apparatus for use in a pumping or like system combining in a single unit a high-low pressure responsive switch adapted to start and stop a pump at different pressure levels and a second switch having means in connection therewith for providing an overriding dry tank control.



3,387,106
SLIDE ACTION SWITCH MECHANISM

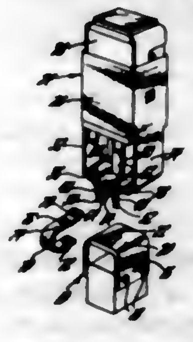
**William Edward Ward, Ilford, England, assignor to The Plessey Company Limited, Ilford, England, a British company
Filed Aug. 29, 1966, Ser. No. 575,599
Claims priority, application Great Britain, Aug. 27, 1965, 37,029/65
6 Claims. (Cl. 200—166)**



An electric switch includes a springy wire forming a movable contact. When suitably actuated an end of the wire is movable against or away from an inclined edge constituting a fixed contact, the wire sliding along the edge so that wiping action occurs. The fixed contact edge may abut an edge of insulating material, transition of the wire between the two edges constituting operation of the switch.

3,387,107
LOCKING DEVICE FOR SWITCH CASE COMPONENTS

**Anthony A. Di Pilla, Philadelphia, Pa., assignor to Robertshaw Controls Company, Richmond, Va., a corporation of Delaware
Filed Dec. 1, 1965, Ser. No. 510,769
6 Claims. (Cl. 200—168)**

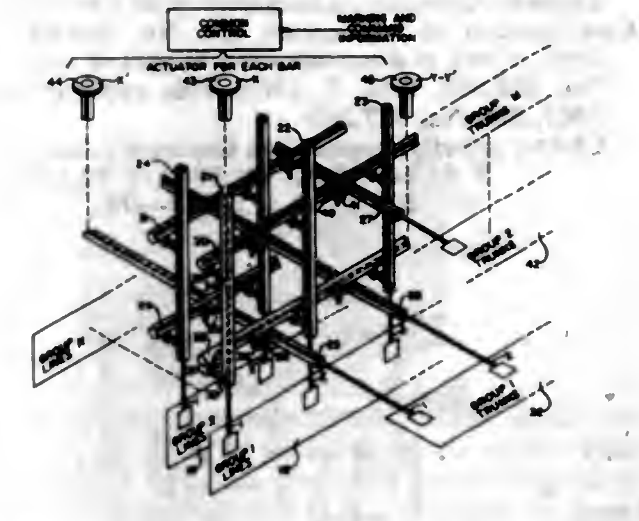


1. In a switch case assembly, the combination comprising

a pair of switch case components adapted to be connected as a unitary assembly,
bracket means on one of said components,
clamping means on the other of said components engaging said bracket means to retain and connect said pair of components to each other,
said clamping means including first and second plates, said first plate having rigid leg means on one edge and resilient leg means on another edge, said rigid and resilient leg means extending beyond said second plate to engage said bracket means whereby the same is resiliently retained in engagement with said second plate, and
a resilient clip resiliently locking said bracket means to said second plate whereby said pair of components are locked in their connected relationship to each other.

3,387,108
THREE-DIMENSIONAL CROSSBAR NETWORK

**William A. Reimer, Wheaton, Ill., assignor to Automatic Electric Laboratories, Inc., a corporation of Delaware
Filed Sept. 8, 1966, Ser. No. 578,063
9 Claims. (Cl. 200—175)**

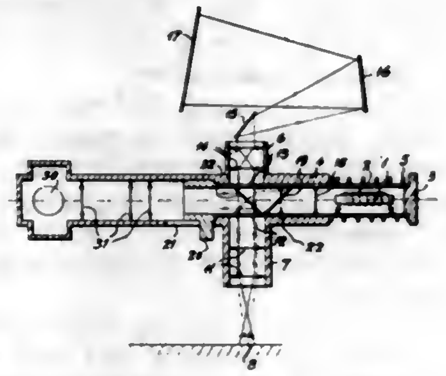


Both stages of a switching network, or grid, are integrated into a two-stage crossbar switch. The switch has three sets of interposed, mutually perpendicular bars corresponding to respective lines, links and trunks. Switch contacts at the intersection of the bars form crosspoints; crosspoints associated with any link include interposed line contacts and trunk contacts as the result of interposition of link bars between perpendicular line and trunk bars which are also interposed. As customary in grids, the number of links is economically limited according to expected peak traffic. The contacts at the crosspoints are self-latching and are operated by simultaneous momentary operation of their respective bars to make a connection; three bars are operated momentarily to operate two crosspoints for completing a two-stage connection, and subsequently only the respective link bar is operated momentarily to restore the crosspoints.

3,387,109
APPARATUS FOR EFFECTING OPTICAL VIEWING AND MARKING OF A WORKPIECE

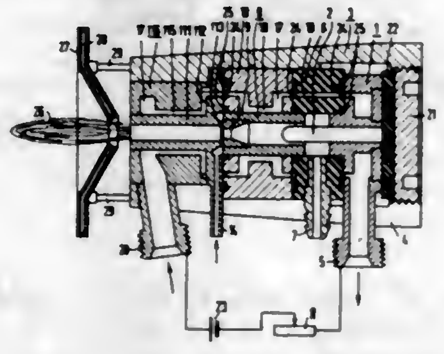
**Marc Bruma, Sceaux, and Michel F. Velghe, Gif-sur-Yvette, France, assignors to Centre National de la Recherche Scientifique, Paris, France
Filed July 29, 1964, Ser. No. 385,984
Claims priority, application France, July 30, 1963, 943,180, Patent 1,373,096
11 Claims. (Cl. 219—69)**

A device for effecting optical sighting and marking of a workpiece, comprising a laser head for actually marking the workpiece in combination with an optical viewing system for positioning of the laser head such that a workpiece receives a marking at a predetermined location thereof.



3,387,110
APPARATUS FOR UNIFORM FEEDING OF POWDER INTO A PLASMA SPRAY GUN

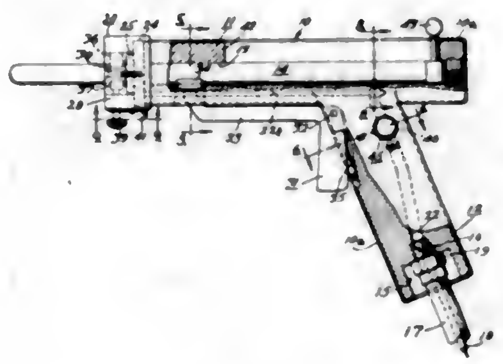
Friedrich Wendler, Erlangen, and Gunter Nette, Schnellenbach, Germany, assignors to Siemens Aktiengesellschaft, Munich, Germany, a corporation of Germany
Continuation of application Ser. No. 490,153, Sept. 13, 1965, which is a continuation-in-part of application Ser. No. 300,569, Aug. 7, 1963. This application Mar. 30, 1967, Ser. No. 627,269
Claims priority, application Germany, Aug. 25, 1962, S 81,100; Sept. 12, 1964, S 93,130
5 Claims. (Cl. 219—76)



Plasma spray apparatus includes a burner channel, feed pipe means connected with the burner channel for supplying a flow of plasma-producing gas thereto, electrode means for forming an arc in the channel so as to generate a plasma from the gas flowing through the channel, nozzle means located in the channel downstream from the arc, an elongated plasma passage having an end connected with the downstream end of the burner channel and an outlet at the other end thereof, the plasma passage being traversable by the generated plasma for discharging the plasma through the outlet, and powder supply means communicating with the plasma passage at a location downstream from the nozzle means, and distant from the outlet for feeding a powder to the generated plasma traversing the plasma passage, the electrode means comprising a pin-shaped cathode and an anode member forming the burner channel, the burner channel being cylindrical and having an axial length in the order of magnitude of substantially two to four diameters of the burner channel, the cathode extending into the burner channel a distance up to substantially one-third the axial length of the burner channel, the nozzle means being located at the downstream end of the burner channel, and the powder supply means comprising a powder suction tube connected with the plasma passage at the downstream end of the burner channel.

3,387,111
CARBON-ARC CUTTING APPARATUS

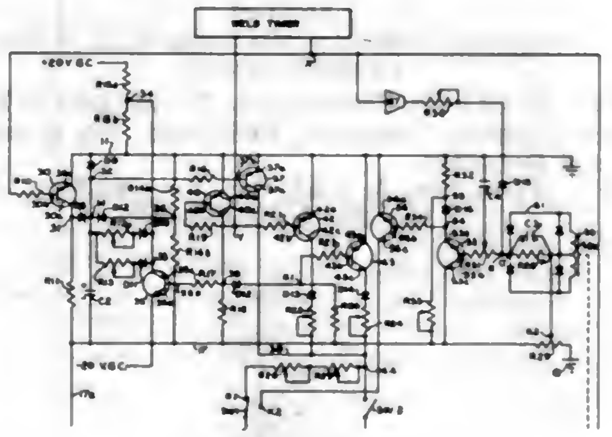
John J. Driscoll, 422 S. 18th St., Allentown, Pa. 18104
Filed Apr. 22, 1965, Ser. No. 449,998
7 Claims. (Cl. 219—70)



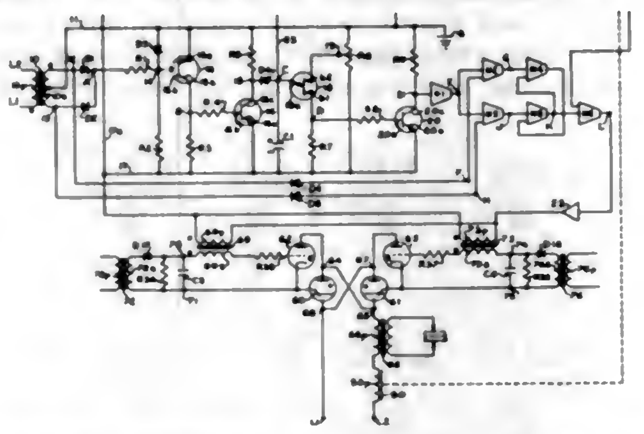
A cutting tool comprising a barrel adapted to mount a consumable electrode and to blow a gaseous medium such as air along one side of the electrode projecting from the tool to blow away the melt produced by the electrode. The tool includes a barrel having a bore mounting the electrode for axial movement therein with an electrode feeder at one end of the bore and a rotatable head surrounding the projecting electrode at the other end of the bore in which gaseous medium outlets are provided. A first clamping means is provided to clamp the electrode against the barrel and a second clamping means is provided to clamp the electrode against the head so as to center it between the outlets. The rotary head is of an improved construction affording the formation thereof by simple machining or molding operations.

3,387,112
RESISTANCE WELDER CONTROL CIRCUIT WITH UP-DOWN SLOPE CONTROL AND CURRENT REGULATOR CIRCUITS

Marvin A. Guettel, Milwaukee, Wis., assignor to Square D Company, Park Ridge, Ill., a corporation of Michigan
Continuation-in-part of application Ser. No. 228,811, Oct. 6, 1962. This application Sept. 8, 1964, Ser. No. 394,970
10 Claims. (Cl. 219—114)

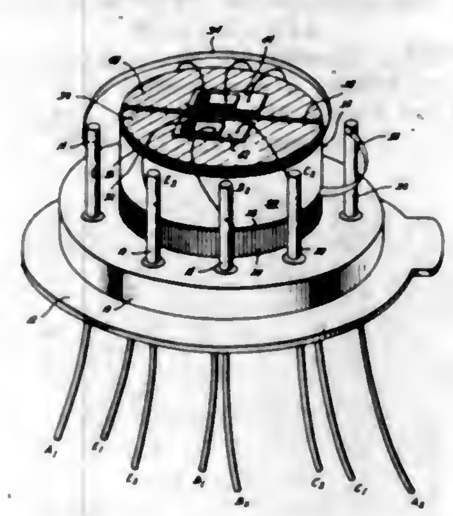


A solid state up-down slope control circuit and a current regulating circuit for a resistance welder controller including a capacitor and means for initiating a charge on the capacitor synchronously with reversals in polarity of an A.C. source so a unijunction type transistor which is switched in response to the magnitude of the charge on the capacitor will supply repetitive output signals to a logic circuit during each half cycle of the A.C. source at instants determined by the charging rate of the capacitor.



3,387,113
ELECTRONIC ASSEMBLY

Roger Charbonnier, Meudon, Seine-et-Oise, France, assignor, by mesne assignments, to Roger Charbonnier, Meudon, and Jean Royer, Saint-Cloud, France
Filed July 7, 1965, Ser. No. 470,161
Claims priority, application France, July 9, 1964, 981,279; Mar. 2, 1965, 7,646
9 Claims. (Cl. 219—209)



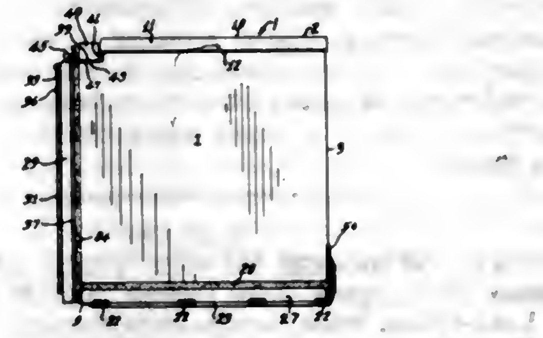
An electronic assembly in which the respective components are thermally stabilized. The assembly includes a thermo-sensitive device made from a ferro-electric matrial doped with a small quantity of one or more metal modifiers, said device having a rapid increase of electric resistance in a regulation range situated on either side of a critical reference temperature. The device is mounted in thermal contact with the components and connected to an independent source of electric power.

3,387,114
WARMING OVEN

Robert L. Brake, Jr., 7508 Ponce Court 32217; Clifford A. Maycott, 7048 Sans Souci Drive 32216; and Philip M. Travis, 3725 Pine St. 32205, all of Jacksonville, Fla.
Filed June 9, 1965, Ser. No. 462,474
19 Claims. (Cl. 219—386)

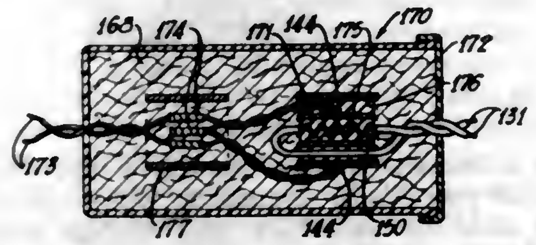
A food warming oven particularly for aircraft comprising inner and outer sealed shells joined at the mouth of the oven to a hollow rigid collar member surrounding the mouth. An electric heating element is arranged in the sealed space between the shells, and this space communicates into the interior of the collar through a small vent. A second small vent communicates between the interior of the collar and the atmosphere. A latch element for the oven door includes a pad closing the vent to the atmosphere.

The oven includes a sealed electrical connection for the heating element, an insulated door closing against a gasket on the face of the collar, a recessed upper front edge portion in which a switch and the latch are disposed, guards for the switch and latch, and a sealed removable top panel portion of the outer sheel.



3,387,115
PROGRAMMING APPARATUS

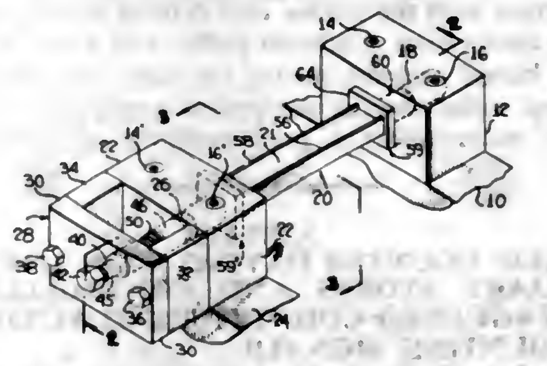
Vernon C. Rees, Newark, Ohio, assignor to Owens-Corning Fiberglas Corporation, a corporation of Delaware
Continuation-in-part of application Ser. No. 293,994, July 10, 1963. This application Oct. 14, 1965, Ser. No. 496,094
12 Claims. (Cl. 219—504)



Programming apparatus in which electrical signals are converted to heat which is accumulated or stored. Heat sensitive apparatus provides electrical output signals in response to the amount of heat so accumulated or stored to provide long term programming signals.

3,387,116
CONTACTS FOR VAPORIZERS EMPLOYED IN VACUUM METALLIZING

Clyde F. Dupuis, Downers Grove, Ill., assignor to Continental Can Company, Inc., New York, N.Y., a corporation of New York
Filed Oct. 8, 1965, Ser. No. 494,059
17 Claims. (Cl. 219—541)

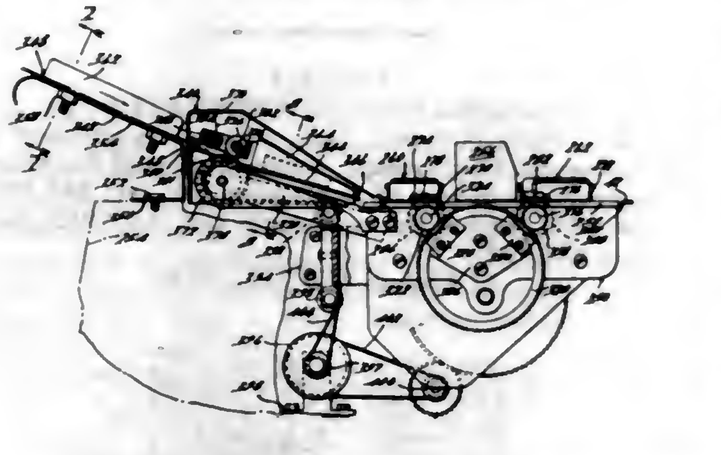


Disclosed herein are contact provisions for coupling a high current resistive heater between supply conductors including a pair of contact blocks rigidly affixed to the conductors in conductive relation thereto. Each of the contact blocks include aligned apertures into which are inserted projection portions of contact collars having facing transverse surfaces for contacting corresponding transverse surfaces on the heater to be employed. One of said contact blocks has affixed thereto a yoke portion including an adjustable member movable toward and away from the aperture formed therein to move the collar portion slidably located in that aperture via resilient means located between the adjustable member and the aperture mounted collar portion. Movement of the adjustably mounted member allows removal of the heater without disturbance of the positioning of the contact blocks and provides maintenance of the heater between the two collar surfaces through a heavy compressive load applied to the heater.

3,387,117
DATA STORAGE DEVICE FEED APPARATUS

James D. Bungard, East Detroit, and Paul E. Becking, Lake Orion, Mich., assignors to Dura Corporation, Oak Park, Mich., a corporation of Michigan

Filed Mar. 16, 1964, Ser. No. 352,232
19 Claims. (Cl. 235—61.9)



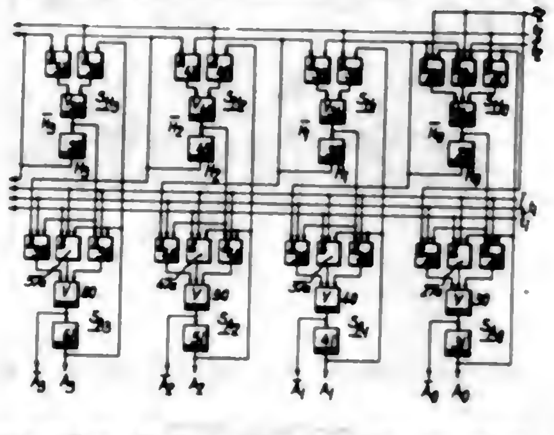
1. In a business machine having a typewriter unit, a punch unit operable in response to typewriter unit operation to code multiple type data storage devices with coded data capable of reproducing the typewriter unit operation, and a reader unit operable to read such coded data storage devices and cause operation of the typewriter unit duplicating the coded operation: multiple type data storage device handling apparatus associated with both said punch unit and said reader unit and being capable of handling both card type data storage devices and tape type data storage devices; separate card and tape data storage device driving means associated with both said punch unit and said reader unit; separate card feed chute means associated with both said punch unit and said reader unit for guiding a card type data storage device into association with said data storage device driving means; power operable roller means associated with the card feed chute means associated with said reader unit to positively drive card type data storage devices into association with the reader unit driving means, said roller means comprising a bottom roller and a top roller, and spring biased support means for said top roller biasing said top roller toward peripheral engagement with said bottom roller under a predetermined optimum load.

3,387,118
STATIC COUNTER HAVING MAIN AND AUXILIARY STORES AND CONTROLLED BY STAGGERED COUNTING AND AUXILIARY COUNTING SIGNALS

Dieter Petzold, Berlin-Neukolln, Germany, assignor to Licentia Patent-Verwaltungs-GmbH, Frankfurt am Main, Germany

Filed Nov. 29, 1963, Ser. No. 327,585
Claims priority, application Germany, Nov. 28, 1962, 43,577, 43,578
25 Claims. (Cl. 235—92)

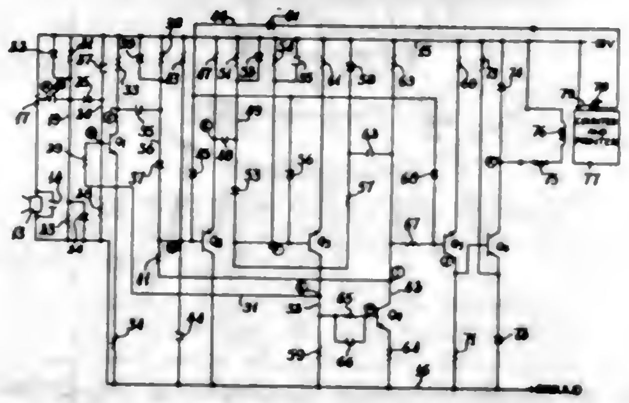
A multiple-digit static counter each of whose stages has main and auxiliary stores and which is controlled by counting signals and auxiliary counting signals, the latter being staggered with respect to and timely spaced from the former. The instants at which the main stores, at whose outputs there appears the count of the respective digit, are set and erased, are controlled by the respective auxiliary store which has different circuit conditions at the two instants and, in addition, by the counter stage of the preceding digit and/or by the counting and/or auxiliary counting signals. As a result, there is built into the counter a tolerance for differences in the characteristics of the semiconductor elements forming part of the counter, in that differences in the switching times of the individual circuit components will not cause errors.



3,387,119
PULSE TRANSLATOR FOR A COUNTING APPARATUS

Michael O'Brien, Grayslake, Ill., assignor to Mangood Corporation, a corporation of Illinois

Filed Feb. 8, 1965, Ser. No. 431,047
9 Claims. (Cl. 235—92)



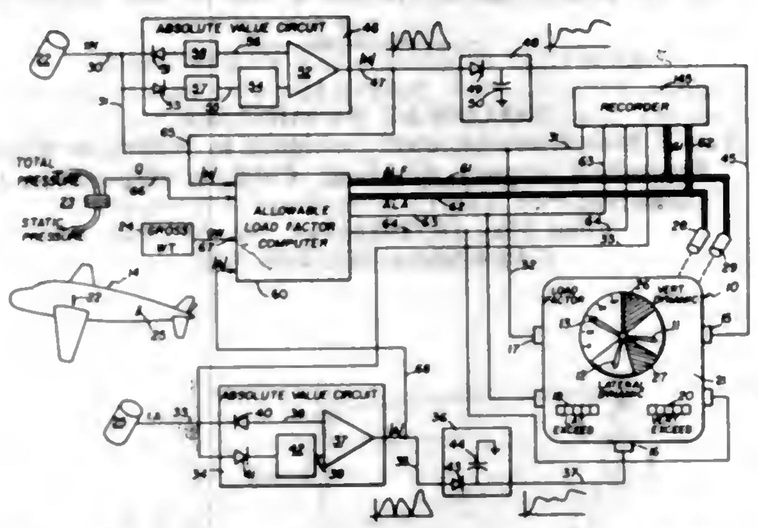
An electronic circuit for translating sound impulses of extremely short duration into pulses of longer duration sufficient to operate a conventional counting apparatus. Sound impulses are received by a microphone connected in a sensitive detecting stage and fed through an amplifying stage to trigger a monostable multivibrator, which, in response, produces pulses of long duration by virtue of a capacitance-resistance circuit chosen to maintain a long duration multivibrator "on" condition. The detecting and amplifying stages are maintained in the triggered state during the multivibrator "on" condition by regenerative circuitry. A follower stage and driver stage respond to the multivibrator "on" condition to operate a conventional counter. A recording mechanism is periodically operated to record an accumulated pulse count, while simultaneously shorting out the amplifying, multivibrator and follower stages.

3,387,120
DAMAGE INTELLIGENCE SYSTEM

Jack N. Funk and Richard V. Ramsey, Wichita, Kans., assignors to The Boeing Company, Wichita, Kans., a corporation of Delaware

Filed Aug. 7, 1963, Ser. No. 300,496
9 Claims. (Cl. 235—150.2)

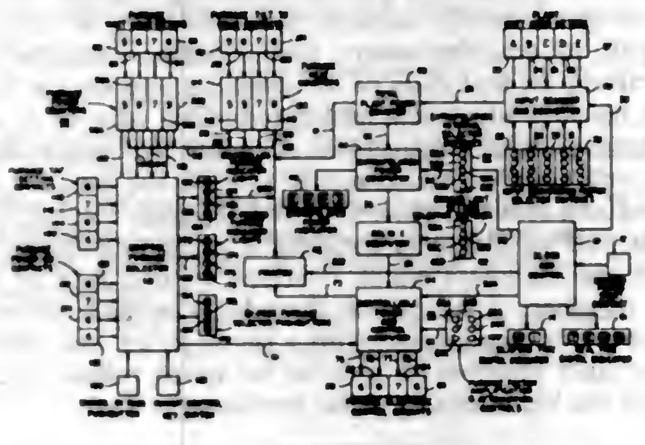
Vertical and lateral aircraft airframe acceleration-load-stress sensors cooperate with circuits computing allowable load stresses (ALF) empirically related to fatigue structural failures as described by Minor's Theory, wherefrom displays shown these sensed and calculated acceleration stress loads along with a display counter of their comparison, which count is relevant of the fatigue life of the airframe.



3,387,121
POWER DEMAND PREDICTING COMPUTER CONTROL SYSTEM

Michael Maczuzak, Wickliffe, and John V. Werme, Painesville, Ohio, assignors to Bailey Meter Company, a corporation of Delaware

Filed Feb. 12, 1964, Ser. No. 344,487
11 Claims. (Cl. 235—151.21)



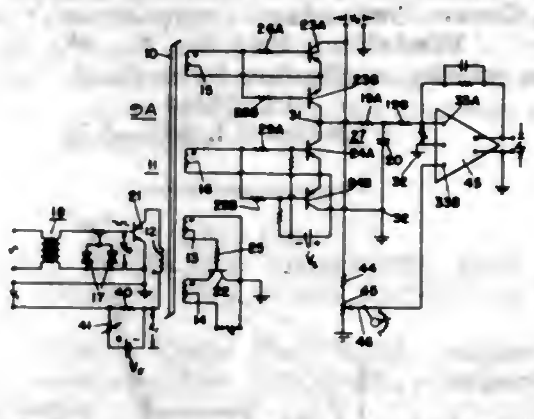
A power consumption control system wherein contact closures in watt-hour meters produce pulses which are converted to represent megawatt-hour consumption, the pulses being totalized in a total power counter. A synchronous clock causes the total power counter to reset at the end of a pre-selected period of time known as a demand period. The pulse count entered in the total power counter is extrapolated at selected intervals of the demand period to determine what final power consumption in the demand period could be expected if the present rate were continued through the entire demand period. This extrapolated value is compared to a desired level of power consumption and a deviation of the extrapolated value beyond preset limits will initiate control of a select portion of the load system thereby maintaining power consumption at the desired level.

3,387,122
MAGNETIC MULTIPLIER/DIVIDER SYSTEMS

James M. Mader, Lansdale, Pa., assignor to Leeds & Northrup Company, a corporation of Pennsylvania

Filed June 9, 1965, Ser. No. 462,640
6 Claims. (Cl. 235—195)

1. A magnetic multiplier system comprising
a saturable core transformer having a plurality of windings,
means for periodically setting said core, said core-setting means including
  a first source of variable DC input voltage,
  a source of finite DC offset voltage, and
  means for effecting periodic application to a first of said core windings of a voltage of fixed frequency and of magnitude proportional to the algebraic sum of said variable DC input voltage and said DC offset voltage;
means including a second of said core windings for periodically resetting said core by pulses of said fixed frequency, of duration proportional to said algebraic sum of said first variable DC input voltage and said DC offset voltage, and of amplitude dependent upon a second input voltage,

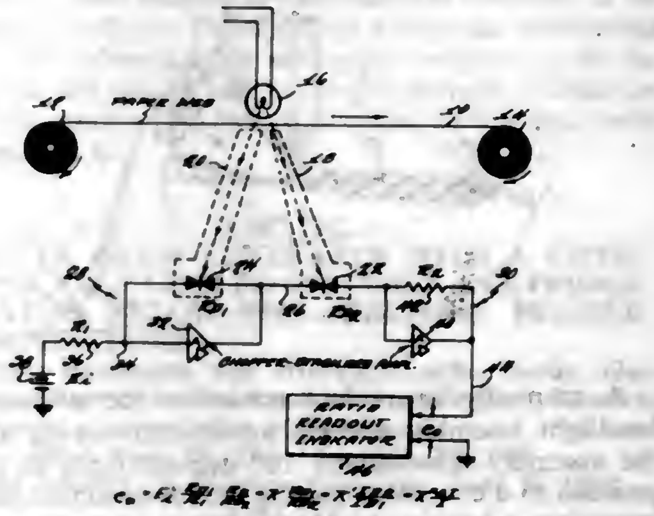


means including a third of said core windings for periodically sampling a third DC input voltage to produce output pulses of said fixed frequency, of amplitude dependent upon said third input voltage, and of duration inversely proportional to said second input voltage and proportional to said algebraic sum of said first input voltage and said offset voltage, said output pulses having components related to said DC offset voltage and to an inherent core-error, and
means for combining said output pulses and a preselected percentage of said third input voltage to produce an output proportional to the product of said first input voltage times the ratio of said third input voltage to said second input voltage, said product output being absent components corresponding with said DC offset voltage and with the core-error.

3,387,123
RATIO COMPUTER AND PAPER FORMATION GAUGE

Ko-Hsin Liu, Fort Lauderdale, Fla., assignor to Industrial Nucleonics Corporation, a corporation of Ohio

Filed Jan. 15, 1964, Ser. No. 337,788
10 Claims. (Cl. 235—196)

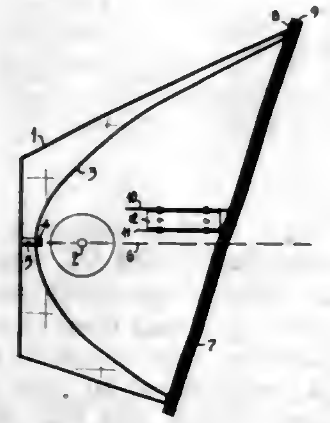


Apparatus disclosed herein for computing the ratio of two signals uses two operational amplifiers with the feedback path of the first containing an impedance which varies in value according to the first signal. A second impedance serially couples the amplifiers and is variable in value according to the second signal.

In a specific embodiment, the variable impedances are photodetectors and the first and second signals are respective light beams of different cross-sectional area, derived from transilluminating paper with light and sensing the light by two different size collimators, to obtain from the second amplifier an output proportional to the ratio of the second signal divided by the first signal, as an indication of formation.

3,387,124
ILLUMINATING FLOODLIGHT

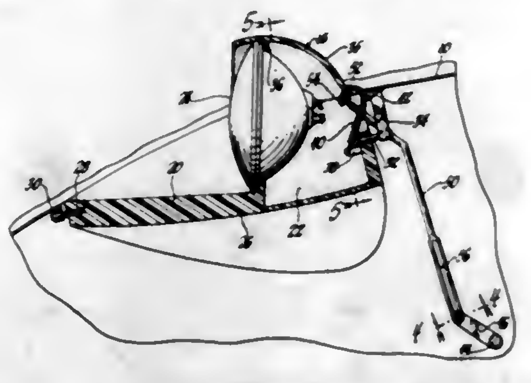
Pierre Monnat, Geneva, Switzerland, assignor to Infranor S.A., Geneva, Switzerland, a corporation of Switzerland
Filed Oct. 1, 1965, Ser. No. 492,108
Claims priority, application Switzerland, Nov. 20, 1964, 15,028/64
2 Claims. (Cl. 240—1.2)



A floodlight mounted on a pole for use primarily in airports, including a reflector and screening plates. The floodlight which provides illumination of the area extending from the base of the pole to a substantial distance forwardly thereof while screening out rays of light tending to be reflected upwardly which could temporarily blind aircraft pilots.

3,387,125
VEHICLE HEADLAMP ASSEMBLY

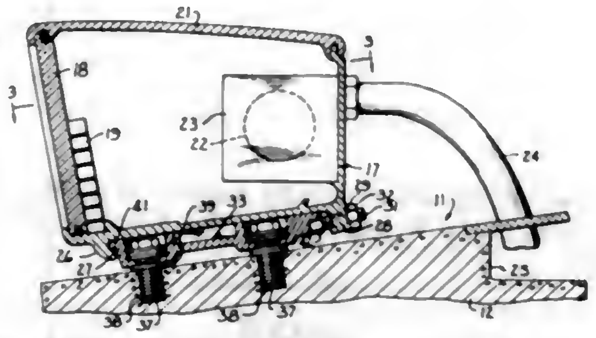
Anthony J. Ingolia, St. Clair Shores, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Oct. 13, 1965, Ser. No. 495,587
4 Claims. (Cl. 240—7.1)



A manually operable mechanism for a concealable headlight assembly wherein an actuator serves to rotate the assembly substantially 180 degrees from an exposed position to a concealed position. Each headlight assembly comprises a housing having a lamp mounted therein and structure to support the housing for rotation in a plane substantially parallel to the longitudinal axis of the vehicle. A spring is connected to the housing so that upon a small movement of the actuating lever the spring goes overcenter to carry the housing the remainder of the distance to obtain full movement to one of said positions.

3,387,126
ROADWAY LUMINAIRE

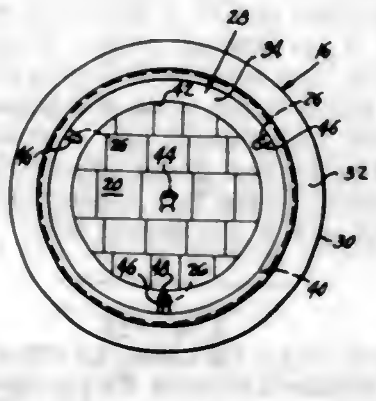
Kun S. Lim, Oakland, Calif., assignor to Wellmade Metal Products Company, Oakland, Calif., a corporation of California
Filed May 18, 1966, Ser. No. 551,112
10 Claims. (Cl. 240—25)



A luminaire is described having a quick release mounting arrangement for securing the same to a roadway barrier such that the luminaire may be removed from the barrier with a minimum of time and effort. The mounting arrangement includes a pair of mounting brackets which may be permanently secured to a roadway barrier. A first pair of complementary interengaging elements are respectively on first ends of the brackets and on the base of the housing adjacent a first longitudinal edge of it, and a second pair of engageable elements are respectively on second ends of the brackets and on the base of the housing adjacent the other longitudinal edge thereof. The second pair of elements includes a projecting flange on one of the members which overlaps an end face of the other member. A set screw threadably extends through the flange for engagement with a recess in an end portion on the other member to provide for quick release occurrence of the light housing to the brackets.

3,387,127
CLEARANCE SAFETY REFLECTOR RING

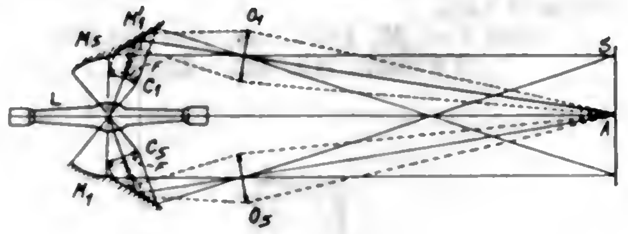
Herbert M. Ericks, 545 Bryan Road, Ottumwa, Iowa 52501
Filed Oct. 21, 1965, Ser. No. 499,508
10 Claims. (Cl. 240—41)



A vehicle lighting system incorporating means with the headlight lenses of a first vehicle to reflect the light rays of a second or oncoming vehicle from the reflecting means of a burned-out headlight on the first vehicle in order to enable the operator of the second vehicle to judge reasonably the lateral width of the first vehicle.

3,387,128
RADIATION CONDENSER DEVICES

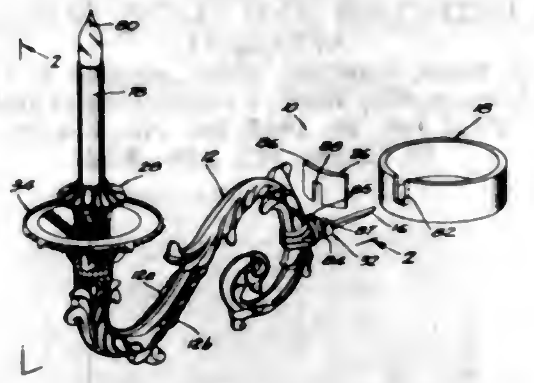
Christian Louis Georges Benard, Paris, France, assignor to Anciens Etablissements Barbier, Benard & Turenne, Paris, France, a joint-stock company of France
Filed Feb. 15, 1965, Ser. No. 432,698
Claims priority, application France, Feb. 18, 1964, 964,243
10 Claims. (Cl. 240—41.3)



Radiation condenser device enabling irradiated surfaces to be lighted uniformly, for instance intended for spatial simulation, comprising several elementary condenser devices comprising a source of light, a spherical mirror, one or two condenser lenses and an objective lens. All the images of the elementary devices coincide so that the irradiated surface is uniformly lighted. Filters may be disposed on the course of each elementary pencil, thus providing light the spectral partition of which is controlled at will.

3,387,129
CHANDELIER ARM SPLIT LONGITUDINALLY TO FORM TWO MATING PIECES

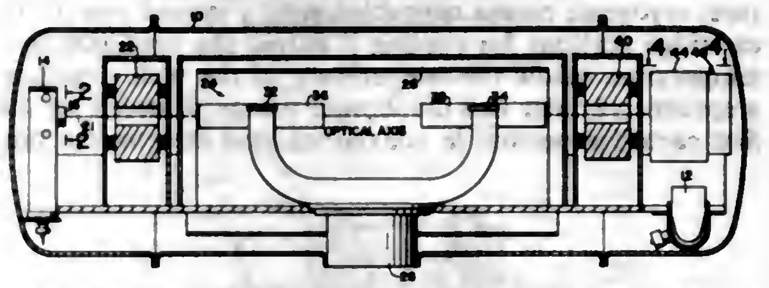
Franz K. Weber, Eagle Rock, and Luther C. Williams, Glendale, Calif., assignors, by direct and mesne assignments, to Beehler & Arant, Los Angeles, Calif., a partnership
Filed Feb. 23, 1967, Ser. No. 618,179
26 Claims. (Cl. 240—78)



A chandelier arm split along its length into two mating halves, each of which is injection molded from plastic material, the two halves of the arm cooperatively defining an internal passage for containing concealed wires; lock means for locking the inner end of the chandelier arm to the central body portion of a chandelier, and including a movable lock member which provides a cam action for locking the chandelier arm both axially and rotationally; a lamp holder having its lower end removably inserted between the outer ends of the chandelier arm halves; and cam-acting lock means securing the outer ends of the chandelier arm halves together and at the same time securing the lamp holder against either axial or rotational movement.

3,387,130
ATOMIC BEAM TUBE HAVING A SOURCE AND AN ANNULAR COLLIMATOR

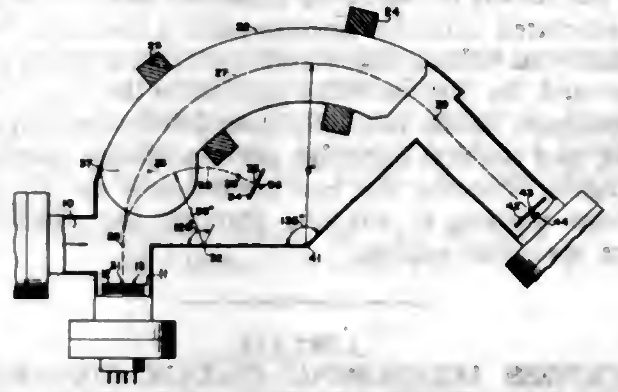
Richard F. Lacey, Salem, Mass., assignor, by mesne assignments, to Hewlett-Packard Company, Palo Alto, Calif., a corporation of California
Filed Sept. 28, 1964, Ser. No. 399,732
2 Claims. (Cl. 250—41.3)



An atomic beam tube in which the atoms emerging from the source go through an annular collimator to form an atomic beam having a large cross-sectional area. The atoms that have undergone the desired transition are detected by a button detector.

3,387,131
DUAL ORBIT MASS SPECTROMETER FOR ANALYZING IONS IN THE MASS RANGE OF 1 TO 100

John C. Helmer, Menlo Park, Calif., assignor to Varian Associates, Palo Alto, Calif., a corporation of California
Filed July 15, 1965, Ser. No. 472,202
11 Claims. (Cl. 250—41.9)

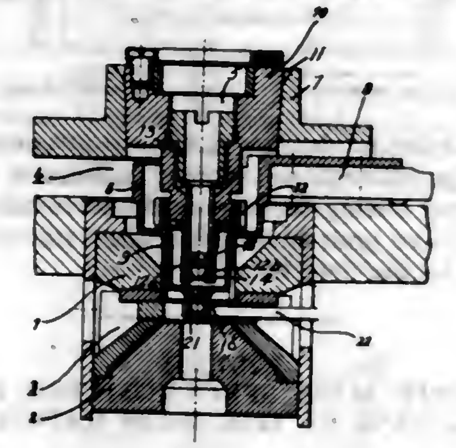


There is disclosed a dual orbit mass spectrometer which utilizes an arcuate ion trajectory of less than 180 degrees for purposes of reducing the magnet weight required heretofore in systems exhibiting equivalent performance. With the present device, a permanent magnet assembly providing a 1000 to 2000 gauss field is used in combination with an accelerating voltage swept from 100 to 1000 volts to provide the energy necessary to separate and monitor ion masses ranging from 1 to 100. Use of the fringing field of the permanent magnet to collimate the electrons in the ion source eliminates the need for a separate collimating magnet, eliminates a wider permanent magnet gap for accepting the ion source and in general permits a reduction in the size, weight and cost of magnets used in dual orbit spectrometers.

3,387,132
PARTICLE BEAM APPARATUS WITH A CRYOGENICALLY COOLED SPECIMEN CARTRIDGE THAT IS BELOW THE SPECIMEN HOLDER TEMPERATURE

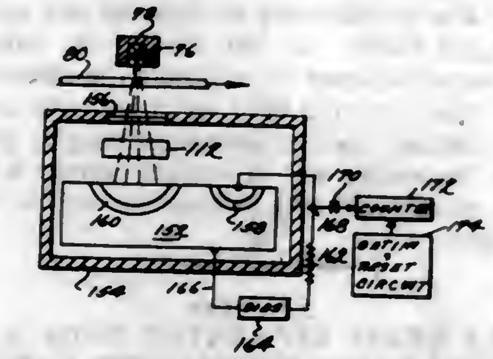
Karl-Heinz Herrmann and Wolfram Loebe, Berlin, Germany, assignors to Siemens Aktiengesellschaft, Munich, Germany, a corporation of Germany
Filed Aug. 26, 1964, Ser. No. 392,088
Claims priority, application Germany, Sept. 9, 1963, S 87,171
15 Claims. (Cl. 250—49.5)

In a particle beam apparatus having wall structure forming a chamber, the wall structure being at the temperature of the surrounding atmosphere when the apparatus is in operation and having a vacuum space in the chamber; a cartridge assembly mounted in the chamber and having two coaxial and axially apertured cartridge portions, a first one of the cartridge portions being in thermally conductive connection with the chamber so as to be substantially at the temperature of the wall structure; cryogenic means connected with a second one of the cartridge portions for cooling it during the operation to a temperature below the temperature of the wall structure; a specimen holder and diaphragm means mounted on the first cartridge portion in coaxial relation thereto, the diaphragm means being axially spaced from the specimen holder on one side of the holder and being in thermally conductive connection with the first cartridge portion so as to be approximately at the temperature of the wall structure; and means for directing a particle beam through the first apertured cartridge portion onto a specimen held in the specimen holder, the second cartridge portion extending around the first cartridge portion in the region where the specimen holder is axially spaced from the diaphragm means, and the first cartridge portion having openings in the region, whereby the low temperature of the second cartridge portion is effective through the openings to reduce specimen soiling.



3,387,133
THICKNESS MEASURING GAUGE COMPRISING A RADIOACTIVE SOURCE AND SOLID STATE RADIATION DETECTOR

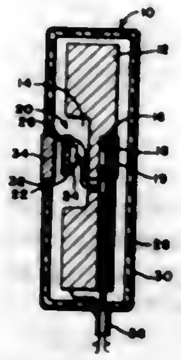
Henry R. Chope, Columbus, Ohio, assignor to Industrial Nucleonics Corporation, a corporation of Ohio
Continuation-in-part of application Ser. No. 56,849, Sept. 19, 1960. This application Feb. 3, 1964, Ser. No. 341,978
15 Claims. (Cl. 250—83.3)



1. Apparatus for gauging a characteristic comprising:
means, including solid state nucleonic radiation detecting means, for providing output pulses varying in number according to the quantity of nucleonic rays reaching said detecting means, said detecting means including a solid state radiation sensitive capacitor,
means, including a nucleonic radiation source having its rays directed toward said detecting means, for varying the quantity of said rays reaching said detecting means in accordance with variations in said characteristic, and
means operative on said output pulses to indicate the variations in said characteristic, said output providing means including an oscillator comprising said capacitor and variable in frequency with variations in capacitance of said capacitor to provide said varying-number pulses.

3,387,134
WAVELENGTH INDEPENDENT, DIRECT READING RADIOMETER

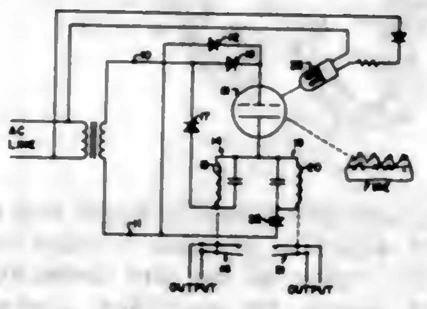
Richard W. Treharne, Xenia, Ohio, assignor to Charles F. Kettering Foundation, Yellow Springs, Ohio, a corporation of Ohio
Filed Jan. 28, 1965, Ser. No. 428,771
8 Claims. (Cl. 250—83.3)



A wavelength independent radiant power measuring instrument includes a target disc having a thermistor integrally mounted on one side, and an optically flat black material to receive and absorb incident radiation coated on the other side. The target disc has an area large compared to the thermistor to provide for thermal focusing of the incident radiation. A second or reference thermistor, shielded from the incident radiation, is connected along with the first thermistor in a bridge circuit and compensates the instrument for changes in ambient temperature.

3,387,135
FIRE DETECTION AND FLAME SAFEGUARD APPARATUS

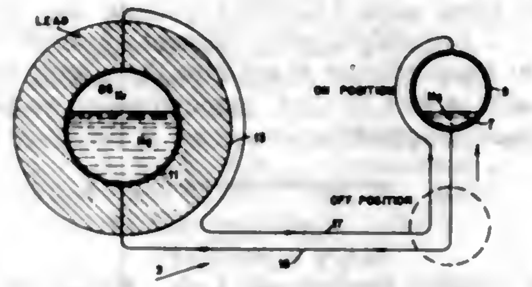
Robert O. Engh, Hopkins, Minn., assignor to Honeywell Inc., Minneapolis, Minn., a corporation of Delaware
Filed July 26, 1965, Ser. No. 474,596
10 Claims. (Cl. 250—83.6)



Self-checking apparatus for detecting either the presence or absence of radiation having a radiation sensor connected across a full wave rectifier bridge. The radiation sensor is exposed during alternate half cycles of the AC supply to first the condition to be detected and second to a condition for checking proper functioning of the apparatus. An output indicative of the presence of the condition to be detected or of the malfunctioning of the apparatus is obtained from relays in two adjacent legs of the rectifier bridge.

3,387,136
"ON-OFF" X-RAY SOURCE

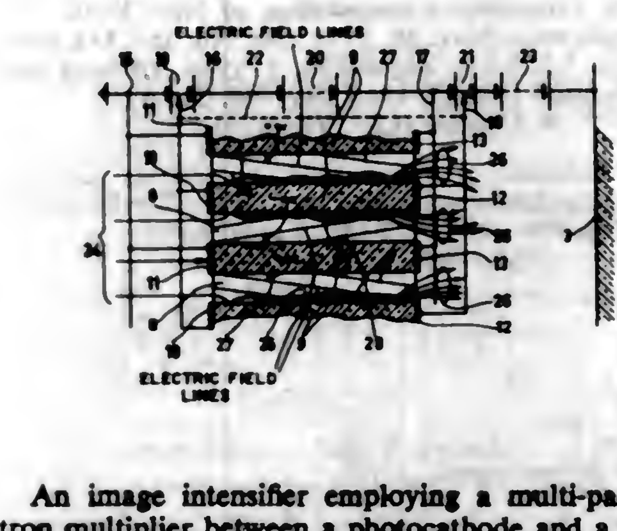
Elick H. Acree and Forrest N. Case, Oak Ridge, Tenn., and John C. Dempsey, Frederick, Md., assignors to the United States of America as represented by the United States Atomic Energy Commission
Filed Jan. 4, 1967, Ser. No. 607,609
10 Claims. (Cl. 250—106)



A beta-emitting gas is contained in a hermetically sealed system. The system consists of two chambers with a gas transfer apparatus connecting the two chambers. One chamber is unshielded and the inner surface is lined with a target material having a relatively high atomic number which emits secondary X-rays when bombarded with beta particles emitted from the gas. This X-ray emission can then be turned off by transferring the gas into the second chamber which is shielded by a suitable shielding material thereby providing a simple and compact "on-off" X-ray source for use where size and simplicity of operation are of considerable importance, such as aerospace communications.

3,387,137
MULTI-PASSAGE ELECTRON MULTIPLIER WITH POTENTIAL DIFFERENCES BETWEEN PASSAGEWAYS

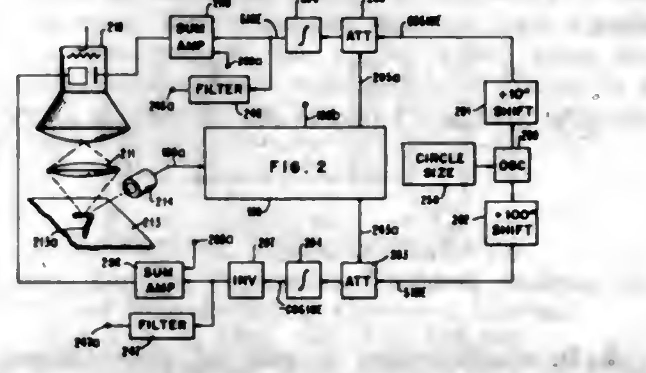
John Adams, East Grinstead, England, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Apr. 29, 1964, Ser. No. 363,496
Claims priority, application Great Britain, May 1, 1963, 17,280/63
3 Claims. (Cl. 250—213)



An image intensifier employing a multi-passage electron multiplier between a photocathode and a fluorescent screen. Alternate conductive strips on opposite faces of the electron multiplier are maintained at different potentials so that an electrical field can be maintained in the passages of the electron multiplier support, the lines of force of which field extend obliquely to the axes of these passages.

3,387,138
RADIANT ENERGY SENSITIVE ELECTRONIC CURVE FOLLOWER

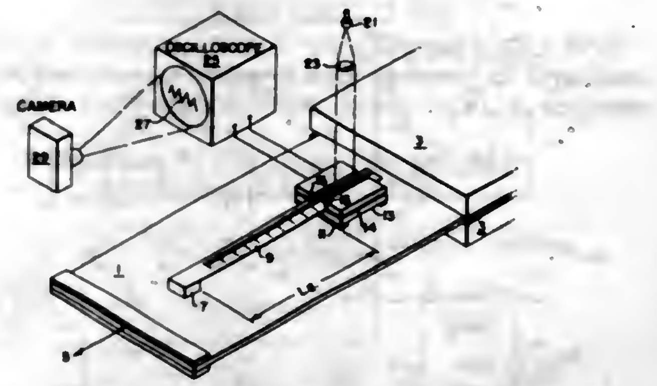
Evon C. Greanias, Chappaqua, Philip F. Meagher, Mahopac, and Charles E. Smyrk, Yorktown Heights, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed June 24, 1964, Ser. No. 377,749
11 Claims. (Cl. 250—219)



An electronic curve follower of the type wherein the radius of the scanning circle is reduced upon the detection of black and provides improved criteria for controlling the radius reducing attenuator. Such provision is primarily accomplished by delaying the operation of the attenuator for a fixed interval after the scanning spot enters the area of the line. During this interval, the photo-reflected signal is analyzed to ascertain that the scanning spot did enter the line. After such ascertaining, the attenuator is operated.

3,387,139
PHOTOELECTRIC MEASURING APPARATUS USING GRATINGS

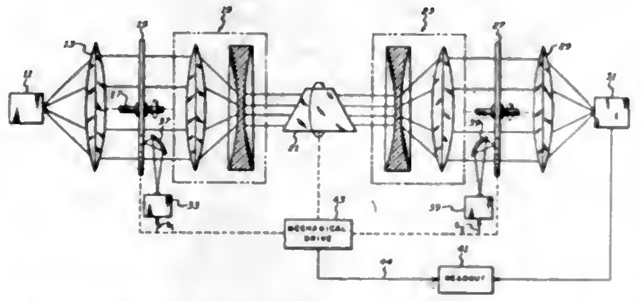
George Gerard, Newton Center, and Ralph P. Papirno, Needham Heights, Mass., assignors to Allied Research Associates, Inc., Concord, Mass., a corporation of Delaware
Filed Nov. 9, 1965, Ser. No. 507,018
10 Claims. (Cl. 250—237)



3. In combination with a gridded tape having a plurality of transparent portions of like shapes and of like maximum widths extending transversely thereof, separated by intervening opaque portions,
said transparent portions constituting apertures of a first kind,
a light gate which comprises
an opaque frame bounding and defining a transparent window of the same said maximum width,
said window constituting an aperture of a second kind,
one of said first and second aperture kinds being characterized by asymmetry of its configuration about its transverse axis,
whereby, when a beam of light is projected, through the tape and the light gate in tandem, onto a light sensitive element and relative movement takes place between the tape and the gate in a direction parallel to the length of the tape,
the flux of light impinging on the element varies in dependence on the sense of said movement.

3,387,140
OPTICAL SIGNAL CORRELATOR USING ROTARY PHOTOCHROMIC RECORD MEANS

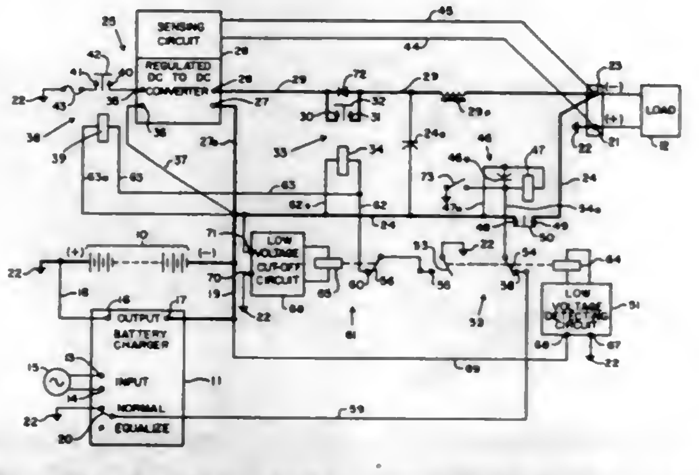
Irving Roth, Williston Park, and Edward W. Stark, Garden City, N.Y., assignors to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware
Filed June 21, 1965, Ser. No. 465,496
9 Claims. (Cl. 250—236)



4. In combination: a pair of photochromic disks; image rotating means positioned between said photochromic disks; means to pass a beam of READ light serially through said photochromic disks and said image rotating means; means to collect said READ beam; means to record first and second trains of input signals in annular paths on said first and second photochromic disks respectively; means to erase said recorded signals; said image rotating means being timed to cause several complete rotations of a projected image before a recorded signal is erased; and means to correlate the instantaneous position of a projected image and the resultant quantity of light being collected by said collection means.

3,387,141
CONSTANT VOLTAGE BATTERY SYSTEM

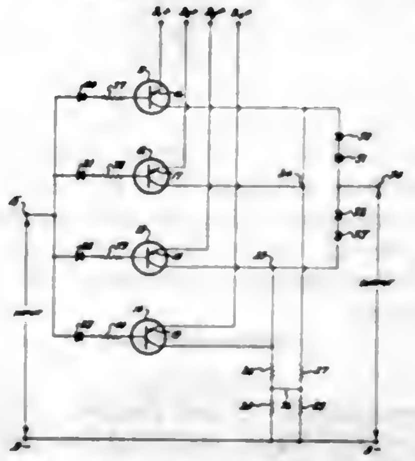
Brian W. Howald, Amherst, Ohio, assignor to Lorain Products Corporation, a corporation of Ohio
Filed Oct. 12, 1964, Ser. No. 403,101
12 Claims. (Cl. 307—49)



A constant voltage battery system including a battery charger having an input for connection to A-C source and having its output connected across a battery which is in turn connected across a load, the battery charger having a normal and equalize switch. An auxiliary D-C to D-C source of power is provided to additively compensate for change in battery voltage so that the sum of the D-C to D-C source voltage and that of the battery is supplied to the load at a constant level. There is provided a low voltage detecting means, a voltage sensing means for the D-C to D-C auxiliary supply and a low voltage cutoff means to disconnect the load from the battery when the battery voltage drops below a predetermined, discharged level. The system operates in three modes. First, when the charger is in operating condition and the A-C source is satisfactory, a battery connect contactor is closed to connect the battery and the charger across the load, the charger holding the battery in float voltage condition and supplying the load. Second, if either the A-C source or the charger become inoperative, and as battery voltage drops, the low voltage detecting means disconnects battery-load connect means, connects power supply-load connect means and connects power supply energizing means whereby battery energy and converter energy are combined to supply the load. A sensing circuit control is the output of the converter to maintain this combined energy at the voltage level called for by the load. Should the battery voltage drop to a discharged level the low voltage cutoff means disconnects the converter from the load and thus deenergizes the system to prevent battery damage. Third, should the normal-equalize switch be thrown to the higher than normal-equalize voltage for equalizing the battery, a voltage dropping element, in series with the rectifiers of the converter is cut into the circuit to reduce the load voltage to a desired, predetermined voltage during the equalize operation.

3,387,142
NAN CIRCUIT

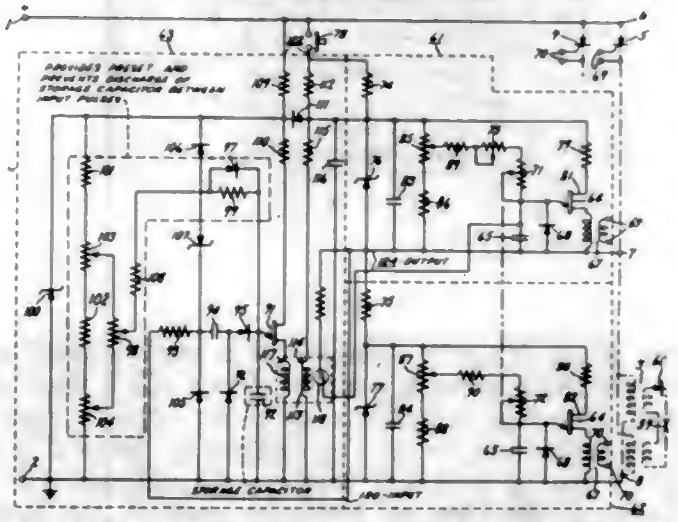
Robert W. Stoffel, Englewood, Colo., Jerome S. Janusz, Huntsville, Ala., and Robert C. Pace, Dallas, Tex., assignors to the United States of America as represented by the Secretary of the Air Force
Filed Mar. 2, 1965, Ser. No. 436,703
1 Claim. (Cl. 307—215)



A redundant NAN with two pairs of parallel transistors and having diodes in the input and redundant diodes in the output, the circuit remaining operative in the event of either a transistor short or open.

3,387,143
PRESET PULSE COUNTER

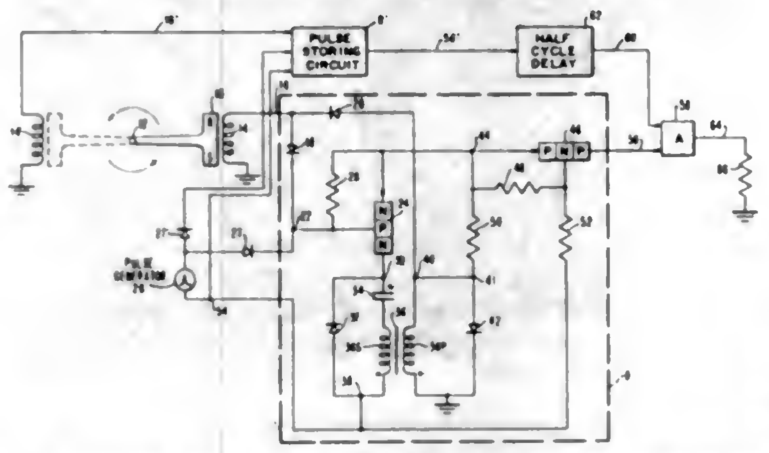
Donald L. Watrous, Scotia, N.Y., assignor to General Electric Company, a corporation of New York
Original application Nov. 28, 1961, Ser. No. 155,333, now Patent No. 3,233,116, dated Feb. 1, 1966. Divided and this application Oct. 21, 1965, Ser. No. 511,012
4 Claims. (Cl. 307—225)



A circuit for counting a preset number of pulses. The circuit includes a counter storage capacitor, the charge on which capacitor determines the emitter voltage of a unijunction transistor. A charging circuit is provided for establishing a predetermined charge on the storage capacitor, such that the accumulation of a predetermined additional charge on the storage capacitor will cause the unijunction emitter to reach its peak-point voltage at a predetermined pulse count, whereupon the storage capacitor is discharged and output signals are provided at the bases of the unijunction transistor. The additional charge is derived from the pulses to be counted through a resistor-capacitor-diode series circuit.

3,387,144
CIRCUIT FOR PERIODICALLY SAMPLING ASYNCHRONOUS PULSES

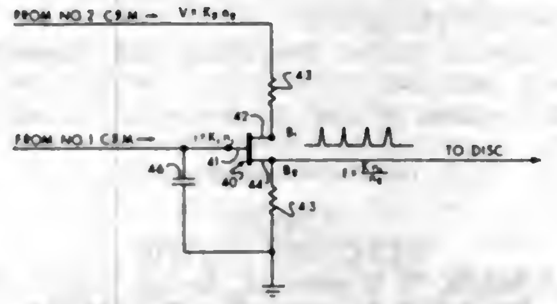
Hans Y. Juliusburger, Putnam Valley, Paul Abramson, Yorktown Heights, and Pao H. Chin, Pleasantville, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Nov. 4, 1964, Ser. No. 408,814
10 Claims. (Cl. 307—232)



A circuit which periodically samples asynchronous pulses occurring at a remote terminal. The circuit includes a capacitor which is charged by one-half of a bi-polar pulse produced at a central station and is discharged by the occurrence of an asynchronous pulse at the terminal. The other half of the bi-polar pulse from the central station is employed to sample whether the capacitor has been discharged by an asynchronous pulse. If an asynchronous pulse has not occurred at the terminal, then the sampling half of the bi-polar pulse is returned to the central station to indicate that the capacitor is still in its charged state. If the sampling half of the bi-polar pulse is not so returned to the central station, it indicates that the capacitor has been discharged, i.e., that an asynchronous pulse has occurred.

3,387,145
COMPUTER RATIO CIRCUIT FOR WELL LOGGING SYSTEM USING UNIJUNCTION TRANSISTOR

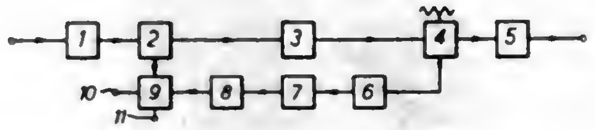
Eric C. Hopkinson, Houston, Tex., assignor to Dresser Industries, Inc., Dallas, Tex., a corporation of Delaware
Filed Nov. 9, 1964, Ser. No. 409,687
2 Claims. (Cl. 307—235)



A uni-junction transistor is connected with a radioactivity well logging apparatus in a particular manner to produce an output signal which is representative of the ratio of two input electrical signals. A first electrical circuit produces an electrical current which is functionally related to one of the two input signals, and another electrical circuit, separate from the first circuit, produces an electrical voltage which is functionally related to the other of the two input signals. The electrical current is connected to the emitter electrode of the uni-junction transistor, and the electrical voltage is connected to the first base electrode. With these two separate input signals connected in this manner, the output signal from the second base electrode of the uni-junction transistor is a voltage which represents the ratio of the two, separate input signals.

3,387,146
ELECTRICAL ARRANGEMENTS

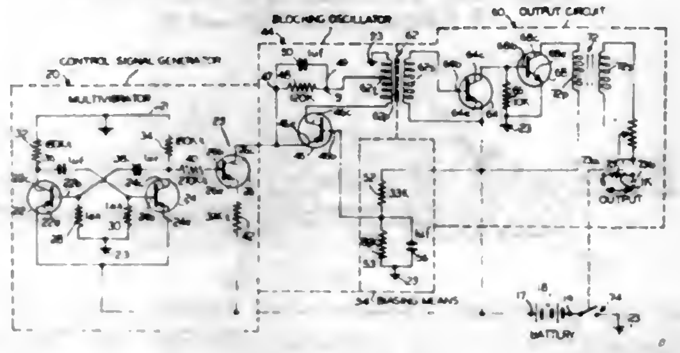
John Sidney Tarrant, Orpington, England, assignor to Telephone Manufacturing Company Limited
Filed Feb. 1, 1965, Ser. No. 429,347
Claims priority, application Great Britain, Feb. 14, 1964, 6,245/64
5 Claims. (Cl. 307—235)



An electrical signal transmission circuit as represented by a terminal or repeat station of a multi-channel carrier telephone system in which automatic control of a variable attenuator pad constituted by a thermistor circuit arrangement is provided by operation of a comparator circuit, the input signal to the system being compared with a standard reference signal and the resultant difference signal utilized to vary the effective resistance of the thermistors in a compensating manner.

3,387,147
MUSCLE STIMULATING PULSE GENERATOR

Joseph A. Radwan, Wichita, Kans., assignor to Dynatone Electronics Corporation, New York, N.Y., a corporation of New York
Filed June 9, 1967, Ser. No. 644,863
10 Claims. (Cl. 307—275)



This invention relates to improvements in pulse generating circuitry for providing muscle stimulating signals which are normally applied for the treatment of the human body. The circuitry comprises means for providing periodic control signals to regulate the activation and deactivation of blocking oscillator means which generate pulse signals. The blocking oscillator means include feedback means which operate in conjunction with biasing means and the periodic control signals for establishing the predetermined operation of the blocking means to generate the aforementioned pulse signals in a periodic manner. Output means including self-biasing amplifying elements amplify and sharpen the leading edges of the pulse signals before their application to the output terminals. The pulse generating circuitry is specifically designed to draw minimum current from a battery source.

3,387,148

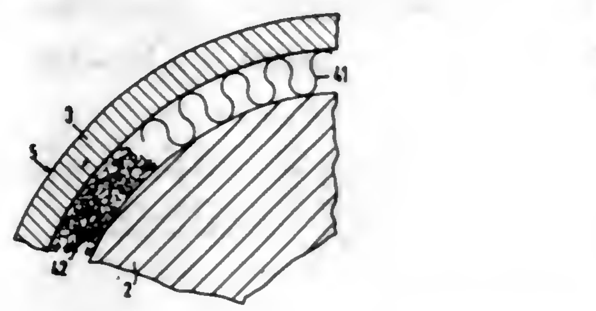
CONVERTER FUEL ELEMENT FOR NUCLEAR REACTORS AND METHOD OF PRODUCING THE SAME

Karl Janner, Erlangen, and Otto Olbrich, Munich, Germany, assignors to Siemens Aktiengesellschaft, Erlangen, Germany, a corporation of Germany

Filed Oct. 22, 1965, Ser. No. 510,437

Claims priority, application Germany, Nov. 26, 1964, S 94,336

10 Claims. (Cl. 310—4)



A converter fuel element for a nuclear reactor includes a plurality of serially connected thermionic diodes, each having an annular emitter electrode and nuclear fuel for the reactor carried by the electrode. The electrode defines a hollow space surrounding the nuclear fuel and having a volume greater than any expanded volume of the nuclear reactor resulting from burn-up of the nuclear fuel in the reactor, whereby stresses produced by the volume increase of the fuel are absorbable in the space for maintaining the dimensional stability of the peripheral surface of the annular emitter electrode. A wave-shaped metal foil or metallic wool can be received in the space.

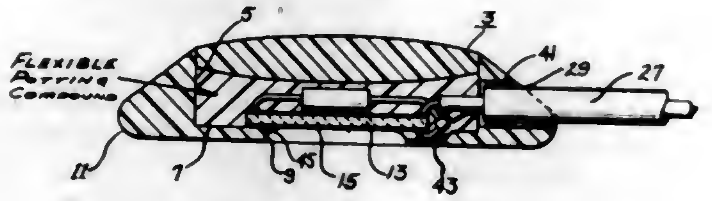
3,387,149

PHONOCARDIOGRAPH TRANSDUCER

William J. Young, Houston, Tex., assignor to the United States of America as represented by the Administrator of the National Aeronautics and Space Administration

Filed Dec. 21, 1965, Ser. No. 515,484

3 Claims. (Cl. 310—8.5)



A piezoelectric transducer for monitoring sound waves of physiological origin. The device is characterized by a nylon housing having a bore therethrough which provides an annular shelf on which is supported a piezoelectric plate at diagonally opposed points of the plate. Conductor leads are secured to both faces of the plate in a manner such that no conductor is in electrical contact with the subject. A resistor for determining low frequency response is electrically connected in parallel with the plate and mounted within the housing directly over the plate to reduce noise pickup. A first flexible potting compound placed directly over the plate fixes the resistor relative to the plate and insulates the circuit from moisture but does not hinder the low frequency vibrating characteristics of the plate. A second less flexible epoxy compound laid over the first potting compound is resistant to mechanical shock and is thermally and electrically insulative.

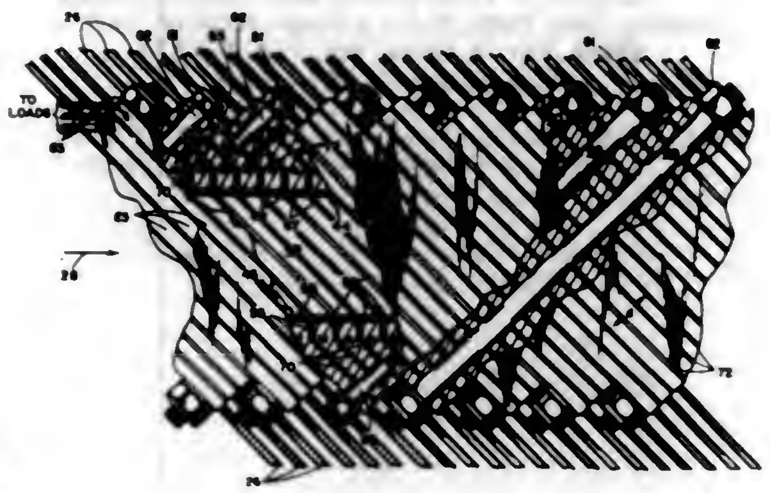
3,387,150

DUCT FOR MAGNETOHYDRODYNAMIC DEVICES

William E. Powers, Jr., West Acton, Martin E. Novack, Brookline, and Philip R. Blackburn, Boston, Mass., assignors to Avco Corporation, Cincinnati, Ohio, a corporation of Delaware

Filed Nov. 16, 1964, Ser. No. 411,413

13 Claims. (Cl. 310—11)



1. In an MHD device having a duct for conveying an electrically-conductive gas through a magnetic field, a plurality of oppositely disposed electrodes in communication with said gas for conducting electricity generated by the movement of said gas relative to said magnetic field, and characterized by resultant electric field gradients at any given point within said duct comprising the vector addition of a first electric field gradient normal to the direction of gas flow at any such given point and a second electric field gradient parallel to the direction of gas flow at said any such given point, the combination comprising:

(a) a plurality of heat resistant, nonmagnetic, and electrically conductive plates disposed in side by side relationship defining at least part of said duct, said plates each having a central opening which surrounds the longitudinal axis of said duct and a passage for receiving a coolant adjacent said central opening, at least some of said plates intersecting a plurality of said resultant electric field gradients and being at least approximately normal to said resultant field gradients at the points of intersection;

(b) means for fixedly maintaining said plates in electrically-insulated and side by side relationship;

(c) sealing means for preventing passages of gas between said plates; and

(d) electrode means comprising said oppositely disposed electrodes carried by and in electrical contact with portions of said plates exposed to said gas.

3,387,151

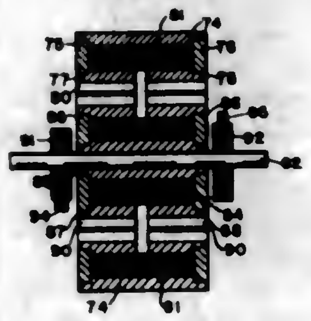
ELECTRIC MOTOR

Paul J. Selgin, 75 Wooster St., Bethel, Conn. 06801

Filed Feb. 16, 1965, Ser. No. 432,996

4 Claims. (Cl. 310—46)

1. An electric motor comprising; a rotor secured to an axial shaft; a plurality of rotor pole pieces of ferromagnetic material symmetrically spaced about the shaft and secured thereto, said rotor pole pieces arranged in pairs adjoining an annular air gap; a rotor toroidal winding for producing magnetic flux in said pole pieces, said rotor winding mounted in axial alignment with the shaft and supported by a shield of ferromagnetic material; a plurality of stator pole pieces arranged in pairs adjoining an annular gap; a stator toroidal winding for producing magnetic flux in the stator pole pieces, said stator winding mounted in axial alignment with the shaft and supported by a shield of ferromagnetic material, two toothed wheels secured to said shaft; a pair of brushes mounted for making electrical contact with the teeth of each wheel and; circuit means which connects one of said windings in series with the other winding, said brushes, and a pair of terminals which are for connection to a source of electrical power; said brushes and toothed wheels arranged for alternately reversing the current in one of said windings in synchronism with the passage of the rotor pole pieces by the stator pole pieces.



3,387,152

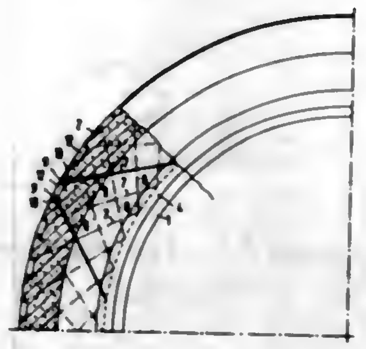
ELECTRICAL MACHINE OF THE VERTICAL TYPE WITH A HOUSING OF CONCRETE

Johannes Mücke, Erlangen, Germany, assignor to Siemens Aktiengesellschaft, Munich, Germany, a corporation of Germany

Filed Jan. 29, 1965, Ser. No. 428,932

Claims priority, application Germany, Feb. 1, 1964, S 89,319

9 Claims. (Cl. 310—89)



Electrical machine of the vertical type includes a stack of stator laminations forming a closed ring structure capable of resisting tangential tractive forces, a concrete housing comprising a wall surrounding the stack and having an outer surface, rod-shaped reinforcing struts spaced uniformly along the periphery of the stack, the struts having a spoke-like arrangement, each of the struts extending with clearance through passages formed in the concrete housing wall and anchored by one end thereof directly to the concrete housing wall at the outer surface of the wall, and connected by the other end thereof to the stack, the concrete housing wall being under compression and the struts and the stack being under tension.

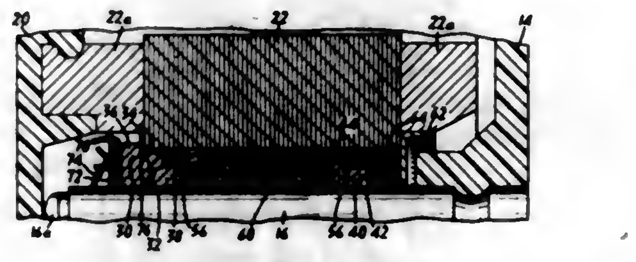
3,387,153

BEARING ASSEMBLY

Peter P. Grad, Woodstock, N.Y., assignor to Rotron Manufacturing Company, Inc., Woodstock, N.Y., a corporation of New York

Continuation-in-part of application Ser. No. 443,798, Mar. 30, 1965. This application Aug. 2, 1965, Ser. No. 477,662

13 Claims. (Cl. 310—90)



1. A bearing arrangement for a pair of concentrically disposed relatively rotating members having complementary cylindrical surfaces of different diameter providing an annular space therebetween comprising, a plurality of annular bearing elements having a radial thickness less than the annular space between said members and disposed therein, one of the circumferential surfaces of each of said bearing elements being of a diameter to engage one of said complementary cylindrical surfaces in close-fitting relationship, a resilient member disposed about the other circumferential surface of each of said bearing elements and tightly engaging the other of said complementary surfaces such that no relative rotation occurs therebetween, and lubricant retaining means between said bearing elements for supplying a lubricant to the areas of said members and said bearing elements in close-fitting relationship.

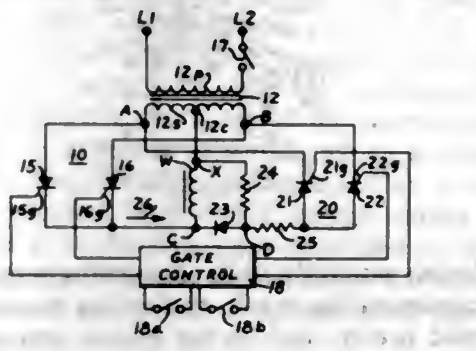
3,387,154

CONTROL CIRCUIT FOR ENERGIZING AND DE-ENERGIZING THE OPERATING WINDINGS OF ELECTROMAGNETIC DEVICES

Roger D. Meier, Menomonee Falls, Wis., assignor to Square D Company, Park Ridge, Ill., a corporation of Michigan

Filed July 21, 1965, Ser. No. 473,658

13 Claims. (Cl. 310—94)



1. A control circuit for repeatedly energizing and deenergizing the operating winding of an electromagnetic device, said control circuit comprising means for selectively applying a unidirectional energizing voltage to the operating winding and for discontinuing said energizing voltage, and means for rapidly discharging the inductive energy stored in the operating winding upon the discontinuance of said energizing voltage, said discharging means including a discharge resistor, a diode, means for connecting said resistor and diode in series with each other across the operating winding, and circuit means for maintaining a unidirectional voltage of predetermined magnitude across said discharge resistor during the discharge period.

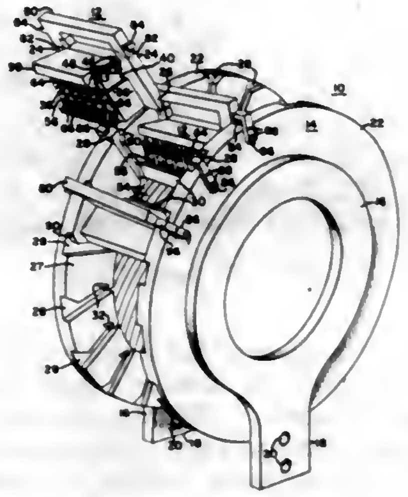
3,387,155

REMOVABLE BRUSH MAGAZINE ARRANGEMENT

Gerd E. Krulls, Scotia, N.Y., assignor to General Electric Company, a corporation of New York

Filed Aug. 11, 1965, Ser. No. 478,825

20 Claims. (Cl. 310—239)



A removable brush magazine for holding and replacing a number of brushes simultaneously in a dynamoelectric machine and having a rotatable insulating handle for manipulating the magazine and securing it in place.

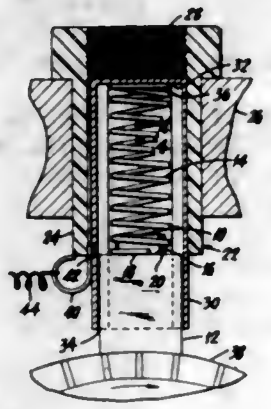
3,387,156

BRUSH ASSEMBLY UNIT

David I. Elow, New Rochelle, N.Y., and Lawrence Jayne, Mountain Lakes, N.J., assignors to Consolidated Spring Corporation, Brooklyn, N.Y., a corporation of New York, and to The Carbone Corporation, Boonton, N.J., a corporation of New Jersey

Filed June 7, 1963, Ser. No. 286,246

2 Claims. (Cl. 310—247)



1. A brush assembly unit, comprising a current collecting and commutating brush, and spring means for pressing against said brush, said spring means comprising a wire helical coil compression spring of round outer cross-section, said spring means including a spring metal element and a current-conducting metal element coextensive in length with said spring metal element, said spring metal element being less conductive than said current conducting metal element and more resilient than said current-conducting element, said spring metal element comprising a stainless spring steel inner core of circular cross-section and said current-conducting metal element comprising an outer coating of electroplated metal completely circumscribing the cross-section of the inner core and in contact therewith and being bonded to the inner core, the wire of said spring being drawn, said electroplated metal being selected from the class consisting of copper and aluminum and alloys thereof.

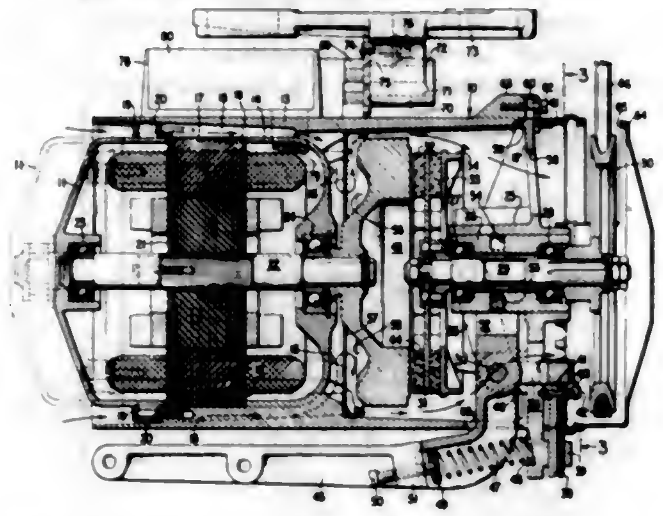
3,387,157

ELECTRIC MOTOR HOUSING IN CLUTCH-BRAKE DRIVING DEVICE

Albert N. Cook, Madison, and James F. Turley, Cranford, N.J., assignors to The Singer Company, New York, N.Y., a corporation of New Jersey

Filed May 10, 1965, Ser. No. 454,409

2 Claims. (Cl. 310—258)



1. Integral housing structure for a clutch-brake driving device having an electric driving motor, comprising a frame having a cylindrical outer wall portion, an inner cup-shaped portion radially spaced from and coaxial with said outer portion, circumferentially-spaced ribs integral with and joining both portions, alternate ones of said ribs extending to different distances axially beyond the open end of said cup portion to define a structure for seating electric motor stator cores of substantially different stack lengths.

3,387,158

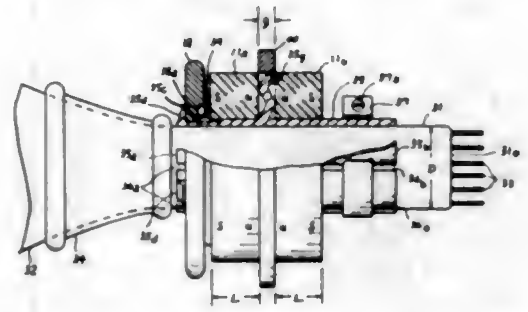
FOCUS MAGNET ASSEMBLY FOR CATHODE RAY TUBES

Akio Ohkoshi, Seuri Miyaoka, and Yoshiharu Katagiri, Tokyo, Japan, assignors to Sony Corporation, Tokyo, Japan, a corporation of Japan

Filed Mar. 31, 1966, Ser. No. 539,072

Claims priority, application Japan, Apr. 14, 1965, 40/29,930

6 Claims. (Cl. 313—84)



The invention is directed to a focusing magnet assembly for a cathode ray tube and includes a plurality of magnets mounted about the electron beam path of the tube so as to substantially reduce the axial intensity of the fringing flux fields of the focus magnets. The focus magnet assembly includes a support sleeve of the generally hollow cylindrical shape for mounting about the neck of the cathode ray tube and including a plurality of outstanding stopper members. A clamp ring is fixed about the sleeve for securing the sleeve to the neck of the cathode ray tube. An annular shielding ring is mounted about the sleeve at one end thereof to protect the deflection coils of the cathode ray tube from the magnetic flux of the focus magnet assembly.

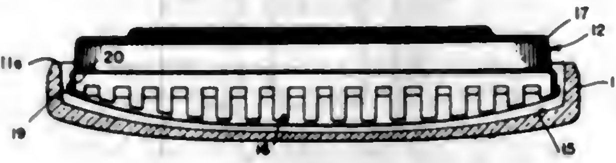
3,387,159

COLOR TELEVISION TUBE MASK MOUNTING WITH APERTURE ALIGNMENT MAINTENANCE DURING EXPANSION

James W. Schwartz, Western Springs, and Laszlo Javorik, Chicago, Ill., assignors to National Video Corporation, Chicago, Ill., a corporation of Illinois

Filed Oct. 28, 1966, Ser. No. 590,315

3 Claims. (Cl. 313—85)



A shadow mask is mounted in the faceplate portion of a color television tube adjacent the phosphor screen by means of spring clips. The shadow mask includes a frame defining a plurality of fingers projecting axially of the tube toward the screen for receiving a foraminous member defining apertures in register with the phosphor pattern of the screen. The foraminous member is mounted at its periphery to the distal ends of the fingers projecting from the frame, and an Invar band having a coefficient of thermal expansion less than the screen and the frame is connected to the periphery of the screen and the distal ends of the frame fingers such that when the frame expands due to heating, the Invar band will restrain the expansion of the periphery of the foraminous member thereby causing an increase curvature of the foraminous member and translating the center thereof axially of the tube toward the screen for correcting for misregistration of the apertures with their associated phosphor pattern.

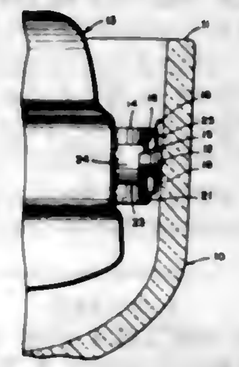
3,387,160

MOUNTING MEANS FOR MOVING SHADOW MASK AXIALLY FORWARD UPON HEATING

James W. Schwartz, Western Springs, Ill., assignor to National Video Corporation, Chicago, Ill., a corporation of Illinois

Filed Jan. 11, 1967, Ser. No. 608,561

3 Claims. (Cl. 313—85)



A quadrilateral shaped fitting for mounting a mask in a color television tube, the fitting being adapted to be distorted upon increase in dimension of the shadow mask relative to the tube envelope so as to produce an axial movement of the shadow mask and thereby maintain the mask openings in register with electron beams.

3,387,161

PHOTOCATHODE FOR ELECTRON TUBES

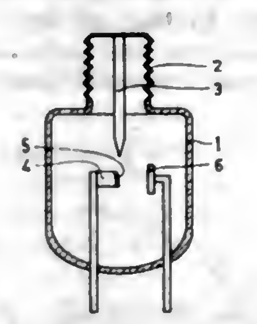
Johannes van Laar and Jacob Jan Scheer, Emmasingel, Eindhoven, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed Nov. 18, 1965, Ser. No. 508,499

Claims priority, application Netherlands, Dec. 2, 1964, 64—13,961

9 Claims. (Cl. 313—94)

An alkali metal activated photocathode comprising a heavily-doped p-type semiconductor of a III–V compound or mixed crystal thereof having an energy gap between 1.1 and 1.6 electron volts. A preferred embodiment comprises zinc-doped gallium-arsenide activated with cesium. Among the advantages are increased sensitivity in the red part of the spectrum.



3,387,162

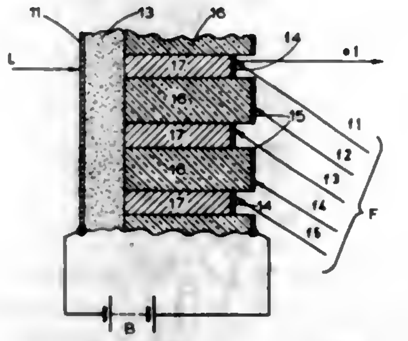
PHOTOCATHODE COMPRISING CHANNELED MATRIX WITH CONDUCTIVE INSERTS IN CHANNELS TIPPED WITH PHOTOCONDUCTIVE MATERIAL

Pieter Schagen, Redhill, and Brian William Manley, Burgess Hill, England, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed Oct. 28, 1964, Ser. No. 407,046

Claims priority, application Great Britain, July 7, 1964, 32,939/63

4 Claims. (Cl. 313—96)



A photocathode for an image transducer which employs a plate of insulating, or highly resistive material provided with a plurality of channels each having a conductive insert therein which does not extend beyond a surface of the plate serving as an output face. The other major surface of the plate, which serves as an input face is covered with a photoconductive material which is in contact with the inserts. An external conductive layer provided on the exposed surfaces of the photoconductive material serves as an input electrode which is connected to the inserts by the photoconductive material. A separate photoemissive element is provided on the output end of each insert and a conductive layer provided on the output face having apertures corresponding to the inserts and channels serve as a grid which is spaced from the photoemissive elements.

3,387,163

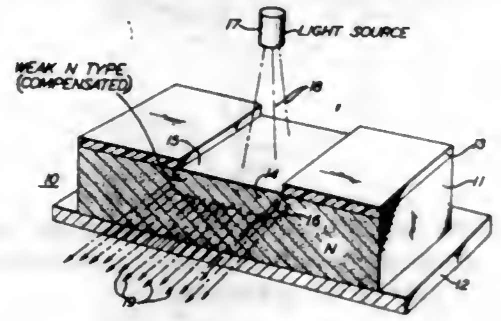
LUMINESCENT SEMICONDUCTOR DEVICES INCLUDING A COMPENSATED ZONE WITH A SUBSTANTIALLY BALANCED CONCENTRATION OF DONORS AND ACCEPTORS

Hans J. Queisser, Summit, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

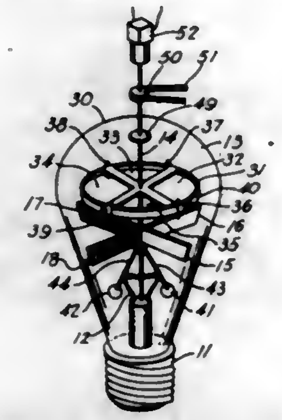
Filed Dec. 20, 1965, Ser. No. 514,940

3 Claims. (Cl. 313—108)

A monocrystalline semiconductor body of the III–V compound type, such as gallium arsenide, contains a Group IV element, such as silicon, as the only significant impurity. By treatment of a portion of the body, a compensated zone is formed in which some of the Group IV element atoms become effective as significant impurities of the type opposite to that of their initial and major state. Thus a gallium arsenide body containing silicon is N-type, but when arsenic is outdiffused from a portion, a compensated zone is formed in which there is a substantial balance between silicon atoms functioning both as donors as originally present, and as acceptors replacing outdiffused arsenic. Such a compensated zone is an efficient source of luminescence when suitably excited.



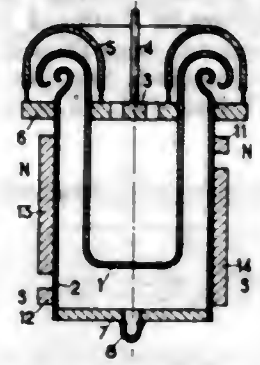
3,387,164
ROTATING VANE BULB
Robert R. Abernethy, 240 Logan Ave., Bedford, Ohio 44014
Filed Sept. 21, 1965, Ser. No. 489,002
11 Claims. (Cl. 313—111)



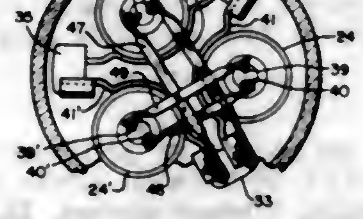
A light bulb having a spindle mounted within the bulbous enclosure. An object for changing the visual effect of radiant energy given off by the filament, is mounted on the spindle in spaced relation from, and for rotation about the longitudinal axis of the spindle. A vane having a pair of silvered and blackened sides in back-to-back relation, and moving in response to radiant energy from the filament, is attached to the object for rotating it.

3,387,165
MAGNET STRUCTURE FOR CYLINDRICAL GAS-FILLED CROSSED-FIELD DIODES
Gilbert Boucher, Paris, France, assignor to CSF—Compagnie Generale de Telegraphie Sans Fil, a corporation of France
Filed Apr. 26, 1966, Ser. No. 545,486
Claims priority, application France, May 4, 1965, 15,675
4 Claims. (Cl. 313—156)

2. A diode discharge device of the crossed field type, comprising anode electrode means, cathode electrode means surrounding said anode electrode means, and means for producing a non-homogeneous magnetic field within the interelectrode space defined by said anode and cathode means including magnetic structure means defining a meander like path for the electrons emitted by said cathode means having to and fro path portions interconnected by reversing path portions and further means for producing in the to and fro path portions a magnetic field having an azimuthal component of periodically alternate directions with the intensity thereof increasing toward the cathode surface and for producing within the reversing path portions a magnetic field of such configuration that the electrons continue to move in a predetermined direction to the next path portion.

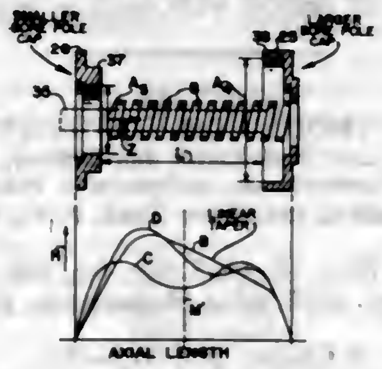


3,387,166
HEATER SUPPORT FOR PLURAL GUN CATHODE-RAY TUBE
James L. Kraner, Harwood Heights, and Nicholas P. Pappadis, Chicago, Ill., assignors to The Rauland Corporation, Chicago, Ill., a corporation of Illinois
Filed May 18, 1967, Ser. No. 639,496
3 Claims. (Cl. 313—272)



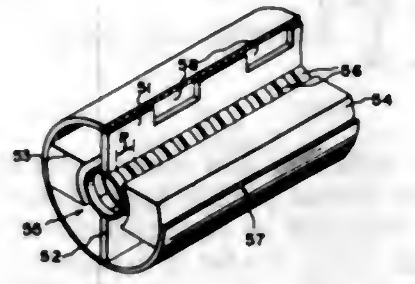
A tri-color gun mount for a color television picture tube includes three rigid metal support straps each supported by and extending between two of the three parallel ceramic support rods, and two of the support straps are each provided with a depending integral ear. A pair of flat conductive strip connectors extend from the depending ears to the terminals of the heater element of one of the electron guns, and another pair of flat conductive connectors are respectively welded to the first pair and extend between corresponding terminals of the other two heater elements of the tri-color gun mount.

3,387,167
LINEAR BEAM MICROWAVE TUBE HAVING POLE CAPS PROVIDING A TAPERED MAGNETIC FIELD ALONG THE BEAM AXIS
Richard H. Ohtomo, Sunnyvale, Calif., assignor to Varian Associates, Palo Alto, Calif., a corporation of California
Filed Nov. 6, 1964, Ser. No. 409,521
11 Claims. (Cl. 315—3.5)



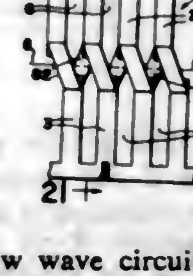
A permanent magnet focusing structure for linear beam traveling wave tubes. Permanent magnets disposed at each end of the slow wave circuit are equipped with specially designed pole caps which cause the magnetic field to be tapered. The tapered magnetic field causes a substantial portion of the beam electrons to strike the slow wave circuit thereby enhancing electronic efficiency.

3,387,168
FIN-SUPPORTED HELICAL SLOW WAVE CIRCUIT PROVIDING MODE SEPARATION AND SUPPRESSION FOR TRAVELING WAVE TUBES
William L. Beaver, Los Altos Hills, Calif., assignor to Varian Associates, Palo Alto, Calif., a corporation of California
Filed Dec. 11, 1964, Ser. No. 417,676
11 Claims. (Cl. 315—3.5)



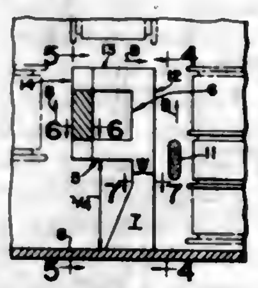
A fin-supported helical slow wave circuit for TWT's. From 1 to 8 metal fins extend longitudinally through the waveguide to support the helix and provide improved thermal conductivity. One or more conductive loading ridges extending longitudinally throughout the waveguide increase the capacitance between helix and waveguide, resulting in increased bandwidth and lessened impedance shift throughout the frequency band. Slotted portions in the fins extending longitudinally over two or more consecutive periods of the helix provide mode separation and suppression which result in stable and predictable operating characteristics.

3,387,169
SLOW WAVE STRUCTURE OF THE COMB TYPE HAVING STRAP MEANS CONNECTING THE TEETH TO FORM ITERATIVE INDUCTIVE SHUNT LOADINGS
George K. Farney, New Providence, N.J., assignor to S-F-D Laboratories, Inc., Union, N.J., a corporation of New Jersey
Filed May 7, 1965, Ser. No. 454,031
3 Claims. (Cl. 315—3.5)



An improved slow wave circuit and microwave tubes employing same are disclosed. The slow wave circuit includes a pair of conductor portions spaced apart to define an electronic interaction region therebetween. Each of the conductors is provided with an array of slots, bars or the like to define iterative series loading elements in each of the conductors. The series-loading elements in the two conductors are offset with respect to each other along the length of the line such that the electron stream successively and alternately interacts with the series voltages developed in first one of the conductors and then the other throughout the length of the circuit to produce an amplified output signal. An array of inductive coupling strap portions interconnect the first and second conductors to define an array of inductive shunt loading elements in the slow wave circuit. In a preferred embodiment, the inductive shunt-loading elements are resonated with the shunt capacity between the conductor portions of the slow wave circuit at a frequency above the resonant frequency of the series loading elements in each of the conductors of the slow wave circuit, whereby the circuit is caused to have a fundamental space harmonic forward wave interaction with a stream of electrons. In a preferred embodiment, the inductive coupling straps interconnecting the first and second conductors are formed by half turns of a helix shaped strap, whereby fabrication of the slow wave circuit is facilitated.

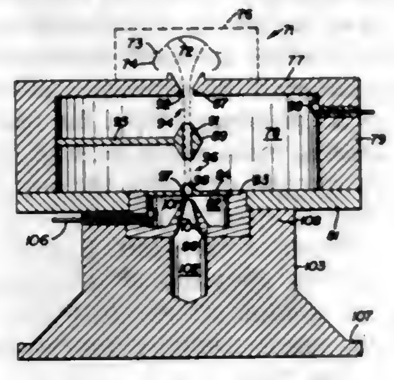
3,387,170
STUB SUPPORTED STRIPLINE HELICAL SLOW WAVE CIRCUIT FOR ELECTRON TUBE
George K. Farney, New Providence, N.J., and Joseph Feinstein, Menlo Park, Calif., assignors to S-F-D Laboratories, Inc., Union, N.J., a corporation of New Jersey
Filed May 7, 1965, Ser. No. 454,140
9 Claims. (Cl. 315—3.5)



Stub supported helical slow wave circuits are disclosed together with tubes using same. The helix circuit comprises a helical stripline conductor having a width greater than the spacing between adjacent turns of the helical stripline conductor to provide a helix circuit having a relatively low characteristic impedance. The stub supports for the helix are aligned one behind the other along the line of circuit development and the stub members are dimensioned relative to the dimensions of the helical stripline for presenting a characteristic circuit impedance to the helix circuit portion which is greater than one-half the characteristic impedance of the helix portion of the composite circuit, whereby wideband operation of the circuit and tube using same is obtained. A number of different helix derived slow wave circuits are disclosed including a helix coupled, ladder line, bifilar helix, and vane array. In one embodiment, a pair of bifilar wound helices couple separate stub arrays and insulator means are provided for applying different electrical potentials to each one of the bifilar wound helices for electrostatic focusing of the beam.

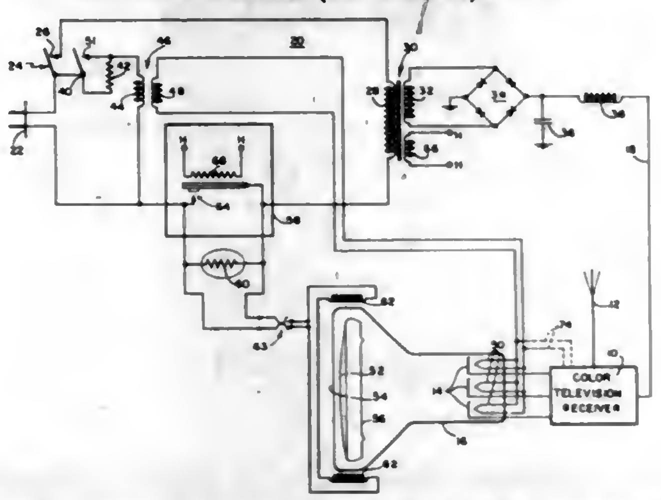
3,387,171
DEVICE FOR MODULATING BEAMS OF CHARGED PARTICLES UTILIZING A LONG INTERACTION GAP
Oskar Heil, San Mateo, Calif., assignor, by mesne assignments, to Varian Associates, a corporation of California
Original application June 10, 1960, Ser. No. 35,258, now Patent No. 3,234,426, dated Feb. 8, 1966. Divided and this application Oct. 22, 1965, Ser. No. 510,436
5 Claims. (Cl. 315—5.51)

A device for density modulating beams of charged particles is described which utilizes an interaction gap having a length substantially equal to the distance a charged particle traveling the beam velocity will travel during one full cycle of the input frequency. The efficiency of the device is discussed. Embodiments of the device



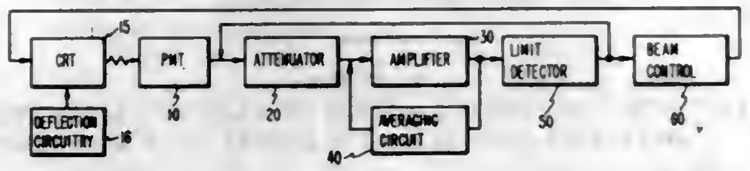
capable of frequency doubling and of operation at the input frequency are described.

3,387,172
AUTOMATIC DEGAUSSING CIRCUIT
Julius L. Simon, Morton Grove, Ill., assignor to Motorola, Inc., Franklin Park, Ill., a corporation of Illinois
Filed Dec. 1, 1966, Ser. No. 598,430
9 Claims. (Cl. 315—8)



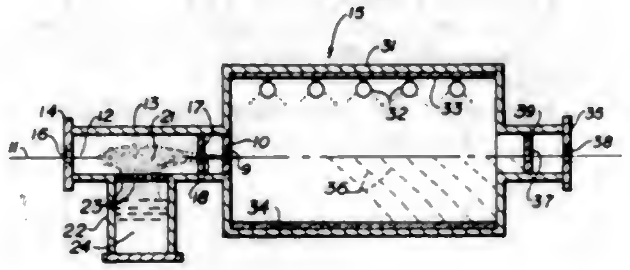
The degaussing circuit is used in a rapid warm-up color television receiver for automatically demagnetizing metal parts of the picture tube each time the receiver is turned on. An inductance coil is positioned adjacent to the picture tube and coupled in parallel with a negative temperature coefficient resistor. A high initial current through the coils decays as the resistor heats up to provide the required demagnetization current. A switch shorts out the coils and the resistor after demagnetization is completed.

3,387,173
CATHODE RAY TUBE PHOSPHOR ERASURE SYSTEM
Richard E. Hall, Rochester, Minn., assignor to International Business Machines Corporation, Armonk, N.Y., a corporation of New York
Filed Feb. 7, 1966, Ser. No. 525,685
7 Claims. (Cl. 315—10)



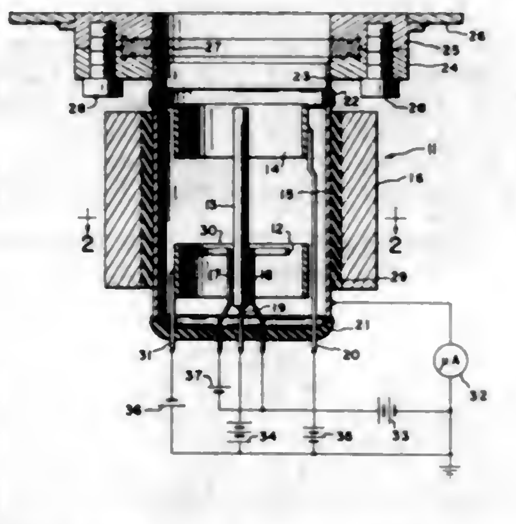
A photomultiplier tube is used to detect scanning of the aged and unaged portions of the phosphor area on the face of the cathode ray tube, with the output of the photomultiplier tube being applied to a logic circuit. The logic circuit is used to increase the beam intensity while scanning the unaged portions of the phosphor and to decrease the beam intensity while scanning the aged portions, thereby compensating for selective aging by erasure of the phosphor in the unaged portions.

3,387,174
METHOD AND APPARATUS FOR REMOVING IMPURITY GAS PARTICLES FROM A PARTICLE BEAM
Richard F. Post, Walnut Creek, Calif., assignor to the United States of America as represented by the United States Atomic Energy Commission
Filed July 18, 1967, Ser. No. 654,281
9 Claims. (Cl. 315—111)



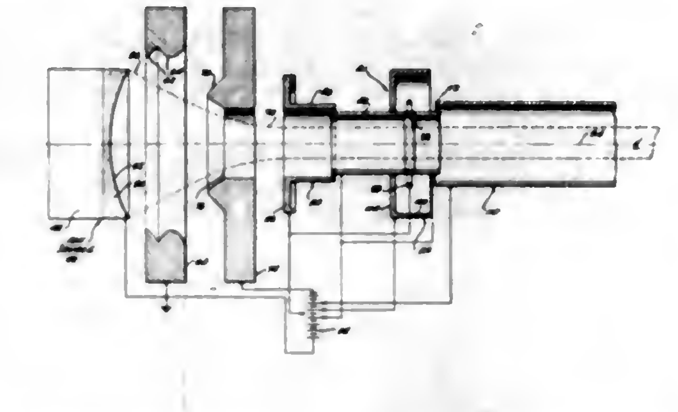
Apparatus for deflecting slow thermal energy particles from an energetic neutral particle beam. Electromagnetic energy strongly absorbed by slow particles moving with a beam is directed across the beam to impart a transverse energy component to the slow particles, deflecting them from the beam, hereby yielding a purified energetic neutral particle beam for use, e.g., in controlled fusion research.

3,387,175
VACUUM GAUGE HAVING SEPARATE ELECTRON COLLECTING AND ELECTRON ACCELERATING ELECTRODES
William A. Lloyd, San Jose, and Robert L. Jepsen, Los Altos, Calif., assignors to Varian Associates, Palo Alto, Calif., a corporation of California
Filed Mar. 5, 1965, Ser. No. 437,456
11 Claims. (Cl. 315—108)



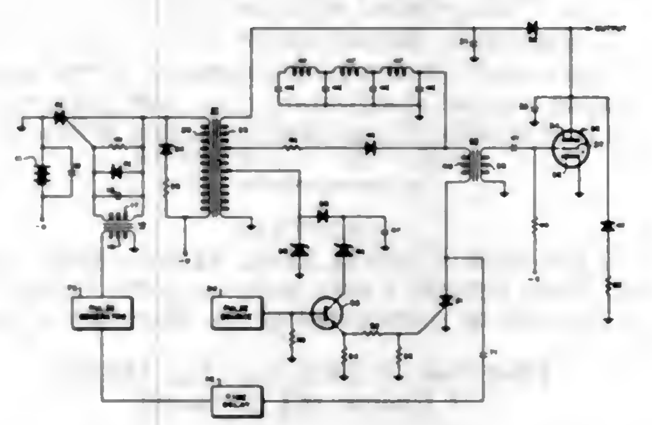
The effective X-ray limit in low pressure ion gauges is substantially reduced if not entirely eliminated in a gauge in which electron collection is effected at potentials too low for any appreciable X-ray emission caused by electron bombardment. In the disclosed gauge, electrons are emitted from a ribbon filament coaxially disposed about the lower end of an elongated high voltage accelerating anode. As the electrons accelerate toward the high voltage anode, they are caused to miss and spiral about the high voltage anode by a magnetic field of about 600 gauss until they reach and are collected by a low voltage electron collector surrounding and coaxial with the upper end of the high voltage anode. The potential on said low voltage electron collector is insufficient for appreciable X-ray emission by electron bombardment. In addition an ion collector is so arranged that if a few X-rays are emitted, the secondary electrons they liberate from the ion collector will be returned to the ion collector by the magnetic field.

3,387,176
APPARATUS FOR PASSING CHARGED PARTICLES THROUGH A FIELD FREE REGION AND NEUTRALIZING SAID PARTICLES DURING TRANSIT
Malcolm R. Currie, Pacific Palisades, and George R. Brewer, Malibu, Calif., assignors to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Continuation of application Ser. No. 62,292, Oct. 12, 1960. This application Jan. 5, 1967, Ser. No. 607,394
16 Claims. (Cl. 315—111)



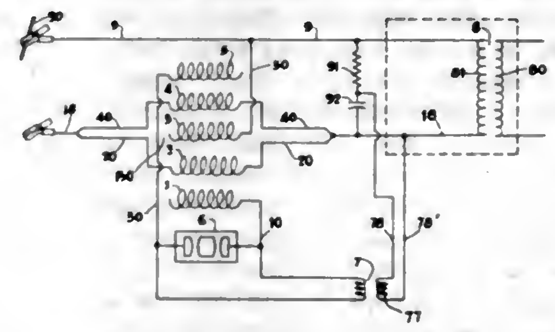
A method and apparatus for neutralizing the charge of a beam of charged particles wherein the beam is passed through a field-free region which is defined by potential barriers at the upstream and downstream ends of said region, neutralizing particles being introduced into said beam in said region.

3,387,177
HIGH RISE THYRATRON PULSE SUPPLY
William D. Israel, Ellicott City, William B. McCartney, Glen Burnie, and Edward O. Uhrig, Catonsville, Md., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Mar. 9, 1965, Ser. No. 438,436
13 Claims. (Cl. 315—209)



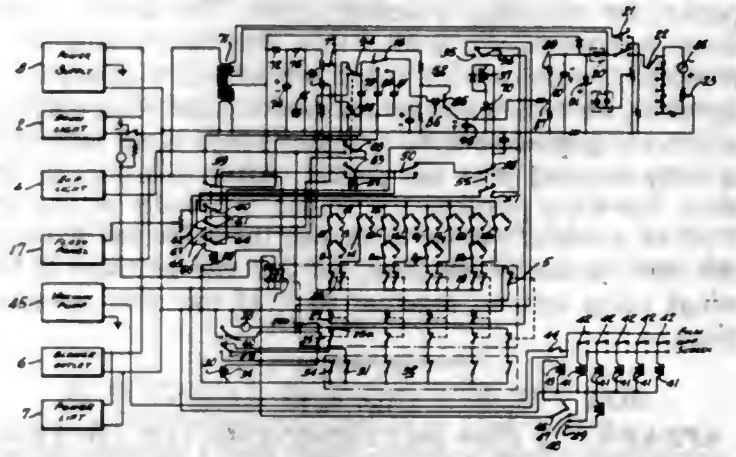
A high rise pulse supply produces a high output pulse across a relatively low output resistance with a rise time plus delay in the circuit of very short duration, as less than 100 nanoseconds. A pair of electronic switches are used in series to activate a step-up transformer connected to a thyratron load. The switches are powered from a converter power supply utilizing a third electronic switch fed from a low voltage D.C. battery and activated by a pulse source. The circuit is intermittently operated to conserve power and is automatically recycled.

3,387,178
HIGH FREQUENCY VOLTAGE INJECTOR CIRCUITS FOR WELDERS
Richard B. Brundage, Ladue, Mo., assignor to Emerson Electric Co., St. Louis County, Mo., a corporation of Missouri
Filed Apr. 1, 1965, Ser. No. 444,618
12 Claims. (Cl. 315—246)



1. In an A.C. welder wherein a welding current is supplied from a welding transformer and a high frequency current is injected into the weld circuit between an electrode and a ground line to a work piece to facilitate starting and stabilizing an arc, the improvement comprising superposed conductor strips having an electrical insulating medium between them, said conductor strips being in the form of coils which have at some radio frequency equal values of inductive reactance measured from start to finish of a coil and of capacitive reactance measured from one coil to another coil; means for inducing a high frequency current in said coils; electrical conductor means connecting electrically one of said conductor strips to one of said electrode and ground lines, and electrical conductor means connecting electrically another conductor strip to the welding transformer and to the other of the electrode and ground lines, said conductor strips and insulating medium constituting a capacitor of a capacitance to block the flow between said conductor strips of low frequency current but to permit free flow of said high frequency current.

3,387,179
ELECTRICAL SYSTEM FOR PHOTOGRAPHIC COLOR SEPARATION
Maksymilian A. Michalski, Woodside, N.Y., assignor to Berkey Photo, Inc., New York, N.Y.
Filed Oct. 5, 1966, Ser. No. 584,429
5 Claims. (Cl. 315—312)

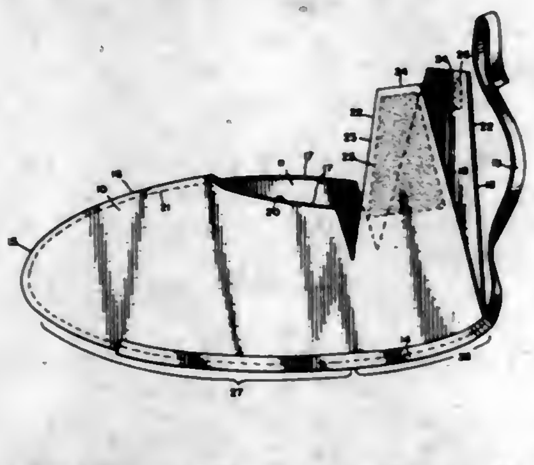


1. An electric system comprising a main exposure lamp, a source of power, a timer, a main exposure starting switch, a timing relay controlled by the main exposure starting switch, main lamp switching means controlled by said timing relay for energizing said main exposure lamp from said source of power, interlock switching means for said timing relay, timer switching means controlled by said timer relay for starting the timer,

main exposure control means for said timer adjustable to set the operating time thereof, a timing reset relay operable by said timer at the expiration of the operating time thereof as determined by said main exposure control means, normally closed switching means controlled by said timing reset relay operative to deenergize said timing relay and thereby deenergize said main lamp from said source of power, a flash panel, a flash panel starting switch, flash panel exposure control means for said timer adjustable to set the operating time thereof, a flash control relay operative by said flash panel starting switch, a flash relay interlock circuit, double throw switching means controlled by said flash relay normally in one position in series with said circuit for energizing said main lamp and in its other position opening the circuit for energizing said main lamp and energizing said flash relay interlock circuit and said flash panel, and double throw switching means controlled by said flash relay normally in one position connecting said main exposure control means to said timer and in its other position connecting said flash panel exposure control means to said timer.

3,387,180
SHOE COVER WITH STATIC ELECTRICITY DISCHARGE MEANS

Frederick W. Zipf III, Rumson, N.J., assignor, by mesne assignments, to American Hospital Supply Corporation, Evanston, Ill., a corporation of Illinois
Filed July 6, 1966, Ser. No. 563,230
8 Claims. (Cl. 317—2)

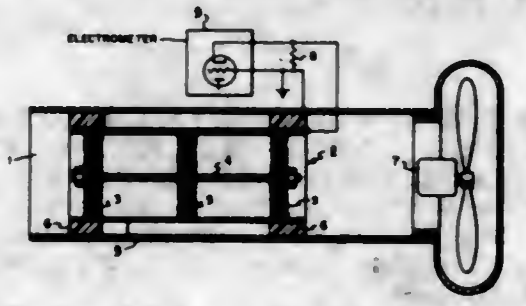


A shoe cover composed of side sections of paper or other foldable sheet material secured together along certain edges to define a rearwardly and upwardly opening pocket for receiving a wearer's foot. The length of the cover is substantially greater than that of the shoe to be received therein and the cover is provided with a pair of upwardly extending and vertically elongated wing portions which are disposed behind a wearer's shoe when such shoe is fully inserted into the pocket. After insertion of the shoe, the wing portions are folded forwardly across the front of a wearer's ankle to enclose the ankle and to cover the rear portion of the shoe, the free end portions of the wings being secured together to hold the shoe cover in place.

3,387,181
APPARATUS FOR DETERMINING THE DIFFERENTIAL ION COUNT IN AN ATMOSPHERE AND FOR CONTROLLING SAME

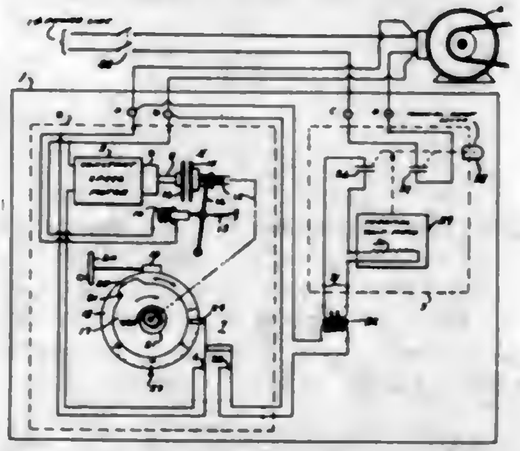
John W. Michener and Philip N. Smith, Spartanburg, S.C., assignors to Deering Milliken Research Corporation, Spartanburg, S.C., a corporation of Delaware
Filed Nov. 5, 1963, Ser. No. 321,546
9 Claims. (Cl. 317—3)

1. In combination with a grid carrying a direct current charge, an atmospheric differential ion counter device comprising a chamber, ion collecting means disposed within said chamber, means for drawing atmosphere through said chamber and through said ion collecting means and means for determining the current resultant from the accumulation of ions on said ion collecting means, said differential ion counter device determining the polarity and intensity of the charge on said grid.



3,387,182
APPARATUS FOR PROTECTING ELECTRICAL POWER EQUIPMENT FROM DAMAGE DUE TO TOO FREQUENT REPETITION OF START CONDITIONS

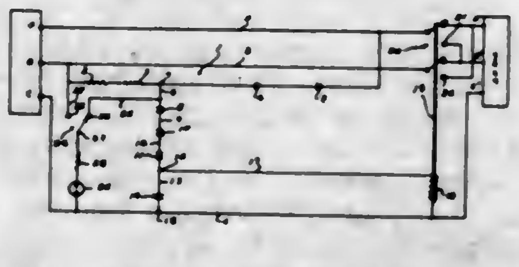
James O. Fourr, P.O. Box 101, Boron, Calif. 93516
Filed Jan. 18, 1966, Ser. No. 521,459
3 Claims. (Cl. 317—40)



A thermally actuated manually reset circuit breaker having an electrical heating element is connected in the energizing circuit of the electrical equipment to be protected. The heating element is connected to the equipment through a normally closed delay switch for energization whenever the equipment is energized and the delay switch is closed. A delay mechanism actuated by energization of the equipment opens the delay switch a predetermined fixed time interval after the initiation of any period of energization of the equipment and holds it open for the duration of the energization period. If the intervals of heating element energization come too frequently, sufficient heat accumulates in the circuit breaker to actuate it.

3,387,183
SYSTEM FOR CORRECTING PHASE SEQUENCE

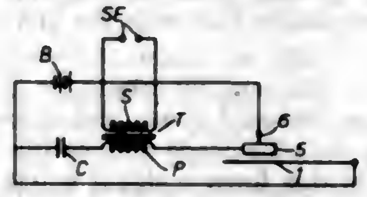
Garth Hess, Upland, Calif., assignor to the United States of America as represented by the Secretary of the Air Force
Filed Nov. 4, 1965, Ser. No. 506,912
7 Claims. (Cl. 317—47)



A system for correcting improper phase sequence in a three-phase circuit. The system employs a reactive network connected between two of the phase conductors and a connection between an intermediate point on the network and the third phase conductor. This connection includes a silicon rectifier, one or more Zener diodes and also a condenser. A connection is taken from a point between the Zener diode and the condenser to one end of a solenoid actuator. The other end of the solenoid is connected to the third phase conductor. A slidable core passes through the solenoid, and the core is secured at the end remote from the solenoid to a pivoted switch which, when operated by the solenoid, serves to interchange two of the phase conductors which have been improperly connected. An auxiliary circuit is also connected from the said intermediate point on the network to the third phase conductor through a glow tube to provide a visual indication of an improper phase condition.

3,387,184
ELECTRIC IGNITION DEVICES

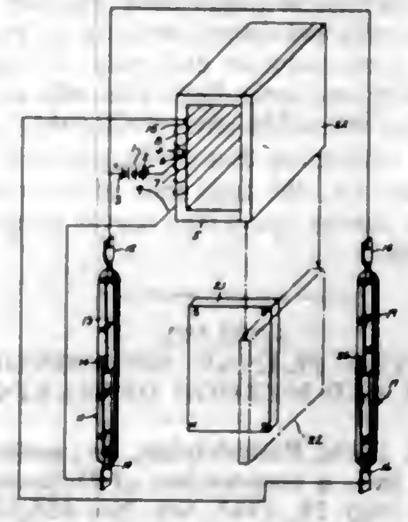
Edward B. Angold, Emsworth, England, assignor to The Plessey Company Limited, Ilford, England, a British company
Filed Jan. 5, 1966, Ser. No. 518,895
Claims priority, application Great Britain, Jan. 8, 1965, 931/65; June 29, 1965, 27,390/65
8 Claims. (Cl. 317—96)



An electric ignition device comprising a capacitor, a transformer having primary and secondary windings, ignition electrodes connected in the secondary winding of said transformer, charging means for charging said capacitor and switching means having fixed and moving contacts and actuating means capable of deflecting the moving contact so that the fixed and moving contacts make impact engagement for the purpose of discharging the capacitor, and in which the capacitor and the primary winding of the transformer are connected in series so that the charging and discharging currents of the capacitor flow in opposite directions in the primary winding of the transformer.

3,387,185
RELAY BINARY FOR RECEIVING A MECHANICAL INPUT

James N. Pearse, Menomonee Falls, Wis., assignor to Allen-Bradley Company, Milwaukee, Wis., a corporation of Wisconsin
Filed Oct. 22, 1965, Ser. No. 500,771
8 Claims. (Cl. 317—123)



1. A relay binary comprising the combination of an electric power supply;

a normally open, magnetically operable switch means connected in series with said power supply;

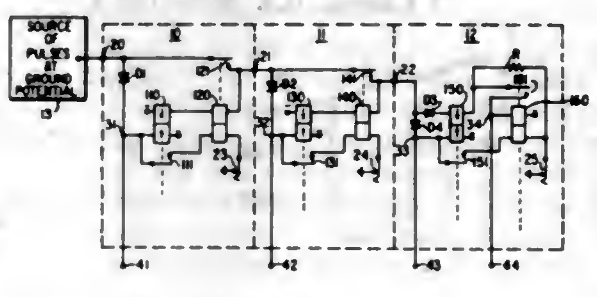
a magnetic biasing and latching source mounted adjacent to said magnetically operable switch to apply sufficient flux to said magnetically operable switch to hold it in a closed condition but insufficient to close it;

a magnetizing coil adapted to be energized by said power supply to alternately generate two resultant magnetomotive forces of opposite polarities, and being connected to be energized through said magnetically operable switch means to generate at least one of said magnetomotive forces;

and a movable magnet mounted to be alternately moved into alignment with and adjacent to said magnet coil to be magnetized by said magnetomotive forces and into magnetic alignment and proximity with said magnetic biasing and latching source to alternately aid and oppose said flux from said magnetic biasing and latching source to close and open said magnetically operable switch.

3,387,186
RELAY COUNTING CHAIN

Hans P. Boswau, Los Altos, Calif., assignor to Automatic Electric Laboratories, Inc., Northlake, Ill., a corporation of Delaware
Filed Jan. 14, 1965, Ser. No. 425,385
8 Claims. (Cl. 317—140)



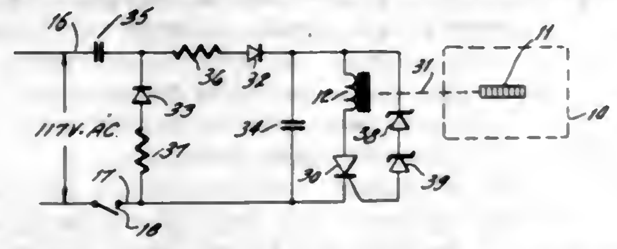
A two-relay bistable circuit module in which only a single "make" contact per relay is required for the control of the relay windings—an operating winding and a differential winding in the case of the first relay, and an operating winding and a hold winding in the case of the second relay—and on which the circuit for the energization of the operating winding of the first relay is independent of contacts of both relays and hence is closed from beginning to end of each pulse. Because of its contact economy this module is of particular advantage if it is made up of reed relays. Only three bistable modules of the above general kind are needed to form a decimal counting chain. In such a counting chain the single make contacts of the second relays are used to advance the input circuit to the next succeeding module. Also in such a counting chain the single make contacts of the various relays may be further used for controlling a readout circuit.

3,387,187
ELECTRICAL DRIVING CIRCUIT FOR SOLENOID-ACTUATED COUNTER

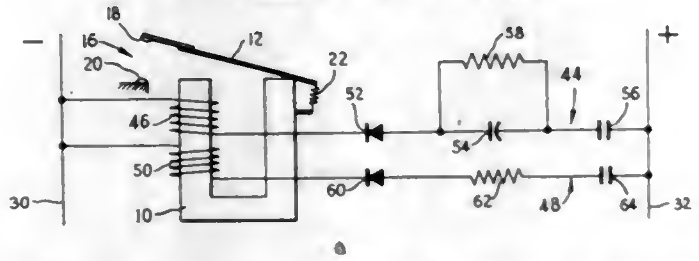
Harvey Haight, Costa Mesa, Calif., assignor to International Rectifier Corporation, El Segundo, Calif., a corporation of California
Filed Oct. 27, 1965, Ser. No. 505,337
3 Claims. (Cl. 317—148.5)

1. In a solenoid actuated counter; a solenoid coil, a counter dial operatively connected to said solenoid coil and advanceable by one number responsive to energization of said solenoid coil, and an energizing circuit connected to said solenoid coil; said energizing circuit comprising a voltage doubler circuit having A-C input termi-

nals and D-C positive and negative output terminals, a controlled rectifier having anode, cathode and gate terminals, and Zener diode means; said input terminals connectable to a 117 volt A-C line; said anode and cathode terminals of said controlled rectifier connected in series with said solenoid coil and in series with said output terminals of said doubler circuit; said controlled rectifier having a forward conduction direction for conducting the D-C output current of said voltage doubler circuit; said Zener diode means connected in closed series relation with said solenoid coil and said anode terminal and said gate terminal of said controlled rectifier and having a forward conduction direction in said closed series connection to conduct in the same direction as the anode current of said controlled rectifier.

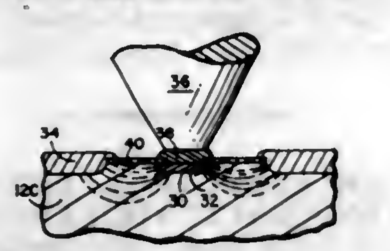


3,387,188
MAGNETICALLY LATCHABLE RELAY
George M. Euler, Normal, Ill., assignor to General Electric Company, a corporation of New York
Filed Dec. 16, 1964, Ser. No. 418,727
7 Claims. (Cl. 317—155.5)



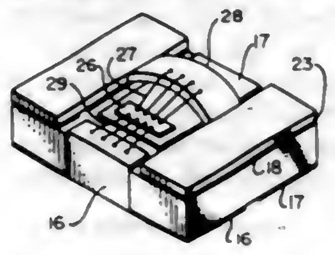
A magnetically latchable relay which is latched by energization of a circuit which provides a large inrush current to a latching coil and is unlatched by energization of an unlatching coil. The large inrush current is provided by connecting a capacitor in series with the latching coil and a diode for energization from an AC or a DC source.

3,387,189
HIGH FREQUENCY DIODE WITH SMALL SPREADING RESISTANCE
Dean B. Anderson, Whittier, Rudolf R. August, Orange, Jerry C. Aukland, Buena Park, and Richard L. Palmquist, Long Beach, Calif., assignors to North American Rockwell Corporation, a corporation of Delaware
Filed Apr. 20, 1964, Ser. No. 361,069
8 Claims. (Cl. 317—234)



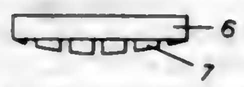
A high frequency diode comprising a diffused island of one conductivity type in a semiconductor body of the other conductivity type, the depth of the island being greater than the skin depth at the frequency of operation. The electric field through the p-n junction thus formed is substantially restricted to the peripheral region of the island. An ohmic contact surrounds the island and extends below the surface of the body to a distance essentially equal to the skin depth.

3,387,190
HIGH FREQUENCY POWER TRANSISTOR HAVING ELECTRODES FORMING TRANSMISSION LINES
Richard H. Winkler, Palo Alto, Calif., assignor to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland
Filed Aug. 19, 1965, Ser. No. 480,870
7 Claims. (Cl. 317—234)



A high frequency transistor assembly in which the transistor die is mounted upon a dielectric wafer such that the collector electrode of the die is bonded to a metallic strip on the wafer, and the base electrode is electrically connected to another metallic strip on the wafer longitudinally aligned with the strip to which the collector electrode is bonded. The emitter and base electrodes face a ground plane so that the base strip forms an input transmission line with the ground plane and the collector strip forms an output transmission line with the ground plane. The emitter electrode is connected to a metallic bridge disposed above and spaced from the transistor die, so that the leads connecting the emitter electrode to the bridge form a shield which serves to isolate the input and output transmission lines. The ground plane is secured to the dielectric wafer and to the metallic bridge to ground the emitter electrode.

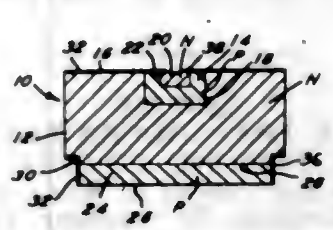
3,387,191
STRAIN RELIEVING TRANSITION MEMBER FOR CONTACTING SEMICONDUCTOR DEVICES
Denis Fishman and Leonard Thomas Alexander Beckett, Aldwych, London, England, assignors to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware
Filed Mar. 19, 1965, Ser. No. 441,119
Claims priority, application Great Britain, Apr. 24, 1964, 17,027/64
3 Claims. (Cl. 317—234)



A strain relieving transition plate for coupling a semiconductor electrode such as molybdenum having a relatively low thermal expansion coefficient to a terminal member such as copper having a relatively high thermal expansion coefficient. The transition member includes a low expansion coefficient disk (matching the expansion coefficient of the semiconductor electrode) having a plurality of rodlike members extending from one surface of the disk. The rodlike members have a relatively high expansion coefficient (matching that of the terminal lead). The outer extremities, i.e., the free ends of the rodlike members describe a convex arc which serves to provide additional strain relief.

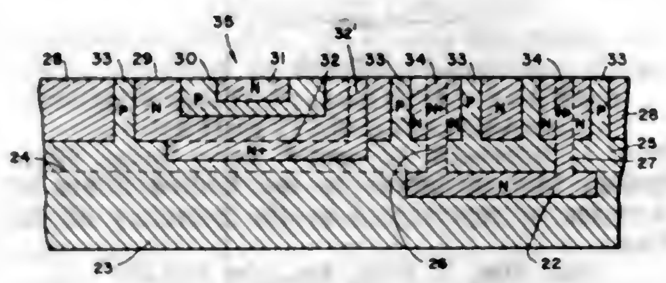
3,387,192
FOUR LAYER PLANAR SEMICONDUCTOR SWITCH AND METHOD OF MAKING THE SAME
Donald S. Diehl, Philadelphia, Pa., assignor to IRC, Inc., a corporation of Delaware
Filed May 19, 1965, Ser. No. 456,919
4 Claims. (Cl. 317—235)

A four layer planar semiconductor switch comprising a flat disc of an n-type semiconductor material having a first region of p-type conductivity in one surface of the disc which is smaller in area than the area of the one surface of the disc to provide a p-n junction which extends to the one surface of the disc. A second region of n-type conductivity is provided within the first region and is smaller in area than the area of the first region to provide a second p-n junction which extends to the one surface of the disc. A third region of p-type conductivity is provided in the other surface of the disc and extends across the entire area of the other surface of the disc to provide a third p-n junction which extends to the edges of the disc. A groove is provided in the edge of the disc which extends from the other surface of the disc to a point beyond the third p-n junction. A film of silicon dioxide is provided on the one surface of the disc which extends across the first and second p-n junctions, and a film of silicon dioxide is provided on the surface of the groove and extends across the third p-n junction.



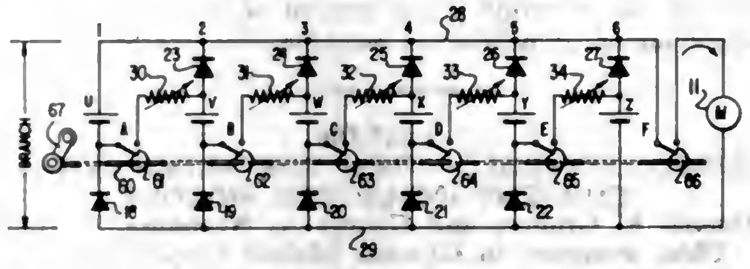
The semiconductor switch is made by forming in one surface of a flat, large wafer of an n-type semiconductor material a plurality of spaced regions of p-type conductivity to provide between each of the regions of the wafer a p-n junction which extends to the one surface of the wafer. At the same time, a region of p-type conductivity is formed in the other surface of the wafer which region extends completely across the other surface of the wafer. Grooves are then formed in the other surface of the wafers with the grooves being of a depth greater than the thickness of the p-type region in the other surface of the wafer and with the groove extending along lines between the spaced p-type regions in the one surface of the wafer so that each of the spaced p-type regions is in an area surrounding the grooves. A separate region of n-type conductivity is then formed in each of the spaced p-type regions in the one surface of the wafer. A film of silicon dioxide is coated on the one surface of the wafer and the surface of the grooves so that the silicon dioxide films extend over the p-n junctions which extend to the coated surfaces. The wafer is then diced along the grooves to divide the wafer into the individual semiconductor switches.

3,387,193
DIFFUSED RESISTOR FOR AN INTEGRATED CIRCUIT
Raymond G. Donald, Burlington, Mass., assignor to P. R. Mallory & Co., Inc., Indianapolis, Ind., a corporation of Delaware
Filed Mar. 24, 1966, Ser. No. 537,033
4 Claims. (Cl. 317—235)



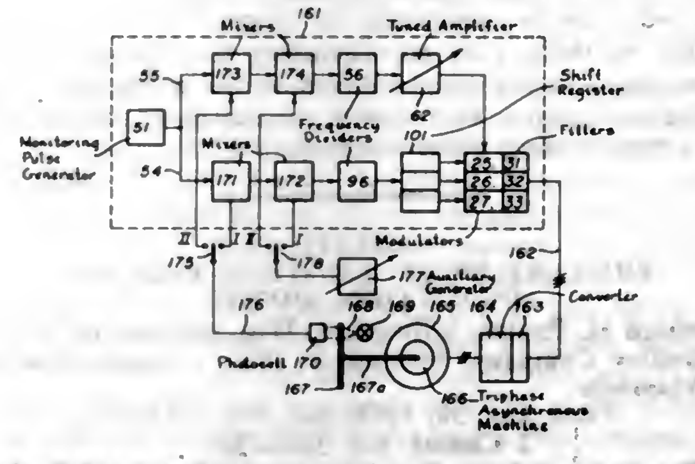
A multi-component integrated circuit means wherein resistive paths are in the substrate underlying an epitaxial layer containing the transistors of the integrated circuit.

3,387,194
ELECTRIC MOTOR CONTROL SYSTEM INCLUDING A BANK OF BATTERIES FOR SERIES/PARALLEL OPERATION
Donald S. Banks, 234 Lowell Road, Wellesley Hills, Mass. 02181
Continuation-in-part of application Ser. No. 431,883, Feb. 11, 1965. This application Oct. 31, 1967, Ser. No. 686,361
10 Claims. (Cl. 318—139)



A control circuit for varying the speed of a DC motor energized from a bank of storage batteries by connecting the batteries in various combinations of series and parallel circuits. The batteries are connected in parallel between two buses with all the positive battery terminals connected to one bus and all of the negative battery terminals connected to the other bus. A plurality of diodes are connected in series in each of the buses with one diode connected between each adjacent pair of battery terminals. A cam operated switch is connected between one terminal of each battery and the opposite polarity terminal of the adjacent battery. The switches are closed in a sequence of combinations which permit the voltage applied to the motor to increase in steps equal to the terminal voltage of each battery. The diodes function in such a way that an individual battery whose terminal voltage drops below the bus voltage is effectively disconnected from the motor until the bus voltage falls to the voltage of the disconnected battery. Such an arrangement of diodes also permits the control circuit to be used as a charging circuit in which the individual batteries are charged in parallel.

3,387,195
METHOD OF AND APPARATUS FOR GENERATING A SINUSOIDAL POLYPHASE CURRENT OF VARIABLE FREQUENCY
Victor Piccand, 13a Chemin des Semailles, Carouge, Geneva, Switzerland, and Jacques Vermot-Gaud, 2 Chemin du Cret de la Neige, Geneva, Switzerland
Filed Sept. 21, 1965, Ser. No. 488,927
Claims priority, application Switzerland, Sept. 22, 1964, 12,329/64
16 Claims. (Cl. 318—227)



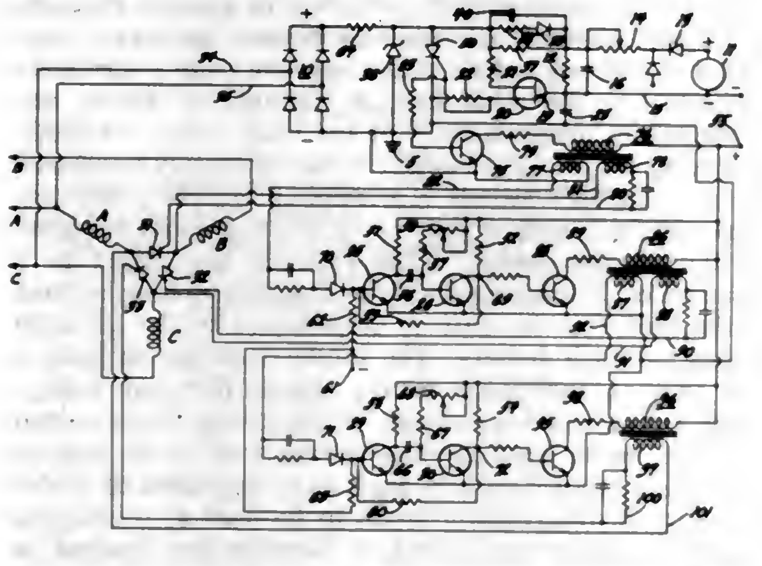
A method and apparatus for generating a polyphase current, the frequency of which can be varied independently. This is achieved by generating a monophase sinusoidal current and feeding it in parallel to a polychannel path, by generating a rectangular polyphase current, amplitude modulating the monophase current in each channel by the corresponding phase of said polyphase current, filtering said modulated currents to transmit at the outputs of said channels the sole components having a frequency equal to the difference between that of the monophase and that of the polyphase currents, so that said components form the phases of the desired polyphase current, the frequency and, respectively, the amplitude of which may be varied independently by varying the frequency of either said sinusoidal monophase or said rectangular polyphase current, or of both, and the amplitude of said sinusoidal monophase current, respectively. An application of the invention is the control of a static converter supplying an asynchronous machine.

3,387,196
SPEED CONTROL SYSTEM FOR ALTERNATING CURRENT INDUCTION MOTORS

Donald E. Graham and George A. Neyhouse, Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Oct. 7, 1965, Ser. No. 493,652

7 Claims. (Cl. 318—227)



A speed control system for alternating current induction motors wherein a direct current reference potential, obtained by rectifying one of the phases of the alternating current supply potential, is compared with a direct current control potential which is a function of motor speed and which may be selectively varied in magnitude to change the speed of the motor. Additional circuitry including an unijunction transistor type relaxation oscillator is responsive to a difference in magnitude between these two potentials to produce a trigger signal at the electrical angle of each potential cycle of each phase of the alternating current supply potential as determined by the difference. The trigger signals are applied across the control electrode-cathode electrodes of respective silicon controlled rectifiers, each corresponding to a phase of the alternating current supply potential, for triggering these devices conductive to complete an energizing circuit for the corresponding phase windings.

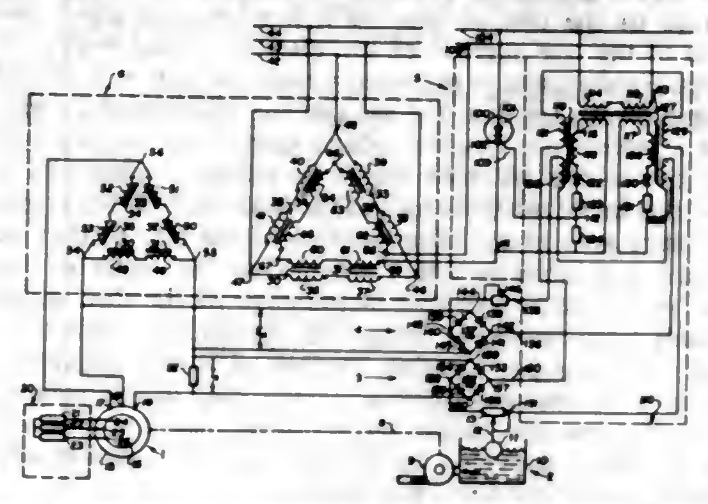
3,387,197
PRIMARY SPEED CONTROL FOR AN INDUCTION MOTOR

Reinhard H. Paulus, Milwaukee, Wis., assignor to Allen-Bradley Company, Milwaukee, Wis., a corporation of Wisconsin

Filed Apr. 30, 1965, Ser. No. 452,066

2 Claims. (Cl. 318—229)

The disclosed embodiment is an automatic speed control for an induction motor driving a sewage pump. Rectified samplings of stator current and stator terminal voltage are fed through variable resistors to the control windings of a magnetic amplifier, the output of which drives an SCR. The SCR is connected in series with the control windings of a frequency doubler. The primary windings of the doubler are connected to a power line, and the secondary windings are connected to the stator of the motor.

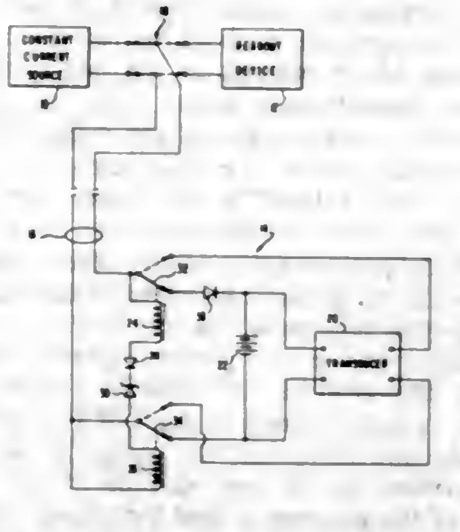


3,387,198
REMOTE TRANSDUCER BATTERY CHARGING CIRCUIT

Irvin D. Johnson and Charles R. Bruce, Littleton, Colo., assignors to Marathon Oil Company, Findlay, Ohio, a corporation of Ohio

Filed Mar. 17, 1966, Ser. No. 535,083

3 Claims. (Cl. 320—14)



A charging circuit for a remote battery energizing an in situ bore hole transducer. A two wire cable is connected at the surface to either a charging current source or a readout device by a first switch. The lower end of the cable is connected to either the battery or the transducer output by a second, relay controlled switch. When the first switch connects the surface end of the cable to the source, the relay is energized and actuates the second switch to connect the lower end of the cable to the battery to charge same. Conversely, when the first switch connects the upper end of the cable to the readout device the relay is de-energized and the second switch connects the lower end of the cable to the transducer.

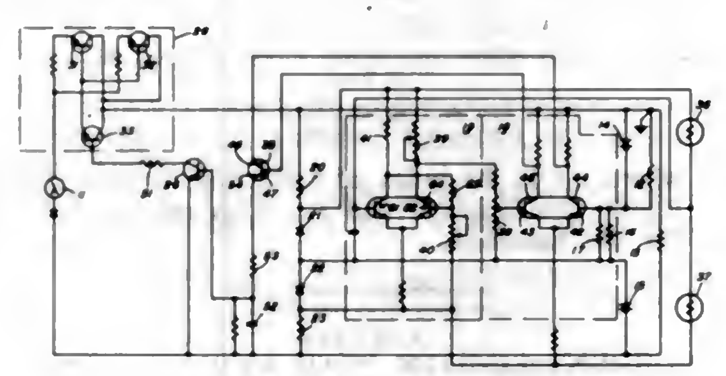
3,387,199
CHARGE CONTROL SYSTEM FOR SATELLITE BATTERIES

Wilfred J. Billerbeck, Jr., and J. Barry Oakes, Silver Spring, Md., assignors to the United States of America as represented by the Secretary of the Navy

Filed Dec. 2, 1965, Ser. No. 511,587

3 Claims. (Cl. 320—32)

A charge limiter for controlling the charging of nickel cadmium batteries in a solar cell powered satellite. The device is a constant current, series, limiter which senses battery charge current and utilizes this measurement to control the solar array input current. A thermistor bridge, which measures the difference between battery temperature and satellite structure temperature, switches the limiter between a high current and a low current level. In this manner the invention provides control of battery overcharge power for maintaining a charge on the battery and maintaining battery temperatures at near optimum value for long battery life.

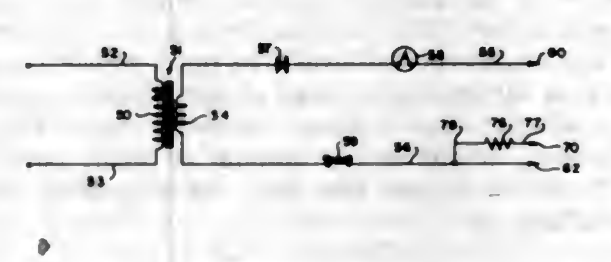


3,387,200
BATTERY CHARGERS WITH REVERSE POLARITY INDICATOR

James B. Godshalk, Yardley, Pa., assignor to Fox Products Company, Philadelphia, Pa., a corporation of Pennsylvania

Continuation of application Ser. No. 409,361, Nov. 6, 1964. This application Oct. 20, 1967, Ser. No. 676,979

1 Claim. (Cl. 320—48)



An ammeter, connected to a battery charging circuit, is provided with special calibrations which inform an operator when the polarity of the connection is incorrect. A resistor connected to a test probe issued to contact the battery terminal. A circuit breaker protects the apparatus from excessive current in case of reverse connection but allows the indication to appear first.

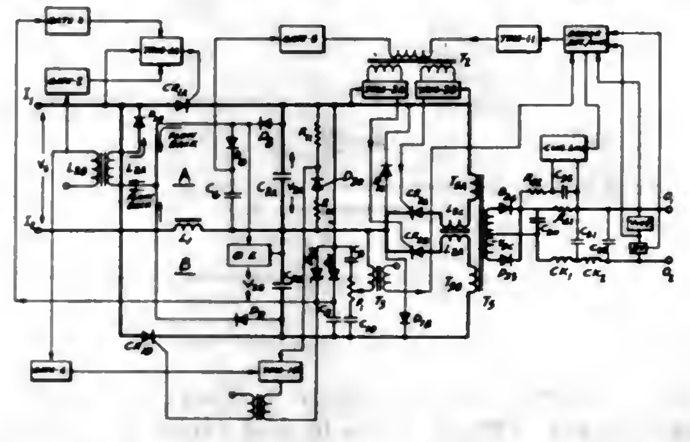
3,387,201
REGULATED POWER SUPPLIES INCLUDING INVERTER CIRCUITS

Sol Greenberg, Roslyn, and George Gautherin, Woodside, N.Y., assignors to Lambda Electronics Corporation, Huntington, N.Y., a corporation of New York

Filed Apr. 1, 1965, Ser. No. 444,577

18 Claims. (Cl. 321—2)

A regulated power supply including two channels each of which has first and second controlled rectifiers and tandem combinations of LC circuits. The first controlled rectifiers in each channel charge capacitors in sequence after which the capacitors are discharged through the primary windings of an output transformer and the second controlled rectifiers in each channel, the controlled sequential charging and discharging being effective to provide an AC output at the transformer secondary winding. This output is rectified and appears as a DC output voltage. The pulses generated within the two channels are controlled as to amplitude and duration to provide a closely controlled voltage at the output terminals. A detection circuit is connected across the DC output terminals to feed an error signal representative of amplitude deviations from a desired level back to trigger circuits which control firing of the controlled rectifiers. The AC portion of the apparatus operates at a relatively high frequency to minimize the size and weight of the inductive components in the system. The controlled rectifiers and the output transformer provide good isolation between the AC and DC portions of the system.

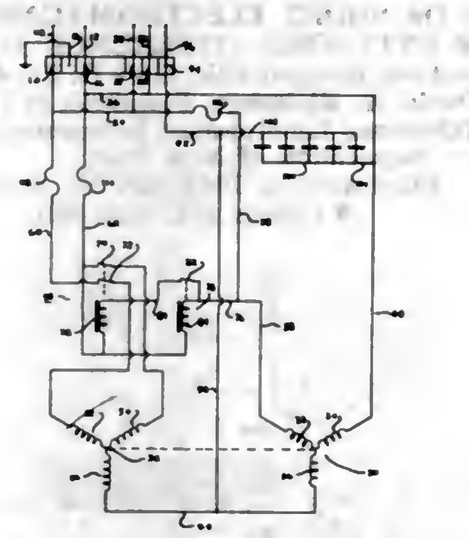


3,387,202
ROTARY PHASE CONVERTER SYSTEM

James F. Buffington, R.R. 3, Plymouth, Ind. 46563

Filed Aug. 25, 1966, Ser. No. 575,084

6 Claims. (Cl. 321—55)



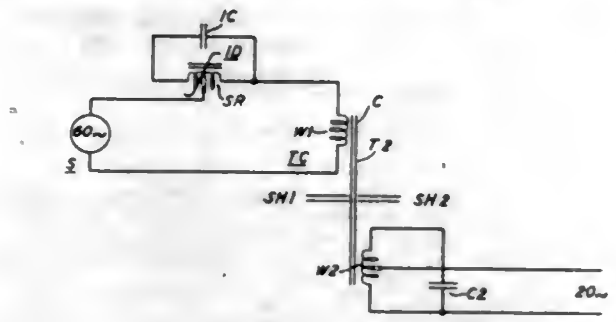
1. A rotary phase converter system for converting a single-phase input to a three-phase output, comprising a starting motor-transformer having three windings and a phase converter transformer having three windings and being connected to and driven by said starting motor-transformer, a single-phase input having two terminals, a three-phase output havings three terminals, leads connecting said input terminals with two of said output terminals, leads connecting said input terminals with two of the windings of said starting motor-transformer, leads connecting said input terminals with two of the windings of said phase converter transformer, a relay means controlling the current through said last two leads, a relay responsive to the operation of said starting motor-transformer for controlling said relay means, a lead means connecting the third winding of each of said transformers together and to the third terminal of said three-phase output, and a capacitor connected to said lead means and to one of said first two mentioned leads.

3,387,203
FREQUENCY CHANGER

James J. Munnelly, Parsippany-Troy Hills Township, Morris County, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Jan. 7, 1965, Ser. No. 424,091

12 Claims. (Cl. 321—68)



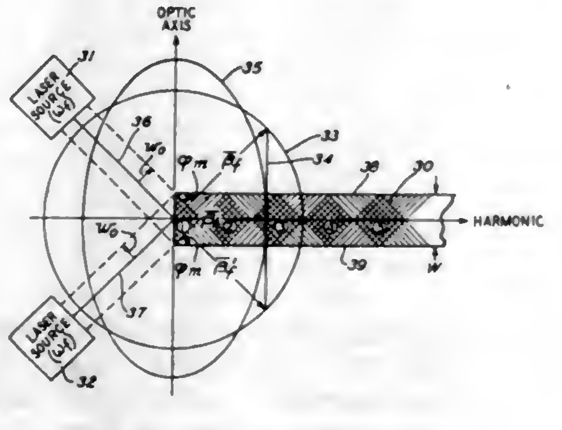
In a subharmonic generator a 60-cycle source energizes an idler circuit tuned to 100 cycles and including a saturable reactor for generating harmonics of both frequencies and modulation sums and differences of all frequencies. A tuning circuit in series with the idler circuit is tuned to a modulation frequency of twice 60 cycles less 100 cycles, or 20 cycles. It comprises a transformer whose secondary is shunted by a tuning capacitor and whose flux from the primary winding is shunted by means of a magnetic shunt short-circuiting the transformer core. The core is unsaturable. Gaps between the core and shunt produce fringing that causes stabilizing eddy currents in the core.

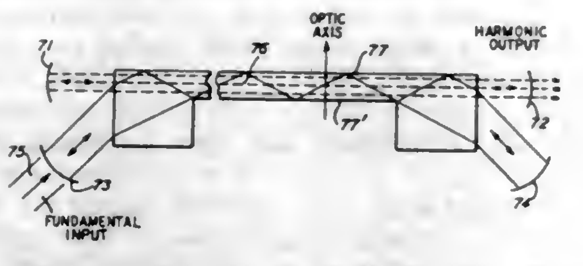
3,387,204
HARMONIC GENERATION AND OTHER PARAMETRIC DEVICES WITH NONLINEAR INTERACTION OF SHORT ELECTROMAGNETIC WAVES OVER EXTENDED COHERENCE VOLUMES

Arthur Ashkin, Bernardsville, Gary D. Boyd, Murray Hill, and David A. Kleinman, Plainfield, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Aug. 31, 1964, Ser. No. 393,029

9 Claims. (Cl. 321—69)





1. Apparatus for the generation of optical frequency wave energy which is harmonically related to the applied energy comprising

a nonlinear birefringent crystal having a pair of elongated plane parallel surfaces and an optic axis normal to said surfaces,

means for applying optical energy of a given fundamental frequency to said crystal,

said fundamental energy being oriented with respect to said crystal to effect phase velocity matching of fundamental and harmonic beams,

said fundamental frequency energy being further defined within said crystal as first and second beam portions having propagating vectors related by an angle φ_m to said plane surfaces,

φ_m being the phase matching angle defined as

$$\cos^{-1}\frac{n_2^e}{n_1^o}$$

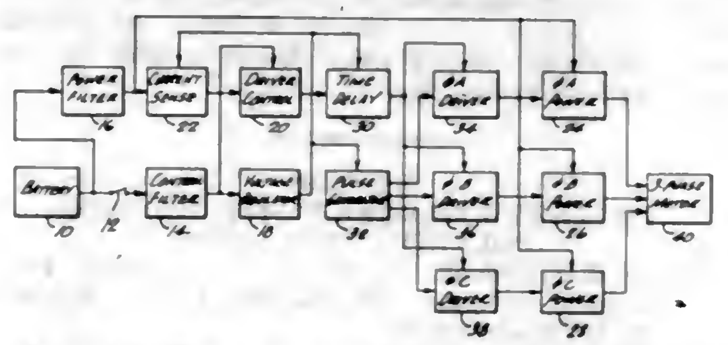
where n_1^o is the index of refraction of said crystal for the fundamental and n_2^e is its refractive index for the harmonic.

3,387,205
CURRENT LIMITER WITH REDUCTION OF POWER APPLIED TO A LOAD

Darrell W. Tesdall, Garden Grove, Calif., assignor, by mesne assignments, to McDonnell Douglas Corporation, Santa Monica, Calif., a corporation of Maryland

Filed Dec. 2, 1965, Ser. No. 511,094

4 Claims. (Cl. 323—9)



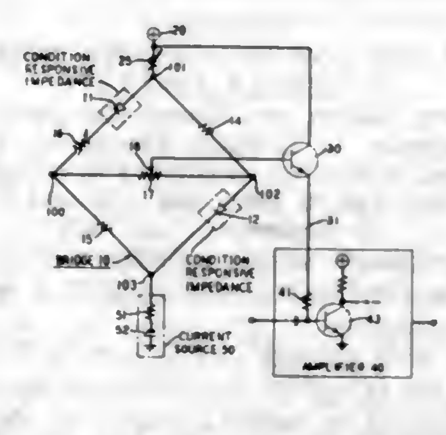
A current limiter including means for sensing current flow to a load and producing an output signal whenever the current flow reaches a predetermined level, and means responsive to the output signal for briefly removing the input power from the load and thus hold peak currents below the predetermined level. The input power is applied to the load through time delay means which is operated, after a selected time interval following initial energization thereof, to reduce the amount of input power applied thereafter to the load and hence increase overall circuit efficiency.

3,387,206
BRIDGE CIRCUIT FOR AMPLIFIER GAIN VERSUS TEMPERATURE COMPENSATION

Sidney F. Sampson, Lincroft, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Sept. 29, 1965, Ser. No. 491,225

8 Claims. (Cl. 323—75)



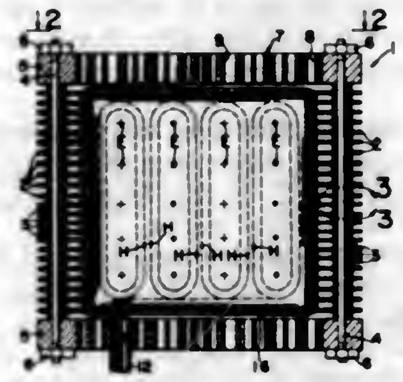
A bridge circuit is disclosed including a diode in one of two diagonally opposite branches thereof and the base-emitter junction of a transistor in the other. A variable resistor and current source is connected to a first pair of opposite bridge terminals while a potentiometer is connected to the other diagonally opposite terminals. An output control signal is derived from the tap of the potentiometer. The particular setting for the variable resistor and the potentiometer determines the equiescent signal value of the temperature coefficient of the bridge.

3,387,207
OPTICALLY TRANSPARENT CAVITY RESONATOR AND GASEOUS ATOMIC RESONANCE APPARATUS USING SAME

Robert F. C. Vessot, Marblehead, Mass., assignor to Varian Associates, Palo Alto, Calif., a corporation of California

Filed May 17, 1965, Ser. No. 456,267

12 Claims. (Cl. 324—.5)



A high Q optically transparent cavity resonator structure is disclosed. A light transmissive side wall portion of the cavity is formed by a plurality of conductive ring portions axially spaced apart to define light transmissive portions between adjacent ones of the rings. The ring portions are made of a conductive material having a thickness less than twice the spacing between adjacent rings and a radial width greater than twice the axial spacing between adjacent portions. By causing the ring portions to have a thickness less than twice the spacing between adjacent ring portions a light transparency for the cavity of at least 30% is assured. By causing the radial width of the conductive rings to be greater than twice the axial spacing between adjacent rings the radiation loss of R.F. energy through the light transparent side wall is minimized. The high Q light transparent cavity is especially useful in an optically pumped rubidium maser wherein a source of optical pumping radiation is disposed outside the cavity for applying optical pumping radiation to an ensemble of rubidium atoms inside the cavity. In a preferred embodiment, a light reflector surrounds the cavity for illuminating the cavity from all sides and a light pumping filter cell is provided by a gas fill between the cavity and the reflector and light source. In one embodiment of the light transparent cavity, the ring portions of the cavity structure are formed by a helically wound continuous metallic ribbon.

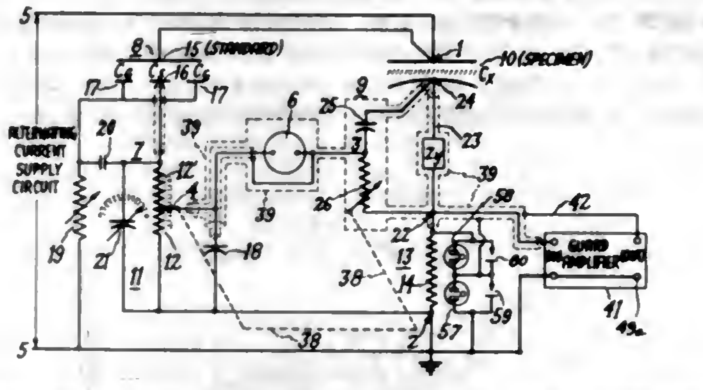
3,387,208
IMPEDANCE COMPENSATED HIGH PRECISION ELECTRICAL CAPACITANCE MEASURING BRIDGE

Albert H. Foley, Pittsfield, Mass., assignor to General Electric Company, a corporation of New York

Filed Mar. 16, 1964, Ser. No. 351,969

14 Claims. (Cl. 324—60)

A high precision electrical bridge for measurement of electrical capacitance is compensated for impedance of the yoke lead to the specimen capacitor. Compensation is provided by a novel circuit comprising a resistor and capacitor serially connected in shunt across the yoke lead and providing at their junction one output terminal of the bridge, the product of the shunt impedances being equal to the product of the specimen capacitance and a standard resistance in the serially connected arm of the bridge. The series resistance arm is protected against overvoltage and against leakage current errors by a plural-gap network and electrostatic shielding of bridge leads, with a low gain power amplifier energized across the series resistor and connected to control the shield and gap network potential.



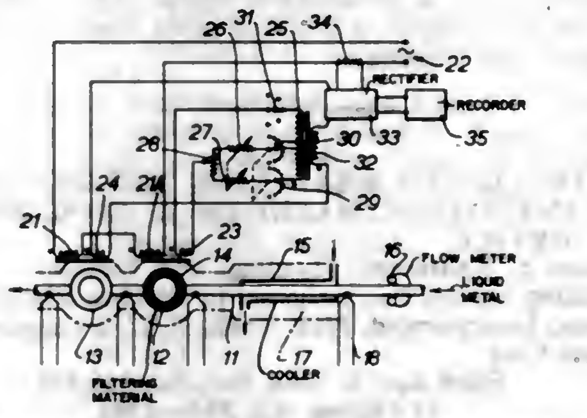
3,387,209
METHOD AND APPARATUS FOR MEASURING THE METAL OXIDE CONTENT OF LIQUID METAL

Anthony Rainsford Eames, Stockton Heath, Warrington, and Richard Alexander Hamilton Pool, Farnham, Surrey, England, assignors to United Kingdom Atomic Energy Authority, London, England

Continuation of application Ser. No. 240,699, Nov. 28, 1962. This application Oct. 27, 1967, Ser. No. 678,761

Claims priority, application Great Britain, Dec. 19, 1961, 45,556/61

6 Claims. (Cl. 324—65)



1. In a method of determining the metal oxide content of a hot flowing liquid metal in which the oxide content is precipitable as particulate matter by cooling the liquid metal, the steps of passing the liquid metal through a filter, progressively cooling the liquid metal to cause deposition of metal oxide particles on the filter as the liquid metal, the steps of passing the liquid metal through perature of the liquid metal to maintain a constant deposit of metal oxide particles on the filter while still permitting flow of said liquid metal through the said filter, and measuring the adjusted temperature.

3,387,210
METHOD AND APPARATUS FOR MEASURING THE RESISTANCE OF AN ELECTROCHEMICAL CELL

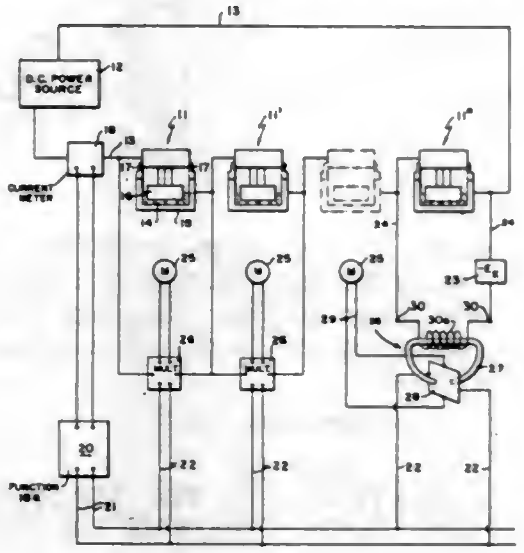
Lester H. Wolgast, Portland, Oreg., assignor to Reynolds Metals Company, Richmond, Va., a corporation of Delaware

Filed Sept. 25, 1964, Ser. No. 399,403

12 Claims. (Cl. 324—64)

Method and apparatus for measuring resistance between the anode and cathode of an electrochemical cell.

A function generator is used to produce a signal that is inversely proportional to cell current, and that signal is delivered to a first pair of Hall effect device input terminals. A portion of the cell's voltage drop (E_k) due to its electrochemical reaction is determined to be that which corresponds to the zero-current intercept of a line which is tangent to the characteristic current-voltage curve of the cell in the region of its normal current load. A control voltage generator is used to produce a signal which is proportional to the total voltage drop across the cell minus the E_k voltage drop. The control voltage signal is delivered to the magnetic input terminals of the Hall effect device which functions to multiply the control voltage signal by the inverse current signal to produce an output signal which is proportional to the cell resistance. The Hall device's output signal may then be delivered to a meter which is calibrated to indicate resistance; or to a mechanism which adjusts the anode position to maintain a predetermined resistance between the anode and cathode.

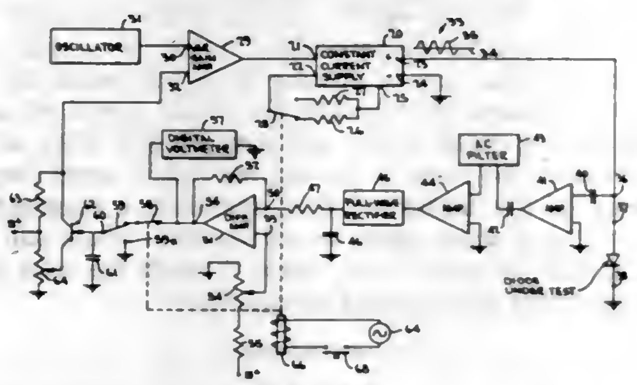


3,387,211
CIRCUIT FOR MEASURING THE DYNAMIC IMPEDANCE RATIO OF A NONLINEAR DEVICE

William S. Kaufmann, Reading, and Richard C. Miller, Sinking Spring, Pa., assignors to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York

Filed Apr. 8, 1966, Ser. No. 541,348

11 Claims. (Cl. 324—158)



1. A circuit for determining the ratio of the dynamic impedance at two points in the operating range of a device having an exponentially-varying voltage-current characteristic, the circuit comprising:

a pair of terminals for effecting an electrical connection with a device inserted into the circuit,

a current source for supplying a D.C. current and a superimposed A.C. current to said terminals and the component, thereby producing respective D.C. and A.C. voltages across the device, the level of the D.C. current establishing a first point in the operating range of the device,

means coupled to one of said pair of terminals for producing a first D.C. voltage equivalent to the A.C. voltage across the device,

means coupled to the A.C. voltage producing means for comparing the level of the first D.C. voltage to a reference D.C. voltage level representing the desired A.C. voltage across the device at the first point, the comparing means providing a difference voltage corresponding to an amplitude difference between the first D.C. voltage and the reference voltage,

voltage storage means selectively connectable to said comparing means for receiving and storing the difference voltage,

means coupled between said voltage storage means and said current source and responsive to the voltage stored by said voltage storage means for adjusting the amplitude of the A.C. current output from said current source until the level of said first D.C. voltage adjusts to substantially the level of said reference voltage,

means for disconnecting said storage means from said comparing means whereupon the amplitude ratio of the A.C. to the D.C. current from said current source is fixed by said storage means,

means for multiplying both the A.C. and D.C. currents from said current source by a predetermined factor so that the level of the D.C. current establishes a second point in the operating range of the device, the superimposed A.C. current thereupon producing a second A.C. voltage across the device, and

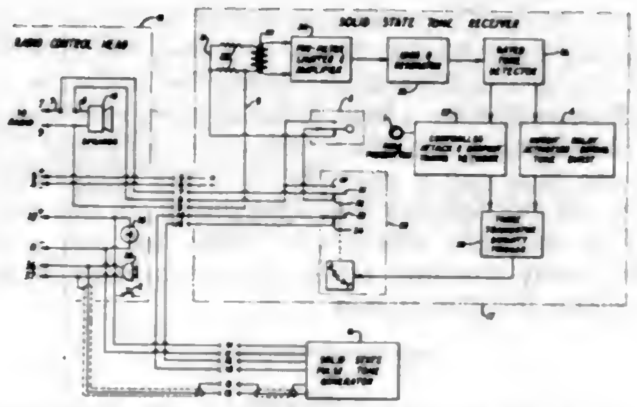
means responsive to a change in the level of the adjusted first D.C. voltage caused by the second A.C. current, for indicating the dynamic impedance ratio of the device.

3,387,212
MOBILE RADIO PAGING SYSTEM WHEREIN THE RECEIVERS ARE ALL MADE OPERATIVE FOR A BRIEF INTERVAL FOLLOWING A TRANSMITTED TONE BURST

Barry M. Kaufman, Redwood City, Calif., assignor to Mn Western Electronics Co., Inc., Redwood City, Calif., a corporation of California

Filed June 9, 1964, Ser. No. 373,667

25 Claims. (Cl. 325—1)



17. A system for paging a certain station in a radio communications system through a repeater, said system comprising,

a calling station,

audio tone generator means in said calling station,

radio transmission means in said calling station to transmit said tone and other communications,

said calling station transmitting a page tone pulse to actuate receiver speakers and transmitting a communicate tone pulse at the initiation of each communication, said page tone pulse being of greater duration than said communicate tone pulse,

a repeater station remote from said calling station,

activation means in said repeater station to cause said repeater station to re-transmit signals only when said signals are preceded by a tone pulse,

tone inhibitor means in said repeater station to prevent said repeater station from repeating and retransmitting for a fixed timing duration at the commencement of each retransmission, said fixed timing duration being greater than the duration of said communicate tone pulse and less than the duration of said page tone pulse, to prevent retransmission of said communicate tone pulses and permit retransmission of a portion of said page tone pulses sufficient to activate receiver speakers.

23. A system for paging a certain station in a radio communications system comprising,

tone generator means to produce an audible tone,

a manual paging switch to actuate said tone generator means to produce a tone pulse,

radio transmission means to transmit said tone pulse and other communications,

radio receiver means,

speaker means receiving the audio output of said radio receiver means, said speaker means being normally in a silent state, and

speaker activation means receiving the audio output of said radio receiver means to activate said speaker means for a timing interval of a given duration upon reception of said tone pulse, and

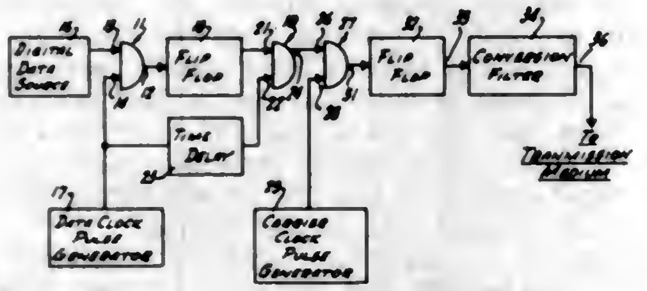
a timing circuit activated by reception of said tone pulse to operate through said speaker activation means to maintain said speaker means operative during said timing interval.

3,387,213
SYNCHRONOUS FREQUENCY MODULATION DUOBINARY PROCESSING OF DIGITAL DATA

Adam Lender, Palo Alto, Calif., assignor, by mesne assignments, to Automatic Electric Laboratories, Inc., Northlake, Ill., a corporation of Delaware

Filed Feb. 23, 1965, Ser. No. 434,583

10 Claims. (Cl. 325—163)



This invention provides process and apparatus for converting a digital data waveform having a series of pulses at two discrete amplitude levels and a predetermined bit interval T into a frequency-modulated signal for transmission. The frequency-modulated signal is formed of a center frequency and two extreme frequencies symmetrically disposed on opposite sides of the center frequency and separated therefrom by $1/4T$ with one of the extreme frequencies being a carrier having the frequency $k/2T$ wherein k is an integer equal to or greater than 2. The center frequency is defined by the expression

$$\frac{2k\pm1}{4T}$$

and in this frequency-modulated signal the two discrete amplitude levels of the digital data waveform are identifiable from the above-noted separate frequencies and also from the phase conditions at each transition point of the signal between bit intervals thereof.

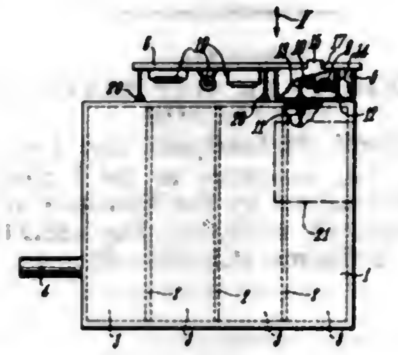
3,387,214
SHIELDING HOUSING FOR MULTISTAGE TUNER WITH INTERMEDIATE FREQUENCY OUTPUT CIRCUIT

Herbert Meyer, Rottweil (Neckar), Germany, assignor to R. & E. Hopt KG.

Filed June 24, 1964, Ser. No. 377,697

Claims priority, application Germany, July 13, 1963, H 45,514

7 Claims. (Cl. 325—357)



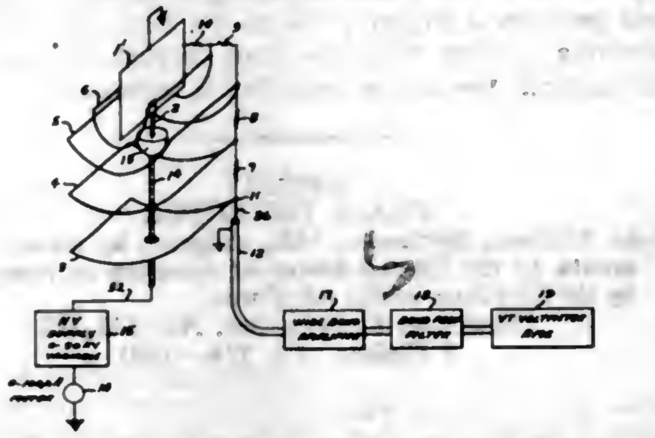
A shielding housing for a multistage tuner, especially applicable to television receivers, wherein on one wall of the tuner housing there is mounted a separate substantially similar box-like enclosure for an IF-output circuit, the separate enclosure being closed by a cover plate formed as a printed circuit board having a shielding layer thereon in addition to a printed circuit.

3,387,215
APPARATUS FOR MEASURING THE RF NOISE PRODUCED BY PASSIVE STATIC DISCHARGERS FOR AIRCRAFT

Robert L. Tanner, Portola Valley, and Joseph E. Nanevicz, George R. Hilbers, and Edward F. Vance, Palo Alto, Calif., assignors to the United States of America as represented by the Secretary of the Air Force

Filed July 28, 1965, Ser. No. 475,614

3 Claims. (Cl. 325—363)

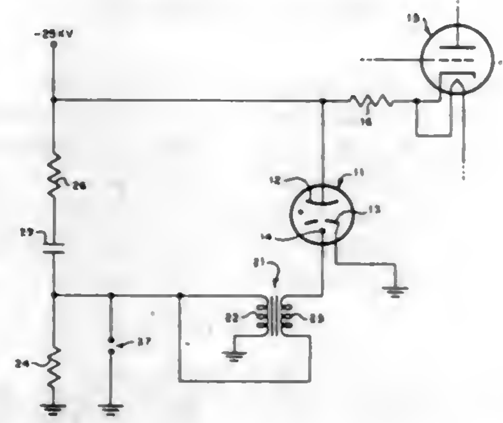


1. Apparatus for measuring the radio frequency noise produced by a static discharger for an aircraft, said apparatus comprising: an enclosure shielded for radio frequency radiation; a conductive plate having a straight edge within said enclosure simulating the trailing edge of an airfoil, said edge being normal to a reference axis lying in the plane of said plate; a noise output electrode having a conductive surface spaced from said edge, facing said edge, centered on said axis and symmetrical to said plane, said conductive surface conforming to an equipotential surface of the electric field that would exist at said output electrode were said plate electrically energized and were said edge long enough to insure absence of fringing effects

at said output electrode; a plurality of conductive guard rings situated between said edge and the conductive surface of said output electrode, each guard ring being centered on said axis and symmetrical to said plane and bounding a surface conforming to an equipotential surface of said electric field; a high resistance potential divider connected between said output electrode and said plate and having said guard rings connected to intermediate points thereon; means for attaching a static discharger test sample to the said edge of said plate in substantial alignment with said axis; means for inducing a corona discharge of predetermined magnitude from said sample; and means for measuring the root-mean-square value of the radio frequency noise voltage between said output electrode and said plate.

3,387,216
TRIGGERED SPARK GAP ELECTRONIC PROTECTOR

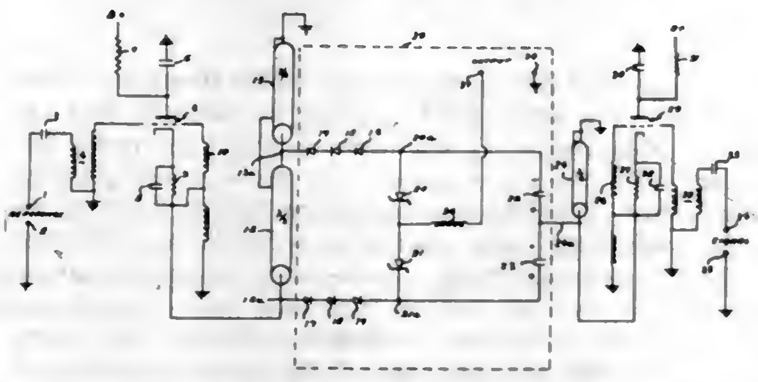
Richard P. Gagliardi, Philadelphia, and Louis C. Metz, Jr., Abington, Pa., assignors to the United States of America as represented by the Secretary of the Navy
Filed June 18, 1965, Ser. No. 465,219
2 Claims. (Cl. 328—8)



An apparatus for protecting an electronic load from damage or destruction from internal arcing, employing a normally high impedance discharge device in shunt with the load. The discharge device is triggered into conduction and hence a low impedance condition by a pulse generating circuit which senses an arcing condition in the load and provides a trigger pulse to the discharge device for shunting current from the load through the discharge device until the arcing condition is removed.

3,387,217
PHASE DETECTOR

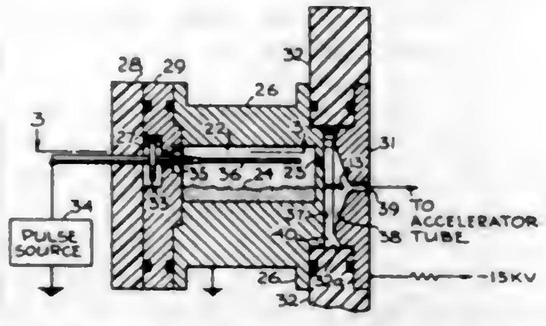
John Mattern, Baltimore, Md., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Air Force
Filed Apr. 8, 1966, Ser. No. 541,392
3 Claims. (Cl. 328—134)



A reference alternating current signal is fed into a ground terminated three-quarter wavelength coaxial line tapped at a point one-quarter wavelength above ground. Push-pull reference voltages, equal in magnitude and 180° out of phase are extracted from the input end and tap point of this line. These reference voltages are fed through respective diodes to two series connected capacitors forming peak detectors. A signal having unknown phase relationship to the reference signal is coupled to a ground terminated one-quarter wavelength coaxial line and fed to the midpoint of the series connected capacitors. Series connected Zener diodes operating in their breakdown regions are connected across the series capacitors and provide at their midpoint a direct current voltage proportional to the phase angle between the known signal and the reference signal.

3,387,218
APPARATUS FOR HANDLING MICRON SIZE RANGE PARTICULATE MATERIAL

Joseph F. Friichtenicht, San Pedro, and Neal L. Roy, Redondo Beach, Calif., assignors to TRW Inc., a corporation of Ohio
Filed May 6, 1964, Ser. No. 365,244
7 Claims. (Cl. 328—233)



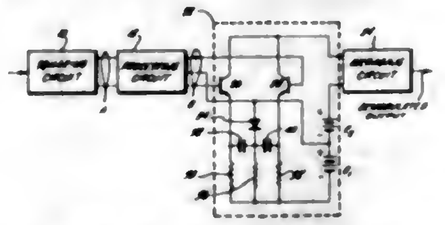
2. In a system for electrostatic acceleration of particles:
first and second oppositely biased conductive members spaced apart in a manner to define a particle manipulation chamber therebetween;
particle injection means for introducing a plurality of particles of a comminuted material into said chamber;
said first conductive member having a substantially planar first surface portion adjacent said chamber;
said second conductive member having a concave second surface portion disposed opposite to and facing said first surface portion and having a particle exit aperture extending through said concave portion for expulsion of particles from said chamber;
said particle exit aperture being located approximately at the point of minimum electric field intensity between said first and second surface portions and in alignment with a particle projection pathway which extends normal to said first surface portion and outwardly beyond said second member;
and means for applying a sufficient differential bias potential between said conductive members to induce electrostatic propulsion of particles back and forth between said first and second surface portions along trajectories which become more nearly parallel to the axis of said particle projection pathway as the particles move toward the region of minimum field intensity within said chamber.

3,387,219
DEMODULATOR CIRCUIT FOR ANGLE-MODULATION SYSTEMS

Bert H. Dann, Altadena, Calif., assignor, by mesne assignments, to Bell & Howell Company, Chicago, Ill., a corporation of Illinois
Filed Sept. 2, 1965, Ser. No. 484,705
8 Claims. (Cl. 329—50)

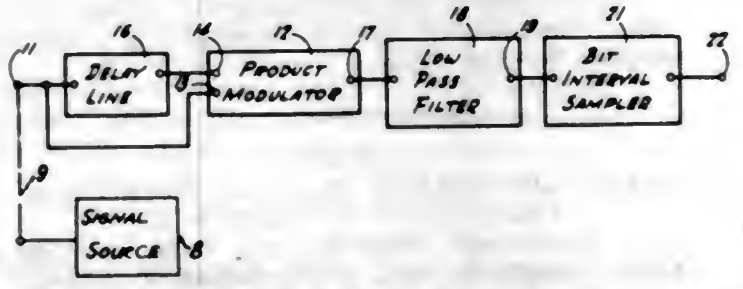
1. In a demodulator for time modulated signals, the circuit comprising first and second transistors each having

emitter, collector, and base electrodes, means connecting the collector electrodes through a common load impedance to one end of a potential source, first and second resistors connected respectively to the emitter electrodes of the two transistors, means connecting the resistors through a common current path to the other end of said potential source, impedance means connecting each of the base electrodes to an intermediate potential point of said potential source, means for alternately pulsing the base electrodes with pulses of the same polarity, a third resistor connected at one end to said other end of the potential source, a diode connecting the other end of the third resistor to said intermediate potential point, and a pair of large capacitors connected respectively between the junction point of the diode and the third resistor and the emitters of the two transistors.



3,387,220
APPARATUS AND METHOD FOR SYNCHRONOUSLY DEMODULATING FREQUENCY MODULATED DIFFERENTIALLY COHERENT DUOBINARY SIGNALS

Adam Lender, Palo Alto, Calif., assignor, by mesne assignments, to Automatic Electric Laboratories, Inc., Northlake, Ill., a corporation of Delaware
Filed Feb. 23, 1965, Ser. No. 434,595
8 Claims. (Cl. 329—104)

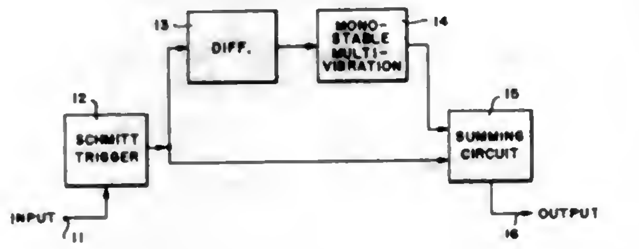


This invention relates generally to synchronous frequency modulated duobinary signals, and is more particularly directed to the coherent demodulation or detection of these signals to obtain the original digital data. Method and apparatus for such demodulation or detection includes delaying of such signals by one bit interval, producing the product of the delayed signal and undelayed signal, and low-pass filtering of such product to remove high-frequency components with the resultant then being sampled at bit intervals to produce original binary signals from which the synchronous frequency-modulated duobinary signals were generated.

3,387,221
PULSE DISCRIMINATOR WITH NOISE SUPPRESSION

Jerome Arberman, Cleveland Heights, and Bernard W. Abrams, South Euclid, Ohio, assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Feb. 9, 1966, Ser. No. 526,666
7 Claims. (Cl. 329—104)

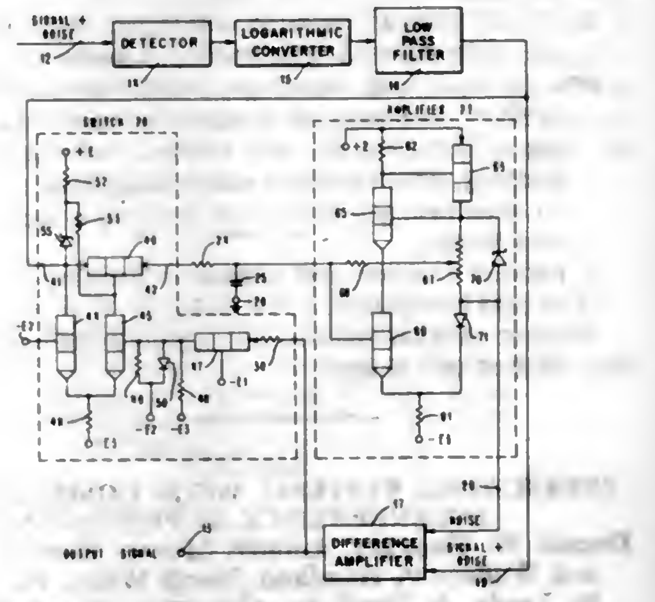
1. Means for removing spurious noise signals from a composite electrical signal containing both said spurious noise signals and predetermined intelligence signals comprising in combination:
means for detecting and passing signals having amplitudes greater than a predetermined amplitude;
means effectively connected to the output of said signal detecting and passing means for reversing the polarities for a predetermined time interval of the aforesaid passed signals having amplitudes greater than a predetermined amplitude; and



means connected to the outputs of said signal polarity reversing means and the aforesaid signal detecting and passing means for algebraically adding said passed and reversed polarity signals therefrom.

3,387,222
ADAPTIVE THRESHOLD SIGNAL DETECTOR WITH NOISE SUPPRESSION

George A. Hellwarth, Poughkeepsie, Alexander W. Bidwell, Wappingers Falls, and David H. Beetle, Jr., Fishkill, N.Y., assignors to International Business Machines Corporation, Armonk, N.Y., a corporation of New York
Filed July 1, 1965, Ser. No. 468,853
19 Claims. (Cl. 329—192)



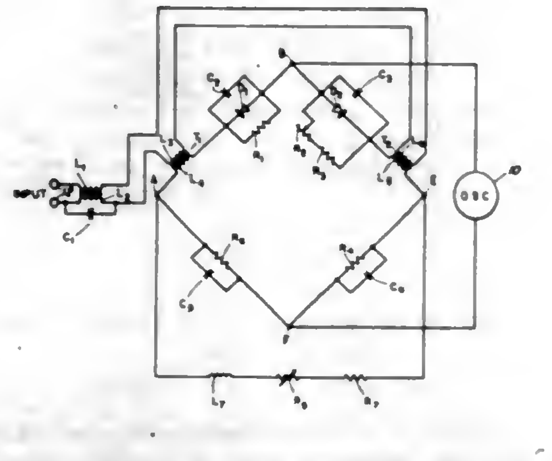
1. A circuit comprising,
a detector for receiving a signal and producing an output that varies according to an electrical quantity of the signal and noise accompanying the signal,
averager means controllably connectable to receive said detector output and to produce an output corresponding to an average of the received detector output,
difference forming means connected to receive said detector output and said averager output and to produce an output that is a function of their difference, and
means connecting said averager to be responsive to said difference circuit output to produce an average output that is independent of the signal component in said detector output.

3,387,223
HIGH GAIN MAGNETIC AMPLIFIER

John G. Spanbauer, Silver Spring, Md., assignor to the United States of America as represented by the Secretary of the Navy

Filed Aug. 27, 1965, Ser. No. 483,377

7 Claims. (Cl. 330—8)



1. A magnetic bridge amplifier for providing a high current gain output to a load from low current low frequency input signals comprising,

a four-arm, four-junction bridge having a driving oscillator connected to two of said junctions and a load connected to the other two of said junctions,

a pair of saturable reactor cores each having a control winding and a load winding, said control windings connected in series,

input signal means connected in series with said control windings for receiving low current low frequency signals,

a pair of unidirectional conducting devices each connected in series with a respective one of said load windings,

a resistor and a capacitor connected in parallel shunting each of said unidirectional conducting devices,

one of said load windings, unidirectional conducting devices, and parallel resistor-capacitor shunts defining a first arm of said bridge, and the other load winding, unidirectional conducting device, and parallel resistor-capacitor shunt defining a second arm of said bridge,

a parallel resistor and capacitor defining a third arm of said bridge, and

another parallel resistor and capacitor defining a fourth arm of said bridge.

3,387,224
MEASURING SYSTEMS WITH COMMON-MODE INTERFERENCE SUPPRESSION

Donald W. Fleischer, Ambler, Murray Garden, Oreland, and William P. Hamilton, North Wales, Pa., assignors to Leeds & Northrup Company, a corporation of Pennsylvania

Filed May 21, 1965, Ser. No. 457,610

18 Claims. (Cl. 330—30)

4. A measuring system comprising

a plurality of analog-input channels each providing a signal representative of a measured condition,

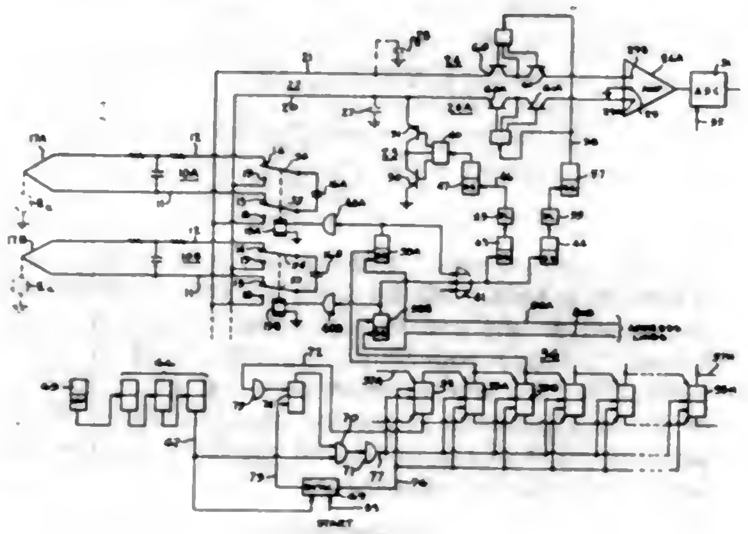
a transmission line having ungrounded conductors,

a plurality of relays each having normally-closed contacts connected to the conductors of one of said channels and normally-open contacts connected to the ungrounded conductors of said transmission line,

a plurality of signal-storage capacitors each connected across the movable contacts of one of said relays and having a capacitance substantially greater by a factor than the stray capacitance to ground of the ungrounded conductors of said transmission line,

an amplifier having an input circuit for connection to said transmission line,

means for effecting selective energization of said relays to transfer the corresponding signal-storage capacitor from connection to the conductors of the associated analog-input channel to connection within the conductors of said transmission line, and



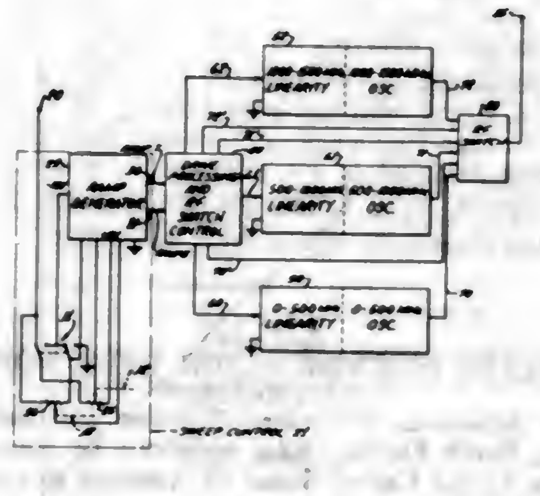
switching means for connecting said transmission line to said amplifier input circuit including normally-open switches operated during energization of each relay first to short out the common-mode voltage on the stray capacitance of one of said transmission-line conductors, and then to apply the analog signal stored on said signal-stored capacitor by way of said transmission line to the amplifier input circuit plus any error due to the common-mode voltage on the other conductor of said transmission line attenuated at least by said factor.

3,387,225
SWEEP GENERATOR HAVING EXTENDED FREQUENCY BANDWIDTH

Claire R. Wainwright, South Laguna, Calif., assignor to Telonic Industries, Inc., a corporation of Indiana

Filed Mar. 20, 1967, Ser. No. 624,579

25 Claims. (Cl. 331—49)



A sweep generator having an extended frequency bandwidth Δf in which plural oscillators are sequentially supplied with a time varying input waveform and synchronously coupled in sequence to an output terminal. Each of the plural oscillators is operable over a predetermined frequency bandwidth Δf_1, Δf_2 . . . Δf_n and the sum of these respective bandwidths covers the extended sweep bandwidth Δf.

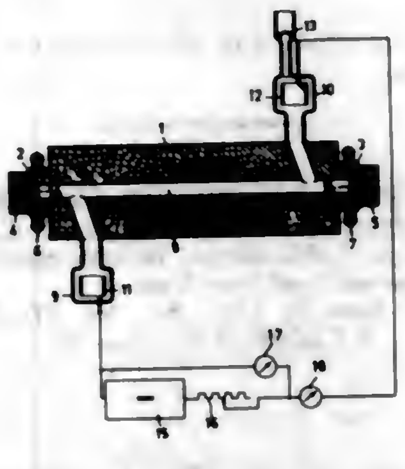
3,387,226
LASER COMPRISING A BLOCK OF INSULATING MATERIAL HAVING A CHANNEL THEREIN FILLED WITH A GAS

Jan Haisma and Sebastiaan Jacobus van Hoppe, Emmasingel, Eindhoven, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed July 15, 1963, Ser. No. 295.063

Claims priority, application Netherlands, July 25, 1962, 281,412

3 Claims. (Cl. 331—94.5)



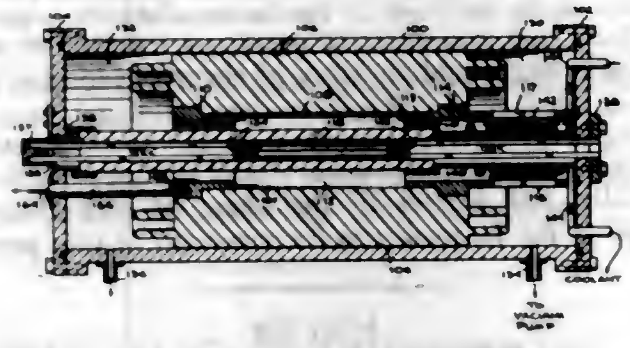
1. A device for producing light by stimulated emission of radiation in a gas comprising a solid block of insulating material having at least one narrow channel therewithin extending the length of said block, said block having a longitudinal dimension the maximum length of which is about 10 to 20 cm., light-reflecting members each having ground surfaces fitting with and directly engaging the ends of the block and connected therewith in a vacuum-tight manner thereby closing the ends of said channel, one of said reflecting members being partially transparent, means to introduce a gaseous active medium into said channel, and means to excite the gaseous active medium gas in said channel to stimulate emission therefrom.

3,387,227
HIGH INTENSITY ELECTRICALLY ENERGIZED GAS DISCHARGE LIGHT SOURCE PARTICULARLY ADAPTABLE FOR PUMPING LASER SYSTEMS

Frithjof N. Mastrup, Manhattan Beach, Robert S. Witte, Torrance, and Ralph F. Wuerker, Palos Verdes Estates, Calif., assignors to TRW Inc., a corporation of Ohio

Filed Dec. 2, 1963, Ser. No. 327,388

28 Claims. (Cl. 331—94.5)



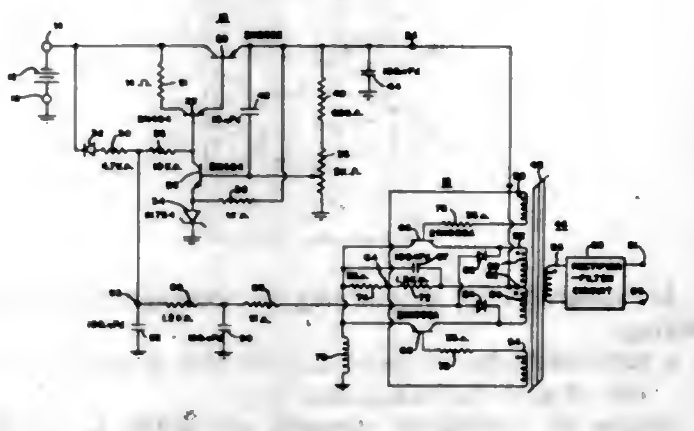
A high energy light source particularly adapted to pump a laserable material wherein a pair of electrodes are positioned at the ends of a pressurizable annular arc discharge passageway which is formed by first and second substantially cylindrical members, one positioned within the other. The walls of at least one of the members is formed in part of an arc responsive gas evolving material. A ballast means which consists of a chamber connected to a means for maintaining a pressure, substantially less than atmospheric, in the chamber and is connected to the passageway so as to evacuate the evolved gases and arc discharge products each time the lamp is fired.

3,387,228
REGULATED INVERTER CIRCUIT

John M. Randall, Fairport, N.Y., assignor to Bausch & Lomb Incorporated, Rochester, N.Y., a corporation of New York

Filed Sept. 30, 1965, Ser. No. 491,643

9 Claims. (Cl. 331—113)



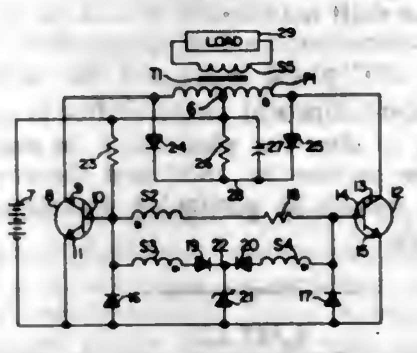
A regulated inverter circuit is disclosed including a pair of transistors connected in a series circuit with a winding of a transformer and coupled to oscillate when a direct current energization potential is applied thereto. A regulator circuit controls the magnitude of the direct current potential applied to the inverter circuit from a source. The regulator circuit includes a series regulator controlled by a feedback amplifier that is initially energized by the source through a diode. The output potential from the regulator is fed back to the amplifier to maintain the regulator output substantially constant. A rectifier circuit is coupled to the winding included in the series circuit to rectify the signal oscillations in the inverter circuit. The rectifier signals are filtered and applied to the feedback amplifier to reverse bias the diode and provide the energization potential for the amplifier.

3,387,229
FREQUENCY STABILIZED MAGNETICALLY COUPLED MULTIVIBRATOR

Philip D. Corey, Crozet, Va., assignor to General Electric Company, a corporation of New York

Filed Feb. 6, 1967, Ser. No. 614,313

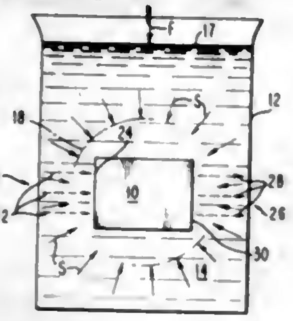
5 Claims. (Cl. 331—113)



In order to provide an output signal from a magnetically coupled multivibrator which is relatively constant in frequency and amplitude where conditions may cause significant voltage supply variations, the necessity for a separate supply voltage regulator is obviated by providing additional transformer windings combined with a Zener diode to adjust automatically the base drive to the two multivibrator transistors by variably shunting appropriate amounts of the base drive current supplied by the conventional positive feedback winding.

3,387,230
STRESS MODULATION OF RECOMBINATION RADIATION IN SEMICONDUCTOR DEVICES

John C. Marinace, Yorktown Heights, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Oct. 30, 1962, Ser. No. 234,154
10 Claims. (Cl. 332—7.51)



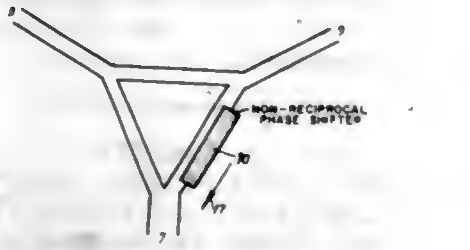
1. Apparatus for modulating electromagnetic radiation having:

a semiconductor element therein with a surface receptive of such radiation, and

means for selectively stressing elastically a region of said semiconductor element to vary the energy gap thereof to modulate said radiation propagating in said region.

3,387,231
CIRCULATOR FOR MICROWAVE TRANSCEIVERS

Martin Müller and Adolf Frank, Pforzheim, Germany, assignors to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware
Filed Oct. 1, 1964, Ser. No. 400,650
Claims priority, application Germany, Oct. 2, 1963, St 21,136
2 Claims. (Cl. 333—1.1)

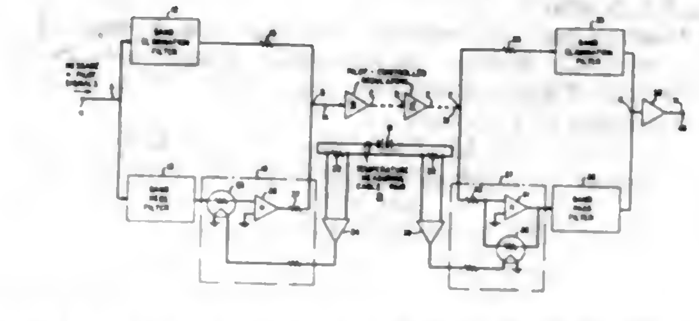


A circulator is provided with three terminals connected to one another via three line sections. The line sections are chosen in length to cause either a 180° pulse shift or a full 360° phase shift between terminals. In one embodiment, all line sections cause a 360° phase shift; in another, two lines cause 180° phase shifts and one causes a 360° phase shift. A non-reciprocal phase shifter is provided in one line section to alter the phase shift in one direction through that line section by 180° and thereby to cause cancellation of signals in particular directions between selected terminals.

3,387,232
PILOT-CONTROLLED REGULATING APPARATUS FOR TRANSMISSION SYSTEMS

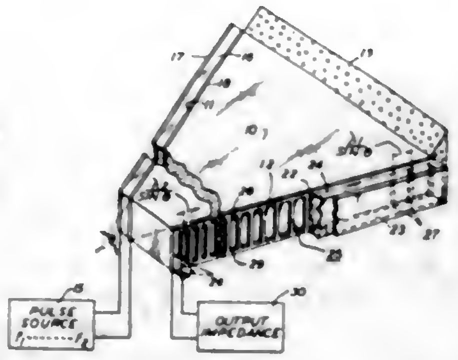
Robert S. Graham, Boxford, Mass., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Aug. 3, 1965, Ser. No. 476,901
5 Claims. (Cl. 333—15)

Loss deviations in a transmission channel section between two regulated amplifiers are equalized by providing half the gain connection at the transmitting end and half at the receiving end. The gain connection at the transmitting and receiving ends is controlled by a pilot signal whose level is determined by the attenuation in the transmission channel.



3,387,233
SIGNAL DISPERSION SYSTEM

Marsena R. Parker, Jr., Winston-Salem, N.C., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed June 11, 1964, Ser. No. 374,544
8 Claims. (Cl. 333—30)

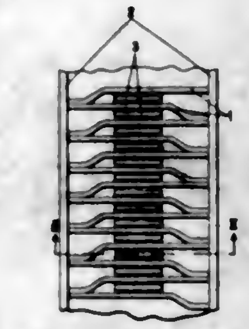


7. An ultrasonic wave transmission system comprising an ultrasonic propagation medium having a pair of opposite faces having differing distances between different opposite points thereon, transducer means upon one of said faces for converting a multifrequency electrical signal into ultrasonic energy having a wavefront extending along the length of said face, said last-named transducer means having a dimension along said face which is large enough compared to said differing distance so that said wavefront approaches an essentially plane wavefront along said face, and transducer means upon the other of said faces for converting each component frequency of said multifrequency ultrasonic energy into an electrical signal in a unique portion of the length of said face so that all components of said multifrequency ultrasonic energy are converted into electrical signals in portions distributed on the basis of frequency along the length of said face, said transducer comprising a member of piezoelectric material and an array of electrodes located upon at least one face of said member, the individual electrodes of said array having a center to center spacing between adjacent ones thereof in each of said portions that is substantially 360 degrees of the phase of said ultrasonic energy at the frequency to be converted in said portion.

3,387,234
DELAY LINE STRUCTURE

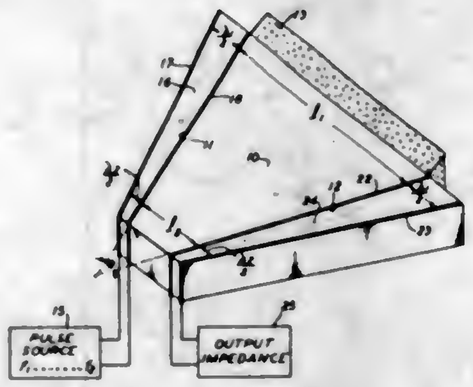
Walter Sobotka, Paris, France, assignor to CSF—Compagnie Generale de Telegraphie Sans Fil, Paris, France
Filed Aug. 14, 1962, Ser. No. 216,917
Claims priority, application France, Sept. 21, 1961, 874,285
20 Claims. (Cl. 333—31)

1. A ladder-type delay line, comprising support means, a series of periodically spaced rungs having both extremities thereof fixed to said support means, the shape of said rungs having, with respect to the plane of longitudinal symmetry of said line, a dissymmetry near one of said extremities in each rung, the dissymmetrical extremities being alternately opposite in successive rungs.



3,387,235
SIGNAL DISPERSION SYSTEM

Irvin E. Fair, Center Valley, Pa., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed June 11, 1964, Ser. No. 374,542
4 Claims. (Cl. 333—30)



1. A signal dispersion system comprising an ultrasonic propagation medium, means for launching ultrasonic energy including a multiplicity of frequencies upon said medium which together forms a broad wavefront propagating therein as a predominant wave in a given direction, and ultrasonic transducer means located in said given direction away from said launching means, said transducer having a pair of opposing faces extending across the path of said wavefront for acoustically responding to different frequencies in said energy at different points along said faces and for producing an electrical output representative of the sum of said separate responses, both of said transducer faces extending across said wavefront at an acute angle to said given direction such that said different frequency responses occur at different distances from said means for launching.

3,387,236
MOVING COIL HELICAL RESONATOR

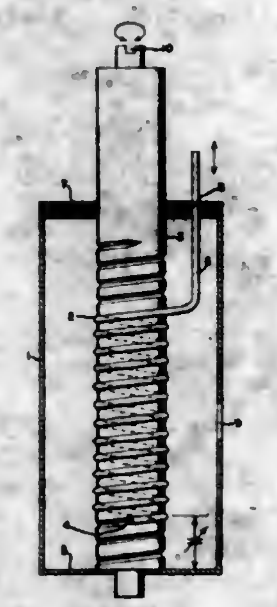
David R. Womack, Jr., Lynchburg, Va., assignor to General Electric Company, a corporation of New York
Filed June 29, 1966, Ser. No. 561,566
4 Claims. (Cl. 333—82)

1. A tunable helical resonator comprising

(a) a conductive housing defining a cavity having a wall portion and end portions,

(b) a threaded core of dielectric material extending into the cavity,

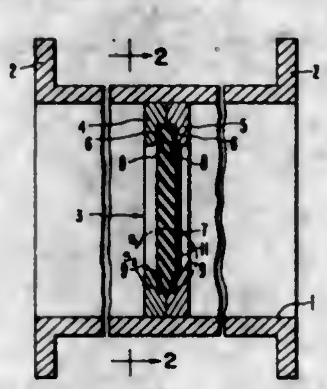
(c) a helical conductor disposed on said core and coaxial with said cavity, said helical conductor having a free end spaced from one end of said cavity to form a capacitor element with said end, the other end of said helix extending outside of said housing, to restrain rotation of said helix,



(d) and means to rotate said helix supporting core to cause a lateral translation of said helix along said core for varying the distance of said free end from the end of said cavity to vary the capacity and the resonant frequency of said resonator.

3,387,237
MICROWAVE WINDOW

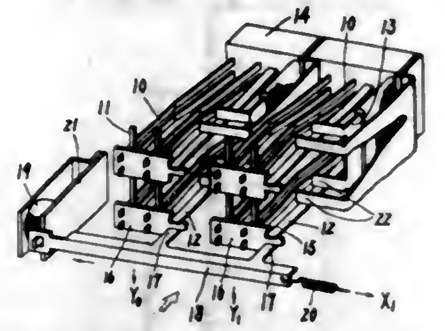
Edward J. Cook, South Hamilton, Mass., assignor to Varian Associates, Palo Alto, Calif., a corporation of California
Filed Dec. 27, 1965, Ser. No. 516,499
9 Claims. (Cl. 333—98)



1. A microwave window assembly including, means forming a wave permeable window member for gas-tight partitioning a wave-supporting structure, means forming a pair of apertured metallic frame members sealed in a gas-tight manner to the margin of said window member and sandwiching said wave permeable member therebetween, said apertures in said frame members defining a pair of iris openings in said frame members, one of said iris openings being smaller than the other for concentrating the electric fields of the wave energy on that side of said window member, and a lip portion of said frame member which defines said smaller iris being yieldable and made of a more ductile material than its adjoining frame portion, whereby thermally produced stresses in said window member are reduced in use.

3,387,238
MECHANICAL LATCHING COORDINATE SWITCH

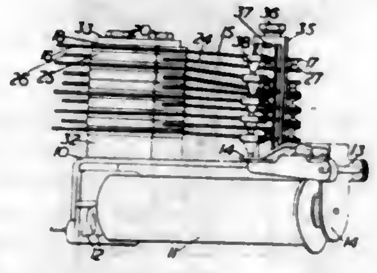
Masao Takamura, Ichizo Nakano, and Shoji Mitsuishi, Tokyo, Japan, assignors to National Telegraph and Telephone Public Corporation, Tokyo, Japan
Filed Sept. 12, 1966, Ser. No. 578,733
Claims priority, application Japan, Mar. 25, 1966, 41/17,902
4 Claims. (Cl. 335—112)



A mechanical latching coordinate switch having a plurality of coordinately arranged contact groups, in each of which holding fingers and contact actuating cards are arranged in such manner that they are movable only in one direction, respectively, and the directions of their movements are perpendicular to each other, resetting bars for driving the contact actuating cards in each horizontal row, electromagnetic devices for driving said resetting bars and electromagnetic devices for simultaneously actuating the holding fingers in each vertical column, whereby the resetting bars and the holding fingers are driven by the electromagnetic devices to disengage the holding finger from the contact actuating card so as to maintain the desired cross-point connection and engage the both members so as to maintain the cross-point release.

3,387,239
ELECTRO-MECHANICAL RELAYS

John Samuel Chenhall, Port Hacking, New South Wales, Australia, assignor to Elevators Pty. Limited, Waterloo, New South Wales, Australia
Filed Mar. 23, 1966, Ser. No. 536,786
Claims priority, application Australia, Mar. 30, 1965, 56,989/65
9 Claims. (Cl. 335—135)

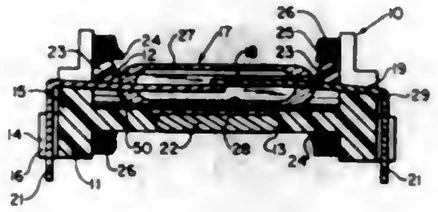


The contacts in or for an electro-mechanical relay are moulded singly or in pairs into plastic wafers through which a securing screw passes so that the whole stack may be quickly assembled with the parts in their correct relative positions, the wafers preferably interlocking with one another.

3,387,240
REED RELAY WITH MOUNTING FOR PROTECTING ENCAPSULATED SWITCHES AND FOR POSITIONING BIAS MAGNETS

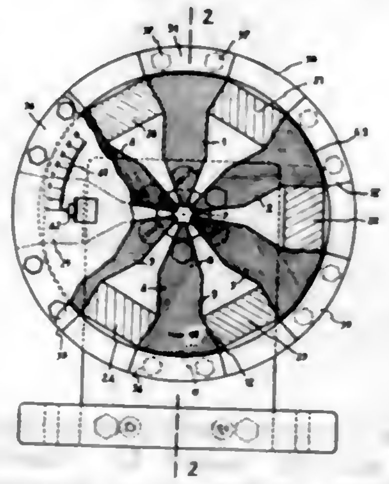
James V. Koppensteiner, Chicago, Ill., assignor to Automatic Electric Laboratories, Inc., Northlake, Ill., a corporation of Delaware
Filed May 31, 1966, Ser. No. 553,953
5 Claims. (Cl. 335—153)

Encapsulated reed switches are mounted in open-sided channels on one side of a bobbin, and magnets are placed on the opposite side in selected recesses to provide break or latching switch combinations by biasing adjacent switches. Shoulders on the bobbin in conjunction with pressure absorbing rods secured by an outer operating winding, support the encapsulated switches by those portions of the reeds projecting outwardly from their envelopes. The external portions of the reeds are bent downward outside the shoulder portions to facilitate plug-in mounting of the reed relays on printed circuit boards.



3,387,241
PERMANENT MAGNET MULTIPOLE MAGNETIC LENS WITH VARIABLE CONVERGENCE

Claude L. Audoin, Ivry-sur-Seine, and Albert L. Septier, Bourg-la-Reine, France, assignors to Centre National de la Recherche Scientifique, Paris, France, a body corporate of France
Filed Oct. 11, 1966, Ser. No. 585,937
3 Claims. (Cl. 335—210)

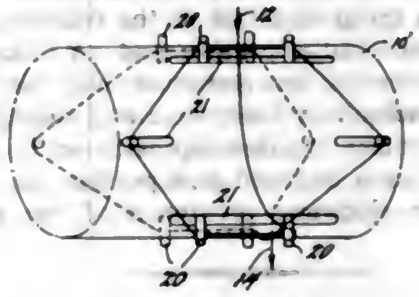


Multipole permanent magnet lens comprising an even number 2N of elongated cylindrical pole pieces alternately North and South, equiangularly distributed around an axis and each having a substantially hyperbolic profile inscribed within an angle $2\pi/2N$ and a heel portion remote from the axis. The heel portions of the pole pieces are connected to one another by permanent magnets disposed substantially orthoradially, the poles of which magnetize the pole pieces alternately North and South. A ring comprising alternate sectoral magnetic and non-magnetic portions can rotate around the heel portions and be immobilized in a selected position.

3,387,242
ELECTROMAGNETIC DEFLECTION WINDING CONFIGURATION

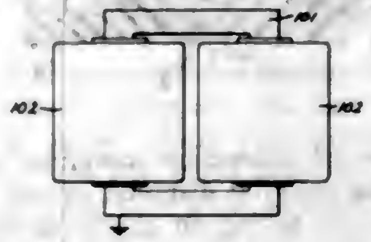
Charles R. Corpew, La Mesa, Calif., assignor to Stromberg-Carlson Corporation, Rochester, N.Y., a corporation of Delaware
Filed June 22, 1966, Ser. No. 559,605
3 Claims. (Cl. 335—213)

A deflection winding for cathode ray tubes has a continuous winding with the crossover portions not normal to the cathode ray beam but continuously curved preferably with the relationship yielding incremental lengths along the beam axis which integrated as a function in the plane of deflection for increments along the beam axis approximate a $\cos^3$ distribution for an angle θ about the beam axis.



3,387,243
INDUCTIVE DISK WINDING WITH IMPROVED IMPULSE VOLTAGE GRADIENT

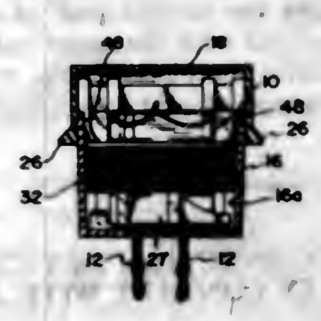
Jonathan H. Carpenter and Tom D. Holder, Rome, Ga., assignors to General Electric Company, a corporation of New York
Filed Mar. 30, 1966, Ser. No. 538,842
10 Claims. (Cl. 336—70)



A high voltage disk-type transformer winding in which impulse voltage distribution is improved by interlacing of coils at only a high voltage end portion and interposing an inter-coil static plate at a point near the transition to a non-interlaced coil section, the plate being electrically connected to the line terminal or other point higher in potential than the coils at the transition point.

3,387,244
TRANSFORMER HAVING WINDING LEADS HELD IN PRESSURE CONTACT WITH TERMINALS

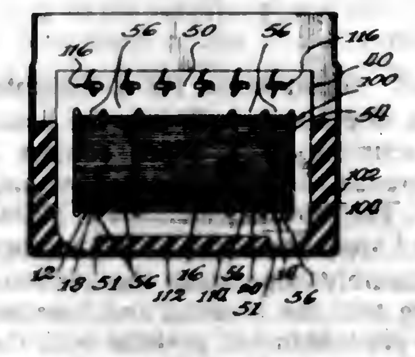
Dhu Aine J. Davis, Wheaton, Ill., assignor to Hermetic Coil Co., Inc., a corporation of Connecticut
Filed May 3, 1966, Ser. No. 547,209
8 Claims. (Cl. 336—92)



An electrical converter in which a hollow casing has a pair of parallel slots therethrough for receiving a pair of input terminal arms and an opening for receiving an output transferring device. Each terminal arm has a lead receiving portion disposed within the casing. A transformer is fitted snugly in the interior of the casing and has primary winding means including input leads held in pressed contact with the lead receiving portions of the terminal arms and secondary winding means having output leads secured to the output transferring device. The casing includes a body member for receiving the transformer and a lid member snap fit onto the body member. The lid has resilient means engaging a portion of the transformer for maintaining pressure against the transformer to press the input leads against the lead receiving portions of the terminal arms.

3,387,245
LAMINATED CORE WITH A TERMINAL CONNECTOR AND RETAINER MEANS

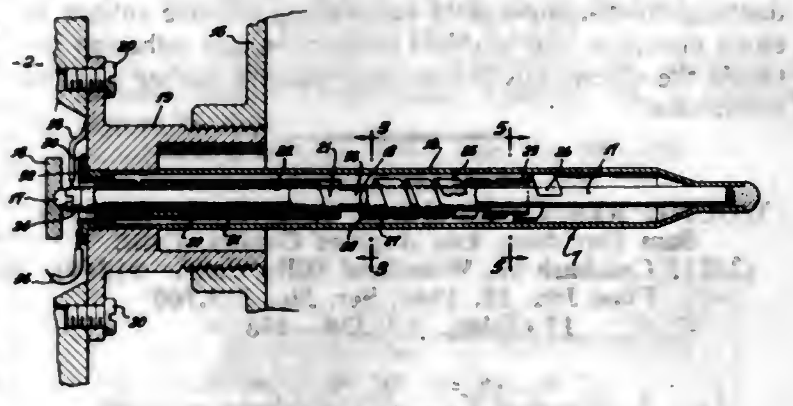
Eugene Czernobil, Chicago, Ill., assignor to Advance Transformer Co., Chicago, Ill., a corporation of Illinois
Continuation-in-part of application Ser. No. 168,952, Jan. 26, 1962. This application Aug. 30, 1963, Ser. No. 305,592
8 Claims. (Cl. 336—192)



8. A core retainer for a laminated transformer core comprising, a non-metallic frame-like flat planar body of generally rectangular configuration having inner edges defining a central opening to accommodate a core end entirely therethrough with non-flexure of said body, at least a pair of opposed fingers formed integral with said body and extending interior of said opening, said fingers forcibly engageable with said core to clamp same in rigid assembly, and electrical terminal connector means mounted on said body at selected locations spaced from said central opening, said terminal connector means comprising a U-shaped metallic member having a pair of arms and a bridging portion, means on said arms for permanently securing same upon said retainer ring and terminal connector mounting member, and wire gripping means formed on said bridging portion.

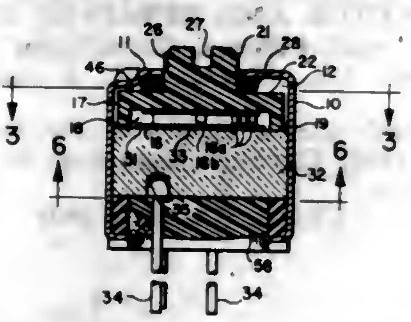
3,387,246
HELICAL THERMAL SWITCH

Richard D. Grayson, Arcadia, Calif., assignor to International Telephone and Telegraph Corporation, a corporation of Delaware
Filed Sept. 22, 1965, Ser. No. 489,220
5 Claims. (Cl. 337—372)



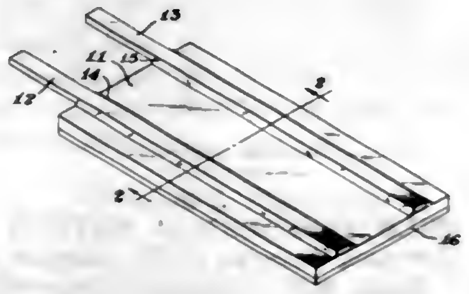
A thermally responsive over-temperature switch includes an elongated helical bimetallic element which surrounds one end of a low thermally responsive rod within a high thermally responsive tube forming a probe unit to be positioned within a water heater. A free end of the element carries a movable contact which cooperates with a fixed contact mounted on a tube which surrounds the other end of the rod and is insulated from the probe tube.

3,387,247
HOUSING AND BASE CONSTRUCTION FOR VARIABLE RESISTANCE DEVICE
Ralph E. Mishler, Battle Creek, Mich., assignor to Beckman Instruments, Inc., a corporation of California
Filed Feb. 28, 1966, Ser. No. 530,574
1 Claim. (Cl. 338—162)



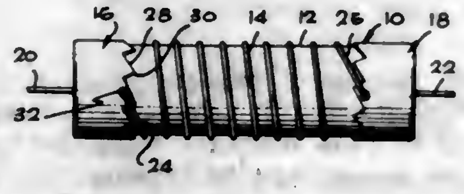
A "fool-proof" construction for a variable resistance device having a stop means built into the housing thereof for limiting excursion of a wiper contact adapted to traverse a resistance element mounted within the cavity of the housing. The housing includes a plurality of tabs so arranged and spaced as to mate with grooves formed in the base assembly supporting the resistance element thereby assuring that the housing and base assembly are assembled in a predetermined position with the resistance element properly oriented with respect to the limits of excursion of the wiper.

3,387,248
FLEXIBLE ELECTRICAL HEATING DEVICES
Donald E. W. Rees, Barry, Glamorgan, Wales, assignor to Midland Silicones Limited, Reading, England
Filed Apr. 23, 1965, Ser. No. 450,306
Claims priority, application Great Britain, May 4, 1964, 18,346/64
3 Claims. (Cl. 338—211)



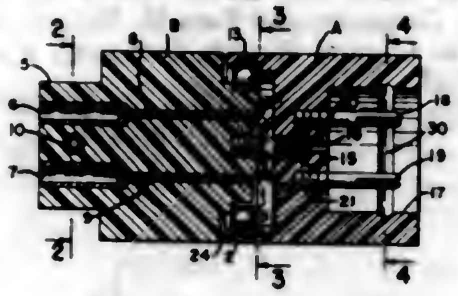
A flexible electrical heating device wherein the electrodes are bonded to a thin, flexible layer of electrically conducting silicone rubber employing an electrically conducting, room-temperature vulcanizing silicone rubber to effect electrical and physical connection and adhesion between the electrically conducting siilcone rubber and the electrodes.

3,387,249
WOUND RESISTORS WITH TERMINAL MEANS
Sam Davidson, Los Angeles County, Calif.
(23215 Calabash St., Woodland Hills, Calif. 91364)
Filed Jan. 10, 1966, Ser. No. 519,760
17 Claims. (Cl. 338—298)



Resistor terminations for terminating the effective resistance of a resistance element which has been wound or otherwise spirally disposed about an essentially cylindrical core. An electrically conductive cylindrical member is disposed about the core with at least one portion of an axially inward edge disposed substantially perpendicularly to the spiral direction of the resistance element, with such member edge portion and an electrically exposed end portion of the resisatnce element being disposed in perpendicularly transverse and radially conductive overlay contact relationship with each other at a location along such exposed end portion for effectively terminating the electrical resistance of the element at such location.

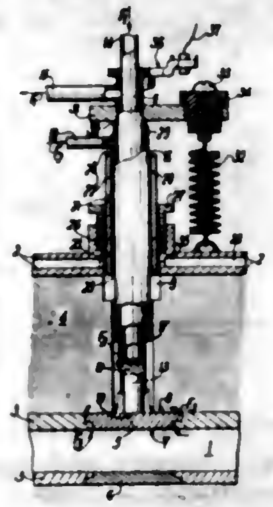
3,387,250
ELECTRIC SWIVEL CONNECTION
James Bjorn, 407 N. O St., and Frederick Marx, Jr., 1510 N. D St., both of Lake Worth, Fla. 33460
Filed Mar. 8, 1966, Ser. No. 532,779
4 Claims. (Cl. 339—8)



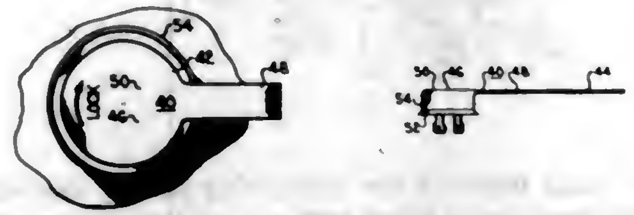
The electric swivel connection comprises a pair of sections of insulating material disposed in end to end relationship, one section having an axially disposed reduced cylindrical extension on its inner fitting within a recess in the inner end of the other section; a ball bearing assembly disposed coaxially of the longitudinal axis of the sections having its inner race mounted on the extension and having its outer race mounted by means of a lip in the wall of the recess in the other section to prevent separation of the sections; a fixed contact head at the center of the said extension; a yieldable contact at the center of the recess normally engaging the fixed contact and urging the sections to separate; a pair of spaced electric contacts mounted in the outer end of the said one section; a second pair of spaced electric contacts mounted in an annular recess in the outer end of said other section; conductors extending through the said one section electrically connecting one of the first pair of contacts with the fixed contact and with the inner ball race respectively; and other conductors extending through the said other section electrically connecting the second pair of contacts with the yieldable contact and with the outer ball race respectively, whereby electric circuits will be maintained between the related contacts of said pairs in all rotated positions of the sections.

3,387,251
ELECTRICAL CONNECTION DEVICE FOR AN ELECTRODE IN CONTACT WITH A CORROSIVE FLUID
Robert Devime, Rueil-Malmaison, France, assignor to Commissariat à l'Energie Atomique, Paris, France
Filed Aug. 3, 1966, Ser. No. 569,930
Claims priority, application France, Aug. 11, 1965, 28,065
7 Claims. (Cl. 339—15)

1. A device for providing a good electrical connection between, firstly, an electrode whose first surface is in contact with a fluid which is corrosive because of its high temperature and its composition, said fluid being contained in a double-walled chamber with the second surface of said electrode facing the outer wall of the said chamber, and, secondly, an electrical circuit situated outside the said outer wall, the said device passing through an aperture formed in said outer wall and being characterised in that it comprises, firstly, a set of two coaxial metal tubes, of which the outer tube has its end which is nearest the electrode closed and rigidly secured to an element providing electrical contact with the said second surface of the electrode while its other end is connected to the said electrical circuit, and of which the inner tube leads into th outer tube near the closed end of the latter, the said two tubes providing for the flow of cooling fluid along a circuit extending through the interior of the inner tube and the annular space between the two tubes, and secondly a tubular jacket coaxial with the outer tube and rigidly secured to the latter, which it surrounds, the said tubular jacket having one end open near the level of the said closure in the outer tube while its other end is fed with an inert gas flowing through the said open end of the jacket and forming a layer of inert gas surrounding the said electrical contact element, said layer of inert gas preventing that portion of said element which touches the said second surface from being attacked by the corrosive fluid.



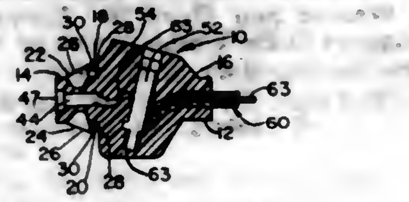
3,387,252
WATERPROOF COVER ASSEMBLY FOR ELECTRIC SOCKETS
Richard C. Rothweiler, Wauwatosa, Wis., assignor to Square D Company, Park Ridge, Ill., a corporation of Michigan
Filed July 13, 1966, Ser. No. 564,851
6 Claims. (Cl. 339—38)



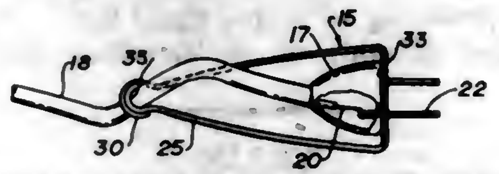
An electric socket cover including a single elastomeric member that has a portion which provides a seal between the socket and its mounting panel, a portion which provides waterproof cover for the socket and a portion which provides a hinge between the sealing portion and the cover portion to prevent loss of the cover portion when it is detached from the socket.

3,387,253
CONVENIENCE PLUG
Edward A. Salners, Mount Prospect, and Daniel James Vondran, Chicago, Ill., assignors to Motorola, Inc., Franklin Park, Ill., a corporation of Illinois
Filed Sept. 27, 1965, Ser. No. 490,266
1 Claim. (Cl. 339—102)

This electrical plug has a one-piece molded body of insulated material. The neck of the body fits into a removable back panel of a television receiver and is locked there so that with the panel in position female connectors in the neck are connected to a pair of terminals for conducting power to the television chassis. The body portion of the plug holds a pair of spring connectors that are inclined at an oblique angle to the plane of the female connectors. A pair of apertures that provide access to the spring connectors opens into a plane which slopes obliquely with respect to the receiver panel with the plug in place, permitting convenient access to the spring connectors for a male plug without interference from the panel.

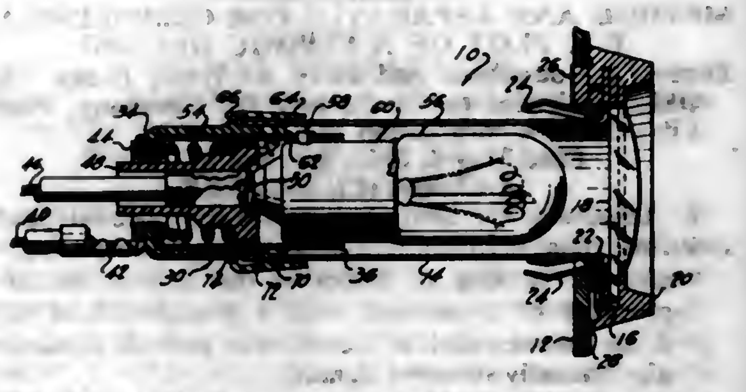


3,387,254
STRESS-RELIEVING DEVICE FOR ELECTRICAL PLUGS
David G. Wheeler, 1703 Orleans Court, Walnut Creek, Calif. 94598
Filed Nov. 7, 1966, Ser. No. 592,531
5 Claims. (Cl. 339—103)



1. A stress-relieving device for electrical plug connectors of the type having a housing with at least one conductive member associated therewith and a cord connected to said housing by a conductor interior of said cord, said device comprising: an endless flexible dielectric loop having a size greater than said housing; said loop having first and second portions on diametrically opposite ends thereof; means on said first portion to connect the face of said housing to said loop with said housing being located on the interior of said loop; clamp means mounted to the second portion of said loop to receive said cord in locked engagement therewith, said cord being looped between said clamp means and said housing sufficiently to relieve tensional forces applied to said cord at the juncture of the electrical connector and said cord.

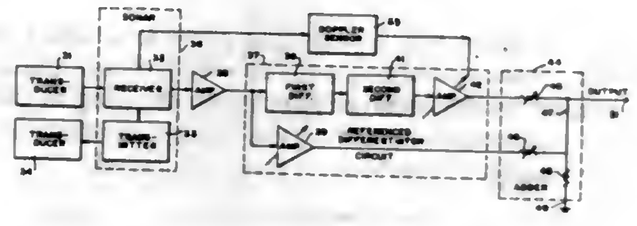
3,387,255
SOCKET INSULATOR FOR PANEL SUPPORTED LAMP
Aubrey W. Earleywine, Jr., Springfield, Ill., assignor to Stewart-Warner Corporation, Chicago, Ill., a corporation of Virginia
Filed Oct. 21, 1966, Ser. No. 588,498
7 Claims. (Cl. 339—188)



This invention relates to securing an insulator to a thin tubular lamp housing by sliding the housing between concentric wall portions on the insulator and engaging slots in the housing with lugs disposed between the wall portions.

3,387,256
DATA SIGNAL PROCESSOR

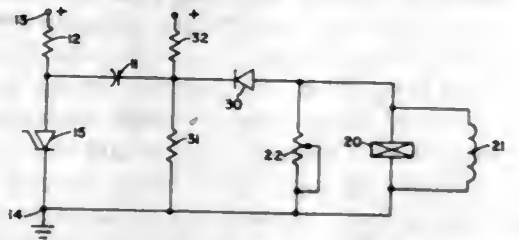
Henry L. Warner and David H. Brown, Panama City, Fla., assignors to the United States of America as represented by the Secretary of the Navy
Filed Feb. 21, 1966, Ser. No. 531,013
5 Claims. (Cl. 340—3)



A data signal processor for resolving a composite of integrated multiple signals into the component signals thereof having a receiving transducer, a referenced differentiator circuit for converting the composite signal received by said transducer into a plurality of signals having predetermined relative phase relationships, and an adder for producing an output signal that is the sum of the aforesaid plurality of predetermined phase-related signals.

3,387,257
PULSE CIRCUIT FOR PULSE ECHO ULTRASONIC TESTING

Kilian H. Brech, Norwalk, Conn., assignor to Branson Instruments, Incorporated, Stamford, Conn., a corporation of Delaware
Filed Jan. 25, 1967, Ser. No. 611,719
5 Claims. (Cl. 340—15)

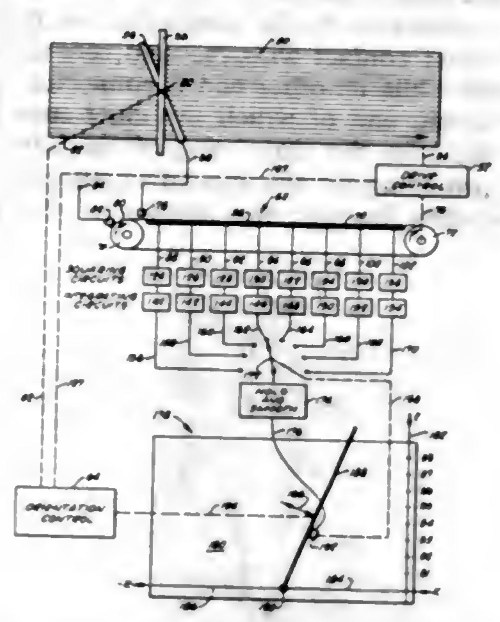


In a pulse circuit for pulsing a piezoelectric transducer using a capacitor which is alternately charged and discharged responsive to the condition of a switching means, a rectifying means is connected in circuit between the transducer and the capacitor in order to block current flow to the transducer when the switching means changes from the conductive to the non-conductive state and causes the capacitor to become charged.

3,387,258
METHOD AND APPARATUS FOR COMPILING AN F–K PLOT OF A SEISMIC RECORD

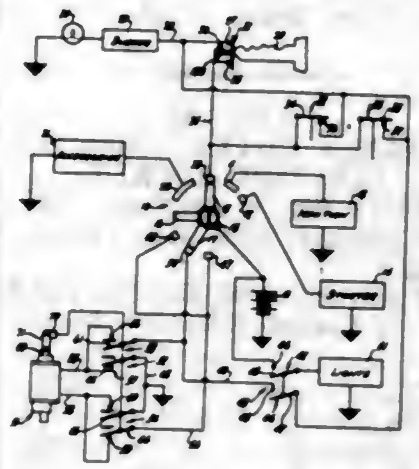
Pierre L. Goupillaud and Jerry A. Ware, Ponca City, Okla., assignors to Continental Oil Company, Ponca City, Okla., a corporation of Delaware
Filed May 6, 1965, Ser. No. 453,621
11 Claims. (Cl. 340—15.5)

1. Apparatus for compiling a two-dimensional power spectrum of a multi-trace seismic record comprising:
  means for sensing all traces of the seismic record a plurality of times and with a predetermined time delay between each of the traces to provide successive algebraically summed signals;
  means receiving said summed signals for deriving for each successive signal an electrical indication of the energy of the sensed information in each of a plurality of frequency bands; and
  means for recording the electrical indication as a function of the frequency and the time delay between said seismic traces.



3,387,259
CAR THEFT INHIBITOR

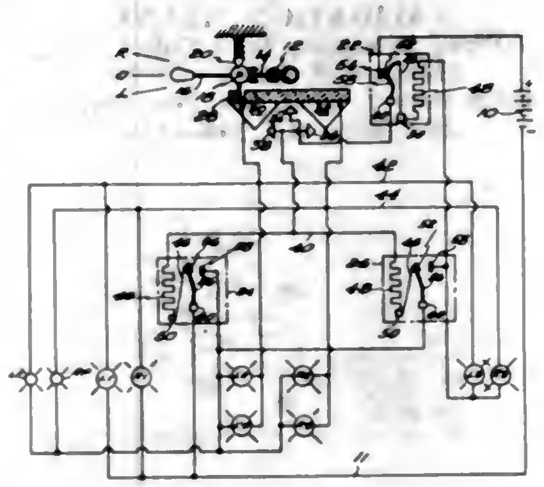
Domenic Oliva, San Francisco, Calif., assignor to Albert A. Oliva, Wood River, Ill.
Filed July 2, 1965, Ser. No. 469,135
18 Claims. (Cl. 340—64)



A car theft inhibitor for minimizing human inadvertence and carelessness when parking and leaving an automobile often leading to accidents involving the same or to theft or other unauthorized use thereof. The inhibition provided is effected by alerting the driver of an automobile to the fact that certain protective conditions have not been satisfied as he is about to leave the automobile after parking the same. The inhibitor provides a signal system, including both audible and visible indicia, which alerts the driver to the fact that one or more of the protective conditions have not been met and which conditions include actuation of the parking brake, removal of the ignition key from the lock-equipped ignition switch, and placement of the gear shift in the park position thereof; the provision of a tamper-proof arrangement for protecting the ignition wires; and a lock that prevents entry into the engine compartment through the movable hood closure therefor when the ignition switch is in the "off" position and the key removed from the lock section thereof.

3,387,260
DYNAMIC DIRECTION INDICATOR FOR MOTOR VEHICLES

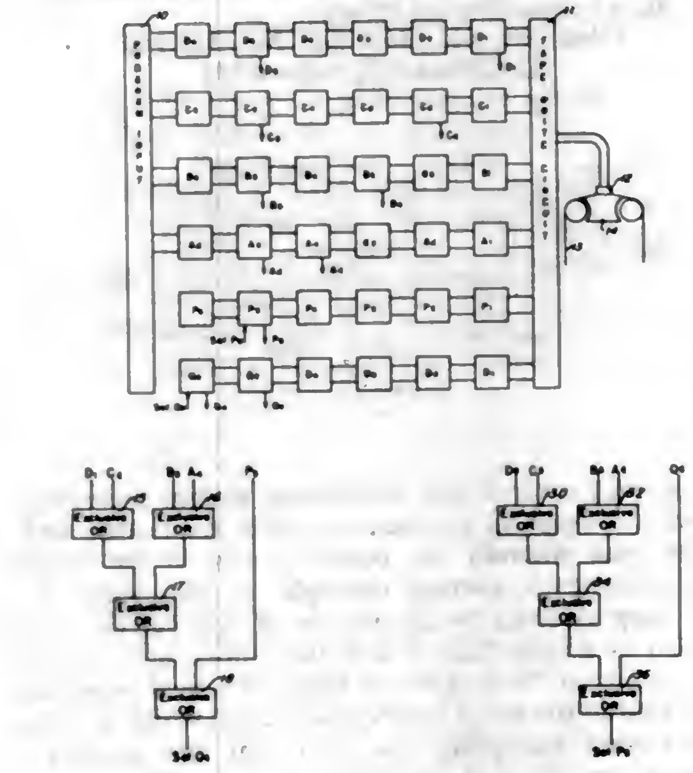
Morris B. Wood, Amesbury, Mass.
(P.O. Box 546, Ipswich, Mass. 01938)
Filed Oct. 4, 1965, Ser. No. 492,431
5 Claims. (Cl. 340—82)



A direction signal indicating system having a series of signal lamps on a vehicle arranged to be illuminated sequentially until all are lit, so as to provide a continuous dynamic indication repeatedly until the expected turn is made, the time interval of illumination for each lamp being effected through the inherent action of a single set of hot wire actuated relays.

3,387,261
CIRCUIT ARRANGEMENT FOR DETECTION AND CORRECTION OF ERRORS OCCURRING IN THE TRANSMISSION OF DIGITAL DATA

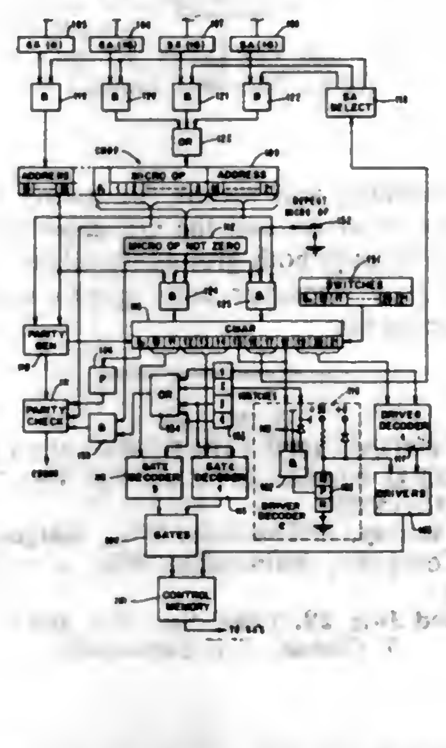
Bernard Keith Betz, Minneapolis, Minn., assignor to Honeywell Inc., a corporation of Delaware
Filed Feb. 5, 1965, Ser. No. 430,704
14 Claims. (Cl. 340—146.1)



An apparatus for detecting errors in data being simultaneously processed through a plurality of information transfer channels and for effecting the correction of errors detected therein in an "on-the-fly" manner. Said apparatus including a pair of transfer registers for storing redundancy information related to said data information being transferred in both a parallel and a diagonal sense.

3,387,262
DIAGNOSTIC SYSTEM

Gerald H. Ottaway, Hyde Park, N.Y., and Klaus Tertel, Boblingen, Germany, assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Jan. 12, 1965, Ser. No. 425,008
6 Claims. (Cl. 340—146.1)



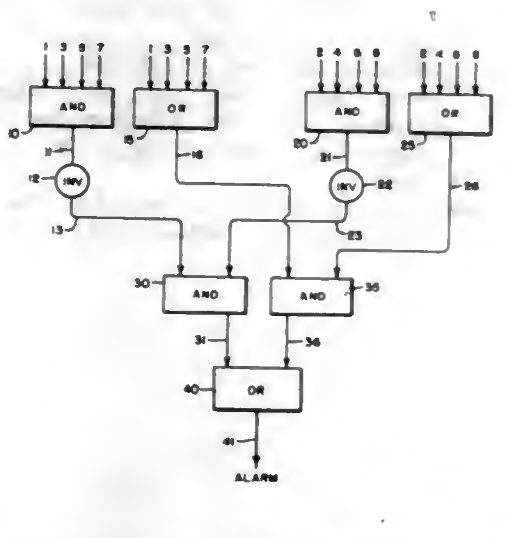
Some memories for data processing apparatus have a network of switches that are turned on in a particular pattern according to an address to read the addressed word of the memory. A fault in the switch network can cause a spurious word to be read and superimposed on the addressed word. This invention provides means operable during a test to inhibit parts of the switch network such that only a spurious word can be read. Means is provided to detect such a word and to signal that a fault exists.

The invention is particularly useful with control memories of the type in which a word of the memory includes a micro operation and the address of the next word to be read. Means is provided to compare the parity of the address portion of one word with the parity of the next word read from the memory and to signal a fault in case of parity failure.

3,387,263
SIGNAL COMPARATOR

William G. Dossé, Lincolnwood, Ill., assignor to Teletype Corporation, Skokie, Ill., a corporation of Delaware
Filed Aug. 23, 1965, Ser. No. 481,521
6 Claims. (Cl. 340—146.2)

A circuit for comparing two groups of character bits which together comprise a complete character and for determining whether all the bits in each group are the same and whether the bits comprising one group are opposite from the bits comprising the other group including a pair of AND-gates each having as its input all the bits of one of the groups and a pair of inverters each having as its input the output of one of the AND-gates so that

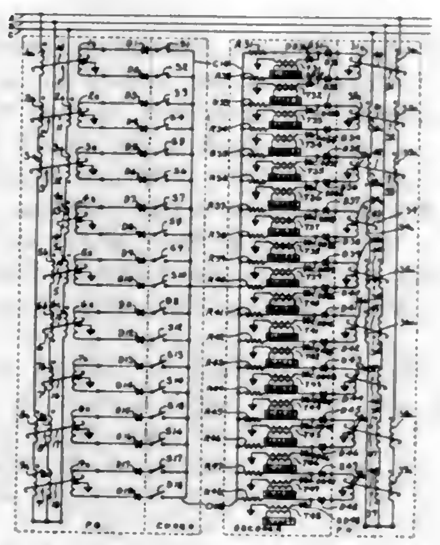


the inverters each produce an output if any of the bits received by their respective AND-gates is spacing, a pair of OR-gates each having as its input all the bits of one of the groups for producing an output if any of the bits it receives is marking and means for gating together the outputs of the inverters and the OR-gates to produce an error signal whenever both groups simultaneously contain a marking bit or whenever both groups simultaneously contain a spacing bit.

3,387,264

TIME DIVISION MULTIPLEXER HAVING SYNCHRONIZED MAGNETIC CORE TRANSMITTER AND RECEIVER

Bernard R. Budny, Milwaukee, Wis., assignor to Allen-Bradley Company, Milwaukee, Wis., a corporation of Wisconsin
Filed July 29, 1964, Ser. No. 385,903
7 Claims. (Cl. 340—147)

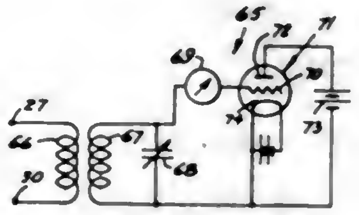


A time division multiplexer comprising a sending pulse generator including a plurality of independently saturable inductors arranged to be driven to a periodic unsaturated state responsive to a source generating a plurality of phase discrete electrical signals, a coder for the generated signals, a single electrical conductor for transmitting the coded signals to a receiving station, the receiving station including a decoder and a plurality of independently saturable inductors also arranged to be periodically driven to an unsaturated state by a source generating electrical signals in a definite phase relationship with the signals driving the inductors of the sending station. There are preferably provided unidirectional current control elements, such as diodes to prevent the signals from passing through from one inductor to a neighboring inductor at the sending station or from one inductor to a neighboring inductor at the receiving station, and thereby facilitate transmission of the signal between stations.

3,387,265

VALIDATION MEANS

Wilfred Smelman, 1614 Fuller Ave.,
Hollywood, Calif. 90028
Filed June 7, 1963, Ser. No. 286,370
25 Claims. (Cl. 340—149)

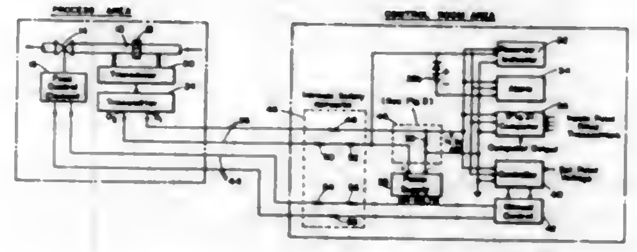


1. A validation system comprising: a credit token bearing invisible, inherent code indicia in an array known only to the issuer and to a proper holder of the token, said code indicia comprising elements having a physical characteristic; a validation token including validation indicia in an array selected by the holder of the credit token, said validation indicia having a physical characteristic; said tokens being adapted to be assembled in contiguous relationship to form a structure having its own physical characteristic; whereby said physical characteristic of the indicia as assembled may be measured, the measured value being indicative of the propriety of custody of the credit token.

3,387,266

ELECTRONIC PROCESS CONTROL SYSTEM

Charles J. Swartwout, Scottsdale, Denton Kenyon Swartwout, Phoenix, and Allen E. Lepley, Scottsdale, Ariz., assignors to Motorola, Inc., Chicago, Ill., a corporation of Illinois
Filed Oct. 14, 1963, Ser. No. 315,940
11 Claims. (Cl. 340—150)

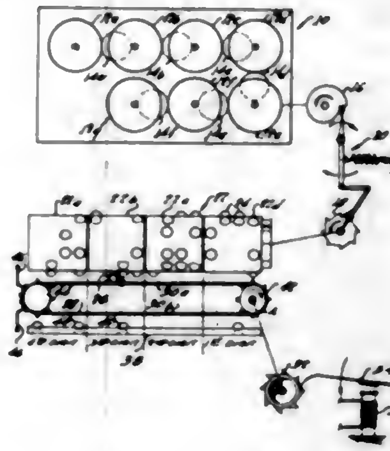


A process control and monitoring system including a two wire connection between a control room area and a process area wherein the power supply in the control rooms supplies a current through the two wires in a series loop circuit, the amplitude of the current being modified by a transducer unit in the process area for indicating status of the process. A series electrical impedance is provided in the series loop circuit across which a voltage is developed indicating the status of the process to utilization means in the control room area. Resistors are provided in a series with the two wire conductors providing an intrinsically safe system. Connections are provided at the process area and the control room area for providing voice communication over the same two wires. Two wires are also used to distribute power from the control room area to the process area transducer. Standby batteries are provided in the power supply for emergency power.

3,387,267

METER READING SYSTEM

Arthur J. Little, Springfield, Ill., assignor to Stewart-Warner Corporation, Chicago, Ill., a corporation of Virginia
Filed Aug. 7, 1964, Ser. No. 388,099
6 Claims. (Cl. 340—150)

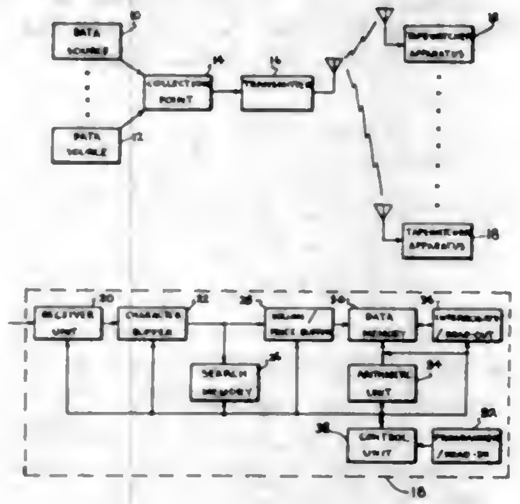


The specification describes a portable arrangement for reading a utility meter from a remote position. The axially spaced dials of the meter each have an associated plurality of series of protuberances or marks with each mark in a series spaced axially in accordance with binary code corresponding to a respective decimal digit. Each series is positioned circumferentially so that one series corresponding to the associated dial reading can be scanned by axially movable contacts or pick up device to transmit a signal corresponding to each scanned marking over a wire to the remote position from which power is supplied to move the contacts. A silicon controlled rectifier circuit at the remote location and simple registration of the signals minimizes the power requirements.

3,387,268

QUOTATION MONITORING UNIT

Sidney Epstein, 36—11 Flatlands Ave.,
Brooklyn, N.Y. 11234
Filed Sept. 9, 1963, Ser. No. 307,588
4 Claims. (Cl. 340—154)

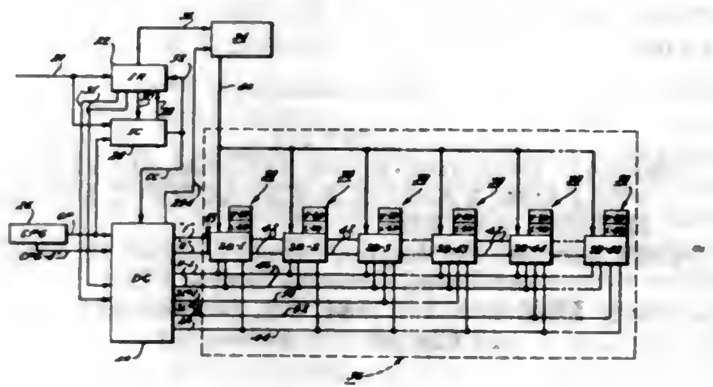


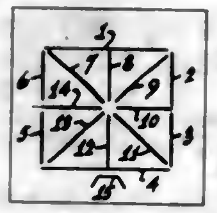
Remotely locatable apparatus for continuously monitoring a continuity of coded alpha numeric data representative of multiplicities of stock trading transactions transmitted over a communication channel from a central location and presettable by the user to selectively and continuously extract therefrom all transmitted data relating to a limited number of selected stocks to indicate selective changes in stock status as evidenced thereby. Included therein are storage and computer means to peform user designated operations upon the selected data to accumulate, update and oherwise prepare and store selective information based thereon for presentation thereof to the user upon a user initiated request therefor.

3,387,269

INFORMATION DISPLAY SYSTEM

George W. Hernan, Haddonfield, N.J., Peter W. Beresin, Philadelphia, Pa., and Eugene Gertler, Cinnaminson, N.J., assignors to Ultronic Systems Corporation, a corporation of Delaware
Filed Aug. 24, 1964, Ser. No. 391,537
9 Claims. (Cl. 340—154)





In an electronic display system using segmental character display devices, particularly for stock quotations and the like, respective display devices have associated therewith a storage means for storing coded character signals and a bistable commutator register stage for controlling the storage of signals and blanking thereof. The signals are supplied in common to the storage means. The register stages are connected to preceding and succeeding stages to form a shift register. A display control unit responsive to character ready signals supplies shift pulses to the shift register and steers the first stage alternatively to storing and blanking states. Each register stage has means for sensing the state thereof. The control unit responds to blanking states at intermediate stages to steer the register to the storing state, and responds to a storing state at a later stage to change the steering to the blanking state. In a specific embodiment, stock quotations are displayed with identification in an upper row and quotations in a lower row. Stages are blanked ahead of a new quotation, and the start of a new quotation in the last seven stages is prevented by rapidly shifting the register to the initial condition. Redundant characters may be eliminated. The system allows the display board to be expanded as desired without changing the control thereof.

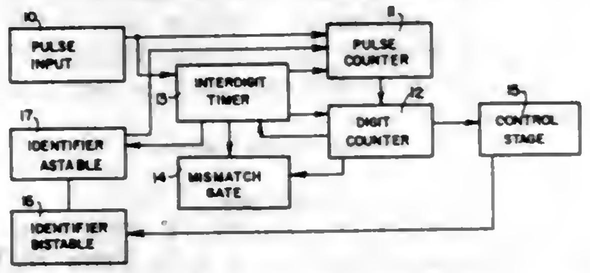
3,387,270

PULSE DECODER-ENCODER SYSTEM CONTROLLED BY PULSE AND DIGIT COUNTERS

Richard H. Adlhoch, Oak Lawn, and Ronald H. Chapman, Wheaton, Ill., assignors to Motorola, Inc., Franklin Park, Ill., a corporation of Illinois

Filed Jan. 15, 1965, Ser. No. 425,749

7 Claims. (Cl. 340—164)



Combined encoder-decoder for responding to particular digital pulse code and for producing the same pulse code to identify a station. A pulse counter receives pulses and has stages selectively connected to stages of a digit counter to enable the same to respond to a particular received digital pulse code. A multivibrator applies regularly recurring pulses to the pulse counter for encoder operation, with the stages of the digit counter actuating a timer to interrupt the multivibrator to produce the code.

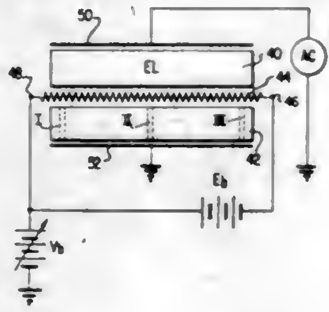
3,387,271

SIGNAL DISTRIBUTION SYSTEM HAVING A VOLTAGE VARIABLE CAPACITIVE DISTRIBUTION LAYER

Fred Chernow, Burlington, Mass., assignor to Electro-Tec Corp., Ormond Beach, Fla.

Filed Oct. 26, 1964, Ser. No. 406,524

18 Claims. (Cl. 340—166)



An AC energizing signal is applied selectively to an electroluminescent layer or other threshold responsive layer by means of a material having a DC voltage versus admittance characteristic which reaches a sharp peak at one point of voltage. With the utilization layer and the peaking material electrically connected, a DC field gradient placed along the peaking material via a resistive layer puts only a select point of the peaking material at the special point of voltage. The latter point of voltage can be moved by raising or lowering the level of the gradient. An AC signal which is applied across the combination of layers and insulated from the gradient passes through the peaking or high admittance point of the peaking material to energize a corresponding point of the utilization layer.

3,387,272

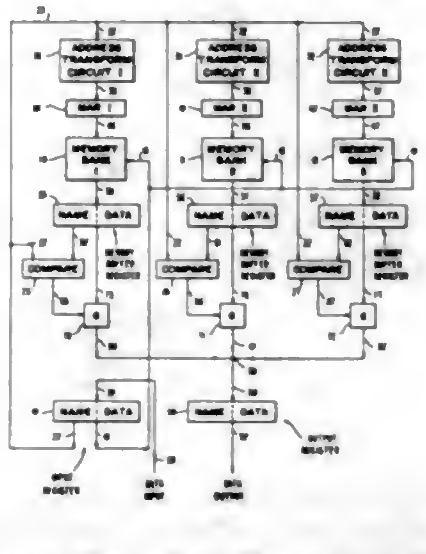
CONTENT ADDRESSABLE MEMORY SYSTEM USING ADDRESS TRANSFORMATION CIRCUITS

James Evans, Stamford, Conn., and John H. Florkowski, Yorktown Heights, N.Y., assignors to International Business Machines Corporation, Armonk, N.Y., a corporation of New York

Filed Dec. 23, 1964, Ser. No. 420,576

15 Claims. (Cl. 340—172.5)

The content addressable memory system is one in which a plurality of information items, each including data and identifier portions, are stored in a plurality of addressable memory locations in a random access memory. Key transformation for the addresses is employed so that each information item is stored at an address which is an address transformation of the contents of the identifier portion of the item. The memory is formed of three different memory units each of which has its own address circuitry. Three separate address transform circuits are provided each of which operates according to different criteria to produce a different address when an identifier is applied to the circuit. During a storage operation the identifier of the item to be stored is applied to each of these three address transform circuits which generate transformed addresses for the three memory units. The input item is stored in one of these units if the addressed location is empty. If all three addresses are full, the information item is read out of one of these addresses and the input item is stored at that address. A bumping routine is then used to restore the read out information item at an address which is provided by applying the identifier of that item to the three address transform circuits. Retrieval of stored items is realized by applying the identifier of the item to be retrieved to the three address transform circuits. The three memory units are then interrogated to read out the information items at the three addresses generated by the three address transform circuits. Comparison is then carried out to determine which of these items has an identifier which matches the input identifier for the retrieval operation and that information is retrieved from the system.


ADDRESS TRANSFORM CIRCUIT I
ADDRESS TRANSFORM CIRCUIT II
ADDRESS TRANSFORM CIRCUIT III
MEMORY BANK
NAME DATA
COMPARE

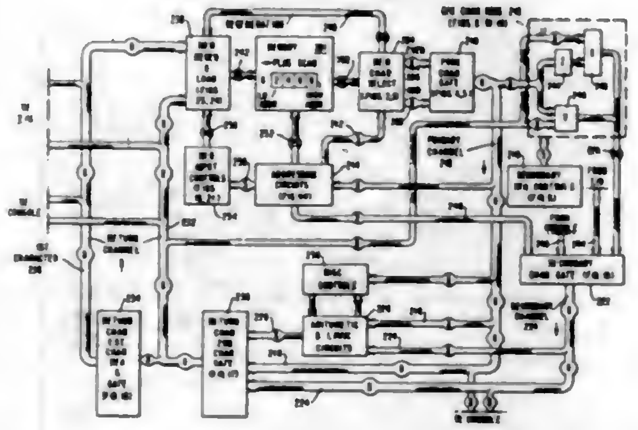
3,387,273

HIGH SPEED SERIAL PROCESSOR

Richard S. Carter and Walter W. Welz, Poughkeepsie, N.Y., assignors to International Business Machines Corporation, Armonk, N.Y., a corporation of New York

Filed June 30, 1965, Ser. No. 468,248

10 Claims. (Cl. 340—172.5)



Disclosed is a computer apparatus for the high speed processing of operands lying in overlapping fields of memory and which eliminates the need for the redundant accessing of memory through use of a result bus connecting to a buffer. Source operands of a first cycle may be gated from memory through the buffer to a processing unit (such as arithmetic and logic circuits) for forming a result operand, which operand may be transferred back to the buffer to serve as a source operand for a next cycle without need of redundantly accessing memory.

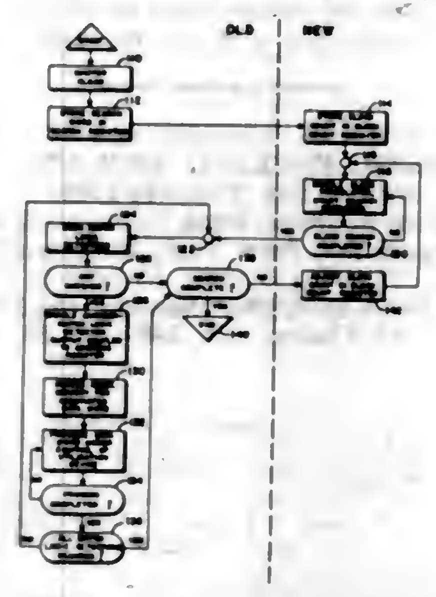
3,387,274

MEMORY APPARATUS AND METHOD

William W. Davis, Minneapolis, Minn., assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware

Filed June 21, 1965, Ser. No. 465,461

5 Claims. (Cl. 340—172.5)



A Search memory system performing the search function block-by-block in a multiblock Search memory system.

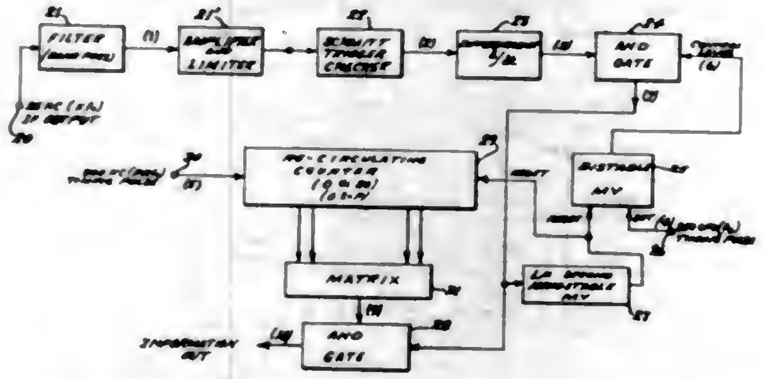
3,387,275

DIGITAL DETECTION AND STORAGE SYSTEM

Dennis J. Gooding, Acton, Mass., and Andrew Wartella, Clarence, N.Y., assignors to the United States of America as represented by the Secretary of the Air Force

Filed Apr. 20, 1965, Ser. No. 449,658

3 Claims. (Cl. 340—172.5)



A digital detector and storage system is provided which includes a resettable recirculating counter, a matrix connected to the output of the counter, and a gate connected to the output of the matrix. The counter is adapted to recirculate $K+\frac{1}{2}$ times if there is a change in phase of 180° in the IF input to the system from the preceding IF input. The counter recirculates exactly K times if there is no change in phase in the IF input to the system from the preceding IF input.

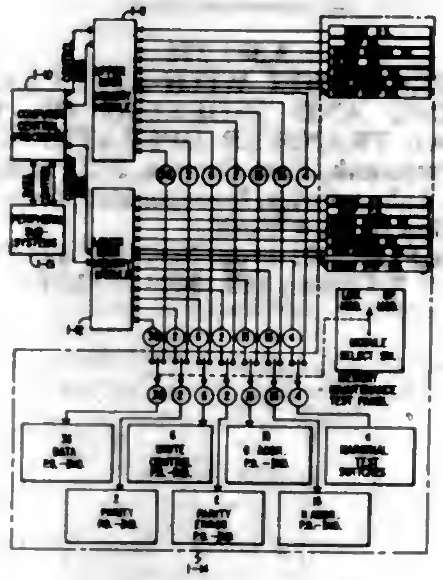
3,387,276

OFF-LINE MEMORY TEST

Richard Charles Reichow, St. Paul, Minn., assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware

Filed Aug. 13, 1965, Ser. No. 479,397

19 Claims. (Cl. 340—172.5)



A data processing system having a central processor operable with plural magnetic memory modules and having means for testing any one of the memory modules while the central processor continues to carry out a program in conjunction with the remaining modules. Each memory module includes address registers and an asynchronous logic control unit or command generator which normally operate in response to the central processor but which, during the test mode, operate in response to control signals from manual controls on a test console.

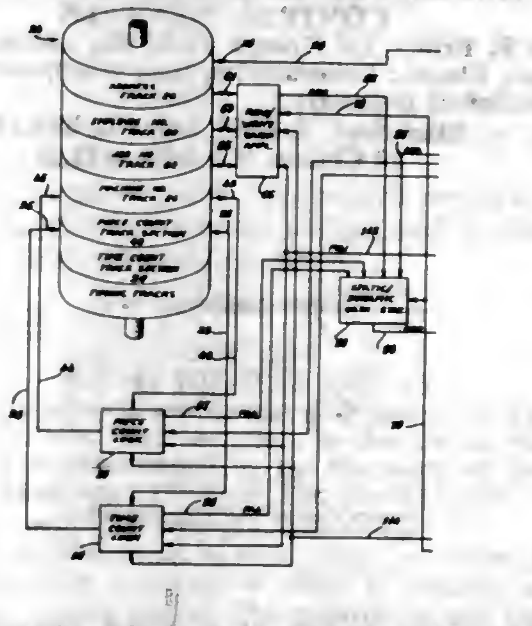
3,387,277

SYSTEM AND APPARATUS FOR ADDRESSING A CYCLICAL MEMORY BY THE STORED CONTENTS THEREOF

Edwin Singer, Stamford, and Ambros Geissler, Wilton, Conn., assignors to Telecontrol Corporation, a corporation of Ohio

Continuation-in-part of application Ser. No. 437,781, Mar. 8, 1965. This application Sept. 2, 1965, Ser. No. 484,522

34 Claims. (Cl. 340—172.5)



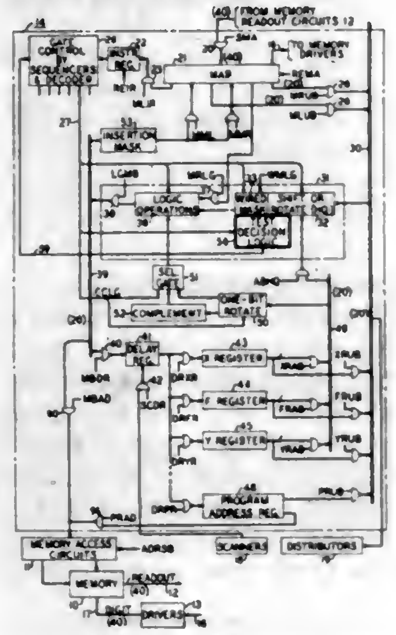
A magnetic drum stores data pertaining to plural input stations. The location of stored data for each input station is referenced to an address stored in a drum address track. Data in a search register is compared with the data content of an appropriate drum track. Upon comparison, an output signal issues to cause address circuitry to retain the address associated with the data in the search register. This address is then compared with the address track readout to provide a selected address signal for locating other data associated with the same input station as that in the search register.

3,387,278
DATA PROCESSOR WITH SIMULTANEOUS TESTING AND INDEXING ON CONDITIONAL TRANSFER OPERATIONS

Edward J. Pasternak, East Orange, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Oct. 20, 1965, Ser. No. 498,787

7 Claims. (Cl. 340—172.5)



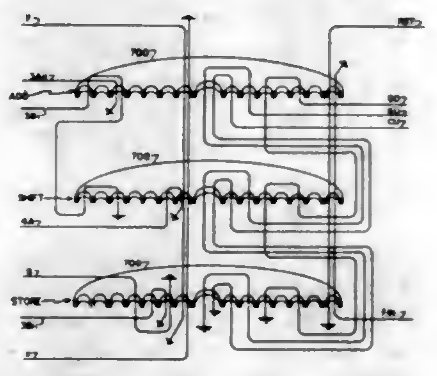
A data processor conditional transfer instruction specifies first and second ones of a plurality of registers having contents that are used simultaneously for testing for an instruction-specified condition and indexing an instruction-specified transfer address. If the condition sought is realized, the indexed address is employed immediately to access the processor memory.

3,387,279
MULTIAPERTURE MAGNETIC DISC COMPUTER CONTROL MEMBERS

Bruce E. Briley, La Grange Park, Ill., assignor to Automatic Electric Laboratories, Inc., Northlake, Ill., a corporation of Delaware

Filed Sept. 7, 1965, Ser. No. 485,153

10 Claims. (Cl. 340—172.5)



The control section of a digital computer employs modular construction wherein control pulse generators of the operational instructions are individually carried on separate plug-in circuit boards. Each of the control pulse generators comprises a myriaperture bistable magnetic disc and its associated driving circuit. The distribution of one or more windings through the apertures of the disc provide, upon magnetic switching of the disc, one or more series of pulses for controlling the operation of the computer.

Being a two-state device, the magnetic-disc, upon resetting, is also capable of generating pulses which are complements of the control pulses. Windings which are mirror windings of the control pulse windings and a rectifier are provided to take advantage of the complementary pulses and decrease the cycle time by converting them to usable control pulses. The correct current direction to provide setting or resetting is determined by a register which records the magnetic state of a disc.

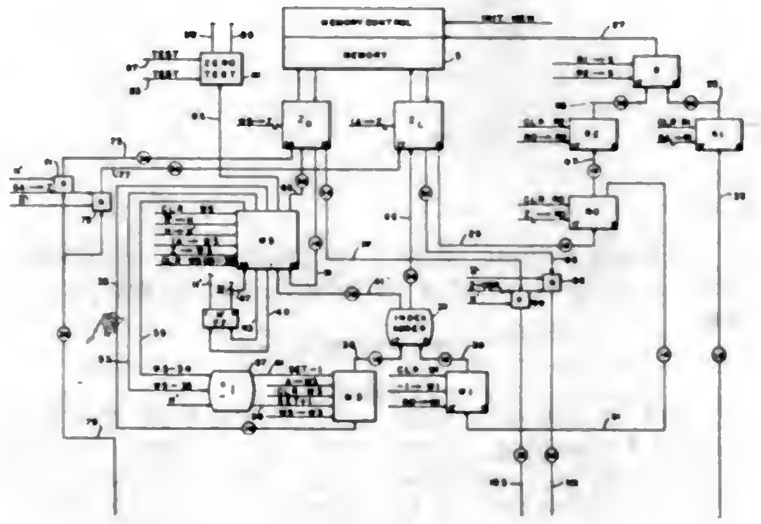
There being no system clock, the operation is self-diagnostic upon an erroneous access of an empty instruction location, which is the same as a HALT instruction. Similarly, failure of an instruction circuit to generate control pulses will also stop the machine.

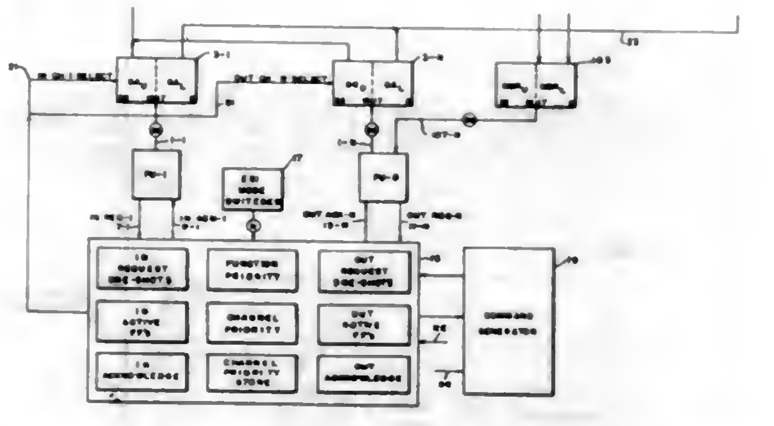
3,387,280
AUTOMATIC PACKING AND UNPACKING OF ESI TRANSFERS

Robert A. Bina, South St. Paul, Minn., assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware

Filed Oct. 4, 1965, Ser. No. 492,377

12 Claims. (Cl. 340—172.5)





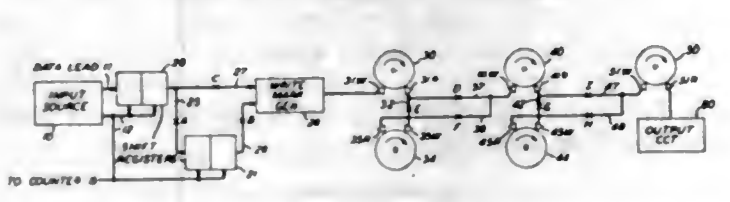
A device for transferring half words between an external data handling device and the main memory of a central data processor, the arrangement being such that two half words are stored in or are read out of, each memory address. For a transfer into the memory from the external device, the external device applies a full word to the data processor. One half of the word represents data and the other half represents the address of a control word which controls the entry of the data into memory. The control word has a current address portion, a half word indicator bit, a word count portion, and a count control portion. Gating means are provided so that the input data can be transferred to either the upper half or the lower half of the address as determined by the half word indicator bit. Each time the control word is withdrawn from memory the indicator bit is changed so that two successive half words are entered into the lower half and then the upper half of a memory location. Each time the control word is withdrawn from memory the word count portion of the control word is decremented, and the transfers are terminated when the word count reaches zero. Every other time the control word is withdrawn from memory the current address portion must be modified. The current address portion is either incremented by one or decremented by one depending upon which operation is specified by the count control portion of the control word. The control circuitry operates in a similar manner to control half word transfers from the memory to the external device.

3,387,281
INFORMATION STORAGE ARRANGEMENT EMPLOYING CIRCULATING MEMORIES

Theodore R. Peters, Flanders, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Nov. 12, 1965, Ser. No. 507,447

19 Claims. (Cl. 340—172.5)



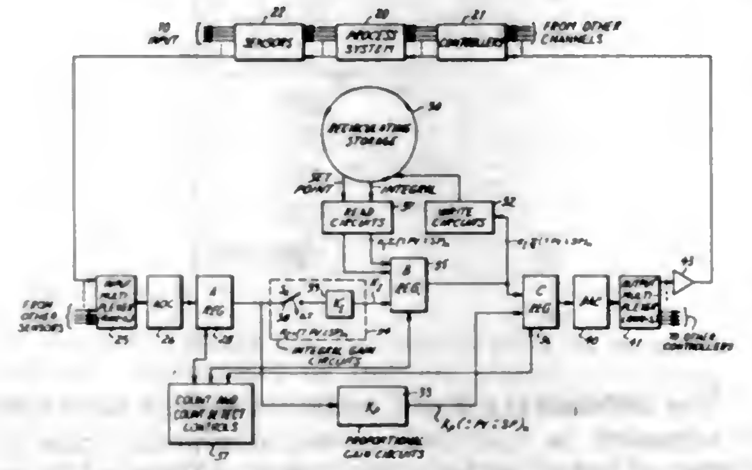
1. In combination, an asynchronous data source, a circulating memory characterized by a capacity of *m* bits, where *m* is a positive integer, and a plurality of cascaded intermediate storage stages connecting said source and said circulating memory, each of said intermediate storage stages comprising a plurality of like periodic memories of capacity *m*/*n*, where *n* and *m*/*n* are positive integers.

3,387,282
INPUT FOR DIGITAL CONTROLLER

James O. Jacques, Boulder, Colo., assignor to International Business Machines Corporation, Armonk, N.Y., a corporation of New York

Filed Jan. 17, 1966, Ser. No. 520,982

8 Claims. (Cl. 340—172.5)



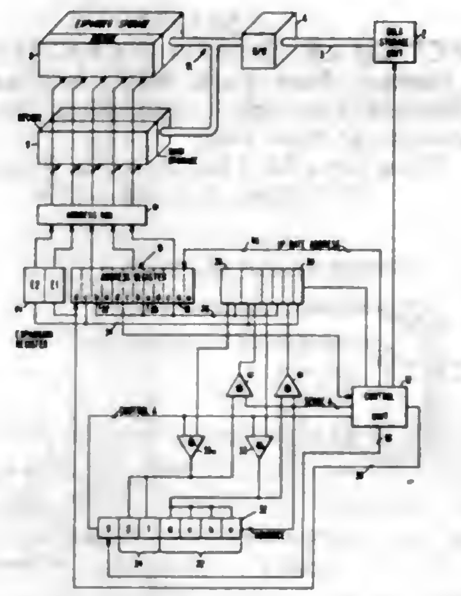
1. A system for entering a new set point in a multiloop digital controller comprising the combination of;
  an adjustable analog device for generating a voltage representative of a desired set point;
  analog to digital converter means responsive to said analog voltage for generating a digital signal corresponding to the value of said desired set point;
  and the digital controller having a plurality of successively scanned loops,
    said digital controller further including an extra loop position,
    means for reading said analog voltage in the extra loop position;
    means to produce a digital set point signal,
    and means for entering the set point signal in a selected loop.

3,387,283
ADDRESSING SYSTEM

Mark C. Snedaker, Vestal, N.Y., assignor to International Business Machines Corporation, Armonk, N.Y., a corporation of New York

Filed Feb. 7, 1966, Ser. No. 525,464

4 Claims. (Cl. 340—172.5)



1. In a data processing system an improved addressing system comprising,
  a storage means having a plurality of individual storage positions,
  first means for individually addressing selected ones of said storage positions and including means for storing corresponding address indicia,
  second means for incrementing said address indicia and for sensing a carry signal therefrom,
  third means responsive to said first means for storing a portion of said address indicia,
  means for incrementing said address indicia in said third means prior to said incrementing by said second means, and
  means responsive to said carry sensing means for transferring said incremented address indicia from said third means to said first means.

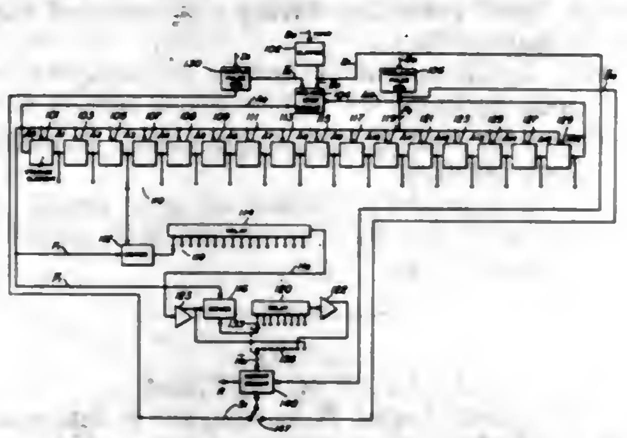
3,387,284
LONG DIGITAL DELAY

John C. Munson, Silver Spring, and Joseph A. Faulkner, Takoma Park, Md., assignors to the United States of America as represented by the Secretary of the Navy

Filed Apr. 27, 1965, Ser. No. 451,363

7 Claims. (Cl. 340—173)

A long digital delay system which provides a long, stable, selectable and precise delay of polarity samples of an input analog signal. The polarity of the input signal is sampled each T seconds and the samples are stored in an interlaced pulse pattern in a circulating loop memory. During sampling a delayed sample is read out of the storage loop such that an output pulse train appears which is a replica of the input sample train except delayed by a selected amount. An add and drop control circuit along with a precessing feature in the loop memory enables new information to be added periodically to the loop while old interlaced information continues to circulate in the loop.

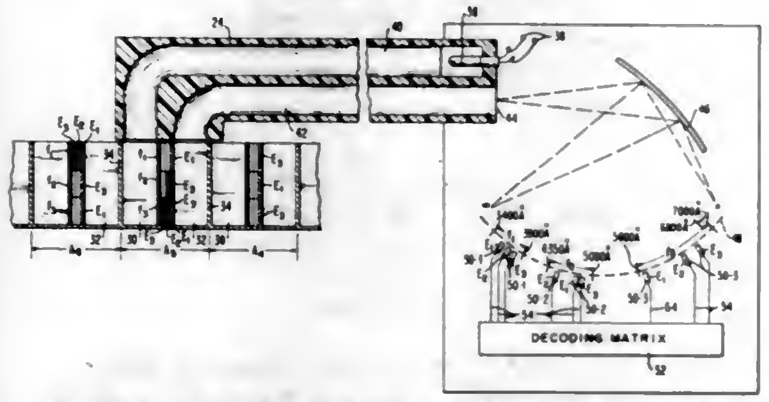


3,387,285
SPECTRALLY CODED DATA STORAGE

John W. Horton, New York, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Dec. 23, 1963, Ser. No. 332,607

17 Claims. (Cl. 340—173)



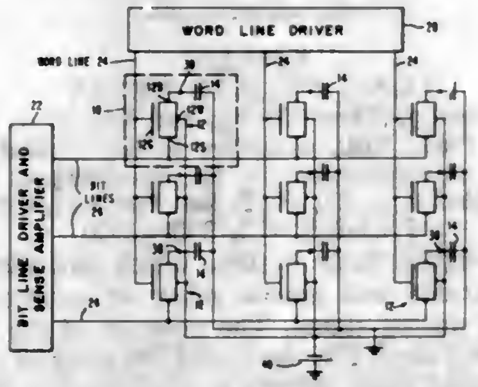
A plurality of data storage bins are arranged in a column with the data in each bin being composed of one or more different elements each having different spectral characteristics. Light is passed through a bin and is applied to a spectroscope which disperses the spectral lines of each element in an absorption spectrum having sectors corresponding to the storage positions of the column. Particular ones of the spectral lines corresponding to each element are selected for detection.

3,387,286
FIELD-EFFECT TRANSISTOR MEMORY

Robert H. Dennard, Croton-on-Hudson, N.Y., assignor to International Business Machines Corporation, Armonk, N.Y., a corporation of New York

Filed July 14, 1967, Ser. No. 653,415

21 Claims. (Cl. 340—173)



The memory is formed of an array of memory cells controlled for reading and writing by word and bit lines which are connected to the cells. Each cell is formed, in one embodiment, using a single field-effect transistor and a single capacitor. The gate electrode of the transistor is connected to the word line, the source terminal to the bit line, and the drain terminal directly to one of the electrodes of the capacitor. The other electrode of the capacitor is connected to a reference potential. Information is stored by charging the capacitor through the transistor and information is read out by discharging the capacitor through the transistor. During a write operation the word line, which is connected to the gate of the transistor, is energized to render the transistor conductive between source and drain. If a zero is to be stored, the bit line is not energized and the capacitor is not charged. If a one is to be stored, the bit line is energized and the capacitor is charged to essentially the potential of the bit line signal. During read operations only the word line is energized and a signal is transmitted to the bit line if a one has been stored previously and the capacitor is charged. Since the charge on the capacitor does leak off, it is necessary to periodically regenerate the information stored in the memory.

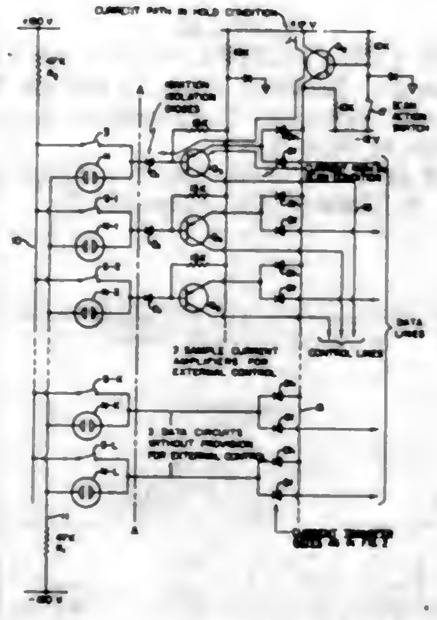
In another disclosed embodiment rather than storing a charge in a conventional capacitor, a second field-effect transistor is used and the charge is stored in the capacitance between the gate and substrate of this transistor. In this memory the readout is nondestructive with the charge stored at the gate of the second transistor being used to render that transistor conductive when a binary one is stored, so that the word line signal is transmitted through this second transistor to the bit sense line. The entire memory in these and other embodiments disclosed is preferably fabricated in integrated circuit form using a single substrate of semiconductor material.

3,387,287
DIGITAL DATA STORAGE CIRCUIT FOR DATA RECORDING AND TRANSMISSION SYSTEMS

Richard C. Webb, Broomfield, Colo., assignor to Colorado Instruments, Inc., Broomfield, Colo., a corporation of Colorado

Filed Feb. 17, 1965, Ser. No. 433,431

10 Claims. (Cl. 340—173)



This invention is a digital memory circuit. A neon tube is connected in series with a switch between a pair of sources of potential of opposite polarity. Connected to the junction between the switch and the neon lamp are the anodes of a pair of diodes. One diode of each pair is a holding diode and its cathode is connected to a third source of potential. The cathode of each holding diode is also connected to a scan switch. The cathode of each transfer diode

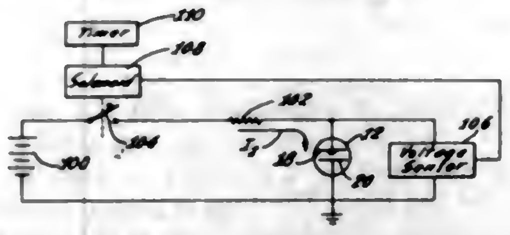
is connected to a data line. When one of the first switches is closed, the neon tube connected to it lights. When the scan switch is closed, the neon tube connected to it lights. When the scan switch is closed, the ignited neon tube applies a voltage through its transfer dioce to its data line. In addition, amplification and control means are provided so that the transfer signal can be used to control elements such as relays.

3,387,288
RAPID READOUT OF ELECTROLYTIC CELL ACCUMULATOR

Thomas B. Bissett, Malibu, and Martin S. Tatch, West Los Angeles, Calif., assignors to The Bissett-Berman Corporation, Santa Monica, Calif., a corporation of California

Filed May 24, 1967, Ser. No. 640,946

12 Claims. (Cl. 340—173)



This invention relates to a technique for rapid readout of an electrolytic cell accumulator which has accumulated a large storage charge of plated material at a low average current. The rapid readout is accomplished by using a source of current to produce a flow of current through the electrolytic cell in a direction to discharge the storage charge of plated material and wherein the discharge current has a non-uniform characteristic with a large initial value and a significantly smaller final value. The non-uniform discharge current may also be used to produce a storage of the same information in an auxiliary electrolytic cell and with the actual readout of the information accomplished by the passage of a constant current through the auxiliary electrolytic cell.

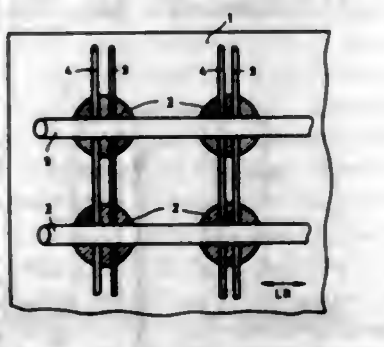
3,387,289
MAGNETIC THIN FILM READOUT SYSTEM

Karlheinz Walter, Munich, Germany, assignor to Siemens Aktiengesellschaft, Munich, Germany, a corporation of Germany

Filed Dec. 19, 1962, Ser. No. 245,814

Claims priority, application Germany, Dec. 22, 1961, S 77,252

2 Claims. (Cl. 340—174)



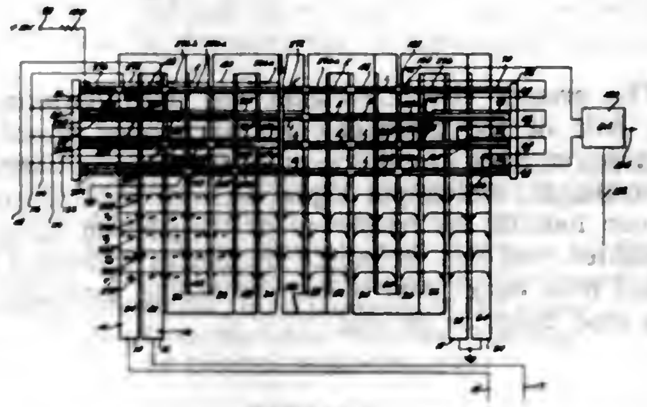
1. An arrangement for the regeneration of magnetic conditions, decomposed by frequent reading operations, in a storage element comprising an individual thin magnetizable layer having a preferential axis of magnetization, comprising means disposed adjacent to, and cooperable with said layer for the conduction of write-in impulses to and read-out impulses from said layer, means for the conduction of reading and regenerating impulses to said layer, and impulse generation means operatively connected to said second mentioned means, which generates reading impulses of one polarity and regenerating impulses of opposite polarity, which are thereby conducted to said thin layer with the respective regenerating impulses being operative to generate a magnetic field in said layer which is oppositely directed to the magnetic field generated in such layer by the reading impulses, operative to effect a regeneration of the original magnetic condition of said thin magnetized layer, wherein said impulse generation means is constructed to allocate one regenerating impulse to a series of reading impulses.

3,387,290
MULTIPHASE SHIFT REGISTER MEMORY

Richard L. Snyder, Fullerton, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware

Filed Nov. 13, 1963, Ser. No. 323,292

11 Claims. (Cl. 340—174)



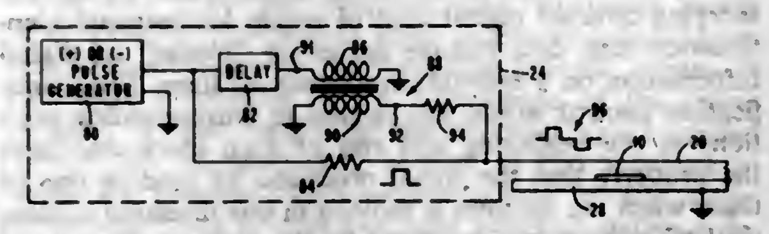
A magnetic shift register including a plurality of magnetic mediums which are magnetically coupled to a polyphase propagating array formed of magnetic material and having a plurality of interconnected segments arranged in parallel juxtaposition which array is responsive to driving pulses applied thereto for developing sequences of driving fields. Recording coils arranged in staggered surrounding relationship at first ends of the magnetic mediums serve to develop informational magnetic domains in different ones of the magnetic mediums during different driving pulse intervals, reproducing coils arranged in staggered surrounding relationship at second ends of the magnetic medium serving to sense the informational magnetic domain.

3,387,291
TIME DISPLACED MEMORY DRIVE

Emerson W. Pugh, Hughsonville, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

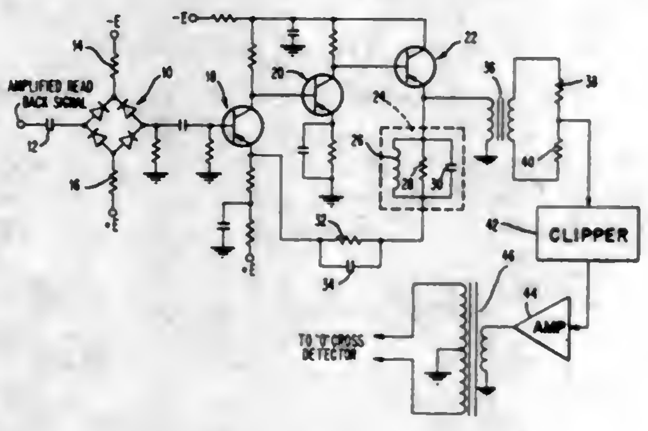
Filed May 1, 1964, Ser. No. 364,172

11 Claims. (Cl. 340—174)



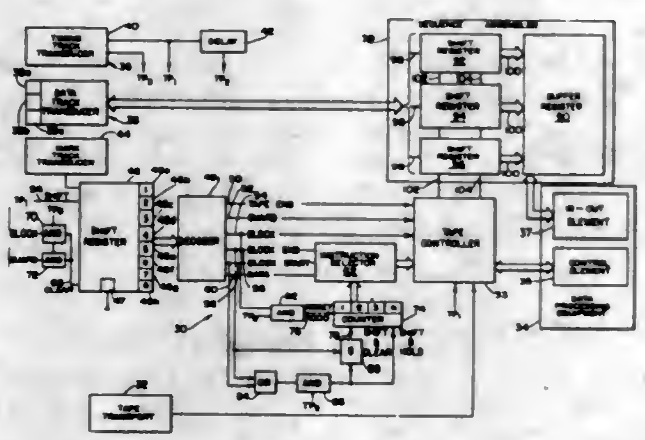
A means for rapidly energizing pulsed operation circuits which contain circuit elements having long time constants. A data pulse is applied to said circuit elements and a time adjacent, opposite-polarity pulse is also applied, which opposite-polarity pulse counteracts currents that persist in the circuit element, in order to clear it for subsequent data pulses.

3,387,292
PHASE MODULATION READ BACK CIRCUIT
Eugene B. Barcaro, Norristown, and John W. Thompson, Upper Darby, Pa., assignors to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Filed May 1, 1964, Ser. No. 364,122
5 Claims. (Cl. 340—174.1)



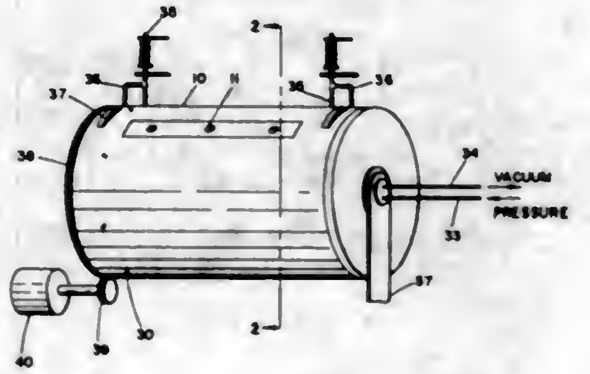
The present circuit enriches the third harmonic of one half of the frequency of the applied signal and provides a filter circuit tuned to said third harmonic. Accordingly, the output signal has the third harmonic of one half of the frequency of the applied signal accentuated and this technique minimizes distortion of a signal read back from a data recording medium, such as a tape, drum or the like.

3,387,293
BIDIRECTIONAL RETRIEVAL OF MAGNETICALLY RECORDED DATA
Thomas C. Stockebrand, West Acton, Mass., assignor to Digital Equipment Corporation, Maynard, Mass.
Filed Nov. 9, 1964, Ser. No. 409,913
15 Claims. (Cl. 340—174.1)



A digital data storage system uses one or more mark tracks, in addition to the usual information tracks, for carrying selected digital control words to designate identification and data storage spaces or "blocks" of digital information on a movable recording medium. The identification control words are located in corresponding positions at the beginning and end of each block and have the property that the signal produced by reading one of them when the medium is moving in one direction is identical with the signal produced by the corresponding word when the medium is moving in the opposite direction. This provides equal facility of identification during motion in either direction. The data control words are located beside each data group in the block and are selected to provide the same signal when they are read in either direction so that data groups may readily be identified and distinguished from identification groups.

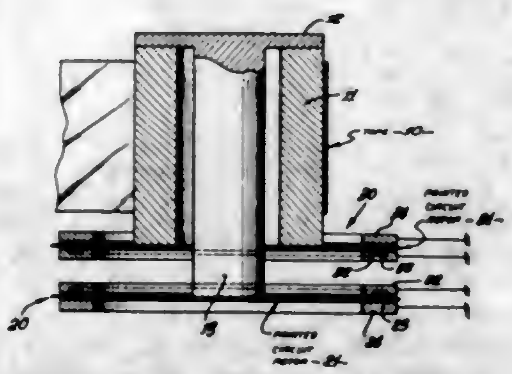
3,387,294
RAPID LOADING MAGNETIC TAPE RECORDING SYSTEM
Daniel Silverman, Tulsa, Okla., assignor to Pan American Petroleum Corporation, Tulsa, Okla., a corporation of Delaware
Filed Jan. 22, 1965, Ser. No. 427,378
10 Claims. (Cl. 340—174.1)



This invention is concerned with the recording and reading of magnetic records on the flexible magnetic tape in which there is a plurality of parallel recording tracks across the tape. The tape is placed around the surface of a rotating cylindrical drum. It is held to the drum (which has a porous outer surface) by differential air pressure outside over inside of the surface.

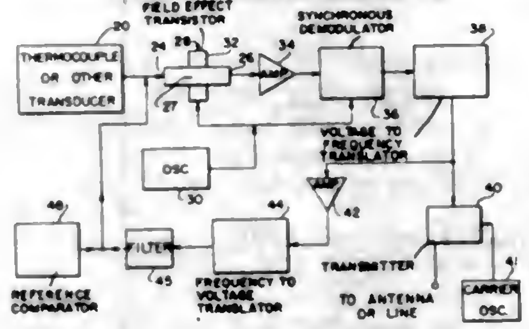
The tape must be precisely positioned longitudinally with respect to the drum surface, and precisely aligned laterally. The tape is prepositioned with respect to the drum on a shelf adjacent the drum and is picked up by the rotating drum by means of retractable pins in the drum surface cooperating with precisely punched holes in the leading edge of the tape. A row of circumferentially placed pins on the drum surface cooperating with a longitudinal row of punched holes in the tape provides precise lateral alignment of the tape with respect to the drum. Means are provided to press the tape into intimate contact with the drum surface so that the differential pressure can hold it. The tape is released from the drum by removing or reversing the differential pressure across the circumferential surface of the drum.

3,387,295
SKEW CORRECTION APPARATUS UTILIZING A TORSIONALLY DEFORMABLE CAPSTAN
Dean L. De Moss, Camarillo, Calif., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
Filed June 24, 1965, Ser. No. 466,607
16 Claims. (Cl. 340—174.1)



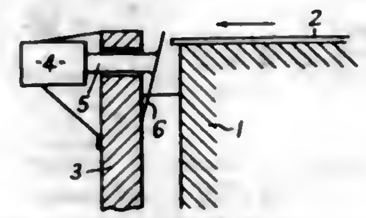
A tape transport with skew correction is disclosed in which a torsionally deformable capstan is controlled from signals representing tape skew. The resulting deformation of the capstan corrects the tape skew. The capstan is particularly driven by two printed circuit motors, whereby temporary speed differences of the motors twist the capstan.

3,387,296
TELEMETERING SYSTEM
Philip L. Epstein, West Caldwell, and Frank Pribila, East Brunswick, N.J., assignors to Quindar Electronics Incorporated, Bloomfield, N.J., a corporation of New Jersey
Filed July 23, 1964, Ser. No. 384,754
2 Claims. (Cl. 340—186)



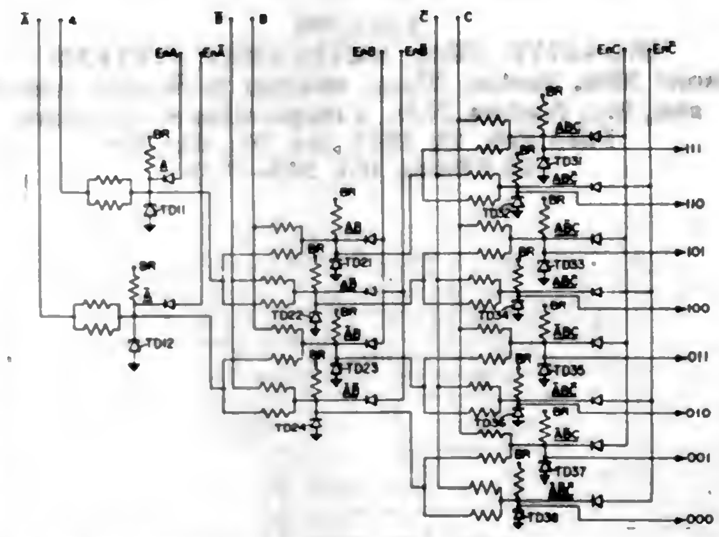
1. A telermetering system comprising a transmitter and a receiver, said transmitter including chopping means for converting an input analog voltage to a first functionally related frequency, high gain alternating current amplifying means for receiving said first functionally related frequency from said chopping means in order to produce an amplified signal, synchronous demodulating means for receiving said amplified signal from said high gain alternating current amplifying means to produce a first functionally related voltage, oscillating means for applying functionally related oscillating signals to said chopping means and said synchronous demodulating means, voltage to frequency translating means for receiving said first functionally related voltage from said synchronous demodulating means and for producing a second functionally related frequency, transmitting output means for directing said second functionally related frequency through a transmission medium, first frequency to voltage translating means for receiving said second functionally related frequency and producing a feedback signal, first reference comparator means for comparing a reference signal with said feedback signal and for applying a resulting control signal to said chopping means, said first frequency to voltage translating means having a transformer with a core characterized by a substantially square hysteresis loop by which its operation is substantially unaffected by environmental conditions, said receiver including second frequency to voltage translating means for receiving said second functionally related frequency through said transmission medium and for producing a preliminary output signal, said second frequency to voltage translating means having a transformer with a core characterized by a substantially square hysteresis loop by which its operation is substantially unaffected by environmental conditious, second reference comparator means for comparing a reference signal with said preliminary output signal in order to produce a final output signal for application to an indicator, said first frequency to voltage translating means and said first reference comparator means being matched with said second frequency to voltage translating means and said second reference comparator means in order to achieve inherent similarity between analogous signals controlled thereby, each of said first reference comparator means and said second reference comparator means being characterized by a Zener diode which provide a precise comparison signal, the Zener diode of the first reference comparator means and the Zener diode of said second reference character means being substantially alike, each of said first frequency to voltage translating means and said second frequency to voltage translating means including a non-critical passive network of resistors and capacitors, the linearity of response of said first frequency to voltage translating means and the linearity of response of said second frequency to voltage translating means being irrelevant because of matching which exactly compensates for any non-linearity present.

3,387,297
SHEET POSITION SENSOR AND INDICATOR IN A SHEET-HANDLING MACHINE
Günter Reichelt, Leipzig, and Werner Lein, Radebeul, Germany, assignors to VEB Druckmaschinewerke Leipzig, Leipzig, Germany
Filed May 17, 1965, Ser. No. 456,063
6 Claims. (Cl. 340—259)



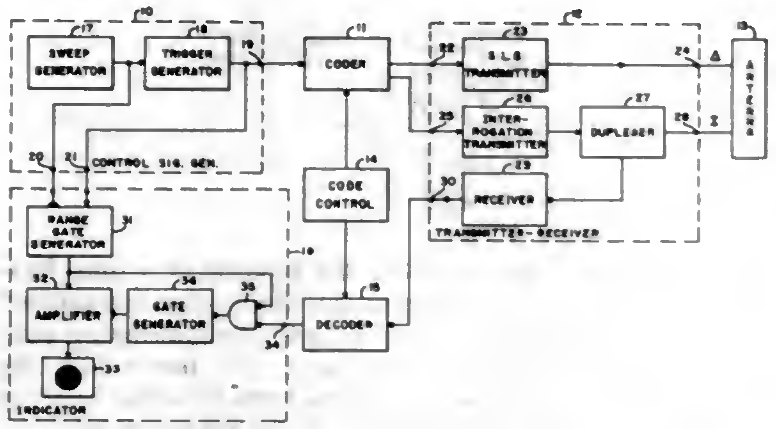
An apparatus for indicating the position of a sheet having a thrust bolt carrying a magnetisable core surrounded by windings one of which is fed with an alternating voltage, whereby when a sheet moves the thrust bolt the change in magnitude of the voltage from the other winding is proportional to the movement of the magnetisable core.

3,387,298
COMBINED BINARY DECODER-ENCODER EMPLOYING TUNNEL DIODE PYRAMID-ORGANIZED SWITCHING MATRIX
Joseph F. Kruy, West Newton, and Chittoor V. Ramamoorthy, Boston, Mass., assignors to Honeywell Inc., Minneapolis, Minn., a corporation of Delaware
Filed Oct. 26, 1964, Ser. No. 406,256
11 Claims. (Cl. 340—347)



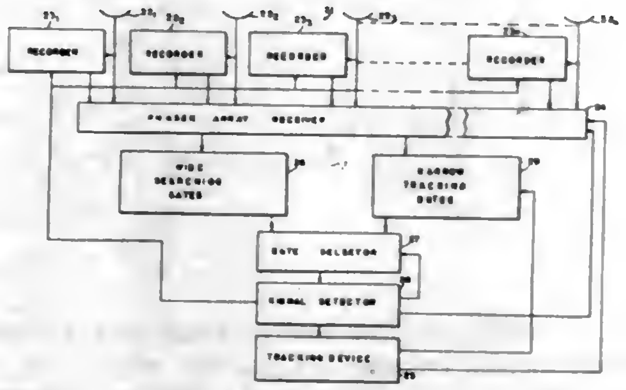
1. A pyramid-organized matrix comprising a sequence of interconnected columns of separate stages, the number of stages in said sequence of columns increasing in size between the apex and the base of the pyramid, each of said stages including bistable signal storage means, means corresponding to each column for applying decoder signals to each stage thereof, means corresponding to each stage for receiving a decoded signal from the preceding column of said sequence, said last-recited means being selectively adapted to apply an encoded signal from each of said stages to the preceding column, means in each stage responsive to the coincidence of the corresponding decoder signal and the decoded signal applied thereto from the preceding column in said sequence to switch the bistable signal storage means of said stage, means responsive to said switching action to derive a decoded signal for application to a plurality of stages in the subsequent column of said sequence, means responsive to an encoded signal received by a selected stage of a given column for switching the bistable signal storage means of said stage, and means responsive to said last-recited switching action for deriving an encoder signal from said given column and from each column preceding said given column in said sequence.

3,387,299
LIGHTWEIGHT IFF DETECTION SYSTEM
John H. Gutman, Greenlawn, and Herbert Huebscher, New Hyde Park, N.Y., assignors to Hazeltine Research, Inc., a corporation of Illinois
Filed Nov. 17, 1965, Ser. No. 518,503
17 Claims. (Cl. 343—6.5)



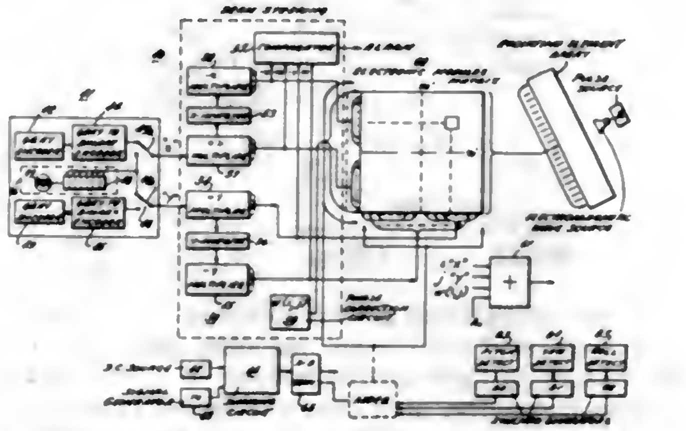
Disclosed is a lightweight IFF interrogator-indicator system capable of portable use by a person to derive an indication of the range and azimuth of a transponding target. An azimuth indication is derived by means of antenna pointing, while a range and identification indication is provided by means of passive aural and/or visual indicator devices, such as a loudspeaker and indicator lamps, respectively. Other embodiments are covered.

3,387,300
NEGATIVE TIME DETECTION SYSTEMS
Daniel Blitz, Boston, Mass., assignor to Sanders Associates, Inc., Nashua, N.H., a corporation of Delaware
Filed Feb. 13, 1967, Ser. No. 615,780
12 Claims. (Cl. 343—7.3)



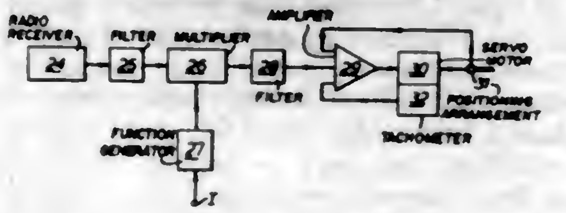
Apparatus is herein disclosed for determining the path (or other information) of a target approaching from a distance, especially that portion of the path (or other information) traversed (occurring) when the target signal is too weak to conventionally detect. The apparatus includes conventional radar (or sonar or other detection) equipment for searching for the target, using preferably broadband gating circuitry. The signal outputs from the broadband circuits, which are applied to tracking and detection circuitry, are also recorded. Once a target has been detected, the gating is adjusted and narrowed, and the recorded prior-to-detection signals are played backward through the narrow gating. At increased signal-to-noise ratio, the target can be tracked backward in time to ranges greater than that originally detectable with the broadband gating. Alternatively, searching can be conducted with a single searching narrow gate, the negative tracking being carried out within the properly positioned narrow gate after initial detection has occurred.

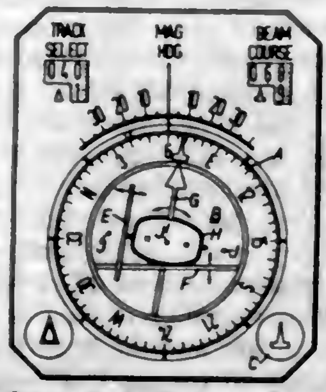
3,387,301
ANTENNA ARRAY EMPLOYING AN AUTOMATIC AVERAGING TECHNIQUE FOR INCREASED RESOLUTION
Judd Blass, Englewood, and Matthew W. Slate, Teaneck, N.J., assignors to Blass Antenna Electronics Corporation, Long Island City, N.Y., a corporation of Delaware
Filed Mar. 31, 1966, Ser. No. 539,074
13 Claims. (Cl. 343—100)



An antenna system comprised of a stationary array of radiating elements and a feed means for directing electromagnetic rays toward the array, which rays are reflected from the array and directed into space. The array is caused to develop a scanning beam by providing control means which selectively controls the phase delay imparted to the electromagnetic waves impinging upon each element of the radiating array thereby developing a scanning beam of relatively narrow beam width. Since the changes in phase delay between adjacent radiating elements is a step-like pattern as opposed to a linear phase taper, the resultant beam pointing error and sidelobe variation is minimized through the application of a signal simultaneously applied to all elements of the array which signal varies in magnitude at a rate at least equal to the repetition rate of electromagnetic wave pulses directed toward the radiating array from the feed means.

3,387,302
INDICATORS
Frank H. Bevan, London, England, assignor to Elliott Brothers (London) Limited, London, England, a British company
Filed Feb. 6, 1967, Ser. No. 614,107
Claims priority, application Great Britain, Feb. 12, 1966, 6,295/66
11 Claims. (Cl. 343—108)



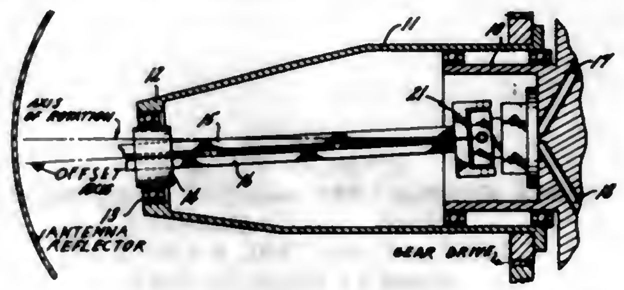


A landing flight path indicator system for an aircraft has receivers responsive to a radio guidance beam for providing signals indicative of the relationship between the actual aircraft position and a desired path.

The system includes a variable sensitivity indicator having a marker movable with respect to a fixed point to indicate the position of the aircraft with respect to the desired path and means for increasing the sensitivity as the aircraft approaches touchdown.

3,387,303
DUAL CHANNEL NUTATING WAVEGUIDE FEED
Paul H. Mountcastle, Glen Burnie, Md., and William E. Snyder, Webster, N.Y., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Mar. 5, 1965, Ser. No. 437,613
3 Claims. (Cl. 343—758)

A dual channel scanning device having first and second waveguides positioned in a first bushing in a stationary housing and third and fourth waveguides each having one end positioned in a second bushing mounted in a rotatable housing with the other ends of said third and fourth waveguides being mounted in an offset end of said rotatable housing, and a universal joint connecting said first and second bushings whereby rotation of said rotatable housing causes said third and fourth waveguide to be nutated.



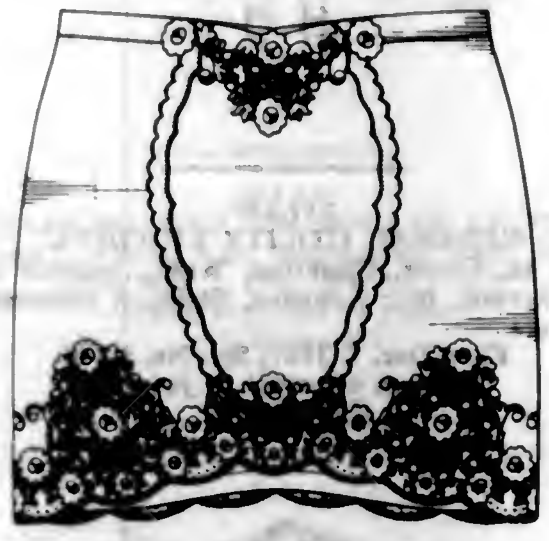
The present invention relates to an antenna and more particularly to compact dual channel nutating waveguides for use in a parabolic microwave antenna.

DESIGNS

JUNE 4, 1968

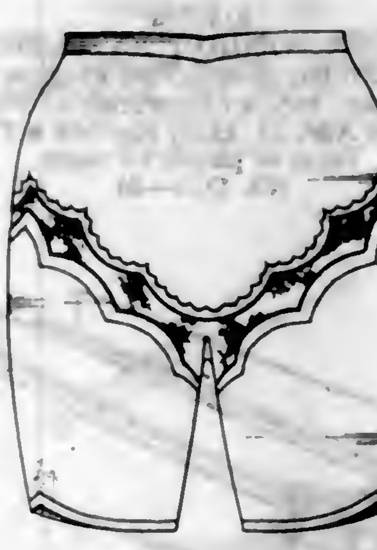
211,231
GIRDLE

Sallyann Z. Salisky, Garfield, N.J., assignor to Sarong, Inc., Dover, Del., a corporation of Delaware
Filed Apr. 27, 1967, Ser. No. 6,867
Term of patent 14 years
(Cl. D2—2)



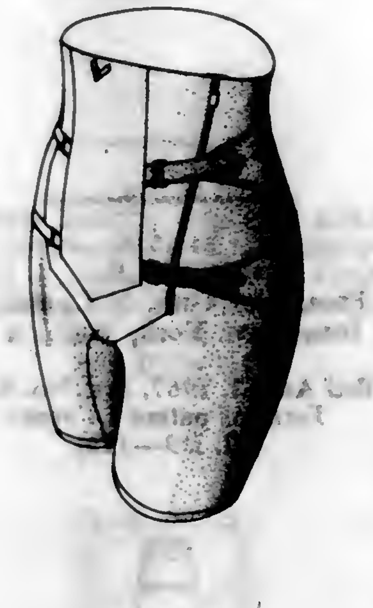
211,232
PANTY GIRDLE

Louise M. Tomasiak, Lincoln Park, N.J., assignor to Sarong, Inc., Dover Del., a corporation of Delaware
Filed Nov. 10, 1966, Ser. No. 4,611
Term of patent 14 years
(Cl. D2—4)



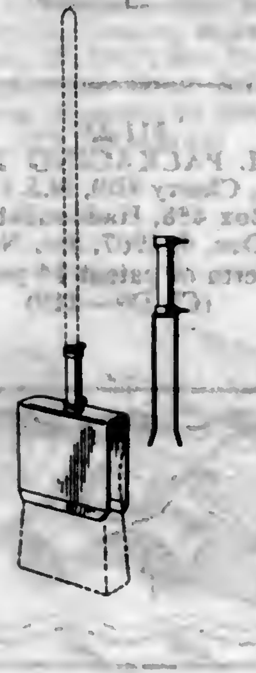
211,233
PANTY GIRDLE

Marguerite R. Williams, 500 Plattsville Road,
Trumbull, Conn. 06611
Filed May 8, 1967, Ser. No. 7,015
Term of patent 14 years
(Cl. D2—4)



211,234
SNOW-REMOVAL ATTACHMENT FOR A BROOM

Thomas J. Collings, Railroad Ave.,
Glen Head, N.Y. 11545
Filed Aug. 29, 1967, Ser. No. 8,421
Term of patent 3½ years
(Cl. D4—4)



211,235

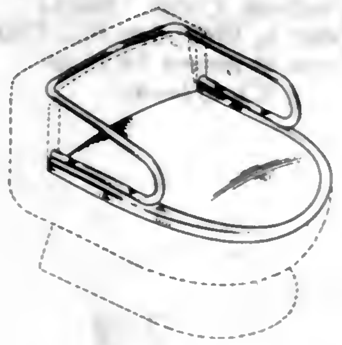
INFANT'S TRAINING CHAIR

Clarence O. Hamilton and Edwin K. Moore, Columbus, Ind., assignors to Hamilton Cosco, Inc., Columbus, Ind., a corporation of Indiana

Continuation of design application Ser. No. 3,734, Sept. 6, 1966. This application June 19, 1967, Ser. No. 7,508

Term of patent 14 years

(Cl. D4—5)



211,236

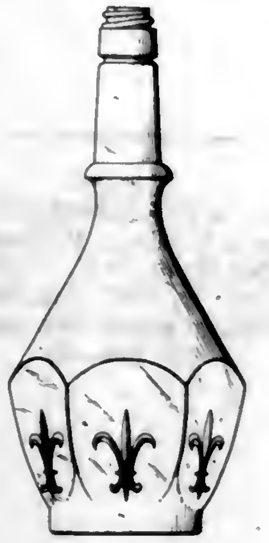
BOTTLE

Ernest L. Du Pree, New York, N.Y., assignor to Schenley Industries, Inc., New York, N.Y., a corporation of Delaware

Filed Aug. 2, 1967, Ser. No. 8,095

Term of patent 14 years

(Cl. D9—112)



211,237

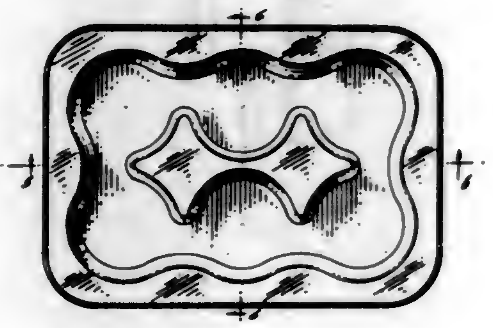
FOIL PACKAGING TRAY

George J. Buff, Jr., Cherry Hill, N.J. (% Penny Plate Inc., P.O. Box 458, Haddonfield, N.J.)

Filed Dec. 4, 1967, Ser. No. 9,628

Term of patent 14 years

(Cl. D9—219)



211,238

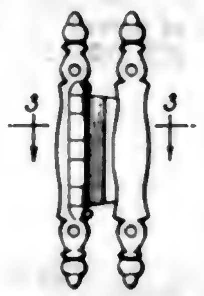
HINGE

La Verne E. Clayton, % Amerock Corporation, 4000 Auburn St., Rockford, Ill. 61103

Original design application June 12, 1967, Ser. No. 7,436, now Patent No. 209,815, dated Jan. 9, 1968. Divided and this application Sept. 25, 1967, Ser. No. 8,716

Term of patent 14 years

(Cl. D10—9)



211,239

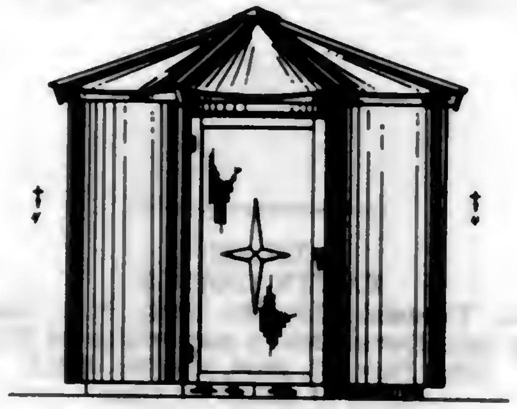
GENERAL UTILITY BUILDING

Kenneth M. Carter, Clarkston, Wash., assignor to Potlatch Forests, Inc., Lewiston, Idaho, a corporation of Delaware

Filed Dec. 7, 1967, Ser. No. 9,686

Term of patent 14 years

(Cl. D13—1)



211,240

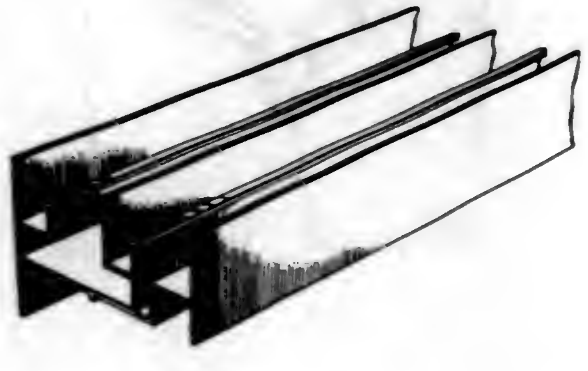
SLIDER WINDOW EXTRUSION

Donald L. Miller, Miami, Fla., assignor to Daryl Industries, Inc., a corporation of Florida

Filed Apr. 21, 1967, Ser. No. 6,779

Term of patent 14 years

(Cl. D13—6)



211,241

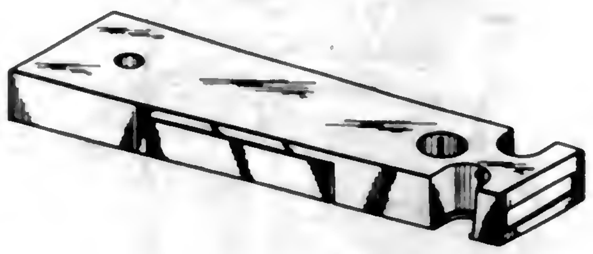
ELECTRODE HOLDER OR THE LIKE

Charles M. Dole, Jr., Mount Kisco, N.Y., and Robert B. Mullaly, West Roxbury, Mass., assignors to Corning Glass Works, Corning, N.Y., a corporation of New York

Filed July 27, 1967, Ser. No. 8,037

Term of patent 14 years

(Cl. D16—1)



211,242

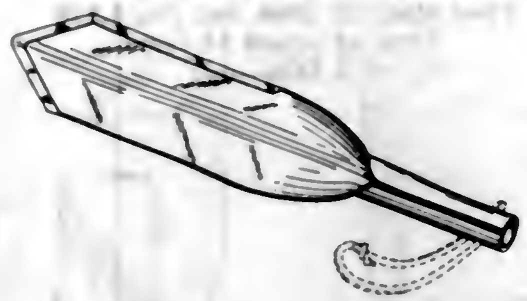
TRAPPING TOOL OR SIMILAR ARTICLE

Ernest J. Wilcox, R.R., Montezuma, Iowa 50171

Filed July 7, 1967, Ser. No. 7,730

Term of patent 14 years

(Cl. D22—18)



211,243

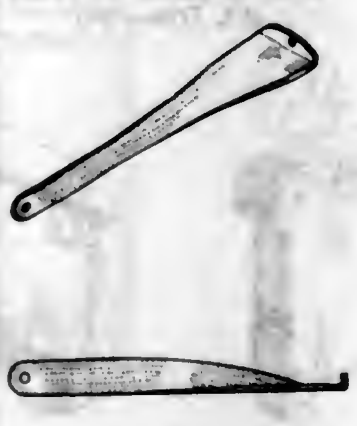
FISHING LURE

John D. Panicci, 21314 Hamilton, Farmington, Mich. 48024

Filed May 10, 1967, Ser. No. 7,057

Term of patent 14 years

(Cl. D22—27)



211,244

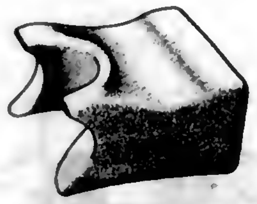
INFANT'S BATHING AID

William K. Hawley, 815 Floral Ave., Terrace Park, Ohio 45174

Filed Nov. 1, 1967, Ser. No. 9,245

Term of patent 14 years

(Cl. D23—52)



211,245

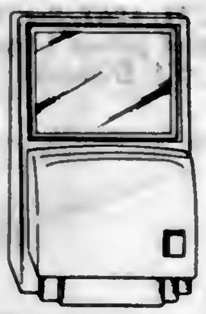
HAND DRIER OR THE LIKE

Frank R. Ball, 525 Preston Ave., and Harry L. Harrison, P.O. Box 121–A, both of Meriden, Conn. 06450

Filed Mar. 23, 1967, Ser. No. 6,353

Term of patent 14 years

(Cl. D23—74)



211,246

COMBINED FAN AND LIGHTING UNIT

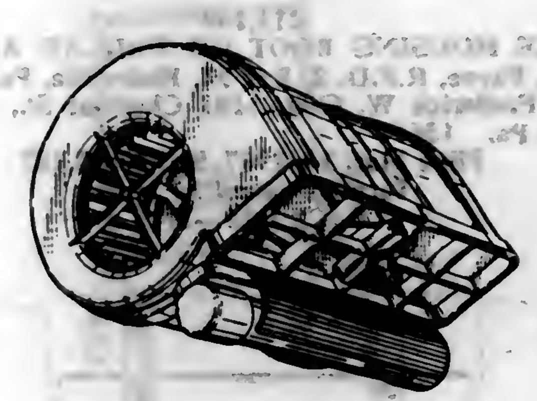
Donald Angus McDonald, Sandringham House, Shirley St., Nassau, Bahamas

Filed Mar. 27, 1967, Ser. No. 6,384

Claims priority, application Great Britain Jan. 11, 1967

Term of patent 14 years

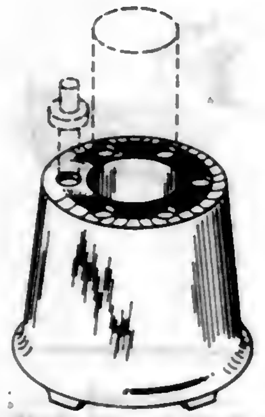
(Cl. D23—140)



211,247
HOLDER FOR DENTAL CLEANSING NOZZLES OR THE LIKE

James Herbert Sullivan, Lake Forest, Ill., assignor to Miles Laboratories, Inc., Elkhart, Ind., a corporation of Indiana

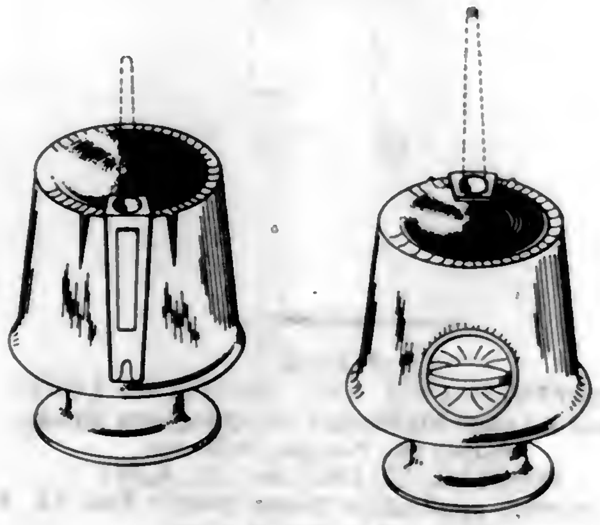
Filed Aug. 31, 1967, Ser. No. 8,445
Term of patent 14 years
(Cl. D24—1)



211,248
DENTAL CLEANSING UNIT OR SIMILAR ARTICLE

James Herbert Sullivan, Lake Forest, Ill., assignor to Miles Laboratories, Inc., Elkhart, Ind., a corporation of Indiana

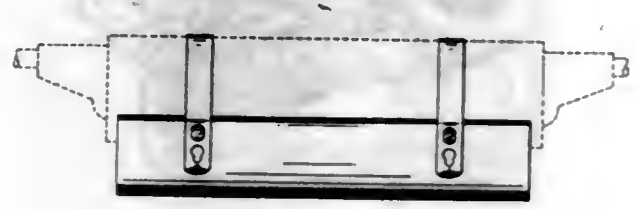
Filed Aug. 31, 1967, Ser. No. 8,446
Term of patent 14 years
(Cl. D24—1)



211,249
CABLE HOUSING BOOT OR SIMILAR ARTICLE

Earl E. Payne, R.F.D. 2, Box 91, Blairsville, Pa. 15717, and Frederick W. Gilg, 3181 Chestnut St., Murraysville, Pa. 15668

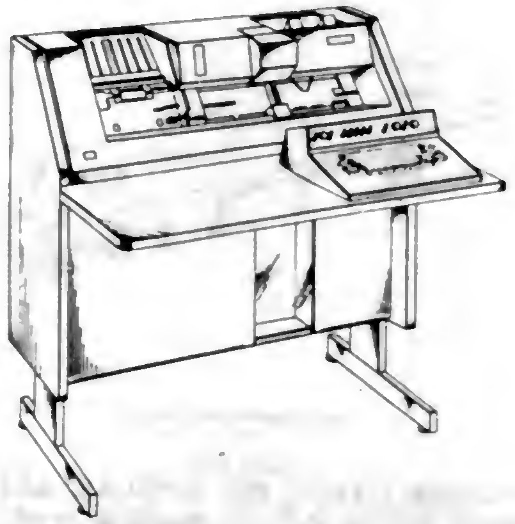
Filed Mar. 14, 1967, Ser. No. 6,187
Term of patent 14 years
(Cl. D26—1)



211,250
CARD PUNCH

Ronald I. Conway, Kingston, and Seton Cottier and Ernest Wittner, Woodstock, N.Y., assignors to International Business Machines Corporation, Armonk, N.Y., a corporation of New York

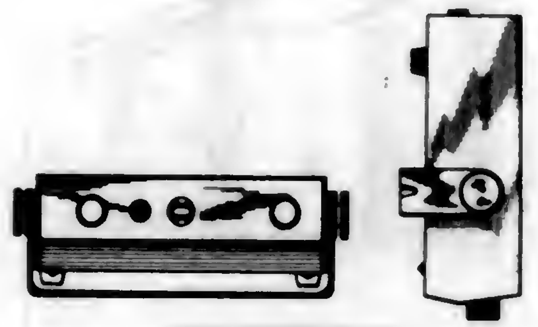
Filed Apr. 14, 1967, Ser. No. 6,682
Term of patent 14 years
(Cl. D26—5)



211,251
AMPLIFIER

Hajime Ota, Tokyo, Japan, assignor to Fedtro, Inc., Rockville Centre, N.Y., a corporation

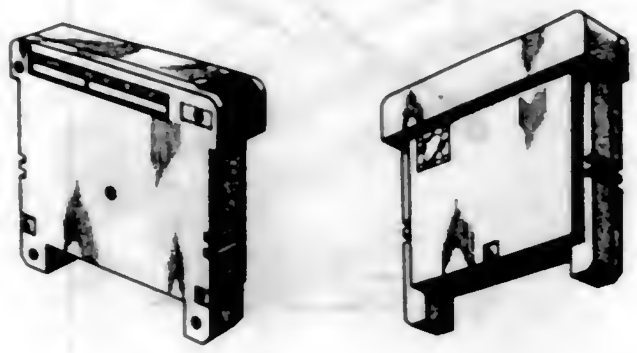
Filed Mar. 29, 1966, Ser. No. 1,678
Term of patent 14 years
(Cl. D26—14)



211,252
RADIO TUNER CARTRIDGE FOR A TAPE-RECORDER OR SIMILAR ARTICLE

Tetsujiro Hasegawa, 19–4 Nakacho, 2-chome, Meguro-ku, Tokyo, Japan

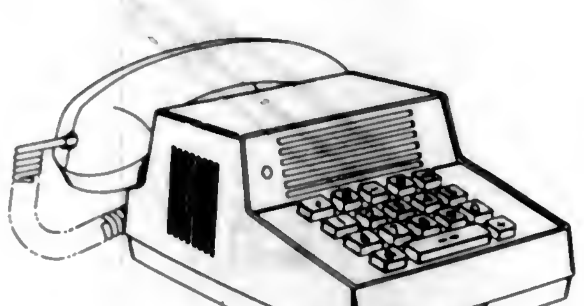
Filed July 26, 1967, Ser. No. 8,013
Term of patent 14 years
(Cl. D26—14)



211,253
HANDSFREE TELEPHONE

Arne Sundquist, Stockholm, and Per Heribertson, Lidingo, Sweden, assignors to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware

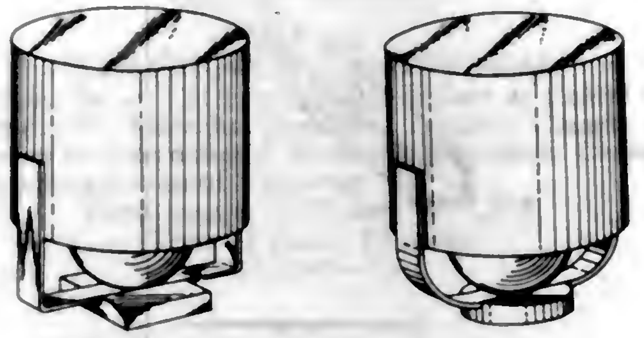
Filed Apr. 23, 1963, Ser. No. 74,587
Claims priority, application Sweden Oct. 25, 1962
Term of patent 14 years
(Cl. D26—14)



211,254
SPEAKER ENCLOSURE

Aston L. Moore, 220 Hammond Place, South Bend, Ind. 46601

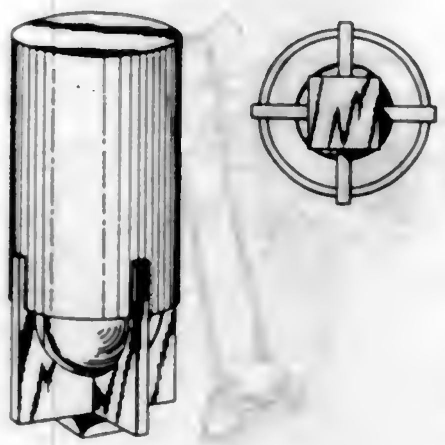
Filed Oct. 13, 1967, Ser. No. 8,991
Term of patent 14 years
(Cl. D26—14)



211,255
SPEAKER ENCLOSURE

Aston L. Moore, 220 Hammond Place, South Bend, Ind. 46601

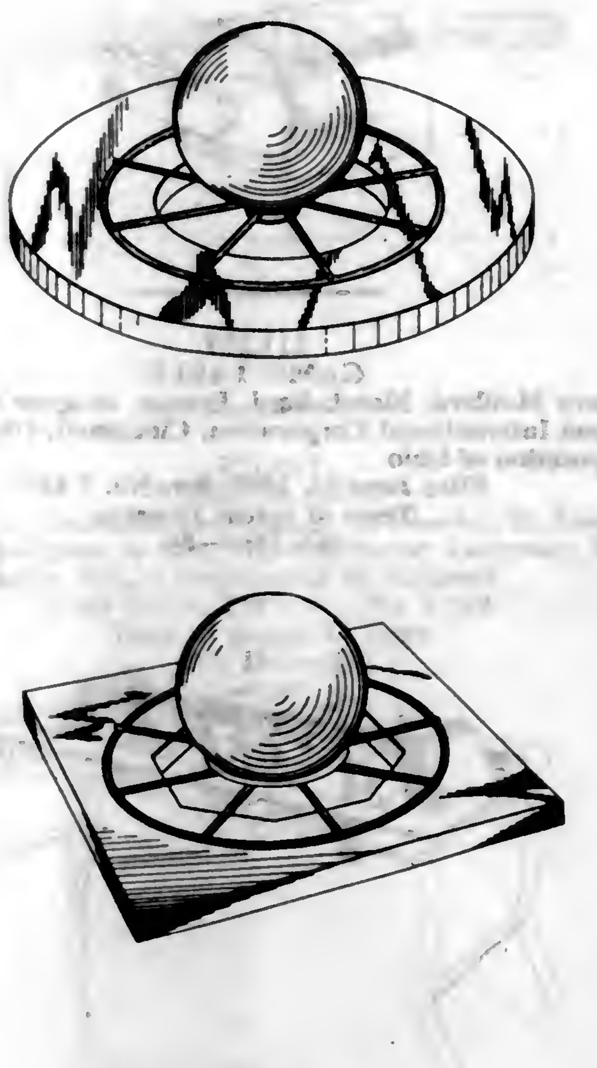
Filed Oct. 13, 1967, Ser. No. 8,992
Term of patent 14 years
(Cl. D26—14)



211,256
SPEAKER BAFFLE

Aston L. Moore, 220 Hammond Place, South Bend, Ind. 46601

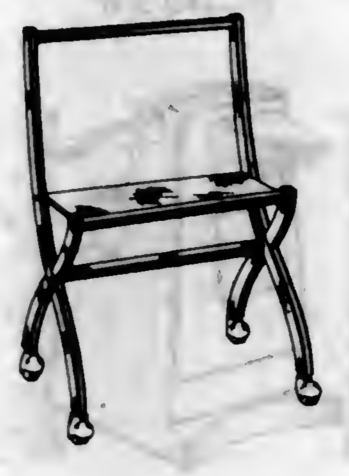
Filed Nov. 1, 1967, Ser. No. 9,238
Term of patent 14 years
(Cl. D26—14)



211,257
SUPPORT STAND FOR A TELEVISION RECEIVER

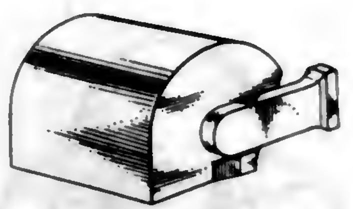
Phil Katzman, 11616 Leavenworth Road, Omaha, Nebr. 68154

Filed Sept. 30, 1966, Ser. No. 4,108
Term of patent 7 years
(Cl. D33—14)



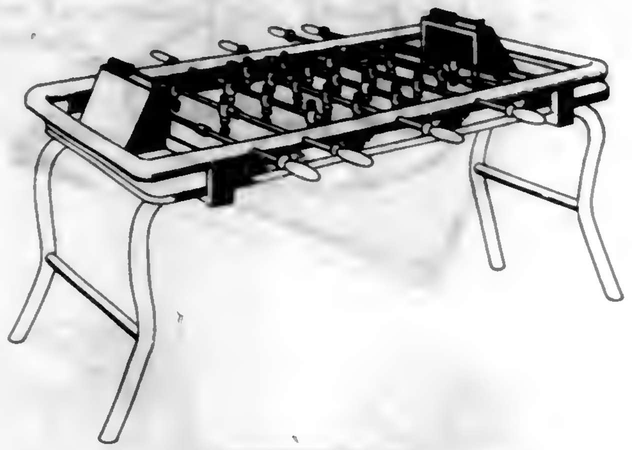
211,258
COMBINED TOILET TISSUE SUPPORT AND COVER

Ben Shrier, 6728 Hillpark Drive,
Los Angeles, Calif. 90028
Filed June 26, 1967, Ser. No. 7,590
Term of patent 14 years
(Cl. D33—31)



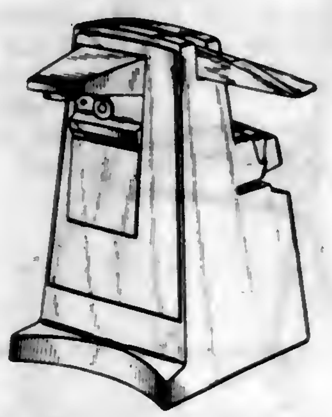
211,259
GAME TABLE

Pierre Maillard, Montbeliard, France, assignor to Patterson International Corporation, Cincinnati, Ohio, a corporation of Ohio
Filed June 12, 1967, Ser. No. 7,430
Term of patent 14 years
(Cl. D34—5)



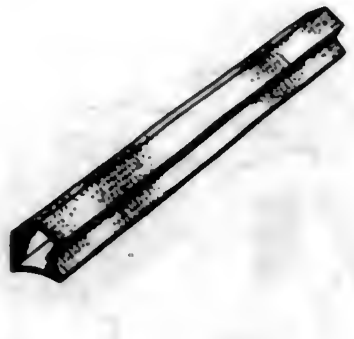
211,260
COMBINATION CAN OPENER AND KNIFE SHARPENER

John E. Reed, Glen Ellyn, Ill., assignor to Sunbeam Corporation, Chicago, Ill., a corporation of Illinois
Filed June 12, 1967, Ser. No. 7,437
Term of patent 14 years
(Cl. D37—1)



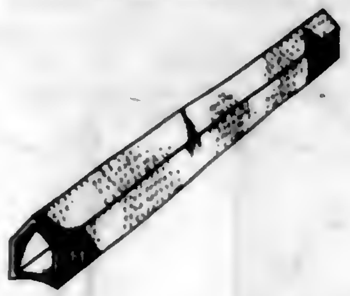
211,261
HOLLOW SIX-SIDED FILE

Elwin Theobald, 4631 Solano Way, Fair Oaks, Calif. 95628, and Phillip R. Andrews, 5700 55th St., Sacramento, Calif. 95824
Filed Sept. 29, 1967, Ser. No. 8,784
Term of patent 14 years
(Cl. D37—1)



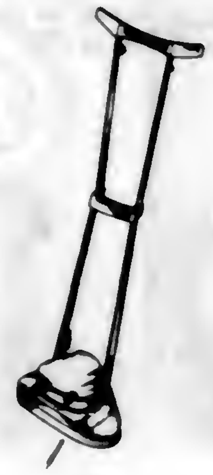
211,262
HOLLOW FIVE-SIDED FILE

Elwin Theobald, 4631 Solano Way, Fair Oaks, Calif. 95628, and Phillip R. Andrews, 5700 55th St., Sacramento, Calif. 95824
Filed Sept. 29, 1967, Ser. No. 8,788
Term of patent 14 years
(Cl. D37—1)



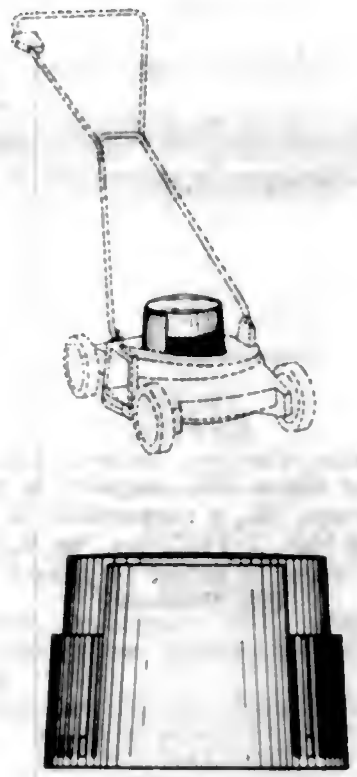
211,263
FLOOR TREATING MACHINE

Raymond Descarries, Montreal, Quebec, Edouard Gaudry, Cite St. Laurent, Quebec, and Paul E. Gaudry, Laval des Rapides, Quebec, Canada, assignors to Electrolux Corporation, Old Greenwich, Conn., a corporation of Delaware
Filed May 9, 1967, Ser. No. 7,032
Term of patent 14 years
(Cl. D37—3)



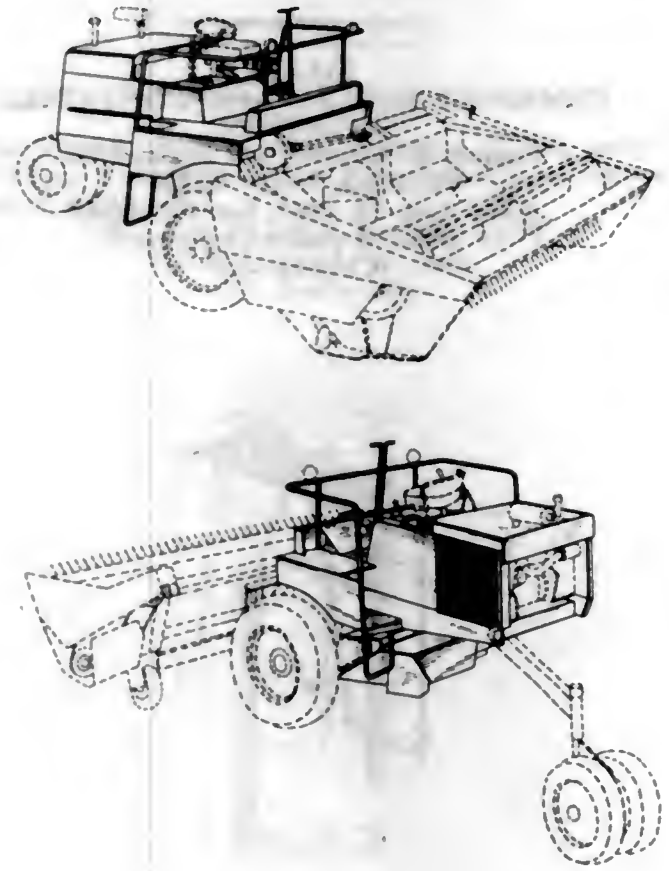
211,264
LAWN MOWER MOTOR SHROUD

James B. Stewart, Glen Ellyn, and Richard S. Hart, Wheaton, Ill., assignors to Sunbeam Corporation, Chicago, Ill., a corporation of Illinois
Filed May 24, 1967, Ser. No. 7,251
Term of patent 14 years
(Cl. D40—1)



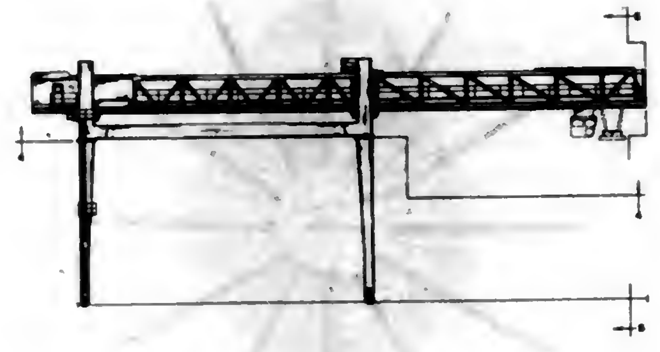
211,265
SELF-PROPELLED WINDROWER

Robert A. Skyer, Chicago, Ill., and Robert A. Calder and Herbert W. Molzahn, Hamilton, Ontario, Canada, assignors to International Harvester Company, Chicago, Ill., a corporation of Delaware
Filed June 6, 1967, Ser. No. 7,375
Term of patent 14 years
(Cl. D40—1)



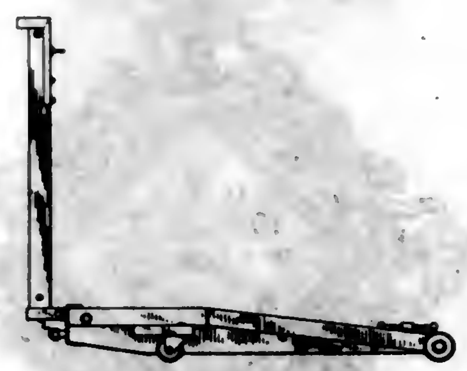
211,266
SLIDING CRANE

Charles H. Zweifel, Oakland, and Lawrence A. Wright, Alameda, Calif., assignors to Pacific Coast Engineering Company, a corporation of California
Filed May 1, 1967, Ser. No. 6,914
Term of patent 14 years
(Cl. D41—1)



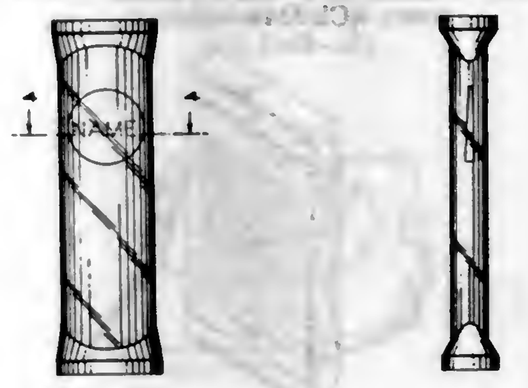
211,267
VEHICLE LIFT

Frank D. Freudenthal and Gilbert W. Gaarder, St. Joseph, Mo., assignors to Gray Manufacturing Company, Inc., St. Joseph, Mo., a corporation of Missouri
Filed Oct. 6, 1967, Ser. No. 8,884
Term of patent 14 years
(Cl. D41—1)



211,268
TIMER WITH FLOATING INDICATOR

Walter G. Von Meyer, 1504 Port Jefferson Road,
Sidney, Ohio 45365
Filed Aug. 5, 1966, Ser. No. 3,365
Term of patent 14 years
(Cl. D42—7)



211,269

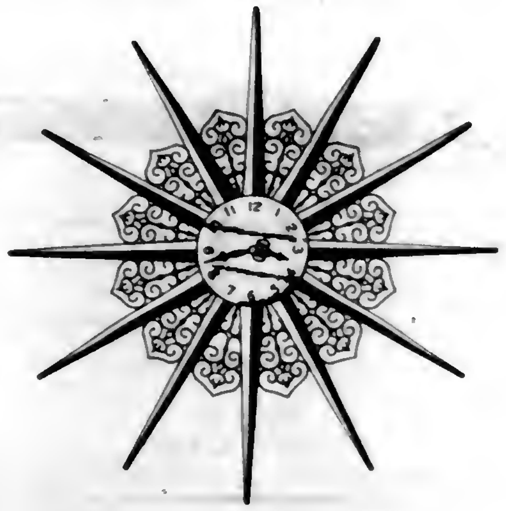
CLOCK

Roman J. Szalek, La Salle, Ill., assignor to General Time Corporation, Stamford, Conn., a corporation of Delaware

Filed Apr. 26, 1967, Ser. No. 6,853

Term of patent 14 years

(Cl. D42—7)



211,270

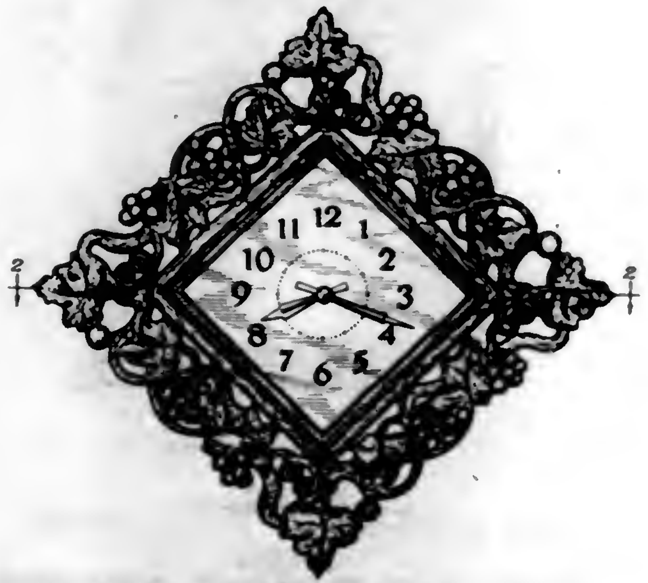
CLOCK

Harry L. Laylon, Syracuse, N.Y., assignor to Sunbeam Corporation, Chicago, Ill., a corporation of Illinois

Filed May 11, 1967, Ser. No. 7,070

Term of patent 14 years

(Cl. D42—7)



211,271

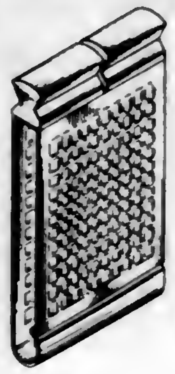
HOLDER FOR TOAST OR THE LIKE

William F. Bradley, 5841 Nagle Ave.,
Van Nuys, Calif. 91461

Filed Mar. 29, 1967, Ser. No. 6,426

Term of patent 14 years

(Cl. D44—1)



211,272

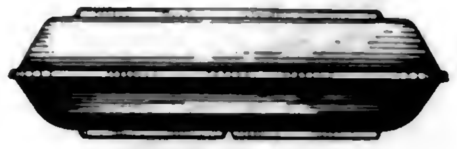
COVERED CASSEROLE

Willis A. Stageberg, 3141 Rhode Island Ave. S.,
Minneapolis, Minn. 55426

Filed July 27, 1967, Ser. No. 8,025

Term of patent 14 years

(Cl. D44—1)



211,273

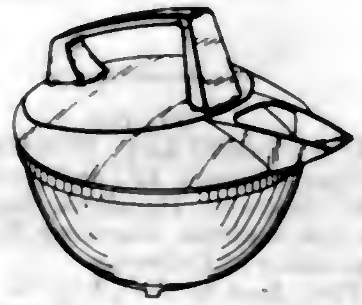
KETTLE

Frederick S. Waller, Caledon, Ontario, Canada, and John E. Reed, Glen Ellyn, Ill., assignors to Sunbeam Corporation, Chicago, Ill., a corporation of Illinois

Filed Nov. 3, 1967, Ser. No. 9,266

Term of patent 14 years

(Cl. D44—25)



211,274

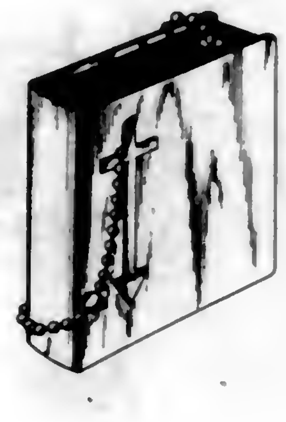
COMBINED ROSARY AND CONTAINER THEREFOR

Thomas R. Duggan, 137 E. 32nd St.,
Brooklyn, N.Y. 11226

Filed Aug. 14, 1967, Ser. No. 8,246

Term of patent 14 years

(Cl. D45—1)



211,275

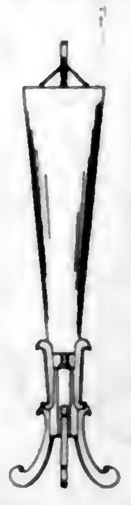
FLOOR LAMP

Fred P. Greve, 801 Timberland Drive,
Berrien Springs, Mich. 49103

Filed July 20, 1967, Ser. No. 7,898

Term of patent 3½ years

(Cl. D48—20)



211,276

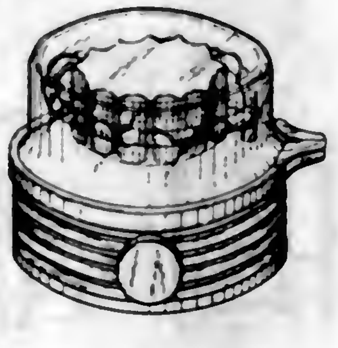
ANTI-COLLISION STROBE LIGHT FOR AIRCRAFT

John L. Jiruska, Annapolis, Md., assignor to Jackson Products Corporation, Annapolis, Md., a corporation of Maryland

Filed Oct. 16, 1967, Ser. No. 9,011

Term of patent 14 years

(Cl. D48—24)



211,277

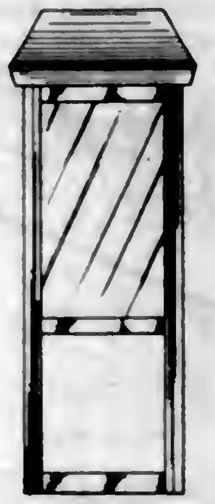
PATH LIGHT

Christopher C. Layton, San Francisco, Calif., assignor to Filper Corporation, San Ramon, Calif., a corporation of California

Filed Feb. 20, 1967, Ser. No. 5,879

Term of patent 14 years

(Cl. D48—31)



211,278

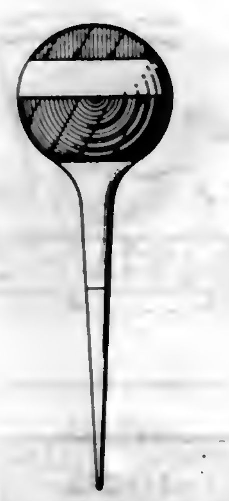
WALK AND GARDEN LIGHT

Mitchell Bobrick, Pacific Palisades, Calif., assignor to Avis Industrial Corporation, Madison Heights, Mich., a corporation of Delaware

Filed Apr. 7, 1967, Ser. No. 6,584

Term of patent 14 years

(Cl. D48—31)



211,279

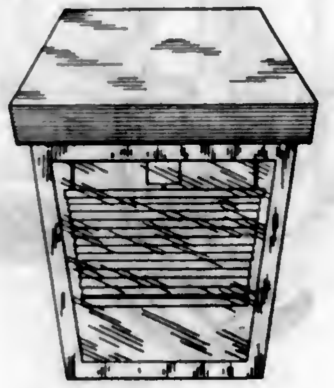
LUMINAIRE

Christopher C. Layton, San Francisco, Calif., assignor to Filper Corporation, San Ramon, Calif., a corporation of California

Continuation-in-part of design application Ser. No. 5,884, Feb. 20, 1967. This application Oct. 24, 1967, Ser. No. 9,141

Term of patent 14 years

(Cl. D48—31)



211,280

ELECTRIC IRON

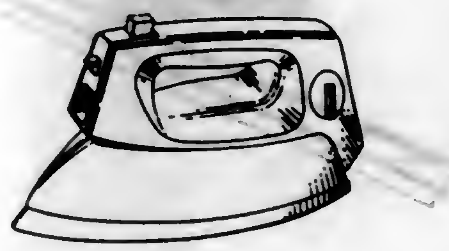
Kenneth Grange, London, England, assignor to Morphy-Richards Limited, Kent England, a company of Great Britain

Filed Mar. 15, 1967, Ser. No. 6,224

Claims priority, application Great Britain Sept. 28, 1966

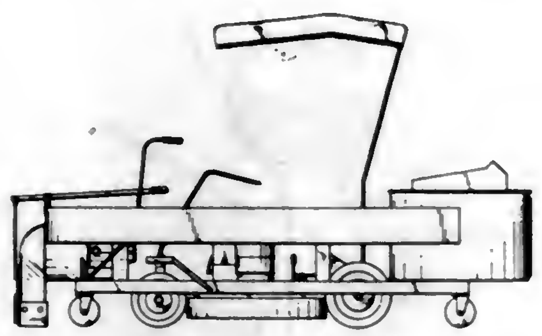
Term of patent 14 years

(Cl. D49—6)



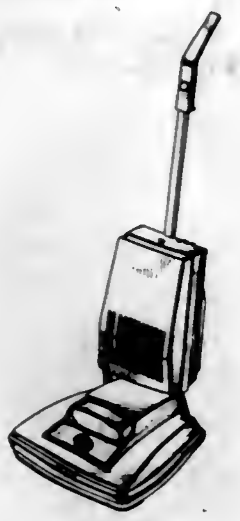
211,281
SWEEPER FOR PARKING LOTS

Roy C. Rush, 6129 NE. Skidmore St.,
Portland, Oreg. 97218
Filed Oct. 16, 1967, Ser. No. 9,010
Term of patent 14 years
(Cl. D49—9.1)



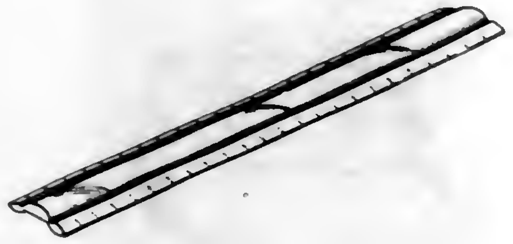
211,282
UPRIGHT SUCTION CLEANER

Harold W. Schaefer and Samuel E. Hohulin, Bloomington, Ill., assignors to National Union Electric Corporation, Stamford, Conn., a corporation of Delaware
Filed Nov. 1, 1967, Ser. No. 9,231
Term of patent 14 years
(Cl. D49—14)



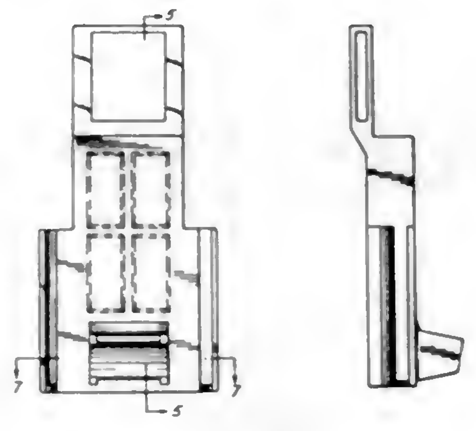
211,283
MAGNIFYING RULER

Harold Hassenfeld, Nashville, Tenn., assignor to Hassenfeld Bros. Inc., Pawtucket, R.I., a corporation of Rhode Island
Filed Apr. 4, 1967, Ser. No. 6,513
Term of patent 14 years
(Cl. D52—6)



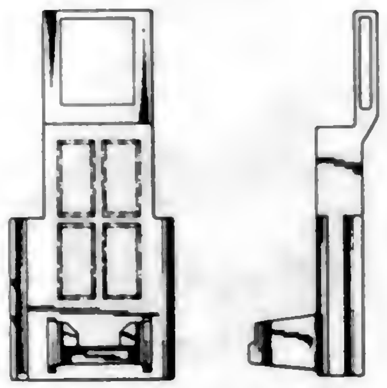
211,284
TOOL HOLDER

Virgil E. Scholl, Ypsilanti, Mich., assignor to
S & W Company, Ypsilanti, Mich.
Filed Jan. 9, 1967, Ser. No. 5,359
Term of patent 14 years
(Cl. D54—13)



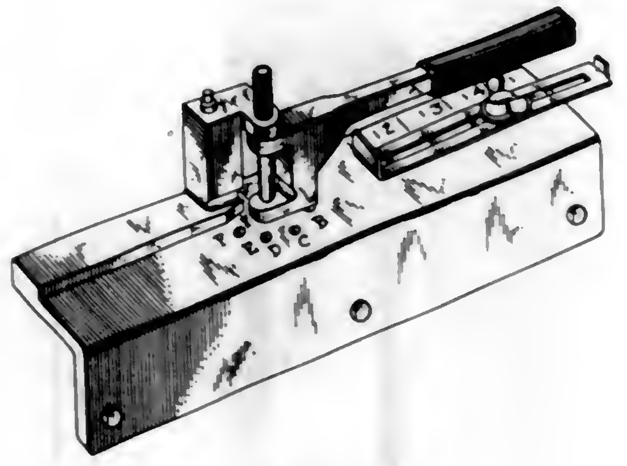
211,285
TOOL HOLDER

Virgil E. Scholl, Ypsilanti, Mich., assignor to
S & W Company, Ypsilanti, Mich.
Filed Jan. 9, 1967, Ser. No. 5,358
Term of patent 14 years
(Cl. D54—13)



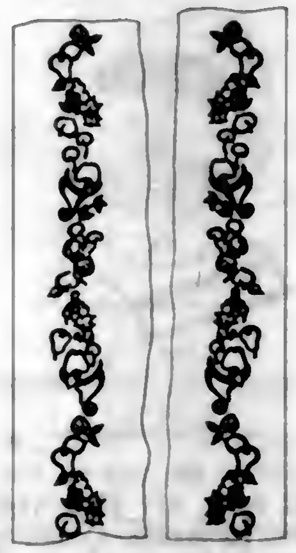
211,286
WIRE BENDER OR SIMILAR ARTICLE

Peter P. Del Monica, 10 Landon Drive,
Bordentown, N.J. 08505
Filed Aug. 17, 1967, Ser. No. 8,300
Term of patent 14 years
(Cl. D54—13)



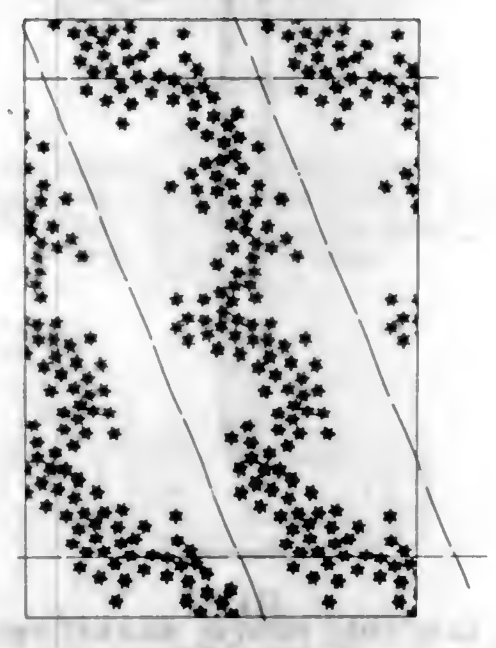
211,287
PAPER TOWELING

Philip Masnick, New York, N.Y., assignor to The Procter & Gamble Company, Cincinnati, Ohio, a corporation of Ohio
Filed Feb. 3, 1967, Ser. No. 5,675
Term of patent 14 years
(Cl. D59—2)



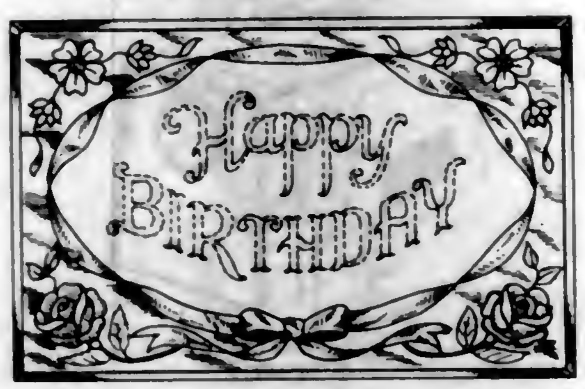
211,288
TOILET TISSUE

Lloyd D. Smith, Cincinnati, Ohio, assignor to The Procter & Gamble Company, Cincinnati, Ohio, a corporation of Ohio
Filed May 10, 1967, Ser. No. 7,059
Term of patent 14 years
(Cl. D59—2)



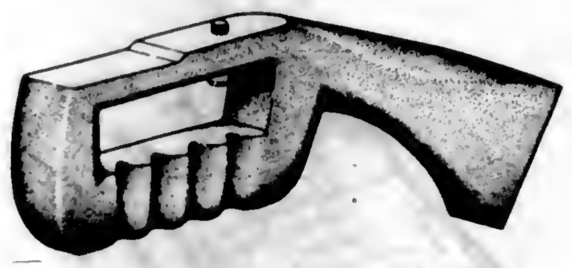
211,289
CAKE COVERING

Paul Langsam, 605 N. Sweetzer Ave.,
Los Angeles, Calif. 90048
Filed May 15, 1967, Ser. No. 7,135
Term of patent 14 years
(Cl. D59—2)



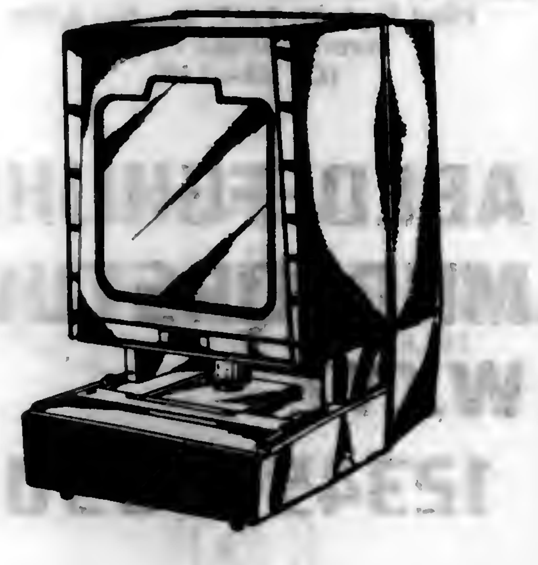
211,290
GUNSTOCK MOUNT FOR CAMERAS

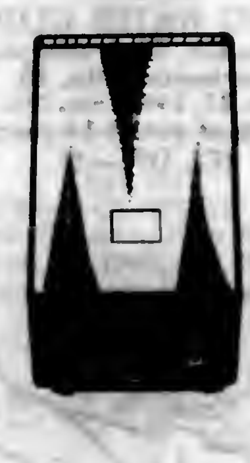
Ralph B. Hardy, 365 North 200 East,
Springville, Utah 84663
Filed June 23, 1967, Ser. No. 7,577
Term of patent 14 years
(Cl. D61—1)



211,291
MICRO-IMAGE VIEWER UNIT

Charles T. Inatomi, Culver City, and Hideo Akiyama, Los Angeles, Calif., assignors to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland
Filed June 29, 1967, Ser. No. 7,639
Term of patent 14 years
(Cl. D61—1)

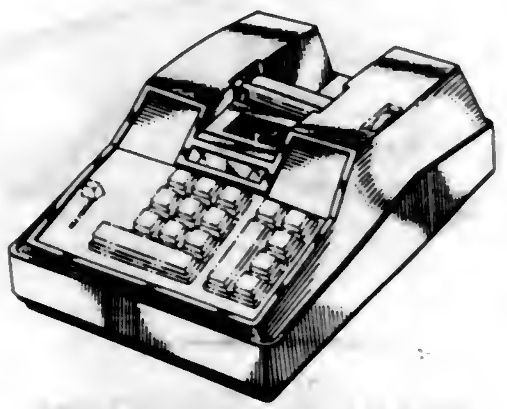




211,292
ADDING MACHINE OR SIMILAR ARTICLE

Pierre L. Crease, Kettering, and Albert J. Michaud, Jr., Englewood, Ohio, assignors to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland

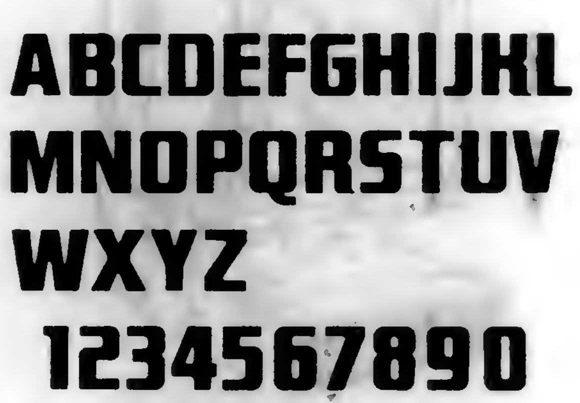
Filed Nov. 20, 1967, Ser. No. 9,473
Term of patent 14 years
(Cl. D64—11)



211,293
FONT OF TYPE OR THE LIKE

Oliver K. Devin, Jr., Bainbridge Island, Wash., assignor to Electro Development Corporation, Seattle, Wash., a corporation of Washington

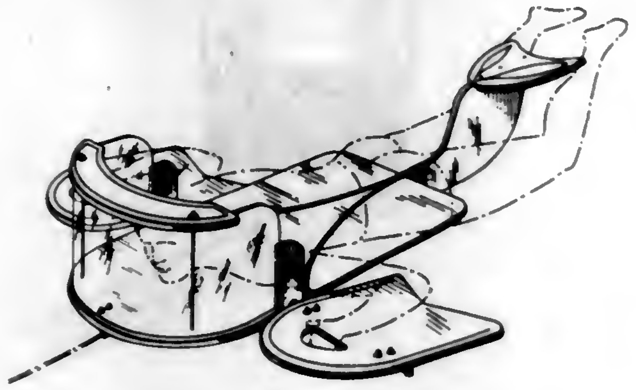
Filed Sept. 21, 1967, Ser. No. 8,679
Term of patent 7 years
(Cl. D64—12)



211,294
DIVING WATER GLIDER

George Loeffler, 45 Crabapple Drive,
Barrington Hills, Ill.

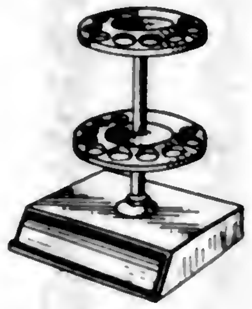
Filed Jan. 25, 1967, Ser. No. 5,568
Term of patent 14 years
(Cl. D71—1)



211,295
PENCIL HOLDER

Gerald D. Wolf, P.O. Box 304,
Oak Grove, Mo. 64075

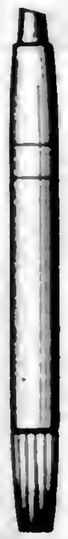
Filed May 1, 1967, Ser. No. 6,891
Term of patent 14 years
(Cl. D74—5)



211,296
CASING FOR AN INK MARKER

Joseph E. Corr, Jr., Riverside, Conn., assignor to Eagle Pencil Company, Danbury, Conn., a corporation of Delaware

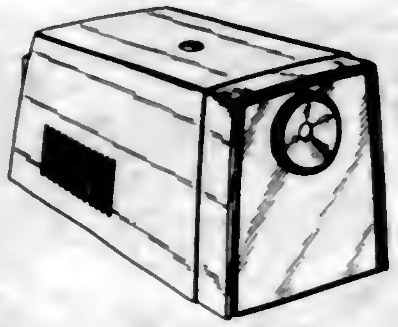
Filed Oct. 7, 1966, Ser. No. 4,188
Term of patent 14 years
(Cl. D74—17)



211,297
ELECTRIC PENCIL SHARPENER

Ralph M. La Zar, Skokie, and Walter B. Herbst, Evanston, Ill., assignors to Sunbeam Corporation, Chicago, Ill., a corporation of Illinois

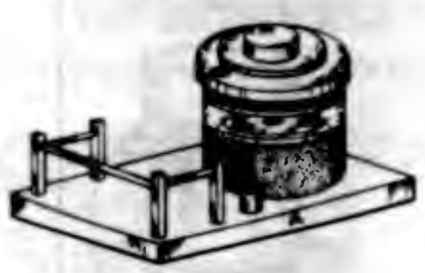
Filed July 3, 1967, Ser. No. 7,670
Term of patent 14 years
(Cl. D74—21)



211,298
CIGARETTE DISPENSER

Roscoe Richardson, % Raque Machine Tool Inc.,
709 Vine St., Louisville, Ky. 40213

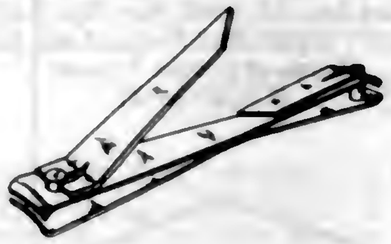
Filed Aug. 7, 1967, Ser. No. 8,152
Term of patent 14 years
(Cl. D85—2)



211,299
COMBINATION FINGER AND TOE NAIL CLIPPER

Anthony N. D'Elia, 3555 Netherland Ave., Riverdale, N.Y. 10471, and Edward M. Stolarz, 30 W. 60th St., New York, N.Y. 10023

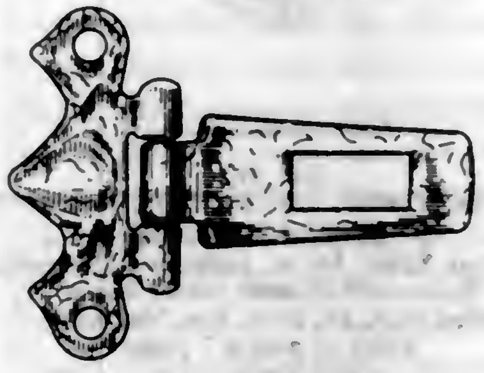
Filed Oct. 17, 1966, Ser. No. 4,300
Term of patent 14 years
(Cl. D86—10)



211,300
HANDBAG CLOSURE CLASP

Etienne Aigner, 40 5th Ave., New York, N.Y. 10003

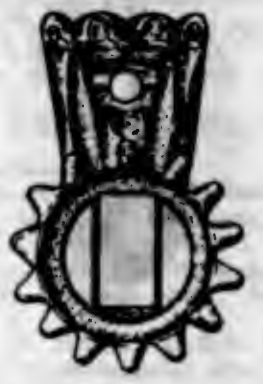
Filed Sept. 20, 1967, Ser. No. 8,665
Term of patent 14 years
(Cl. D87—2)



211,301
HANDBAG CLOSURE CLASP

Etienne Aigner, 40 5th Ave., New York, N.Y. 10003

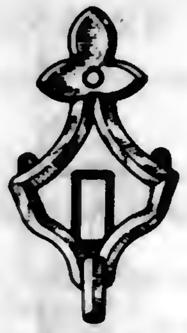
Filed Sept. 20, 1967, Ser. No. 8,666
Term of patent 14 years
(Cl. D87—2)



211,302
HANDBAG CLOSURE CLASP

Etienne Aigner, 40 5th Ave., New York, N.Y. 10003

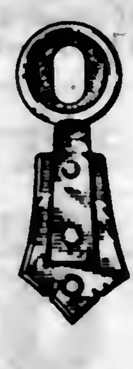
Filed Sept. 27, 1967, Ser. No. 8,759
Term of patent 14 years
(Cl. D87—2)



211,303
HANDBAG CLOSURE CLASP

Etienne Aigner, 40 5th Ave., New York, N.Y. 10003

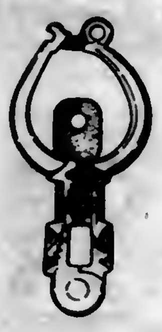
Filed Sept. 27, 1967, Ser. No. 8,760
Term of patent 14 years
(Cl. D87—2)



211,304
HANDBAG CLOSURE CLASP

Etienne Aigner, 40 5th Ave., New York, N.Y. 10003

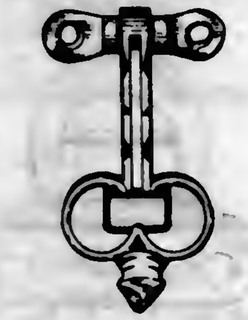
Filed Sept. 27, 1967, Ser. No. 8,762
Term of patent 14 years
(Cl. D87—2)



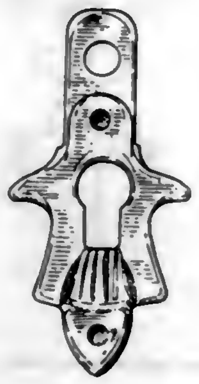
211,305
HANDBAG CLOSURE CLASP

Etienne Aigner, 40 5th Ave., New York, N.Y. 10003

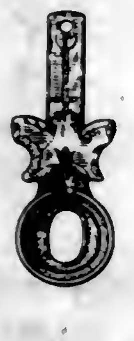
Filed Sept. 27, 1967, Ser. No. 8,764
Term of patent 14 years
(Cl. D87—2)



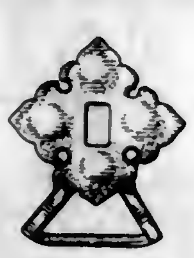
211,306
HANDBAG CLOSURE CLASP
Etienne Aigner, 40 5th Ave., New York, N.Y. 10003
Filed Oct. 2, 1967, Ser. No. 8,807
Term of patent 14 years
(Cl. D87—2)



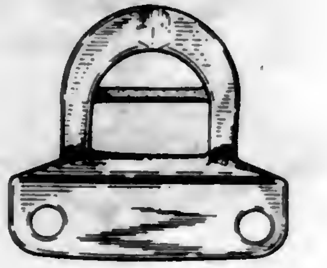
211,307
HANDBAG CLOSURE CLASP
Etienne Aigner, 40 5th Ave., New York, N.Y. 10003
Filed Oct. 2, 1967, Ser. No. 8,820
Term of patent 14 years
(Cl. D87—2)



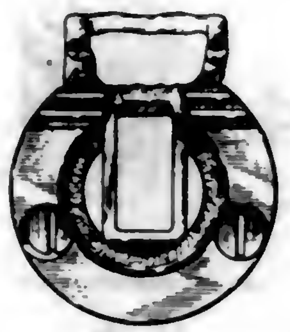
211,308
HANDBAG CLOSURE CLASP
Etienne Aigner, 40 5th Ave., New York, N.Y. 10003
Filed Oct. 2, 1967, Ser. No. 8,821
Term of patent 14 years
(Cl. D87—2)



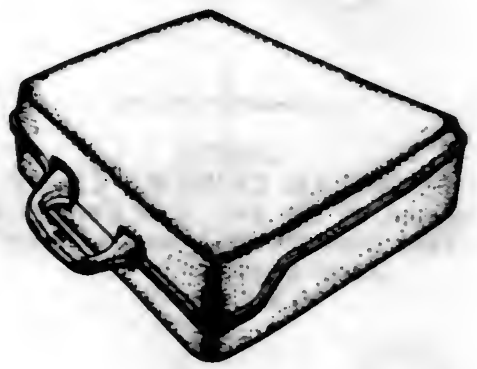
211,309
HANDBAG CLOSURE CLASP
Etienne Aigner, 40 5th Ave., New York, N.Y. 10003
Filed Oct. 2, 1967, Ser. No. 8,832
Term of patent 14 years
(Cl. D87—2)



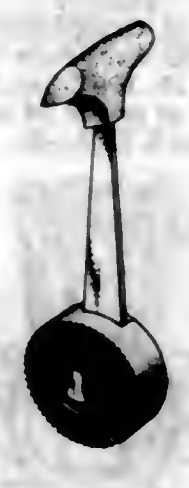
211,310
HANDBAG CLOSURE CLASP
Etienne Aigner, 40 5th Ave., New York, N.Y. 10003
Filed Oct. 2, 1967, Ser. No. 8,833
Term of patent 14 years
(Cl. D87—2)



211,311
LUGGAGE CASE
Andreas Christen, Zurich, Switzerland, assignor to "Swissair" Schweizerische Luftverkehr-Aktiengesellschaft, Zurich, Switzerland
Filed Jan. 16, 1967, Ser. No. 5,427
Claims priority, application Switzerland July 18, 1966
Term of patent 7 years
(Cl. D87—5)



211,312
SPEED CONTROL LEVER FOR A BICYCLE OR SIMILAR ARTICLE
Keizo Shimano, Sakai, Japan, assignor to Shimano Kogyo Kabushiki Kaisha, Sakai, Japan
Filed Sept. 19, 1966, Ser. No. 3,908
Term of patent 7 years
(Cl. D90—1)



LIST OF REISSUE PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 4TH DAY OF JUNE, 1968

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Automatic Electric Laboratories, Inc.: *See*—
Stoffels, Robert E., Talcott, Erdmann, Luce, and Crabbe. Re. 26,396.

Caterpillar Tractor Co.: *See*—
Hein, Allyn J. Re. 26,398.

Chris Craft Industries: *See*—
Jasper, Elmer P. Re. 26,400.

Clark Equipment Co.: *See*—
Watters, Johnny T. Re. 26,399.

Crabbe, Edwin P.: *See*—
Stoffels, Robert E., Talcott, Erdmann, Luce, and Crabbe. Re. 26,396.

Erdmann, David P.: *See*—
Stoffels, Robert E., Talcott, Erdmann, Luce, and Crabbe. Re. 26,396.

Franck, Kurt, to Holophane Co., Inc. Street lighting luminaires. Re. 26,397, 6-4-68, Cl. 240—25.

Hein, Allyn J., to Caterpillar Tractor Co. Hydraulic circuit having two pumps for self-loading scrapers. Re. 26,398, 6-4-68, Cl. 37—8.

Holophane Co., Inc.: *See*—
Franck, Kurt. Re. 26,397.

Jasper, Elmer P., to Chris Craft Industries. Cooling system for marine engines. Re. 26,400, 6-4-68, Cl. 123—41.08.

King, Gerald E.: *See*—
Stevens, Donald G., Miller, and King. Re. 26,401.

Luce, James M.: *See*—
Stoffels, Robert E., Talcott, Erdmann, Luce, and Crabbe. Re. 26,396.

Miller, Arthur F.: *See*—
Stevens, Donald G., Miller, and King. Re. 26,401.

Standard Oil Co., The: *See*—
Stevens, Donald G., Miller, and King. Re. 26,401.

Stevens, Donald G., A. F. Miller, and G. E. King, to The Standard Oil Co. Removal of saturated carbonyls from unsaturated nitriles by pH-controlled distillation. Re. 26,401, 6-4-68, Cl. 203—6.

Stoffels, Robert E., H. C. Talcott, D. P. Erdmann, J. M. Luce, and E. P. Crabbe, to Automatic Electric Laboratories, Inc. Data transmission system. Re. 26,396, 6-4-68, Cl. 178—3.

Talcott, Horace C.: *See*—
Stoffels, Robert E., Talcott, Erdmann, Luce, and Crabbe. Re. 26,396.

Watters, Johnny T., to Clark Equipment Co. Apparatus for handling freight containers. Re. 26,399, 6-4-68, Cl. 248—361.

LIST OF PLANT PATENTEES

Calvino, Stefano. Hybrid tea rose plant. 2,814, 6-4-68, Cl. 20.

Swin, Herbert C., and O. L. Weeks, to O. L. Weeks, d.b.a. Weeks Wholesale Rose Grower. 2,815, 6-4-68, Cl. 24.

Trumbull, Wayne M., to Van Well Nursery, Inc. Apple tree. 2,816, 6-4-68, Cl. 35.

Van Well Nursery, Inc.: *See*—
Trumbull, Wayne M. 2,816.

Weeks, O. L.: *See*—
Swin, Herbert C., and Weeks. 2,815.

Weeks Wholesale Rose Grower: *See*—
Swin, Herbert C., and Weeks. 2,815.

LIST OF DESIGN PATENTEES

Aigner, Etienne. Handbag closure clasp. 211,300, 6-4-68, Cl. D87—2.

Aigner, Etienne. Handbag closure clasp. 211,301, 6-4-68, Cl. D87—2.

Aigner, Etienne. Handbag closure clasp. 211,302, 6-4-68, Cl. D87—2.

Aigner, Etienne. Handbag closure clasp. 211,303, 6-4-68, Cl. D87—2.

Aigner, Etienne. Handbag closure clasp. 211,304, 6-4-68, Cl. D87—2.

Aigner, Etienne. Handbag closure clasp. 211,305, 6-4-68, Cl. D87—2.

Aigner, Etienne. Handbag closure clasp. 211,306, 6-4-68, Cl. D87—2.

Aigner, Etienne. Handbag closure clasp. 211,307, 6-4-68, Cl. D87—2.

Aigner, Etienne. Handbag closure clasp. 211,308, 6-4-68, Cl. D87—2.

Aigner, Etienne. Handbag closure clasp. 211,309, 6-4-68, Cl. D87—2.

Aigner, Etienne. Handbag closure clasp. 211,310, 6-4-68, Cl. D87—2.

Akiyama, Hideo: *See*—
Inatomi, Charles T., and Akiyama. 211,291.

Andrews, Phillip R.: *See*—
Theobald, Elwin, and Andrews. 211,261.
Theobald, Elwin, and Andrews. 211,262.

Avis Industrial Corp.: *See*—
Bobrick, Mitchell. 211,278.

Ball, Frank R., and H. L. Harrison. Hand drier or the like. 211,245, 6-4-68, Cl. D23—74.

Bobrick, Mitchell, to Avis Industrial Corp. Walk and garden light. 211,278, 6-4-68, Cl. D48—31.

Bradley, William F. Holder for toast or the like. 211,271, 6-4-68, Cl. D44—1.

Buff, George J., Jr. Foil packaging tray. 211,237, 6-4-68, Cl. D9—219.

Calder, Robert A.: *See*—
Skyer, Robert A., Calder, and Molzahn. 211,265.

Carter, Kenneth M., to Potlatch Forests, Inc. General utility building. 211,239, 6-4-68, Cl. D13—1.

Christen, Andreas, to "Swissair" Schweizerische Luftverkehr-Aktiengesellschaft. Luggage case. 211,311, 6-4-68, Cl. D87—5.

Clayton, La Verne E. Hinge. 211,238, 6-4-68, Cl. D10—9.

Collings, Thomas J. Snow-removal attachment for a broom. 211,234, 6-4-68, Cl. D4—4.

Conway, Ronald I., S. Cottier, and E. Wittner, to International Business Machines Corp. Card punch. 211,250, 6-4-68, Cl. D26—5.

Corning Glass Works: *See*—
Dole, Charles M., Jr., and Mullaly. 211,241.

Corr, Joseph E., Jr., to Eagle Pencil Co. Casing for an ink marker. 211,296, 6-4-68, Cl. D74—17.

Cottier, Seton: *See*—
Conway, Ronald I., Cottier, and Wittner. 211,250.

Crease, Pierre L., and A. J. Michaud, Jr., to The National Cash Register Co. Adding machine or similar article. 211,292, 6-4-68, Cl. D64—11.

Daryl Industries, Inc.: *See*—
Miller, Donald L. 211,240.

D'Elia, Anthony N., and E. M. Stolars. Combination finger and toe nail clipper. 211,299, 6-4-68, Cl. D86—10.

Del Monica, Peter P. Wire bender or similar article. 211,286, 6-4-68, Cl. D54—13.

Descarries, Raymond, E. Gaudry, and P. E. Gaudry, to Electrolux Corp. Floor treating machine. 211,268, 6-4-68, Cl. D87—3.

Devin, Oliver K., Jr., to Electro Development Corp. Font of type or the like. 211,293, 6-4-68, Cl. D64—12.

Dole, Charles M., Jr., and R. B. Mullaly, to Corning Glass Works. Electrode holder or the like. 211,241, 6-4-68, Cl. D16—1.

Duggan, Thomas R. Combined rosary and container therefor. 211,274, 6-4-68, Cl. D45—1.

Du Pree, Ernest L., to Schenley Industries, Inc. Bottle. 211,236, 6-4-68, Cl. D9—112.

Eagle Pencil Co.: *See*—
Corr, Joseph E., Jr. 211,296.

Electro Development Corp.: *See*—
Devin, Oliver K., Jr. 211,293.

Electrolux Corp.: *See*—
Descarries, Raymond, E. Gaudry, and P. E. Gaudry. 211,268.

Fedtro, Inc.: *See*—
Ota, Hajime. 211,251.

Filper Corp.: *See*—
Layton, Christopher C. 211,277.
Layton, Christopher C. 211,279.

Freudenthal, Frank D., and G. W. Gaarder, to Gray Mfg. Co., Inc. Vehicle lift. 3,211,267, 6-4-68, Cl. D41—1.

Gaarder, Gilbert W.: *See*—
Freudenthal, Frank D., and Gaarder. 211,267.

Gaudry, Edouard: *See*—
Descarries, Raymond, and E. and P. E. Gaudry. 211,268.

- Gaudry, Paul E.: *See*—
  - Descarries, Raymond, and E. and P. E. Gaudry. 211,263.
- General Time Corp.: *See*—
  - Szalek, Roman J. 211,269.
- Gilg, Frederick W.: *See*—
  - Payne, Earl E., and Gilg. 211,249.
- Grange, Kenneth, to Morphy-Richards Ltd. Electric iron. 211,280, 6-4-68, Cl. D49—6.
- Gray Mfg. Co., Inc.: *See*—
  - Freudenthal, Frank D., and Gaarder. 211,267.
- Greve, Fred P. Floor lamp. 211,275, 6-4-68, Cl. D48—20.
- Hamilton, Clarence O., and E. K. Moore, to Hamilton Cosco, Inc. Infant's training chair. 211,235, 6-4-68, Cl. D4—5.
- Hamilton Cosco, Inc.: *See*—
  - Hamilton, Clarence O., and Moore. 211,235.
- Hardy, Ralph B. Gunstock mount for cameras. 211,290, 6-4-68, Cl. D61—1.
- Harrison, Harry L.: *See*—
  - Ball, Frank R., and Harrison. 211,245.
- Hart, Richard S.: *See*—
  - Stewart, James B., and Hart. 211,264.
- Hasegawa, Tetsujiro. Radio tuner cartridge for a tape-recorder or similar article. 211,252, 6-4-68, Cl. D26—14.
- Hassenfeld Bros., Inc.: *See*—
  - Hassenfeld, Harold. 211,283.
- Hassenfeld, Harold, to Hassenfeld Bros., Inc. Magnifying ruler. 211,283, 6-4-68, Cl. D52—6.
- Hawley, William K. Infant's bathing aid. 211,244, 6-4-68, Cl. D23—52.
- Herbst, Walter B.: *See*—
  - La Zar, Ralph M., and Herbst. 211,297.
- Heribertson, Per: *See*—
  - Sundquist, Arne, and Heribertson. 211,253.
- Hohulin, Samuel E.: *See*—
  - Schaefer, Harold W., and Hohulin. 211,282.
- Inatomi, Charles T., and H. Akiyama, to The National Cash Register Co. Micro-image viewer unit. 211,291, 6-4-68, Cl. D61—1.
- International Business Machines Corp.: *See*—
  - Conway, Ronald I., Cottier, and Wittner. 211,250.
- International Harvester Co.: *See*—
  - Skyer, Robert A., Calder, and Molzahn. 211,265.
- International Standard Electric Corp.: *See*—
  - Sundquist, Arne, and Heribertson. 211,253.
- Jackson Products Corp.: *See*—
  - Jiruska, John L. 211,276.
- Jiruska, John L., to Jackson Products Corp. Anti-collision strobe light for aircraft. 211,276, 6-4-68, Cl. D48—24.
- Katzman, Phil. Support stand for a television receiver. 211,257, 6-4-68, Cl. D33—14.
- Langsam, Paul. Cake covering. 211,289, 6-4-68, Cl. D59—2.
- Layton, Christopher C., to Filper Corp. Path light. 211,277, 6-4-68, Cl. D48—31.
- Layton, Christopher C., to Filper Corp. Luminaire. 211,279, 6-4-68, Cl. D48—31.
- Laylon, Harry L., to Sunbeam Corp. Clock. 211,270, 6-4-68, Cl. D42—7.
- La Zar, Ralph M., and W. B. Herbst, to Sunbeam Corp. Electric pencil sharpener. 211,297, 6-4-68, Cl. D74—23.
- Loeffler, George. Diving water glider. 211,294, 6-4-68, Cl. D71—1.
- Maillard, Pierre, to Patterson International Corp. Game table. 211,259, 6-4-68, Cl. D34—5.
- Masnick, Philip, to The Procter & Gamble Co. Paper toweling. 211,287, 6-4-68, Cl. D59—2.
- McDonald, Donald A. Combined fan and lighting unit. 211,246, 6-4-68, Cl. D23—140.
- Molzahn, Herbert W.: *See*—
  - Skyer, Robert A., Calder, and Molzahn. 211,265.
- Moore, Aston L. Speaker enclosure. 211,254, 6-4-68, Cl. D26—14.
- Moore, Aston L. Speaker enclosure. 211,255, 6-4-68, Cl. D26—14.
- Moore, Aston L. Speaker baffle. 211,256, 6-4-68, Cl. D26—14.
- Moore, Edwin K.: *See*—
  - Hamilton, Clarence O., and Moore. 211,235.
- Michaud, Albert J., Jr.: *See*—
  - Crease, Pierre L., and Michaud. 211,292.
- Miles Laboratories, Inc.: *See*—
  - Sullivan, James H. 211,247.
  - Sullivan, James H. 211,248.
- Miller, Donald L., to Daryl Industries, Inc. Slider window extrusion. 211,240, 6-4-68, Cl. D13—6.
- Morphy-Richards Ltd.: *See*—
  - Grange, Kenneth. 211,280.
- Mullaly, Robert B.: *See*—
  - Dole, Charles M., Jr., and Mullaly. 211,241.
- National Cash Register Co., The: *See*—
  - Crease, Pierre L., and Michaud. 211,292.
  - Inatomi, Charles T., and Akiyama. 211,291.
- National Union Electric Corp.: *See*—
  - Schaefer, Harold W., and Hohulin. 211,282.
- Ota, Hajime, to Fedtro, Inc. Amplifier. 211,251, 6-4-68, Cl. D26—14.
- Pacific Coast Engineering Co.: *See*—
  - Zweifel, Charles H., and Wright. 211,266.
- Panicoi, John D. Fishing lure. 211,243, 6-4-68, Cl. D22—27.
- Patterson International Corp.: *See*—
  - Maillard, Pierre. 211,259.
- Payne, Earl E., and F. W. Gilg. Cable housing boot or similar article. 211,249, 6-4-68, Cl. D26—1.
- Potlatch Forests, Inc.: *See*—
  - Carter, Kenneth M. 211,239.
- Procter & Gamble Co., The: *See*—
  - Masnick, Philip. 211,287.
  - Smith, Lloyd D. 211,288.
- Reed, John E., to Sunbeam Corp. Combination can opener and knife sharpener. 211,260, 6-4-68, Cl. D37—1.
- Reed, John E.: *See*—
  - Waller, Frederick S., and Reed. 211,273.
- Richardson, Roscoe. Cigarette dispenser. 211,298, 6-4-68, Cl. D85—2.
- Rush, Roy C. Sweeper for parking lots. 211,281, 6-4-68, Cl. 49—9.1.
- S & W Co.: *See*—
  - Scholl, Virgil E. 211,284.
  - Scholl, Virgil E. 211,285.
- Salisky, Sallyann Z., to Sarong, Inc. Girdle. 211,231, 6-4-68, Cl. D2—2.
- Sarong, Inc.: *See*—
  - Salisky, Sallyann Z. 211,231.
  - Tenusiak, Louise M. 211,232.
- Schaefer, Harold W., and S. E. Hohulin, to National Union Electric Corp. Upright suction cleaner. 211,282, 6-4-68, Cl. D49—14.
- Schenley Industries, Inc.: *See*—
  - Du Pree, Ernest L. 211,236.
- Scholl, Virgil E., to S & W Co. Tool holder. 211,284, 6-4-68, Cl. D54—13.
- Scholl, Virgil E., to S & W Co. Tool holder. 211,285, 6-4-68, Cl. D54—13.
- Shimano, Keizo, to Shimano Kogyo Kabushiki Kaisha. Speed control lever for a bicycle or similar article. 211,312, 6-4-68, Cl. D90—1.
- Shimano Kogyo Kabushiki Kaisha: *See*—
  - Shimano, Keizo. 211,312.
- Shrier, Ben. Combined toilet tissue support and cover. 211,258, 6-4-68, Cl. D33—31.
- Skyer, Robert A., R. A. Calder, and H. W. Molzahn, to International Harvester Co. Self-propelled windrower. 211,265, 6-4-68, Cl. D40—1.
- Smith, Lloyd D., to The Procter & Gamble Co. Toilet tissue. 211,288, 6-4-68, Cl. D59—2.
- Stageberg, Willis A. Covered casserole. 211,272, 6-4-68, Cl. D44—1.
- Stewart, James B., and R. S. Hart, to Sunbeam Corp. Lawn mower motor shroud. 211,264, 6-4-68, Cl. D40—1.
- Stolarz, Edward M.: *See*—
  - D'Elia, Anthony N., and Stolarz. 211,299.
- Sullivan, James H., to Miles Laboratories, Inc. Holder for dental cleansing nozzles or the like. 211,247, 6-4-68, Cl. D24—1.
- Sullivan, James H., to Miles Laboratories, Inc. Dental cleansing unit or similar article. 211,248, 6-4-68, Cl. D24—1.
- Sunbeam Corp.: *See*—
  - Laylon, Harry L. 211,270.
  - La Zar, Ralph M., and Herbst. 211,297.
  - Reed, John E. 211,260.
  - Stewart, James B., and Hart. 211,264.
  - Waller, Frederick S., and Reed. 211,273.
- Sundquist, Arne, and P. Heribertson, to International Standard Electric Corp. Handsfree telephone. 211,253, 6-4-68, Cl. D26—14.
- "Swissair" Schweizerische Luftverkehr-Aktiengesellschaft: *See*—
  - Christen, Andreas. 211,311.
- Szalek, Roman J., to General Time Corp. Clock. 211,269, 6-4-68, Cl. D42—7.
- Tenusiak, Louise M., to Sarong, Inc. Panty girdle. 211,232, 6-4-68, Cl. D2—4.
- Theobald, Elwin, and P. R. Andrews. Hollow 6-sided file. 211,261, 6-4-68, Cl. D37—1.
- Theobald, Elwin, and P. R. Andrews. Hollow 5-sided file. 211,262, 6-4-68, Cl. D37—1.
- Von Meyer, Walter G. Timer with floating indicator. 211,268, 6-4-68, Cl. D42—7.
- Waller, Frederick S., and J. E. Reed, to Sunbeam Corp. Kettle. 211,273, 6-4-68, Cl. D44—25.
- Wilcox, Ernest J. Trapping tool or similar article. 211,242, 6-4-68, Cl. D22—18.
- Williams, Marguerite R. Panty girdle. 211,233, 6-4-68, Cl. D2—4.
- Wittner, Ernest: *See*—
  - Conway, Ronald I., Cottier, and Wittner. 211,250.
- Wolf, Gerald D. Pencil holder. 211,295, 6-4-68, Cl. D74—5.
- Wright, Lawrence A.: *See*—
  - Zweifel, Charles H., and Wright. 211,266.
- Zweifel, Charles H., and L. A. Wright, to Pacific Coast Engineering Co. Sliding crane. 211,266, 6-4-68, Cl. D41—1.

LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 4TH DAY OF JUNE, 1968

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

- AB Platmanufaktur: *See*—
  - Jacobsen, Kjell M. 3,386,615.
- AMP Inc.: *See*—
  - Friend, Lindsay C. 3,387,104.
  - Klingler, Martin L. 3,386,298.
  - Lau, Ralph R., and Sits. 3,386,153.
- A-Z International Tool Co.: *See*—
  - Chadderdon, Jack, and Shirley. 3,386,521.
- Abalo, Luis J. Process for the production of partially dehydrated fruits especially of the genus musa. 3,386,888, 6-4-68, Cl. 99—204.
- Abbott Laboratories: *See*—
  - Lynch, Don M., and Cole. 3,386,996.
- Abbott, Thomson S., to Allis-Chalmers Mfg. Co. Rotary heat exchanger with a chain drive. 3,386,718, 6-4-68, Cl. 263—33.
- Abernethy, Robert R. Rotating vane bulb. 3,387,164, 6-4-68, Cl. 313—111.
- Abex Corp.: *See*—
  - Adams, Cecil E. 3,386,457.
  - Taylor, Thomas S., and Ling. 3,386,583.
- Abitibi Power & Paper Co., Ltd.: *See*—
  - Yan, Maxwell M., and Baldwin. 3,386,879.
- Abramitis, Walter W., to Armour Industrial Chemical Co. Chlorinated hydrocarbon insecticides synergized with aliphatic amines. 3,386,881, 6-4-68, Cl. 167—22.
- Abrams, Bernard W.: *See*—
  - Arberman, Jerome, and Abrams. 3,387,221.
- Abramson, Paul: *See*—
  - Juliusburger, Hans Y., Abramson, and Chin. 3,387,144.
- Abt, Ronald C., to The Cincinnati Milling Machine Co. Electro-erosive machining apparatus. 3,386,907, 6-4-68, Cl. 204—224.
- Ackerman, Irving. Dual-purpose filter disk for coffeemakers. 3,386,586, 6-4-68, Cl. 210—477.
- Acree, Elick H., F. N. Case, and J. C. Dempsey, to United States of America, Atomic Energy Commission. "On-off" X-ray source. 3,387,136, 6-4-68, Cl. 250—106.
- Adams, Cecil E., to Abex Corp. Servovalve having floating ring pilot stage. 3,386,457, 6-4-68, Cl. 137—85.
- Adams, Dolor N., and D. C. Thomas, to Lithoplate, Inc. Plate base adapted to receive light-sensitive coating. 3,386,850, 6-4-68, Cl. 117—75.
- Adams, Donald F.: *See*—
  - Copeland, Jack M., and Adams. 3,386,433.
- Adams, John, to North American Philips Co., Inc. Multi-passage electron multiplier with potential differences between passageways. 3,387,137, 6-4-68, Cl. 250—213.
- Addison, George E., to Universal Oil Products Co. Process for production of aromatic hydrocarbons. 3,387,052, 6-4-68, Cl. 260—668.
- Ades, Lewis B., to Sundstrand Corp. Coolant filter. 3,386,588, 6-4-68, Cl. 210—512.
- Adlhoch, Richard H., and R. H. Chapman, to Motorola, Inc. Pulse decoder-encoder system controlled by pulse and digit counters. 3,387,270, 6-4-68, Cl. 340—164.
- Advance Transformer Co.: *See*—
  - Czernobil, Eugene. 3,387,245.
- Aebi, Claude M., and B. J. Serafin, to International Business Machines Corp. Process for producing improved diazotype elements. 3,386,826, 6-4-68, Cl. 96—91.
- Aebi, Claude M., and H. F. Herbrandson, to International Business Machines Corp. Thermo-developable light-sensitive diazo compositions and elements. 3,386,827, 6-4-68, Cl. 96—91.
- Aero-Chatillon Corp.: *See*—
  - Hajzlar, Emil. 3,386,284.
- Aerojet-General Corp.: *See*—
  - Grakauskas, Vytautas, and Hamel. 3,387,044.
- Aeronca, Inc.: *See*—
  - Boyle, Homer G. 3,386,694.
- Agfa Aktiengesellschaft: *See*—
  - Honig, Hans L., Kolb, Moll, and Morcher. 3,386,981.
  - Kremp, Rudolf, Winkler, Ernst, and Zattler. 3,386,857.
- Agrostroj Prostejov: *See*—
  - Martinak, Bonifac. 3,386,573.
- Aguadisch, Leon, J. Charrier, and C. Miguet, to Produits Chimiques Pechiney-Saint-Gobain. Paints comprising aluminum oxide that contains less than thirty percent alpha alumina. 3,386,934, 6-4-68, Cl. 260—23.7.
- Ahlert, Richard H.: *See*—
  - Milch, Alfred E., Ahlert, and Lalak. 3,386,158.
  - Milch, Alfred, Lalak, and Ahlert. 3,386,159.
  - Milch, Alfred, Lalak, and Ahlert. 3,386,160.
- Aihara, Kenzo, and K. Takaya, to Ikegai Tekko Kabushiki Kaisha. Index mechanism for rotary tool rest on lathe. 3,386,315, 6-4-68, Cl. 74—813.
- Air Products and Chemicals, Inc.: *See*—
  - Craig, Robert G., and Zalueta. 3,387,049.
- Aircraft Appliances and Equipment Ltd.: *See*—
  - Mast, Andrew C., and Havelka. 3,386,587.
- Airth, James C., and W. H. Findlay, to James Howden & Co. Ltd. Liquid-fuel burner. 3,386,794, 6-4-68, Cl. 431—115.
- Ajinomoto Co., Inc.: *See*—
  - Sugita, Yoshihisa, Komori, and Isuchiya. 3,387,028.
- Akaboshi, Michijiro, T. Kominami, S. Fukuda, and K. Uragami, to Kurashiki Rayon Co., Ltd. Method of mixing a relatively viscous liquid with a relatively non-viscous liquid. 3,386,981, 6-4-68, Cl. 260—91.3.
- Aktiebolaget Atomenergi: *See*—
  - Mogard, Johan H. 3,386,887.
- Aktiebolaget Svenska Metallverken Vasteras: *See*—
  - Sterner, Stig R. 3,386,117.
- Aktien-Gesellschaft "Weser": *See*—
  - Nitzki, Leopold and V. 3,386,516.
- Alagy, Jacob, to Institut Francais du Petrole des Carburants et Lubrifiants. Process for manufacturing terephthalic acid. 3,387,027, 6-4-68, Cl. 260—524.
- Alamance Industries, Inc.: *See*—
  - Simmons, John C. 3,386,270.
- Albertson, Orris E., to Dorr-Oliver Inc. Waste treatment for phosphorous removal. 3,386,911, 6-4-68, Cl. 210—18.
- Albright, Bruce S., to General Motors Corp. Freezing tray. 3,386,698, 6-4-68, Cl. 249—131.
- Albright & Wilson (Mfg.) Ltd.: *See*—
  - Coates, Harold, and Hoye. 3,387,011.
- Alburger, James R. Process for fluorescence detection of extremely small flaws. 3,386,920, 6-4-68, Cl. 252—301.2.
- Alexander, Guy B., S. F. West, and P. C. Yates, to Fansteel Metallurgical Corp. Process for making chromium, cobalt and/or nickel containing powder having dispersed refractory metal oxide. 3,386,814, 6-4-68, Cl. 75—.5.
- Alexander, Peter, to Isotopes, Inc. Flexible heat-conducting mount. 3,386,266, 6-4-68, Cl. 62—45.
- Alger, Richard C.: *See*—
  - Pekarcik, Leonard S., and Alger. 3,386,918.
- Alkirk, Inc.: *See*—
  - Lawrence, James C., and Hamilton. 3,386,520.
- Allen-Bradley Co.: *See*—
  - Budny, Bernard R. 3,387,264.
  - Grabarczyk, Frank A. 3,386,560.
  - Paulus, Reinhard H. 3,387,197.
  - Pearse, James N. 3,387,135.
- Allied Chemical Corp.: *See*—
  - Anello, Louis G., and Sweeney. 3,387,034.
  - Dulin, Grady N., Jr., and Scott. 3,386,871.
  - Figiel, Francis J. 3,386,805.
  - Scudder, William C. 3,387,068.
  - Twilley, Ian C. 3,386,964.
  - Twilley, Ian C. 3,386,967.
  - Walter, Charles E., Jr. 3,387,080.
- Allied Research Associates, Inc.: *See*—
  - Gerard, George, and Papirno. 3,387,189.
- Allis-Chalmers Mfg. Co.: *See*—
  - Abbott, Thomson S. 3,386,718.
  - Berthold, Robert G., and Cooney. 3,386,965.
- Allison, William D., to Ford Motor Co. Vehicle variably interconnected suspension system. 3,386,751, 6-4-68, Cl. 280—104.
- Alms, Erhard E., to American Farm Equipment Co. Air heating devices for crop dryers and the like. 3,386,715, 6-4-68, Cl. 263—19.
- Altenweger, Alois, to Zellweger Ltd. Support frame for warps. 3,386,144, 6-4-68, Cl. 28—4.
- Aluminum Co. of America: *See*—
  - Rolles, Rolf, and Luyk. 3,386,544.
- Amberg, Lyle O., to Hercules Inc. Non-exuding rubbers. 3,386,937, 6-4-68, Cl. 260—27.
- American Air Filter Co., Inc.: *See*—
  - Czerwonka, Lawrence J. 3,386,227.
  - Gaines, William C., Jr. 3,386,232.
  - Nutting, Arthur. 3,386,231.
- American Cyanamid Co.: *See*—
  - Cadwell, Edward P. 3,386,572.
  - Gerber, Samuel M. 3,386,991.
  - Mosby, William L., and Silva. 3,387,004.
  - Nawakowski, Aleksandra C., Wang, and Schiller. 3,386,955.
  - Nawakowski, Aleksandra C., Schiller, and Wang. 3,386,956.
- American Enka Corp.: *See*—
  - Van Silfhout, Jan. 3,386,143.
- American Farm Equipment Co.: *See*—
  - Alms, Erhard E. 3,386,715.
- American Home Products Corp.: *See*—
  - Vesina, Claude, Marshall, and Deghenghi. 3,386,890.
  - Wendt, Gerhard R., and Ledig. 3,387,006.
- American Hospital Supply Corp.: *See*—
  - Krzymczuk, Edward. 3,386,702.
  - Zipf, Frederick W., III. 3,387,180.
- American Machine & Foundry Co.: *See*—
  - Congelli, Henry C., and Hays. 3,386,784.
- American Meter Co.: *See*—
  - Johnson, Dwight N. 3,386,465.
- American Standard, Inc.: *See*—
  - Bevans, Rowland S., Renzi, and Loonkar. 3,386,796.
  - Parkison, Richard G., and Klein. 3,386,459.

- American Telephone and Telegraph Co.: *See—*
  - Delker, Robert W. 3,387,091.
- American Tobacco Co., The: *See—*
  - Black, James H., Neal, and Reed. 3,386,578.
- Anaconda Wire and Cable Co.: *See—*
  - Weisbecker, Charles J., 3,386,120.
- Anciens Etablissements Barbier, Benard & Turenne: *See—*
  - Benard, Christian L. G. 3,387,128.
- Anderson, Dean B., R. R. August, J. C. Aukland, and R. L. Palmquist, to North American Rockwell Corp. High frequency diode with small spreading resistance. 3,387,189, 6-4-68, Cl. 317—234.
- Anderson, Gordon C.: *See—*
  - Munroe, Richard W., West, Anderson, and Drake. 3,386,184.
- Anderson-Miller Mfg. Co.: *See—*
  - Miller, John D. 3,386,765.
- Anello, Louis G., and R. F. Sweeney, to Allied Chemical Corp. Novel halogenated sulfides. 3,387,034, 6-4-68, Cl. 260—590.
- Angelillo, Elena. Heated air circulating hair brush. 3,386,185, 6-4-68, Cl. 34—97.
- Angold, Edward B., to The Plessey Co. Ltd. Electric ignition devices. 3,387,184, 6-4-68, Cl. 317—96.
- Angulo, Francisco M. Apparatus for the generation and accumulation of energy. 3,386,341, 6-4-68, Cl. 91—92.
- Anjac Mfg. Co.: *See—*
  - Banner, Joseph. 3,386,208.
- Antran Corp.: *See—*
  - Savin, Cornelius, Vorwald, and Vagts. 3,386,190.
- Appeman, Ralph. Internal combustion engines. 3,386,424, 6-4-68, Cl. 123—48.
- Appleton Machine Co.: *See—*
  - Lamon, David E., and Scott. 3,386,672.
- Appleton Mills: *See—*
  - Tewksbury, Charles G., and Mizell. 3,386,849.
- Arberman, Jerome, and B. W. Abrams, to United States of America, Navy. Pulse discriminator with noise suppression. 3,387,221, 6-4-68, Cl. 329—104.
- Arenbeck, Hellmuth. Multi-ply sack. 3,386,646, 6-4-68, Cl. 229—55.
- Arfert, Horst F. W., and F. A. Siemonsen, to Reynolds Metals Co. Easy-opening means for a container. 3,386,614, 6-4-68, Cl. 220—54.
- Argo Industries, Inc.: *See—*
  - Pastore, Michael W. 3,386,501.
- Armantrout, Kenneth M., to Borg-Warner Corp. Variable control for transmission mechanism. 3,386,316, 6-4-68, Cl. 74—870.
- Armco Steel Corp.: *See—*
  - Long, Spencer W. 3,386,263.
- Armour Industrial Chemical Co.: *See—*
  - Abramitis, Walter W. 3,386,881.
- Armstrong Machine Works: *See—*
  - Rea, Thomas H. 3,386,659.
- Arnold, Kent B.: *See—*
  - Arnold, Philip S. and K. B. 3,386,178.
- Arnold, Philip S. and K. B.; J. M. Wright, executor of said P. S. Arnold, deceased. Grinding gage. 3,386,178, 6-4-68, Cl. 33—178.
- Arnot, Alfred E. R. Foodstuff packaging. 3,386,837, 6-4-68, Cl. 99—171.
- Arps, Milton J., F. J. Grist, and E. J. Rippl. Dispensing and recording apparatus. 3,386,621, 6-4-68, Cl. 222—30.
- Arvidson, Bengt A., and F. F. Treiber, to Corley-Miller, Inc. Wrapping and heat sealing machine. 3,386,225, 6-4-68, Cl. 53—184.
- Asahi Kasei Kogyo Kabushiki Kaisha: *See—*
  - Wakasa, Ryoichi, Ishida, and Oizumi. 3,387,070.
- Asano, Setsunobu: *See—*
  - Kuraishi, Michio, Asano, and Shinozaki. 3,387,043.
- Ashkin, Arthur, G. D. Boyd, and D. A. Kleinman, to Bell Telephone Laboratories, Inc. Harmonic generation and other parametric devices with nonlinear interaction of short electromagnetic waves over extended coherence volumes. 3,387,204, 6-4-68, Cl. 321—69.
- Associated Electrical Industries Ltd.: *See—*
  - Brown, Ronald E. C. 3,387,102.
- Astro Research Corp.: *See—*
  - Schuerch, Hans U. 3,386,692.
- Atlas Enameling Co., Inc.: *See—*
  - Starcevic, Louis J. 3,386,209.
- Audi, Henri H.: *See—*
  - Yearley, Douglas C., and Audi. 3,386,494.
- Audoin, Claude L., and A. L. Septier, to Centre National de la Recherche Scientifique. Permanent magnet multipole magnetic lens with variable convergence. 3,387,241, 6-4-68, Cl. 335—210.
- August, Rudolf R.: *See—*
  - Anderson, Dean B., August, Aukland, and Palmquist. 3,387,189.
- Aukland, Jerry C.: *See—*
  - Anderson, Dean B., August, Aukland, and Palmquist. 3,387,189.
- Automatic Electric Laboratories, Inc.: *See—*
  - Boswau, Hans P. 3,387,186.
  - Briley, Bruce E. 3,387,279.
  - Grandstaff, Otho D., and Weber. 3,387,096.
  - Koppensteiner, James V. 3,387,240.
  - Lender, Adam. 3,387,213.
  - Lender, Adam. 3,387,220.
  - Reimer, William A. 3,387,108.
- Automotive Products Co. Ltd.: *See—*
  - Carins, Wallace M. J., and Chouings. 3,386,538.
- Avco Corp.: *See—*
  - Park, Jerald L., and Rossetti. 3,386,307.
  - Powers, William E., Jr., Novack, and Blackburn. 3,387,150.
- Avisun Corp.: *See—*
  - Wyckoff, Harold W. 3,386,876.
- Bach, Hartwig C., to Monsanto Co. Fully conjugated alicyclic polymers and process of making same. 3,386,966, 6-4-68, Cl. 260—78.
- Bachle, Carl F., to Continental Aviation and Engineering Corp. Retainer structure for variable compression ratio piston. 3,386,347, 6-4-68, Cl. 92—216.
- Badalich, Frank C., to Bell & Howell Co. Low power intermittent drive with gear assist. 3,386,636, 6-4-68, Cl. 226—76.
- Badische Anilin & Soda-Fabrik Aktiengesellschaft: *See—*
  - Steden, Franz, Schaedler, Lissner, and Schuster. 3,386,924.
- Bailey, Fay W., to Phillips Petroleum Co. Sulfur-vulcanizable blends of ethylene-butadiene copolymer and butyl or E.P.D. rubber. 3,387,063, 6-4-68, Cl. 260—888.
- Bailey Meter Co.: *See—*
  - Macsuzak, Michael, and Werme. 3,387,121.
- Bajek, Walter A., to Universal Oil Products Co. Automatic cable rewind assembly. 3,386,682, 6-4-68, Cl. 242—107.
- Baker Brush Co. Inc.: *See—*
  - Shulman, Stuart M. 3,386,119.
- Baldwin, Stanley H.: *See—*
  - Yan, Maxwell M., and Baldwin. 3,386,879.
- Ball Brothers Co. Inc.: *See—*
  - Quinn, Richard M. 3,386,675.
  - Scholes, Addison B. 3,386,855.
- Ballard, Francis J., Jr., to Brown & Williamson Tobacco Corp. Pneumatic feed system for cigarette-making machines. 3,386,773, 6-4-68, Cl. 302—28.
- Baller, Maurice H., to United States of America, Navy. Missile launch simulator. 3,386,188, 6-4-68, Cl. 35—25.
- Balz, Gunther W., and F. P. Leipold, to Roto-Finish Co. Continuous centrifugal device. 3,386,180, 6-4-68, Cl. 34—8.
- Banks, Donald S. Electric motor control system including a bank of batteries for series parallel operation. 3,387,194, 6-4-68, Cl. 318—139.
- Banner, Joseph, to Anjac Mfg. Co. Adjustable door roller construction. 3,386,208, 6-4-68, Cl. 49—420.
- Barcaro, Eugene B., and J. W. Thompson, to Sperry Rand Corp. Phase modulation read back circuit. 3,387,292, 6-4-68, Cl. 340—174.1.
- Barnes, Lloyd L., Jr., to Bell Aerospace Corp. Fluid pressure indicator apparatus. 3,386,410, 6-4-68, Cl. 116—70.
- Baron, Herschel: *See—*
  - Jacobs, Herbert, Baron, and Winston. 3,386,396.
- Baron, Walter J.: *See—*
  - Cleaver, John C., Rehm, Craig, Baron, Gething, and Wiegratz. 3,386,420.
- Bartell, James F., and M. E. Ross, to Dow Corning Corp. Thermally stable sealants from fluoroalkyl siloxanes, zirconium silicate, and ceric hydrate. 3,386,945, 6-4-68, Cl. 260—37.
- Bartheld, Robert G., and E. F. Cooney, to Allis-Chalmers Mfg. Co. Pump adjusting mechanism. 3,386,385, 6-4-68, Cl. 103—87.
- Barthelemy, Robert F., to United States of America, Navy. Deadload simulator. 3,386,278, 6-4-68, Cl. 73—11.
- Barton, George C., and G. Millar, to United Shoe Machinery Corp. Adhesive applying devices for heel seat lasting machines. 3,386,114, 6-4-68, Cl. 12—12.5.
- Batchelder, Charles F., and J. A. Rubico, to Batchelder-Rubico, Inc. Shoe and process for making the same. 6,386,116, 6-4-68, Cl. 12—142.
- Batchelder-Rubico, Inc.: *See—*
  - Batchelder, Charles F., and Rubico. 3,386,116.
- Battelle Development Corp., The: *See—*
  - Sorensen, Svend E., and McHale. 3,386,647.
- Bauer, Eugen GmbH: *See—*
  - Reinsch, Herbert. 3,386,791.
- Baumgarten, Peter K., to E. I. du Pont de Nemours and Co. Process for continuous production of carbon tetrafluoride. 3,386,989, 6-4-68, Cl. 260—653.
- Bausch & Lomb Inc.: *See—*
  - Blood, Charles H., Goodyear, and Korones. 3,386,695.
  - Hensler, Joseph R., and Letter. 3,386,789.
  - Keller, John D. 3,386,361.
  - McCulloch, Donald J. 3,386,790.
  - Randall, John M. 3,387,228.
- Beadle, Anthony C., and R. W. Parrish, to International Standard Electric Corp. Telephone tone ringer. 3,387,097, 6-4-68, Cl. 179—84.
- Beam, Paul E., Jr., and E. W. Spears, Jr., to General Motors Corp. Bypass valve for recuperative gas turbines. 3,386,248, 6-4-68, Cl. 60—39.51.
- Beaver, William L., to Varian Associates. Fin-supported helical slow wave circuit providing mode separation and suppression for traveling wave tubes. 3,387,168, 6-4-68, Cl. 315—3.6.
- Beazer, Charles W., to Phillips Petroleum Co. Storage and transportation of cold liquids. 3,386,257, 6-4-68, Cl. 62—45.
- Beckenstein, Leonard A., to The Singer Co. Stitch cam adjustment and indicator means. 3,386,268, 6-4-68, Cl. 66—54.
- Becker, Arno. Apparatus for continuously winding up a flat strip of material. 3,386,677, 6-4-68, Cl. 242—56.
- Becker, Gustav: *See—*
  - Schulze, Ernst, and Becker. 3,386,579.
- Becker, Walter W.: *See—*
  - Susskind, Herbert, Becker, and Maresca. 3,386,627.
- Beckett, Leonard T. A.: *See—*
  - Fishman, Denis, and Beckett. 3,387,191.
- Becking, Paul E.: *See—*
  - Bungard, James D., and Becking. 3,387,117.
- Beckman Instruments, Inc.: *See—*
  - Bruhl, Donald A., Jr., and Counts. 3,386,165.
  - Mishler, Ralph E. 3,387,247.
  - Sternberg, James C. 3,386,279.

- Bechler & Arnst: *See—*
  - Weber, Franz K., and Williams. 3,387,129.
- Beetle, David H., Jr.: *See—*
  - Hellwarth, George A., Bidwell, and Beetle. 3,387,222.
- Bell, Forrest F., to Caradco Inc. Window grille. 3,386,219, 6-4-68, Cl. 52—456.
- Bell Aerospace Corp.: *See—*
  - Barnes, Lloyd L., Jr. 3,386,410.
  - Gray, Samuel A. 3,386,346.
- Bell, Alan, C. J. Kibler, and J. G. Smith, to Eastman Kodak Co. Stabilization of non-yellowing segmented polyurethane copolymers of polymeric diols, functionally aliphatic diisocyanates and functionally aliphatic diamines. 3,386,942, 6-4-68, Cl. 260—37.
- Bell & Howell Co.: *See—*
  - Badalich, Frank C. 3,386,636.
  - Dann, Bert H. 3,387,219.
  - Thomsen, Jack W. 3,386,676.
- Bell Telephone Laboratories, Inc.: *See—*
  - Ashkin, Arthur, Boyd, and Kleinman. 3,387,204.
  - Fair, Irvin R. 3,387,285.
  - Finne, Ronald M. 3,386,996.
  - Fischer, James L., and Strommen. 3,387,098.
  - Fischer, James L., and Strommen. 3,387,099.
  - Graham, Robert S. 3,387,282.
  - Grodkiewicz, William H., and Van Uitert. 3,386,799.
  - Miller, Ralph L., and Young. 3,387,095.
  - Munnelly, James J. 3,387,208.
  - Parker, Marsena R., Jr. 3,387,283.
  - Pasternak, Edward J. 3,387,278.
  - Peters, Theodore R. 3,387,281.
  - Queisser, Hans J. 3,387,163.
  - Sampson, Sidney F. 3,387,206.
- Benard, Christian L. G., to Anciens Etablissements Barbier, Benard & Turenne. Radiation condenser devices. 3,387,128, 6-4-68, Cl. 240—41.3.
- Benatar, Victor, to The Mead Corp. Feeder mechanism. 3,386,558, 6-4-68, Cl. 198—35.
- Bendix Corp., The: *See—*
  - Holmes, John L., Torrye, Spino, and Vargas. 3,386,288.
  - Leach, Robert L., and Lanahan. 3,386,174.
- Benjamin, Braham: *See—*
  - Greene, Gordon Z., and Benjamin. 3,386,700.
- Bennett Industries, Inc.: *See—*
  - Shankland, Ronald B., Sr. 3,386,617.
- Bennett, John V.: *See—*
  - Harrison, Stanley R., Bennett, Broughton, and Thawley. 3,386,485.
- Beresin, Peter W.: *See—*
  - Hernan, George W., Beresin, and Gertler. 3,387,260.
- Beresin, Peter W., to Ultronic Systems Corp. Multiplexing system for synchronous transmission of start-stop signals after removal of the start and stop bits. 3,387,086, 6-4-68, Cl. 178—50.
- Beretta, John J. Container labels. 3,386,200, 6-4-68, Cl. 40—610.
- Bergandi Mfg. Co., Inc.: *See—*
  - Rohrbacher, Herbert R. 3,386,320.
- Bergeron, Normand: *See—*
  - McKibbin, Raymond, and Bergeron. 3,386,115.
- Bergman, Walter, and R. A. Husen, to Ford Motor Co. Vehicle suspension system having a flexible arm. 3,386,750, 6-4-68, Cl. 280—96.2.
- Bergquist, Frank H., to Harper-Wyman Co. Two burner oven systems and controls. 3,386,656, 6-4-68, Cl. 236—15.
- Berk Ltd.: *See—*
  - Jolles, Zvi E. 3,387,040.
- Berkey Photo, Inc.: *See—*
  - Michalski, Maksymillian A. 3,387,179.
- Berman, Morris. Expansion-contraction joint. 3,386,352, 6-4-68, Cl. 94—18.
- Bernier, Georges E., T. Gilchrist, and R. H. Pallen, to Canadian Industries Ltd. Process of forming a polymerisable cyclic vinyl ether. 3,386,926, 6-4-68, Cl. 260—2.5.
- Berrill, William H., and E. Blower, to United Shoe Machinery Corp. Mixing and dispensing apparatus. 3,386,623, 6-4-68, Cl. 222—134.
- Bessette, Ramon L., to General Motors Corp. Closure latch. 3,386,760, 6-4-68, Cl. 292—216.
- Betjemann, Christopher H. Demountable shipping gondolas. 3,386,600, 6-4-68, Cl. 214—15.
- Bets, Bernard K., to Honeywell Inc. Circuit arrangement for detection and correction of errors occurring in the transmission of digital data. 3,387,261, 6-4-68, Cl. 340—146.1.
- Bevan, Frank H., to Elliott Bros. (London) Ltd. Indicators. 3,387,302, 6-4-68, Cl. 343—106.
- Bevans, Rowland S., P. N. Rensi, and Y. R. Loonkar, to American Standard, Inc. Method of removing sulfur compounds and recovering heat from combustion gases. 3,386,798, 6-4-68, Cl. 23—2.
- Bhagwat, Madhav R., to United States of America, Navy. Process for drying water-wet HMX with lower alkanols. 3,386,998, 6-4-68, Cl. 260—239.
- Biddick, Royce E., to Union Oil Co. of California. Porous electrode comprising hydrophobic binder and hydrophilic material incorporated therein and method of fabricating same. 3,386,859, 6-4-68, Cl. 136—120.
- Bidwell, Alexander W.: *See—*
  - Hellwarth, George A., Bidwell, and Beetle. 3,387,222.
- Biehl, Heinrich. Process for feeding domestic animals, especially pigs. 3,386,418, 6-4-68, Cl. 119—51.
- Bielstein, Walter J., and L. G. Rawl, to Esso Production Research Co. Process and system for the recovery of viscous oil. 3,386,508, 6-4-68, Cl. 166—11.
- Big Three Industrial Gas & Equipment Co.: *See—*
  - Bloom, Dolores F. 3,386,512.
- Billerbeck, Wilfred J., Jr., and J. B. Oakes, to United States of America, Navy. Charge control system for satellite batteries. 3,387,199, 6-4-68, Cl. 320—32.
- Billig, Frederick S.: *See—*
  - Dugger, Gordon L., and Billig. 3,386,249.
- Bina, Robert A., to Sperry Rand Corp. Automatic packing and unpacking of BSI transfers. 3,387,280, 6-4-68, Cl. 340—172.5.
- Bishop, Gary E., and W. B. Bramley, Jr., to General Motors Corp. Friction band. 3,386,535, 6-4-68, Cl. 188—77.
- Bissett-Berman Corp., The: *See—*
  - Bissett, Thomas B., and Tatch. 3,387,288.
- Bissett, Thomas B., and M. S. Tatch, to The Bissett-Berman Corp. Rapid readout of electrolytic cell accumulator. 3,387,288, 6-4-68, Cl. 340—173.
- Bjorn, James, and F. Marx, Jr. Electric swivel connection. 3,387,250, 6-4-68, Cl. 339—8.
- Black, James H., W. P. Neal, Jr., and E. W. Reed, to The American Tobacco Co. Inspection device for composite cigarette filter rods. 3,386,578, 6-4-68, Cl. 209—111.7.
- Blackburn, Philip R.: *See—*
  - Powers, William E., Jr., Novack, and Blackburn. 3,387,150.
- Blairon, Andre E.: *See—*
  - Vanhentenrijk, Georges C., and Blairon. 3,386,110.
- Blanchard, Carl E.: *See—*
  - Tantlinger, Keith W., Chieger, and Blanchard. 3,386,724.
- Blanshine, Allison W.: *See—*
  - Waldrop, Thomas W., and Blanshine. 3,386,483.
- Blass Antenna Electronics Corp.: *See—*
  - Blass, Judd, and Slate. 3,387,301.
- Blass, Judd, and M. W. Slate, to Blass Antenna Electronics Corp. Antenna array employing an automatic averaging technique for increased resolution. 3,387,301, 6-4-68, Cl. 343—100.
- Blazek, William J., and C. D. Hillis, to Lempco Industries, Inc. Die set having readily demountable guide pins and bushings. 3,386,781, 6-4-68, Cl. 308—4.
- Blitz, Daniel, to Sanders Associates, Inc. Negative time detection systems. 3,387,300, 6-4-68, Cl. 343—7.3.
- Blohm & Voss A.G.: *See—*
  - Sprengel, Heinz F. J. 3,386,593.
- Blomeyer, Friedrich, to Farbenfabriken Bayer Aktiengesellschaft. Water binding agents for polyurethanes based on mixtures of phosphorous pentoxide with pigments or fillers. 3,386,944, 6-4-68, Cl. 260—37.
- Blood, Charles H., J. L. Goodyear, and H. D. Korones, to Bausch & Lomb Inc. Gun telescope mounting having a fixed lateral adjustment member. 3,386,695, 6-4-68, Cl. 248—229.
- Bloom, Dolores F., to Big Three Industrial Gas & Equipment Co. Method for insulating oil wells. 3,386,512, 6-4-68, Cl. 166—40.
- Bloom, James W., to General Motors Corp. Power one-way drive engaging wrench. 3,386,319, 6-4-68, Cl. 81—54.
- Blower, Eric: *See—*
  - Berrill, William H., and Blower. 3,386,623.
- Blower, Warren A.: *See—*
  - Janke, Gilbert J., and Blower. 3,386,493.
- Blumstein, Abraham. Bead chain link. 3,386,240, 6-4-68, Cl. 59—78.
- Boeing Co., The: *See—*
  - Funk, Jack N., and Ramsey. 3,387,120.
  - Rowe, Donald C. 3,386,863.
- Boettner, Raymond C.: *See—*
  - Johnston, Thomas L., Boettner, Bush, and McEvily. 3,386,862.
- Boliden Aktiebolag: *See—*
  - Görling, Karl G., and Lundqvist. 3,386,815.
- Bolkow Gesellschaft mit beschrankter Haftung: *See—*
  - Wossagk, Ulf. 3,386,172.
- Bonnart, Jacques, and G. Pollane, to Rhone-Poulenc S.A. Production of benzyl alcohol and benzaldehyde. 3,387,036, 6-4-68, Cl. 260—599.
- Booher, Walter C., to Voss Engineering Co. Shearing and welding apparatus. 3,386,640, 6-4-68, Cl. 228—5.
- Boos, Francis H., Jr.: *See—*
  - Farber, Richard J., and Boos. 3,387,083.
- Boothroyd, Howard W., to Sanders Associates, Inc. Rate actuator for hydraulic rate controlled systems. 3,386,293, 6-4-68. Cl. 74—5.6.
- Borden Co., The: *See—*
  - Gordon, Philip L., Diedrich, and Dean. 3,386,982.
  - Wood, Lonne G. 3,386,669.
- Borenstein, Benjamin, and E. G. Smith, to Hoffmann-La Roche, Inc. Process for the production of cured meat products. 3,386,836, 6-4-68, Cl. 99—159.
- Borg-Warner Corp.: *See—*
  - Armantrout, Kenneth M. 3,386,316.
  - Moochhala, Yunus E., and Underwood. 3,386,342.
  - Reed, Thomas S., and Staunch. 3,386,309.
  - Venema, Harry J. 3,386,255.
- Bosch, Robert, G.m.b.H.: *See—*
  - Maier, Oskar. 3,386,860.
  - Weitbrecht, Gerhard. 3,386,164.
- Bossert Mfg. Co.: *See—*
  - Mount, Wadsworth W. 3,386,407.
- Boswau, Hans P., to Automatic Electric Laboratories, Inc. Relay counting chain. 3,387,186, 6-4-68, Cl. 317—140.
- Bottenbruch, Ludwig: *See—*
  - Schnell, Hermann, and Bottenbruch. 3,386,954.
- Boucher, Gilbert, to CSF-Compagnie Generale de Telegraphie Sans Fil. Magnet structure for cylindrical gas-filled crossed-field diodes. 3,387,165, 6-4-68, Cl. 313—156.
- Boyd, Gary D.: *See—*
  - Ashkin, Arthur, Boyd, and Kleinman. 3,387,204.
- Boyle, Homer G., to Aeronca, Inc. Positioning mount for antennas and the like. 3,386,694, 6-4-68, Cl. 248—179.
- Brack, Alfred, to Farbenfabriken Bayer Aktiengesellschaft. Mono and disazo dyestuffs. 3,386,986, 6-4-68, Cl. 260—152.

Bradbury, Wilburn F.: *See*—
  Kleinschmidt, Edward E., Bradbury, and Taubmann. 3,387,061.
Bradbury, Wilburn F., and W. I. Erdman, to SCM Corp. Electromagnetic control means for print hammers. 3,386,378, 6-4-68, Cl. 101—93.
Brader, Walter H., Jr., to Jefferson Chemical Co., Inc. Method for the preparation of catalysts for the synthesis of heterocyclic diamines. 3,386,800, 6-4-68, Cl. 23—105.
Brady, Robert T., and O. Kartal, to Vapor Corp. Combustion noise eliminator. 3,386,395, 6-4-68, Cl. 110—184.
Brake, Robert L., Jr., C. A. Maycott, and P. M. Travis. Warming oven. 3,387,114, 6-4-68, Cl. 219—386.
Bramley, Winlaw B., Jr.: *See*—
  Bishop, Gary E., and Bramley. 3,386,535.
Branson, Charles D., to Robertshaw Controls Co. Burner construction and method and apparatus for making the same and the like. 3,386,431, 6-4-68, Cl. 126—39.
Branson Instruments, Inc.: *See*—
  Brech, Kilian H. 3,387,257.
Braun, Oskar, R. Gross, H. Muller, H. Nakaten, and J. Weissert, to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning. Process for the manufacture of plastic articles dyed in the mass. 3,386,841, 6-4-68, Cl. 106—165.
Braun, Vernon F.: *See*—
  Campbell, Richard H., Jr., and Braun. 3,386,826.
Brech, Kilian H., to Branson Instruments, Inc. Pulse circuit for pulse echo ultrasonic testing. 3,387,257, 6-4-68, Cl. 340—15.
Brennemann, Andrew E., D. P. Seraphim, and S. Tansal, to International Business Machines Corp. Method for fabricating insulated-gate field effect transistor. 3,386,163, 6-4-68, Cl. 29—571.
Brenner, Orlestus R., and G. L. Reser, to Ritter Pfaudler Corp. Surgical drain bag and support therefor. 3,386,444, 6-4-68, Cl. 128—292.
Bret, Antoine, and R. Marinot, to Commissariat a l'Energie Atomique. Pressure control. 3,386,884, 6-4-68, Cl. 176—19.
Bretford Mfg., Inc.: *See*—
  Petrick, Edward J., and Genger. 3,386,767.
Brewer, George R.: *See*—
  Currie, Malcolm R., and Brewer. 3,387,176.
Brezosky, Bernard J., to General Electric Co. Water softener for use with an automatic washing machine. 3,386,582, 6-4-68, Cl. 210—136.
Bridges, Cecil C., to Tracor, Inc. Method and apparatus for displaying speech. 3,387,090, 6-4-68, Cl. 179—1.
Bridges, Thomas F.: *See*—
  Knight, George R., Jr., and Bridges. 3,386,405.
Briley, Bruce E., to Automatic Electric Laboratories, Inc. Multiaperture magnetic disc computer control members. 3,387,279, 6-4-68, Cl. 340—172.5.
Brinckman, Frederick E., Jr., H. S. Haiss, and R. A. Robb, to United States of America, Navy. Triazenometal compounds and method of preparation. 3,386,985, 6-4-68, Cl. 260—140.
Brinson, Paul R., to International Business Machines Corp. Card stacker. 3,386,731, 6-4-68, Cl. 271—71.
British Drug Houses Ltd., The: *See*—
  Burn, Derek, Coombs, and Petrow. 3,387,005.
British Sterilizer Co., Ltd.: *See*—
  Butler, Richard A., Hailer, and Perera. 3,386,203.
Brogan, Francis A. Audiometric method and apparatus. 3,387,089, 6-4-68, Cl. 179—1.
Brogy, Inc.: *See*—
  Lino, Joseph A. 3,386,739.
Bronnes, Robert L., to North American Philips Co., Inc. Transistor base and method of making the same. 3,386,906, 6-4-68, Cl. 204—192.
Brooks, Richard W., and A. F. Kubli. Carriage for supporting lances in steel making operations. 3,386,722, 6-4-68, Cl. 266—34.
Broughton, Robert M.: *See*—
  Harrison, Stanley R., Bennett, Broughton, and Thawley. 3,386,485.
Brown, Cicero C.: *See*—
  Potts, Ernest L. 3,386,384.
Brown, Craig D.: *See*—
  Johnstone, Theodore H., Peters, and Brown. 3,386,761.
Brown, David H.: *See*—
  Warner, Henry L., and Brown. 3,387,256.
Brown, Donald J., and J. C. Hanlon, to The Cowles Dissolver Co., Inc. Variable speed power transmission. 3,386,299, 6-4-68, Cl. 74—230.17.
Brown, George N., to E. I. du Pont de Nemours and Co. Process and apparatus for blending. 3,386,707, 6-4-68, Cl. 259—97.
Brown Oil Tools, Inc.: *See*—
  Potts, Ernest L. 3,386,701.
Brown, Richard J. Hinge, door assembly and method for making said assembly. 3,386,207, 6-4-68, Cl. 49—402.
Brown, Robert G., to B. H. Bunn Co. Tying machine for making parallel ties. 3,386,370, 6-4-68, Cl. 100—4.
Brown, Ronald E. C., to Associated Electrical Industries Ltd. Subscriber's telephone instruments. 3,387,102, 6-4-68, Cl. 179—165.
Brown & Williamson Tobacco Corp.: *See*—
  Ballard, Francis J., Jr. 3,386,773.
Bruce, Charles R.: *See*—
  Johnson, Irvin D., and Bruce. 3,387,198.
Bruckner, Ernst. Method and machine for the manufacture of pottery. 3,386,140, 6-4-68, Cl. 25—24.
Bruhl, Donald A., Jr., and W. E. Counts, to Beckman Instruments, Inc. Method of making cermet resistance element and terminal connections therefor. 3,386,165, 6-4-68, Cl. 29—621.
Bruinsma, Josephus F. D., to Kiekens Wervelwind Holland N.V. Device for discharging a powdered material from a container. 3,386,628, 6-4-68, Cl. 222—193.
Bruma, Marc, and M. F. Velghe, to Centre National de la Recherche Scientifique. Apparatus for effecting optical viewing and marking of a workpiece. 3,387,109, 6-4-68, Cl. 219—69.
Brundage, Richard B., to Emerson Electric Co. High frequency voltage injector circuits for welders. 3,387,178, 6-4-68, Cl. 315—246.
Brunel, Henri. Sealing combination comprising butylene polymer, filler, acid and polyvinyl acetate. 3,386,929, 6-4-68, Cl. 260—4.
Brunsing, Rex L. Pilot operated valve with venturi. 3,386,466, 6-4-68, Cl. 137—484.8.
Brunswick Corp.: *See*—
  Hennings, Louis W. 3,386,277.
  Rogers, Albert P. 3,386,735.
Brynko, Carl, to Xerox Corp. Solvent capsule fixing of powder images. 3,386,822, 6-4-68, Cl. 96—1.4.
Bubber, Heins: *See*—
  Siegel, Herbert, and Bubber. 3,387,094.
Bublitz, Donald E., and G. H. Harris, to The Dow Chemical Co. Thiolcarboxylate esters of cyclopentadienyl metals. 3,387,009, 6-4-68, Cl. 260—429.
Buchanan, James B., and W. A. Gregory, to E. I. du Pont de Nemours and Co. p-(Trichloromethylthio)benzaldehyde. 3,387,037, 6-4-68, Cl. 260—599.
Buchheit, Paul: *See*—
  Nitzsche, Siegfried, and Buchheit. 3,387,016.
Buck, Ollie G.: *See*—
  Uraneck, Carl A., and Buck. 3,386,973.
Bucyrus-Erie Co.: *See*—
  Reischl, Karl E. 3,386,592.
Budd Co., The: *See*—
  Genzabella, John C. 3,386,933.
Budny, Bernard R., to Allen-Bradley Co. Time division multiplexer having synchronized magnetic core transmitter and receiver. 3,387,264, 6-4-68, Cl. 340—147.
Buffington, James F. Rotary phase converter system. 3,387,202, 6-4-68, Cl. 321—55.
Bungard, James D., and P. E. Becking, to Dura Corp. Data storage device feed apparatus. 3,387,117, 6-4-68, Cl. 235—61.9.
Bungard, James D.: *See*—
  Lorber, Harold, Bungard, and Hartley. 3,386,552.
Bunn, B. H., Co.: *See*—
  Brown, Robert G. 3,386,370.
Burg, Kenneth E., to Texas Instruments Inc. Multiple short streamer marine seismic detector system. 3,386,526, 6-4-68, Cl. 181—.5
Burgess, Richard H. Game board with tapered pockets and rollable disc of different diameters. 3,386,737, 6-4-68, Cl. 273—126.
Burke, Oliver W., Jr., and C. B. Jackson, said Jackson assor. to said Burke. Apparatus for the production of silica pigments. 3,386,810, 6-4-68, Cl. 23—285.
Burn, Derek, R. V. Coombs, and V. Petrow, to The British Drug Houses Ltd. Steroidal 4,6-dien-3-ones having a substituted methyl group at C_6 and process for producing same. 3,387,005, 6-4-68, Cl. 260—349.
Burndy Corp.: *See*—
  Dibble, Charles E., Matthysse, Neaderland, and Ralla. 3,387,080.
Burris, Donald J., and G. E. Stanley, to Redfield Gun Sight Co. Optical range-finding device. 3,386,330, 6-4-68, Cl. 88—1.
Burroughs Corp.: *See*—
  Kaplan, Donald E. 3,386,574.
  McDermott, John J., and Clausi. 3,386,847.
Busche, Louis R.: *See*—
  Noiset, Willy R., and Busche. 3,386,834.
Bush, Richard H.: *See*—
  Johnston, Thomas L., Boettner, Bush, and McEvily. 3,386,862.
Bushmeyer, Richard W., D. E. Krause, and C. J. Rath, to J. I. Case Co. Crop pelleter. 3,386,373, 6-4-68, Cl. 100—89.
Butler, Maurice H. Boat Controllers. 3,386,308, 6-4-68, Cl. 74—480.
Butler, Richard A., A. H. Hailer, and R. Perera, to British Sterilizer Co., Ltd. Power-operated doors. 3,386,203, 6-4-68, Cl. 49—210.
Butler, Walter R.: *See*—
  Neely, Charles E., and Butler. 3,386,740.
CSF-Compagnie Generale de Telegraphie Sans Fil: *See*—
  Boucher, Gilbert. 3,387,165.
  Sobotka, Walter. 3,387,284.
Cabane, Gerard, P. Mouturat, J. F. Petit, G. Sainfort, and M. Salesse, to Commissariat a l'Energie Atomique. Iron-aluminum alloys containing less than 84% by weight iron and an additive and process for preparing the same. 3,386,819, 6-4-68, Cl. 75—124.
Cadwell, Edward P., to American Cyanamid Co. Upgrading of copper concentrates from flotation. 3,386,572, 6-4-68, Cl. 209—3.
Cahill, John W., J. L. Powell, and E. A. Gartner, to Globe Mfg. Co. Fibers. 3,387,071, 6-4-68, Cl. 264—184.
Cairns, Wallace M. J., and L. C. Chouings, to Automotive Products Co. Ltd. Internal shoe drum brakes for vehicles. 3,386,538, 6-4-68, Cl. 188—195.
Calculator Equipment Corp.: *See*—
  Crews, John B., Dillingham, and Kearl. 3,386,202.
Caldwell, John R., and R. Gilkey, to Eastman Kodak Co. Polyesters having improved dyeing properties. 3,386,795, 6-4-68, Cl. 8—100.
Caldwell, John R.: *See*—
  Jackson, Winston J., Jr., and Caldwell. 3,386,935.

California Packing Corp.: *See*—
  Ross, Edward E., Cunningham, and Hartman. 3,386,557.
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Campbell, Richard H., Jr., and V. F. Braun, to V. F. Braun. Mechanical capture system. 3,386,826, 6-4-68, Cl. 84—345.
Campagnie d'Applications Mecaniques a l'Atomistique (C.A.M.E.C.A.): *See*—
  Guernet, Jacques. 3,386,674.
Canadian General Electric Co., Ltd.: *See*—
  Whittier, Angus C. 3,386,886.
Canadian Industries Ltd.: *See*—
  Bernier, Georges E., Gilchrist, and Pallen. 3,386,928.
Canadian Ingersoll-Rand Co., Ltd.: *See*—
  Clarke, Bruce P. 3,386,549.
  Davidson, James C. 3,386,536.
Caradco Inc.: *See*—
  Bell, Forrest F. 3,386,219.
Carbone Corp., The: *See*—
  Elow, David I. 3,387,156.
Carpenter, Jonathan H., and T. D. Holder, to General Electric Co. Inductive disk winding with improved impulse voltage gradient. 3,387,243, 6-4-68, Cl. 336—70.
Carpenter, Wayne R., to United States of America, Navy. Tetrazole polymers. 3,386,968, 6-4-68, Cl. 260—78.4.
Carrier Corp.: *See*—
  Ostrander, William S. 3,386,499.
Carter, Richard S., and W. W. Weis, to International Business Machines Corp. High speed serial processor. 3,387,278, 6-4-68, Cl. 340—172.5.
Carter, Sidney T., to Geo. J. Meyer Mfg. Co. Hold-down belt for labeling machines. 3,386,565, 6-4-68, Cl. 198—162.
Casagrande, Leo, and R. W. Loughney, to Griffin Wellpoint Corp. Method of strengthening and stabilizing compressible soils. 3,386,251, 6-4-68, Cl. 61—35.
Case, Forrest N.: *See*—
  Acree, Elick H., Case, and Dempsey. 3,387,136.
Case, J. I. Co.: *See*—
  Bushmeyer, Richard W., Krause, and Rath. 3,386,373.
  Long, Elton E. 3,386,519.
Casey, John A. Safety glove and internal finger protector. 3,386,104, 6-4-68, Cl. 2—161.
Cassel, Harrison H., to Palmer-Shile Co. Removable foot for adjustable storage racks. 3,386,591, 6-4-68, Cl. 211—188.
Cassidy, Benjamin, to Federal Carton Corp. Book carton. 3,386,641, 6-4-68, Cl. 229—34.
Castello, Anthony M., and R. R. Cooper, to The Coleman Co., Inc. Method of and apparatus for installing a furnace. 3,386,434, 6-4-68, Cl. 126—114.
Caterpillar Tractor Co.: *See*—
  Horsch, Joachim, Morris, Pearce, and Rohweder. 3,386,640.
  Junck, John A., Kokaly, and Scheidt. 3,386,344.
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Cawley, John D., to Eastman Kodak Co. Process for making a substantially ester free fatty acid alkanolamide product. 3,387,008, 6-4-68, Cl. 260—404.
Celanese Corp.: *See*—
  Hay, Alden W. 3,386,842.
  Santangelo, Joseph G., and Steinmann. 3,386,930.
  Smart, Charles L., and Keel. 3,386,981.
  Steinmann, Henry W. 3,386,932.
Censullo, Frederick A.: *See*—
  Moses, William, and Censullo. 3,386,889.
Centigrade Systems, Inc.: *See*—
  Montgomery, William S., Jr., and Erickson. 3,387,078.
Centre National de la Recherche Scientifique: *See*—
  Andoin, Claude L., and Septier. 3,387,241.
  Bruma, Marc, and Velghe. 3,387,109.
Cesca, Sebastiano: *See*—
  Marconi, Walter, Cesca, and Fortuna. 3,386,975.
Chadderdon, Jack, and K. R. Shirley, to A-Z International Tool Co. Combination well drilling tool. 3,386,521, 6-4-68, Cl. 175—269.
Chafetz, Harry, and T. C. Mead, to Texaco, Inc. Catalytic method of preparing keto-acids. 3,387,026, 6-4-68, Cl. 260—514.
Champ Corp.: *See*—
  Rueb, Harold D. 3,386,603.
Champion, James R.: *See*—
  Powell, Robert J., P. R., and Champion. 3,386,427.
Chance Brothers Ltd.: *See*—
  Nolan, Maurice A. W., and Murray. 3,386,577.
Chapman, Ronald H.: *See*—
  Adlhoch, Richard H., and Chapman. 3,387,270.
Charbonnier, Roger, to Roger Charbonnier, and Jean Royer. Electronic assembly. 3,387,118, 6-4-68, Cl. 319—209.
Charrier, Jacques: *See*—
  Aguadisch, Leon, Charrier, and Miguet. 3,386,934.
Chemagro Corp.: *See*—
  Kimmel, Richard L. 3,386,474.
Chemical Construction Corp.: *See*—
  Manes, Milton. 3,386,990.
Chenhall, John S., to Elevators Pty. Ltd. Electro-mechanical relays. 3,387,239, 6-4-68, Cl. 335—185.
Chernow, Fred, to Electro-Tec Corp. Signal distribution system having a voltage variable capacitive distribution layer. 3,387,271, 6-4-68, Cl. 340—166.
Chibata, Ichiro, T. Tosa, and N. Endo, to Tanabe Seiyaku Co., Ltd. Resolution of racemic amino acids. 3,386,888, 6-4-68, Cl. 195—2.
Chicago Aerial Industries, Inc.: *See*—
  Miller, Alan. 3,386,824.
Chieger, George: *See*—
  Tantlinger, Keith W., Chieger, and Blanchard. 3,386,724.
Chin, Pao H.: *See*—
  Juliusburger, Hans Y., Abramson, and Chin. 3,387,144.
Chipman, Gerald, R. L. Pierce, and W. Grengg, to United States of America, Navy. Means of recording and reading microwave energy. 3,387,100, 6-4-68, Cl. 179—100.2.
Chope, Henry R., to Industrial Nucleonics Corp. Thickness measuring gauge comprising a radioactive source and solid state radiation detector. 3,387,133, 6-4-68, Cl. 250—83.3.
Chouings, Leslie C.: *See*—
  Cairns, Wallace M. J., and Chouings. 3,386,538.
Christian, Joseph D., to Packaged Power Terminals Inc. Apparatus for treating flowable materials. 3,386,706, 6-4-68, Cl. 259—2.
Christian, Thomas, and J. L. Youngblood. Toilet deodorizing device. 3,386,109, 6-4-68, Cl. 4—213.
Chupp, John P., and P. E. Newallis, to Monsanto Co. Arylphosphinodithioic acids. 3,387,025, 6-4-68, Cl. 260—502.4.
Cincinnati Milling Machine Co., The: *See*—
  Abt, Ronald C. 3,386,907.
  Flick, Carl N., and Greathouse. 3,386,817.
Clark Equipment Co.: *See*—
  King, James F. 3,386,471.
Clark, Sidney G.: *See*—
  McEwan, Gilbert J., and Clark. 3,387,056.
Clarke, Bruce P., to Canadian Ingersoll-Rand Co., Ltd. Mine hoist clutch. 3,386,549, 6-4-68, Cl. 192—71.
Clausi, Joseph C.: *See*—
  McDermott, John J., and Clausi. 3,386,847.
Cleaner-Brooks Co.: *See*—
  Cleaver, John C., Rehm, Craig, Baron, Gething, and Wiegratz. 3,386,420.
Cleary, James W., to Phillips Petroleum Co. Production of soluble polycyclopentadienes. 3,387,046, 6-4-68, Cl. 260—666.
Cleaver, John C., G. A. Rehm, G. D. Craig, W. J. Baron, F. Gething, and F. G. Wiegratz, to Cleaner-Brooks Co. Atmospheric fired boiler. 3,386,420, 6-4-68, Cl. 122—235.
Clejan, Deodat, to Pulse Jet Corp. Aircraft provided with an engine and a retractable fairing therefor. 3,386,688, 6-4-68, Cl. 244—58.
Clemens, Charles H. Shower curtain structure. 3,386,106, 6-4-68, Cl. 4—164.
Clemett, Edwin F., Jr.: *See*—
  Mandy, Robert R., and Clemett. 3,386,668.
Clifford, Howard J., J. A. Dugger, and D. L. French, said Clifford and said French assor. to said Dugger. Cleaning machine. 3,386,185, 6-4-68, Cl. 19—200.
Coates, Harold, and P. A. Hoye, to Albright & Wilson (Mfg.) Ltd. Production of organotin halides. 3,387,011, 6-4-68, Cl. 260—429.7.
Coats & Clark Inc.: *See*—
  Morin, Louis H. 3,386,271.
Cobble, James A., Jr.: *See*—
  Cobble, James A., Sr., and Jr. 3,386,398.
Cobble, James A., Sr., and J. A. Cobble, Jr., to Southern Machine Co., Inc. Tufting machine knife block. 3,386,398, 6-4-68, Cl. 112—79.
Code, Rheta M. H., and J. B. Lindecker. Racing boots for horses. 3,386,226, 6-4-68, Cl. 54—82.
Cohen, Milton J. Dental pad. 3,386,440, 6-4-68, Cl. 128—268.
Cole, John W.: *See*—
  Lynch, Don M., and Cole. 3,386,996.
Coleman Co., Inc., The: *See*—
  Castello, Anthony M., and Cooper. 3,386,434.
Colgate-Palmolive Co.: *See*—
  Douglas, Livingston C. 3,386,619.
Colorado Instruments, Inc.: *See*—
  Webb, Richard C. 3,387,287.
Colt Ventilation and Heating Ltd.: *See*—
  Fielding, Eric. 3,386,368.
Colt's Inc.: *See*—
  Roy, Robert E. 3,386,336.
Combes, Marvin G., to Grove Valve and Regulator Co. Valve construction method. 3,386,151, 6-4-68, Cl. 29—157.1.
Commercial Solvents Corp.: *See*—
  Jones, Lawrence R. 3,386,803.
Commissariat a l'Energie Atomique: *See*—
  Bret, Antoine, and Marinot. 3,386,884.
  Cabane, Gerard, Mouturat, Petit, Sainfort, and Salesse. 3,386,819.
  Devime, Robert. 3,387,251.
  Rostaing, Michel. 3,386,502.
Compagnie Generale d'Electricite: *See*—
  Forrat, Francis. 3,386,919.
Compagnie Generale des Etablissements Michelin Raison Sociale Michelin & Cie: *See*—
  Massoubre, Jean-Marie. 3,386,487.
  Massoubre, Jean-Marie. 3,386,809.
  Verdier, Henri. 3,386,771.
Comstock & Wescott, Inc.: *See*—
  Rice, Richard E., and Webb. 3,386,821.
Congelli, Henry C., and G. W. Hays, to American Machine & Foundry Co. Pinspotting mechanism with spotting cups pivotally mounted on movable yoke. 3,386,784, 6-4-68, Cl. 273—43.
Coniglione, Roy: *See*—
  Goda, George G., and Coniglione. 3,386,470.
Connally, Dickey P., to Reading & Bates Offshore Drilling Co. Underwater work vessel. 3,386,254, 6-4-68, Cl. 61—69.
Consolidated Packaging Machinery Corp.: *See*—
  Riesenberg, James H. 3,386,480.
Consolidated Spring Corp.: *See*—
  Elow, David I., and Jayne. 3,387,156.
Consolidation Coal Co.: *See*—
  Neuworth, Martin B., and Hammesfahr. 3,387,057.
Continental Aviation and Engineering Corp.: *See*—
  Bachle, Carl F. 3,386,347.

- Continental Can Co., Inc.: *See—*
  - Corning, Allan O., and Woodland. 3,386,503.
  - Dupuis, Clyde F. 3,387,116.
  - Fields, Charles M. 3,386,604.
  - Traynor, Bernard J. 3,386,613.
- Continental Distilling Corp.: *See—*
  - McCabe, John T. 3,386,832.
- Continental Motors Corp.: *See—*
  - Powell, Robert J., and Champion. 3,386,427.
- Continental Oil Co.: *See—*
  - Gordy, Travis L., Higgins, and Riggs. 3,386,936.
  - Goupilliaud, Pierre L., and Ware. 3,387,258.
  - Knupke, James A. 3,386,522.
- Control Data Corp.: *See—*
  - Wallace, Richard A. 3,386,654.
- Conwed Corp.: *See—*
  - Videen, Otis B. 3,386,796.
- Cook, Albert N., and J. F. Turley, to The Singer Co. Electric motor housing in clutch-brake driving device. 3,387,157, 6-4-68, Cl. 310—258.
- Cook, Edward J., to Varian Associates. Microwave window. 3,387,237, 6-4-68, Cl. 333—98.
- Coombe, Robert V.: *See—*
  - Burn, Derek, Coombs, and Petrow. 3,387,005.
- Cooney, Edward F.: *See—*
  - Bartheld, Robert G., and Cooney. 3,386,385.
- Cooper, Robert B.: *See—*
  - Castello, Anthony M., and Cooper. 3,386,434.
- Copeland, Jack M., and D. F. Adams. Device for cooking food. 3,386,433, 6-4-68, Cl. 126—41.
- Cords, Fred W., to Minesota Automotive, Inc. Auxiliary hydraulic brake lock. 3,386,777, 6-4-68, Cl. 303—89.
- Corey, Philip D., to General Electric Co. Frequency stabilized magnetically coupled multivibrator. 3,387,229, 6-4-68, Cl. 331—113.
- Corley-Miller, Inc.: *See—*
  - Arvidson, Bengt A., and Treiber. 3,386,225.
- Corn Products Co.: *See—*
  - Moses, William, and Censullo. 3,386,889.
- Cornelius Co., The: *See—*
  - Cornelius, Richard T. 3,386,261.
- Cornelius, Richard T., to The Cornelius Co. Method of and apparatus for dispensing reconstituted beer. 3,386,261, 6-4-68, Cl. 62—339.
- Corning, Allan O., and L. B. Woodland, to Continental Can Co., Inc. Differential heating plate. 3,386,503, 6-4-68, Cl. 165—185.
- Corpew, Charles R., to Stromberg-Carlson Corp. Electromagnetic deflection winding configuration. 3,387,242, 6-4-68, Cl. 335—213.
- Cotton Producers Institute, The: *See—*
  - Tewksbury, Charles G., and Kidda. 3,386,193.
- Counsell, Raymond E., and P. D. Klimstra, to G. D. Searle & Co. 6β-methyl-5α-androst-2-en-17-one and derivatives thereof. 3,387,007, 6-4-68, Cl. 260—397.5.
- Counts, William E.: *See—*
  - Bruhl, Donald A., Jr., and Counts. 3,386,165.
- Couture, Robert. Static modular ventilating unit. 3,386,217, 6-4-68, Cl. 52—303.
- Cowles Dissolver Co., Inc., The: *See—*
  - Brown, Donald J., and Hanlon. 3,386,299.
- Cox, James H., and E. B. Eisenegger. Portable, self-contained, electrical pumping device. 3,386,622, 6-4-68, Cl. 222—76.
- Craig, Glenn D.: *See—*
  - Cleaver, John C., Rehm, Craig, Baron, Gething, and Wiegratz. 3,386,420.
- Craig, Robert G., and J. Zulueta, to Air Products and Chemicals, Inc. Catalytic hydrogenation of aromatic hydrocarbons. 3,387,049, 6-4-68, Cl. 260—667.
- Craig Systems Corp.: *See—*
  - Watt, Charles E., Jr. 3,386,747.
- Crain, Donald L.: *See—*
  - Norell, John R., Crain, and Kleinschmidt. 3,387,050.
- Crews, John B., E. Dillingham, and J. R. Kearl, to Calculator Equipment Corp. Automatic passageway. 3,386,202, 6-4-68, Cl. 49—35.
- Crocker, Harry E., to McGraw-Edison Co. Combination dictating-transcribing machine. 3,386,743, 6-4-68, Cl. 274—9.
- Crosby, Donald G.: *See—*
  - Johnson, Herbert E., and Crosby. 3,387,031.
- Cross, Alexander D., and I. T. Harrison, to Syntex Corp. Pregna-4,6-diene- and 19 norpregna-4,6-diene-3β,16,17α-triol steroids, derivatives thereof, and processes for their preparation. 3,386,994, 6-4-68, Cl. 260—239.55.
- Crow, Morgan L., J. D. Foster, and M. D. Kilgore, to Dresser Industries, Inc. Well completion apparatus. 3,386,515, 6-4-68, Cl. 166—120.
- Crute, Billy G., to Stant Mfg. Co., Inc. Vent-controlling gas cap. 3,386,611, 6-4-68, Cl. 220—40.
- Cummings, Warren M. Accelerator set and release mechanism. 3,386,542, 6-4-68, Cl. 192—3.
- Cummins Engine Co., Inc.: *See—*
  - Kirkpatrick, Henry O. 3,386,259.
  - Kirkpatrick, Henry O. 3,386,260.
- Cunningham, Jack: *See—*
  - Ross, Edward E., Cunningham, and Hartman. 3,386,557.
  - Ross, Edward E., Cunningham, and Hartman. 3,386,559.
  - Ross, Edward E., Cunningham, and Hartman. 3,386,560.
- Curlett, John, to Gurries Mfg. Co., Inc. Servo mechanism. 3,386,303, 6-4-68, Cl. 74—388.
- Currie, Adam, to Wald Industries, Inc. Method and apparatus for controlling and metering the flow of granular material. 3,386,629, 6-4-68, Cl. 222—193.
- Currie, Malcolm R., and G. R. Brewer, to Hughes Aircraft Co. Apparatus for passing charged particles through a field free region and neutralizing said particles during transit. 3,387,176, 6-4-68, Cl. 315—111.
- Curry, James B. Adhesive tape dispensing appliances. 3,386,-684, 6-4-68, Cl. 225—16.
- Czernobil, Eugene, to Advance Transformer Co. Laminated core with a terminal connector and retainer means. 3,387,-6-4-68, Cl. 336—192.
- Czerwonka, Lawrence J., to American Air Filter Co., Inc. Electrostatic filter device. 3,386,227, 6-4-68, Cl. 55—142.
- Daimler-Benz Aktiengesellschaft: *See—*
  - Helmer, Josef A. 3,386,244.
  - Hoffmann, Heinrich, and Traub. 3,386,421.
  - Saufferer, Helmut. 3,386,241.
- Dale, John I., III: *See—*
  - Weaver, Max A., Dale, and Straley. 3,386,491.
  - Weaver, Max A., and Dale. 3,386,958.
- Dale, John I., III, J. M. Straley, and M. A. Weaver, to Eastman Kodak Co. Azo dyes containing vinylsulfonylethyl tetrahydroquinoline groups. 3,386,990, 6-4-68, Cl. 260—155.
- Dally, Roy: *See—*
  - Kingsbury, L C James, and Dally. 3,386,744.
- Dalton, John F., to Mohawk Data Sciences Corp. Print hammer assembly employing two-piece hammers. 3,386,377, 6-4-68, Cl. 101—93.
- Damusis, Adolfas, to Wyandotte Chemicals Corp. Low modulus NCO-terminated urethane compositions. 3,386,962, 6-4-68, Cl. 260—77.5.
- Daniel, Peggy J. Portable cot. 3,386,111, 6-4-68, Cl. 5—81.
- Dann, Bert H., to Bell & Howell Co. Demodulator circuit for angle-modulation systems. 3,387,219, 6-4-68, Cl. 329—50.
- Dannatt, Hugh St. L., and J. R. Fuld, to Sperry Rand Corp. Ribbon packaging device. 3,386,556, 6-4-68, Cl. 197—151.
- Dannels, Bobby F.: *See—*
  - Shepard, Alvin F., and Dannels. 3,386,699.
- Danti, Bernard R., to Polaroid Corp. Photographic product. 3,386,361, 6-4-68, Cl. 95—18.
- Daubert Chemical Co.: *See—*
  - Daubert, George A., Wollek, and Kutashy. 3,386,527.
- Daubert, George A., R. F. Wollek, and Z. Kutashy, to Daubert Chemical Co. Adhesive sound damping tape for application to vibrating panels. 3,386,527, 6-4-68, Cl. 181—33.
- Daurat, Andre, to Pechiney Compagnie de Produits Chimiques et Electrometallurgiques. Cell for refining aluminum by fusion electrolysis. 3,386,908, 6-4-68, Cl. 204—243.
- Davidson, James C., to Canadian Ingersoll-Rand Co. Ltd. Brake control mechanism. 3,386,536, 6-4-68, Cl. 188—174.
- Davidson, Joseph H.: *See—*
  - Pinkham, Jesse R., Trivette, Davidson, and Speas. 3,386,-320.
- Davidson, Sam. Wound resistors with terminal means. 3,387,-249, 6-4-68, Cl. 338—298.
- Davis, Dhu A. J., to Hermetic Coil Co., Inc. Transformer having winding reads held in pressure contact with terminals. 3,387,244, 6-4-68, Cl. 336—92.
- Davis, Myron D. Cigarette extinguisher. 3,386,452, 6-4-68, Cl. 131—256.
- Davis, William W., to Sperry Rand Corp. Memory apparatus and method. 3,387,274, 6-4-68, Cl. 340—173.5.
- Dawson, Edward F. Winch interlocking apparatus. 3,386,704, 6-4-68, Cl. 254—185.
- Dawson, Robert E., to R. E. Dietz Co. Self-righting traffic cone. 3,386,409, 6-4-68, Cl. 116—63.
- Dean, Donald E.: *See—*
  - Gordon, Philip L., Diedrich, and Dean. 3,386,982.
- Dean, Ralph K., to D. G. Griswold. Sprinkler system with automatic pressure relief valve. 3,386,460, 6-4-68, Cl. 137—218.
- Deco Tools, Inc.: *See—*
  - Faber, Elmer L. 3,386,414.
  - Faber, Elmer L. 3,386,415.
- Deering Milliken Research Corp.: *See—*
  - Michener, John W., and Smith. 3,387,181.
  - Pitts, Bobby L., and Ingham. 3,386,136.
- Deflandre, Rene, to Societe Derefa, Etablissement pour le Developpement Recherches et Fabrications Industrielles. Milling and boring machine having a rotary tailstock. 3,386,-146, 6-4-68, Cl. 29—26.
- Deghenghi, Romano: *See—*
  - Vezina, Claude, Marshall, and Deghenghi. 3,386,890.
- Dehydag Deutsche Hydrierwerke, G.m.b.H.: *See—*
  - Offermann, Wilhelm, and Linden. 3,386,845.
- Deibel, Raymond A.: *See—*
  - Olshei John R., and Deibel. 3,386,123.
- Deighton, Ward, to Radio Corp. of America. Mechanical movement. 3,386,742, 6-4-68, Cl. 274—4.
- Deiker, Robert W., to American Telephone and Telegraph Co. Alarm system for telephone pay stations. 3,387,091, 6-4-68, Cl. 179—5.
- Delman Co., The: *See—*
  - Mandy Robert R., and Clemett. 3,386,663.
- De Merre, Leon J., to Johnson & Johnson. Catamenial pad with an enzyme thereon. 3,386,441, 6-4-68, Cl. 128—284.
- De Moss, Dean L., to Minnesota Mining and Mfg. Co. Skew correction apparatus utilizing a torsionally deformable capstan. 3,387,295, 6-4-68, Cl. 340—174.1.
- Dempsey, John C.: *See—*
  - Acree, Elick H., Case, and Dempsey. 3,387,136.
- Dennard, Robert H., to International Business Machines Corp. Field-effect transistor memory. 3,387,286, 6-4-68, Cl. 340—173.
- Denton, James B., and B. J. Skuda, to Benton Williams, Co., Inc. Closure apparatus. 3,386,489, 6-4-68, Cl. 160—35.
- Derbyshire, Rodney L., and F. W. Schernig, to Raychem Corp. Production of irradiated material. 3,387,065, 6-4-68, Cl. 264—22.
- Dereich, John E., to Neville Chemical Co. Epoxy resin ink for for printing on glass. 3,386,848, 6-4-68, Cl. 117—38.
- Deutsche Gold- und Silber-Scheideanstalt vormals Roessler: *See—*
  - Neugebauer, Walter, and Schmidt. 3,386,894.

- Devime, Robert, to Commissariat a l'Energie Atomique. Electrical connection device for an electrode in contact with a corrosive fluid. 3,387,251, 6-4-68, Cl. 339—15.
- Devlin, Bernard T.: *See—*
  - Parker, Robert H., Devlin, and Purvis. 3,386,689.
- Dexter Corp., The: *See—*
  - Noiset, Willy R., and Busche. 3,386,834.
- Dibble, Charles E., I. F. Matthysse, A. C. Neaderland, and E. S. Raila, to Burndy Corp. Splice connector with locking insert. 3,387,080, 6-4-68, Cl. 174—94.
- Dickinson, Horace, and C. E. Stallard, to Varec, Inc. Breather valve construction. 3,386,468, 6-4-68, Cl. 137—496.
- Diedrich, James L.: *See—*
  - Gordon, Philip L., Diedrich, and Dean. 3,386,982.
- Diehl, Donald S., to IRC, Inc. Four layer planar semiconductor switch and method of making the same. 3,387,192, 6-4-68, Cl. 317—235.
- Dielectric Products Engineering Co., Inc.: *See—*
  - Sewell, Donald N. 3,386,147.
- Dietz, R. E., Co.: *See—*
  - Dawson, Robert E. 3,386,409.
- Digital Equipment Corp.: *See—*
  - Stockebrand, Thomas C. 3,387,293.
- Dike-O-Seal, Inc.: *See—*
  - Olson, Richard L. 3,386,141.
- Diller, Kenneth. Multiple-cell molded plastic tray. 3,386,608, 6-4-68, Cl. 220—23.6.
- Dillhoefer, James R., to The Eagle-Picher Co. Thermoplastic rubber blends comprising reclaimed rubber and an ethylene/vinyl acetate copolymer. 3,386,925, 6-4-68, Cl. 260—2.3.
- Dillingham, Edward: *See—*
  - Crews, John B., Dillingham, and Kearl. 3,386,202.
- Di Pilla, Anthony A., to Robertshaw Controls Co. Locking device for switch case components. 3,387,107, 6-4-68, Cl. 200—168.
- Distillers Co. Ltd., The: *See—*
  - Leitch, Archibald C. 3,387,072.
- Dohr, Albert D.: *See—*
  - Woelfer, Charles G., and Dohr. 3,386,162.
- Dominion Engineering Works, Ltd.: *See—*
  - Jenkinson, Richard I. 3,386,155.
  - Waterhouse, Peter, and Tincombe. 3,386,681.
- Donald, Raymond G., to P. R. Mallory & Co., Inc. Diffused resistor for an integrated circuit. 3,387,193, 6-4-68, Cl. 317—235.
- Donaldson Co., Inc.: *See—*
  - Riesberg, Kenneth D., and Gaul. 3,386,230.
- D'Onofrio, Anthony, to Litton Business Systems, Inc. Method of and apparatus for using radio or high frequency energy to produce printed matter. 3,386,551, 6-4-68, Cl. 197—1.
- Doo, Ven Y., to International Business Machines Corp. Process of making planar semiconductor devices isolated by encapsulating oxide filled channels. 3,386,865, 6-4-68, Cl. 148—175.
- Dore, Dondi B., to C. E. Valente. Electrical coffee grinder with metered dispensing device. 3,386,666, 6-4-68, Cl. 241—33.
- Dorr-Oliver Inc.: *See—*
  - Albertson, Orris E. 3,386,911.
- Doss, Richard C., to Phillips Petroleum Co. Preparation of disulfides. 3,387,039, 6-4-68, Cl. 260—608.
- Doane, William G., to Teletype Corp. Signal comparator. 3,387,263, 6-4-68, Cl. 340—146.2.
- Douglas, Livingston C., to Colgate-Palmolive Co., Prepackaged applicator dispensing. 3,386,619, 6-4-68, Cl. 221—135.
- Dovey, Norman E., to G. R. Smythe, J. R. Smythe, C. W. Smythe, D. Y. M. Smythe, M. W. Melvill, and S. Melvill. Accessory device for a slitter. 3,386,323, 6-4-68, Cl. 83—470.
- Dow Chemical Co., The: *See—*
  - Bublitz, Donald E., and Harris. 3,387,009.
  - Gardner, John B., Harper, and Pickle. 3,386,971.
  - Gardner, John B., and Harper. 3,386,972.
  - Handlovits, Carl E., and Louch. 3,387,020.
  - Kaeding, Warren W. 3,387,042.
  - Layne, Gilbert S., Huml, and Smith. 3,386,817.
  - Rosecrans, Alfred E., and Goeders. 3,386,927.
  - Skochdopole, Richard E., and Urchick. 3,386,877.
- Dow Corning Corp.: *See—*
  - Bartell, James F., and Ross. 3,386,945.
  - Kohl, Charles F., Stark, and Vogel. 3,386,905.
  - Piccoli, William A. 3,387,015.
  - Schiefer, Harry M. 3,386,917.
- Doyle, Edward A., and D. E. Stevens, to Kohler General, Inc. Apparatus for prefoaming of expandable synthetic resin such as styrene polymer composition containing a volatile organic liquid. 3,386,716, 6-4-68, Cl. 263—21.
- Drach, George, Jr., to General Motors Corp. Glove box compartment for a motor vehicle. 3,386,765, 6-4-68, Cl. 296—37.
- Drake, William H.: *See—*
  - Munroe, Richard W., West, Anderson, and Drake. 3,386,-134.
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- Dreher, Hans C., to General Cigar Co., Inc. Positive-displacement pump for metering fluids. 3,386,383, 6-4-68, Cl. 103—38.
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  - Crow, Morgan L., Foster, and Kilgore. 3,386,515.
  - Hopkinson, Eric C. 3,387,146.
  - Levine, Walter E. 3,386,411.
  - Miller, Eldon D. 3,386,723.
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- Dugger, Joe A.: *See—*
  - Clifford, Howard J., Dugger, and French. 3,386,125.
- Dulin, Grady N., Jr., and J. I. Scott, to Allied Chemical Corp. Method of splicing polyamide yarn and bonding composition therefor. 3,386,871, 6-4-68, Cl. 156—158.
- Dunlop Co. Ltd., The: *See—*
  - Harrison, Stanley R., Bennett, Broughton, and Thawley. 3,386,485.
  - Press, Carl. 3,386,534.
- Dunning, Herbert N., J. R. Nagy, and H. Wittcoff, to General Mills, Inc. Latent curing of epoxy resins. 3,386,953, 6-4-68, Cl. 260—47.
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  - Baumgarten, Peter K. 3,386,960.
  - Brown, George N. 3,386,707.
  - Buchanan, James E., and Gregory. 3,387,037.
  - Finch, Neil L., Sr. 3,386,983.
  - Jaffe, Edward E., and Marshall. 3,386,843.
  - Koch, Theodore A. 3,387,033.
  - Mesec, Kenneth J. 3,386,989.
  - Oscar, John A. 3,387,041.
  - Rushmere, John D. 3,386,898.
  - Starkweather, Howard W., Jr. 3,386,476.
  - Steinacker, Warren R. 3,386,181.
  - Tuites, Donald E. 3,386,940.
- Dupuis, Clyde F., to Continental Can Co., Inc. Contacts for vaporisers employed in vacuum metallising. 3,387,116, 6-4-68, Cl. 219—541.
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  - Bungard, James D., and Becking. 3,387,117.
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- Durgin, Frank H., to United States of America, Navy. Pair of flexural pivots with built-in damping. 3,386,780, 6-4-68, Cl. 308—2.
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- Dynamit Nobel Aktiengesellschaft: *See—*
  - Hartel Heinz, and Nobel. 3,387,089.
- Dynatone Electronics Corp.: *See—*
  - Radwan, Joseph A. 3,387,147.
- Eagle-Picher Co., The: *See—*
  - Dillhoefer, James R. 3,386,925.
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- Earleywine, Aubrey W., Jr., to Stewart-Warner Corp. Winding apparatus for an electric clock. 3,386,237, 6-4-68, Cl. 58—41.
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- Eastman Kodak Co.: *See—*
  - Bell, Alan, Kibler, and Smith. 3,386,942.
  - Caldwell, John R., and Gilkey. 3,386,795.
  - Cawley, John D. 3,387,008.
  - Dale, John I., Straley, and Weaver. 3,386,990.
  - Hagemeyer, Hugh J., Gammans, and Robinson. 3,387,022.
  - Harris, James E. 3,386,145.
  - Jackson, Winston J., Jr., and Caldwell. 3,386,935.
  - Nerwin, Hubert. 3,386,360.
  - Newland, Gordon C. 3,386,839.
  - Weaver, Max A., Dale, and Straley. 3,386,491.
  - Weaver, Max A., and Wallace. 3,386,967.
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  - Young, Howard S., and McDaniel. 3,386,928.
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- Ecob, Osmond: *See—*
  - Widdowson, Albert H., Ecob, and Johnson. 3,386,267.
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- Edenbaum, Martin I., to Johnson & Johnson. Indicator tape. 3,386,807, 6-4-68, Cl. 23—253.
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- Eie, Nils. Ski fastening. 3,386,748, 6-4-68, Cl. 280—11.35.
- Eisenegger, Edwin B.: *See—*
  - Cox, James H., and Eisenegger. 3,386,622.
- Eklund, Carl M., and L. A. Thomas, to United States of America, Department of Health, Education, and Welfare. Purified vaccine from brain tissue. 3,386,882, 6-4-68, Cl. 167—78.
- Electro-Tec Corp.: *See—*
  - Chernow, Fred. 3,387,271.
- Electrovert Mfg. Co. Ltd.: *See—*
  - Tardoskegyi, Louis V. 3,386,166.
- Elevators Pty. Ltd.: *See—*
  - Chenhall, John S. 3,387,239.
- Elfstrom, Philip D. Illuminated sign. 3,386,197, 6-4-68, Cl. 40—132.

- Eli, Lily and Co.: *See—*
  - Hargrove, William W. 3,387,001.
- Elliott Bros. (London) Ltd.: *See—*
  - Bevan, Frank H. 3,387,302.
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- Ellison Tufting Machinery Ltd.: *See—*
  - Ellison, Ronald, and Pritchard. 3,386,397.
- Elow, David I., and L. Jayne, to Consolidated Spring Corp., and The Carbone Corp. Brush assembly unit. 3,387,156, 6-4-68, Cl. 310—247.
- Elsee, John B.: *See—*
  - Foster, Thomas W. F., and Elsee. 3,386,717.
- Emerson Electric Co.: *See—*
  - Brundage, Richard B. 3,387,178.
- Emhart Corp.: *See—*
  - Hand, Albert E. 3,386,125.
- Emmons, William D., to Rohm & Haas Co. N-alkenoyloxy-2-morpholinones and their corresponding hydrolysis products. 3,386,998, 6-4-68, Cl. 260—247.2.
- Endo, Noriko: *See—*
  - Chibata, Ichiro, Tosa, and Endo. 3,386,888.
- Engh, Robert O., to Honeywell Inc. Fire detection and flame safeguard apparatus. 3,387,135, 6-4-68, Cl. 250—83.6.
- Engle, Ellsworth C. Fluid power drive unit having rotary and reciprocatory movement. 3,386,340, 6-4-68, Cl. 91—61.
- Englehard Industries, Inc.: *See—*
  - Rylander, Paul N., and Steele. 3,387,048.
- English, Alan, to Arthur G. McKee Co. Agglomeration of iron oxide material. 3,386,816, 6-4-68, Cl. 75—33.
- Epstein, Philip L., and F. Pribila, to Quindar Electronics Inc. Telemetering system. 3,387,296, 6-4-68, Cl. 340—186.
- Epstein, Sidney. Quotation monitoring unit. 3,387,268, 6-4-68, Cl. 340—154.
- Erdman, William I.: *See—*
  - Bradbury, Wilburn F., and Erdman. 3,386,378.
- Ericks, Herbert M. Clearance safety reflector ring. 3,387,127, 6-4-68, Cl. 240—41.
- Erickson, George F., to United States of America, Atomic Energy Commission. Device for forming small diameter tubing. 3,386,276, 6-4-68, Cl. 72—56.
- Erickson, Ronald E.: *See—*
  - Montgomery, William S., Jr., and Erickson. 3,387,078.
- Ericson, John A.: *See—*
  - Nadrich, John, and Ericson. 3,386,633.
- Erikson, Herman E., to Polaroid Corp. Photographic exposure and processing apparatus. 3,386,355, 6-4-68, Cl. 95—1.1.
- Eriksson, Sven G. Pump for sucking liquid, air and solid particles. 3,386,386, 6-4-68, Cl. 103—117.
- Ernst, Heinz: *See—*
  - Kremp, Rudolf, Winkler, Ernst, and Zattler. 3,386,357.
- Esakov, Daniel A.: *See—*
  - Hildebrandt, William J., Lukstas, Yerks, and Esakov. 3,386,650.
- Esso Production Research Co.: *See—*
  - Bielstein, Walter J., and Rawl. 3,386,508.
  - Kirby, Robert A. 3,386,285.
  - Weber, Alvin G. 3,386,514.
- Etablissements Kuhlmann: *See—*
  - Pajot, Pierre T. C. 3,387,059.
- Etheridge, James D.: *See—*
  - Prilliman, Floyd W., and Etheridge. 3,386,690.
- Ethyl Corp.: *See—*
  - Farmer, Harold L., and Waltman. 3,386,371.
- Ets. A. & L. Verhaegen Societe Anonyme: *See—*
  - Vanhentenrijk, Georges C., and Blairon. 3,386,110.
- Euler, George M., to General Electric Co. Magnetically latchable relay. 3,387,188, 6-4-68, Cl. 317—155.5.
- Eurey, Noah W., to Excel, Inc. Retractable cover for storage receptacles. 3,386,609, 6-4-68, Cl. 220—24.
- Evans, James, and J. H. Florkowski, to International Business Machines Corp. Content addressable memory system using address transformation circuits. 3,387,272, 6-4-68, Cl. 340—172.5.
- Evans, Richard A., and H. D. Ogren, to Honeywell Inc. Fluid vortex apparatus. 3,386,291, 6-4-68, Cl. 73—505.
- Evans, Robert T., to Halliburton Co. Overshot for retrievable bridge plug. 3,386,764, 6-4-68, Cl. 294—86.1.
- Everhard, Paul R., to International Business Machines Corp. Shift-print interlock. 3,386,554, 6-4-68, Cl. 197—71.
- Excel, Inc.: *See—*
  - Eurey, Noah W. 3,386,609.
- Eyzat, Pierre, to Institut Francais du Petrole, des Carburants et Lubrifiants. Compression-ignition engine. 3,386,422, 6-4-68, Cl. 123—32.
- FMC Corp.: *See—*
  - Forrest, Tom H. 3,386,910.
- Faber, Elmer L., to Deco Tools, Inc. Decorative painting apparatus. 3,386,414, 6-4-68, Cl. 118—323.
- Faber, Elmer L., to Deco Tools, Inc. Coating machine. 3,386,415, 6-4-68, Cl. 118—323.
- Facit-Halda AB: *See—*
  - Stroberg, John E. 3,386,556.
- Fair, Irvin E., to Bell Telephone Laboratories, Inc. Signal dispersion system. 3,387,235, 6-4-68, Cl. 333—30.
- Fair, Joseph O., to Pan American Petroleum Corp. Gas anchor. 3,386,390, 6-4-68, Cl. 103—203.
- Fairbanks, Gordon J., to Stewart-Warner Corp. Heat exchanger. 3,386,500, 6-4-68, Cl. 165—51.
- Fairchild, Robert K., to Lancaster Meter Parts Co. Quick-disconnect bearing bracket for a gas meter diaphragm. 3,386,288, 6-4-68, Cl. 73—278.
- Fang, Fabian T., to Rhom and Haas Co. Fibrous textile products. 3,386,797, 6-4-68, Cl. 8—115.7.
- Fansteel Metallurgical Corp.: *See—*
  - Alexander, Guy B., West, and Yates. 3,386,814.
- Farbenfabriken Bayer Aktiengesellschaft: *See—*
  - Blomeyer, Friedrich. 3,386,944.
  - Brack, Alfred. 3,386,956.
  - Lippert, Axel. 3,386,182.
  - Pauli, Otto, Kuhle, and Klauke. 3,386,951.
  - Schnell, Hermann, and Bottenbruch. 3,386,954.
  - Schon, Nikolaus, Pampus, and Witte. 3,386,984.
  - Witte, Josef, Schon, and Pampus. 3,386,983.
- Farber, Richard J., to Hazeltine Research, Inc. Pay television audience survey and billing system. 3,387,082, 6-4-68, Cl. 178—6.
- Farber, Richard J., and F. H. Boos, Jr., to Hazeltine Research, Inc. Pay television system with billing transponder. 3,387,083, 6-4-68, Cl. 178—6.
- Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning: *See—*
  - Braun, Oskar, Gross, Muller, Nakaten, and Weissert. 3,386,841.
  - Feldhoff, Manfred, Gumboldt, and Helberg. 3,386,957.
- Farmer, Harold L., and R. Waltman, to Ethyl Corp. Banding machine. 3,386,371, 6-4-68, Cl. 100—9.
- Farney, George K., to S-F-D Laboratories, Inc. Slow wave structure of the comb type having strap means connecting the teeth to form iterative inductive shunt loading. 3,387,169, 6-4-68, Cl. 315—3.5.
- Farney, George K., and J. Feinstein, to S-F-D Laboratories, Inc. Stub supported stripline helical slow wave circuit for electron tube. 3,387,170, 6-4-68, Cl. 315—3.5.
- Farnsworth, Philo T., to International Telephone and Telegraph Corp. Method and apparatus for producing nuclear-fusion reactions. 3,386,883, 6-4-68, Cl. 176—1.
- Faulkner, Joseph A.: *See—*
  - Munson, John C., and Faulkner. 3,387,284.
- Federal Carton Corp.: *See—*
  - Cassidy, Benjamin. 3,386,641.
- Federal-Mogul Corp.: *See—*
  - Thill, Walter E. 3,386,154.
- Feine, Wolfgang. Hand roller. 3,386,124, 6-4-68, Cl. 15—230.11.
- Feinstein, Joseph: *See—*
  - Farney, George K., and Feinstein. 3,387,170.
- Feldhoff, Manfred, A. G. M. Gumboldt, and J. Helberg, to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning. Copolymers of α-alkylenaryl ethers with α-olefins. 3,386,957, 6-4-68, Cl. 260—62.
- Feldmeier, Robert H. Regenerative heat exchanger for heavy liquids. 3,386,497, 6-4-68, Cl. 165—11.
- Ferb, Thomas E. Hypodermic projectile. 3,386,381, 6-4-68, Cl. 102—92.
- Ferko, Alexander, to L. W. Nash Co. Turnover device. 3,386,598, 6-4-68, Cl. 214—1.
- Field, Joseph P., to International Telephone and Telegraph Corp. Tandem trunking having incoming and outgoing appearances in a crossbar matrix. 3,387,092, 6-4-68, Cl. 179—18.
- Fielding, Eric, to Colt Ventilation and Heating Ltd. Ventilators. 3,386,368, 6-4-68, Cl. 98—43.
- Fields, Charles M., to Continental Can Co., Inc. Infant-nursing pouch. 3,386,604, 6-4-68, Cl. 215—11.
- Figiel, Francis J., to Allied Chemical Corp. Process of separating non-diamond carbonaceous material from synthetic diamantiferous products. 3,386,805, 6-4-68, Cl. 23—209.9.
- Finch, Neil L., Sr., to E. I. du Pont de Nemours and Co. Acrylic wax abrasion resistant fiber finish composition. 3,386,938, 6-4-68, Cl. 260—28.5.
- Findlay, William H.: *See—*
  - Airth, James C., and Findlay. 3,386,794.
- Finne, Ronald M., to Bell Telephone Laboratories, Inc. Electroplating onto molybdenum surfaces. 3,386,896, 6-4-68, Cl. 204—37.
- Firma Alfelder Eisenwerke: *See—*
  - Heise, Carl-Hermann. 3,386,394.
- Firma Carinthia Elektrogerate Gesellschaft m.b.H.: *See—*
  - Loner, Aldo. 3,386,168.
- Firma Dornbusch & Co.: *See—*
  - Grunewald, Waldemar F. W., and Peiler. 3,386,180.
- Fischer, Edward, to Hoover Ball and Bearing Co. Extrusion apparatus. 3,386,132, 6-4-68, Cl. 18—14.
- Fischer, James L., and L. A. Strommen, to Bell Telephone Laboratories, Inc. Telephone repertory dialer. 3,387,098, 6-4-68, Cl. 179—90.
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- Fisher, Walter, to Traco Canada Ltd. Multi-port orifice valve. 3,386,461, 6-4-68, Cl. 137—237.
- Fishman, Denis, and L. T. A. Beckett, to International Standard Electric Corp. Strain relieving transition member for contacting semiconductor devices. 3,387,191, 6-4-68, Cl. 317—234.
- Fitch, Roland H.: *See—*
  - Stone, Arthur R., and Fitch. 3,386,322.
- Fitzgerald, Ernest M.: *See—*
  - Horton, William B., and Fitzgerald. 3,386,475.
- Fleicher, Donald W., M. Garden, and W. P. Hamilton, to Leeds & Northrup Co. Measuring systems with common-mode interference suppression. 3,387,224, 6-4-68, Cl. 330—30.
- Fletcher, H. E., Co.: *See—*
  - Horton, William B., and Fitzgerald. 3,386,475.
- Flick, Carl N., and R. C. Greathouse, to Cincinnati Milling Machine Co. Bore machining mechanism. 3,386,317, 6-4-68, Cl. 77—3.
- Flick, Francis S., and R. M. Morgan, to Flick-Reedy Corp. Valving structure. 3,386,463, 6-4-68, Cl. 137—270.
- Flick-Reedy Corp.: *See—*
  - Flick, Francis S., and Morgan. 3,386,463.
- Florkowski, John H.: *See—*
  - Evans, James, and Florkowski. 3,387,272.

- Floway Pumps, Inc.: *See—*
  - Kennedy, Marcel J., and Royer. 3,386,662.
- Foley, Albert H., to General Electric Co. Impedance compensated high precision electrical capacitance measuring bridge 3,387,208, 6-4-68, Cl. 324—60.
- Fong, Harry L. Peg-type target game. 3,386,736, 6-4-68, Cl. 273—100.
- Ford Motor Co.: *See—*
  - Allison, William D. 3,386,751.
  - Bergman, Walter, and Husen. 3,386,750.
  - Freers, Sidney L., and Tea. 3,386,752.
  - Haddad, Charles. 3,386,310.
  - Ivanchich, Peter G. 3,386,302.
  - Johnston, Thomas L., Boettner, Bush, and McEvily. 3,386,862.
  - Jones, Clevee D. 3,386,548.
  - Magil, Donald G., and Spencer. 3,386,782.
  - Morrison, William S. 3,386,754.
  - Moss, Jacques L. 3,386,532.
  - Preston, Bruce W. 3,386,333.
  - Slabey, Martin W., and Wu. 3,386,428.
  - Stockton, Thomas R. 3,386,314.
- Fornaciari, Ray P. Equipment for feeding laundry to flatwork ironer. 3,386,192, 6-4-68, Cl. 38—143.
- Forrat, Francis, to Compagnie Generale d'Electricite. Preparation of oriented monocrystals. 3,386,919, 6-4-68, Cl. 252—301.1.
- Forrest, Tom H., to FMC Corp. Process for treatment of sewage and nutrient removal. 3,386,910, 6-4-68, Cl. 210—5.
- Fortuna, Giorgio: *See—*
  - Marconi, Walter, Cesca, and Fortuna. 3,386,975.
- Forward, Robert W., to General Motors Corp. Combination mold and fastening means. 3,386,757, 6-4-68, Cl. 287—189.36.
- Foster, Joe D.: *See—*
  - Crow, Morgan L., Foster, and Kilgore. 3,386,515.
- Foster, Thomas W. F., and J. B. Elsee, to Kaiser Aluminum & Chemical Corp. Process and apparatus for heat treating aluminum ingots. 3,386,717, 6-4-68, Cl. 263—28.
- Foulon, Fernand G., and J. A. Mouret, to The Yoder Co. Multiple strip tensioning device. 3,386,679, 6-4-68, Cl. 242—56.2.
- Fourr, James O. Apparatus for protecting electrical power equipment from damage to too frequent repetition of start conditions. 3,387,182, 6-4-68, Cl. 317—40.
- Fox Products Co., The: *See—*
  - Godshalk, James B. 3,387,200.
- Foxboro Co., The: *See—*
  - Smith, William F. 3,386,620.
- Francis, Gus. Method and apparatus for propelling projectiles for space and other applications. 3,386,380, 6-4-68, Cl. 102—23.
- Frank, Adolf: *See—*
  - Muller, Martin, and Frank. 3,387,231.
- Frans, Frederick. Metronome. 3,386,327, 6-4-68, Cl. 84—484.
- Franssen, Volker: *See—*
  - Jasching, Wolfgang, and Franssen. 3,387,012.
- Freers, Sidney L., and C. A. Tea, to Ford Motor Co. Vehicle suspension system having torsion spring. 3,386,752, 6-4-68, Cl. 280—124.
- French, Dick L.: *See—*
  - Clifford, Howard J., Dugger, and French. 3,386,135.
- Friend, Lindsay C., to AMP Inc. Two hole video jack. 3,387,104, 6-4-68, Cl. 200—51.1.
- Frilchtenicht, Joseph F., and N. L. Roy, to TRW Inc. Apparatus for handling micron size range particulate material. 3,387,218, 6-4-68, Cl. 328—233.
- Fritz, Karl. Metal-coating furnace. 3,386,720, 6-4-68, Cl. 263—44.
- Froning, H., to Pan American Petroleum Corp. Plugging highly permeable zones of underground formations. 3,386,509, 6-4-68, Cl. 166—29.
- Frost, Thomas H.: *See—*
  - Pike, Malcom R., Kerridge, and Frost. 3,386,248.
- Frouws, Simon M., to North American Philips Co., Inc. Method of manufacturing a gas discharge tube. 3,386,785, 6-4-68, Cl. 316—4.
- Fruehauf Corp.: *See—*
  - Tantlinger, Keith W., Chieger, and Blanchard. 3,386,724.
- Fuji Shashin Film Kabushiki Kaisha: *See—*
  - Yoshida, Makoto, Shiba, and Okumura. 3,386,880.
- Fujikawa, Koichi. Seat frame member. 3,386,725, 6-4-68, Cl. 267—110.
- Fukuda, Seigo: *See—*
  - Akaboshi, Michijiro, Kominami, Fukuda, and Uragami. 3,386,981.
- Fuld, Jerome R.: *See—*
  - Dannatt, Hugh St. L., and Fuld. 3,386,556.
- Funfstuck, Horst, to Statham Instruments, Inc. Temperature control system. 3,386,498, 6-4-68, Cl. 165—26.
- Funk, Jack N., and R. V. Ramsey, to The Boeing Co. Damage intelligence system. 3,387,120, 6-4-68, Cl. 235—150.2.
- Fynegar, Eric E. G., and A. E. Hoitt. Straight-bar knitting machines. 3,386,269, 6-4-68, Cl. 66—88.
- Gagliardi, Richard P., and L. C. Metz, Jr., to United States of America, Navy. Triggered spark gap electronic protector. 3,387,216, 6-4-68, Cl. 328—8.
- Gaines, William C., Jr., to American Air Filter Co., Inc. Pocket-type filter. 3,386,232, 6-4-68, Cl. 55—500.
- Gamage, Russell W. Rotary external combustion engines. 3,386,245, 6-4-68, Cl. 60—59.
- Gammans, William J.: *See—*
  - Hagemeyer, Hugh J., Gammans, and Robinson. 3,387,022.
- Garden, Murray: *See—*
  - Fleicher, Donald W., Garden, and Hamilton. 3,387,224.
- Gardner, John B., B. G. Harper, and W. S. Pickle, to The Dow Chemical Co. Moldable polysulfones. 3,386,971, 6-4-68, Cl. 260—79.3.
- Gardner, John B., and B. G. Harper, to The Dow Chemical Co. Copolymers of sulfur dioxide and allylthioureas. 3,386,972, 6-4-68, Cl. 260—79.3.
- Garrett, Henry U. Well apparatus and method. 3,386,891, 6-4-68, Cl. 103—233.
- Gartner, Edward A.: *See—*
  - Cahill, John W., Powell, and Gartner. 3,387,071.
- Gaul, Paul U., Jr.: *See—*
  - Riesberg, Kenneth D., and Gaul. 3,386,290.
- Gautherin, George: *See—*
  - Greenberg, Sol and Gautherin. 3,387,201.
- Gauthier, Alfred, G.m.b.H.: *See—*
  - Rentschler, Waldemar T. 3,386,356.
  - Rentschler, Waldemar T. 3,386,363.
- Gavoret, Juliette, to Produits Chimiques Pechiney-Saint-Gobain. Method of making expandable pearls of styrene copolymer. 3,386,926, 6-4-68, Cl. 260—2.5.
- Gaydasch, Alexander, to Universal Oil Products Co. N-acyl-N-cyanoalkyl-cyclohexylamines. 3,387,019, 6-4-68, Cl. 260—464.
- Gehring, Rudolph: *See—*
  - Rutschi, Robert, and Gehring. 3,386,915.
- Geigy Chemical Corp.: *See—*
  - Kleiner, Eduard K. 3,386,977.
- Geissler, Ambros: *See—*
  - Singer, Edwin, and Geissler. 3,387,277.
- General Aniline & Film Corp.: *See—*
  - Marijan, Ashot, and Grosser. 3,386,976.
  - Slimowicz, Chester E. 3,386,823.
- General Cigar Co., Inc.: *See—*
  - Dreher, Hans G. 3,386,383.
- General Dynamics Corp.: *See—*
  - Selsam, Roger L. 3,386,389.
- General Electric Co.: *See—*
  - Brezosky, Bernard J. 3,386,582.
  - Carpenter, Jonathan H., and Holder. 3,387,243.
  - Coray, Philip D. 3,387,229.
  - Euler, George M. 3,387,188.
  - Foley, Albert H. 3,387,208.
  - Gross, Charles H., and Helmintoller. 3,386,247.
  - Kendt, Norman L. 3,386,454.
  - Kingsbury, L C James. 3,386,741.
  - Kingsbury, L C James, and Dally. 3,386,744.
  - Kralls, Gerd E. 3,387,155.
  - Maxwell, Hugh S. 3,386,821.
  - Watrous, Donald L. 3,387,143.
  - Womack, David R., Jr. 3,387,236.
- General Mills, Inc.: *See—*
  - Dunning, Herbert N., Nasy, and Wittcoff. 3,386,958.
- General Motors Corp.: *See—*
  - Albright, Bruce S. 3,386,998.
  - Beam, Paul E., Jr., and Spears. 3,386,243.
  - Bessette, Ramon L. 3,386,760.
  - Bishop, Gary E., and Bramley. 3,386,535.
  - Bloom, James W. 3,386,319.
  - Drach, George, Jr. 3,386,765.
  - Drayer, William L. 3,386,709.
  - Forward, Robert W. 3,386,757.
  - Graham, Donald E., and Neyhouse. 3,387,196.
  - Ingolia, Anthony J. 3,387,125.
  - Johnstone, Theodore H., Peters, and Brown. 3,386,761.
  - Kwasiborski, Stanley, Jr. 3,386,759.
  - Mance, John J., and Stallard. 3,386,873.
  - Ruf, Ernst H. 3,386,161.
  - York, Jerome B., Jr. 3,386,710.
- General Time Corp.: *See—*
  - Voit, Richard L. 3,386,238.
- Genger, Horst: *See—*
  - Petrick, Edward J., and Genger. 3,386,767.
- Gentile, Lawrence F., to Time, Inc. Apparatus for making photographic images. 3,386,359, 6-4-68, Cl. 95—11.
- Gentry, Hermond G., to The Mead Corp. Can wrapper. 3,386,569, 6-4-68, Cl. 206—65.
- Gentry, Hermond G., to The Mead Corp. Article carrier. 3,386,648, 6-4-68, Cl. 229—04.
- Genzabella, John C., to The Budd Co. Coating composition for erasable paper comprising polyvinyl acetate emulsion, hydroxyethylated starch dispersion and colloidal silica and erasable paper coated therewith. 3,386,938, 6-4-68, Cl. 260—17.4.
- Gerard, George, and R. P. Papirno, to Allied Research Associates, Inc. Photoelectric measuring apparatus using gratings. 3,387,139, 6-4-68, Cl. 250—237.
- Gerben, Ralph D., to Maryland Cup Corp. Stacking and stack arranging device. 3,386,599, 6-4-68, Cl. 214—6.
- Gerber, Samuel M., to American Cyanamid Co. Process for reducing organic nitrogen oxides to amines using iron and active carbon in a solvent. 3,386,901, 6-4-68, Cl. 260—156.
- Gertler, Eugene: *See—*
  - Hernan, George W., Beresin, and Gertler. 3,387,269.
- Gething, Frank: *See—*
  - Cleaver, John C., Rehm, Craig, Baron, Gething, and Wiegratz. 3,386,420.
- Geyer, Robert L.: *See—*
  - Landrum, Ralph A., and Geyer. 3,386,525.
- Gibson, James A., and J. B. Parker, to United States of America, Navy. Fluorimino piperazines. 3,387,000, 6-4-68, Cl. 260—268.
- Gilbert, Richard S. Arranging and counting apparatus. 3,386,618, 6-4-68, Cl. 221—12.
- Gilchrist, Thomas: *See—*
  - Bernier, Georges E., Gilchrist, and Pallen. 3,386,928.
- Gilkey, Russell: *See—*
  - Caldwell, John R., and Gilkey. 3,386,795.
- Gimler, John R., and J. E. Jurman, to Hercules Inc. Heat resistant propellants containing organic oxidisers. 3,386,868, 6-4-68, Cl. 149—2.
- Giovannucci, Julius L., to Revere Copper and Brass Inc. Lightweight panel. 3,386,321, 6-4-68, Cl. 52—586.

Glass, Emmett F., and H. G. McCarty, to Sperry Rand Corp. Implement frame. 3,386,233, 6-4-68, Cl. 56—22.
Gleim, Clyde E., and R. B. Spacht, to The Goodyear Tire & Rubber Co. Polyester resin stabilized with phenolic phosphites. 3,386,952, 6-4-68, Cl. 260—45.95.
Globe Mfg. Co.: *See*—
Cahill, John W., Powell, and Gartner. 3,387,071.
Goda, George C., and R. Coniglione, to Greiner Scientific Corp. Liquid check valve assembly. 3,386,470, 6-4-68, Cl. 137—512.
Godshalk, James B., to The Fox Products Co. Battery chargers with reverse polarity indicator. 3,387,200, 6-4-68, Cl. 320—48.
Goeders, Calvin N.: *See*—
Rosecrans, Alfred E., and Goeders. 3,386,927.
Goldberg, Norman: *See*—
Economides, Leander, and Goldberg. 3,386,866.
Goldstein, Eugene, to H. G. Enterprises. Protective garment. 3,386,443, 6-4-68, Cl. 128—287.
Gooding, Dennis J., and A. Wartella, to United States of America, Air Force. Digital detection and storage system. 3,387,275, 6-4-68, Cl. 340—172.5.
Goodrich, B. F., Co., The: *See*—
Kramer, James H. 3,386,657.
Goodyear, John L.: *See*—
Blood, Charles H., Goodyear, and Korones. 3,386,695.
Goodyear Tire & Rubber Co., The: *See*—
Gleim, Clyde E., and Spacht. 3,386,952.
Grote, Warren B. 3,386,875.
Kovac, Frederick J., and Rye. 3,386,486.
Lal, Joginder, and Scott. 3,386,947.
Lal, Joginder, and McGrath. 3,386,980.
Wiener, Maria V. 3,386,960.
Wiener, Maria V. 3,386,961.
Gordon, Philip L., J. L. Diedrich, and D. E. Dean, to The Borden Co. Alkoxylated polyvinyl alcohol and alkoxylated amine compositions. 3,386,982, 6-4-68, Cl. 260—91.3.
Gordy, Travis L., F. J. Higgins, and O. L. Riggs, Jr., to Continental Oil Co. Carveable compositions comprising paraffin wax, ethylene-vinyl acetate or ethylene-ethyl acrylate copolymer and plasticizer. 3,386,936, 6-4-68, Cl. 260—27.
Gorelick, Joseph. Dentist chair combination with utility supporting attachment. 3,386,766, 6-4-68, Cl. 297—192.
Görling, Karl G., and S. A. Lundqvist, to Boliden Aktiebolag. Process for roasting iron sulfide materials. 3,386,815, 6-4-68, Cl. 75—9.
Gough, Dick V. Liquid separators. 3,386,581, 6-4-68, Cl. 210—68.
Goupillaud, Pierre L., and J. A. Ware, to Continental Oil Co. Method and apparatus for compiling an F-K plot of a seismic record. 3,387,258, 6-4-68, Cl. 340—15.5.
Grabarczyk, Frank A., to Allen-Bradley Co. Stackable sieve construction for use in reciprocating air column sifters and the like. 3,386,580, 6-4-68, Cl. 209—237.
Grace, W. R., & Co.: *See*—
Marriam, Robert R. 3,386,660.
Grad, Peter P., to Rotron Mfg. Co., Inc. Bearing assembly. 3,387,153, 6-4-68, Cl. 310—90.
Graham, Donald E., and G. A. Neyhouse, to General Motors Corp. Speed control system for alternating current induction motors. 3,387,196, 6-4-68, Cl. 318—227.
Graham, Robert S., to Bell Telephone Laboratories, Inc. Pilot-controlled regulating apparatus for transmission systems. 3,387,232, 6-4-68, Cl. 333—15.
Grakauskas, Vytautas, and E. E. Hamel, to Aerojet-General Corp. Process for fluorinating compounds containing a gem-dinitro group. 3,387,044, 6-4-68, Cl. 260—644.
Gramm, Raymond A. Adjustable tray apparatus. 3,386,392, 6-4-68, Cl. 108—44.
Grandstaff, Otho D., and V. F. Weber, to Automatic Electric Laboratories, Inc. Operator's transmission coupling circuit. 3,387,096, 6-4-68, Cl. 179—81.
Gray, Don N., and R. D. Knight, to United States of America, Air Force. Fluorine substituted benzophenone ultraviolet absorbers. 3,387,035, 6-4-68, Cl. 260—591.
Gray, Samuel A., to Bell Aerospace Corp. Dynamically constantly variable gain servo control system. 3,386,343, 6-4-68, Cl. 91—364.
Grayson, Richard D., to International Telephone and Telegraph Corp. Helical thermal switch. 3,387,246, 6-4-68, Cl. 337—372.
Greanias, Evon C., P. F. Meagher, and C. E. Smyrk, to International Business Machines Corp. Radiant energy sensitive electronic curve follower. 3,387,138, 6-4-68, Cl. 250—219.
Greathouse, Richard C.: *See*—
Flick, Carl N., and Greathouse. 3,386,317.
Green, Edward H., and D. S. Tillotson. Method of filling aerosol containers and aerosol valve structure adapted for such method. 3,386,479, 6-4-68, Cl. 141—3.
Green, James F., R. Hansen, and L. V. Raper, to The Oklahoma Publishing Co. Rotary press preprinted web registering device. 3,386,637, 6-4-68, Cl. 226—100.
Green, Joseph, E. C. Klaubert, and R. J. Smith, to United States of America, Atomic Energy Commission. Solid composite propellants containing burning rate catalysts. 3,386,869, 6-4-68, Cl. 149—19.
Green, Michael L. Lockable closure. 3,386,273, 6-4-68, Cl. 70—168.
Greenberg, Sol, and G. Gautherin, to Lambda Electronics Corp. Regulated power supplies including inverter circuits. 3,387,201, 6-4-68, Cl. 321—2.
Greene, Gordon Z., and B. Benjamin. Pressure seal bib.
Gregory, Walter A.: *See*—
3,386,700, 6-4-68, Cl. 251—175.
Buchanan, James B., and Gregory. 3,387,037.
Greiner Scientific Corp.: *See*—
Goda, George G., and Coniglione. 3,386,470.
Gretz, Charles, to Life-Like Products, Inc. Construction kit. 3,386,590, 6-4-68, Cl. 211—177.
Griesemer, Harold A., and D. M. Large, to Western Electric Co., Inc. Method of magnetically loading a mass of articles into a workholder. 3,386,156, 6-4-68, Cl. 29—428.
Griffin, Gordon D. Composting machine. 3,386,705, 6-4-68, Cl. 259—6.
Griffin Wellpoint Corp.: *See*—
Casagrande, Leo, and Loughney. 3,386,251.
Grist, Franklin J.: *See*—
Arps, Milton J., Grist, and Rippl. 3,386,621.
Griswold, Donald G.: *See*—
Dean, Ralph K. 3,386,460.
Grodberg, Sidney L. Apparatus for manufacturing mailing tubes. 3,386,350, 6-4-68, Cl. 93—77.
Grodkiewicz, William H., and L. G. Van Uitert, to Bell Telephone Laboratories, Inc. Growth of yttrium iron garnet. 3,386,799, 6-4-68, Cl. 23—51.
Gronwald, Gerd: *See*—
Mutz, Gerhard, and Gronwald. 3,386,376.
Gros, Chajim. Welding of plastics sheet material. 3,386,874, 6-4-68, Cl. 156—220.
Gross, Charles H., and A. M. Helmintoller, to General Electric Co. Powerplant with thrust reverser. 3,386,247, 6-4-68, Cl. 60—226.
Gross, Richard: *See*—
Braun, Oskar, Gross, Muller, Nakaten, and Weissert. 3,386,841.
Grosser, Frederick: *See*—
Merijan, Ashot, and Grosser. 3,386,976.
Grote, Warren B., to The Goodyear Tire & Rubber Co. Expandable tire building bladder apparatus. 3,386,875, 6-4-68, Cl. 156—416.
Grove, John L., to Grove Mfg. Co. Method of and apparatus for extending a telescopic crane boom. 3,386,594, 6-4-68, Cl. 212—55.
Grove Mfg. Co.: *See*—
Grove, John L. 3,386,594.
Grove Valve and Regulator Co.: *See*—
Combes, Marvin G. 3,386,151.
Gruber, Bernard A., to Monsanto Co. Article containing silicon carbon fibers. 3,386,840, 6-4-68, Cl. 106—44.
Grumblatt, Victor J., to Lord Corp. Slip coupling. 3,386,266, 6-4-68, Cl. 64—30.
Grunewald, Waldemar F. W., and J. Peller, to Firma Dornbusch & Co. Embossing roll, in particular for the treatment of webs of thermoplastic material. 3,386,130, 6-4-68, Cl. 18—10.
Grunzweig & Hartmann AG.: *See*—
Kurtze, Gunter. 3,386,528.
Guernet, Jacques, Campagnie d'Applications Mecaniques a 1-Atomistique (C.A.M.E.C.A.) Automatic film or tape reproducing apparatus. 3,386,674, 6-4-68, Cl. 242—55.12.
Guettel, Marvin A., to Square D Co. Resistance welder control circuit with up-down slope control and current regulator circuits. 3,387,112, 6-4-68, Cl. 219—114.
Gulf General Atomic Inc.: *See*—
Merten, Ulrich. 3,386,583.
Gumboldt, Albert G. M.: *See*—
Feldhoff, Manfred, Gumboldt, and Helberg. 3,386,957.
Gundlach, Robert W., and V. S. Mihajlov, to Xerox Corp. Duplicating with color producing reagents. 3,386,379, 6-4-68, Cl. 101—469.
Gurries Mfg. Co., Inc.: *See*—
Curlett, John. 3,386,303.
Gutman, John H., and H. Huebecher, to Hazeltine Research Inc. Lightweight IFF detection system. 3,387,299, 6-4-68, Cl. 343—6.5.
Gutridge, Jack E., T. R. Schmitz, and W. Van Der Sluys, to Pullman Inc. Coupler centering arrangement. 3,386,596, 6-4-68, Cl. 213—20.
H. G. Enterprises: *See*—
Goldstein, Eugene. 3,386,443.
Haas, Howard C., to Polaroid Corp. Ultraviolet light polarisers from vinyl monomers polymerised in the presence of polyphenyl chain transfer agents. 3,386,979, 6-4-68, Cl. 260—89.1.
Hackbart, Reuben J., and D. F. Sanborn, to The Trane Co. Refrigeration apparatus with compressors in parallel. 3,386,262, 6-4-68, Cl. 62—469.
Haddad, Charles, to Ford Motor Co. Three-element push-pull cable assembly. 3,386,310, 6-4-68, Cl. 74—501.
Hadekel, Ruben, to Trico Products Corp. Windscreen wipers. 3,386,126, 6-4-68, Cl. 15—250.42.
Hagemeyer, Hugh J., W. J. Gammans, and A. G. Robinson, to Eastman Kodak Co. 2,2,4-Trimethyl-1,3-pentanediol methacrylate compositions. 3,387,022, 6-4-68, Cl. 260—486.
Haight, Harvey, to International Rectifier Corp. Electrical driving circuit for solenoid-actuated counter. 3,387,187, 6-4-68, Cl. 317—148.5.
Hailer, Albert H.: *See*—
Butler, Richard A., Hailer, and Perera. 3,386,208.
Haisma, Jan, and S. J. Van Hoppe, to North American Philips Co., Inc. Laser comprising a block of insulating material having a channel therein filled with a gas. 3,387,226, 6-4-68, Cl. 331—94.5.
Haiss, Hermann S.: *See*—
Brinckman, Frederick E., Jr., Haiss, and Robb. 3,386,985.
Haldex Aktiebolag: *See*—
Wallqvist, Sven H. 3,386,651.
Hale, Hazen G., Jr. Box making machine. 3,386,349, 6-4-68, Cl. 93—49.
Hale, Loren: *See*—
Kirkwood, Creal E., and Hale. 3,386,612.
Hall, Richard E., to International Business Machines Corp. Cathode ray tube phosphor erasure system. 3,387,173, 6-4-68, Cl. 315—10.

Halliburton Co.: *See*—
Evans, Robert T. 3,386,764.
Halpin, Martin J., to Worthington Corp. Controlled leakage piston ring assembly. 3,386,346, 6-4-68, Cl. 92—183.
Hamel, Edward E.: *See*—
Grakauskas, Vytautas, and Hamel. 3,387,044.
Hamilton Kent Mfg. Co.: *See*—
Hein, Roy C. 3,386,745.
Hamilton, William H.: *See*—
Lawrence, James C., and Hamilton. 3,386,520.
Hamilton, William P.: *See*—
Fletcher, Donald W., Garden, and Hamilton. 3,387,224.
Hammesfahr, Frederic W.: *See*—
Neuworth, Martin B., and Hammesfahr. 3,387,057.
Hand, Albert E., to Emhart Corp. Door bumper. 3,386,125, 6-4-68, Cl. 16—86.
Handeland, George A. Water treating apparatus. 3,386,808, 6-4-68, Cl. 23—272.7.
Handlovits, Carl E., and J. B. Louch, to The Dow Chemical Co. Preparation of aromatic esters by catalytic dismutation of aromatic aldehydes. 3,387,020, 6-4-68, Cl. 260—473.
Haneke, Karl-Heinz: *See*—
Niemeyer, Willy, Haneke, and Espel. 3,386,576.
Hanlon, Jerry C.: *See*—
Brown, Donald J., and Hanlon. 3,386,299.
Hanna, J. R.: *See*—
Hanna, J. R., and Morin. 3,386,870.
Hansen, Quinten A. Alternatively operable couplings with intervening actuator encircling thrust rod in spline of hub. 3,386,546, 6-4-68, Cl. 192—18.
Hansen, Quinten A. Alternately operated forward and reverse cam clutches. 3,386,547, 6-4-68, Cl. 192—51.
Hansen, Richard: *See*—
Green, James F., Hansen, and Raper. 3,386,637.
Hanson, Lloyd A., to North American Rockwell Corp. Preparation of an actinide metal monocarbide from an oxide thereof. 3,386,811, 6-4-68, Cl. 23—344.
Hanson, Roy W. Barbeque grill. 3,386,432, 6-4-68, Cl. 126—41.
Hara, Shusaku. System of grade separation and also underroad parking. 3,386,351, 6-4-68, Cl. 94—1.
Harber, Lynn D. Process for quenching iodine-effected dehydrogenation effluent. 3,387,055, 6-4-68, Cl. 260—681.5.
Harbison-Walker Refractories Co.: *See*—
Miller, Elden D. 3,386,723.
Hargrove, William W., to Eli Lilly and Co. Novel aminoacyl esters of desacetyl vincaleukoblastine. 3,387,001, 6-4-68, Cl. 260—287.
Harlan, Jerry W. Preparation of polymer-coated solid materials suitable as fillers for organic polymers. 3,386,851, 6-4-68, Cl. 117—93.31.
Harmon, Ruby L. Magnet kit. 3,386,568, 6-4-68, Cl. 206—47.
Harper, Billy G.: *See*—
Gardner, John B., Harper, and Pickle. 3,386,971.
Gardner, John B., and Harper. 3,386,972.
Harper, Thomas P. Dental irrigator. 3,386,439, 6-4-68, Cl. 128—229.
Harper-Wyman Co.: *See*—
Bergquist, Frank H. 3,386,656.
Harris, Guy H.: *See*—
Bublitz, Donald E., and Harris. 3,387,009.
Harris, James E., to Eastman Kodak Co. Quality monitoring system for continuously moving filamentary structures. 3,386,145, 6-4-68, Cl. 28—64.
Harrison, Ian T.: *See*—
Cross Alexander D., and Harrison. 3,386,994.
Harrison, John, to The Spra-Con Co. Machine for the sortation of mail and other packages. 3,386,563, 6-4-68, Cl. 198—155.
Harrison, Stanley R., J. V. Bennett, R. M. Broughton, and C. S. Thawley, to The Dunlop Co. Ltd. Fabricless pneumatic tires. 3,386,485, 6-4-68, Cl. 152—330.
Hart, Walter C., to Phillips Petroleum Co. Alkylate purification by temperature controlled distillation. 3,386,891, 6-4-Cl. 203—1.
Hartel, Heinz, and I. U. Nebel, to Dynamit Nobel Aktiengesellschaft. Oxidation of polyacroleins. 3,387,029, 6-4-68, Cl. 260—67.
Hartley, Thomas J.: *See*—
Lorber, Harold, Bungard, and Hartley. 3,386,962.
Hartman, Fred: *See*—
Ross, Edward E., Cunningham, and Hartman. 3,386,557.
Ross, Edward E., Cunningham, and Hartman. 3,386,559.
Ross, Edward E., Cunningham, and Hartman. 3,386,560.
Hartmann, Fortunat, to Sulzer Brothers Ltd. Apparatus for separating gaseous components from gas mixtures. 3,386,228, 6-4-68, Cl. 55—16.
Hauni-Werke, Koerber & Co., KG: *See*—
Wochnowski, Waldemar. 3,386,447.
Wochnowski, Waldemar. 3,386,448.
Hauser, Alwin G., to Maag Gear Wheel & Machine Co. Ltd. Method for grinding tooth flanks of toothed gear wheels. 3,386,212, 6-4-68, Cl. 51—287.
Havelka, Otto R.: *See*—
Mast, Andrew C., and Havelka. 3,386,587.
Havelka, Otto R., to Aircraft Appliances and Equipment Ltd. Tubular filter element and caps. 3,386,587, 6-4-68, Cl. 210—483.
Haviland, Girard S. Dispensing apparatus. 3,386,630, 6-4-68, Cl. 222—309.
Hay, Alden W., to Celanese Corp. Cellulose acetate spinning solutions and process of spinning dope-dyed yarns therefrom. 3,386,842, 6-4-68, Cl. 106—180.
Hayden, Leonard O., to United States of America, Navy. Synchronous intervalometer. 3,386,304, 6-4-68, Cl. 95—53.
Hayes Industries, Inc.: *See*—
Panonne, Richard F. 3,386,929.
Hays, Gordon W.: *See*—
Congelli, Henry C., and Hays. 3,386,784.
Hazeltine Research, Inc.: *See*—
Farber, Richard J. 3,387,082.
Farber, Richard J., and Boos. 3,387,088.
Gutman, John H., and Huebecher. 3,387,299.
Kaplan, Robert A. 3,386,787.
Hazen Engineering Co.: *See*—
Jones, Robert L., and Hazen. 3,386,721.
Hazen, Frank D.: *See*—
Jones, Robert L., and Hazen. 3,386,721.
Heald Machine Co., The: *See*—
Lockwood, George H., and Thomas. 3,386,210.
Hedrick, Ross M., P. A. Tierney, and W. R. Richard, Jr., to Monsanto Co. Process for polymerizing lactams in the presence of filler or reinforcing agent. 3,386,943, 6-4-68, Cl. 260—37.
Heger, Alois. Comminuting device. 3,386,670, 6-4-68, Cl. 241—74.
Heil, Oskar, to Varian Associates. Device for modulating beams of charged particles utilising a long interaction gap. 3,387,171, 6-4-68, Cl. 315—3.51.
Hein, Roy C., to Hamilton Kent Mfg. Co. Soil-pipe gasket. 3,386,745, 6-4-68, Cl. 277—168.
Heise, Carl-Hermann, to Firma Alfelder Eisenwerke. Method and apparatus for waste disposal. 3,386,394, 6-4-68, Cl. 110—14.
Hejslar, Sid, to Aero-Chatillon Corp. Torque gauge. 3,386,284, 6-4-68, Cl. 73—139.
Helberg, Jurgen: *See*—
Feldhoff, Manfred, Gumboldt, and Helberg. 3,386,957.
Heller, Anton H., to United Suffolk Corp. Vehicular enclosure for maintaining material at an elevated temperature. 3,386,406, 6-4-68, Cl. 126—343.5.
Hellwarth, George A., A. W. Bidwell, and D. H. Beetle, Jr., to International Business Machines Corp. Adaptive threshold signal detector with noise suppression. 3,387,222, 6-4-68, Cl. 329—192.
Helmer, John C., to Varian Associates. Dual orbit mass spectrometer for analyzing ions in the mass range of 1 to 100. 3,387,131, 6-4-68, Cl. 250—41.9.
Helmer, Josef A., to Daimler-Benz Aktiengesellschaft. Rotor of hydrodynamic unit. 3,386,244, 6-4-68, Cl. 60—54.
Helmintoller, Augustus M.: *See*—
Gross, Charles H., and Helmintoller. 3,386,247.
Helms, Charles R., to Knoll Associates, Inc. Rotatable chair height-adjustment mechanism. 3,386,697, 6-4-68, Cl. 248—406.
Henderson, Herbert V., to Wright Anderson (South Africa) Ltd. Lashing gear. 3,386,268, 6-4-68, Cl. 61—41.
Hennings, Louis W., to Brunswick Corp. Positioning device. 3,386,277, 6-4-68, Cl. 73—1.
Hensler, Joseph R., and E. C. Letter, to Bausch & Lomb Inc. Reflective element. 3,386,789, 6-4-68, Cl. 350—160.
Herbrandson, Harry F.: *See*—
Aebi, Claude M., and Herbrandson. 3,386,827.
Hercules Inc.: *See*—
Amberg, Lyle O. 3,386,987.
Gimler, John R., and Jurman. 3,386,868.
Willis, William D. 3,386,946.
Hermetic Coil Co., Inc.: *See*—
Davis, Dhu Aine. J. 3,387,244.
Hernan, George W., P. W. Beresin, and Eugene Gertler, to Ultronic Systems Corp. Information display system. 3,387,269, 6-4-68, Cl. 340—154.
Herr, Theodore Z. Door operating and locking mechanism. 3,386,205, 6-4-68, Cl. 49—220.
Herrmann, Karl-Heinz, and W. Loebe, to Siemens Aktiengesellschaft. Particle beam apparatus with a cryogenically cooled specimen cartridge that is below the specimen holder temperature. 3,387,132, 6-4-68, Cl. 250—49.5.
Hess, Garth, to United States of America, Air Force. System for correcting phase sequence. 3,387,183, 6-4-68, Cl. 317—47.
Hewlett-Packard Co.: *See*—
Lacey, Richard F. 3,387,130.
Higgins, Francis J.: *See*—
Gordy, Travis L., Higgins, and Riggs. 3,386,936.
Hilbers, George R.: *See*—
Tanner, Robert L., Nanevicz, Hilbers, and Vance. 3,387,315.
Hildebrand, Robert Maschinenbau G.m.b.H.: *See*—
Tiefenbach, Johann. 3,386,186.
Hildebrandt, William J., E. W. Lukstas, R. W. Yerks, and D. A. Esakov, to Powers & Eaton Industries, Inc. Control mechanism. 3,386,650, 6-4-68, Cl. 234—122.
Hill, Edward D. Ink transfer member. 3,387,074, 6-4-68, Cl. 264—259.
Hill, George R.: *See*—
Needham, Donald G., and Hill. 3,386,948.
Hind, John D., to Philip Morris, Inc. Method of making a reconstituted tobacco sheet. 3,386,449, 6-4-68, Cl. 131—140.
Hind, John D.: *See*—
Seligman, Robert B., and Hind. 3,386,450.
Hine, Joseph T., and J. R. McDaniel, to McDonnell Douglas Corp. Color television data display system. 3,387,084, 6-4-68, Cl. 178—6.8.
Hinderer, Helmuth E.: *See*—
Huffman, William A. H., H. E., Smith, and Hinden. 3,386,965.
Hitachi, Ltd.: *See*—
Murooka, Hideyasu. 3,387,076.
Hitzeroth, Franklin C., and D. B. Walitzer, to McGraw-Edison Co. Control knob connecting means. 3,386,127, 6-4-68, Cl. 16—121.
Hoffmann, Heinrich, and W. Traub, to Daimler-Benz Aktiengesellschaft. Air compressing injection-type internal combustion engine. 3,386,421, 6-4-68, Cl. 123—32.

- Hoffmann-La Roche, Inc. : *See—*
  - Borenstein, Benjamin, and Smith. 3,386,886.
- Hoffsommer, Gary M. : *See—*
  - Joy, Ivan L., Hoffsommer, Muyskens, and Reiter. 3,387,064.
- Hoitt, Alfred E. : *See—*
  - Synegar, Eric E. G., and Hoitt. 3,386,269.
- Holder, Tom D. : *See—*
  - Carpenter, Jonathan H., and Holder. 3,387,243.
- Holly, Harry H., to Hollymatic Corp. Molding apparatus with air relief. 3,386,129, 6-4-68, Cl. 17—32.
- Hollymatic Corp. : *See—*
  - Holly, Harry H. 3,386,129.
- Holmes, Billy G., to Mobil Oil Corp. Recovery of viscous crude by fluid injection. 3,386,513, 6-4-68, Cl. 166—42.
- Holmes, John L., G. W. Torrye, N. D. Spino, and W. S. Vargas, to The Bendix Corp. Tensile tester wedge clamp. 3,386,283, 6-4-68, Cl. 73—103.
- Honeywell Inc. : *See—*
  - Betz, Bernard K. 3,387,261.
  - Egli, Werner H. 3,386,290.
  - Engh, Robert O. 3,387,135.
  - Evans, Richard A., and Ogren. 3,386,291.
  - Kruy, Joseph F., and Ramamoorthy. 3,387,298.
- Honig, Hans L., G. Kolb, F. Moll, and B. Morcher, to Agfa Aktiengesellschaft. Stabilizing of photographic silver halide emulsions with acyl phenyl hydrazides. 3,386,831, 6-4-68, Cl. 96—109.
- Hooker Chemical Corp. : *See—*
  - Shepard, Alvin F., and Dannels. 3,386,899.
- Hoover Ball and Bearing Co. : *See—*
  - Fischer, Edward. 3,386,132.
- Hopkinson, Eric C., to Dresser Industries, Inc. Computer ratio circuit for well logging system using unijunction transistor. 3,387,145, 6-4-68, Cl. 307—235.
- Hoppe, Walter, N. Muller, and W. in der Schmitten, to United States of America, Atomic Energy Commission. Process for the fusion of metal oxides. 3,387,079, 6-4-68, Cl. 13—34.
- Hopt, E. & R., KG : *See—*
  - Meyer, Herbert. 3,387,214.
- Hornig, Martin, and H. Seiter, to Siemens Aktiengesellschaft. Method of producing semiconductor members by alloying metal into a semiconductor body. 3,386,893, 6-4-68, Cl. 204—15.
- Horsch, Joachim, H. C. Morris, S. I. Pearce, and G. D. Rohweder, to Caterpillar Tractor Co. Transmission and control system therefor. 3,386,540, 6-4-68, Cl. 192—.09.
- Horton, John W., to International Business Machines Corp. Spectrally coded data storage. 3,387,285, 6-4-68, Cl. 340—173.
- Horton, William B., and E. M. Fitzgerald, to H. E. Fletcher Co. Flame jet burner construction. 3,386,475, 6-4-68, Cl. 431—158.
- Horvath, Bertalan : *See—*
  - Horvath, Elizabeth G. and B. 3,386,950.
- Horvath, Elizabeth G. and B., to Phillips Petroleum Co. Stabilized poly(arylene sulfides). 3,386,950, 6-4-68, Cl. 260—45.7.
- Hough, Ralph L., to United States of America, Air Force. Apparatus for depositing material on a filament from ionized coating material. 3,386,909, 6-4-68, Cl. 204—312.
- Hough, Ralph L., and H. S. Schwartz, to United States of America, Air Force. High temperature dielectric reinforced composite. 3,386,918, 6-4-68, Cl. 252—63.5.
- Howald, Brian W., to Lorain Products Corp. Constant voltage battery system. 3,387,141, 6-4-68, Cl. 307—49.
- Howden, James, & Co. Ltd. : *See—*
  - Airth, James C., and Findlay. 3,386,794.
- Howe, August W. Dispensing device for ice-cubes, lump sugar and the like. 3,386,616, 6-4-68, Cl. 220—85.
- Howell, David S., to Woodle Corp. Poster holder. 3,386,198, 6-4-68, Cl. 40—156.
- Howland, Orville E., to McDonnell Douglas Corp. Power retraction inertia reel. 3,386,683, 6-4-68, Cl. 242—107.4.
- Hoye, Peter A. T. : *See—*
  - Coates, Harold, and Hoye. 3,387,011.
- Hudson, Percy W. Use of hydromixer for the recovery of substantially impurity-free copper powder from leached malachite and azurite copper powder. 3,386,818, 6-4-68, Cl. 75—117.
- Huebscher. Herbert : *See—*
  - Gutman, John H., and Huebscher. 3,387,299.
- Huffman, Ernestine H. : *See—*
  - Huffman, William A. H., Smith, and Hinderer. 3,386,965.
- Huffman, William A. H., deceased (by E. H. Huffman, executrix), R. W. Smith, and H. E. Hinderer, to Monsanto Co. aromatic polyamides having pendent carboxyl groups and process therefor. 3,386,965, 6-4-68, Cl. 260—78.
- Hughes Aircraft Co. : *See—*
  - Currie, Malcolm R., and Brewer. 3,387,176.
  - Snyder, Richard L. 3,387,290.
- Huml, James O. : *See—*
  - Layne, Gilbert S., Huml, and Smith. 3,386,817.
- Hunter, Meredith A., to International Business Machines Corp. Method and apparatus for electroplating rollable objects. 3,386,895, 6-4-68, Cl. 204—23.
- Hunter, Robert F. Process of removing a component from a fluid. 3,386,914, 6-4-68, Cl. 210—35.
- Hurvitz, Hyman. Flow detectors. 3,386,287, 6-4-68, Cl. 73—194.
- Husen, Robert A. : *See—*
  - Bergman, Walter, and Husen. 3,386,750.
- Huynh, Chanh : *See—*
  - Martel, Jacques, Huynh, and Nomine. 3,387,003.
- Hwa, Jesse C. H. : *See—*
  - Remes, Nathaniel L., and Hwa. 3,386,958.
- Hydraulic-Drive A.G. : *See—*
  - Thoma, Oswald H. 3,386,389.
- Hy-Dynamic Co., The : *See—*
  - Jones, Edwin L. 3,386,775.
- Hyosaka, Alfred M., to Speed-O-Print Business Machines Corp. Sheet separating device for photocopying machines. 3,386,780, 6-4-68, Cl. 271—64.
- IRC, Inc. : *See—*
  - Diehl, Donald S. 3,387,192.
- Ihle, Hans E., to Lockheed Aircraft Corp. Mounting adapter for the ram of power presses. 3,386,324, 6-4-68, Cl. 83—548.
- Ikegai Tekko Kabushiki Kaisha : *See—*
  - Aihara, Kenzo, and Takaya. 3,386,315.
- Improved Machinery, Inc. : *See—*
  - Luthi, Oscar. 3,386 584.
- In der Schmitten, Wilhelm : *See—*
  - Hoppe, Walter, Muller, and In der Schmitten. 3,387,079.
- Industrial Nucleonics Corp. : *See—*
  - Chope, Henry R. 3,387,133.
  - Liu, Ko-Hsin. 3,387,123.
- Infranor S.A. : *See—*
  - Monnat, Pierre. 3,387,124.
- Ingham, Robert M., Jr. : *See—*
  - Pitts, Bobby L., and Ingham. 3,386,136.
- Ingolia, Anthony J., to General Motors Corp. Vehicle headlamp assembly. 3 387,125, 6-4-68, Cl. 240—7.1.
- Institut Francais du Petrole des Carburants et Lubrifiants : *See—*
  - Alagy, Jacob. 3,387,027.
  - Eyzat, Pierre. 3,386,422.
- Intercontinental Systems, Inc. : *See—*
  - Lorber, Harold, Bungard, and Hartley. 3,386,552.
- International Business Machines Corp. : *See—*
  - Aebi, Claude M., and Serafin. 3,386,826.
  - Aebi, Claude M., and Herbrandson. 3,386,827.
  - Brennemann, Andrew E., Seraphim, and Tansal. 3,386,163.
  - Brinson, Paul R. 3,386,731.
  - Carter, Richard S., and Welz. 3,387,273.
  - Dennard, Robert H. 3,387,286.
  - Doo, Ven Y. 3,386,865.
  - Ebert, Ekkehard, and Spielmann. 3,386,866.
  - Evans, James, and Florkowski. 3,387,272.
  - Everhard, Paul R. 3,386,554.
  - Greanias, Evon C., Meagher, and Smyrk. 3,387,188.
  - Hall, Richard E. 3,387,173.
  - Hellwarth, George A., Bidwell, and Beettie. 3,387,222.
  - Horton, John W. 3,387,285.
  - Hunter, Meredith A. 3,386,895.
  - Jacques, James O. 3,387,282.
  - Juliusburger, Hans Y., Abramson, and Chin. 3,387,144.
  - Keller, Seymour P., and Somorjai. 3,386,823.
  - Marinace, John C. 3,387,230.
  - Ottaway, Gerald H., and Tertel. 3,387,262.
  - Platter, Sandford, and Lowery. 3,386,772.
  - Pugh, Emerson W. 3,387,291.
  - Silvestri, Victor J., Lyons, and Marinace. 3,386,864.
  - Snedaker, Mark C. 3,387,283.
  - Staples, John L. 3,386,867.
  - Watson, Robert A., Mahoney, Nielsen, and Kiernan.
- International Harvester Co. : *See—*
  - Ruhl, Charles A. L. 3,386,523.
- International Rectifier Corp. : *See—*
  - Haight, Harvey. 3,387,187.
- International Salt Co. : *See—*
  - Jacoby Charles H., and Peyfuss. 3,386,768.
- International Standard Electric Corp. : *See—*
  - Beadle, Anthony C., and Parrish. 3,387,097.
  - Siegel, Herbert, and Bubber. 3,387,094.
  - Muller, Martin, and Frank. 3,387,231.
  - Fishman, Denis and Beckett. 3,387,191.
  - Waldenburger, Hermann, and Schlegel. 3,386,294.
- International Telephone and Telegraph Corp. : *See—*
  - Farnsworth, Philo T. 3,386,883.
  - Field, Joseph P. 3,387,092.
  - Grayson, Richard D. 3,387,246.
  - Whitesel, James W. 3,386,553.
  - Winkler, Richard H. 3,387,190.
- Iozzi, Anthony J., and R. A. Zakhour, to Verific Corp. Gas torch. 3,386,665 6-4-68, Cl. 239—416.1.
- Ireland, James M. Paint kit. 3,386,792, 6-4-68, Cl. 401—40.
- Irwin, Malcolm F. : *See—*
  - Stanley, Robert K., and Irwin. 3,386,142.
- Ishida, Shinichi : *See—*
  - Wakasa, Ryoichi, Ishida, and Oizumi. 3,387,070.
- Isolated Beef Protein Supplements, Inc. : *See—*
  - Krose, Robert D. 3,386,806.
- Isotopes, Inc. : *See—*
  - Alexander, Peter. 3,386,256.
- Israel, William D., W. B. McCartney, and E. O. Uhrig, to United States of America, Navy. High rise thyratron pulse supply. 3,387,177, 6-4-68, Cl. 315—209.
- Isuchiya, Yoshio : *See—*
  - Sugita, Yoshihisa, Komori, and Isuchiya. 3,387,028.
- Ito, Yoshikazu, S. Wakamatsu, and Y. Shimokawa, to Toyo Rayon Kabushiki Kaisha. Method for preparing oximinomethyl benzoic acid. 3,386,908, 6-4-68, Cl. 204—158.
- Ivanchich, Peter G., to Ford Motor Co. Multiple speed ratio, synchronized torque transmission mechanism. 3,386,302, 6-4-68, Cl. 74—339.
- Ivanko, Michael F., to The Singer Co. Bobbin thread replenishment mechanism for lockstitch sewing machines. 3,386,400, 6-4-68, Cl. 112—181.
- Jackson, Carey B. : *See—*
  - Burke, Oliver W., Jr., and Jackson. 3,386,810.
- Jackson, Winston J., Jr., and J. R. Caldwell, to Eastman Kodak Co. High modulus polyester and polycarbonate compositions. 3,386,985, 6-4-68, Cl. 260—26.

- Jacobs, Herbert, H. Baron, and E. Winston, said Baron and said Winston assors. to Jacobs Machine Corp. Combined automatic sewing assembly. 3,386,896, 6-4-68, Cl. 112—2.
- Jacobs Machine Corp. : *See—*
  - Jacobs, Herbert, Baron, and Winston. 3,386,896.
- Jacobsen, Kjell M., to AB Platmanufaktur. End closure for cylindrical can. 3,386,615, 6-4-68, Cl. 220—67.
- Jacobson, Walter E., to Revere Corp. of America. Temperature responsive device. 3,386,282, 6-4-68, Cl. 73—88.5.
- Jacoby, Charles H., and K. F. Peyfuss, to International Salt Co. Mining and refining soluble minerals. 3,386,768, 6-4-68, Cl. 299—4.
- Jacques, James O., to International Business Machines Corp. Input for digital controller. 3,387,282, 6-4-68, Cl. 340—172.5.
- Jaffe, Edward E., and W. J. Marshall, to E. I. du Pont de Nemours and Co. Quinacridone pigments. 3,386,843, 6-4-68, Cl. 106—288.
- Jagaciak, George J., to Olin Mathieson Chemical Corp. Aluminum base alloy containing zirconium-chromium-manganese. 3,386,820, 6-4-68, Cl. 75—138.
- Janke, Gilbert J., and W. A. Blower, to The Osborn Mfg. Co. Mechanical lock means for foundry molding machine. 3,386,493, 6-4-68, Cl. 164—173.
- Janner, Karl, and O. Olbrich, to Siemens Aktiengesellschaft. Converter fuel element for nuclear reactors and method of producing the same. 3,387,148, 6-4-68, Cl. 310—4.
- Jannotta, Peter A. : *See—*
  - Johnson, Jamison T., Jannotta, and Lauterback. 3,386,112.
- Janusz, Jerome S. : *See—*
  - Stoffel, Robert W., Janusz, and Pace. 3,387,142.
- Jarvi, Robert W., to McGraw-Edison Co. Method of fabricating U-bolt keeper assembly. 3,386,157, 6-4-68, Cl. 29—458.
- Jasching, Wolfgang, and V. Franzen. Production of dialiphatic tin dihalides. 3,387,012, 6-4-68, Cl. 260—429.7.
- Javorik, Laszlo : *See—*
  - Schwartz, James W., and Javorik. 3,387,159.
- Jayne, Lawrence : *See—*
  - Mow, David I., and Jayne. 3,387,156.
- Jefferson Chemical Co., Inc. : *See—*
  - Brader, Walter H., Jr. 3,386,800.
- Jenkinson, Richard I., to Dominion Engineering Works, Ltd. Method of fitting seal-rings to blades. 3,386,155, 6-4-68, Cl. 29—401.
- Jensen, Donald D. Apparatus and method for producing a fog curtain heat shield. 3,386,365, 6-4-68, Cl. 98—36.
- Jepsen, Robert L. : *See—*
  - Lloyd, William A., and Jepsen. 3,387,175.
- Johnson, Bertram : *See—*
  - Widdowson, Albert H., Ecob, and Johnson. 3,386,267.
- Johnson, Dwight N., to American Meter Co. Pressure regulator with internal low pressure shutoff. 3,386,465, 6-4-68, Cl. 137—463.
- Johnson, George W. Simulated milk comprising soy bean flour, sesame seed flour and coconut meal. 3,386,833, 6-4-68, Cl. 99—64.
- Johnson, Herbert E., and D. G. Crosby, to Union Carbide Corp. Synthesis of alpha-amino acid amide hydrohalides. 3,387,031, 6-4-68, Cl. 260—561.
- Johnson, Hugo C. Surf raft. 3,386,408, 6-4-68, Cl. 115—26.3.
- Johnson, Irvin D., and C. R. Bruce, to Marathon Oil Co. Remote transducer battery charging circuit. 3,387,198, 6-4-68, Cl. 320—14.
- Johnson, Jamison T., P. A. Jannotta, and W. J. Lauterback, said Jannotta and said Lauterback assors. to said Johnson. Folding crib. 3,386,112, 6-4-68, Cl. 5—99.
- Johnson & Johnson : *See—*
  - De Merre, Leon J. 3,386,441.
  - Rosenbaum, Martin I. 3,386,807.
  - Zackheim, Eli A. 3,386,644.
- Johnson, Ralph E., to The Singer Co. Sewing machines. 3,386,401, 6-4-68, Cl. 112—184.
- Johnston, Thomas L., R. C. Boettner, R. H. Bush, and A. J. McEvily, Jr., to Ford Motor Co. High strength structural steel. 3,386,862, 6-4-68, Cl. 148—12.
- Johnstone, Theodore H., T. F. Peters, and C. D. Brown, to General Motors Corp. Vehicle body door latch and locking system. 3,386,761, 6-4-68, Cl. 292—201.
- Jelles, Zvi E., to Berk Ltd. Brominated diphenyl sulfides. 3,387,040, 6-4-68, Cl. 260—609.
- Jones, Clevoe D., to Ford Motor Co. Synchronizer clutch mechanism with spring to return blocker to neutral. 3,386,548, 6-4-68, Cl. 192—53.
- Jones, Edwin L., to The Hy-Dynamic Co. Supplemental braking system. 3,386,775, 6-4-68, Cl. 303—2.
- Jones, John A. : *See—*
  - Moore, Howard D., Scarlett, and Jones. 3,386,916.
- Jones, Lawrence R., to Commercial Solvents Corp. Preparation of hydroxylamine and aldehydes from alkali metal salts of primary nitroparaffins and organic acids. 3,386,803, 6-4-68, Cl. 23—190.
- Jones, Robert L., and F. D. Hazen, to Hazen Engineering Co. Convector plates for coil annealing apparatus. 3,386,721, 6-4-68, Cl. 263—47.
- Joy, Ivan, G. M. Hoffsommer, D. L. Muyskens, and M. G. Reiter. Rail shunt resistance indicating system. 3,387,064, 6-4-68, Cl. 246—1.
- Joy Mfg. Co. : *See—*
  - Reed, Leo O. 3,386,229.
- Joyce, Maurice. Pivoted indicator for newspaper delivery receptacle. 3,386,649, 6-4-68, Cl. 232—34.
- Judd, Joseph H., to United States of America, National Aeronautics and Space Administration. Spacecraft airlock. 3,386,685, 6-4-68, Cl. 244—1.
- Juelss, David, and H. L. Ross, to Venus Esterbrook Corp. Drafting lead and method of preparation. 3,386,829, 6-4-68, Cl. 106—19.
- Juergens, William A., to Verson Mfg. Co. Rim adaptive appliance retainer. 3,386,108, 6-4-68, Cl. 4—187.
- Juliusburger, Hans Y., P. Abramson, and P. H. Chin, to International Business Machines Corp. Circuit for periodically sampling asynchronous pulses. 3,387,144, 6-4-68, Cl. 307—232.
- Junck, John A., J. Kokaly, and J. E. Scheidt, to Caterpillar Tractor Co. Self-loading scraper hydraulic circuit with diverter. 3,386,344, 6-4-68, Cl. 91—414.
- Jurman, Stephen E. : *See—*
  - Gimler, John R., and Jurman. 3,386,868.
- Kabushiki Kaisha Honda Gijutsu Kenkyusho : *See—*
  - Matsuda, Minoru. 3,386,544.
- Kaeding, Warren W., to The Dow Chemical Co. Butyl nitrophenols. 3,387,042, 6-4-68, Cl. 260—622.
- Kaiser Aluminum & Chemical Corp. : *See—*
  - Foster, Thomas W. F., and Elsee. 3,386,717.
  - Null, Richard E. 3,386,684.
- Kaiser, Donld W., to Olin Mathieson Chemical Corp. Selected salts of substituted 3,5-dimethylphenols. 3,387,018, 6-4-68, Cl. 260—429.9.
- Kaisler, Francis J., and G. E. Lynn, to United States of America, Air Force. Mirror resonant nutating device. 3,386,786, 6-4-68, Cl. 350—6.
- Kamborian, Jacob S. : *See—*
  - McKibbin, Raymond, and Bergeron. 3,386,115.
- Kamijo, Shigeichi, to T. Takahashi, and S. Kamijo. Fuel heating device for internal combustion engines. 3,386,426, 6-4-68, Cl. 123—119.
- Kanarek, Joseph S. De-packaging apparatus and method. 3,386,602, 6-4-68, Cl. 214—305.
- Kandel, Walter. Fringed Venetian blind. 3,386,490, 6-4-68, Cl. 160—178.
- Kane, John S. Glass tinting lacquer compositions. 3,386,941, 6-4-68, Cl. 260—31.2.
- Kaplan, Donald E., to Burroughs Corp. High speed item handling apparatus. 3,386,574, 6-4-68, Cl. 209—72.
- Kaplan, Robert A., to Hazeltine Research, Inc. Macroscopic optical waveguides. 3,386,787, 6-4-68, Cl. 350—96.
- Karr, Willis F., to Stearns Mfg. Co., Inc. Automated kiln. 3,386,718, 6-4-68, Cl. 263—6.
- Kartal, Ozgun : *See—*
  - Brady, Robert T., and Kartal. 3,386,395.
- Kasaback, Ronald L., to Lord Corp. Torsionally resilient drive. 3,386,265, 6-4-68, Cl. 64—27.
- Kasai, Teruaki : *See—*
  - Kobayashi, Tetsuo, and Kasai. 3,386,211.
- Katagiri, Yoshiharu : *See—*
  - Ohkoshi, Akio, Miyaoka, and Katagiri. 3,387,158.
- Katayama, Susumu. Water current controlling means. 3,386,250, 6-4-68, Cl. 61—2.
- Katchka, Jay R., to Robertshaw Controls Co. Flow control and regulating system. 3,386,467, 6-4-68, Cl. 137—495.
- Kato Body Mfg. Co., Ltd. : *See—*
  - Obata, Kiyokatsu. 3,386,204.
- Kaufman, Barry M., to Mu Western Electronics Co., Inc. Mobile radio paging system wherein the receivers are all made operative for a brief interval following a transmitted tone burst. 3,387,212, 6-4-68, Cl. 325—1.
- Kaufman, Robert, to The Taylor-Merchant Corp. Optical viewer. 3,386,194, 6-4-68, Cl. 40—63.
- Kaufmann, William S., and R. C. Miller, to Western Electric Co., Inc. Circuit for measuring the dynamic impedance ratio of a nonlinear device. 3,387,211, 6-4-68, Cl. 324—158.
- Kearl, James R. : *See—*
  - Crews, John B., Dillingham, and Kearl. 3,386,202.
- Kearney, Patrick. Non-refillable bottle and pourer. 3,386,626, 6-4-68, Cl. 222—147.
- Kearney & Trecker Corp. : *See—*
  - Osburn, John G. 3,386,542.
- Keel, Donald K. : *See—*
  - Smart, Charles L., and Keel. 3,386,981.
- Keene, William A., to Phillips Petroleum Co. Article carrier formed from a single sheet. 3,386,607, 6-4-68, Cl. 220—61.
- Kelco Co. : *See—*
  - Schweiger, Richard G., and O'Connell. 3,386,921.
  - Schweiger, Richard G. 3,386,902.
- Keller, John D., to Bausch & Lomb Inc. Apparatus for absorption spectrochemical analysis. 3,386,331, 6-4-68, Cl. 88—14.
- Keller, Seymour P., and G. A. Somorjai, to International Business Machines Corp. Photo thermic image producing process. 3,386,823, 6-4-68, Cl. 96—27.
- Kelley, Leon O. Vibrator ripper plows. 3,386,517, 6-4-68, Cl. 172—40.
- Kelly, Patrick J., and A. R. Loesius. Walking doll. 3,386,201, 6-4-68, Cl. 46—149.
- Kelly, Samuel T., to Robertshaw Controls Co. Pressure regulator. 3,386,469, 6-4-68, Cl. 137—505.38.
- Kendt, Norman L., to General Electric Co. Dishwasher with integral water softener. 3,386,454, 6-4-68, Cl. 134—58.
- Kennedy, Marcel J., and W. M. Royer, to Floway Pumps, Inc. Rotary sprinkler. 3,386,662, 6-4-68, Cl. 239—230.
- Kent, Alfred S. : *See—*
  - Weyanda, John E., and Kent. 3,386,585.
- Kenyon, Fred V., to Robertshaw Controls Co. Switch with cam having a plastic sleeve insert. 3,386,306, 6-4-68, Cl. 74—548.
- Kerridge, Norman A. : *See—*
  - Pike, Malcom R., Kerridge, and Frost. 3,386,348.
- Kettering, Charles F., Foundation : *See—*
  - Treharne, Richard W. 3,387,134.
- Kibler, Charles J. : *See—*
  - Bell, Alan, Kibler, and Smith. 3,386,942.
- Kidda, Bernard G. : *See—*
  - Tewksbury, Charles G., and Kidda. 3,386,193.
- Kiekens Wervelwind Holland N.V. : *See—*
  - Bruinsma, Josephus F. D. 3,386,628.
- Kienzle Apparate G.m.b.H. : *See—*
  - Mutz, Gerhard, and Gronwald. 3,386,376.

Kiernan, James J.: *See*—
Watson, Robert A., Mahoney, Nielsen, and Kiernan. 3,386,982.

Kiesserling, Th., & Albrecht: *See*—
Lorenz, Horst. 3,386,726.

Kilby, Jack S., to Texas Instruments Inc. Teaching machine. 3,386,187, 6-4-68, Cl. 35—9.

Kilgore, Marion D.: *See*—
Crow, Morgan L., Foster, and Kilgore. 3,386,515.

Kimmel, Richard L., to Chemagro Corp. Diverter valve for finely divided solids. 3,386,474, 6-4-68, Cl. 137—608.

King, Henry V., to Plessey (U.K.) Ltd. Self-locking actuators for rotary valve and other two-position rotary elements. 3,386,386, 6-4-68, Cl. 91—44.

King, James F., to Clark Equipment Co. Flow control and cushioning valve. 3,386,471, 6-4-68, Cl. 137—596.2.

King, Stella W.: *See*—
White, Robert W., and King. 3,387,021.

Kingsbury, L C James, to General Electric Co. Actuating mechanism for portable recording apparatus. 3,386,741, 6-4-68, Cl. 274—1.

Kingsbury, L C James, and R. Dally, to General Electric Co. Phonograph adaptor. 3,386,744, 6-4-68, Cl. 274—39.

Kiralfy, Alexander E. Dial reading calipers. 3,386,173, 6-4-68, Cl. 33—148.

Kirby, Robert A., to Esso Production Research Co. System for measuring change in fluid pressure. 3,386,285, 6-4-68, Cl. 73—152.

Kirkpatrick, Henry O., to Cummins Engine Co., Inc. Air conditioning apparatus with hot gas heating means. 3,386,259, 6-4-68, Cl. 62—156.

Kirkpatrick, Henry O., to Cummins Engines Co., Inc. Heat exchangers. 3,386,260, 6-4-68, Cl. 62—239.

Kirkwood, Creal E., and L. Hale. Quick opening lid for pressure vessels. 3,386,612, 6-4-68, Cl. 220—44.

Klaubert, Earl C.: *See*—
Green, Joseph, Klaubert, and Smith. 3,386,869.

Klauke, Erich: *See*—
Pauli, Otto, Kuhle, and Klauke. 3,386,951.

Klein, Paul J.: *See*—
Parkison, Richard G., and Klein. 3,386,459.

Kleiner, Eduard K., to Geigy Chemical Corp. Copolymers of perfluoroalkyl α-trifluoromethacrylates. 3,386,977, 6-4-68, Cl. 260—86.1.

Kleinman, David A.: *See*—
Ashkin, Arthur, Boyd, and Kleinman. 3,387,204.

Kleinschmidt, Edward E., to SCM Corp. Telegraphic receiving and recording apparatus. 3,387,087, 6-4-68, Cl. 178—89.

Kleinschmidt, Edward E., W. F. Bradbury, and K. Taubmann, to SCM Corp. Telegraphic progressive printing system. 3,387,081, 6-4-68, Cl. 178—4.

Kleinschmidt, Edward E., and K. Taubmann, to SCM Corp. Transmitter. 3,387,085, 6-4-68, Cl. 178—17.

Kleinschmidt, Roger F.: *See*—
Norell, John R., Crain, and Kleinschmidt. 3,387,050.

Klimstra, Paul D.: *See*—
Counsell, Raymond E., and Klimstra. 3,387,007.

Klingler, Martin L., to AMP Inc. Switch control mechanism. 3,386,298, 6-4-68, Cl. 74—122.

Knibb, Leroy H. Bottle closure assembly for an atomizer. 3,386,664, 6-4-68, Cl. 239—346.

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Knight, Roger D.: *See*—
Gray, Don N., and Knight. 3,387,035.

Knipp, Karl-Heinz, to Lindemann Maschinenfabrik G.m.b.H. Method and apparatus for dosing fibrous material. 3,386,372, 6-4-68, Cl. 100—35.

Knoll Associates, Inc.: *See*—
Helms, Charles R. 3,386,697.

Knupke, James A., to Continental Oil Co. Rock wall slicer. 3,386,522, 6-4-68, Cl. 175—311.

Kobayashi, Tetsuo, and T. Kasai, to Otsukakoki Kabushiki-kaisha. Locking device for handbrake. 3,386,311, 6-4-68, Cl. 74—531.

Koch, Theodore A., to E. I. du Pont de Nemours and Co. Process for oxidizing propylene and isobutylene to unsaturated aldehyde. 3,387,038, 6-4-68, Cl. 260—604.

Kodera, Keiji: *See*—
Okumura, Kentaro, Kodera, Nishihara, and Oda. 3,386,987.

Kohl, Charles F., F. O. Stark, and G. E. Vogel, to Dow Corning Corp. Preparation of 1,1,1,3-tetrachloropropane with high energy ionizing electromagnetic radiation. 3,386,905, 6-4-68, Cl. 204—163.

Kohler General, Inc.: *See*—
Doyle, Edward A., and Stevens. 3,386,716.

Kokaly, Joseph: *See*—
Junck, John A., Kokaly, and Scheidt. 3,386,844.

Kokoruda, Michael, and W. K. Langdon, to Wyandotte Chemicals Corp. Polyesters prepared from maleic anhydride and 2,2,4,4-tetrachloro-1,5-dihydroxy - 3 - pentanone. 3,387,060, 6-4-68, Cl. 260—869.

Kolb, Gunter: *See*—
Honig, Hans L., Kolb, Moll, and Morcher. 3,386,831.

Kominami, Tsuguo: *See*—
Akaboshi, Michijiro, Kominami, Fukuda, and Uragami. 3,386,981.

Komori, Isamu: *See*—
Sugita, Yoshihisa, Komori, and Isuchiya. 3,387,028.

Koop, Gerhard: *See*—
Menge, Guenter, and Koop. 3,386,281.

Koppensteiner, James V., to Automatic Electric Laboratories, Inc. Reed relay with mounting for protecting encapsulated switches and for positioning bias magnets. 3,387,240, 6-4-68, Cl. 335—153.

Koppers Co., Inc.: *See*—
Medney, Jonas. 3,386,872.

Korner, Wilhelm: *See*—
Wunder, Friedrich, and Korner. 3,386,492.

Korones, Herbert D.: *See*—
Blood, Charles H., Goodyear, and Korones. 3,386,695.

Koshar, Robert J.: *See*—
Talbott, Richard L., and Koshar. 3,387,083.

Kotuby, Paul M., to The Risdon Mfg. Co. Actuator-overcap with slidably retracting side-projecting nozzle. 3,386,631, 6-4-68, Cl. 222—402.11.

Kovac, Frederick J., and G. W. Rye, to The Goodyear Tire & Rubber Co. Tires. 3,386,486, 6-4-68, Cl. 152—354.

Koyama, Mikio. Camshaft driving system for internal combustion engines. 3,386,301, 6-4-68, Cl. 74—219.

Kramer, Hyman. Supporting surface for a mattress, cushion, and the like. 3,386,113, 6-4-68, Cl. 5—190.

Kramer, James H., to The B. F. Goodrich Co. Resilient rail hold-down. 3,386,657, 6-4-68, Cl. 238—310.

Kraner, James L., and N. P. Pappadis, to The Rauland Corp. Heater support for plural gun cathode-ray tube. 3,387,166, 6-4-68, Cl. 313—272.

Krause, David E.: *See*—
Bushmeyer, Richard W., Krause, and Rath. 3,386,373.

Kraut, Herman G., to The Stanley Works. Skin-packaged article. 3,386,571, 6-4-68, Cl. 206—80.

Kremp, Rudolf, A. Winkler, H. Ernst, and K. Zattler, to Agfa Aktiengesellschaft. Photographic camera with built-in light meter. 3,386,357, 6-4-68, Cl. 95—10.

Kropp, Karl, to C. Reichert Optische Werke Aktiengesellschaft. Exposure control apparatus for photomicrography. 3,386,358, 6-4-68, Cl. 95—10.

Kross, Robert D., to Isolated Beef Protein Supplements, Inc. Assay method. 3,386,806, 6-4-68, Cl. 23—230.

Krulls, Gerd E., to General Electric Co. Removable brush magazine arrangement. 3,387,155, 6-4-68, Cl. 310—239.

Kruy, Joseph F., and C. V. Ramamoorthy, to Honeywell Inc. Combined binary decoder-encoder employing tunnel diode, pyramid-organized switching matrix. 3,387,298, 6-4-68, Cl. 340—347.

Krzyszczuk, Edward, to American Hospital Supply Corp. Air driven variable speed turbine for angular and straight handpieces. 3,386,702, 6-4-68, Cl. 253—3.

Kubli, Arthur F.: *See*—
Brooks, Richard W., and Kubli. 3,386,722.

Kuehl, Guenter H., to Mobil Oil Corp. Alkali metal and alkylammonium phosphatoaluminate complexes and the preparation of crystalline aluminosilicates. 3,386,801, 6-4-68, Cl. 23—105.

Kuhle, Engelbert: *See*—
Pauli, Otto, Kuhle, and Klauke. 3,386,951.

Kunetka, Robert E., to Texaco Inc. Recovery of hydrocarbons from underground formations by in situ combustion. 3,386,504, 6-4-68, Cl. 166—2.

Kuraishi, Michio, S. Asano, and Y. Shinozaki. Homologation process. 3,387,043, 6-4-68, Cl. 260—642.

Kurashiki Rayon Co., Ltd.: *See*—
Akaboshi, Michijiro, Kominami, Fukuda, and Uragami. 3,386,981.

Kurland, Ann: *See*—
McIntyre, Duncan. 3,386,274.

Kurland, Samuel: *See*—
McIntyre, Duncan. 3,386,274.

Kurtze, Gunter, to Grunzweig & Hartmann AG. Jet engine sound suppressor with coanda effect deflector. 3,386,528, 6-4-68, Cl. 181—51.

Kutashy, Zoltan: *See*—
Daubert, George A., Wellek, and Kutashy. 3,386,527.

Kwasnborski, Stanley, Jr., to General Motors Corp. Closure latch. 3,386,759, 6-4-68, Cl. 292—216.

Lacey, Richard F., to Hewlett-Packard Co. Atomic beam tube having a source and an annular collimator. 3,387,130, 6-4-68, Cl. 250—41.3.

Lafont, Leopoldo C., to John J. McMullen Associates, Inc. Three purpose container. 3,386,065, 6-4-68, Cl. 220—1.5.

Lal, Joginder, and K. W. Scott, to The Goodyear Tire & Rubber Co. Vulcanization of poly (vinyl alkyl ethers) by a sulfur bearing curing agent and an organic peroxide. 3,386,947, 6-4-68, Cl. 260—41.

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Lalak, Joseph J.: *See*—
Milch, Alfred E., Ahlert, and Lalak. 3,386,158.
Milch, Alfred, Lalak, and Ahlert. 3,386,159.
Milch, Alfred, Lalak, and Ahlert. 3,386,160.

Lambda Electronics Corp.: *See*—
Greenberg, Sol, and Gautherin. 3,387,201.

Lamon, David E., and G. W. Scott, to Appleton Machine Co. Web supply. 3,386,672, 6-4-68, Cl. 242—55.

Lanahan, John H.: *See*—
Leach, Robert I., and Lanahan. 3,386,174.

Lancaster Motor Parts Co.: *See*—
Fairchild, Robert K. 3,386,288.

Land, Edwin H., to Polaroid Corp. Photographic product containing zinc. 3,386,825, 6-4-68, Cl. 96—86.

Landrum, Ralph A., and R. L. Geyer, to Pan American Petroleum Corp. Seismic exploration control method. 3,386,525, 6-4-68, Cl. 181—.5.

Langdon, William K.: *See*—
Kokoruda, Michael, and Langdon. 3,387,060.

Large, Donald M.: *See*—
Griesemer, Harold A., and Large. 3,386,156.

Larsen, Olaf E., to Phillips Petroleum Co. Polyethylene extrusion. 3,387,073, 6-4-68, Cl. 264—211.

Lastowsky, Peter E.: *See*—
Maurey, Joseph E., and Lastowsky. 3,386,300.

Lau, Ralph R., and G. C. Sitz, to AMP Inc. Method and apparatus for forming an insulated electrical connection. 3,386,158, 6-4-68, Cl. 29—203.

Launay, Raymond, to North American Philips Co., Inc. Method of etching the contacts on a transistor to improve the power output therefor. 3,386,902, 6-4-68, Cl. 204—143.

Lauterback, Walter J.: *See*—
Johnson, Jamison T., Jannotta, and Lauterback. 3,386,112.

Lawrence, James C., and W. H. Hamilton, to Alkirk, Inc. Apparatus for anchoring the pilot member in a pilot bore. 3,386,520, 6-4-68, Cl. 175—230.

Layne, Gilbert S., J. O. Huml, and R. D. Smith, to The Dow Chemical Co. Process for the reduction of metal oxides. 3,386,817, 6-4-68, Cl. 75—84.

Lazare, Leon, to The Puraq Co. Desalination of sea water. 3,386,912, 6-4-68, Cl. 210—22.

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Leach, Robert I., and J. H. Lanahan, to The Bendix Corp. Coordinate measuring machine. 3,386,174, 6-4-68, Cl. 33—174.

Leader, Harold P. Grass and litter catcher. 3,386,234, 6-4-68, Cl. 56—202.

Ledig, Kurt W.: *See*—
Wendt, Gerhard R., and Ledig. 3,387,006.

Lee, Emerson H., to Monsanto Co. Dehydrogenation catalyst and process. 3,387,053, 6-4-68, Cl. 260—669.

Leeds & Northrup Co.: *See*—
Fletcher, Donald W., Garden, and Hamilton. 3,387,224.
Mader, James M. 3,387,122.
Szonntagh, Eugene L. 3,386,472.

Leesona Corp.: *See*—
O'Brien, William H. 3,386,150.

Lefort, Marcel J. C., to Rhone-Poulenc S.A. Pentalene derivatives and their production. 3,387,017, 6-4-68, Cl. 260—448.8.

Leifman, Harvey, and S. D. Robinson. Denture bath. 3,386,706, 6-4-68, Cl. 259—72.

Lein, Werner: *See*—
Reichelt, Gunter, and Lein. 3,387,297.

Leipold, Forrest P.: *See*—
Balz, Gunther W., and Leipold. 3,386,180.

Leitch, Archibald C., to The Distillers Co. Ltd. Process for the production of void-free blocks from thermoplastic material. 3,387,072, 6-4-68, Cl. 264—210.

Lempco Industries, Inc.: *See*—
Blazek, William J., and Hillis. 3,386,781.

Lender, Adam, to Automatic Electric Laboratories, Inc. Synchronous frequency modulation duobinary processing of digital data. 3,387,213, 6-4-68, Cl. 325—163.

Lender, Adam, to Automatic Electric Laboratories, Inc. Apparatus and method for synchronously demodulating frequency modulated differentially coherent duobinary signals. 3,387,220, 6-4-68, Cl. 329—104.

Lenhard, Leslie A. Grinding fixture. 3,386,212, 6-4-68, Cl. 51—217.

Leonard, Jackson D. Process for the manufacture of methylamines. 3,387,032, 6-4-68, Cl. 260—585.

Leonhardt, Ernst, Jr., to Mobil Oil Corp. Supplementary cementing assembly for subaqueous wells. 3,386,505, 6-4-68, Cl. 166—.5.

Lepley, Allen E.: *See*—
Swartwout, Charles J. and S. D., and Lepley. 3,387,266.

Lessard, Roland B., to United Shoe Machinery Corp. Apparatus for melting and dispensing thermoplastic material. 3,386,625, 6-4-68, Cl. 222—146.

Letter, Eugene C.: *See*—
Hensler, Joseph R., and Letter. 3,386,789.

Lever Bros. Co.: *See*—
Schaap, Jacob A. 3,386,885.

Levin, Alfred A., and S. B. Richter, to Velsicol Chemical Corp. Method destroying undesirable plants. 3,386,818, 6-4-68, Cl. 71—112.

Levine, Harold H., to Whittaker Corp. Fusible polybenzimidazoles. 3,386,969, 6-4-68, Cl. 260—78.4.

Levine, Harold H., to Whittaker Corp. Fusible and infusible polymers from carbocyclic aromatic polycarboxylic phenyl esters and carbocyclic aromatic tetramines. 3,387,058, 6-4-68, Cl. 260—823.

Levine, Seymour D., to E. R. Squibb & Sons, Inc. A-nor-D-homosteroids. 3,387,023, 6-4-68, Cl. 260—488.

Levine, Walter E., to Dresser Industries, Inc. Control device. 3,386,411, 6-4-68, Cl. 116—129.

Licentia Patent-Verwaltungs-G.m.b.H.: *See*—
Petzold, Dieter. 3,387,118.

Liebig, Joseph M., to Vare Corp. Oil seal. 3,386,746, 6-4-68, Cl. 277—207.

Life-Like Products, Inc.: *See*—
Grets, Charles. 3,386,590.

Lim, Kun S., to Wellmade Metal Products Co. Roadway luminaire. 3,387,126, 6-4-68, Cl. 240—25.

Lind, Eldon J. Model covering tool. 3,386,727, 6-4-68, Cl. 269—152.

Lindecker, Joseph B.: *See*—
Code, Rheta M. H., and Lindecker. 3,386,226.

Lindemann Maschinenfabrik G.m.b.H.: *See*—
Knipp, Karl-Heinz. 3,386,372.

Linden, Heinrich: *See*—
Offermann, Wilhelm, and Linden. 3,386,845.

Ling, Frederick R.: *See*—
Taylor, Thomas S., and Ling. 3,386,533.

Ling-Temco-Vought, Inc.: *See*—
Von Bose, Robert J. 3,386,170.

Lino, Joseph A., to Brogy, Inc. Game apparatus with adjustable columns of indicia. 3,386,739, 6-4-68, Cl. 273—135.

Linstead, Robert S., to Structo Division, King-Seeley Thermos Co. Portable foldable outdoor grill. 3,386,430, 6-4-68, Cl. 126—25.

Lippert, Axel, to Farbenfabriken Bayer Aktiengesellschaft. Method of and apparatus for the mixing, drying or moistening by pneumatic means of material in powder form. 3,386,182, 6-4-68, Cl. 34—10.

Lissner, Oskar: *See*—
Steden, Franz, Schaedler, Lissner, and Schuster. 3,386,924.

Litfin, Dorothy W. Nail having head to receive cord or the like. 3,386,328, 6-4-68, Cl. 85—28.

Lithoplate, Inc.: *See*—
Adams, Delor N., and Thomas. 3,386,850.

Little, Arthur J., to Stewart-Warner Corp. Meter reading system. 3,387,267, 6-4-68, Cl. 340—150.

Litton Business Systems, Inc.: *See*—
D'Onofrio, Anthony. 3,386,551.

Liu, Ko-Hsin, to Industrial Nucleonics Corp. Ratio computer and paper formation gauge. 3,387,123, 6-4-68, Cl. 235—196.

Lloyd, William A., and R. L. Jepsen, to Varian Associates. Vacuum gauge having separate electron collecting and electron accelerating electrodes. 3,387,175, 6-4-68, Cl. 315—108.

Lock, Joseph H., to The Mead Corp. Article container having integral article protecting means. 3,386,570, 6-4-68, Cl. 206—65.

Lockheed Aircraft Corp.: *See*—
Ihle, Hans E. 3,386,324.

Lockwood, George H., and F. Thomas, to The Heald Machine Co. Grinding machine. 3,386,210, 6-4-68, Cl. 51—5.

Lockwood, John O.: *See*—
Oppenhuizen, Simon W., and Lockwood. 3,386,784.

Loebe, Wolfram: *See*—
Herrmann, Karl-Heinz, and Loebe. 3,387,182.

Lomas, Harold, to Ontario Research Foundation. Process of forming paper containing polyethyleneimine cross-linked with methylene-bis-acrylamide and paper thereof. 3,386,880, 6-4-68, Cl. 162—168.

Loner, Aldo, to Firma Carinthia Elektrogerate Gesellschaft m.b.H. Shaving head for a dry shaver having a cutter foil mounted on a pivotal frame. 3,386,168, 6-4-68, Cl. 30—43.92.

Lones, Harry E., to Nashua Corp. Activatable adhesive sheets with peaked areas of lesser potential adhesive tenacity. 3,386,846, 6-4-68, Cl. 117—11.

Long, Elton B., to J. I. Case Co. Hydraulic cylinder mounting. 3,386,519, 6-4-68, Cl. 172—305.

Long, Spencer W., to Armco Steel Corp. Rotary table master bushing. 3,386,263, 6-4-68, Cl. 64—23.5.

Loonkar, Yashwant R.: *See*—
Bevans, Rowland S., Renzi, and Loonkar. 3,386,798.

Lorain Products Corp.: *See*—
Howald, Brian W. 3,387,141.

Lorber, Harold, J. D. Bungard, T. J. Hartley, and G. J. Wensley, to Intercontinental Systems, Inc. Edit and margin control system. 3,386,552, 6-4-68, Cl. 197—20.

Lord Corp.: *See*—
Grumblatt, Victor J. 3,386,266.
Kassback, Ronald L. 3,386,265.

Lorenz, Horst, to Th. Kiesserling & Albrecht. Clamping device. 3,386,726, 6-4-68, Cl. 269—31.

Lossius, Allan R.: *See*—
Kelly, Patrick J., and Lossius. 3,386,201.

Lotta, Russell P. Custom fitting of bowling balls. 3,386,176, 6-4-68, Cl. 23—174.

Louch, James B.: *See*—
Handlevitz, Carl E., and Louch. 3,387,020.

Loughney, Richard W.: *See*—
Casagrande, Leo, and Loughney. 3,386,251.

Loveless, Marion W. Closure for large diameter opening of a pressure vessel. 3,386,206, 6-4-68, Cl. 49—221.

Lowery, Michael J., Jr.: *See*—
Platter, Sandford, and Lowery. 3,386,772.

Luebkeman, George C. Binocular rib sight. 3,386,171, 6-4-68, Cl. 33—47.

Luijt, Hermanus N. Brake-accelerator device. 3,386,541, 6-4-68, Cl. 192—3.

Lukstas, Edward W.: *See*—
Hildebrandt, William J., Lukstas, Yerks, and Essakov. 3,386,650.

Lumpkin, William B., to Phillips Petroleum Co. Oil well performance. 3,386,507, 6-4-68, Cl. 166—11.

Lundqvist, Sven A.: *See*—
Görling, Karl G., and Lundqvist. 3,386,615.

Luthi, Oscar, to Improved Machinery, Inc. Valveless drum filter. 3,386,584, 6-4-68, Cl. 210—404.

Luxembourgeoise de Brevets et de Participations: *See*—
Paulsen, Jean F. 3,386,264.

Luyk, Kenneth E.: *See*—
Rolles, Rolf, and Luyk. 3,386,844.

Lynch, Don M., and J. W. Cole, to Abbott Laboratories. Process for producing certain 8-hydroxy or lower alkoxy-(4-pyridyl lower-alkylidene)-1,2,3,4-tetrahydro-naphthalenes; 8-hydroxy or lower-alkoxy-(4-pyridyl lower-alkyl)-3,4-dihydro naphthalenes and derivatives thereof. 3,386,996, 6-4-68, Cl. 260—240.

Lynn, Gordon E.: *See*—
Kaisler, Francis J., and Lynn. 3,386,786.

Lyons, Vincent J.: *See*—
Silvestri, Victor J., Lyons, and Marinace. 3,386,864.

Maag Gear Wheel & Machine Co. Ltd.: *See*—
Hauser, Alwin G. 3,386,213.

Machowski, Eugene C. Sanitary station for pet animals. 3,386,417, 6-4-68, Cl. 119—1.

Macku, Thomas J., and E. H. Natschke, to Universal Railway Devices Co. Two way automatic brake adjuster arrangement for hopper cars. 3,386,539, 6-4-68, Cl. 188—198.

Macsusak, Michael, and J. V. Werme, to Bailey Meter Co. Power demand predicting computer control system. 3,387,121, 6-4-68, Cl. 235—151.21.

Mader, James M., to Leeds & Northrup Co. Magnetic multiplier/divider systems. 3,387,122, 6-4-68, Cl. 235—195.

Mader, Jerome J., to Teletype Corp. Wire spring paper spindle. 3,386,673, 6-4-68, Cl. 242—55.2.

Magil, Donald G., and R. E. Spencer, to Ford Motor Co. Kingpin bearing lubrication system. 3,386,782, 6-4-68, Cl. 308—120.

Mahoney, Robert E.: *See*—
  Watson, Robert A., Mahoney, Nielsen, and Kiernan. 3,386,292.

Maier, Oskar, to Robert Bosch, G.m.b.H. Method of assembling storage batteries. 3,386,860, 6-4-68, Cl. 136—176.

Mallory, P. R., & Co., Inc.: *See*—
  Donald, Raymond G. 3,387,193.

Malone, Fermer A. Roll winding apparatus. 3,386,678, 6-4-68, Cl. 242—56.

Mance, John J., and R. M. Stallard, to General Motors Corp. Method of dielectrically embossing a reflector button on a trim panel. 3,386,873, 6-4-68, Cl. 156—219.

Mandy, Robert R., and E. F. Clemett, Jr., to The Delman Co. Adjustable nozzle support for windshield clearing systems. 3,386,668, 6-4-68, Cl. 239—284.

Manes, Milton, to Chemical Construction Corp. Synthesis of melamine. 3,386,999, 6-4-68, Cl. 260—249.7.

Mangood Corp.: *See*—
  O'Brien, Michael. 3,387,119.

Manley, Brian W.: *See*—
  Schagen, Pieter, and Manley. 3,387,162.

Marathon Oil Co.: *See*—
  Johnson, Irvin D., and Bruce. 3,387,198.

Marbach, Michel: *See*—
  Thomas, Jean-Claude, and Marbach. 3,387,062.

Marconi, Walter, S. Cesca, and G. D. Fortuna, to SNAM S.p.A. Terpolymers of polycyclic diolefin and two monoolefins. 3,386,975, 6-4-68, Cl. 260—80.7.

Maremont Corp.: *See*—
  Munroe, Richard W., West, Anderson, and Drake. 3,386,184.

Maresca, Marie: *See*—
  Susskind, Herbert, Beecker, and Maresca. 3,386,627.

Maresca, Michael W.: *See*—
  Susskind, Herbert, Becker, and Maresca. 3,386,627.

Marinace, John C.: *See*—
  Silvestri, Victor J., Lyons, and Marinace. 3,386,864.

Marinace, John C., to International Business Machines Corp. Stress modulation of recombination radiation in semiconductor devices. 3,387,230, 6-4-68, Cl. 332—7.51.

Marinot, Robert: *See*—
  Bret, Antoine, and Marinot. 3,386,884.

Marriam, Robert R., to W. R. Grace & Co. Slurry fertiliser spray apparatus. 3,386,660, 6-4-68, Cl. 239—142.

Marshall, David J.: *See*—
  Vesina, Claude, Marshall, and Deghenghi. 3,386,890.

Marshall, William J.: *See*—
  Jaffe, Edward E., and Marshall. 3,386,843.

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Marx, Frederick, Jr.: *See*—
  Bjorn, James, and Marx. 3,387,250.

Maryland Cup Corp.: *See*—
  Gerben, Ralph D. 3,386,599.

Massoubre, Jean-Marie, to Compagnie Generale des Etablissements Michelin Raison Sociale Michelin & Cie. Tire casing with reinforced sidewalls. 3,386,487, 6-4-68, Cl. 152—361.

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Mathieson, Robert V. Rotatable disc devices. 3,386,122, 6-4-68, Cl. 16—230.17.

Matson, Carl G. Vibration mechanism and method. 3,386,296, 6-4-68, Cl. 74—87.

Matsuda, Minoru, to Kabushiki Kaisha Honda Gijutsu Kenkyusho. Ratchet type coaster brake apparatus. 3,386,544, 6-4-68, Cl. 192—6.

Mattern, John, to United States of America, Air Force. Phase detector. 3,387,217, 6-4-68, Cl. 328—134.

Matthysse, Irving F.: *See*—
  Dibble, Charles E., Matthysse, Neaderland, and Ralls. 3,387,080.

Maurey, Joseph E., to Maurey Mfg. Corp. Adjustable motor base. 3,386,304, 6-4-68, Cl. 74—424.8.

Maurey, Joseph E., and P. E. Lastowsky, to Maurey Mfg. Corp. Variable speed sheave. 3,386,300, 6-4-68, Cl. 74—230.17.

Maurey Mfg. Corp.: *See*—
  Maurey, Joseph E. 3,386,304.
  Maurey, Joseph E., and Lastowsky. 3,386,300.

Maxwell, Hugh S., to General Electric Co. Automatic control system for hot strip mill crop shear. 3,386,621, 6-4-68, Cl. 83—[illegible].

May, Albert N.: *See*—
  Sammons, William A., and May. 3,387,077.

May, Clinton E. High frequency hydraulic actuated jaw crusher. 3,386,667, 6-4-68, Cl. 241—36.

Maycott, Clifford A.: *See*—
  Brake, Robert L., Jr., Maycott, and Travis. 3,387,114.

McCabe, John T., to Continental Distilling Corp. Method for aging whiskey. 3,386,862, 6-4-68, Cl. 99—48.

McCarthy, John J., to Norco, Inc. Releasable pin assemblage. 3,386,137, 6-4-68, Cl. 24—211.

McCartney, William B.: *See*—
  Israel, William D., McCartney, and Uhrig. 3,387,177.

McCarty, Horace G.: *See*—
  Glass, Emmett F., and McCarty. 3,386,238.

McCulloch, Donald J., to Bausch & Lomb Inc. Recessed temple hinge mounting for spectacle frame. 3,386,790, 6-4-68, Cl. 351—153.

McCurdy, John L., to Standard Oil Co. Low density plastic foam article and production technique. 3,387,067, 6-4-68, Cl. 264—56.

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McDaniel, Edgar L.: *See*—
  Young, Howard S., and McDaniel. 3,386,923.

McDaniel, John R.: *See*—
  Hine, Joseph T., and McDaniel. 3,387,064.

McDermott, John J., and J. C. Clausi, to Burroughs Corp. Silicone release coating transfer paper. 3,386,847, 6-4-68, Cl. 117—36.4.

McDonald, John D. Body contact pads. 3,386,446, 6-4-68, Cl. 128—417.

McDonnell Douglas Corp.: *See*—
  Hine, Joseph T., and McDaniel. 3,387,064.
  Howland, Orville E. 3,386,683.
  Tesdall, Darrell W. 3,387,206.

McEvily, Arthur J., Jr.: *See*—
  Johnston, Thomas L., Boettner, Bush, and McEvily. 3,386,862.

McEwan, Gilbert J., and S. G. Clark, to Monsanto Co. Process for preparing straight chain alkyl aromatic compounds using HF and a fluoride catalyst modifier. 3,387,056, 6-4-68, Cl. 260—671.

McGill, Madeline F.: *See*—
  Morin, Louis H. 3,386,870.

McGrath, James E.: *See*—
  Lal, Joginder, and McGrath. 3,386,980.

McGraw-Edison Co.: *See*—
  Crocker, Harry E. 3,386,743.
  Hitzeroth, Franklin C., and Walitzer. 3,386,127.
  Jarvi, Robert W. 3,386,157.

McHale, William L.: *See*—
  Sorensen, Svend E., and McHale. 3,386,647.

McIntyre, Duncan, ⅓ to S. Kurland, and A. Kurland. Trailer lock. 3,386,274, 6-4-68, Cl. 70—232.

McKee, Arthur G., Co.: *See*—
  English, Alan. 3,386,816.

McKibbin, Raymond, and N. Bergeron, to J. S. Kamborian. Shoe and lasting with pronged wipers. 3,386,115, 6-4-68, Cl. 12—12.5.

McMullen, John J., Associates, Inc.: *See*—
  Knight, George R., Jr., and Bridges. 3,386,406.
  Lafont, Leopoldo C. 3,386,605.

Mead Corp., The: *See*—
  Benatar, Victor. 3,386,558.
  Gentry, Hermond G. 3,386,569.
  Gentry, Hermond G. 3,386,643.
  Lock, Joseph H. 3,386,570.

Mead, Theodore C.: *See*—
  Chafetz, Harry, and Mead. 3,387,026.

Meagher, Philip F.: *See*—
  Greanias, Evon C., Meagher, and Smyrk. 3,387,138.

Medney, Jonas, to Koppers Co., Inc. Method of making filament wound, compound curved shells. 3,386,872, 6-4-68, Cl. 156—173.

Mee, Jack E., and G. R. Pulliam, to North American Rockwell Corp. Epitaxial dielectric MgO crystals. 3,386,852, 6-4-68, Cl. 117—106.

Mehr, Hans P., to The United States of America. Convergent-divergent jet exhaust nozzle for supersonic aircraft. 3,386,658, 6-4-68, Cl. 239—127.3.

Meier, Roger D., to Square D Co. Control circuit for energizing and deenergizing the operating windings of electromagnetic devices. 3,387,154, 6-4-68, Cl. 310—94.

Mellen, William F. Plows. 3,386,518, 6-4-68, Cl. 172—225.

Melvill, Michael W.: *See*—
  Dovey, Norman E. 3,386,823.

Melvill, Sally: *See*—
  Dovey, Norman E. 3,386,823.

Mendonca, Robert R. Seedling transplanting tool. 3,386,762, 6-4-68, Cl. 294—25.

Menge, Guenter, and G. Koon. Apparatus for testing cigarettes and the like. 3,386,281, 6-4-68, Cl. 73—41.

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Merten, Ulrich, to Gulf General Atomic Inc. Reverse osmosis membrane module. 3,386,583, 6-4-68, Cl. 210—321.

Mesec, Kenneth J., to E. I. du Pont de Nemours and Co. Acrylic dispersions for wire enamels. 3,386,939, 6-4-68, Cl. 260—29.3.

Messina, Frank J., to Production stimulation method for oil wells. 3,386,511, 6-4-68, Cl. 166—38.

Metallgesellschaft Aktiengesellschaft: *See*—
  Wendel, Gunter, and Wiemer. 3,386,215.

Metz, Louis C., Jr.: *See*—
  Gagliardi, Richard P., and Metz. 3,387,216.

Meyer, Geo. J., Mfg. Co.: *See*—
  Carter, Sidney T. 3,386,565.

Meyer, Herbert, to E. & R. Hopt, KG. Shielding housing for multi-stage tuner with intermediate frequency output circuits. 3,387,214, 6-4-68, Cl. 325—357.

Meyer Machine, Inc.: *See*—
  Thompson, Harvey L. 3,386,530.

Michalko, Edward, to Universal Oil Products Co. Method for preparing spherically-shaped crystalline zeolite particles. 3,386,802, 6-4-68, Cl. 23—112.

Michalski, Maksymilian A., to Berkey Photo, Inc. Electrical system for photographic color separation. 3,387,179, 6-4-68, Cl. 315—312.

Michel, Maurice J. Writing guide. 3,386,191, 6-4-68, Cl. 35—38.

Michener, John W. and P. N. Smith, to Deering Milliken Research Corp. Apparatus for determining the differential ion count in an atmosphere and for controlling same. 3,387,181, 6-4-68, Cl. 317—3.

Midland-Ross Corp.: *See*—
  Duval, Daniel W., Spear, and Toth. 3,386,696.
  Willison, Donald and Zanow. 3,386,597.

Midland Silicones Ltd.: *See*—
  Rees, Donald E. W. 3,387,248.

Miguet, Claude: *See*—
  Aguadisch, Leon, Charrier, and Miguet. 3,386,934.

Mihajlov, Vsevolod S.: *See*—
  Gundlach, Robert W., and Mihajlov. 3,386,379.

Milch, Alfred, J. J. Lalak, and R. H. Ahlert, to North American Philips Co., Inc. Method of forming a refractory metal-to-ceramic seal. 3,386,159, 6-4-68, Cl. 29—473.1.

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Miles Laboratories, Inc.: *See*—
  Slager, James E. 3,386,900.

Millar, George: *See*—
  Barton, George C., and Millar. 3,386,114.

Miller, Alan, to Chicago Aerial Industries, Inc. Photographic processing film laminate structure utilizing plastic microcapsules. 3,386,824, 6-4-68, Cl. 96—50.

Miller, Eldon D., to Dresser Industries, Inc. Vacuum degasser conduit. 3,386,723, 6-4-68, Cl. 266—34.

Miller, Harry L. Apparatus for inverting granular articles, such as coffee beans. 3,386,562, 6-4-68, Cl. 198—33.

Miller, John D., to Anderson-Miller Mfg. Co. Quick-disconnect pipe coupling. 3,386,755, 6-4-68, Cl. 285—6.

Miller, Ralph L., and W. R. Young, Jr., to Bell Telephone Laboratories, Inc. Conference synchronizing system. 3,387,095, 6-4-68, Cl. 179—18.

Miller, Richard C.: *See*—
  Kaufmann, William S., and Miller. 3,387,211.

Millipore Corp.: *See*—
  Weyanda, John E., and Kent. 3,386,585.

Mine Safety Appliances Co.: *See*—
  Temple Robert and E. E. 3,386,334.

Minnesota Automotive, Inc.: *See*—
  Cords, Fred W. 3,386,777.

Minnesota Mining and Mfg. Co.: *See*—
  De Moss, Dean L. 3,387,295.
  Talbott, Richard L., and Koshar. 3,387,033.
  Wegwerth, Arthur A. 3,386,223.

Mishler, Ralph E., to Beckman Instruments, Inc. Housing and base construction for variable resistance device. 3,387,247, 6-4-68, Cl. 338—162.

Mitchell, John F. Cucumber harvesting machine. 3,386,236, 6-4-68, Cl. 56—327.

Mitsuishi, Shoji: *See*—
  Takamura, Masao, Nakano, and Mitsuishi. 3,387,238.

Miyahara, Kingo. Water heaters. 3,386,436, 6-4-68, Cl. 126—359.

Miyaoka, Senri: *See*—
  Ohkoshi, Akio, Niyaoka, and Katagiri. 3,387,158.

Mizell, Louis R.: *See*—
  Tewksbury, Charles G., and Mizell. 3,386,849.

Mobil Oil Corp.: *See*—
  Holmes, Billy G. 3,386,513.
  Kuehl, Guenter H. 3,386,801.
  Leonhardt, Ernst, Jr. 3,386,505.

Mochizuki, Toyoju: *See*—
  Watanabe, Mamoru. 3,386,537.

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Mohawk Data Sciences Corp.: *See*—
  Dalton, John F. 3,386,377.

Moll, Franz: *See*—
  Honig, Hans L., Kolb, Moll, and Morcher. 3,386,831.

Monnat, Pierre, to Infranor S.A. Illuminating floodlight. 3,387,124, 6-4-68, Cl. 240—1.2.

Monsanto Co.: *See*—
  Bach, Hartwig C. 3,386,966.
  Chupp, John P., and Newallis. 3,387,025.
  Gruber, Bernard A. 3,386,840.
  Hedrick, Ross M., Tierney, and Richard. 3,386,943.
  Huffman, William A. H. 3,386,965.
  Lee, Emerson H. 3,387,063.
  McEwan, Gilbert J., and Clark. 3,387,056.

Monsanto Research Corp.: *See*—
  Parts, Leo P. 3,387,018.
  Salyer, Ival O. 3,386,978.

Montecatini Edison S.p.A.: *See*—
  Turba, Vittorio, Sartori, and Valvassori. 3,387,047.

Montgomery, William S., Jr., and R. E. Erickson, to Centigrade Systems, Inc. Diffusion furnace with flat recovery. 3,387,078, 6-4-68, Cl. 13—24.

Moochhala, Yunus E., and H. N. Underwood, to Borg-Warner Corp. Variable stroke fluid drive. 3,386,342, 6-4-68, Cl. 91—277.

Moore, Eddie. Quick demountable tire chain assembly. 3,386,484, 6-4-68, Cl. 152—242.

Moore, Howard D., N. A. Scarlett, and J. A. Jones, to Shell Oil Co. Lubricating grease composition. 3,386,916, 6-4-68, Cl. 252—21.

Moore, Olan T. Hydrocarbon well logging. 3,386,286, 4-6-68, Cl. 73—153.

Morcher, Bernhard: *See*—
  Honig, Hans L., Kolb, Moll, and Morcher. 3,386,831.

Morgan, Richard M.: *See*—
  Flick, Francis S., and Morgan. 3,386,463.

Morin, Louis H., to Coats & Clark Inc. Combination padlock. 3,386,271, 6-4-68, Cl. 70—25.

Morin, Louis H., ⅓ to M. F. McGill, and ⅓ to J. R. Hanna. Method of ultrasonic bonding of overlying portions of a fishhook snell. 3,386,870, 6-4-68, Cl. 156—73.

Morioku, Shigemi, T. Sueyoshi, and M. Murakami. Resilient brush unit. 3,386,118, 6-4-68, Cl. 15—181.

Morris, Hugh C.: *See*—
  Horsch, Joachim, Morris, Pearce, and Rohweder. 3,386,540.

Morris, Philip, Inc.: *See*—
  Seligman, Robert B., and Hind. 3,386,450.

Morrison, William S., to Ford Motor Co. Hose coupling connect and disconnect mechanism. 3,386,754, 6-4-68, Cl. 285—1.

Morsell, Arthur L., III. Internal combustion engines. 3,386,425, 6-4-68, Cl. 123—58.

Mosby, William L., and M.-L. Silva, to American Cyanamid Co. Certain substituted quinones and their preparation. 3,387,004, 6-4-68, Cl. 260—349.

Moses, William, and F. A. Censullo, to Corn Products Co. Neomycin fermentation media and process. 3,386,889, 6-4-68, Cl. 195—114.

Mosler Safe Co., The: *See*—
  Potzick, Anthony J. 3,386,275.

Moss, Jacques L., to Ford Motor Co. Parking brake for use in a driveline. 3,386,532, 6-4-68, Cl. 188—31.

Motora, Seizo. Ship's hull adapted for considerably reducing vertical forces caused by waves. 3,386,404, 6-4-68, Cl. 114—56.

Motorola, Inc.: *See*—
  Adlhoch, Richard H., and Chapman. 3,387,270.
  Salners, Edward A., and Vondran. 3,372,253.
  Simon, Julius L. 3,387,172.
  Swartwout, Charles J. and D. K., and Lepley. 3,387,266.

Mouissie, Bob, to Paillard S.A. Device for fastening the end of a film or tape on a spool. 3,386,680, 6-4-68, Cl. 242—74.1.

Mount Hope Machine Co., Inc.: *See*—
  Robertson, John D. 3,386,148.
  Robertson, John D. 3,386,149.

Mount, Wadsworth W., to Bossert Mfg. Corp. Anchors and anchoring mechanisms. 3,386,407, 6-4-68, Cl. 114—206.

Mountcastle, Paul H., and W. E. Snyder, United States of America, Navy. Dual channel nutating waveguide feed. 3,387,303, 6-4-68, Cl. 343—758.

Mouret, Jean A.: *See*—
  Foulon, Fernand G., and Mouret. 3,386,679.

Mouturat, Pierre: *See*—
  Cabane, Gerard, Mouturat, Petit, Sainfort, and Salesse. 3,386,819.

Mu Western Electronics Co., Inc.: *See*—
  Kaufman, Barry M. 3,387,212.

Mucke, Johannes, to Siemens Aktiengesellschaft. Electrical machine of the vertical type with a housing of concrete. 3,387,152, 6-4-68, Cl. 310—89.

Muller, Heinz: *See*—
  Braun, Oskar, Gross, Muller, Nakaten, and Weissert. 3,386,841.

Muller, Martin, and A. Frank, to International Standard Electric Corp. Circulator for microwave transceivers. 3,387,281, 6-4-68, Cl. 333—1.1.

Muller, Norbert: *See*—
  Hoppe, Walter, Muller, and in der Schmitten. 3,387,079.

Muller, Walter: *See*—
  Schmidt, Alfred, Muller, and Weinrotter. 3,386,892.

Munnelly, James J., to Bell Telephone Laboratories, Inc. Frequency changer. 3,387,208, 6-4-68, Cl. 321—68.

Munroe, Richard W., P. B. West, G. C. Anderson, and W. H. Drake, to Maremont Corp. Textile sliver can changing and storage apparatus. 3,386,184, 6-4-68, Cl. 19—159.

Munson, John C., and J. A. Faulkner, to United States of America, Navy. Long digital delay. 3,387,264, 6-4-68, Cl. 340—173.

Munson, Whitney K. Inking pad and method of producing the same. 3,386,418, 6-4-68, Cl. 118—269.

Murakami, Masami: *See*—
  Morioku, Shigemi, Sueyoshi, and Murakami. 3,386,118.

Murooka, Hideyasu, to Hitachi Ltd. Methods of molding plastic objects with inserts. 3,387,076, 6-4-68, Cl. 264—276.

Murray, Francis A.: *See*—
  Nolan, Maurice A. W., and Murray. 3,386,577.

Murray, William O.: *See*—
  Murray, William R. and W. O. 3,386,550.

Murray, William R., and W. O. Automatic electronic microwave cooking and vending machine. 3,386,550, 6-4-68, Cl. 194—10.

Mutz, Gerhard, and G. Gronwald, to Kienzle Apparate G.m.b.H. Damping means to prevent print hammer rebound. 3,386,376, 6-4-68, Cl. 101—93.

Muyskens, Donald L.: *See*—
  Joy, Ivan L., Hoffsommer, Muyskens, and Reifer. 3,387,064.

Nadeau, James H. Portable rotary cut-off saw with guide means for accurately locating a workpiece thereupon. 3,386,482, 6-4-68, Cl. 143—41.
Nadrich, John, and J. A. Ericson. Closure for a bottom pour metallurgical ladle. 3,386,633, 6-4-68, Cl. 222—548.
Nagatsuka, Masanori. Photograph mounting. 3,386,199, 6-4-68, Cl. 40—158.
Nakano, Ichizo: *See*—
  Takamura, Masao, Nakano, and Mitsuishi. 3,387,238.
Nakaten, Herbert: *See*—
  Braun, Oskar, Gross, Muller, Nakaten, and Weissert. 3,386,841.
Nanevics, Joseph E.: *See*—
  Tanner, Robert L., Nanevics, Hilbers, and Vance. 3,387,215.
Nash, L. W., Co.: *See*—
  Ferko, Alexander. 3,386,598.
Nash, Paul. Web tensioning method and apparatus. 3,386,635, 6-4-68, Cl. 226—1.
Nashua Corp.: *See*—
  Lones, Harry E. 3,386,846.
National Cash Register Co., The: *See*—
  Petropoulos, Constantine C. 3,386,904.
  Phipps, Arthur F. 3,386,653.
National Telegraph and Telephone Public Corp.: *See*—
  Takamura, Masao, Nakano, and Mitsuishi. 3,387,238.
National Video Corp.: *See*—
  Schwartz, James W. 3,386,354.
  Schwartz, James W. 3,387,160.
  Schwartz, James W., and Javorik. 3,387,159.
Natschke, Eldred H.: *See*—
  Macku, Thomas J., and Natschke. 3,386,539.
Nawakowski, Aleksandra C., S. S.-N. Wang, and A. M. Schiller, to American Cyanamid Co. Substituted ureas as low temperature epoxy curing agents. 3,386,955, 6-4-68, Cl. 260—47.
Nawakowski, Aleksandra C., A. M. Schiller, and S. S.-W. Wang, to American Cyanamid Co. Low temperature curable epoxy resin adhesive compositions with long storage stability. 3,386,956, 5-4-68, Cl. 260—47.
Nasy, John R.: *See*—
  Dunning, Herbert N., Nasy, and Wittcoff. 3,386,953.
Neaderland, Adolph C.: *See*—
  Dibble, Charles E., Matthysse, Neaderland, and Railla. 3,387,080.
Neal, William P., Jr.: *See*—
  Black, James H., Neal, and Reed. 3,386,578.
Nebel, Ilse U.: *See*—
  Hartel, Heins, and Nebel. 3,387,029.
Needham, Donald G., and G. R. Hill, to Phillips Petroleum Co. Polymeric composition. 3,386,948, 6-4-68, Cl. 260—41.
Neely, Charles E., and W. R. Butler. Randomly indexed trap door operated game device. 3,386,740, 6-4-68, Cl. 273—142.
Nelson, Carl P. Rip rap structure device. 3,386,252, 6-4-68, Cl. 61—37.
Nerwin, Hubert, to Eastman Kodak Co. Flash filter. 3,386,360, 6-4-68, Cl. 95—11.
Nette, Gunter: *See*—
  Wendler, Friedrich, and Nette. 3,387,110.
Neugebauer, Walter, and L. Schmidt, to Deutsche Gold- und Silber-Scheideanstalt vormals Roessler. Process for separating ammonia from nitriles. 3,386,804, 6-4-68, Cl. 23—196.
Neuworth, Martin B., and F. W. Hammesfahr, to Consolidation Coal Co. Phenolic rubber antioxidants. 3,387,057, 6-4-68, Cl. 260—810.
Neville Chemical Co.: *See*—
  Dereich, John E. 3,386,848.
Newallis, Peter E.: *See*—
  Chupp, John P., and Newallis. 3,387,025.
Newland, Gordon C., to Eastman Kodak Co. Photoreproduction process utilizing photosensitive thianthrene compositions. 3,386,829, 6-4-68, Cl. 96—90.
Neyhouse, George A.: *See*—
  Graham, Donald E., and Neyhouse. 3,387,196.
Nielsen, Thomas C.: *See*—
  Watson, Robert A., Mahoney, Nielsen, and Kiernan. 3,386,292.
Niemeyer, Willy, K.-H. Haneke, and G. Espel, to Windmoller & Holscher. Machine for manufacturing sacks having folded bottoms from transversely fed tube sections. 3,386,576, 6-4-68, Cl. 209—62.
Nishihara, Toji: *See*—
  Okumura, Kentaro, Kodera, Nishihara, and Oda. 3,386,997.
Nitzki, Leopold and V., to Aktien-Gesellschaft "Weser." Method for increasing the propulsion efficiency of a propeller. 3,386,516, 6-4-68, Cl. 170—135.
Nitzki, Volker: *See*—
  Nitzki, Leopold and V. 3,386,516.
Nitzsche, Siegfried, and P. Buchheit, to Wacker-Chemie G.m.b.H. Aminoorganosilanes. 3,387,016, 6-4-68, Cl. 260—448.8.
Nobel, Fred I.: *See*—
  Ostrow, Barnet D., and Nobel. 3,386,897.
Noiset, Willy R., and L. R. Busche, to The Dexter Corp. Infuser web material method of preparing same and infusion package. 3,386,834, 6-4-68, Cl. 99—77.1.
Nolan, Maurice A. W., and F. A. Murray, to Chance Brothers Ltd. Methods and apparatus for sorting members of different lengths. 3,386,577, 6-4-68, Cl. 209—90.
Nomine, Gerard: *See*—
  Martel, Jacques, Huynh, and Nomine. 3,387,008.
Noorlander, Willem, to North American Philips Co., Inc. Method of making a manganese oxide dielectric coating for barrier layer capacitors. 3,386,856, 6-4-68, Cl. 117—200.
Nooter Corp.: *See*—
  Woelfer, Charles G., and Dohr. 3,386,162.
Norco, Inc.: *See*—
  McCarthy, John J. 3,386,187.
Norcross, Paul D. Liquid tester. 3,386,289, 6-4-68, Cl. 73—440.
Norell, John R., to Phillips Petroleum Co. Method of preparation of substituted aryl ethane compounds. 3,387,051, 6-4-68, Cl. 260—668.
Norell, John R., D. L. Crain, and R. F. Kleinschmidt, to Phillips Petroleum Co. Production of stilbene and bibenzyl. 3,387,050, 6-4-68, Cl. 260—668.
North American Philips Co., Inc.: *See*—
  Adams, John. 3,387,187.
  Bronnes, Robert L. 3,386,906.
  Frouws, Simon M. 3,386,785.
  Haisma, Jan, and Van Hoppe. 3,387,226.
  Launay, Raymond. 3,386,902.
  Milch, Alfred, Lalak, and Ahlert. 3,386,159.
  Milch, Alfred, Lalak, and Ahlert. 3,386,160.
  Noorlander, Willem. 3,386,856.
  Schagen, Pieter, and Manley. 3,387,162.
  Steinmaier, Walter. 3,386,867.
  Van Laar, Johannes, and Scheer. 3,387,161.
North American Rockwell Corp.: *See*—
  Anderson, Dean B., August, Aukland, and Palmquist. 3,387,189.
  Hanson, Lloyd A. 3,386,811.
  Mee, Jack E., and Pulliam. 3,386,852.
  Rollins, Harry E. 3,386,687.
Northern Electric Co. Ltd.: *See*—
  Steppat, Christian H. M. 3,386,894.
Northrop Corp.: *See*—
  Pekarcik, Leonard S., and Alger. 3,386,318.
Norwich Pharmacal Co., The: *See*—
  Ebetino, Frank F. 3,386,995.
Novack, Martin E.: *See*—
  Powers, William E., Jr., Novack, and Blackburn. 3,387,150.
Null, Richard E., to Kaiser Aluminum & Chemical Corp. Rod material handling and uncoiling system. 3,386,684, 6-4-68, Cl. 242—128.
Nutting, Arthur, to American Air Filter Co., Inc. Pocket-type filter. 3,386,231, 6-4-68, Cl. 55—418.
Oakes, J. Barry: *See*—
  Billerbeck, Wilfred J., Jr., and Oakes. 3,387,199.
Obata, Kiyokatsu, to Kato Body Mfg. Co., Ltd. Sliding door arrangement. 3,386,204, 6-4-68, Cl. 49—212.
Oberg, Paul E., and M. C. Paul. Spiral vacuum deposition apparatus and method. 3,386,853, 6-4-68, Cl. 117—106.
O'Brien, Michael, to Mangood Corp. Pulse translator for a counting apparatus. 3,387,119, 6-4-68, Cl. 235—92.
O'Brien, William H., to Leesona Corp. Traverse roll. 3,386,150, 6-4-68, Cl. 29—148.4.
O'Connell, John J.: *See*—
  Schweiger, Richard G., and O'Connell. 3,386,921.
O'Connor, Thomas J. P. Remote heating and cooling temperature setback device. 3,386,496, 6-4-68, Cl. 165—2.
Oda, Tatsuo: See—
  Okumura, Kentaro, Kodera, Nishihara, and Oda. 3,386,997.
Offermann, Wilhelm, and H. Linden, to Dehydag Deutsche Hydrierwerke, G.m.b.H. Amino salts of dimerized fatty acids used as auxiliaries for lacquers. 3,386,845, 6-4-68, Cl. 106—308.
Ogren, Harvey D.: *See*—
  Evans, Richard A., and Ogren. 3,386,291.
Ohkoshi, Akio, S. Miyaoka, and Y. Katagiri, to Sony Corp. Focus magnet assembly for cathode ray tubes. 3,387,158, 6-4-68, Cl. 313—84.
Ohtomo, Richard H., to Varian Associates. Linear beam microwave tube having pole caps providing a tapered magnetic field along the beam axis. 3,387,167, 6-4-68, Cl. 315—3.5.
Oishei, John R., and R. A. Deibel, to Trico-Products Corp. Windshield wiper blade. 3,386,123, 6-4-68, Cl. 15—250.42.
Oizumi, Chihiro: *See*—
  Wakasa, Ryoichi, Ishida, and Oizumi. 3,387,070.
Oklahoma Publishing Co., The: *See*—
  Green, James F., Hansen, and Raper. 3,386,637.
Okumura, Akio: *See*—
  Yoshida, Makoto, Shiba, and Okumura. 3,386,880.
Okumura, Kentaro, K. Kodera, T. Nishihara, and T. Oda, to Tanabe Seiyaku Co., Ltd. 2-(3-hydroxy-5-hydroxymethyl-2-methyl-4-pyridyl)-tetrahydro-1,3-thiazine-4-carboxylic acid and the preparation thereof. 3,386,997, 6-4-68, Cl. 260—243.
Olbrich, Otto: *See*—
  Janner, Karl, and Olbrich. 3,387,148.
Olin Mathieson Chemical Corp.: *See*—
  Jasnaciak, George J. 3,386,820.
  Kaiser, Donald W. 3,387,018.
Oliva, Albert A.: *See*—
  Oliva, Domenic. 3,387,259.
Olson, Carroll G. and T. V. Self-propelled sprinkling irrigation apparatus. 3,386,661, 6-4-68, Cl. 239—177.
Olson, Richard L., to Dike-O-Seal, Inc. Strike-off bar structure. 3,386,141, 6-4-68, Cl. 25—104.
Olson, Theodore V.: *See*—
  Olson, Carroll G. and T. V. 3,386,661.
Ontario Research Foundation: *See*—
  Lomas, Harold. 3,386,880.
Oppenhuizen, Simon W., and J. O. Lockwood, to Uniline Corp. Drawer construction including preformed side members and supporting slide rails therefor. 3,386,784, 6-4-68, Cl. 312—348.
O'Rear, John D. Wind-resistant umbrella. 3,386,455, 6-4-68, Cl. 135—20.
Osborn Mfg. Co., The: *See*—
  Janke, Gilbert J., and Blower. 3,386,493.

Osburn, John G., to Kearney & Trecker Corp. Machine tool transmission and control mechanism. 3,386,543, 6-4-68, Cl. 192—3.5.
Oscar, John A., to E. I. du Pont de Nemours and Co. Process for preparing dinitrodiphenyl ethers. 3,387,041, 6-4-68, Cl. 260—612.
Osterreichische Stickstoffwerke Aktiengesellschaft: *See*—
  Schmidt, Alfred, Muller, and Weinrotter. 3,386,892.
Ostrander, William S., to Carrier Corp. Heating and cooling system. 3,386,499, 6-4-68, Cl. 165—29.
Ostrow, Barnet D., and F. I. Nobel. Electroplating bright nickel. 3,386,897, 6-4-68, Cl. 204—49.
Otsukakoki Kabushiki Kaisha: *See*—
  Kobayashi, Tetsuo, and Kasai. 3,386,311.
Ottaway, Gerald H., and K. Tertel, to International Business Machines Corp. Diagnostic system. 3,387,262, 6-4-68, Cl. 340—146.1.
Ottaway, Robert W., and P. G. Rumball, to United Shoe Machinery Corp. Flat piece pickup heads. 3,386,763, 6-4-68, Cl. 294—61.
Ourgaud, Janine, to Societe Nationale des Petroles d'Aquitaine Tour Aquitaine. Olefin copolymers. 3,386,974, 6-4-68, Cl. 260—79.5.
Outboard Marine Corp.: *See*—
  Trapp, Robert L. 3,386,242.
  Yourich, Adolph J. 3,386,546.
Overman, Harold S., to United States of America, Navy. Environment discriminating release mechanism. 3,386,138, 6-4-68, Cl. 24—211.
Owens-Corning Fiberglas Corp.: *See*—
  Rees, Vernon C. 3,387,115.
Pace, Robert C.: *See*—
  Stoffel, Robert W., Janusz, and Pace. 3,387,142.
Package Machinery Co.: *See*—
  Weiner, Seymour. 3,386,133.
Packaged Power Terminals Inc.: *See*—
  Christian, Joseph D. 3,386,708.
Paña, Gerhard, to Waagner-Biro A.G. Process for intimately contacting two fluids. 3,386,712, 6-4-68, Cl. 261—116.
Paillard S.A.: *See*—
  Mouissie, Bob. 3,386,680.
Pajot, Pierre T. C., to Etablissements Kuhlmann. Polyesters prepared from branched chain monocarboxylic acids. 3,387,059, 6-4-68, Cl. 260—842.
Pallen, Robert H.: *See*—
  Bernier, Georges E., Gilchrist, and Pallen. 3,386,928.
Palmer-Shile Co.: *See*—
  Cassel, Harrison H. 3,386,591.
Palmquist, Richard L.: *See*—
  Anderson, Dean B., August, Aukland, and Palmquist. 3,387,189.
Pampus, Gottfried: *See*—
  Witte, Josef, Schon, and Pampus. 3,386,983.
  Schon, Nikolaus, Pampus, and Witte. 3,386,984.
Pan American Petroleum Corp.: *See*—
  Fair, Joseph O. 3,386,390.
  Froning, H. R. 3,386,509.
  Landrum, Ralph A., and Geyer. 3,386,525.
  Quance, Robert J. 3,386,506.
  Silverman, Daniel. 3,387,294.
Pande, Kailash C., to Stauffer Chemical Co. Metal oxime compounds. 3,387,010, 6-4-68, Cl. 260—429.5.
Pannone, Richard F., to Hayes Industries, Inc. Universal mounting system for mufflers. 3,386,529, 6-4-68, Cl. 181—72.
Papirno, Ralph P.: *See*—
  Gerard, George, and Papirno. 3,387,139.
Pappadis, Nicholas P.: *See*—
  Kraner, James L., and Pappadis. 3,387,166.
Park, Jerald L., and C. Rossetti, to Avco Corp. Ball recirculating mechanism for ball screw and nut actuators. 3,386,307, 6-4-68, Cl. 74—459.
Parker, James B.: *See*—
  Gibson, James A., and Parker. 3,387,000.
Parker, Marsena R., Jr., to Bell Telephone Laboratories, Inc. Signal dispersion system. 3,387,233, 6-4-68, Cl. 333—30.
Parker, Robert H., B. T. Devlin, and E. H. Purvis, to Sperry Rand Corp. Aircraft autopilot with control wheel steering. 3,386,689, 6-4-68, Cl. 244—77.
Parkison, Richard G., and P. J. Klein, to American Standard Inc. Flushing apparatus. 3,386,459, 6-4-68, Cl. 137—216.
Parrish, Ralph W.: *See*—
  Beadle, Anthony C., and Parrish. 3,387,097.
Parts, Leo P., to Monsanto Research Corp. Organic compounds of boron. 3,387,018, 6-4-68, Cl. 260—453.
Pasternak, Edward J., to Bell Telephone Laboratories, Inc. Data processor with simultaneous testing and indexing on conditional transfer operations. 3,387,278, 6-4-68, Cl. 340—172.5.
Pastore, Michael W., to Argo Industries, Inc. Finned tube heat transfer unit with control guides. 3,386,501, 6-4-68, Cl. 165—82.
Pastrick, Michael A. Junction box. 3,386,606, 6-4-68, Cl. 220—3.94.
Patent Management, Inc.: *See*—
  Walker, Robert O. 3,386,456.
Paul, Maynard C.: *See*—
  Oberg, Paul E., and Paul. 3,386,853.
Pauli, Otto, E. Kuhle, and E. Klauke, to Farbenfabriken Bayer Aktiengesellschaft. Microbicidal agents for paint and synthetic resin coatings. 3,386,951, 6-4-68, Cl. 260—45.9.
Paulsen, Jean F., to Luxembourgeoise de Brevets et de Participations. Resilient couplings. 3,386,264, 6-4-68, Cl. 64—27.
Paulus, Reinhard H., to Allen-Bradley Co. Primary speed control for an induction motor. 3,387,197, 6-4-68, Cl. 318—229.
Pearce, Shairyl I.: *See*—
  Horsch, Joachim, Morris, Pearce, and Rohweder. 3,386,540.
Pearse, James N., to Allen-Bradley Co. Relay binary for receiving a mechanical input. 3,387,185, 6-4-68, Cl. 317—123.
Pease, Lionel, to T. W. Secrest, trustee of the Creditors Committee of Mill Equipment. Feed table. 3,386,564, 6-4-68, Cl. 198—162.
Pechiney Compagnie de Produits Chimiques et Electrometallurgiques: *See*—
  Daurat, Andre. 3,386,908.
Peller, Johannes: *See*—
  Grunewald, Waldemar F. W., and Peller. 3,386,130.
Pekarcik, Leonard S., and R. C. Alger, to Northrop Corp. Precision drill clamp. 3,386,318, 6-4-68, Cl. 77—62.
Pellegrino, Joseph. Antismudge ring. 3,386,367, 6-4-68, Cl. 98—40.
Perera, Ramon: *See*—
  Butler, Richard A., Haller, and Perera. 3,386,203.
Pester, William B., A. J. Schwarz, and C. F. Seitz, to Sears Roebuck and Co. Slide tray for projector. 3,386,195, 6-4-68, Cl. 40—79.
Peters & Russell, Inc.: *See*—
  Russell, Linus E. 3,387,105.
Peters, Theodore F.: *See*—
  Johnstone, Theodore H., Peters, and Brown. 3,386,761.
Peters, Theodore R., to Bell Telephone Laboratories, Inc. Information storage arrangement employing circulating memories. 3,387,821, 6-4-68, Cl. 340—172.5.
Peterson, Lowell S.: *See*—
  Peterhon, Tim L. and L. S. 3,386,898.
Peterson, Tim L. and L. S. Wall depository. 3,386,898, 6-4-68, Cl. 109—50.
Petit, Jean F.: *See*—
  Cabane, Gerard, Mouturat, Petit, Sainfort, and Salesse. 3,386,819.
Petrick, Edward J., and H. Genger, to Bretford Mfg., Inc. Appliance stand and storage device. 3,386,767, 6-4-68, Cl. 297—193.
Petropoulos, Constantine C., to The National Cash Register Co. Desyl aryl sulfides as polymerization initiators. 3,386,904, 6-4-68, Cl. 204—159.24.
Petrow, Vladimir: *See*—
  Burn, Derek, Coombs, and Petrow. 3,387,005.
Petter, William J., and H. A. and R. M. Ronningen, to Ronningen Mfg. Co. Ball valve seal. 3,386,699, 6-4-68, Cl. 251—315.
Peyfuss, Kurt F.: *See*—
  Jacoby, Charles H., and Peyfuss. 3,386,768.
Phelps Dodge Copper Products Corp.: *See*—
  Yearley, Douglas C., and Audi. 3,386,494.
Philip Morris, Inc.: *See*—
  Hind, John D. 3,386,449.
Phillips Petroleum Co.: *See*—
  Bailey, Fay W. 3,387,063.
  Beaser, Charles W. 3,386,257.
  Cleary, James W. 3,387,046.
  Doss, Richard C. 3,387,039.
  Hart, Walter C. 3,386,891.
  Horvath, Elizabeth G. and B. 3,386,950.
  Keene, William A. 3,386,607.
  Larsen, Olaf E. 3,387,073.
  Lumpkin, William B. 3,386,507.
  Needham, Donald G., and Hill. 3,386,948.
  Norell, John R. 3,387,051.
  Norell, John R., Crain, and Kleinschmidt. 3,387,050.
  Uraneck, Carl A., and Buck. 3,386,973.
  Zuech, Ernest A. 3,387,045.
Phillips, William H., to United States of America, National Aeronautics and Space Administration. Station keeping of a gravity-gradient stabilised satellite. 3,386,686, 6-4-68, Cl. 244—1.
Phipps, Arthur F., to The National Cash Register Co. Check number evaluating device. 3,386,653, 6-4-68, Cl. 235—61.
Piccand, Victor, and J. Vermot-Gand. Method of and apparatus for generating a sinusoidal polyphase current of variable frequency. 3,387,195, 6-4-68, Cl. 318—227.
Piccoli, William A., to Dow Corning Corp. Siltolylene compounds. 3,387,015, 6-4-68, Cl. 260—448.8.
Pickle, William S.: *See*—
  Gardner, John B., Harper, and Pickle. 3,386,971.
Pierce, Richard L.: *See*—
  Chipman, Gerald, Pierce, and Grengg. 3,387,100.
Pietrucci, Andre, and G. Schrep, to Service d'Exploitation Industrielle des Tabacs et des Allumettes. Apparatus for treating foliate material such as tobacco. 3,386,451, 6-4-68, Cl. 131—146.
Pike, Malcom R., N. A. Kerridge, and T. H. Frost, to Rolls-Royce Ltd. Nozzle assembly for a jet propulsion engine. 3,386,248, 6-4-68, Cl. 60—261.
Pine, Robert M., to Uarco Inc. Deleaver. 3,386,729, 6-4-68, Cl. 270—52.5.
Pinkham, Jesse R., to R. J. Reynolds Tobacco Co. Package. 3,386,566, 6-4-68, Cl. 206—45.33.
Pinkham, Jesse R., R. C. Trivette, J. H. Davidson, and H. L. Speas, Jr., to R. J. Reynolds Tobacco Co. Package-opening method and apparatus. 3,386,320, 6-4-68, Cl. 83—23.
Pirelli S.p.A.: *See*—
  Vanzo, Marcello. 3,386,181.
Pitkanen, Alan R., to Royal Industries, Inc. Tagging and tying apparatus. 3,386,478, 6-4-68, Cl. 140—93.6.
Pitt, Harold M., to Stauffer Chemical Co. Process for the copolymerization of carbon bisulfide and a free radical polymerizable material. 3,386,970, 6-4-68, Cl. 260—79.
Pitts, Bobby L., and R. M. Ingham, Jr., to Deering Milliken Research Corp. Drafting system. 3,386,136, 6-4-68, Cl. 19—245.

- Platter, Sandford, and M. J. Lowery, Jr., to International Business Machines Corp. Method and apparatus for transporting a closed tape loop. 3,386,772, 6-4-68, Cl. 302—2.
- Plegat, Alain E., to Societe Anonyme des Usines Chausson. Method of making heat exchanger nest and more particularly cooling radiators. 3,386,152, 6-4-68, Cl. 29—157.3.
- Plessey Co. Ltd., The: *See*—
  - Angold, Edward B. 3,387,184.
  - Ward, William E. 3,387,106.
- Plessey-UK Ltd.: *See*—
  - King, Henry V. 3,386,338.
  - Martin, Gerald, and Walker. 3,387,066.
- Pollane, Georges: *See*—
  - Bonnart, Jacques, and Pollane. 3,387,036.
- Polacoat Inc.: *See*—
  - Drayer, John F. 3,386,788.
- Polaroid Corp.: *See*—
  - Danti, Bernard R. 3,386,861.
  - Erikson, Herman E. 3,386,355.
  - Haas, Howard C. 3,386,979.
  - Land, Edwin H. 3,386,825.
- Ponczek, George M., to Sunbeam Corp. Hair dryer case with collapsible hose and cap storage means. 3,386,184, 6-4-68, Cl. 34—99.
- Pool, Richard A. H.: *See*—
  - Eames, Anthony R., and Pool. 3,387,209.
- Pooley, Robert W., to Uniroyal, Inc. Method of making expanded plastic articles and laminates involved in such method. 3,386,878, 6-4-68, Cl. 161—188.
- Possis Machine Corp.: *See*—
  - Schuette, Thomas L., and Straub. 3,386,382.
- Post, Richard F., to United States of America, Atomic Energy Commission. Method and apparatus for removing impurity gas. 3,387,174, 6-4-68, Cl. 315—111.
- Potts, Ernest L., to Brown, Cicero C. Multiple power consuming devices. 3,386,384, 6-4-68, Cl. 103—49.
- Potts, Ernest L., to Brown Oil Tools, Inc. Well tools. 3,386,701, 6-4-68, Cl. 251—229.
- Potzick, Anthony J., to The Mosler Safe Co. Key changeable tumbler construction for combination locks. 3,386,275, 6-4-68, Cl. 70—316.
- Powell, James L.: *See*—
  - Cahill, John W., Powell, and Gartner. 3,387,071.
- Powell, Milton L., to Rap Industries Inc. Packaging sheet material. 3,386,645, 6-4-68, Cl. 229—55.
- Powell, Robert J., deceased by Ruth B., and J. E. Champion, to Continental Motors Corp. Fuel systems. 3,386,427, 6-4-68, Cl. 123—119.
- Powell, Ruth B.: *See*—
  - Powell, Robert J., and Champion. 3,386,427.
- Power Brake Equipment Co.: *See*—
  - Williams, Norman C. 3,386,776.
- Powers & Eaton Industries, Inc.: *See*—
  - Hildebrandt, William J., Lukstas, Yerks, and Esakov, 3,386,650.
- Powers, William E., Jr., M. E. Novack, and P. R. Blackburn, to Avco Corp. Duct for magnetohydrodynamic devices. 3,387,150, 6-4-68, Cl. 310—11.
- Premier Tool Works, Inc.: *See*—
  - Soennichsen, Soenke. 3,386,348.
- Press, Carl, to The Dunlop Co. Ltd. Spot type disc brakes. 3,386,534, 6-4-68, Cl. 188—73.
- Preston, Bruce W., to Ford Motor Co. Headlamp aiming. 3,386,333, 6-4-68, Cl. 88—14.
- Preston, Frank S., to United Aircraft Corp. Gun platform stabilization system. 3,386,335, 6-4-68, Cl. 89—41.
- Prete, Ernest, Jr. Hanger apparatus for use in moving vehicles. 3,386,589, 6-4-68, Cl. 211—118.
- Pribila, Frank: *See*—
  - Epstein, Philip L., and Pribila. 3,387,296.
- Prilliman, Floyd W., and J. D. Etheridge, to United States of America, Navy. Direct lift control system. 3,386,690, 6-4-68, Cl. 244—83.
- Primm, George M. Pipe fitting assembly. 3,386,756, 6-4-68, Cl. 285—197.
- Pritchard, John: *See*—
  - Ellison, Ronald, and Pritchard. 3,386,397.
- Procter & Gamble Co., The: *See*—
  - Quimby, Oscar T. 3,387,024.
- Produits Chimiques Pechiney-Saint-Gobain: *See*—
  - Aguadisch, Leon, Charrier, and Miguet. 3,386,934.
  - Gavoret, Juliette. 3,386,926.
  - Thomas, Jean-Claude, and Marbach. 3,387,062.
  - Trebillon, Emile, and Wetroff. 3,387,014.
- Pugh, Emerson W., to International Business Machines Corp. Time displaced memory drive. 3,387,291, 6-4-68, Cl. 340—174.
- Pulliam, George R.: *See*—
  - Mee, Jack E., and Pulliam. 3,386,852.
- Pullman Inc.: *See*—
  - Gutridge, Jack E., Schmitz, and Van Der Sluys. 3,386,596.
- Pulse Jet Corp.: *See*—
  - Clejan, Deodat. 3,386,688.
- Purag Co., The: *See*—
  - Lazare, Leon. 3,386,912.
  - Lazare, Leon. 3,386,913.
- Purtell, Rufus J., to Tri-Matic, Inc. Trail tube movers. 3,386,464, 6-4-68, Cl. 137—344.
- Purvis, Edwin H.: *See*—
  - Parker, Robert H., Devlin, and Purvis. 3,386,689.
- Quance, Robert J., to Pan American Petroleum Corp. Method for secondary recovery of petroleum. 3,386,506, 6-4-68, Cl. 166—9.
- Quedreux, Edmond. Occupant-propelled vehicle that moves by displacement of its center of gravity in advance of its ground support. 3,386,753, 6-4-68, Cl. 280—208.
- Queisser, Hans J., to Bell Telephone Laboratories, Inc. Luminescent semiconductor devices including a compensated zone with a substantially balanced concentration of donors and acceptors. 3,387,163, 6-4-68, Cl. 313—108.
- Quimby, Oscar T., to The Proctor & Gamble Co. Class of organo-phosphorus compounds and process for preparing members thereof. 3,387,024, 6-4-68, Cl. 260—602.4.
- Quindar Electronics Inc.: *See*—
  - Epstein, Philip L., and Pribila. 3,387,296.
- Quinn, Richard M., to Ball Brothers Co., Inc. Inspection system for multi-station inspection apparatus. 3,386,575, 6-4-68, Cl. 209—75.
- Radio Corp. of America: *See*—
  - Deighton, Ward. 3,386,742.
- Radwan, Joseph A., to Dynatone Electronics Corp. Muscle stimulating pulse generator. 3,387,147, 6-4-68, Cl. 307—276.
- Ralla, Edward S.: *See*—
  - Dibble, Charles E., Matthysse, Neaderland, and Ralla. 3,387,080.
- Ramamoorthy, Chittoor V.: *See*—
  - Kruy, Joseph F., and Ramamoorthy. 3,387,298.
- Ramsey, Richard V.: *See*—
  - Funk, Jack N., and Ramsey. 3,387,120.
- Randall, John M., to Bausch & Lomb Inc. Regulated inverter circuit. 3,387,228, 6-4-68, Cl. 331—113.
- Rap Industries Inc.: *See*—
  - Powell, Milton L. 3,386,645.
- Raper, Lindell V.: *See*—
  - Green, James F., Hansen, and Raper. 3,386,637.
- Rath, Carl J.: *See*—
  - Bushmeyer, Richard W., Krause, and Rath. 3,386,373.
- Ratzsch, Manfred, H.-F. Rockstuhl, and W. Schaff, to Veb Leuna-Werke Ulbricht, Walter. Process for producing powders from plastic and wax masses. 3,386,488, 6-4-68, Cl. 159—48.
- Rauland Corp., The: *See*—
  - Kraner, James L., and Pappadis. 3,387,166.
- Rawl, Lawrence G.: *See*—
  - Bielstein, Walter J., and Rawl. 3,386,508.
- Raychem Corp.: *See*—
  - Derbyshire, Rodney L., and Schernig. 3,387,065.
  - Stivers, Edward C. 3,386,949.
- Razzolini, Dante. Sheet blanks for construction of three-dimensional representations of bird species. 3,386,196, 6-4-68, Cl. 40—126.
- Rea, Thomas H., to Armstrong Machine Works. Humidifiers of the steam discharge type. 3,386,659, 6-4-68, Cl. 239—132.
- Reading & Bates Offshore Drilling Co.: *See*—
  - Connally, Dickey P. 3,386,254.
- Reckitt & Coleman (Overseas) Ltd.: *See*—
  - Stanton, David C. 3,386,793.
- Reed, Leo O., to Joy Mfg. Co. Apparatus and method for treatment of gases. 3,386,229, 6-4-68, Cl. 55—227.
- Reed, Robert C. Molded metal parts, and vapor phase sintering process, molds and compositions for preparing same. 3,386,121, 6-4-68, Cl. 15—224.
- Reed, Thomas S., and E. S. Staunch, Jr., to Borg-Warner Corp. Adjustable steering mechanism. 3,386,309, 6-4-68, Cl. 74—493.
- Rees, Donald E. W., to Midland Silicones Ltd. Flexible electrical heating devices. 3,387,248, 6-4-68, Cl. 338—211.
- Rees, Vernon C., to Owens-Corning Fiberglas Corp. Programming apparatus. 3,387,115, 6-4-68, Cl. 219—504.
- Redfield Gun Sight Co.: *See*—
  - Burris, Donald J., and Stanley. 3,386,330.
- Regnier, Gaston L., to Richier. Lifting apparatus. 3,386,595, 6-4-68, Cl. 212—71.
- Rehm, Gustav A.: *See*—
  - Cleaver, John C., Rehm, Craig, Baron, Gething, and Wiegratz. 3,386,420.
- Reichelt, Gunter, and W. Lein, to Veb Druckmaschinewerke Leipzig. Sheet position sensor and indicator in a sheet-handling machine. 3,387,297, 6-4-68, Cl. 340—259.
- Reichert, C., Optische Werke Aktiengesellschaft: *See*—
  - Kropp, Karl. 3,386,358.
- Reichow, Richard C., to Sperry Rand Corp. Off-line memory test. 3,387.276, 6-4-68, Cl. 340—172.5.
- Reimer, William A., to Automatic Electric Laboratories, Inc. Three-dimensional crossbar network. 3,387,108, 6-4-68, Cl. 200—175.
- Reinsch, Herbert, to Eugen Bauer G.m.b.H. Motion picture camera. 3 386,791, 6-4-68, Cl. 352—83.
- Reischl, Karl E., to Bucyrus-Erie Co. Load snubber for a crane. 3,386,592, 6-4-68, Cl. 212—1.
- Reiter, Merlin G.: *See*—
  - Joy, Ivan L., Hoffsommer, Muyskens, and Reiter. 3,387,064.
- Remes, Nathaniel L., and J. C. H. Hwa, to Stauffer Chemical Co. Process of preparing poly(methylene sulfide). 3,386,958, 6-4-68, Cl. 260—67.
- Rentschler, Waldemar T., to A. Gauthier, G.m.b.H. Photographic camera with independently adjustable controls for distance and diaphragm aperture values. 3,386,356, 6-4-68, Cl. 95—10.
- Rentschler, Waldemar T., to A. Gauthier, G.m.b.H. Photographic shutter with electronically-controlled exposure timing device. 3,386,363, 6-4-68, Cl. 95—53.
- Renzi, Peter N.: *See*—
  - Bevans, Rowland S., Renzi, and Loonkar. 3,386,798.
- Reser, George L.: *See*—
  - Brenner, Orlestus R., and Reser. 3,386,444.
- Restivo. Albert R.: *See*—
  - Yale, Harry L., and Restivo. 3,387,002.
- Rettaw Enterprises, Inc.: *See*—
  - Stockman, William C. 3,386,175.
- Revere Copper and Brass Inc.: *See*—
  - Giovannucci, Julius L. 3.386,221.
- Revere Corp. of America: *See*—
  - Jacobson, Walter E. 3,386,282.

- Reynolds, Hugh W., to Weyerhaeuser Co. Lumber dryer and drying method. 3,386,183, 6-4-68, Cl. 34—48.
- Reynolds Metals Co.: *See*—
  - Arfert, Horst F. W., and Siemonsen. 3,386,614.
  - Wolgast, Lester H. 3,387,210.
- Reynolds, R. J., Tobacco Co.: *See*—
  - Pinkham, Jesse R. 3,386,566.
  - Pinkham, Jesse R., Trivette, Davidson, and Speas. 3,386,320.
- Rhone-Poulenc S.A.: *See*—
  - Bonnart, Jacques, and Pollane. 3,387,036.
  - Lefort, Marcel J. C. 3,387,017.
- Rice, Richard E., and G. W. Webb, to Comstock & Wescott, Inc. Powder metallurgy. 3,386,821, 6-4-68, Cl. 75—226.
- Richard Mfg. Co.: *See*—
  - Treace, Harry T. 3,386,487.
- Richardson, Arthur A. Steering mechanism for waterborne vessel. 3,386,313, 6-4-68, Cl. 74—625.
- Richier: *See*—
  - Regnier, Gaston L. 3,386,595.
- Richter, Sidney B.: *See*—
  - Levin, Alfred A., and Richter. 3,386,813.
- Riesberg, Kenneth D., and P. U. Gaul, Jr., to Donaldson Co., Inc. Liquid and gas separator. 3,386,230, 6-4-68, Cl. 55—337.
- Riesenberg, James H., to Consolidated Packaging Machinery Corp. Filling machine with adjustable fill height control. 3,386,480, 6-4-68, Cl. 141—147.
- Riethmuller, Heinz: *See*—
  - Thomaier, Dieter, and Riethmuller. 3,386,179.
- Riggs, Olen L., Jr.: *See*—
  - Gordy, Travis L., Higgins, and Riggs. 3.386,936.
- Ring, Marie I. Flower arrangement holder. 3,386,693, 6-4-68, Cl. 248—27.8.
- Rippl, Edward J.: *See*—
  - Arps, Milton J., Grist, and Rippl. 3,386,621.
- Risdon Mfg. Co., The: *See*—
  - Kotuby, Paul M. 3.386,631.
- Ritter Pfaudler Corp.: *See*—
  - Brenner, Orlestus R., and Reser. 3,386,444.
- Robb, Robert A.: *See*—
  - Brinckman, Frederick E., Jr., Haiss, and Robb. 3,386,985.
- Roberts, William A., and A. J. Woodell. Rotary hair combing device. 3,386,453, 6-4-68, Cl. 132—11.
- Robertshaw Controls Co.: *See*—
  - Branson, Charles D. 3,386,431.
  - Di Pilla, Anthony A. 3,387,107.
  - Katchka, Jay R. 3,386,467.
  - Kelly, Samuel T. 3,386,469.
  - Kenyon, Fred V. 3,386,306.
  - Willson, James R. 3,386,655.
- Robertson, John D., to Mount Hope Machine Co., Inc. Fluid bearing table roll. 3,386,148, 6-4-68, Cl. 29—116.
- Robertson, John D., to Mount Hope Machine Co., Inc. Fluid bearing table roll. 3,386,149, 6-4-68, Cl. 29—116.
- Robin-Nodwell Mfg. Ltd.: *See*—
  - Rymes, John E. 3,386,778.
- Robins, Betty N. Oral facial exerciser. 3,386,732, 6-4-68, Cl. 272—67.
- Robinson, Alfred G.: *See*—
  - Hagemeyer, Hugh J., Gammans, and Robinson. 3,387,022.
- Robinson, Chris B. Seat belt pad. 3,386,103, 6-4-68, Cl. 2—2.
- Robinson, Seymour D.: *See*—
  - Leifman, Harvey, and Robinson. 3,386,706.
- Rocchetti, Frankie. Fastener. 3,386,139, 6-4-68, Cl. 24—242.
- Rockstuhl, Hans-Friedrich: *See*—
  - Ratzsch, Manfred, Rochstuhl, and Schaff. 3,386,488.
- Roehr Products Co.: *See*—
  - Stevens, Peter A. 3,386,438.
- Rogers, Albert P., to Brunswick Corp. Bowling ball accelerator and wipers. 3,386,735, 6-4-68, Cl. 273—49.
- Rohm & Haas Co.: *See*—
  - Emmons, William D. 3,386,998.
  - Fang, Fabian T. 3,386,797.
  - White, Robert W., and King. 3 387,021.
- Rohrbacher, Herbert E., to Bergandi Mfg. Co., Inc. Powder measure for loading cartridges. 3,386,329, 6-4-68, Cl. 86—31.
- Rohweder, Gerald D.: *See*—
  - Horsch, Joachim, Morris, Pearce, and Rohweder. 3,386,540.
- Rolles, Rolf, and K. E. Luyk, to Aluminum Co. of America. Aluminum flake pigment composition. 3,386,844, 6-4-68, Cl. 106—290.
- Rollins, Harry E., to North American Rockwell Corp. Method of deploying a flexible wing vehicle. 3,386,687, 6-4-68, Cl. 244—49.
- Rolls-Royce Ltd.: *See*—
  - Pike, Malcom R., Kerridge, and Frost. 3,386,248.
- Ronningen, Helmer A.: *See*—
  - Petter, William J., and H. A. and R. M. Ronningen. 3,386,699.
- Ronningen Mfg. Co.: *See*—
  - Petter, William J., and H. A. and R. M. Ronningen. 3,386,699.
- Ronningen, Robert M.: *See*—
  - Petter, William J., and H. A. and R. M. Ronningen. 3,386,699.
- Rose, Ralph B., Sr. Dryer for printed sheets. 3,386,714, 6-4-68, Cl. 263—8.
- Rosecrans, Alfred E., and C. N. Goeders, to The Dow Chemical Co. Method for making porous polyurethane foams. 3,386,927, 6-4-68, Cl. 260—2.5.
- Rosenberg, David. Hydraulically actuated pump. 3,386,388, 6-4-68, Cl. 103—152.
- Ross, Edward E., J. Cunningham, and F. Hartman, to California Packing Corp. Method and apparatus for orienting elongated tapered agricultural products. 3,386,557, 6-4-68, Cl. 198—30.
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- Ross, Edward E., J. Cunningham, and F. Hartman, to California Packing Corp. Method and apparatus for orienting elongated tapered agricultural products. 3,386,560, 6-4-68, Cl. 198—31.
- Ross, Henry L.: *See*—
  - Juelss, David, and Ross. 3,386,839.
- Ross, Marcus E.: *See*—
  - Bartell, James F., and Ross. 3,386,945.
- Ross, Roger J., to The Singer Co. Thread trimming mechanism for sewing machines. 3,386,402, 6-4-68, Cl. 112—252.
- Rossetti, Charles: *See*—
  - Park, Jerald L., and Rossetti. 3,386,307.
- Rostaing, Michel, to Commissariat a l'Energie Atomique. Heat recovery system. 3,386,502, 6-4-68, Cl. 165—106.
- Roth, Irving, and E. W. Stark, to Sperry Rand Corp. Optical signal correlator using rotary photochromic record means. 3,387,140, 6-4-68, Cl. 250—236.
- Rothweiler, Richard C., to Square D Co. Waterproof cover assembly for electric sockets. 3,387,252, 6-4-68, Cl. 339—38.
- Roto-Finish Co.: *See*—
  - Balz, Gunther W., and Leipold. 3,386,180.
- Rotron Mfg. Co., Inc.: *See*—
  - Grad, Peter P. 3,387,153.
- Roudanez, Georges. Surfer's sulky. 3,386,749, 6-4-68, Cl. 280—47.3.
- Roussel-Uclaf: *See*—
  - Martel, Jacques, Huynh, and Nomine. 3,387,003.
- Rowe, Donald C., to The Boeing Co. Method and apparatus for fabricating a hollow part. 3,386,863, 6-4-68, Cl. 148—12.1.
- Roy, Neal L.: *See*—
  - Frilchtenicht, Joseph F., and Roy. 3,387,218.
- Roy, Robert E., to Colt's Inc. Convertible machine gun for right- and left-hand cartridge feed and operation. 3,386,336, 6-4-68, Cl. 89—191.
- Royal Industries, Inc.: *See*—
  - Pitkanen, Alan R. 3,386,478.
- Royer, Jean: *See*—
  - Charbonnier, Roger. 3,387,113.
- Royer, William M.: *See*—
  - Kennedy, Marcel J., and Royer. 3,386,662.
- Rubico, Jerome A.: *See*—
  - Batchelder, Charles F., and Rubico. 3,386,116.
- Rueb, Harold D., to Champ Corp. Mast tilt safety device for lift trucks. 3,386,603, 6-4-68, Cl. 214—673.
- Ruf, Ernst H., to General Motors Corp. Method of making bearing material. 3,386,161, 6-4-68, Cl. 29—487.
- Ruhl, Charles A. L., to International Harvester Co. Forward-reverse, steering, braking and motor control. 3,386,523, 6-4-68, Cl. 180—6.66.
- Rumball, Paul G.: *See*—
  - Ottaway, Robert W., and Rumball. 3,386,763.
- Rushmere, John D., to E. I. du Pont de Nemours and Co. Alkaline, cyanide zinc electroplating bath process, and additive therefor. 3,386,898, 6-4-68, Cl. 204—55.
- Russell, Arthur G., Co., Inc., The: *See*—
  - Willis, Grant N. 3,386,297.
- Russell, Eunice C. Educational device. 3,386,189, 6-4-68, Cl. 35—31.
- Russell, Linus E., to Peters & Russell, Inc. Pressure and dry tank switch assembly. 3,387,105, 6-4-68, Cl. 200—81.4.
- Russo, Anthony F., and R. Small. Batting practice device. 3,386,733, 6-4-68, Cl. 273—26.
- Rutschi, Robert, and R. Gehring, to Solvay & Cie, Societe Anonyme. Process for the manufacturing of chlorine dioxide in solution and the use of the solution thus obtained. 3,386,915, 6-4-68, Cl. 210—62.
- Ryan Aeronautical Co., The: *See*—
  - Vyvyan, Wesley W. 3,386,128.
- Rye, Grover W.: *See*—
  - Kovac, Frederick J., and Rye. 3,386,486.
- Rylander, Paul N., and D. R. Steele, to Englehard Industries, Inc. Process for the selective hydrogenation of biphenyl and dipyridyl and derivatives thereof. 3,387,048, 6-4-68, Cl. 260—667.
- Rymes, John E., to Robin-Nodwell Mfg. Ltd. Walking beam suspension. 3,386,778, 6-4-68, Cl. 305—27.
- SCM Corp.: *See*—
  - Bradbury, Wilburn F., and Erdman. 3,386,878.
  - Kleinschmidt, Edward E. 3,387,087.
  - Kleinschmidt, Edward E., and Taubmann. 3,387,085.
  - Kleinschmidt, Edward E., Bradbury, and Taubmann. 3.387,081.
  - Soenksen, Christian J., and Chinlund. 3,386,362.
- S-F-D Laboratories, Inc.: *See*—
  - Farney, George K. 3,387,169.
  - Farney, George K., and Feinstein. 3,387,170.
- SNAM S.p.A.: *See*—
  - Marconi, Walter, Cesca, and Fortuna. 3,386,975.
- Sabee, Reinhardt. Disposable diaper. 3,386,442, 6-4-68, Cl. 128—287.
- Sager, Frederick. Container provided with a vent and spout assembly. 3,386,632, 6-4-68, Cl. 222—482.
- Sainfort, Gerard: *See*—
  - Cabane, Gerard, Mouturat, Petit, Sainfort, and Salesse. 3,386,819.
- Salesse, Marc: *See*—
  - Cabane, Gerard, Mouturat, Petit, Sainfort, and Salesse. 3,386,819.

- Sallein, Werner J. Retractable ladder. 3,386,531, 6-4-68, Cl. 182—207.
- Salners, Edward A., and D. J. Vondran, to Motorola, Inc. Convenience plug. 3,387,253, 6-4-68, Cl. 339—102.
- Salyer, Ival O., to Monsanto Research Corp. Preparation of hydrolyzed ethylene/vinyl/acetate copolymer. 3,386,978, 6-4-68, Cl. 260—87.3.
- Sammons, William A., and A. N. May, to T. J. Smith & Nephew Ltd. Method for the production of open-work structures. 3,387,077, 6-4-68, Cl. 264—289.
- Sampson, Sidney F., to Bell Telephone Laboratories, Inc. Bridge circuit for amplifier gain versus temperature compensation. 3,387,206, 6-4-68, Cl. 323—75.
- Sanborn, Duane F.: *See*—
  - Hackbart, Reuben J., and Sanborn. 3,386,262.
- Sanders Associates, Inc.: *See*—
  - Blitz, Daniel. 3,387,300.
  - Boothroyd, Howard W. 3,386,293.
- Santa Rita Technology, Inc.: *See*—
  - Stewart, John L. 3,387,093.
- Santangelo, Joseph G., and H. W. Steinmann, to Celanese Corp. Synthetic filaments of polyanhydroglucose triester copolymers. 3,386,930, 6-4-68, Cl. 260—13.
- Santaniello, Anthony F., to Thiokol Chemical Corp. Isocyanate-terminated polysulfide polymers. 3,386,963, 6-4-68, Cl. 260—77.5.
- Sartori, Guido: *See*—
  - Turba, Vittorio, Sartori, and Valvassori. 3,387,047.
- Sartorius-Werke vormals Gottinger Prazisionswaagenfabrik G.m.b.H., A.G.: *See*—
  - Weickhardt, Ludwig. 3,386,779.
- Saufferer, Helmut, to Daimler-Benz Aktiengesellschaft. Process and apparatus for afterburning exhaust gases of internal combustion engines. 3,386,241, 6-4-68, Cl. 60—30.
- Saultz, Robert H. Hinged cover for garbage receptacle. 3,386,610, 6-4-68, Cl. 220—36.
- Sautier, Francis, to Societe Anonyme dite Les Oxydes Francais. Surface treatment of freshly poured concrete and cement mortar. 3,386,854, 6-4-68, Cl. 117—123.
- Savin, Cornelius, A. G. Vorwald, and C. R. Vagts, to Antran Corp. Device and method for demonstrating the area of a circle. 3,386,190, 6-4-68, Cl. 35—34.
- Scarlett, Norris A.: *See*—
  - Moore, Howard D., Scarlett, and Jones. 3,386,916.
- Schaap, Jacob A., to Lever Bros. Co. Method of preparing oil-water emulsions. 3,386,835, 6-4-68, Cl. 99—118.
- Schaedler, Hugo: *See*—
  - Steden, Franz, Schaedler, Lissner, and Schuster. 3,386,924.
- Schaff, Wolfgang: *See*—
  - Ratsch, Manfred, Rockstuhl, and Schaff. 3,386,488.
- Schagen, Pieter, and B. W. Manley, to North American Philips Co., Inc. Photocathode comprising channeled matrix with conductive inserts in channels tipped with photoconductive material. 3,387,162, 6-4-68, Cl. 313—96.
- Scheer, Jacob J.: *See*—
  - Van Laar, Johannes, and Scheer. 3,387,161.
- Scheidt, James E.: *See*—
  - Junck, John A., Kokaly, and Scheidt. 3,386,344.
- Schernig, Fred W.: *See*—
  - Derbyshire, Rodney L., and Schernig. 3,387,065.
- Scheufler, Roland, to Karl Schmidt G.m.b.H. Anti-friction bearing. 3,386,783, 6-4-68, Cl. 308—121.
- Schiefer, Harry M., to Dow Corning Corp. Fluoroalkylpolysiloxane lubricants containing organophosphorus additives. 3,386,917, 6-4-68, Cl. 252—49.9.
- Schiller, Arthur M.: *See*—
  - Nawakowski, Aleksandra C., Wang, and Schiller. 3,386,955.
  - Nawakowski, Aleksandra C., Schiller, and Wang. 3,386,956.
- Schlegel, Peter: *See*—
  - Waldenburger, Hermann, and Schlegel. 3,386,294.
- Schmidt, Alfred, W. Muller, and F. Weinrotter, to Osterreichische Stickstoffwerke Aktiengesellschaft. Purification of fluosilicic acid solution by distillation with phosphoric acid solution. 3,386,892, 6-4-68, Cl. 203—42.
- Schmidt, Karl, G.m.b.H.: *See*—
  - Scheufler, Roland. 3,386,783.
- Schmidt, Lothar: *See*—
  - Neugebauer, Walter, and Schmidt. 3,386,804.
- Schmitz, Thomas R.: *See*—
  - Gutridge, Jack E., Schmitz, and Van Der Sluys. 3,386,596.
- Schnabel, Harry, Jr. Method of installing well points. 3,386,510, 6-4-68, Cl. 166—34.
- Schnell, Hermann, and L. Bottenbruch, to Farbenfabriken Bayer Aktiengesellschaft. Production of high molecular weight linear polycarbonates from oligomeric cyclic carbonates. 3,386,954, 6-4-68, Cl. 260—47.
- Schoeffel, Eugene W., and F. J. Zimmerman, to Sterling Drug, Inc. Wet air oxidation of combustible materials adsorbed on carbonaceous adsorbent. 3,386,922, 6-4-68, Cl. 252—416.
- Scholes, Addison B., to Ball Bros. Co. Inc. Lubricous coating for glass. 3,386,855, 6-4-68, Cl. 117—124.
- Scholl, James E., to United States of America, Navy. Constant runout bridle arrester. 3,386,691, 6-4-68, Cl. 244—110.
- Schon, Nikolaus: *See*—
  - Witte, Josef, Schon, and Pampus. 3,386,983.
- Schon, Nikolaus, G. Pampus, and J. Witte, to Farbenfabriken Bayer Aktiengesellschaft. Process for the production of hydrocarbon-soluble mixed catalysts for the polymerization of buta-1,3-diene. 3,386,984, 6-4-68, Cl. 260—94.3.
- Schrep, Georg: *See*—
  - Pietrucci, Andre, and Schrep. 3,386,451.
- Schuerch, Hans U., to Astro Research Corp. Parachute. 3,386,692, 6-4-68, Cl. 244—138.
- Schuessler, Francis J., to Sunbeam Corp. Electric dry shaver with detachable shaving head. 3,386,167, 6-4-68, Cl. 30—34.1.
- Schuette, Thomas L., and M. J. Straub, to Possis Machine Corp. Fluid material dispensing apparatus. 3,386,382, 6-4-68, Cl. 103—3.
- Schulze, Ernst, and G. Becker. Method of and apparatus for detecting light-deflecting flaws in hollow glass articles. 3,386,579, 6-4-68, Cl. 209—111.7.
- Schuman, Seymour C. Conversion of C_4, C_5 hydrocarbons with elemental sulfur and metal sulfide catalyst. 3,387,054, 6-4-68, Cl. 260—680.
- Schuster, Ludwig: *See*—
  - Steden, Franz, Schaedler, Lissner, and Schuster. 3,386,924.
- Schwartz, Herbert S.: *See*—
  - Hough, Ralph L., and Schwartz. 3,386,918.
- Schwartz, James W., to National Video Corp. Lens system for correcting effect of earth's magnetic field in color tubes. 3,386,354, 6-4-68, Cl. 95—1.
- Schwartz, James W., to National Video Corp. Mounting means for moving shadow mask axially forward upon heating. 3,387,160, 6-4-68, Cl. 313—85.
- Schwartz, James W., and L. Javorik, to National Video Corp. Color television tube mask mounting with aperture alignment maintenance during expansion. 3,387,159, 6-4-68, Cl. 313—85.
- Schwartz, Jerome, to Taylor Lock Co. File-cabinet-type lock. 3,386,272, 6-4-68, Cl. 70—81.
- Schwarz, Albert J.: *See*—
  - Pester, William B., and Schwarz. 3,386,195.
- Schweiger, Richard G., to Kelco Co. Sulfation of guar and locust bean gum. 3,386,992, 6-4-68, Cl. 260—234.
- Schweiger, Richard G., and J. J. O'Connell, to Kelco Co. Gels and methods of producing same. 3,386,921, 6-4-68, Cl. 252—316.
- Scialom, Jacques. Method and means for attaching teeth and the like to the maxillar bone. 3,386,169, 6-4-68, Cl. 32—10.
- Scott, Gerald W.: *See*—
  - Lamon, David E., and Scott. 3,386,672.
- Scott, Harley D., to Elwin G. Smith & Co., Inc. Building panel with ribbed sealing element between overlapping edges. 3,386,218, 6-4-68, Cl. 52—309.
- Scott, John I.: *See*—
  - Dulin, Grady N., Jr., and Scott. 3,386,871.
- Scott, Kenneth W.: *See*—
  - Lal, Joginder, and Scott. 3,386,947.
- Scudder, William C., to Allied Chemical Corp. Process for forming transparent unoriented polyamide resin films. 3,387,068, 6-4-68, Cl. 264—83.
- Searle, G. D., & Co.: *See*—
  - Counsell, Raymond E., and Klimstra. 3,387,007.
- Sears, Roebuck and Co.: *See*—
  - Pester, William B., Schwarz, and Seitz. 3,386,195.
- Seck, John C., to The Singer Co. Skip stitch attachments for zigzag sewing machines. 3,386,399, 6-4-68, Cl. 112—154.
- Secrest, Thomas W.: *See*—
  - Pease, Lionel. 3,386,564.
- Seiter, Hartmut: *See*—
  - Hornig, Martin, and Seiter. 3,386,893.
- Selgin, Paul J. Electric motor. 3,387,151, 6-4-68, Cl. 310—46.
- Seligman, Robert B., and J. D. Hind, to Philip Morris, Inc. Method of making reconstituted tobacco. 3,386,450, 6-4-68, Cl. 131—140.
- Selsam, Roger L., to General Dynamics Corp. Hydraulic amplifier. 3,386,339, 6-4-68, Cl. 91—52.
- Seltzer, Edward C.: *See*—
  - Smith, Keith L., Winslow, and Seltzer. 3,387,061.
- Septier, Albert L.: *See*—
  - Audoin, Claude L., and Septier. 3,387,241.
- Serafin, Bernard J.: *See*—
  - Aebi, Claude M., and Serafin. 3,386,826.
- Seraphim, Donald P.: *See*—
  - Brennemann, Andrew E., Seraphim, and Tansal. 3,386,163.
- Service d'Exploitation Industrielle des Tabacs et des Allumettes: *See*—
  - Pietrucci, Andre, and Schrep. 3,386,451.
- Setco Industries, Inc.: *See*—
  - Wagner, Harold J. 3,386,211.
- Sewell, Donald N., to Dielectric Products Engineering Co., Inc. Apparatus for manufacturing coaxial transmission lines. 3,386,147, 6-4-68, Cl. 29—34.
- Shankland, Ronald B., Sr., to Bennett Industries, Inc. Stackable container with movable handle on each end. 3,386,617, 6-4-68, Cl. 220—94.
- Sheinberg, Haskell, to United States of America, Atomic Energy Commission. Castable machine tool bit composition of boron carbide and nickel. 3,386,812, 6-4-68, Cl. 29—182.8.
- Shell Oil Co.: *See*—
  - Moore, Howard D., Scarlett, and Jones. 3,386,916.
- Shepard, Alvin F., and B. F. Dannels, to Hooker Chemical Corp. Electrolytic production of aromatic condensation products. 3,386,899, 6-4-68, Cl. 204—59.
- Shepherd, Thomas C. R. Waste disposal apparatus. 3,386,668, 6-4-68, Cl. 241—46.
- Shiba, Keisuke: *See*—
  - Yoshida, Makoto, Shiba, and Okumura. 3,386,830.
- Shiffman, Jerome. Combination plastic watch case and crystal. 3,386,239, 6-4-68, Cl. 58—91.
- Shimokawa, Yoichi: *See*—
  - Ito, Yoshikazu, Wakamatsu, and Shimokawa. 3,386,903.
- Shinozaki, Yoshiaki: *See*—
  - Kuraishi, Michio, Asano, and Shinozaki. 3,387,043.
- Shirley, Kirk R.: *See*—
  - Chadderdon, Jack, and Shirley. 3,386,521.

- Shoemaker, Frank O., to Titan Abrasives Co. Grinding disc. 3,386,214, 6-4-68, Cl. 51—356.
- Short, Joe T., to Zallaway Mills Co. Multi-purpose tufting machine and method. 3,386,403, 6-4-68, Cl. 112—266.
- Shulman, Stuart M., to Baker Brush Co. Inc. Paint brush and method of making the same. 3,386,119, 6-4-68, Cl. 15—193.
- Shuttleworth, James J. Case packer. 3,386,224, 6-4-68, Cl. 53—165.
- Siegel, Herbert, and H. Bubber, to International Standard Electric Corp. Call number indicating circuits. 3,387,094, 6-4-68, Cl. 179—18.
- Siemens Aktiengesellschaft: *See*—
  - Herrmann, Karl-Heinz, and Loebe. 3,387,132.
  - Hornig, Martin, and Seiter. 3,386,893.
  - Janner, Karl, and Olbrich. 3,387,148.
  - Mucke, Johannes. 3,387,152.
  - Walter, Karlheinz. 3,387,289.
  - Wendler, Friedrich, and Nette. 3,387,110.
- Siemonsen, Frederik A.: *See*—
  - Arfert, Horst F. W., and Siemonsen. 3,386,614.
- Silva, Mary-Louise: *See*—
  - Mosby, William L., and Silva. 3,387,004.
- Silverman, Daniel, to Pan American Petroleum Corp. Rapid loading magnetic tape recording system. 3,387,294, 6-4-68, Cl. 340—174.1.
- Silvestri, Victor J., V. J. Lyons, and J. C. Marinace, to International Business Machines Corp. Semiconductor-metal-semiconductor structure. 3,386,864, 6-4-68, Cl. 148—175.
- Simmons, John C., to Alamance Industries, Inc. Man's support sock and method of forming same. 3,386,270, 6-4-68, Cl. 66—178.
- Simon, Julius L., to Motorola, Inc. Automatic degaussing circuit. 3,387,172, 6-4-68, Cl. 315—8.
- Singer Co., The: *See*—
  - Beckenstein, Leonard A. 3,386,268.
  - Cook, Albert N., and Turley. 3,387,157.
  - Ivanko, Michael F. 3,386,400.
  - Johnson, Ralph E. 3,386,401.
  - Ross, Roger J. 3,386,402.
  - Seck, John C. 3,386,399.
- Singer, Edwin, and A. Geissler, to Telecontrol Corp. System and apparatus for addressing a cyclical memory by the stored contents thereof. 3,387,277, 6-4-68, Cl. 340—172.5.
- Sitz, Gilbert C.: *See*—
  - Lau, Ralph R., and Sitz. 3,386,158.
- Skiles, William J. Identifier for two-way mobile transmitters. 3,387,101, 6-4-68, Cl. 179—100.2.
- Skochdopole, Richard E., and D. Urchick, to The Dow Chemical Co. Cellular thermoplastic article having selected open cells and its manufacture. 3,386,877, 6-4-68, Cl. 161—160.
- Skuda, Benton J.: *See*—
  - Denton, James B., and Skuda. 3,386,469.
- Slabey, Martin W., and T.-Y. Wu, to Ford Motor Co. Engine fuel supply system. 3,386,428, 6-4-68, Cl. 123—139.
- Slager, James E., to Miles Laboratories, Inc. Electrolytic process of making diethylstilbestrol. 3,386,900, 6-4-68, Cl. 204—75.
- Slate, Matthew W.: *See*—
  - Blass, Judd, and Slate. 3,387,301.
- Slimowicz, Chester E., to General Aniline & Film Corp. Diazo sensitizing formulations containing a xanthine and an imidazoledione. 3,386,828, 6-4-68, Cl. 96—91.
- Sloan, Sol. Foundation garment. 3,386,446, 6-4-68, Cl. 128—528.
- Smakel, Harry J. Pin master. 3,386,728, 6-4-68, Cl. 269—289.
- Small, Guy W. Strip gang saw. 3,686,481, pub. 6-4-68, Cl. 143—38.
- Small, Richard: *See*—
  - Russo, Anthony F., and Small. 3,386,738.
- Smart, Charles L., and D. K. Keel, to Celanese Corp. Copolymers of cellulose, triesters and isocyanate containing polymers. 3,386,931, 6-4-68, Cl. 260—13.
- Smelman, Wilfred. Validation means. 3,387,265, 6-4-68, Cl. 340—149.
- Smith, Albert R. Stone setting apparatus. 3,386,412, 6-4-68, Cl. 118—200.
- Smith, Elwin G., & Co., Inc.: *See*—
  - Scott, Harley D. 3,386,218.
- Smith, Ernest G.: *See*—
  - Borenstein, Benjamin, and Smith. 3,386,836.
- Smith, Keith L., A. E. Winslow, and E. C. Seltzer, to Union Carbide Corp. Reaction products of polymeric association products polycarboxylic acid and polymeric polyethers. 3,387,061, 6-4-68, Cl. 260—874.
- Smith, Philip N.: *See*—
  - Michener, John W., and Smith. 3,387,181.
- Smith, Ralph W.: *See*—
  - Huffman, William A. H., Smith, and Hinderer. 3,386,965.
- Smith, Richard D.: *See*—
  - Layne, Gilbert S., Huml, and Smith. 3,386,817.
- Smith, Richard K., to Twin Cities Container Corp. Shipping support structure for bathtubs and blanks therefor. 3,386,567, 6-4-68, Cl. 206—46.
- Smith, Ronald J.: *See*—
  - Green, Joseph, Klaubert, and Smith. 3,386,869.
- Smith, T. J., & Nephew Ltd.: *See*—
  - Sammons, William A., and May. 3,387,077.
- Smith, Walter E. Slide bar for Hawaiian guitar. 3,386,325, 6-4-68, Cl. 84—319.
- Smith, William F., to The Foxboro Co. Electronic valve control system with reduced flow at end of cycle. 3,386,620, 6-4-68, Cl. 222—20.
- Smyrk, Charles E.: *See*—
  - Greanias, Evon C., Meagher, and Smyrk. 3,387,168.
- Smythe, Craig W.: *See*—
  - Dovey, Norman E. 3,386,328.
- Smythe, Denise Y. M.: *See*—
  - Dovey, Norman E. 3,386,328.
- Smythe, George R.: *See*—
  - Dovey, Norman E. 3,386,328.
- Smythe, Jennifer R.: *See*—
  - Dovey, Norman E. 3,386,328.
- Snedaker, Mark C., to International Business Machines Corp. Addressing system. 3,387,283, 6-4-68, Cl. 340—172.5.
- Snyder, Richard L., to Hughes Aircraft Co. Multiphase shift register memory. 3,387,290, 6-4-68, Cl. 340—174.
- Snyder, William E.: *See*—
  - Mountcastle, Paul H., and Snyder. 3,387,303.
- Sobotka, Walter, to CSF-Compagnie Generale de Telegraphie Sans Fil. Delay line structure. 3,387,234, 6-4-68, Cl. 333—31.
- Societe Anonyme des Usines Chausson: *See*—
  - Plegat, Alain E. 3,386,152.
- Societe Anonyme dite Les Oxydes Francais: *See*—
  - Sautier, Francis. 3,386,854.
- Societe Derefa, Etablissement pour le Developpements Recherches et Fabrications Industrielles: *See*—
  - Defandre, Rene. 3,386,146.
- Societe d'Etudes et de Participations, Eau, Gaz, Electricite, Energie, S.A. (S.E.P.): *See*—
  - Vallin, Emile. 3,386,428.
- Societe Nationale des Petroles d'Aquitaine Tour Aquitaine: *See*—
  - Ourgaud, Janine. 3,386,974.
- Soenksen, Christian J., and J. F. Chinlund, to SCM Corp. Film cartridge. 3,386,362, 6-4-68, Cl. 95—31.
- Soennichsen, Soenke, to Premier Tool Works, Inc. Egg carton setup machine. 3,386,348, 6-4-68, Cl. 93—37.
- Solvay & Cie, Societe Anonyme: *See*—
  - Rutschi, Robert, and Gehring. 3,386,915.
- Somorjai, Gabor A.: *See*—
  - Keller, Seymour P., and Somorjai. 3,386,823.
- Sony Corp.: *See*—
  - Ohkoshi, Akio, Miyaoka, and Katagiri. 3,387,158.
- Sorensen, Svend E., and W. L. McHale, to The Battelle Development Corp. Free-piston engine diaphragm compressor. 3,386,647, 6-4-68, Cl. 230—49.
- Sotani, Tadashi and Y. Cartridge for strip and take-up motion therefor. 3,386,676, 6-4-68, Cl. 242—55.13.
- Sotani, Yasuo: *See*—
  - Sotani, Tadashi and Y. 3,386,676.
- Southern Machine Co., Inc.: *See*—
  - Cobble, James A., Sr. and J. A. Cobble, Jr. 3,386,398.
- Spacht, Ronald B.: *See*—
  - Gleim, Clyde E., and Spacht. 3,386,952.
- Spanbauer, John G., to United States of America, Navy. High gain magnetic amplifier. 3,387,223, 6-4-68, Cl. 330—8.
- Spear, Robert A.: *See*—
  - Duval, Daniel W., Spear, and Toth. 3,386,696.
- Spears, Esten W., Jr.: *See*—
  - Beam, Paul E., Jr., and Spears. 3,386,243.
- Speas, Herbert L., Jr.: *See*—
  - Pinkham, Jesse R., Trivette, Davidson, and Speas. 3,386,320.
- Speed-O-Print Business Machines Corp.: *See*—
  - Hyosaka, Alfred M. 3,386,730.
- Spencer, Robert E.: *See*—
  - Magil, Donald G., and Spencer. 3,386,782.
- Sperry Rand Corp.: *See*—
  - Barcaro, Eugene B., and Thompson. 3,387,292.
  - Bina, Robert A. 3,387,280.
  - Dannatt, Hugh S. L., and Fuld. 3,386,556.
  - Davis, William W. 3,387,274.
  - Glass, Emmett F., and McCarty. 3,386,233.
  - Parker, Robert H., Devlin, and Purvis. 3,386,689.
  - Reichow, Richard C. 3,387,276.
  - Roth, Irving, and Stark. 3,387,140.
  - Waldrop, Thomas W., and Blanshine. 3,386,483.
- Spielmann, Werner: *See*—
  - Ebert, Ekkehard, and Spielmann. 3,386,866.
- Spier, Raymond A., to United States of America, National Aeronautics and Space Administration. Portable milling tool. 3,386,337, 6-4-68, Cl. 90—12.
- Spino, Nicholas D.: *See*—
  - Holmes, John L., Torrye, Spino, and Vargas. 3,386,283.
- Spra-Con Co., The: *See*—
  - Harrison, John. 3,386,568.
- Sprengel, Heinz F. J., to Blohm & Voss A.G. Ship's loading apparatus having a cargo boom with a plurality of pendulum purchase block fittings. 3,386,598, 6-4-68, Cl. 212—3.
- Spuhl A.-G.: *See*—
  - Spühl, Walter. 3,386,561.
- Spühl, Walter, to Spuhl A.-G. Machines for manufacturing spring interiors. 3,386,561, 6-4-68, Cl. 198—32.
- Square D Co.: *See*—
  - Guettel, Marvin A. 3,387,112.
  - Meier, Roger D. 3,387,154.
  - Rothweiler, Richard C. 3,387,252.
- Squibb, E. R., & Sons, Inc.: *See*—
  - Levine, Seymour D. 3,387,023.
  - Yale, Harry L., and Restivo. 3,387,002.
- Staats, Henry N. Ceiling panel construction with tensioning means. 3,386,220, 6-4-68, Cl. 52—495.
- Stallard, Clarence E.: *See*—
  - Dickinson, Horace, and Stallard. 3,386,468.
- Standard Oil Co.: *See*—
  - McCurdy, John L., and Wallace. 3,386,495.
- Standard Oil Co. (Indiana): *See*—
  - McCurdy, John L. 3,387,067.
- Stanley, Gene E.: *See*—
  - Burris, Donald J., and Stanley. 3,386,330.
- Stanley, Robert K., and M. F. Irwin, to Techniservice Corp. Strand treatment process and apparatus. 3,386,142, 6-4-68, Cl. 28—1.

- Stanley Works, The: *See—*
  - Kraut, Herman G. 3,386,571.
- Stant Mfg. Co., Inc.: *See—*
  - Crute, Billy G. 3,386,611.
- Stanton, David C., to Reckitt & Coleman (Overseas) Ltd. Applicators for liquids, pastes or other flowable substances. 3,386,793, 6-4-68, Cl. 401—132.
- Staples, John L., to International Business Machines Corp. Method for providing electrical contacts to a wafer of GaAs. 3,386,867, 6-4-68, Cl. 148—180.
- Starcevic, Louis J., to Atlas Enameling Co., Inc. Reversible door. 3,386,209, 6-4-68, Cl. 49—501.
- Stark, Edward W.: *See—*
  - Roth, Irving, and Stark. 3,387,140.
- Stark, Forrest O.: *See—*
  - Kohl, Charles F., Stark, and Vogel. 3,386,905.
- Starkweather, Howard W., Jr., to E. I. du Pont de Nemours and Co. Laminates of polyethylene terephthalate. 3,386,476, 6-4-68, Cl. 138—144.
- Statham Instruments, Inc.: *See—*
  - Funfstuck, Horst. 3,386,498.
- Stauffer Chemical Co.: *See—*
  - Pande, Kailash C. 3,387,010.
  - Pitt, Harold M. 3,386,970.
  - Remes, Nathaniel L., and Hwa. 3,386,958.
- Staunch, Edward S., Jr.: *See—*
  - Reed, Thomas S., and Staunch. 3,386,309.
- Stearns Mfg. Co., Inc.: *See—*
  - Karr, Willis F. 3,386,713.
- Steden, Franz, H. Schaedler, O. Lissner, and L. Schuster, to Badische Anilin- & Soda-Fabrik Aktiengesellschaft. Curing polyepoxy compounds with tetrahydrotricyclopentadienylene diamine. 3,386,924, 6-4-68, Cl. 260—2.
- Steele, Duane R.: *See—*
  - Rylander, Paul N., and Steele. 3,387,048.
- Steinacker, Warren R., to E. I. du Pont de Nemours and Co. Method of removing water and apparatus therefor. 3,386,181, 6-4-68, Cl. 34—9.
- Steinmaier, Walter, to North American Philips Co., Inc. Method of manufacturing semiconductor devices such as transistors and diodes and semiconductor devices manufactured by such methods. 3,386,857, 6-4-68, Cl. 117—212.
- Steinmann, Henry W.: *See—*
  - Santangelo, Joseph G., and Steinmann. 3,386,930.
- Steinmann, Henry W., to Celanese Corp. Novel cellulosics, segmented copolymers, and methods of preparing same. 3,386,932, 6-4-68, Cl. 260—16.
- Steppat, Christian H. M., to Northern Electric Co. Ltd. Formation of metallic contacts. 3,386,894, 6-4-68, Cl. 204—15.
- Sterling Drug Inc.: *See—*
  - Schoeffel, Eugene W., and Zimmermann. 3,386,922.
- Sternberg, James C., to Beckman Instruments, Inc. Time resolution analysis apparatus. 3,386,279, 6-4-68, Cl. 73—23.1.
- Sterner, Stig R., to Aktiebolaget Svenska Metallverken Vasteras. System for connecting buoyant bodies together. 3,386,117, 6-4-68, Cl. 14—27.
- Stevens, Donald E.: *See—*
  - Doyle, Edward A., and Stevens. 3,386,718.
- Stevens, Peter A., to Roehr Products Co. Tapered needle. 3,386,438, 6-4-68, Cl. 128—221.
- Stewart, John L., to Santa Rita Technology, Inc. Speech bandwidth compression system. 3,387,093, 6-4-68, Cl. 179—15.55.
- Stewart-Warner Corp.: *See—*
  - Earleywine, Aubrey W., Jr. 3,386,237.
  - Earleywine, Aubrey W., Jr. 3,387,255.
  - Fairbanks, Gordon J. 3,386,600.
  - Little, Arthur J. 3,387,267.
  - Williams, Philip J. 3,386,770.
- Stivers, Edward C., to Raychem Corp. Chemical crosslinking of ethylene copolymers with di-t-butyl diperoxyoxalate. 3,386,949, 6-4-68, Cl. 260—41.
- Stockebrand, Thomas C., to Digital Equipment Corp. Bidirectional retrieval of magnetically recorded data. 3,387,293, 6-4-68, Cl. 340—174.1.
- Stockman, William C., to Rettaw Enterprises, Inc. Gauge for use in setting forms. 3,386,175, 6-4-68, Cl. 33—174.
- Stockton, Thomas R., to Ford Motor Co. Four-speed transmission and axle assembly. 3,386,314, 6-4-68, Cl. 74—759.
- Stoffel, Robert W., J. S. Januss, and R. C. Pace, to United States of America, Air Force. Nan circuit. 3,387,142, 6-4-68, Cl. 307—215.
- Stohr, Anita: *See—*
  - Stohr, Christian. 3,387,069.
- Stohr, Christian, to A. Stohr. Method for the manufacture of tube profiles from thermoplastics. 3,387,069, 6-4-68, Cl. 264—145.
- Stolzenberger, Adam J.: *See—*
  - Wasserman, Lee S., and Stolzenberger. 3,386,458.
- Stone, Arthur R., and R. H. Fitch, to Stone Machinery Co., Inc. Cut-off machine. 3,386,322, 6-4-68, Cl. 83—488.
- Stone Machinery Co., Inc.: *See—*
  - Stone, Arthur R., and Fitch. 3,386,322.
- Stout, William H. Telegraph single key. 3,387,088, 6-4-68, Cl. 178—108.
- Stow Mfg. Co.: *See—*
  - Wells, Gordon S. 3,386,353.
- Straley, James M.: *See—*
  - Dale, John L, III, Straley, and Weaver. 3,386,990.
  - Weaver, Max A., Dale, and Straley. 3,386,491.
- Straub, Melvin J.: *See—*
  - Schuette, Thomas L., and Straub. 3,386,382.
- Stroberg, John E., to Facit-Halda AB. Powered case shift having overcenter spring. 3,386,555, 6-4-68, Cl. 197—74.
- Strolik, Edward R. Thermocouple with cast iron contacting junction. 3,386,861, 6-4-68, Cl. 136—233.
- Stromberg-Carlson Corp.: *See—*
  - Corpew, Charles R. 3,387,242.
- Strommen, Lawrence A.: *See—*
  - Fischer, James L., and Strommen. 3,387,098.
  - Fischer, James L., and Strommen. 3,387,099.
- Structo Division, King-Seeley Thermos Co.: *See—*
  - Linstead, Robert S. 3,386,430.
- Strydom, Maurits L., to Tobacco Research and Development Institute Ltd. Valves for feeding articles into pneumatic conveyance systems. 3,386,774, 6-4-68, Cl. 302—49.
- Sueyoshi, Toshio: *See—*
  - Morioku, Shigemi, Sueyoshi, and Murakami. 3,386,118.
- Sugimura, Hiroshi. Composite gas-liquid pressurizing engine. 3,386,246, 6-4-68, Cl. 60—221.
- Sugita, Yoshihisa, I. Komori, and Y. Isuchiya, to Ajinomoto Co., Inc. Recovery of glutamic acid from a fermentation broth containing the same. 3,387,028, 6-4-68, Cl. 260—527.
- Sulzer Brothers Ltd.: *See—*
  - Hartmann, Fortunat. 3,386,228.
- Sunbeam Corp.: *See—*
  - Ponczek, George M. 3,386,184.
  - Schuessler, Francis J. 3,386,167.
- Sunderland Forge & Engineering Co. Ltd., The: *See—*
  - Urwin, George T. 3,386,652.
- Sundstrand Corp.: *See—*
  - Ades, Lewis B. 3,386,588.
- Susskind, Herbert, W. W. Becker, M. W. Maresca (deceased), by M. Maresca, administratrix, to United States of America, Atomic Energy Commission. Controlled unloading of geometrically ordered packed beds. 3,386,627, 6-4-68, Cl. 222—193.
- Swartwout, Charles J. and D. K., and A. E. Lepley, to Motorola, Inc. Electronic process control system. 3,387,266, 6-4-68, Cl. 340—150.
- Swartwout, Denton K.: *See—*
  - Swartwout, Charles J. and D. K., and Lepley. 3,387,266.
- Swearingen Aircraft: *See—*
  - Swearingen, Edward J. 3,386,758.
- Swearingen, Edward J., to Swearingen Aircraft. Aircraft latch assembly. 3,386,758, 6-4-68, Cl. 292—53.
- Sweeney, Richard F.: *See—*
  - Anello, Louis G., and Sweeney. 3,387,034.
- Sylvan Pools, Inc.: *See—*
  - Van den Broek, William A. 3,386,419.
- Syntex Corp.: *See—*
  - Cross, Alexander D., and Harrison. 3,386,994.
- Szonntagh, Eugene L., to Leeds & Northrup Co. Valves for gas chromatography. 3,386,472, 6-4-68, Cl. 137—597.
- TELDIX Luftfahrt-Ausrustungs G.m.b.H.: *See—*
  - Thomaier, Dieter, and Riethmuller. 3,386,179.
- TRW Inc.: *See—*
  - Friichtenicht, Joseph F., and Roy. 3,387,218.
  - Mastrup, Frithjof N., Witte, and Wuerker. 3,387,227.
- Takahashi, Takayuki: *See—*
  - Kamijo, Shigeichi. 3,386,426.
- Takamura, Masao, I. Nakano, and S. Mitsuishi, to National Telegraph and Telephone Public Corp. Mechanical latching coordinate switch. 3,387,238, 6-4-68, Cl. 335—112.
- Takaya, Kazuo: *See—*
  - Aihara, Kenzo, and Takaya. 3,386,315.
- Talbott, Richard L., and R. J. Koshar, to Minnesota Mining and Mfg. Co. Difluoramino compounds. 3,387,033, 6-4-68, Cl. 260—583.
- Tanabe Seiyaku Co., Ltd.: *See—*
  - Chibata, Ichiro, Tosa, and Endo. 3,386,888.
  - Okumura, Kentaro, Kodera, Nishihara, and Oda. 3,386,997.
- Tanner, Robert L., J. E. Nanevicz, G. R. Hilbers, and E. F. Vance, to United States of America, Air Force. Apparatus for measuring the RF noise produced by passive static dischargers for aircraft. 3,387,215, 6-4-68, Cl. 325—363.
- Tansal, Sabih: *See—*
  - Brennemann, Andrew E., Seraphim, and Tansal. 3,386,163.
- Tantlinger, Keith W., G. Chieger, and C. E. Blanchard, to Fruehauf Corp. Vehicle construction spring-to-axle mounting. 3,386,724, 6-4-68, Cl. 267—52.
- Taplin, John F. Rolling diaphragm device having centering button on diaphragm and having piston rod rotatable relative to piston. 3,386,345, 6-4-68, Cl. 92—99.
- Tardoskegyi, Louis V., to Electrovert Mfg. Co. Ltd. Method and apparatus for soldering printed circuit boards. 3,386,166, 6-4-68, Cl. 29—625.
- Tarrant, John S., to Telephone Mfg. Co. Ltd. Electrical arrangements. 3,387,146, 6-4-68, Cl. 307—235.
- Tatch, Martin S.: *See—*
  - Bissett, Thomas B., and Tatch. 3,387,288.
- Taubmann, Kurt: *See—*
  - Kleinschmidt, Edward E.; Bradbury, and Taubmann. 3,387.081.
  - Kleinschmidt, Edward E., and Taubmann. 3,387,085.
- Taylor Lock Co.: *See—*
  - Schwartz, Jerome. 3,386,272.
- Taylor-Merchant Corp., The: *See—*
  - Kaufman, Robert. 3,386,194.
- Taylor, Thomas S., and F. R. Ling, to Abex Corp. Bolster-mounted brake. 3,386,533, 6-4-68, Cl. 188—52.
- Tea, Clark A.: *See—*
  - Freers, Sidney L., and Tea. 3,386,752.
- Techniservice Corp.: *See—*
  - Stanley, Robert K., and Irwin. 3,386,142.
- Telecontrol Corp.: *See—*
  - Singer, Edwin, and Geissler. 3,387,277.
- Telephone Mfg. Co. Ltd.: *See—*
  - Tarrant, John S. 3,387,146.
- Teletype Corp.: *See—*
  - Dosse, William G. 3,387,263.
  - Mader, Jerome J. 3,386,673.

- Telonic Industries, Inc.: *See—*
  - Wainwright, Claire R. 3,387,225.
- Temple, Ernest E.: *See—*
  - Temple, Robert and E. E. 3,386,334.
- Temple, Robert and E. E., to Mine Safety Appliances Co. Firing mechanism for explosively actuated tools. 3,386,334, 6-4-68, Cl. 89—1.
- Tertel, Klaus: *See—*
  - Ottaway, Gerald H., and Tertel. 3,387,262.
- Tesdall, Darrell W., to McDonnell Douglas Corp. Current limiter with reduction of power applied to a load. 3,387,205, 6-4-68, Cl. 323—9.
- Tewksbury, Charles G., and B. G. Kidda, to The Cotton Producers Institute. Dry shaping of cellulosic fabrics at temperatures greater than 400 F. and pressures greater than 300 p.s.i. 3,386,193, 6-4-68, Cl. 38—144.
- Tewksbury, Charles G., and L. R. Misell, to Appleton Mills. Method of making prebroken-in papermakers' felt. 3,386,849, 6-4-68, Cl. 117—65.2.
- Texaco Canada Ltd.: *See—*
  - Fisher, Walter. 3,386,461.
- Texaco, Inc.: *See—*
  - Chafetz, Harry, and Mead. 3,387,026.
  - Kunetka, Robert E. 3,386,504.
- Texas Industries, Inc.: *See—*
  - Van der Lely, Cornelis. 3,386,285.
- Texas Instruments Inc.: *See—*
  - Burg, Kenneth E. 3,386,526.
  - Kilby, Jack S. 3,386,187.
- Tesuka, Kunitoshi. Scrap-metal compressor. 3,386,374, 6-4-68, Cl. 100—215.
- Tesuka, Kunitoshi. Device for removing materials from a compressor. 3,386,375, 6-4-68, Cl. 100—218.
- Tesuka, Kunitoshi. Hoisting sling having fusible connection and method for charging materials into a furnace. 3,386,601, 6-4-68, Cl. 214—18.
- Thawley, Clive S.: *See—*
  - Harrison, Stanley R., Bennett, Broughton, and Thawley. 3,386,485.
- Thill, Walter E., to Federal-Mogul Corp. Oil seal assembly sleeve. 3,386,154, 6-4-68, Cl. 29—271.
- Thiokol Chemical Corp.: *See—*
  - Santaniello, Anthony F. 3,386,963.
- Thoma, Oswald H., to Hydraulic-Drive A.G. Hydraulic pumps or motors. 3,386,389, 6-4-68, Cl. 103—162.
- Thomaier, Dieter, and H. Riethmuller, to Teldix Luftfahrt-Ausrustungs G.m.b.H. Gyrocompass. 3,386,179, 6-4-68, Cl. 33—226.
- Thomas, Daniel C.: *See—*
  - Adams, Dolor N., and Thomas. 3,386,850.
- Thomas, Fred: *See—*
  - Lockwood, George H., and Thomas. 3,386,210.
- Thomas, Jean-Claude, and M. Marbach, to Produits Chimiques Pechiney-Saint-Gobain. Compositions of polyvinyl chloride and graft polymers of chlorinated butyl rubber on polyvinyl chloride. 3,387,062, 6-4-68, Cl. 260—876.
- Thomas, Leo A.: *See—*
  - Eklund, Carl M., and Thomas. 3,386,882.
- Thompson, Harvey L., to Meyer Machine, Inc. Safety clamp device. 3,386,530, 6-4-68, Cl. 182—113.
- Thompson, John W.: *See—*
  - Barcaro, Eugene B., and Thompson. 3,387,292.
- Thomsen, Jack W., to Bell & Howell Co. Driven web supply detector. 3,386,675, 6-4-68, Cl. 242—55.18.
- Thumma, Francis L. Portable wheel stand. 3,386,708, 6-4-68, Cl. 254—88.
- Tiedemann, James B., to United States of America, Navy. Drift stabiliser for ground effects machine. 3,386,524, 6-4-68, Cl. 180—117.
- Tiefenbach, Johann, to Robert Hildebrand Maschinenbau G.m.b.H. Apparatus for conducting a gaseous drying medium. 3,386,186, 6-4-68, Cl. 34—191.
- Tierney, Paul A.: *See—*
  - Hedrick, Ross M., Tierney, and Richard. 3,386,948.
- Tillotson, David S.: *See—*
  - Green, Edward H., and Tillotson. 3,386,479.
- Time, Inc.: *See—*
  - Gentile, Lawrence F. 3,386,359.
- Tincombe, Harold F.: *See—*
  - Waterhouse, Peter, and Tincombe. 3,386,681.
- Titan Abrasives Co.: *See—*
  - Shoemaker, Frank O. 3,386,214.
- Tobacco Research and Development Institute Ltd.: *See—*
  - Strydom, Maurits L. 3,386,774.
- Tomlinson, Audie B. Swiveling tool support for earth-working machine. 3,386,295, 6-4-68, Cl. 74—63.
- Torrye, George W.: *See—*
  - Holmes, John L., Torrye, Spino, and Vargas. 3,386,283.
- Tosa, Tetsuya: *See—*
  - Chibata, Ichiro, Tosa, and Endo. 3,386,888.
- Toth, Joseph A.: *See—*
  - Duval, Daniel W., Spear, and Toth. 3,386,696.
- Toyo Rayon Kabushiki Kaisha: *See—*
  - Ito, Yoshikazu, Wakamatsu, and Shimokawa. 3,386,903.
- Tracor, Inc.: *See—*
  - Bridges, Cecil C. 3,387,090.
- Trammell, Earl M., Jr. Internal combustion engine. 3,386,429, 6-4-68, Cl. 123—197.
- Trane Co., The: *See—*
  - Hackbart, Reuben J., and Sanborn. 3,386,262.
- Trapp, Robert L., to Outboard Marine Corp. Engine. 3,386,242, 6-4-68, Cl. 60—39.16.
- Traub, Werner: *See—*
  - Hoffmann, Heinrich, and Traub. 3,386,421.
- Travis, Philip M.: *See—*
  - Brake, Robert L., Jr., Maycott, and Travis. 3,387,114.
- Traynor, Bernard J., to Continental Can Co., Inc. Container. 3,386,613, 6-4-68, Cl. 220—54.
- Treace, Harry T., to Richard Mfg. Co. Compression device for use with a bone fracture plate. 3,386,437, 6-4-68, Cl. 128—92.
- Trebillon, Emile, and G. Wetroff, to Produits Chimiques Pechiney-Saint Gobain. Process of oxidising organo-aluminum compounds. 3,387,014, 6-4-68, Cl. 260—448.
- Treharne, Richard W., to Charles F. Kettering Foundation. Wavelength independent, direct reading radiometer. 3,387,134, 6-4-68, Cl. 250—83.3.
- Treiber, Fritz F.: *See—*
  - Arvidson, Bengt A., and Treiber. 3,386,225.
- Tri-Matic, Inc.: *See—*
  - Purtell, Rufus J. 3,386,464.
- Trico Products Corp.: *See—*
  - Hadekel, Ruben. 3,386,126.
  - Oishei, John R., and Deibel. 3,386,128.
- Trivette, Roger C.: *See—*
  - Pinkham, Jesse R., Trivette, Davidson, and Speas. 3,386,320.
- Troutner, Arthur L. High-load truss joist link. 3,386,222, 6-4-68, Cl. 52—693.
- Tsunoda, Ichiro. Control apparatus of an electrically driven toy. 3,386,406, 6-4-68, Cl. 114—144.
- Tuites, Donald E., to E. I. du Pont de Nemours and Co. Stable aqueous dispersions of polyamides. 3,386,940, 6-4-68, Cl. 260—29.4.
- Turba, Vittorio, G. Sartori, and A. Valvassori, to Montecatini Edison S.p.A. Alkenylcyclobutenes and method of preparing same. 3,387,047, 6-4-68, Cl. 260—666.
- Turley, James F.: *See—*
  - Cook, Albert N., and Turley. 3,387,157.
- Turner, Phillip H., to Whirlpool Corp. Disposer chamber mounting. 3,386,671, 6-4-68, Cl. 241—100.5.
- Turner, William A., to United States Steel Corp. Looping tower carriage suspension. 3,386,638, 6-4-68, Cl. 226—119.
- Twilley, Ian C., to Allied Chemical Corp. Terpolymers of e-caprolactam, m-xylenediamine, and a dicarboxylic acid. 3,386,964, 6-4-68, Cl. 260—78.
- Twilley, Ian C., to Allied Chemical Corp. Poly capro amide having excess number of carboxyl end groups over amino end groups. 3,386,967, 6-4-68, Cl. 260—78.
- Twin Cities Container Corp.: *See—*
  - Smith, Richard K. 3,386,567.
- UCB (Union Chimique-Chemische Bedrijven): *See—*
  - Van Eygen, Cyrille, and Weerens. 3,386,959.
- Uarco Inc.: *See—*
  - Pine, Robert M. 3,386,729.
- Uhrig, Edward O.: *See—*
  - Israel, William D., McCartney, and Uhrig. 3,387,177.
- Ultronic Systems Corp.: *See—*
  - Beresin, Peter W. 3,387,086.
  - Hernan, George W., Beresin, and Gertler. 3,387,269.
- Underwood, Herbert N.: *See—*
  - Moochhala, Yunus E., and Underwood. 3,386,342.
- Unger, Karl. Portable pneumatic peg-driving machine. 3,386,639, 6-4-68, Cl. 227—14.
- Uniline Corp.: *See—*
  - Oppenhuizen, Simon W., and Lockwood. 3,386,784.
- Union Carbide Corp.: *See—*
  - Johnson, Herbert E., and Crosby. 3,387,031.
  - Smith, Keith L., Winslow, and Seltzer. 3,387,061.
- Union Oil Co. of California: *See—*
  - Biddick, Royce E. 3,386,869.
- Uniroyal, Inc.: *See—*
  - Pooley, Robert W. 3,386,878.
- United Aircraft Corp.: *See—*
  - Preston, Frank S. 3,386,335.
- United Kingdom Atomic Energy Authority: *See—*
  - Eames, Anthony R., and Pool. 3,387,209.
  - Wright, James R. 3,386,885.
- United Shoe Machinery Corp.: *See—*
  - Barton, George C., and Millar. 3,386,114.
  - Berrill, William H., and Blower. 3,386,623.
  - Lessard, Roland B. 3,386,625.
  - Ottaway, Robert W., and Rumball. 3,386,763.
- United States of America: *See—*
  - Mehr, Hans P. 3,386,658.
- United States of America
  - Air Force: *See—*
    - Gooding, Dennis J., and Wartella. 3,387,275.
    - Gray, Don N., and Knight. 3,387,085.
    - Hess, Garth. 3,387.183.
    - Hough, Ralph L. 3,386,909.
    - Hough, Ralph L., and Schwartz. 3,386,918.
    - Kaisler, Francis J., and Lynn. 3,386,786.
    - Mattern, John. 3,387,217.
    - Stoffel, Robert W., Januss, and Pace. 3,387.142.
    - Tanner, Robert L., Nanevicz, Hilbers, and Vance. 3,387,215.
    - Wasserman, Lee S., and Stolzenberger. 3,386,458.
  - Atomic Energy Commission: *See—*
    - Acree, Elick H., Case, and Dempsey. 3,387,136.
    - Erickson, George F. 3,386,276.
    - Green, Joseph, Klaubert, and Smith. 3,386,869.
    - Hoppe, Walter, Muller, and in der Schmitten. 3,387,079.
    - Post, Richard F. 3.387.174.
    - Sheinberg, Haskell. 3.386.812.
    - Susskind, Herbert, Becker, Maresca. 3,386,627.
  - Department of Health, Education, and Welfare: *See—*
    - Eklund, Carl M., and Thomas. 3,386,882.
  - National Aeronautics and Space Administration: *See—*
    - Judd, Joseph H. 3.386,685.
    - Phillips, William H. 3.386.686.
    - Spier, Raymond A. 3,386,337.
    - Young, William J. 3,387,149.
  - Navy: *See—*
    - Arberman, Jerome, and Abrams. 3,387,221.
    - Baller, Maurice H. 3,386,188.

United States of America
  Navy: *See*—Continued
    Barthelemy, Robert F. 3,386,278.
    Bhagwat, Madhav R. 3,386,993.
    Billerbeck, Wilfred J., Jr., and Oakes. 3,387,199.
    Brinckman, Frederick E., Jr., Haiss, and Robb. 3,386,985.
    Carpenter, Wayne R. 3,386,968.
    Cavanagh, Martin B., and Wilson. 3,386,858.
    Chipman, Gerald, Pierce, and Grengg. 3,387,100.
    Dugger, Gordon L., and Billig. 3,386,249.
    Durgin, Frank H. 3,386,780.
    Gagliardi, Richard P., and Metz. 3,387,216.
    Gibson, James A., and Parker. 3,387,000.
    Hayden, Leonard O. 3,386,364.
    Israel, William D., McCartney, and Uhrig. 3,387,177.
    Mountcastle, Paul H., and Snyder. 3,387,303.
    Munson, John C., and Faulkner. 3,387,284.
    Overman, Harold S. 3,386,138.
    Prilliman, Floyd W., and Etheridge. 3,386,690.
    Scholl, James E. 3,386,691.
    Spanbauer, John G. 3,387,223.
    Tiedemann, James B. 3,386,524.
    Warner, Henry L., and Brown. 3,387,256.
United States Steel Corp.: *See*—
  Turner, William A. 3,386,638.
United Suffolk Corp.: *See*—
  Heller, Anton H. 3,386,435.
Universal Oil Products Co.: *See*—
  Addison, George E. 3,387,052.
  Bajek, Walter A. 3,386,682.
  Gaydasch, Alexander. 3,387,019.
  Michalko, Edward. 3,386,802.
Universal Railway Devices Co.: *See*—
  Macku, Thomas J., and Natschke. 3,386,539.
Uragami, Kikuji: *See*—
  Akaboshi, Michijiro, Kominami, Fukuda, and Uragami. 3,386,981.
Uraneck, Carl A., and O. G. Buck, to Phillips Petroleum Co. Process of preparing conjugated diene polymers and resultant product. 3,386,973, 6-4-68, Cl. 260—79.5.
Urchick, Demetrius: *See*—
  Skochdopole, Richard E., and Urchick. 3,386,877.
Urwin, George T., to The Sunderland Forge & Engineering Co. Ltd. Apparatus for production of punched record cards. 3,386,652, 6-4-68, Cl. 235—60.29.
VEB Leuna-Werke Ulbricht, Walter: *See*—
  Ratzsch, Manfred, Rockstuhl, and Schaff. 3,386,488.
Vagts, Christopher R.: *See*—
  Savin, Cornelius, Vorwald, and Vagts. 3,386,190.
Valente, Carlo E.: *See*—
  Dore, Dondi B. 3,386,666.
Valente, Carlo E. Dispensing device for powdered material. 3,386,624, 6-4-68, Cl. 222—145.
Vallin, Emile, to Societe d'Etudes et de Participations, Eau, Gas, Electricite, Energie, S.A. (S.E.P.). Fuel injection systems of the accumulation type for free piston autogenerators. 3,386,423, 6-4-68, Cl. 123—46.
Valvassori, Alberto: *See*—
  Turba, Vittorio, Sartori, and Valvassori. 3,387,047.
Van den Broek, William A., to Sylvan Pools, Inc. Liquid filtering and heating apparatus. 3,386,419, 6-4-68, Cl. 122—18.
Van der Lely, Cornelis, to Texas Industries, Inc. Agricultural machines. 3,386,235, 6-4-68, Cl. 56—210.
Van der Sluys, William: *See*—
  Gutridge, Jack E., Schmitz, and Van der Sluys. 3,386,596.
Van Eygen, Cyrille, and A. Weerens, to UCB (Union Chimique-Chemische Bedrijven). Thermosetting resinous compositions. 3,386,959, 6-4-68, Cl. 260—67.5.
Van Hoppe, Sebastiaan J.: *See*—
  Haisma, Jan, and Van Hoppe. 3,387,226.
Van Laar, Johannes, and J. J. Scheer, to North American Philips Co., Inc. Photocathode for electron tubes. 3,387,161, 6-4-68, Cl. 313—94.
Van Rossem, Walter J. Rotary vane type pump. 3,386,648, 6-4-68, Cl. 230—153.
Van Uitert, Le Grand G.: *See*—
  Grodkiewicz, William H., and Van Uitert. 3,386,799.
Van Silfhout, Jan, to American Enka Corp. Apparatus for heating fibrillary products and crimping apparatus employing same. 3,386,143, 6-4-68, Cl. 28—1.
Vance Edward F.: *See*—
  Tanner, Robert L., Nanevicz, Hilbers, and Vance. 3,387,215.
Vanhentenrijk, Georges C., and A. E. Blairon, to Ets. A. & L. Verhoegen Societe Anonyme. Tip-up bed. 3,386,110, 6-4-68, Cl. 5—3.
Vanzo, Marcello, to Pirelli S.p.A. Apparatus for the continuous treatment of rubber and plastic material in general. 3,386,131, 6-4-68, Cl. 18—12.
Vapor Corp.: *See*—
  Brady, Robert T., and Kartal. 3,386,395.
Vare Corp.: *See*—
  Liebig, Joseph M. 3,386,746.
Varec, Inc.: *See*—
  Dickinson, Horace, and Stallard. 3,386,468.
Vargas, Walter S.: *See*—
  Holmes, John L., Torrye, Spino, and Vargas. 3,386,283.
Varian Associates: *See*—
  Beaver, William L. 3,387,168.
  Cook, Edward J. 3,387,237.
  Heil, Oskar. 3,387,171.
  Helmer, John C. 3,387,131.
  Lloyd, William A., and Jepsen. 3,387,175.
  Ohtomo, Richard H. 3,387,167.
  Vessot, Robert F. C. 3,387,207.
Veb Druckmaschinewerke Leipizig: *See*—
  Reichelt, Gunter, and Lein. 3,387,297.
Velghe, Michel F.: *See*—
  Bruma, Marc, and Velghe. 3,387,109.
Velsicol Chemical Corp.: *See*—
  Levin, Alfred A., and Richter. 3,386,813.
Venema, Harry J., to Borg-Warner Corp. Thermoelectric system with improved energising network. 3,386,255, 6-4-68, Cl. 62—3.
Venus Esterbrook Corp.: *See*—
  Juelss, David, and Ross. 3,386,839.
Verdier, Henri, to Compagnie Generale des Etablissements Michelin Raison Sociale Michelin & Cie. Devices for mounting vehicle wheels. 3,386,771, 6-4-68, Cl. 301—9.
Verino Corp.: *See*—
  Iozzi, Anthony J., and Zakhour. 3,386,665.
Vermot-Gaud, Jacques: *See*—
  Piccand, Victor, and Vermot-Gaud. 3,387,195.
Verson Mfg. Co.: *See*—
  Juergens, William A. 3,386,108.
Vessot, Robert F. C., to Varian Associates. 3,387,207, 6-4-68, Cl. 324—.5.
Vesina, Claude, D. J. Marshall, and R. Deghenghi, to American Home Products Corp. Process for preparing equilin. 3,386,890, 6-4-68, Cl. 195—51.
Videen, Otis R., to Conwed Corp. Dry-cleaning operation. 3,386,796, 6-4-68, Cl. 8—142.
Vogel, George E.: *See*—
  Kohl, Charles F., Stark, and Vogel. 3,386,905.
Vogt Inc.: *See*—
  Vogt, Norman H. 3,383,369.
Vogt, Norman H., to Vogt Inc. Machine for controlled injection of pickle fluid in meat products. 3,386,369, 6-4-68, Cl. 99—257.
Voit, Richard L., to General Time Corp. Control mechanism for alarm clock. 3,386,238, 6-4-68, Cl. 58—50.
Von Bose, Robert J., to Ling-Temco-Vought, Inc. Inertial reference device. 3,386,170, 6-4-68, Cl. 33—1.
Von Koscielski, George H. Marking tool for molding. 3,386,177, 6-4-68, Cl. 33—174.
Vondran, Daniel J.: *See*—
  Salners, Edward A., and Vondran. 3,387,253.
Vorwald, Alan G.: *See*—
  Savin, Cornelius, and Vorwald, and Vagts. 3,386,190.
Voss Engineering Co.: *See*—
  Booher, Walter C. 3,386,640.
Vyvyan, Wesley W., to The Ryan Aeronautical Co. Self-actuating, self-locking hinge. 3,386,128, 6-4-68, Cl. 16—150.
Waagner-Biro A.G.: *See*—
  Paña, Gerhard. 3,386,712.
Wacker-Cheme G.m.b.H.: *See*—
  Nitzsche, Siegfried, and Buchheit. 3,387,016.
Wagner, Harold J., to Setco Industries, Inc. Universal wheel mount for grinders. 3,386,211, 6-4-68, Cl. 51—168.
Wainwright, Claire R., to Telonic Industries, Inc. Sweep generator having extended frequency bandwidth. 3,387,225, 6-4-68, Cl. 331—49.
Wakamatsu, Shigeru: *See*—
  Ito, Yoshikazu, Wakamatsu, and Shimokawa. 3,386,903.
Wakasa, Ryoichi, S. Ishida, and C. Oisumi, to Asahi Kasei Kogyo Kabushiki Kaisha. Method for producing shaped articles of water-insoluble poly-DL-alanine. 3,387,070, 6-4-68, Cl. 264—178.
Wald Industries, Inc.: *See*—
  Currie, Adam. 3,386,629.
Waldenburger, Hermann, and P. Schlegel, to International Standard Electric Corp. Stepping gear for the track selector in a multi-track tape recorder. 3,386,294, 6-4-68, Cl. 74—54.
Waldrop, Thomas W., and A. W. Blanshine, to Sperry Rand Corp. Forage harvester. 3,386,483, 6-4-68, Cl. 146—117.
Walitzer, David B.: *See*—
  Hitzeroth, Franklin C., and Walitzer. 3,386,127.
Walker, Laurie: *See*—
  Martin, Gerald, and Walker. 3,387,066.
Walker, Robert O., 50% to Patent Management, Inc. Portable shelter. 3,386,456, 6-4-68, Cl. 135—7.1.
Wallace, Robert A.: *See*—
  McCurdy, John L., and Wallace. 3,386,495.
Wallace, Richard A., to Control Data Corp. Card punching and reading device. 3,386,654, 6-4-68, Cl. 235—61.1.
Wallqvist, Sven H., to Haldex Aktiebolag. Taximeters. 3,386,651, 6-4-68, Cl. 235—30.
Walter, Charles R., Jr., to Allied Chemical Corp. Production of methylsemicarbazides and monomethylhydrazines. 3,387,030, 6-4-68, Cl. 260—554.
Walter, Karlheinz, to Siemens Aktiengesellschaft. Magnetic thin film readout system. 3,387,289, 6-4-68, Cl. 340—174.
Walters, William R. Liquid level control. 3,386,462, 6-4-68, Cl. 137—244.
Waltman, Robert: *See*—
  Farmer, Harold L., and Waltman. 3,386,871.
Wang, Samuel S.: *See*—
  Nawakowski, Aleksandra C., Wang, and Schiller. 3,386,955.
  Nawakowski, Aleksandra C., Schiller, and Wang. 3,386,956.
Ward, William E., to The Plessey Co. Ltd. Slide action switch mechanism. 3,387,106, 6-4-68, Cl. 200—166.
Ware, Jerry A.: *See*—
  Goupillaud, Pierre L., and Ware. 3,387,258.
Warner, Henry L., and D. H. Brown, to United States of America. Navy. Data signal processor. 3,387,256, 6-4-68, Cl. 340—3.
Wartella, Andrew: *See*—
  Gooding, Dennis J., and Wartella. 3,387,275.

Wasserman, Lee S., and A. J. Stolzenberger, to United States of America, Air Force. Internally actuated combined oxygen pressure regulator and oxygen-air dilution valves for respiratory apparatus. 3,386,458, 6-4-68, Cl. 137—114.
Watanabe, Mamoru, to T. Mochizuki. Braking control apparatus. 3,386,527, 6-4-68, Cl. 188—181.
Waterhouse, Peter, and H. F. Tincombe, to Dominion Engineering Works, Ltd. Winder tension control. 3,386,681, 6-4-68, Cl. 242—75.44.
Watrous, Donald L., to General Electric Co. Preset pulse counter. 3,387,143, 6-4-68, Cl. 307—225.
Watson, Emmett S. Differential refractometry. 3,386,332, 6-4-68, Cl. 88—14.
Watson, Robert A., R. E. Mahoney, T. C. Nielsen, and J. J. Kiernan, to International Business Machines Corp. Digital accelerometer. 3,386,292, 6-4-68, Cl. 73—517.
Watt, Charles E., Jr., to Craig Systems Corp. Load-supporting dolly with transverse and longitudinal leveling means. 3,386,747, 6-4-68, Cl. 280—6.
Weasler, Anthony V. Safety cap for the stub shaft of a tractor power take-off or the like. 3,386,312, 6-4-68, Cl. 74—609.
Weaver, Max A.: *See*—
  Dale, John I., III, Straley, and Weaver. 3,386,990.
Weaver, Max A., J. I. Dale III, and J. M. Straley, to Eastman Kodak Co. Cyanomethylidene tetrahydroquinoline compounds. 3,386,491, 6-4-68, Cl. 160—287.
Weaver, Max A., and D. J. Wallace, to Eastman Kodak Co. Azo dyes for containing dicarboximido groups. 3,386,987, 6-4-68, Cl. 260—152.
Weaver, Max A., and J. I. Dale III, to Eastman Kodak Co. Disazo dyes containing dicarboxylic acid imidoethyl sulfonyl groups. 3,386,988, 6-4-68, Cl. 260—152.
Webb, George W.: *See*—
  Rice, Richard E., and Webb. 3,386,821.
Webb, Richard C., to Colorado Instruments, Inc. Digital data storage circuit for data recording and transmission systems. 3,387,287, 6-4-68, Cl. 340—173.
Weber, Alvin G., to Esso Production Research Co. Method for production of thin oil zones. 3,386,514, 6-4-68, Cl. 166—42.
Weber, Frans K., and L. C. Williams, to Beehler & Arant. Chandelier arm split longitudinally to form two mating pieces. 3,387,129, 6-4-68, Cl. 240—78.
Weber, Vernon F.: *See*—
  Grandstaff, Otho D., and Weber. 3,387,096.
Weerens, Arthur: *See*—
  Van Eygen, Cyrille, and Weerens. 3,386,959.
Wegwerth, Arthur A., to Minnesota Mining and Mfg. Co. Method of joining drywall panels. 3,386,223, 6-4-68, Cl. 52—741.
Weickhardt, Ludwig, to Sartorius-Werke vormals Gottinger Prazisionswaagenfabrik G.m.b.H., A.G. Knife edge bearing assembly for measuring instruments. 3,386,779, 6-4-68, Cl. 308—2.
Weiner, Seymour, to Package Machinery Co. Safety mechanism for plastic injection molding machine or the like. 3,386,133, 6-4-68, Cl. 18—30.
Weinrotter, Ferdinand: *See*—
  Schmidt, Alfred, Muller, and Weinrotter. 3,386,892.
Weisbecker, Charles J., to Anaconda Wire and Cable Co. Strand wiping apparatus. 3,386,120, 6-4-68, Cl. 15—210.
Weissert, Josef: *See*—
  Braun, Oskar, Gross, Muller, Nakaten, and Weissert. 3,386,841.
Weltbrecht, Gerhard, to Robert Bosch G.m.b.H. Compensating for the sintering distortion of arcuate magnetic members and assembling same between arcuate rotor members. 3,386,164, 6-4-68, Cl. 29—598.
Wellmade Metal Products Co.: *See*—
  Lim, Kun S. 3,387,126.
Wells, Gordon S., to Stow Mfg. Co. Vibratory compacting machines. 3,386,353, 6-4-68, Cl. 94—48.
Welz, Walter W.: *See*—
  Carter, Richard S., and Welz. 3,387,273.
Wendel, Gunter, and J. Wiemer, to Metallgesellschaft Aktiengesellschaft. Blow-out roof for electrostatic dust separator. 3,386,215, 6-4-68, Cl. 52—1.
Wendler, Friedrich, and G. Nette, to Siemens Aktiengesellschaft. Apparatus for uniform feeding of powder into a plasma spray gun. 3,387,110, 6-4-68, Cl. 219—76.
Wendt, Gerhard R., and K. W. Ledig, to American Home Products Corp. 17β-fluoroalkoxy-3-ketoestrenes. 3,387,006, 6-4-68, Cl. 260—397.4.
Werme, John V.: *See*—
  Maczuzak, Michael, and Werme. 3,387,121.
West, Paul B.: *See*—
  Munroe, Richard W., West, Anderson, and Drake. 3,386,134.
West, Sherwood F.: *See*—
  Alexander, Guy B., West, and Yates. 3,386,814.
West Virginia Pulp and Paper Co.: *See*—
  Young, Gerald H. 3,386,642.
Western Electric Co., Inc.: *See*—
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Zanow, Andrey L.: *See*—
Willison, Donald, and Zanow. 3,386,597.
Zattler, Kurt: *See*—
Kremp, Rudolf, Winkler, Ernst, and Zattler. 3,386,357.
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154	3,386,106
172	3,386,107
187	3,386,108
213	3,386,109
5– 3	3,386,110
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13– 24	3,387,078
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139–122	3,386,477
140– 93.6	3,386,478
141– 3	3,386,479
147	3,386,480
143– 33	3,386,481
41	3,386,482
146–117	3,386,483
148– 12	3,386,862
.1	3,386,863
175	3,386,864
	3,386,865
	3,386,866
180	3,386,867
149– 2	3,386,868
19	3,386,869
152–242	3,386,484
330	3,386,485
354	3,386,486
361	3,386,487
156– 73	3,386,870
158	3,386,871
173	3,386,872
219	3,386,873
220	3,386,874
416	3,386,875
159– 48	3,386,488
160– 25	3,386,489
178	3,386,490
287	3,386,491
161–109	3,386,876
160	3,386,877
188	3,386,878
162–127	3,386,879
168	3,386,880
164– 92	3,386,492
173	3,386,493
260	3,386,494
165– 2	3,386,495
	3,386,496
11	3,386,497
26	3,386,498
29	3,386,499
51	3,386,500
82	3,386,501
106	3,386,502
185	3,386,503
166– .5	3,386,505
2	3,386,504
9	3,386,506
11	3,386,507
	3,386,508
29	3,386,509
34	3,386,510
38	3,386,511
40	3,386,512
42	3,386,513
	3,386,514
120	3,386,515
167– 22	3,386,881
78	3,386,882
170–135	3,386,516
172– 40	3,386,517
225	3,386,518
805	3,386,519
174– 94	3,387,080
175–230	3,386,520
269	3,386,521
311	3,386,522
176– 1	3,386,883
19	3,386,884
37	3,386,885
42	3,386,886
72	3,386,887
178– 3	Re.26,396
4	3,387,081
6	3,387,082
	3,387,083
.8	3,387,084
17	3,387,085
50	3,387,086
89	3,387,087
108	3,387,088
179– 1	3,387,089
	3,387,090
5	3,387,091
15.55	3,387,093
18	3,387,092
	3,387,094
	3,387,095
81	3,387,096
84	3,387,097
90	3,387,098
	3,387,099
100.2	3,387,100
	3,387,101
165	3,387,102

180– 6.66	3,386,523
117	3,386,524
181– .5	3,386,525
	3,386,526
33	3,386,527
51	3,386,528
72	3,386,529
182–112	3,386,530
207	3,386,531
188– 31	3,386,532
52	3,386,533
73	3,386,534
77	3,386,535
174	3,386,536
181	3,386,527
195	3,386,538
198	3,386,539
191– 83	3,387,103
192– .09	3,386,540
3	3,386,541
	3,386,542
.5	3,386,543
6	3,386,544
18	3,386,545
51	3,386,546
	3,386,547
53	3,386,548
71	3,386,549
194– 10	3,386,550
195– 2	3,386,888
51	3,386,890
114	3,386,889
197– 1	3,386,551
20	3,386,552
	3,386,553
71	3,386,554
74	3,386,555
151	3,386,556
198– 25	3,386,558
30	3,386,557
	3,386,559
31	3,386,560
32	3,386,561
33	3,386,562
155	3,386,563
162	3,386,564
	3,386,565
200– 51.1	3,387,104
81.4	3,387,105
166	3,387,106
168	3,387,107
175	3,387,108
203– 1	3,386,891
6	Re.26,401
42	3,386,892
204– 15	3,386,893
	3,386,894
23	3,386,895
37	3,386,896
49	3,386,897
55	3,386,898
59	3,386,899
75	3,386,900
143	3,386,901
	3,386,902
158	3,386,903
159.24	3,386,904
163	3,386,905
192	3,386,906
224	3,386,907
243	3,386,908
312	3,386,909
206– 45.33	3,386,566
46	3,386,567
47	3,386,568
65	3,386,569
	3,386,570
80	3,386,571
209– 3	3,386,572
31	3,386,573
73	3,386,574
75	3,386,575
82	3,386,576
90	3,386,577
111.7	3,386,578
	3,386,579
237	3,386,580
210– 5	3,386,910
18	3,386,911
22	3,386,912
	3,386,913
35	3,386,914
62	3,386,915
86	3,386,581
136	3,386,582
321	3,386,583
404	3,386,584
445	3,386,585
477	3,386,586
493	3,386,587
512	3,386,588
211–118	3,386,589
177	3,386,590
183	3,386,591
212– 1	3,386,592
3	3,386,593
212– 55	3,386,594
71	3,386,595
213– 20	3,386,596
32	3,386,597
214– 1	3,386,598
6	3,386,599
15	3,386,600
18	3,386,601
305	3,386,602
673	3,386,603
215– 11	3,386,604
219– 69	3,387,109
70	3,387,111
76	3,387,110
114	3,387,112
209	3,387,113
386	3,387,114
504	3,387,115
541	3,387,116
220– 1.5	3,386,605
3.94	3,386,606
21	3,386,607
23.6	3,386,608
24	3,386,609
36	3,386,610
40	3,386,611
44	3,386,612
54	3,386,613
	3,386,614
67	3,386,615
85	3,386,616
94	3,386,617
221– 12	3,386,618
135	3,386,619
222– 20	3,386,620
30	3,386,621
76	3,386,622
134	3,386,623
145	3,386,624
146	3,386,625
147	3,386,626
193	3,386,627
	3,386,628
	3,386,629
309	3,386,630
402.11	3,386,631
482	3,386,632
548	3,386,633
225– 16	3,386,634
226– 1	3,386,635
76	3,386,636
100	3,386,637
119	3,386,638
227– 14	3,386,639
228– 5	3,386,640
229– 34	3,386,641
40	3,386,642
	3,386,643
41	3,386,644
55	3,386,645
	3,386,646
230– 49	3,386,647
153	3,386,648
232– 34	3,386,649
234–123	3,386,650
235– 30	3,386,651
60.29	3,386,652
61	3,386,653
.1	3,386,654
.9	3,387,117
92	3,387,118
	3,387,119
150.2	3,387,120
151.21	3,387,121
195	3,387,122
196	3,387,123
236– 15	3,386,655
	3,386,656
238–310	3,386,657
239–127.3	3,386,658
132	3,386,659
142	3,386,660
177	3,386,661
259	3,386,662
284	3,386,663
346	3,386,664
416.1	3,386,665
240– 1.2	3,387,124
7.1	3,387,125
25	Re.26,397
	3,387,126
41	3,387,127
.3	3,387,128
78	3,387,129
241– 33	3,386,666
36	3,386,667
46	3,386,668
.13	3,386,669
74	3,386,670
100.5	3,386,671
242– 55	3,386,672
.12	3,386,674
.13	3,386,675
	3,386,676
.2	3,386,673
56	3,386,677
242– 56	3,386,678
.2	3,386,679
74.1	3,386,680
75.44	3,386,681
107	3,386,682
.4	3,386,683
128	3,386,684
244– 1	3,386,685
	3,386,686
49	3,386,687
53	3,386,688
77	3,386,689
83	3,386,690
110	3,386,691
138	3,386,692
248– 27.8	3,386,693
179	3,386,694
229	3,386,695
361	Re.26,399
	3,386,696
406	3,386,697
249–131	3,386,698
250– 41.3	3,387,130
.9	3,387,131
49.5	3,387,132
83.3	3,387,133
	3,387,134
.6	3,387,135
106	3,387,136
213	3,387,137
219	3,387,138
236	3,387,140
237	3,387,139
251–175	3,386,700
229	3,386,701
315	3,386,699
252– 21	3,386,916
49.9	3,386,917
63.5	3,386,918
301.1	3,386,919
.2	3,386,920
316	3,386,921
416	3,386,922
432	3,386,923
253– 3	3,386,702
254– 88	3,386,703
185	3,386,704
259– 2	3,386,708
6	3,386,705
72	3,386,706
97	3,386,707
260– 2	3,386,924
.3	3,386,925
.5	3,386,926
	3,386,927
	3,386,928
4	3,386,929
13	3,386,930
	3,386,931
16	3,386,932
17.4	3,386,933
23.7	3,386,934
26	3,386,935
27	3,386,936
	3,386,937
28.5	3,386,938
29.3	3,386,939
.4	3,386,940
31.2	3,386,941
37	3,386,942
	3,386,943
	3,386,944
	3,386,945
	3,386,946
41	3,386,947
	3,386,948
	3,386,949
45.7	3,386,950
.9	3,386,951
.95	3,386,952
47	3,386,953
	3,386,954
	3,386,955
	3,386,956
62	3,386,957
67	3,386,958
.5	3,386,959
75	3,386,960
	3,386,961
77.5	3,386,962
	3,386,963
78	3,386,964
	3,386,965
	3,386,966
	3,386,967
.4	3,386,968
	3,386,969
79	3,386,970
.3	3,386,971
	3,386,972
.5	3,386,973
	3,386,974
80.7	3,386,975
86.1	3,386,976
	3,386,977
87.3	3,386,978
260– 89.1	3,386,979
91.1	3,386,980
.3	3,386,981
	3,386,982
94.3	3,386,983
	3,386,984
140	3,386,985
152	3,386,986
	3,386,987
	3,386,988
155	3,386,990
156	3,386,991
234	3,386,992
239	3,386,993
.55	3,386,994
240	3,386,995
	3,386,996
243	3,386,997
247.2	3,386,998
249.7	3,386,999
268	3,387,000
287	3,387,001
327	3,387,002
343.5	3,387,003
349	3,387,004
	3,387,005
397.4	3,387,006
.5	3,387,007
404	3,387,008
429	3,387,009
.5	3,387,010
.7	3,387,011
	3,387,012
.9	3,387,013
448	3,387,014
.8	3,387,015
	3,387,016
	3,387,017
453	3,387,018
464	3,387,019
473	3,387,020
486	3,387,022
488	3,387,023
502.4	3,387,024
	3,387,025
514	3,387,026
524	3,387,027
527	3,387,028
530	3,387,029
554	3,387,030
561	3,387,031
574	3,387,021
583	3,387,033
585	3,387,032
590	3,387,034
591	3,387,035
599	3,387,036
	3,387,037
604	3,387,038
608	3,387,039
609	3,387,040
612	3,387,041
622	3,387,042
642	3,387,043
644	3,387,044
653	3,386,989
666	3,387,045
	3,387,046
	3,387,047
667	3,387,048
	3,387,049
668	3,387,050
	3,387,051
	3,387,052
669	3,387,053
671	3,387,056
680	3,387,054
681.5	3,387,055
810	3,387,057
823	3,387,058
842	3,387,059
869	3,387,060
874	3,387,061
876	3,387,062
888	3,387,063
261– 29	3,386,709
36	3,386,710
70	3,386,711
116	3,386,712
263– 6	3,386,713
8	3,386,714
19	3,386,715
21	3,386,716
28	3,386,717
33	3,386,718
34	3,386,719
44	3,386,720
47	3,386,721
264– 1	3,387,064
22	3,387,065
24	3,387,066
53	3,387,067
83	3,387,068
145	3,387,069
178	3,387,070
184	3,387,071
264–210	3,387,072
211	3,387,073
259	3,387,074
263	3,387,075
276	3,387,076
289	3,387,077
266– 34	3,386,722
	3,386,723
267– 52	3,386,724
110	3,386,725
269– 31	3,386,726
152	3,386,727
289	3,386,728
270– 52.5	3,386,729
271– 64	3,386,730
71	3,386,731
272– 57	3,386,732
273– 26	3,386,733
43	3,386,734
49	3,386,735
100	3,386,736
126	3,386,737
131	3,386,738
135	3,386,739
142	3,386,740
274– 1	3,386,741
4	3,386,742
9	3,386,743
39	3,386,744
277–168	3,386,745
207	3,386,746
280– 6	3,386,747
11.35	3,386,748
47.3	3,386,749
96.2	3,386,750
104	3,386,751
124	3,386,752
208	3,386,753
285– 1	3,386,754
6	3,386,755
197	3,386,756
287–189.36	3,386,757
292– 53	3,386,758
201	3,386,761
216	3,386,759
	3,386,760
294– 25	3,386,762
61	3,386,763
86.1	3,386,764
296– 37	3,386,765
297–192	3,386,766
193	3,386,767
304	3,386,770
299– 4	3,386,768
70	3,386,769
301– 9	3,386,771
302– 2	3,386,772
28	3,386,773
49	3,386,774
303– 2	3,386,775
7	3,386,776
89	3,386,777
305– 27	3,386,778
307– 49	3,387,141
215	3,387,142
225	3,387,143
232	3,387,144
235	3,387,145
	3,387,146
275	3,387,147
308– 2	3,386,779
	3,386,780
4	3,386,781
120	3,386,782
121	3,386,783
310– 4	3,387,148
8.5	3,387,149
11	3,387,150
46	3,387,151
89	3,387,152
90	3,387,153
94	3,387,154
239	3,387,155
247	3,387,156
258	3,387,157
312–348	3,386,784
313– 84	3,387,158
85	3,387,159
	3,387,160
94	3,387,161
96	3,387,162
108	3,387,163
111	3,387,164
156	3,387,165
272	3,387,166
315– 3.5	3,387,167
	3,387,168
	3,387,169
	3,387,170
5.51	3,387,171
8	3,387,172
10	3,387,173
108	3,387,175
111	3,387,174
	3,387,176
209	3,387,177
315–246	3,387,178
312	3,387,179
316– 4	3,386,785
317– 2	3,387,180
3	3,387,181
40	3,387,182
47	3,387,183
96	3,387,184
123	3,387,185
140	3,387,186
148.5	3,387,187
155.5	3,387,188
234	3,387,189
	3,387,190
	3,387,191
235	3,387,192
	3,387,193
318–139	3,387,194
227	3,387,195
	3,387,196
229	3,387,197
320– 14	3,387,198
32	3,387,199
48	3,387,200
321– 2	3,387,201
55	3,387,202
68	3,387,203
69	3,387,204
323– 9	3,387,205
75	3,387,206
324– .5	3,387,207
60	3,387,208
64	3,387,210
65	3,387,209
158	3,387,211
325– 1	3,387,212
163	3,387,213
357	3,387,214
363	3,387,215
328– 8	3,387,216
134	3,387,217
233	3,387,218
329– 50	3,387,219
104	3,387,220
	3,387,221
192	3,387,222
330– 8	3,387,223
30	3,387,224
331– 49	3,387,225
94.5	3,387,226
	3,387,227
113	3,387,228
	3,387,229
332– 7.51	3,387,230
333– 1.1	3,387,231
15	3,387,232
30	3,387,233
	3,387,235
31	3,387,234
82	3,387,236
98	3,387,237
335–112	3,387,238
135	3,387,239
153	3,387,240
210	3,387,241
213	3,387,242
336– 70	3,387,243
92	3,387,244
192	3,387,245
337–372	3,387,246
338–162	3,387,247
211	3,387,248
298	3,387,249
339– 8	3,387,250
15	3,387,251
38	3,387,252
102	3,387,253
103	3,387,254
188	3,387,255
340– 3	3,387,256
15	3,387,257
.5	3,387,258
64	3,387,259
82	3,387,260
146.1	3,387,261
	3,387,262
.2	3,387,263
147	3,387,264
149	3,387,265
150	3,387,266
	3,387,267
154	3,387,268
	3,387,269
164	3,387,270
166	3,387,271
172.5	3,387,272
	3,387,273
	3,387,274
	3,387,275
	3,387,276
	3,387,277
	3,387,278
	3,387,279
	3,387,280
	3,387,281
	3,387,282

340–172.5	3,387,283
173	3,387,284
	3,387,285
	3,387,286
	3,387,287
	3,387,288
340–174	3,387,289
	3,387,290
	3,387,291
.1	3,387,292
	3,387,293
340–174.1	3,387,294
	3,387,295
186	3,387,296
259	3,387,297
347	3,387,298
343– 6.5	3,387,299
7.3	3,387,300
100	3,387,301
108	3,387,302
758	3,387,303
350– 6	3,386,786
96	3,386,787
160	3,386,788
	3,386,789
351–153	3,386,790
352– 83	3,386,791
401– 40	3,386,792
132	3,386,793
431–115	3,386,794
158	3,386,475

CLASSIFICATION OF DESIGNS

D 2– 2	211,231
4	211,232
	211,233
D 4– 4	211,234
5	211,235
D 9–112	211,236
219	211,237
D10– 9	211,238
D13– 1	211,239
6	211,240
D16– 1	211,241
D22– 18	211,242
27	211,243
D23– 52	211,244
D23– 74	211,245
140	211,246
D24– 1	211,247
	211,248
D26– 1	211,249
5	211,250
14	211,251
	211,252
	211,253
	211,254
	211,255
	211,256
D33– 14	211,257
31	211,258
D34– 5	211,259
D37– 1	211,260
	211,261
	211,262
3	211,263
D40– 1	211,264
	211,265
D41– 1	211,266
	211,267
D42– 7	211,268
	211,269
	211,270
D44– 1	211,271
	211,272
D44– 25	211,273
D45– 1	211,274
D48– 20	211,275
24	211,276
31	211,277
	211,278
	211,279
D49– 6	211,280
9.1	211,281
14	211,282
D52– 6	211,283
D54– 13	211,284
	211,285
	211,286
D59– 2	211,287
	211,288
	211,289
D61– 1	211,290
	211,291
D64– 11	211,292
12	211,293
D71– 1	211,294
D74– 5	211,295
17	211,296
21	211,297
D85– 2	211,298
D86– 10	211,299
D87– 2	211,300
	211,301
	211,302
	211,303
	211,304
	211,305
	211,306
	211,307
	211,308
	211,309
	211,310
5	211,311
D90– 1	211,312

CLASSIFICATION OF PLANTS

P. – 20	2,814
P. – 24	2,815
P. – 35	2,816

GEOGRAPHICAL INDEX
OF RESIDENCE OF INVENTORS

(U.S. States, Territories and Armed Forces, the Commonwealth of Puerto Rico, and the Canal Zone)

(NOTE.—CODES ARE CHANGED AS OF JANUARY 1, 1967)

Alabama	1
Alaska	2
American Samoa	3
Arizona	4
Arkansas	5
California	6
Canal Zone	7
Colorado	8
Connecticut	9
Delaware	10
District of Columbia	11
Florida	12
Georgia	13
Guam	14
Hawaii	15
Idaho	16
Illinois	17
Indiana	18
Iowa	19
Kansas	20
Kentucky	21
Louisiana	22
Maine	23
Maryland	24
Massachusetts	25
Michigan	26
Minnesota	27
Mississippi	28
Missouri	29
Montana	30
Nebraska	31
Nevada	32
New Hampshire	33
New Jersey	34
New Mexico	35
New York	36
North Carolina	37
North Dakota	38
Ohio	39
Oklahoma	40
Oregon	41
Pennsylvania	42
Puerto Rico	43
Rhode Island	44
South Carolina	45
South Dakota	46
Tennessee	47
Texas	48
Utah	49
Vermont	50
Virginia	51
Virgin Islands	52
Washington	53
West Virginia	54
Wisconsin	55
Wyoming	56
U.S. Air Force	57
U.S. Army	58
U.S. Navy	59

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Re.26,398
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35 : 3,386,276
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36 : 3,386,405
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37 : 3,386,122
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3,387,233
38 : 3,386,252
39 : Re.26,397
Re.26,401
3,386,106
3,386,161
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Design Patents

6 : 211,258 211,261 211,262 211,266 211,271 211,277 211,278 211,279 211,289 211,291 9 : 211,233 211,245	9 : 211,296 12 : 211,240 17 : 211,238 211,247 211,248 211,260 211,264 211,265 211,269 211,282 211,294 211,297	18 : 211,235 211,254 211,255 211,256 19 : 211,242 21 : 211,298 24 : 211,276 26 : 211,243 211,267 211,275 211,284 211,285	27 : 211,272 29 : 211,295 31 : 211,257 34 : 211,231 211,232 211,237 211,286 36 : 211,234 211,236 211,241 211,250 211,270	36 : 211,274 211,287 211,299 211,300 211,301 211,302 211,303 211,304 211,305 211,306 211,307 211,308	36 : 211,309 211,310 39 : 211,244 211,268 211,288 211,292 41 : 211,281 42 : 211,249 47 : 211,283 49 : 211,290 53 : 211,239 211,293

Plant Patents

6 : 2,815	41 : 2,816				

U.S. DEPARTMENT OF COMMERCE

OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE

June 4, 1968 Volume 851 Number 1

TRADEMARKS

NOTICES

Service by Publication

A petition to cancel the registration identified below having been filed, and the notice of default of such proceedings sent by registered mail to registrant at the last known address having been returned by the Post Office as undeliverable, notice is hereby given that unless the registrant listed herein, its assigns or legal representatives, shall enter an appearance within thirty days from the date of this publication, judgment will be entered against registrant and said registration will be canceled.

Forward Industries, Inc., by change of name from Nail Tone, Inc., Miami, Fla., Reg. No. 741,024, Canc. No. 9112.

EDWIN L. REYNOLDS,
First Assistant Commissioner of Patents.

Trademark Suits

Notices under 15 U.S.C. 1116; Trademark Act of July 5, 1946

Reg. No. 306,005 (FRITOS), Daisy D. Doolin, doing business as Frito Company, Cakes; **Reg. No. 502,225**, same, The Frito Company, Corn chips; **Reg. No. 519,950**, same, Candy, shelled salted peanuts, and corn chips; **Reg. No. 689,001**, same, Canned foods—namely, chili containing meat, tamales containing meat, meat, meat sauces; and confections and snack items, namely, wafers, corn chips, cakes, potato chips, candy, and shelled peanuts, **filed** Jan. 1, 1968, D.C., N.D. Ill. (Chicago), Doc. 68c63, *Jay Foods, Inc.* v. *Frito-Lay Inc.*

Reg. No. 502,225. (See Reg. No. 306,005.)

Reg. No. 519,950. (See Reg. No. 306,005.)

Reg. No. 532,971 (ERNESTBOREL), Ernest Borel & Co., Watches, clocks and parts of watches; **Reg. No. 631,284** (ERNESTBOREL SEA GEM), same, Clocks, watches, and all parts thereof; **Reg. No. 736,586** (BOREL), same; **Reg. No. 826,095** (ERNEST BOREL), same, All types of watches, clocks, alarm clocks, and parts thereof, watch movements, watch cases, and watch dials, **filed** Feb. 7, 1968, D.C., S.D.N.Y., Doc. 68—C—516, *Ernest Borel & Cie. et ano.* v. *Borel Watch Company of N.Y. et al.*

Reg. No. 631,284. (See Reg. No. 532,971.)

Reg. No. 689,001. (See Reg. No. 306,005.)

Reg. No. 724,862 (BALCAR), Thomas Instrument Company, Electronic flash apparatus and accessories for photographic lighting, **filed** Nov. 30, 1967, D.C. District of Columbia, Doc. C.A. 3045—67, *Thomas Instrument Co., Inc.* v. *Balcar Societe Anonyme.*

Reg. No. 735,227 (DRIFTER), Kop-Ron Machine Corp., House boats, **filed** Feb. 1, 1967, D.C., M.D. Tenn. (Nashville), Doc. 4670, *Thelma K. Cron and Drifter Corporation* v. *House Boating Corporation of America.*

Reg. No. 736,586. (See Reg. No. 532,971.)

Reg. No. 775,943. (See Reg. No. 784,193.)

Reg. No. 784,193 (ALO-FACE), Aloe Creme Laboratories, Inc., Face cream; **Reg. No. 812,766** (ALO-HANDS AND DESIGN), same, Hand lotion; **Reg. No. 815,248** (ALO-COSMETICS), same, Face Cream; **Reg. No. 784,194** (ALO-PLUS),

CONDITION OF TRADEMARK APPLICATIONS AS OF APRIL 30, 1968

Total number of applications awaiting action [excluding renewals and Sec. 12(c)]---------- 16, 519
Date of oldest new application---------- May 23, 1967
Date of oldest amended application (filing date)---------- April 20, 1965

C. M. WENDT, Director, Trademark Examining Operation TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application	
	New	Amended
(I) L. J. BETTENDORF, Classes 2, 3, 4, 5, 7, 9, 10, 11, 27, 28, 30, 32, 33, 37, 38, 39, 40, 41, 42, 43, 50; Certification Marks, Classes A and B	5-23-67	4-20-65
(II) F. H. WETHERBEE, Classes 1, 6, 15, 18, 45, 46, 47, 48, 49, 51, 52; Collective Membership Mark, Class 200	6-28-67	7-6-65
(III) P. S. BALL, Classes 19, 21, 23, 26, 31, 34, 35, 36	8-18-67	10-23-65
(IV) M. E. ABRAMSON, Classes 8, 12, 13, 14, 16, 17, 20, 22, 24, 25, 29, 44; Service Marks, Classes 100, 101, 102, 103, 104, 105, 106, and 107	5-26-67	12-23-65
Renewals (All Classes)	4-9-68	--------
Sec. 12(c) Publications (All Classes)	4-15-68	--------

Applications filed during the month of April 1968—2,640

Registrations Issued ---------- 377—No. 850,034 to No. 850,410
Renewals Issued ---------- 80

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington, D.C., 20402 to whom all subscriptions should be made payable and all communications addressed; subscription price, $12.00 per annum, foreign mailing $4.00 additional; single copies, 25 cents each.

PRINTED COPIES OF TRADEMARK REGISTRATIONS are furnished by the Patent Office for 20 cents each. Address orders to the Commissioner of Patents, Washington, D.C. 20231.

same; **Reg. No. 775,943** (TRAV-ALO), same, Combination Package containing five items—namely, bottles of face lotion, hand lotion, body lotion, leg lotion and shampoo, filed Feb. 14, 1968, D.C., S.D. Fla. (Miami), Doc. 68–155–CA, *Aloe Creme Laboratories, Inc.* v. *Universal Beauty Supply Co., Inc. and Martha Sage.*

Reg. No. 784,194. (See Reg. No. 784,193.)

Reg. No. 795,473 (CHOLIPAN), Western Research Laboratories, Bile ensyme therapy preparation, filed Jan. 25, 1968, D.C., E.D. Mo. (St. Louis), Doc. 68c34(3), *Western Research Laboratories, Inc.* v. *Mills Pharmaceutical, Inc.*

Reg. No. 802,314 (COME ON STRONG), B & L Sales Associates, Work clothing—namely, pants and shirts; and leisure wear—namely, slacks and lingerie, filed Feb. 28, 1968, D.C., S.D.N.Y., Doc. 68–C–826, *B & L Associates* v. *H. Daroff & Sons, Inc.*

Reg. No. 809,973 (DAHLBERG), Dahlberg Electronics, Inc., Electronic hearing aids, filed Jan. 22, 1968, D.C., Conn. (New Haven), Doc. 12372, *Dahlberg Electronics, Inc.* v. *Karl F. Fiston, doing business as Fiston Hearing Aid Center.*

Reg. No. 812,766. (See Reg. No. 784,193.)

Reg. No. 815,248. (See Reg. No. 784,193.)

Reg. No. 826,005. (See Reg. No. 532,971.)

Reg. No. 829,728 (SPINRITE), Pedigo Pork Rind Co., Inc., Fish bait and fish lures, filed Feb. 28, 1968, D.C., C.D. Calif. (Los Angeles), Doc. 68–319–F, *Pedigo Pork Rind Co., Inc.* v. *S. H. Barton & Co.*

Reg. No. 838,183 (COPYTONE), Copystatics Mfg. Corp., Toner for electrostatic copying machine, filed Jan. 19, 1968, D.C.N.J. (Newark), Doc. 71–68, *Copystatics Mfg. Corp.* v. *H–C Development Inc. and James G. Burnett.*

MARKS PUBLISHED FOR OPPOSITION

SECTION 1

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Application for the registration of these marks in more than one class has been filed as provided in section 30 of said act as amended by Public Law 772, 87th Congress, approved Oct. 9, 1962, 76 Stat. 769. Opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.

A separate fee of twenty-five dollars for each class opposed must accompany the opposition.

[NOTE: For publication of marks presented in applications for registration in one class, see section 2.]

SN 216,237. Laverne International, Ltd., New York, N.Y. Filed Apr. 12, 1965.

LAVERNE

Class 8—Smokers' Articles, Not Including Tobacco Products

For Decorative Accessories—Namely, Ash Trays (Int. Cl. 34).

Class 20—Linoleum and Oiled Cloth

For Surface Coverings Comprising Material Such as Canvas, Plastic Materials Including Vinyl Plastic, Paper and Other Materials on Which Designs and/or Tonal and Textural Effects Are placed for Application to a Wall or Other Surface by an Adhesive (Int. Cl. 27).

Class 37—Paper and Stationery

For Wallpaper (Int. Cl. 27).

Class 50—Merchandise Not Otherwise Classified

For Mural Decorations and Sculpture Including Sculptural Display Pieces and Decorative Accessories Such as Planters (Int. Cl. 20).

Class 100—Miscellaneous

For Designing of Furniture, Textiles, Wall Coverings and Accessories and Layouts for Others Incorporating said Designs; Design and Decorating Services (Int. Cl. 42).

First use Dec. 11, 1961.

SN 217,234. Engineered Plastics Incorporated, Gibsonville, N.C. Filed Apr. 26, 1965.

E.P.I.

Class 1—Raw or Partly Prepared Materials

For Synthetic Plastic Materials for Fabrication Into Finished Products in the Following Forms: Balls, Bars, Castings, Discs, Extrusions, Film, Pipe, Rods, Rolls, Sheets, Slabs, Strip and Tubing (Int. Cl. 17).

First use Jan. 10, 1961.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

For Spindle Adapters; Spools and Bobbins for Textile Machinery parts (Int. Cl. 7).

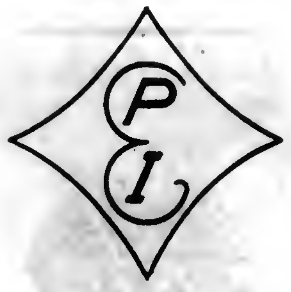
First use Nov. 21, 1953.

Class 38—Prints and Publications

For Brochures Issued From Time to Time (Int. Cl. 16).

First use June 1, 1955.

SN 217,235. Engineered Plastics Incorporated, Gibsonville, N.C. Filed Apr. 26, 1965.



Class 1—Raw or Partly Prepared Materials

For Synthetic Plastic Materials for Fabrication Into Finished Products in the Following Forms: Balls, Bars, Castings, Discs, Extrusions, Film, Pipe, Rods, Rolls, Sheets, Slabs, Strip and Tubing (Int. Cl. 17).

First use Jan. 10, 1961.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

For Spindle Adapters; Spools and Bobbins for Textile Machinery parts (Int. Cl. 7).

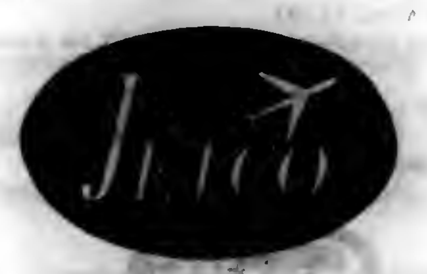
First use Nov. 21, 1953.

Class 38—Prints and Publications

For Brochures Issued From Time to Time (Int. Cl. 16).

First use June 1, 1955.

SN 234,484. James E. Thomas, Jr., d.b.a. J. E. Thomas Co., Memphis, Tenn. Filed Dec. 13, 1965.



Owner of Reg. No. 840,827.

Class 6—Chemicals and Chemical Compositions

For Chemicals or Powders—Namely, Tri-Sodium Phosphate (Int. Cl. 1).

Class 12—Construction Materials

For Powdered Spackle, Ready-mixed Spackle, Plaster of Paris, Patching Plaster, and Floor Patching Material (Int. Cl. 19).

Class 16—Protective and Decorative Coatings

For Paint Thinner, Lacquer Thinner, and Clear Wood Sealer (Int. Cl. 2).

First use Aug. 31, 1965; 1952 at to "Jetco."

SN 240,049. J. P. Stevens & Co., Inc., New York, N.Y. Filed Mar. 3, 1966.

TRANSAM

Class 5—Adhesives

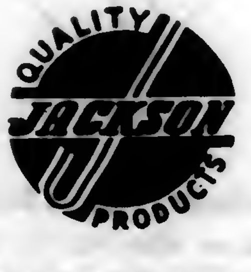
For Film-Forming Type Adhesives—Namely, Acrylic Emulsion, Urethane Solvent, and Vinyl Chloride (Int. Cl. 1).

Class 6—Chemicals and Chemical Compositions

For Chemicals—Namely, Acrylics, Amides, Sulfonates, Ethyloxylates for Uses Such as Crosslinking Resins, Softeners, Catalysts, Solvent Emulsions, Dyeing Aids, Film-Forming Hand Builders, and Sizing Agents (Int. Cl. 1).

First use on or about Jan. 24, 1966.

SN 240,490. Air Reduction Company, Incorporated, New York, N.Y. Filed Mar. 9, 1966.



No registration rights are claimed for the words "Quality Products" apart from the mark as shown, but applicant waives none of its common law rights in the mark shown or any feature thereof. Owner of Reg. No. 360,484.

Class 21—Electrical Apparatus, Machines, and Supplies

For Welding Electrode Holders, Ground Clamps, Cable Connectors, Cable Hatches, Cable Splicers, and Cable Lugs for Electric Welding Apparatus (Int. Cl. 9).
First use in or about December 1936 on electrode holders.

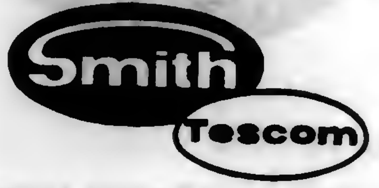
Class 26—Measuring and Scientific Appliances

For Goggles, Eye Shields, Visors, Filter and Protection Lenses, Magnifier Lenses as Eye Protective Devices, Welding Helmets, and Face Shields (Int. Cl. 9).
First use in or about January 1941 on eye shields.

Class 39—Clothing

For Safety Hatwear, Liners for Safety Hats, Sweatbands, Headgear Suspensions for Safety Hats and Welding Helmets, and Helmets (Int. Cl. 9).
First use in or about February 1952 on welding helmets.

SN 247,854. Tescom Corporation, Minneapolis, Minn. Filed June 13, 1966.



Owner of Reg. Nos. 240,926 and 240,927.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

For Manually Operated and Motor Actuated Air, Oxygen, Acetylene, Hydrogen and Other Gas Pressure Regulators, Including Spring Loaded, Dome Loaded, Gas Loaded, Self Relieving and Preset Pressure Regulators; Parts of Pressure Regulators; Range Adaptors for Use in Conjunction With Pressure Regulators; Hose and Cylinder Manifolds; Fittings for Cylinders, Pressure Regulators and Hose; Check and Relief Valves (Int. Cls. 6 and 7).
First use prior to Aug. 14, 1965.

Class 21—Electrical Apparatus, Machines, and Supplies

For Electrically Operated Remote Positioning Actuator With Feed Back Circuit for Use With Welding and Cutting Equipment, Solenoid-Operated Valve Unit for Use With Welders and Cutters (Int. Cl. 9).
First use prior to May 24, 1966.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

For Drill Style Tip Cleaners for Welders and Torches (Int. Cl. 7).
First use prior to Aug. 29, 1965.

Class 26—Measuring and Scientific Appliances

For Halide Leak Detectors, Pressure Gauges, Flowmeters, Flowmeter Regulators, and Parts Thereof, Eye Shields and Goggles (Int. Cl. 9).
First use prior to Aug. 19, 1965.

Class 34—Heating, Lighting, and Ventilating Apparatus

For Hand Type and Machine Type Welding, Cutting, Heating and Brazing Torches and Torch Assemblies Including Torch Tips and Parts Therefor; Soldering Equipment, Lead Burning Torches; Paint Burners and Torch Lighters; and Outfits and Kits for Heating, Welding and Brazing Including a Torch and Torch Tips, and Other Such Outfits and Kits Additionally Including One or More of the Following: a Pressure Regulator, a Check Valve, Wrench, Goggles, Hose and Lighter; Bronze, Welding, Cast Iron, and Aluminum Brazing Flux (Int. Cls. 1, 6, and 11).
First use prior to Aug. 14, 1965.

SN 247,989. Tescom Corporation, Minneapolis, Minn. Filed June 13, 1966.

TESCOM

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

For Manually Operated and Motor Actuated Air, Oxygen, Acetylene, Hydrogen and Other Gas Pressure Regulators, Including Spring Loaded, Dome Loaded, Gas Loaded, Self Relieving and Preset Pressure Regulators; Parts of Pressure Regulators; Range Adaptors for Use in Conjunction With Pressure Regulators; Hose and Cylinder Manifolds; Fittings for Cylinders, Pressure Regulators and Hose; Check and Relief Valves (Int. Cls. 6 and 7).
First use prior to Aug. 14, 1965.

Class 21—Electrical Apparatus, Machines, and Supplies

For Electrically Operated Remote Positioning Actuator With Feed Back Circuit for Use With Welding and Cutting Equipment, Solenoid-Operated Valve Unit for Use With Weld- and Cutters (Int. Cl. 9).
First use prior to May 24, 1966.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

For Drill Style Tip Cleaners for Welders and Torches (Int. Cl. 7).
First use prior to Aug. 29, 1965.

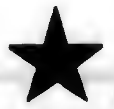
Class 26—Measuring and Scientific Appliances

For Halide Leak Detectors, Pressure Gauges, Flowmeters, Flowmeter Regulators, and Parts Thereof, Eye Shields and Goggles (Int. Cl. 9).
First use prior to Aug. 19, 1965.

Class 34—Heating, Lighting, and Ventilating Apparatus

For Hand Type and Machine Type Welding, Cutting, Heating and Brazing Torches and Torch Assemblies Including Torch Tips and Parts Therefor; Soldering Equipment, Lead Burning Torches; Paint Burners and Torch Lighters; and Outfits and Kits for Heating, Welding and Brazing Including a Torch and Torch Tips, and Other Such Outfits and Kits Additionally Including One or More of the Following: a Pressure Regulator, a Check Valve, Wrench, Goggles, Hose and Lighter; Bronze, Welding, Cast Iron, and Aluminum Brazing Flux (Int. Cls. 1, 6, and 11).
First use prior to Jan. 1, 1964.

SN 248,686. Eberhard Faber Inc., Wilkes-Barre, Pa. Filed June 22, 1966.



Class 37—Paper and Stationery

For Pencils, Ball Pens, Erasers, Rubber Bands, and Finger Tips (Int. Cl. 16).
First use 1901.

Class 52—Detergents and Soaps

For Type Cleaner (Int. Cl. 3).
First use Aug. 24, 1925.

SN 250,800. Societe Galaxie, Paris, France. Filed July 22, 1966.

LA GAMINERIE

Priority claimed under Sec. 44(d) on French Reg. Nos. 705,846, dated Feb. 22, 1966, and 707,966, dated Apr. 26, 1966.

Class 39—Clothing

For Hats, Gloves, Shoes, Ready-To-Wear Dresses for Women and Girls, and Underwear (Int. Cl. 25).

Class 51—Cosmetics and Toilet Preparations

For Perfumes, Toilet Water, Lipsticks, Skin Lotions, Face Creams, Foundation Creams, Leg Creams, Powder, Milk Lotion, and Mascara (Int. Cl. 3).

SN 253,385. Williams Brothers Company, Tulsa, Okla. Filed Aug. 29, 1966.

WILLIAMS BROTHERS

Class 100—Miscellaneous

For Surveying, Planning, Designing and Engineering Services Relating to Pipeline Construction and Operation (Int. Cl. 42).

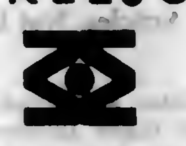
Class 103—Construction and Repair

For Installation, Construction and Operation of Pipelines (Int. Cl. 37).

First use at least as early as Oct. 19, 1954; at least as early as Apr. 26, 1951, in a different form.

SN 259,621. Mickelson Incorporated, d.b.a. Mickelson Gallery, Washington, D.C. Filed Nov. 29, 1966.

MICKELSON



GALLERY

The mark consists of two letters "M" back to back on their side and a large dot therebetween; and the words "Mickelson" and "Gallery." The word "Gallery" is disclaimed apart from the mark as shown.

Class 38—Prints and Publications

For Paintings, Graphics, Etchings, and Drawings (Int. Cl. 16).

Class 50—Merchandise Not Otherwise Classified

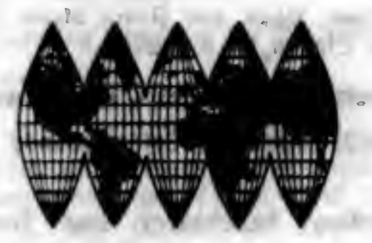
For Sculptured Works of Art (Int. Cl. 20).

Class 101—Advertising and Business

For Exhibition and Sale of Works of Art for Others (Int. Cl. 35).

First use October 1963.

SN 260,479. Taylor & Gaskin, Inc., Detroit, Mich. Filed Dec. 9, 1966.



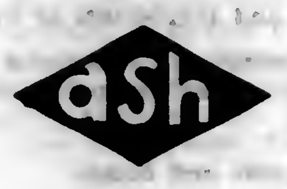
Class 2—Receptacles

For Marine Tanks of Different Sizes and Shapes Including Gas, Fuel, and Water Tanks for Boats (Int. Cl. 6).
First use early in January 1965.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

For Mechanical Conveyors—Namely, Bulk Conveyors, Unit Conveyors, and Package Handling Conveyors and Parts Thereof; Industrial Parts Washers; Power Tranmissions Including Speed Reducing Equipment for Conveyors and Other Power Driven Machines Which Are Operated at Different Rates of Speed and Parts Thereof (Int. Cl. 7).
First use on or about June 1, 1964.

SN 263,344. Ash Precision Equipment, Inc., Detroit, Mich. Filed Jan. 26, 1967.



Class 4—Abrasives and Polishing Materials

For Abrasive Discs, and Diamond Dressing Wheels (Int. Cl. 7).

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

For Cutters—Namely, Cutting Bits and Files; Material Handling Equipment—Namely Conveyors (Int. Cls. 7 and 8).

Class 26—Measuring and Scientific Appliances

For Precision Measuring Instruments—Namely, Micrometers, Gage Blocks, Dial Indicators, Calipers, Tape Measures, and Gages; Drafting Equipment and Supplies—Namely, Drafting Boards, Drawing Sets, Templates, and Drafting Machines; Scientific Instruments—Namely, Mechanical Calculators, Slide Rules, Dividers, and Compasses (Int. Cls. 9 and 16).

Class 27—Horological Instruments

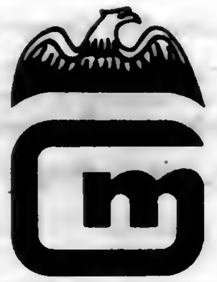
For Stop Watches (Int. Cl. 14).

Class 32—Furniture and Upholstery

For Steel Files, Drawers, and Shelving (Int. Cl. 20).

First use March 1962.

SN 265,585. Gold Medal Products Co., Cincinnati, Ohio. Filed Feb. 28, 1967.



Class 2—Receptacles

For Cups, Cones, Bags, and Boxes Made of Plastic, Paper or the Like (Int. Cls. 16, 20, and 22).

Class 21—Electrical Apparatus, Machines, and Supplies

For Electrically Operated Cotton Candy Machines (Int. Cl. 7).

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

For Merchandise Vending Machines, Hand Operated and Power Operated Ice Shavers, and Mechanical Dispensers for Syrups and Other Edible Products (Int. Cls. 7 and 9).

Class 26—Measuring and Scientific Appliances

For Automatic Measuring Dispensers (Int. Cl. 9).

Class 32—Furniture and Upholstery

For Display Cases, Counters, Racks, and Trays (Int. Cl. 20).

Class 34—Heating, Lighting, and Ventilating Apparatus

For Warming, Heating and Cooking Units for Edible Products for Commercial Use (Int. Cl. 11).

Class 45—Soft Drinks and Carbonated Waters

For Syrups and Flavoring Concentrates for Making Soft Drinks (Int. Cl. 32).

Class 46—Foods and Ingredients of Foods

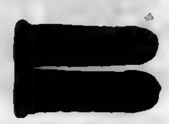
For Flavoring Syrups and Concentrates for Food Purposes, Powders for Use in Making Flavored Coatings for Food Purposes (Int. Cl. 30).

Class 52—Detergents and Soaps

For Preparation for Cleaning Food Machinery (Int. Cl. 1).

First use on or about Jan. 1, 1964.

SN 266,969. Burns Pharmaceuticals, Inc., d.b.a. Burns Pharmaceuticals, Oakland, Calif. Filed Mar. 17, 1967.



Class 6—Chemicals and Chemical Compositions

For Room Deodorant (Int. Cl. 5).
First use October 1966.

Class 18—Medicines and Pharmaceutical Preparations

For Medicated Veterinary Preparations (Int. Cl. 5).
First use Oct. 7, 1966.

Class 51—Cosmetics and Toilet Preparations

For Sweet Scent Applied to Animals (Int. Cl. 5).
First use October 1966.

Class 52—Detergents and Soaps

For Shampoo, Soap, and Tear-Stain Removal for Animals (Int. Cl. 5).
First use October 1966.

SN 268,203. Adolph Lerman, d.b.a. Minart Company, New York, N.Y. Filed Apr. 3, 1967.

MINART

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

For Handbags (Int. Cl. 18).

Class 39—Clothing

For Belts (Int. Cl. 25).

First use Nov. 16, 1961.

SN 275,005. Firth Sterling Corporation, Pittsburgh, Pa., assignee of Firth Sterling Inc., Pittsburgh, Pa. Filed June 29, 1967.

SIL·TUNG

Class 9—Explosives, Firearms, Equipments, and Projectiles

For Rocket Nozzles (Int. Cl. 13).

Class 21—Electrical Apparatus, Machines, and Supplies

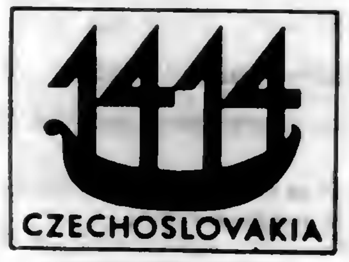
For Electrical Discharge Machining Electrodes and Electrical Contacts (Int. Cl. 9).

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

For Anti-Friction Machinery Bearings and Journal Bearings (Int. Cl. 7).

First use Apr. 17, 1962.

SN 275,359. Borske Sklo Narodni Podnik, Novy Bor, Czechoslovakia. Filed July 5, 1967.



The geographical designation "Czechoslovakia" is disclaimed. Owner of Czechslovakian Reg. No. 156,677, dated Mar. 1, 1966.

Class 8—Smokers' Articles, Not Including Tobacco Products

For Smoker's Articles and Smoker's Kits—Namely, Ashtrays; Cigarette and Cigar Holders; Cigar, Cigarette, and Tobacco Boxes and Cases (Int. Cl. 34).

Class 33—Glassware

For Utilitarian Household Glassware—Namely, Vases, Bowls, Jardinieres, Baskets, Cups, Tableware, Compote Sets, Tumblers, and Stemware (Int. Cl. 21).

SN 282,020. Clairol Incorporated, New York, N.Y. Filed Oct. 4, 1967.

MILK OF KINDNESS

Owner of Reg. Nos. 819,240, 825,435, and 833,793.

Class 51—Cosmetics and Toilet Preparations

For Hair Conditioner (Int. Cl. 3).

Class 52—Detergents and Soaps

For Hair Shampoo (Int. Cl. 3).

First use July 12, 1967.

SN 282,023. Clairol Incorporated, New York, N.Y. Filed Oct. 9, 1967.

TAKE SHAPE

Class 51—Cosmetics and Toilet Preparations

For Hair Setting Foam, Hair Setting Lotion, Hair Conditioner, and Hair Spray (Int. Cl. 3).

Class 52—Detergents and Soaps

For Hair Shampoo (Int. Cl. 3).

First use Aug. 16, 1967.

SN 282,024. Clairol Incorporated, New York, N.Y. Filed Oct. 9, 1967.

TAKE HOLD

Class 51—Cosmetics and Toilet Preparations

For Hair Setting Foam, Hair Setting Lotion, Hair Conditioner, and Hair Spray (Int. Cl. 3).

Class 52—Detergents and Soaps

For Hair Shampoo (Int. Cl. 3).

First use Aug. 16, 1967.

SN 286,299. The Never on Friday Club, Long Beach, Calif. Filed Dec. 6, 1967.

THE NEVER ON FRIDAY CLUB

Class 100—Miscellaneous

For Arranging for Apartment Leasing for Others (Int. Cl. 42).
First use Mar. 14, 1965.

Class 107—Education and Entertainment

For Organizing, Promoting, and Supervising Entertainment Programs—Namely, Parties, Dances, Tours, and Excursions (Int. Cl. 41).
First use December 1963.

SN 287,785. Kobi Polyethylene Bag Mfg. Co. Inc., Brooklyn, N.Y. Filed Dec. 29, 1967.

KOBI

Class 1—Raw or Partly Prepared Materials

For Plastic Sheeting and Film for General Use in the Industrial Arts (Int. Cl. 17).

Class 2—Receptacles

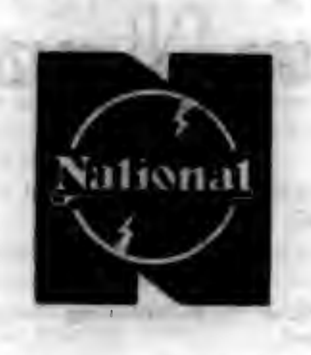
For Plastic Bags; Plastic Liners for Drums, Boxes, and Waste Cans (Int. Cls. 20 and 22).

Class 37—Paper and Stationery

For Plastic Sheeting and Film for Wrapping (Int. Cl. 17).

First use December 1960.

SN 289,148. Matsushita Electric Industrial Cd., Ltd., Kadoma-shi, Osaka Prefecture, Japan. Filed Jan. 19, 1968.



Owner of Japanese Reg. No. 625,996, dated Oct. 7, 1963; and U.S. Reg. Nos. 295,890 and 659,001.

Class 21—Electrical Apparatus, Machines, and Supplies

For Color and Black and White Television Receivers, Radios, Transceivers, Amplifiers, Microphones, Wireless Microphones, Wireless Amplifiers, Wireless Transmitters, Wireless Receivers, Telephones, Intercommunication Units, Public Address Systems, Electronic Megaphones, Oscillators, Speakers, Condensers, Resistors, Integrated Circuits, Thermisters, Coils, Antennae, Antenna Coils, Rotary Switches, Tuners, Printed Wiring Boards, Phonograph Motors, Remote Controllers for Television Receiving Sets, Transistors, Diodes, Image Converters, and Stereophonic Radio Receivers (Int. Cl. 9).

Class 26—Measuring and Scientific Appliances

For Oscilloscopes, Oscillographs, Voltmeters, Ammeters, and Electric Insulation Meters, TV Cameras, Video Tape Recorders, and Video Recording Tapes (Int. Cl. 9).

Class 36—Musical Instruments and Supplies

For Phonographs, Tape Recorders, Magnetic Recording Tapes, Phonograph Cartridges, and Phonograph Pick-Ups (Int. Cl. 9).

SECTION 2

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Opposition under section 13 may be filed within thirty days of publication. See Rules 2.101 to 2.105.

A fee of twenty-five dollars must accompany the opposition.

[NOTE: For publication of marks presented in a combined application for registration in more than one class, see section 1.]

Class 1—Raw or Partly Prepared Materials

SN 262,259. The Flintkote Company, New York, N.Y. Filed Jan. 10, 1967.

UTE

Owner of Reg. No. 708,235.
For Lime and Limestone (Int. Cl. 19).
First use Aug. 1, 1966; during 1924, in a different form.

SN 263,716. George Warner Seed Company, Inc., Hereford, Tex. Filed Jan. 31, 1967.

GRO·N·GRAZE

For Sorghum Sudangrass Hybrid Seed (Int. Cl. 31).
First use Apr. 27, 1966.

SN 270,373. Garland Manufacturing Company, Saco, Maine. Filed May 1, 1967.

GAR-DUR

For Plastic Materials—Namely, High Molecular Weight Polyethylene and Articles Made Therefrom, Namely, Rods, Bars, Tubes, and Slabs (Int. Cl. 17).
First use July 20, 1966.

SN 275,166. Peabody Coal Company, St. Louis, Mo. Filed June 30, 1967.

OLD GLORY

For Coal (Int. Cl. 4).
First use Jan. 1, 1918.

SN 275,167. Peabody Coal Company, St. Louis, Mo. Filed June 30, 1967.

CHIEFTAIN

For Coal (Int. Cl. 4).
First use Jan. 7, 1933.

SN 275,168. Peabody Coal Company, St. Louis, Mo. Filed June 30, 1967.

AIRLINE

For Cool (Int. Cl. 4).
First use Mar. 12, 1945.

SN 275,169. Peabody Coal Company, St. Louis, Mo. Filed June 30, 1967.

SYCAMORE

For Coal (Int. Cl. 4).
First use Dec. 26, 1940.

SN 275,255. The Gilman Brothers Company, Gilman, Conn. Filed July 3, 1967.

GILMOLD

For Synthetic Elastomeric Sheeting (Int. Cl. 17).
First use May 25, 1967.

SN 290,443. Barrett & Company, Inc., Newark, N.Y. Filed Feb. 7, 1968.

BARRETT'S

Owner of Reg. Nos. 787,363 and 846,863.
For Leather (Int. Cl. 18).
First use at least as early as 1954.

Class 2—Receptacles

SN 258,325. Rheem Manufacturing Company, New York, N.Y. Filed Nov. 9, 1966.

SANIMASTER

Owner of Reg. No. 625,395.
For Hot Water Storage Tanks (Int. Cl. 6).
First use Oct. 6, 1966.

SN 280,475. Sparks Corporation, Harleysville, Pa. Filed Sept. 15, 1967.

DATADOSE

For Hospital Unit Package (Int. Cl. 20).
First use July 20, 1967.

SN 283,455. Plastics, Inc., St. Paul, Minn. Filed Oct. 26, 1967.

PLASS-PAK

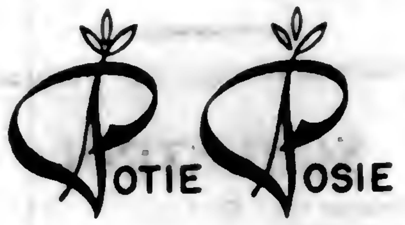
For Cartons and Containers Containing Plastic Glasses (Int. Cl. 20).
First use June 16, 1967.

SN 284,565. American Can Company, New York, N.Y. Filed Nov. 13, 1967.

MENU MASTER

For Paper, Plastic Coated Paper, and Plastic Receptacles—Namely, Tableware, Cups, Saucers, Bowls, Dishes, Plates, Platters, and Trays (Int. Cl. 21).
First use Oct. 19, 1967.

SN 284,998. Elmer H. Davis, d.b.a. Tri-Pee Co., Columbus, Ohio. Filed Nov. 16, 1967.



For Ornamental Receptacle for Rolled Toilet Tissue (Int. Cl. 21).
First use Nov. 6, 1967.

SN 285,242. L. Marino, Inc., Brooklyn, N.Y. Filed Nov. 20, 1967.

TRANS-FLEX

For Cargo Containers (Int. Cl. 20).
First use July 27, 1967.

SN 291,809. Du Pont of Canada Limited, Montreal, Quebec, Canada. Filed Feb. 26, 1968.

SCLAIRPAK

Owner of Canadian Reg. No. 129,720, dated Feb. 1, 1963.
For Polyethylene Industrial Bags (Int. Cl. 22).

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

SN 275,031. Brown Shoe Company, Inc., St. Louis, Mo. Filed June 29, 1967.

LIFE STRIDE

Owner of Reg. Nos. 887,963 and 890,461.
For Women's Handbags (Int. Cl. 18).
First use Mar. 14, 1967.

Class 5—Adhesives

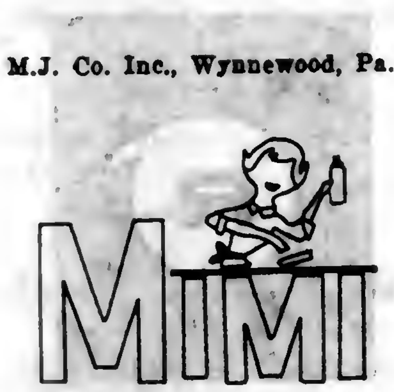
SN 282,509. American Adhesives Inc., Brooklyn, N.Y. Filed Oct. 16, 1967.

BETTER ADHESIVES THROUGH RESEARCH

For Adhesives of All Types—Namely, Adhesive Formulations in Both Liquid and Solid Form and Having a Vegetable, Animal or Synthetic Base, for Use in Book Binding, Packaging, Paper Converting, Laminating, Cloth Combining, and Cementing of Wood, Metals, and Other Materials (Int. Cl. 1).
First use at least as early as October 1948.

Class 6—Chemicals and Chemical Compositions

SN 249,170. M.J. Co. Inc., Wynnewood, Pa. Filed June 28, 1966.



For Textile Sizing Preparation in Pressurized Cans (Int. Cl. 1).
First use Apr. 12, 1966.

SN 264,985. Ken Steenolsen, South Pasadena, Calif. Filed Feb. 17, 1967.

TEMPRASURE

For Chemically Treated Papers—Namely, a Disposable Temperature Indicator for Indicating Temperature Variance in All Refrigerated and Frozen Food Products Through Chemical or Color Change in the Indicator (Int. Cl. 1).
First use Jan. 27, 1967.

SN 267,461. Velsicol Chemical Corporation (Delaware corporation), Chicago, Ill., by merger and change of name from Velsicol Chemical Corporation (Illinois corporation), Chicago, Ill. Filed Mar. 23, 1967.

THE GROWING WORLD OF VELSICOL

For Insecticides, Herbicides, Fungicides, Fumigants, Biocides; Industrial Chemicals—Namely, Chlorine, Caustic Soda, Chlorendic Anhydride, Dicyclopentadiene, Hexachlorocyclopentadiene, Benzal Chloride, Benzaldehyde, Benzoic Acid, Benzoguanamine, Benzonitrile, Benzotrichloride, Benzoyl Chloride, Benzyl Acetate, Benzyl Alcohol, Benzyl Benzoate, Benzyl Chloride, Hydrochloric Acid, Methylbenzophenone, Sodium Benzoate, Sucrose Benzoate, Butyl Benzoate, Dibenzyl Ether, and Solid Polyol Benzoates (Int. Cls. 1 and 5).
First use Feb. 24, 1967.

SN 267,869. Ugine Kuhlmann, Paris, France. Filed Mar. 29, 1967.

FRANCOLANE

Owner of French Reg. No. 516,315, dated Oct. 10, 1963 (Paris); Natl. Inst. No. 212,752.
For Dyestuffs (Int. Cl. 2).

SN 268,013. Atlas Chemical Industries, Inc., Wilmington, Del. Filed Mar. 31, 1967.

ATPLUS

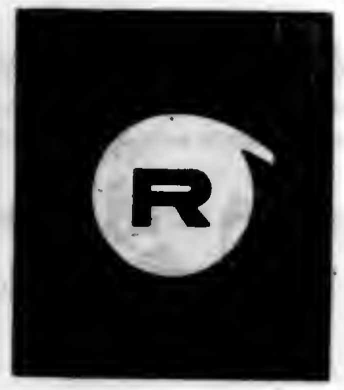
Owner of Reg. No. 599,829.
For Surface Active Agents (Int. Cl. 1).
First use Feb. 20, 1967.

SN 268,883. Koppers Company, Inc., Pittsburgh, Pa. Filed Apr. 11, 1967.

LUSTRETONE

Owner of Reg. No. 444,271.
For Methyl Methacrylate Monomer (Int. Cl. 1).
First use July 20, 1965.

SN 269,565. The Richardson Company, Melrose Park, Ill. Filed Apr. 19, 1967.



The drawing is lined to indicate the color red, but color is not an essential feature of the trademark. Owner of Reg. Nos. 765,724 and 765,725.

For Industrial Chemicals—Namely, Specialty Organic and Inorganic Chemicals and Chemical Intermediates (Int. Cl. 1).

First use Oct. 15, 1962.

SN 272,388. The Maximent Corporation, Cincinnati, Ohio. Filed May 25, 1967.

MAXIRON

For Concrete Hardener Additive (Int. Cl. 1).

First use Jan. 17, 1967.

SN 277,006. American Fuel & Supply Co., Inc., d.b.a. American Fuel and Supply Co., Milwaukee, Wis. Filed July 28, 1967.

ICE A-GO-GO

Applicant disclaims the word "Ice" apart from the mark as shown.

For Salt Used To Melt Ice and Snow (Int. Cl. 1).

First use Oct. 1, 1966.

SN 278,341. Ciba Limited, Basel, Switzerland. Filed Aug. 11, 1967.

NYLASPIN

Owner of Swiss Reg. No. 211,449, dated May 31, 1965.

For Dyestuffs and Colouring Matters (Int. Cl. 2).

SN 278,344. Calgon Corporation (Delaware corporation), Pittsburgh, Pa., assignee of Calgon Corporation (Pennsylvania corporation), Pittsburgh, Pa. Filed July 25, 1967.

TRICHELOCK

For Chemical Composition for Boiler Water Treatment (Int. Cl. 1).

First use May 8, 1967.

SN 278,376. Commercial Solvents Corporation, New York, N.Y. Filed Aug. 16, 1967.

COMSOL

For Nitropropane Solvent (Int. Cl. 1).

First use July 20, 1967.

SN 279,181. General Aniline & Film Corporation, New York, N.Y. Filed Aug. 28, 1967.

ANSCOCHROME

Owner of Reg. Nos. 616,815, 700,342, and 726,290.

For Photographic Chemicals (Int. Cl. 1).

First use July 30, 1959.

SN 279,404. Merck & Co., Inc., Rahway, N.J. Filed Aug. 30, 1967.

TECTO

For Antimycotic Agent for the Treatment of Fruits and Vegetables (Int. Cl. 5).

First use Aug. 10, 1967.

SN 279,822. Hercules Incorporated, Wilmington, Del. Filed Sept. 7, 1967.

SCALETROL

For Scale Inhibitor (Int. Cl. 1).

First use Aug. 2, 1967.

SN 279,966. Texize Chemicals, Inc., Greenville, S.C. Filed Sept. 8, 1967.

LOVING

For Fabric Softener (Int. Cl. 3).

First use July 27, 1967.

SN 280,044. Geigy Chemical Corporation, Ardsley, N.Y. Filed Sept. 11, 1967.

ULTRACIDE

Owner of Reg. Nos. 716,317 and 724,678.

For Chemical Ingredient Used in the Manufacture of Insecticides (Int. Cl. 1).

First use Aug. 28, 1967.

SN 280,100. The Sherwin-Williams Company, Cleveland, Ohio. Filed Sept. 11, 1967.

BRITONE

For Pigment (Int. Cl. 2).

First use December 1966.

SN 280,140. American Cyanamid Company, Wayne, N.J. Filed Sept. 12, 1967.

CY-ELEC

For Cathode Depolarizer (Int. Cl. 1).

First use Aug. 24, 1967.

SN 290,050. J. Hershkowitz, Inc., d.b.a. P.M.C., Brooklyn, N.Y. Filed Feb. 1, 1968.

HIDDEN GLOW

For Fluorescent Spray for Application to Fabrics for Use With Ultraviolet Illumination, and to Surfaces for Crime Detection, Machine Parts Inspection, Unusual Advertising Displays, and for Many Other Uses of This Nature (Int. Cl. 1).

First use Feb. 26, 1965.

SN 292,241. Chas. Pfizer & Co., Inc., New York, N.Y. Filed Mar. 1, 1968.

GLOBINCAL

For Standard for Cyanmethemoglobin Determinations for Laboratory Use (Int. Cl. 1).

First use Jan. 29, 1968.

SN 292,848. Diamond Shamrock Corporation, Cleveland, Ohio, Filed Mar. 11, 1968.

TRAILWAY

For Herbicide (Int. Cl. 5).

First use Jan. 28, 1968.

SN 292,845. Diamond Shamrock Corporation, Cleveland, Ohio. Filed Mar. 11, 1968.

SINGLESHOT

For Herbicide (Int. Cl. 5).

First use Jan. 28, 1968.

Class 7 — Cordage

SN 246,486. Peter P. Riggs, Manningtree, Essex, England. Filed May 24, 1966.

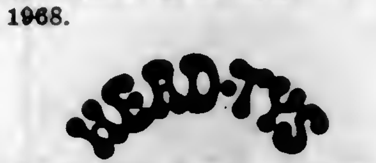
NORSELAY

For Plastic Impregnated Wire Ropes (Int. Cl. 6).

First use Feb. 14, 1966; in commerce Feb. 18, 1966.

Subj. to Intf. with SN 288,408.

SN 288,010. East House Enterprises, Inc., New York, N.Y. Filed Jan. 3, 1968.



For Colored Yarns for Gift Wrapping and Other Decorative Purposes (Int. Cl. 28).

First use Nov. 8, 1967.

Class 8 — Smokers' Articles, Not Including Tobacco Products

SN 251,787. B. Barling & Sons Limited, London, England. Filed Aug. 5, 1966.

JOHN PEEL

The mark "John Peel" is the name of a deceased person. Owner of British Reg. No. B633,357, dated Dec. 5, 1944.

For Pipes for Smokers (Int. Cl. 34).

Class 9 — Explosives, Firearms, Equipments, and Projectiles

SN 273,141. Washington Fireworks Co., Inc., Washington, D.C. Filed June 5, 1967.

MERCURY

For Fireworks (Int. Cl. 13).

First use May 25, 1967.

SN 291,549. General Ordnance Equipment Corporation, Pittsburgh, Pa. Filed Feb. 21, 1968.

MACE

Owner of Reg. No. 823,563.

For Volatile Liquid Preparation for Temporarily Incapacitating Persons (Int. Cl. 13).

First use Dec. 11, 1967.

Class 10 — Fertilizers

SN 275,600. Amchem Products, Inc., Ambler, Pa. Filed July 10, 1967.

TRE-HOLD

For Plant Hormones (Int. Cl. 1).

First use May 22, 1967.

Class 12 — Construction Materials

SN 193,901. Ridge Pike Lumber Company, Inc., Conshohocken, Pa. Filed May 20, 1964.

RIDGE HOMES

The word "Homes" is disclaimed apart from the mark as shown.

For Prefabricated Homes and Prefabricated Components of Homes (Int. Cl. 19).

First use Feb. 1, 1963.

SN 193,903. Ridge Pike Lumber Company, Inc., Conshohocken, Pa. Filed May 20, 1964.

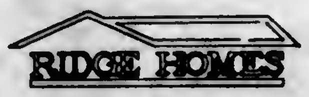
RIDGE PIKE HOMES

The word "Homes" is disclaimed apart from the mark as shown.

For Prefabricated Homes and Prefabricated Components of Homes (Int. Cl. 19).

First use 1956.

SN 231,597. Ridge Pike Lumber Company, Inc., Conshohocken, Pa. Filed Oct. 24, 1965.



The word "Homes" is disclaimed apart from the mark as shown.

For Prefabricated Homes and Prefabricated Components of Homes (Int. Cl. 19).

First use Feb. 1, 1963.

SN 243,544. Clearview Corp., Dallas, Tex. Filed Apr. 15, 1966.

SOLARSHADE

Owner of Reg. No. 789,798.

For Louver Windows (Int. Cl. 19).

First use Mar. 14, 1966.

SN 256,831. Dur-A-Flex, Inc., Hartford, Conn. Filed Oct. 20, 1966.

DUR-A-FLEX

For Decorative and Durable, Wear Surface Covering and the Ingredients Therefor, and Chips for Embodiment Therein, for Application to Floors, Countertops, Walls, Furniture, Boats, and the Like To Provide a Seamless Surface Covering Therefor (Int. Cl. 19).

First use March 1966.

SN 265,642. Lesjofors Aktiebolag, Lesjofors, Sweden. Filed Feb. 28, 1967.

FIST

For Elastic Fastener or Clamp for Railroad Rails, Sold as Part of Prestressed Concrete Sleepers (Int. Cl. 19).

First use February 1965; in commerce February 1965.

SN 269,456. Ranco Industrial Products Corporation, Cleveland, Ohio. Filed Apr. 18, 1967.

RANCO

Owner of Reg. No. 717,078.

For Masonry Waterproofing Compounds, Composed of Silicon; Cement, and Pulverized Iron; and Floor Resurfacing Compounds, Composed of Emulsified Asphalt, Crushed Stone or Rock, Liquid Latex, and/or Cements (Int. Cl. 19).

First use on or about Feb. 8, 1934.

SN 280,584. Georgia-Pacific Corporation, Portland, Oreg. Filed Sept. 18, 1967.

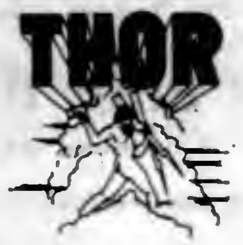
VINYL SHIELD

The term "Vinyl" is disclaimed apart from the mark as shown.

For Prefinished Plywood Paneling (Int. Cl. 19).

First use July 25, 1967.

SN 280,810. Packaged Concrete Manufacturers Association, Columbus, Ohio. Filed Sept. 20, 1967. COLLECTIVE MARK.



For Vinyl-Resin Composition for Patching and Repairing Cementitious Surfaces and Structures, and a Latex-Asphalt Emulsion for Filling Cracks in Driveways, Sidewalks, and Similar Surfaces (Int. Cl. 19).

First use Sept. 29, 1965.

SN 281,592. Lake Chemical Co., Chicago, Ill. Filed Oct. 2, 1967.

SLIC-TITE

For Pipe Thread Tape Used as Sealant To Prevent Leakage (Int. Cl. 17).

First use July 6, 1967.

SN 281,715. Munchhausen Soundproofing Company, Inc., New York, N.Y. Filed Oct. 3, 1967.

STEALSOUND

For Sound Insulating Structures—Namely, Doors (Int. Cl. 6).

First use Sept. 22, 1967.

SN 286,244. Chem Sales Corporation (Bahamas) Limited, Nassau, Bahamas. Filed Dec. 5, 1967.

LACE-TEX

Owner of Canadian Reg. No. 144,643, dated Apr. 1, 1966.

For Building Bricks and Blocks—Namely, Clay Bricks, Concrete Bricks, Concrete Blocks, and Sand and Lime Bricks (Int. Cl. 19).

SN 292,557. Concrete Masonry Corporation, Elyria, Ohio. Filed Mar. 6, 1968.

XOC

For Building Blocks (Int. Cl. 19).

First use on or about Jan. 19, 1968.

Class 13 — Hardware and Plumbing and Steam-Fitting Supplies

SN 256,969. Price-Pfister Brass Mfg. Co., Pacoima, Calif. Filed Oct. 21, 1966.

PP

For General Line of Plumbing Fittings and Valves; Faucets; Aerators for Faucets; Single Lever Fixtures for Lavatories and Sinks; Laundry Tray Fixtures; Hydraulic Dishwashing Apparatus Composed of Dishwasing Brush, Receptacle and Valves for Dispensing Detergents Into the Water Stream and a Hose for Connection to a Sink Plumbing Fixture; Hose Bibs; Diverter Valves; Shower Head Sets; Spouts; Diverter Spouts; Bath Cocks; By-Pass Valves; Diverters; Waste and Overflows; Trip Lever Waste and Overflows; Pop-Up Waste and Overflows; Flexible Fittings; Washing Machine Fillers; Air Conditioning Cooler Valves; Gas Log Lighter Valves; Gas Cocks; Relief Valves; and Parts for Said Goods (Int. Cls. 6 and 11).

First use 1946.

SN 259,964. Ric-Wil, Incorporated, Barberton, Ohio. Filed Dec. 2, 1966.

GALVA-FLEX

For Prefabricated Conduit Consisting of Insulated Piping Supported Within an Outer Casing, and Conduit Accessories (Int. Cl. 6).

First use Oct. 19, 1966.

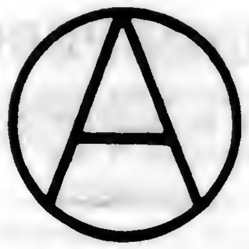
SN 264,838. Joe Leighton & Associates, Inc., d.b.a. Canterbury Enterprises, Los Angeles, Calif. Filed Feb. 16, 1967.

BLUE FLAME

For Fireplace Log Lighters, Gas Valves, Gas Valve Keys, and Gas Valve Stem Extenders (Int. Cl. 6).

First use January 1954.

SN 273,013. Airhardware, Inc., Van Nuys, Calif. Filed June 5, 1967.

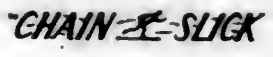


For Fastening Devices in the Aircraft and Space Industry, Including Screws, Bolts and Rivets (Int. Cl. 6).

First use Apr. 8, 1967.

Class 15 — Oils and Greases

SN 251,181. Robert L. Batchelor, Bergenfield, N.J. Filed July 28, 1966.



Applicant disclaims the words "Chain" and "Slick" apart from the mark.

For Liquid Lubricant, Particularly for Chain-type Conveyors (Int. Cl. 4).

First use May 1965.

SN 251,182. Robert L. Batchelor, Bergenfield, N.J. Filed July 28, 1966.

The word "Lube" is disclaimed apart from the mark as shown.

For Liquid Lubricant for Use in the Food Industry, and Particularly in Bottling Plants (Int. Cl. 4).

First use May 1965.

SN 278,100. Hangsterfer's Laboratories, Inc., Mantua, N.J. Filed Aug. 11, 1967.

MISSILE LUBE

Without relinquishing any of its common law rights, applicant disclaims the word "Lube," apart from the mark as shown.

For Oil and Water Soluble Cutting and Grinding Fluid Used in Metal Manufacturing (Int. Cl. 4).

First use 1960.

SN 280,976. Ron Shields, Inc., Milford, Conn. Filed Sept. 22, 1967.

MIC OIL

Applicant disclaims any exclusive rights in the word "Oil" apart from the mark as shown.

For Lubricating Oil (Int. Cl. 4).

First use on or about Apr. 3, 1967.

Class 17 — Tobacco Products

SN 262,179. Lane Limited, New York, N.Y. Filed Jan. 9, 1967.

TURKISH TAFFY

Applicant disclaims the word "Turkish" apart from the mark as shown.

For Smoking Tobacco (Int. Cl. 34).

First use October 1964.

SN 262,180. Lane Limited, New York, N.Y. Filed Jan. 9, 1967.

BALLERINA

For Smoking Tobacco (Int. Cl. 34).

First use September 1966.

SN 262,181. Lane Limited, New York, N.Y. Filed Jan. 9, 1967.

ENGLISH TOFFEE

Applicant disclaims the word "English" apart from the mark as shown.

For Smoking Tobacco (Int. Cl. 34).

First use November 1966.

SN 262,182. Lane Limited, New York, N.Y. Filed Jan. 9, 1967.

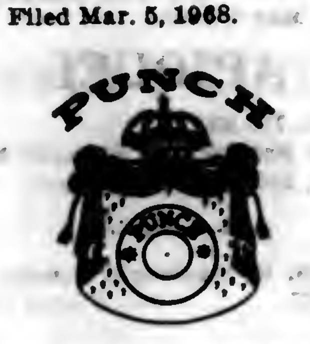
MONTE VERDI

The words "Monte Verdi" are Italian meaning "green mountain."

For Smoking Tobacco (Int. Cl. 34).

First use October 1966.

SN 292,496. F. Palicio & Co., Inc., d.b.a. F. Palicio, Inc., New York, N.Y. Filed Mar. 5, 1968.



Owner of Reg. Nos. 261,894 and 833,576.

For Cigars (Int. Cl. 34).

First use 1870.

Class 18 — Medicines and Pharmaceutical Preparations

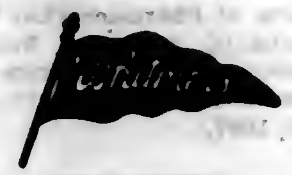
SN 259,941. Arthur Koponen, d.b.a. Chrichton Chemical Company, South Salem, N.Y. Filed S.R. Dec. 2, 1966; Am. P.R. Mar. 26, 1968.

STRUT

For Medicated Powder for Preventing Athletes Foot, Fungus Infection, Relieve Itching, and Reduce Foot Odor (Int. Cl. 5).

First use Mar. 11, 1966.

SN 262,405. Marianna Denton, d.b.a. The Whitmer Company, Bowling Green, Ky. Filed Jan. 12, 1967.



For Remedy for Coughs, Colds, Croup, Asthma, Bronchitis, Consumption, Whooping-Cough, Lung Affections, Rheumatism, Neuralgia, Headaches, Earache, Toothache, Fresh Cuts, Wounds, Sores, Burns, Sprains, Bruises, Frost-Bites, Sore Shoulder, Galls, Greased Heel, Sweeny, Barb-Wire Cuts, Dysentery, Diarrhea, Chlora-Morbus, Flux, Constipation, Biliousness, Corns, Sore Throat, Colic, Blood, Liver, Kidneys, and Stomach, Fever, Ague, Indigestion, Bladder, and Dyspepsia (Int. Cl. 5).

First use Prior to 1878.

SN 263,732. American Home Products Corporation, New York, N.Y. Filed Feb. 1, 1967.

SORDENAC

For Neuroleptic Agent (Int. Cl. 5).

First use Jan. 6, 1967.

SN 266,070. Palmedico, Inc., Columbia, S.C. Filed Mar. 6, 1967.

G-LIXIR

For Analgesic (Int. Cl. 5).

First use May 7, 1965.

SN 266,076. Palmedico, Inc., Columbia, S.C. Filed Mar. 6, 1967.

G-3

For Analgesic in Capsule Form (Int. Cl. 5).

First use Aug. 27, 1963.

SN 270,690. McNeil Laboratories, Incorporated, Fort Washington, Pa. Filed May 4, 1967.

APIQUEL

Owner of Reg. No. 755,821.
For Anorexigenic Preparations (Int. Cl. 5).
First use Jan. 26, 1967.

SN 272,099. The S. E. Massengill Company, Bristol, Tenn. Filed May 22, 1967.

BOLMED

For Preparation for Intrauterine Use in Large Animals as a Prophylaxis and Treatment of Bacterial Infections (Int. Cl. 5).
First use Jan. 14, 1963.

SN 272,218. Schering Corporation, Bloomfield, N.J. Filed May 23, 1967.

MASTIBIOTIC

Owner of Reg. No. 642,506.
For Antibiotic Corticosteroid Preparation for Use in the Treatment of Bovine Mastitis (Int. Cl. 5).
First use Apr. 26, 1967.

SN 274,175. Beutlich, Inc., Chicago, Ill. Filed June 19, 1967.

MYCOSERT

For Tampon Form of Pharmaceutical Preparation for the Treatment of Monilia (C. Albicanis), Trichomonas and Most Other Vaginal Infections Caused by Gram-Positive and Gram-Negative Organisms (Int. Cl. 5).
First use Jan. 20, 1967.

SN 274,472. The Upjohn Company, Kalamazoo, Mich. Filed June 21, 1967.

LINCO-MED

For Veterinary Antibiotic Steroid Preparation (Int. Cl. 5).
First use Feb. 23, 1967.

SN 274,891. The Purdue Frederick Company, Yonkers, N.Y. Filed June 27, 1967.

GLUTAFORTIS

Owner of Reg. No. 701,684.
For Sedative Tranquilizing Agent (Int. Cl. 5).
First use June 20, 1967.

SN 275,183. USV Pharmaceutical Corporation, New York, N.Y. Filed June 30, 1967.

CERVASPAN

For Vasorelaxant—Cerebral, Pheripheral and Coronary Blood Vessels; for Treatment of Cerebral, Peripheral and Myocardial Ischemia (Int. Cl. 5).
First use June 9, 1967.

SN 275,282. Merck & Co., Inc., Rahway, N.J. Filed July 3, 1967.

PANCOXIN

For Preparation for Use in the Prevention of Infectious Diseases, Particularly Coccidiosis in Animals (Int. Cl. 5).
First use June 22, 1967.

SN 275,718. American Home Products Corporation, New York, N.Y. Filed July 6, 1967.

MATCH

For Veterinary Preparation To Control Estrus in Animals (Int. Cl. 5).
First use Apr. 14, 1967.

Class 19—Vehicles

SN 252,363. Donald L. Wollard, d.b.a. Don's Marine Center, Islamorada, Fla. Filed Aug. 15, 1966.

SEA-LARK

For Power Boats (Int. Cl. 12).
First use Jan. 1, 1946.

SN 272,528. Westerly Marine Construction Limited, Waterlooville, Portsmouth, England. Filed May 26, 1967.

WESTERLY

For Water Craft—Namely, Sailboats, Power Boats, and Dinghies; and Parts Therefor (Int. Cl. 12).
First use June 14, 1964; in commerce June 14, 1964.

SN 275,546. Miracle Spring Lift Co., Memphis, Tenn. Filed July 7, 1967.

LOAD TOTEMS

For Vehicle Spring Lifts Used To Restore Coil Springs to Original Position (Int. Cl. 12).
First use June 21, 1967.

SN 281,599. James F. Mann, d.b.a. Tork Lift Sales and Manufacturing Company, Tacoma, Wash. Filed Oct. 2, 1967.

Tork Lift

For Trailer Hitches (Int. Cl. 12).
First use Feb. 15, 1967.

SN 284,211. Marine Services Unlimited, Downey, Calif. Filed Nov. 6, 1967.

REGATTA

For Outboard and Inboard Motor Boats (Int. Cl. 12).
First use 1957.

SN 284,876. Miami Products, Inc., Miami, Okla. Filed Nov. 15, 1967.

NEWELL COACH

The term "Coach" is disclaimed apart from the mark as shown.
For Self-Propelled Mobile Homes (Int. Cl. 12).
First use July 7, 1967.

SN 290,558. H. W. Andersen Products, Inc., Oyster Bay, N.Y. Filed Feb. 8, 1968.

HI-BUOY

For Marine Mooring Device Consisting of a Float To Which a Boat May Be Moored and an Automatic Catch Which Is Installed Upon the Boat, Which Catch Engages the Float (Int. Cl. 12).
First use June 15, 1959.

Class 20—Linoleum and Oiled Cloth

SN 250,549. Technical Tape Corp., New Rochelle, N.Y. Filed July 19, 1966.

LUXURON

For Decorative Plastic Sheet Materials for Covering Surfaces, Such as Wall Surfaces, Including Designs Which Simulate Non-Plastic Materials Such as Textile Fabrics (Int. Cl. 27).
First use Mar. 29, 1966.

Class 21—Electrical Apparatus, Machines, and Supplies

SN 196,475. Pendleton Tool Industries, Inc., Los Angeles, Calif. Filed June 25, 1964.

PROTO

Without Waiver of Applicant's common law rights, the words "Professional" and "Equipment" are disclaimed apart from the mark as shown. Owner of Reg. Nos. 501,030, 774,903, and others.
For Automotive Tune-Up Equipment—Namely, Starter Switches and Resistors (Int. Cl. 9).
First use Mar. 2, 1963.

SN 241,789. Litton Precision Products, Inc., Beverly Hills, Calif. Filed Mar. 24, 1966.

LITTON NEO-MAGNETIC

For Encoders, Parts and Components (Int. Cl. 9).
First use on or about Jan. 4, 1966.

SN 264,159. Pickering & Company, Inc., Plainview, N.Y. Filed Feb. 7, 1967.

DUSTAMATIC

For Phonograph Cartridge Assemblies, and Stylus Assemblies Therefor (Int. Cl. 9).
First use May 19, 1966.

SN 266,424. The John-Wilmer Company, Inc., Atlanta, Ga. Filed Mar. 10, 1967.

AL-RITE

For Automotive Parts—Namely, Solenoids, Generators, Starters, Armatures, Alternators, and Voltage Regulators (Int. Cls. 9 and 12).
First use Jan. 16, 1967.

SN 279,011. Tasco Sales, Inc., Miami, Fla. Filed Aug. 24, 1967.

TASCO

Owner of Reg. No. 705,966.
For Illuminating Devices for Optical Instruments Including Microscopes and Telescopes, Electrical Clock Drives for Telescopes, and Parts Therefor (Int. Cl. 9).
First use July 1, 1952.

SN 279,216. Prodelin, Inc., Hightstown, N.J. Filed Aug. 28, 1967.

SPIR-O-GUIDE

For Flexible Waveguides (Int. Cl. 11).
First use on or about Nov. 11, 1966.

SN 279,613. Battery Corporation of America, Fort Lauderdale, Fla. Filed Sept. 5, 1967.

BCA

Owner of Reg. No. 829,899.
For Dry Cell Batteries (Int. Cl. 9).
First use June 8, 1967.

SN 280,101. Silvray-Litecraft Corporation, Passaic, N.J. Filed Sept. 11, 1967.

multi-forms

For Electrical Lighting Fixtures (Int. Cl. 11).
First use June 20, 1967.

SN 292,865. Sealectro Corporation, Mamaroneck, N.Y. Filed Mar. 11, 1968.

SEALECTROSWITCH

Owner of Reg. Nos. 750,059, 750,060, and 830,118.
For Electronic Components—Namely, Switches and Relays (Int. Cl. 9).
First use Jan. 15, 1968.

Class 22—Games, Toys, and Sporting Goods

SN 251,931. Peter Kennedy, Inc., Seattle, Wash. Filed Aug. 8, 1966.

PETER KENNEDY

"Peter Kennedy" identifies Michael E. Kennedy III, whose consent is of record.
For Skiing Equipment and Accessories—Namely, Skis, Ski Poles, Boots, and Ski Racks (Int. Cl. 28).
First use February 1957.

SN 252,595. Frank J. Schick, Fort Wayne, Ind. Filed Aug. 17, 1966.

CRAZIPOKR

For Deck of Cards for Playing a Parlor Game (Int. Cl. 28).
First use Aug. 10, 1966.

SN 263,367. Everlast World's Boxing Headquarters Corporation, New York, N.Y. Filed Jan. 26, 1967.

EVERLAST

Owner of Reg. Nos. 205,020, 524,970, and 803,336.

For Trampolines, Gymnasium Horses, Parallel Bars, Climbing Ropes, Bicycle Trainers, Medicine Balls, Head Guards, Punching Bags, Training Bags, Strip Ropes, Mouthpieces, Wrestling and Boxing Trunks, Shirts, Supporters, Shoe Guards, and Helmets; Boxing and Wrestling Rings, Ear and Eyebrow Protectors for Boxers, Boxing Masks, Odontoguards, Boxing Gloves, Fighting Gloves, Training Dummies, Striking-Bag Platforms, Baseballs, Baseball Gloves, Baseball Bats, Catchers' Masks, Catchers' Protectors, Dumbbells, Footballs, Guards and Protectors for Football Players, Basketballs, Roller Skates, Ice Skates, Rowing Machines, Chest Weights, Spring Exercisers, and Grip Developers (Int. Cls. 25 and 28).

First use January 1912.

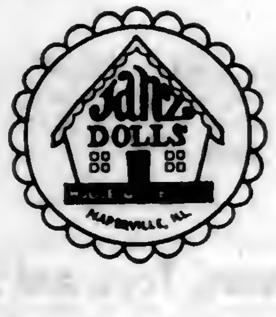
SN 265,248. George R. Vibbert, d.b.a. Stand-Rite Co., Syracuse, N.Y. Filed Feb. 23, 1967.

STAND-RITE

For Gages Adjustable To Indicate Spacing of Feet, Positioning of Ball, and Direction of Swing for Golfers (Int. Cl. 28).

First use Dec. 10, 1966.

SN 266,035. Janet L. Hall, d.b.a. House of Ideas, Naperville, Ill. Filed Mar. 6, 1967.

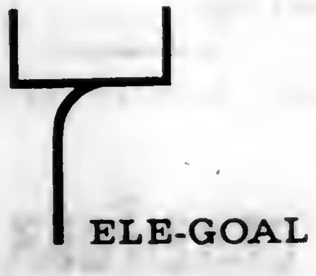


The words "Dolls," "House of Ideas," and "Naperville, Ill." are disclaimed apart from their use in the mark.

For Dolls and Dolls' Clothes (Int. Cl. 28).

First use Jan. 13, 1967.

SN 267,362. Triman Tele-Goal Ltd., Ville la Salle, Quebec, Canada. Filed Mar. 22, 1967.



Priority claimed under Sec. 44(d) on Canadian application filed Oct. 4, 1966; Reg. No. 151,901, dated July 7, 1967.

For Football Goal Posts (Int. Cl. 28).

SN 274,088. M. Edward Pope, d.b.a. Eddie Pope & Company, Altadena, Calif. Filed June 16, 1967.

DAVE DAVIS

"Dave Davis" is the name of an individual, now deceased.

For Fishing Spinners, Lake Trolls, Attractor Spinners, and Fishing Lures (Int. Cl. 28).

First use in or about 1922.

SN 276,637. Milton Bradley Company, Springfield, Mass. Filed July 24, 1967.

4CYTE

For Equipment Comprising Letters and Trays for Playing a Word Game (Int. Cl. 28).

First use May 1, 1967.

SN 282,258. Atlantic Products Corporation (Delaware corporation), Trenton, N.J., assignee of Atlantic Products Corporation (New Jersey corporation), Trenton, N.J. Filed Oct. 11, 1967.

TRIPLE CROWN

Owner of Reg. No. 821,933.

For Golf Clubs (Int. Cl. 28).

First use June 15, 1967.

SN 285,615. Robert A. Kramer, d.b.a. Kramer Designs, Birmingham, Mich. Filed Nov. 24, 1967.

OP-YOP

For Entertainment Devices—Namely, Decorated Disks Carried on Cords and Spun by Twisting Action Thereof (Int. Cl. 28).

First use Oct. 10, 1967.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

SN 245,929. Ingersoll-Rand Company, New York, N.Y. Filed May 18, 1966.

NO-SHOCK

For Electrically Driven Hand Held and Stand Mounted Drills, Sanders, Grinders, Polishers, Wire Brushes, Wrenches, Saws, Cutters, and Screwdrivers (Int. Cl. 7).

First use November 1963.

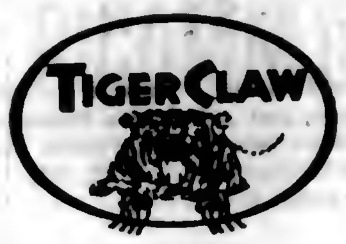
SN 248,471. Peter V. N. Heller, San Clemente, Calif. Filed June 20, 1966.

ULTRAMILL

For Unitary Machines Having Capabilities for the Grinding, Ultrasonic Machining, Milling and Forming by Heat, Pressure, and Vacuum of Precision Parts Made of Metal, Ceramics, and Other Materials (Int. Cl. 7).

First use June 19, 1962.

SN 253,918. Standard Engineering Co., Inc., Fort Dodge, Iowa. Filed Sept. 6, 1966.



For Field Cultivatros (Int. Cl. 7).

First use July 1965.

SN 263,122. Solo Kleinmotoren G.m.b.H., Maichingen, Wurttenberg, Germany. Filed Jan. 23, 1967.

SOLO

Owner of U.S. Reg. No. 832,144.

For Internal Combustion Engines (Int. Cl. 7).

First use 1951; in commerce 1953.

SN 266,771. Wean Industries, Inc., Warren, Ohio, assignee of The McKay Machine Company, Youngstown, Ohio. Filed Mar. 15, 1967.

MCKAY

For Sheet, Tin, and Strip Mill Equipment—Namely, Roller Levelers, Slitters, Shear Lines, Drawbenches, Roll Formers, Tube Mills, Stress Relieving Apparatus, Press Feed Apparatus, Strip Joiners, Coil Handling and Strip Feeding Apparatus, Flex Roll Processors, Benders and Rim Making Machines (Int. Cl. 7).

First use 1921.

SN 269,293. The Cincinnati Shaper Company, Cincinnati, Ohio. Filed Apr. 17, 1967.

CINCINNATI

Owner of Reg. Nos. 638,000 and 663,754.

For Attachments and Accessories for a Press Brake or a Shear for Processing Material From Coil, Sheet, or Plate Stock—Namely, Conveyors, Uncoilers, Straighteners, Levellers, Stackers, Destackers, Feeders, Trimmers, and Material Loaders and Unloaders (Int. Cl. 7).

First use Oct. 30, 1937.

SN 276,366. Sundstrand Corporation, Rockford, Ill. Filed July 19, 1967.

SUNDSTRAND

Owner of Reg. Nos. 525,878 and 602,292.

For Machining Centers, and More Specifically, a Multi-Purpose Machine Tool Capable of Performing a Number of Machining Operations Such as Drilling, Reaming, Tapping, End Milling, Face Milling, and Finish Boring (Int. Cl. 7).

First use May 21, 1958.

SN 276,715. Telsta Corporation, San Carlos, Calif. Filed July 24, 1967.

TEL-LASHER

For Apparatus Mounted on a Vehicle for Prelashing Strand and Cable (Int. Cl. 7).

First use Dec. 31, 1965.

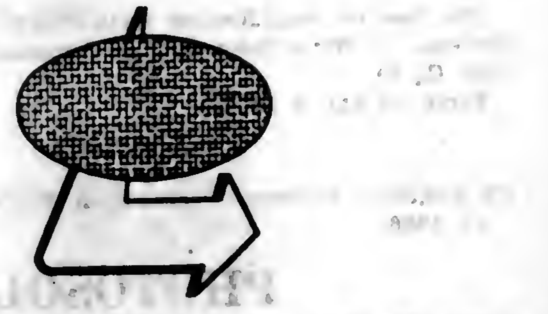
SN 276,917. Big Dutchman, Inc., Zeeland, Mich. Filed July 27, 1967.

QUICK TACK

For Pulleys (Int. Cl. 7).

First use on or before Jan. 30, 1967.

SN 278,024. Midas, Inc., Chicago, Ill. Filed Aug. 10, 1967.

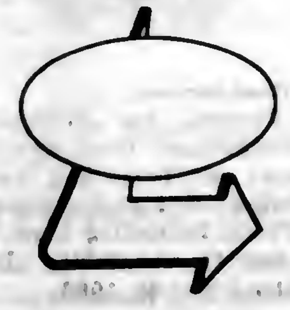


The mark is lined for the color yellow, and the color is claimed an integral part of the mark. Owner of Reg. Nos. 726,350, 803,611, and others.

For Mufflers for Internal Combustion Engines and Parts Therefor—Namely, Tail Pipes, Exhaust Pipes and Extensions, Muffler Clamps and Hangers, Dual Muffler Kits, Hollywood Type Mufflers; Positive Crankcase Ventilation Valves and Systems Used in Internal Combustion Engines for Eliminating Crankcase Emissions and Parts Therefor; Fuel Pumps; Water Pumps; Car Jacks; and Automatic and Manual Transmissions and Parts Therefor (Int. Cls. 8 and 12).

First use on or about Dec. 19, 1958.

SN 278,025. Midas, Inc., Chicago, Ill. Filed Aug. 10, 1967.



Owner of Reg. Nos. 726,350, 803,611, and others.

For Mufflers for Internal Combustion Engines and Parts Therefor—Namely, Tail Pipes, Exhaust Pipes and Extensions, Muffler Clamps and Hangers, Dual Muffler Kits, Hollywood Type Mufflers; Positive Crankcase Ventilation Valves and Systems Used in Internal Combustion Engines for Eliminating Crankcase Emissions and Parts Therefor; Fuel Pumps; Water Pumps; Car Jacks; and Automatic and Manual Transmissions and Parts Therefor (Int. Cls. 8 and 12).

First use on or about Dec. 19, 1958.

SN 278,795. General Time Corporation, Stamford, Conn. Filed Aug. 22, 1967.

MAGNATROL

For Variable Speed Drives (Int. Cl. 7).

First use Jan. 10, 1966.

Class 25 — Locks and Safes

SN 263,104. National Lock Co., Rockford, Ill. Filed Jan. 28, 1967.

Dress up your home!

For Locks, Latches, Catches, Bolts, Keys, and Key Blanks (Int. Cl. 6).

First use Jan. 10, 1966.

Class 26—Measuring and Scientific Appliances

SN 245,243. SCM Corporation, New York, N.Y. Filed May 9, 1966.

311

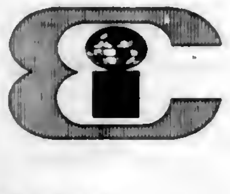
For Electric Send-Receive Data Printer for Use With Data Systems or With Conventional Communications Equipment (Int. Cl. 9).
First use Apr. 8, 1966.

SN 253,552. Photosol Corporation, Buffalo, N.Y. Filed Aug. 31, 1966.

PHOTOSOL

For Photocopy Machines and Photocopy Supplies—Namely, Sensitized Photocopy Paper and Packaging and Dispensing Containers for Materials for Developing Exposed Photocopy Paper (Int. Cls. 1 and 16).
First use Dec. 15, 1965.

SN 259,095. Dieterich Standard Corp., New Buffalo, Mich. Filed Nov. 21, 1966.



The drawing is lined for red.
For Pressure, Vacuum, and Differential Gauges of the Manometer and Diaphragm Type, Portable Gas Analyzers, Steam Calorimeters; and Parts and Accessories Therefor—Namely, Orifice Plates and Flanges, Equalizer and Connector Manifolds, Pitot Tubes, Indicating Liquids, Valves, Air Filter and Connecting Adapters, and Tubing (Int. Cls. 1 and 9).
First use on or about May 30, 1966.

SN 259,867. The Viking Corporation, Hastings, Mich. Filed Dec. 1, 1966.

FIRE-CYCLE

For Apparatus for Detecting Fires and Controlling Operation of Automatic Sprinkling Systems in Response Thereto (Int. Cl. 9).
First use on or about Oct. 19, 1966.

SN 263,576. Industrial Inventions, Incorporated, Monmouth Junction, N.J. Filed Jan. 30, 1967.

LOGICO

For Digital and Binary Voltage Indicators and Monitors (Int. Cl. 9).
First use Nov. 30, 1966.

SN 264,382. The Ashton Valve Company, Wrentham, Mass. Filed Feb. 10, 1967.

ASHTON

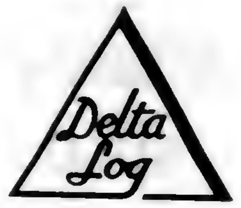
For Gages, Gage Testers, Recorders, and Pressure Testing Instruments (Int. Cl. 9).
First use 1877.

SN 264,532. Eugene Dietzgen Co., Chicago, Ill. Filed Feb. 13, 1967.

STAR

For Drawing and Ruling Pens and Pencils, Drawing Compasses and Dividers, and Accessories Therefor—Namely, Compass Extension Bars and Needle Points, and Boxed Sets of the Above Named Instruments (Int. Cl. 16).
First use on or about Dec. 1, 1966.

SN 264,945. Macbeth Corporation, Newburgh, N.Y. Filed Feb. 17, 1967.



For Electronic Photometric Light Measuring Device (Int. Cl. 9).
First use Jan. 11, 1967.

SN 270,466. Aktiebolaget Deber-Kontrol, Lidingo, Sweden. Filed May 2, 1967.

DEBER

Priority claimed under Sec. 44(d) on Swedish application filed Nov. 3, 1966; Reg. No. 119,473, dated Apr. 14, 1967.
For Registering and Regulating Level and Flow Meters and Indicators; Cash Registers; and Calculating Machines (Int. Cl. 9).

SN 272,955. Sanders Associates, Inc., Nashua, N.H. Filed June 2, 1967.

CLINI-CALL

For Electronic Data Processing System for Entry, Storage, Retrieval, Processing, Display, and Communication of Medical Data and Information (Int. Cl. 9).
First use Apr. 14, 1967.

SN 275,785. The Rank Organisation Limited, London, England. Filed July 11, 1967.

TALYLIN

For Instruments for Measuring the Straightness of Surfaces (Int. Cl. 9).
First use Sept. 25, 1964; in commerce Oct. 1, 1965.

SN 276,579. Picker X-Ray Corporation, White Plains, N.Y. Filed July 21, 1967.

LITE-GARD

For X-Ray Protective Aprons (Int. Cl. 9).
First use Mar. 16, 1967.

SN 279,296. The House of Vision, Inc., Chicago, Ill. Filed Aug. 29, 1967.

VIP-LITE

For Eyeglasses Having Plastic Lenses, and Lenses Therefor (Int. Cl. 9).
First use on or before July 15, 1967.

SN 281,620. Potter Instrument Company, Inc., Plainview, N.Y. Filed Oct. 2, 1967.

PICOMM II

Owner of Reg. No. 807,241.
For Coordinate Measuring Machines for Measuring or Laying Out Dimensional Relationships Between Points, Holes, Surfaces, and the Like in Fabricated Items and Other Objects (Int. Cl. 9).
First use Oct. 25, 1966.

SN 281,713. Motorola, Inc., Franklin Park, Ill. Filed Oct. 3, 1967.

DEVICHROME

For Illuminated Indicator for an Electronic Process Control Instrument (Int. Cl. 9).
First use June 1963.

SN 282,396. The Richards Corporation, McLean, Va. Filed Oct. 12, 1967.

STEREODAPTER

For Viewing Attachment for Use in Interpreting Aerial Photographs in Three Dimensions (Int. Cl. 9).
First use July 8, 1967.

SN 287,787. Rolock Incorporated, Fairfield, Conn. Filed Dec. 29, 1967.

DEMAND-VARIABLE

For Electronic Controller With Memory Circuit To Control Operation of Furnaces or Generators (Int. Cl. 9).
First use Oct. 9, 1967.

Class 28—Jewelry and Precious-Metal Ware

SN 259,712. Bomaé, Buena Park, Calif. Filed Nov. 30, 1966.

bomaé

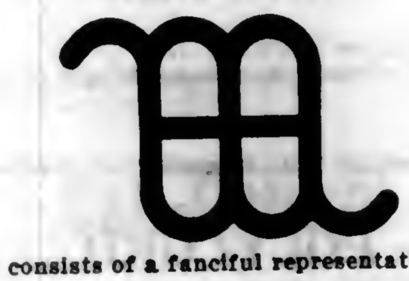
For Costume Jewelry (Int. Cl. 14).
First use in or about September 1965.

SN 264,539. Gold-Master Corp., New York, N.Y. Filed Feb. 13, 1967.

DIAMOND-MASTER

Applicant disclaims the right to the exclusive use of the word "Diamond" apart from the mark as shown.
For Men's and Women's Diamond Rings or Rings Having Diamonds Thereon (Int. Cl. 14).
First use May 27, 1964.

SN 280,615. Bart W. Mann, San Angelo, Tex. Filed Sept. 18, 1967.



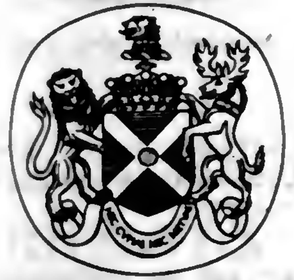
The mark consists of a fanciful representation of the letters "BWM."
For Jewelry (Int. Cl. 14).
First use Sept. 1, 1967.

SN 282,567. Freeman Industrial Enterprises Corporation, New York, N.Y. Filed Oct. 16, 1967.

CHAINSATION

For Key Chains Made of Precious Metal (Int. Cl. 14).
First use Jan. 10, 1967.

SN 283,194. The Earl of Hardwicke, Limited, New York, N.Y. Filed Oct. 24, 1967.



The Latin term "Nec Copias Nec Metvas" is translated in English as "neither covet nor fear." The lines on the drawing conform to the actual display of the lines on the specimens and do not indicate color. The mark is the coat of arms of a living individual, "Philip Grantham Yorke," whose consent is of record.
For Tie Clasps, Tie Pins, and Cuff Links (Int. Cl. 14).
First use Sept. 5, 1967.

SN 283,196. The Earl of Hardwicke, Limited, New York, N.Y. Filed Oct. 24, 1967.

THE EARL OF HARDWICKE

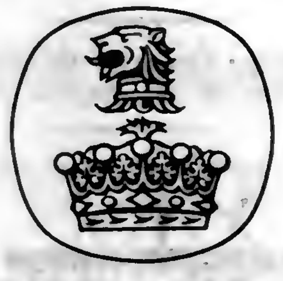
The mark is the title of a living individual, Philip Grantham Yorke, whose consent is of record.
For Tie Clasps, Tie Pins, and Cuff Links (Int. Cl. 14).
First use Sept. 5, 1967.

SN 283,198. The Earl of Hardwicke, Limited, New York, N.Y. Filed Oct. 24, 1967.

ROYSTON ARMS

The term "Royston" is the title of a living individual, Philip Grantham Yorke, whose consent is of record.
For Tie Clasps, Tie Pins, and Cuff Links (Int. Cl. 14).
First use Sept. 5, 1967.

SN 283,200. The Earle of Hardwicke, Limited, New York, N.Y. Filed Oct. 24, 1967.



For Tie Clasps, Tie Pins, and Cuff Links (Int. Cl. 14).
First use Sept. 5, 1967.

Class 29—Brooms, Brushes, and Dusters

SN 281,333. Vistron Corporation, Cleveland, Ohio. Filed Sept. 27, 1967.

LOMA

For Brooms, Brushes and Dusters, Specifically, Pastry Brushes, Shoe Polish Daubers, Bottle Brushes, Toothbrushes, Hairbrushes, Outdoor Brooms, Bowl Brushes, Pet Brushes, Floor Polishing Brushes, Shoe Polish Brushes, Household Brushes, and Personal Brushes (Int. Cl. 21).
First use prior to Aug. 7, 1966.

Class 31 — Filters and Refrigerators

SN 259,753. Clifford F. Mitchell, Garland, Tex. Filed Nov. 30, 1966.

MULTI-KUBE

For Automatic Ice Cube Making Machines for Commercial Use (Int. Cl. 11).
First use January 1965.

SN 276,591. U.S. Automatic Sales, Inc., Avenel, N.J. Filed July 21, 1967.

U.S.AUTOMATIC SALES, INC.

The term "U.S.A," and the representation of the outline map of the United States, are disclaimed apart from the mark as shown.
For Refrigerated Vending Machines for Vending Milk, Ice Cream, and Other Edibles (Int. Cl. 9).
First use July 1965.

Class 34 — Heating, Lighting, and Ventilating Apparatus

SN 246,833. Air Products and Chemicals, Inc., Allentown, Pa. Filed May 31, 1966.

Air Products

Applicant makes no claim to the words "Air Products" separate and apart from the mark as shown. Owner of Reg. No. 792,452.
For Gas Fueled Cutting and Welding Torches and Parts Thereof; Cutting Tips; Welding Tips; Electric Arc Cutting and Welding Units and Parts Therefor; Fixed and Consumable Electrodes, Cables and Power Sources for Electric Arc Cutting and Welding; Manifolds, Proportioners, Valves, and Regulators for Gas-Fueled Welding Units, Cutting Units, and Gas Shielded Electric Arc Units, Tip Cleaners, Welding Rods, Brazing Alloys, Fluxes and Solders (Int. Cls. 1, 6, and 9).
First use Oct. 1, 1965, on electric arc welding equipment.

SN 248,241. Koehring Company, Milwaukee, Wis., assignee of Master Consolidated Inc., Dayton, Ohio. Filed June 16, 1966.

atoMaster

Owner of Reg. Nos. 681,159 and 814,491.
For Burner Units and Control Components for Heaters, Primarily for Space Heaters (Int. Cl. 11).
First use Dec. 27, 1965.

SN 248,628. Middle State Manufacturing Co., Inc., Columbus, Nebr. Filed June 21, 1966.

HELIFOIL

For Crop Conditioning Equipment—Namely, Air Heaters, Blowers, Heated Air Distributing Means, and Ventilating Equipment (Int. Cl. 11).
First use June 10, 1965.

SN 267,795. The Babcock & Wilcox Company, New York, N.Y. Filed Mar. 29, 1967.

RACER

For Steam Atomizing Oil Burner for Boilers (Int. Cl. 11).
First use Apr. 9, 1965.

SN 272,560. Abex Corporation, New York, N.Y. Filed May 29, 1967.

SUPER 20

For Welding Rods, Welding Electrodes, and Hard Facing Alloys for Use in Welding (Int. Cls. 6 and 9).
First use June 23, 1959.

SN 273,950. Eutectic Welding Alloys Corporation, Flushing, N.Y. Filed June 15, 1967.

KOOLTIP

For Welding Torch (Int. Cl. 9).
First use Apr. 7, 1967.

SN 277,680. Malleable Iron Range Company, Beaver Dam, Wis. Filed Aug. 7, 1967.

MONARCH

Owner of Reg. Nos. 63,856, 285,700, and 297,152.
For Coal and Wood Ranges, Gas Ranges, Gas Water Heaters, and Kitchen Ventilating Hoods (Int. Cl. 11).
First use 1899 on coal and wood ranges.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 257,386. Robert S. Hanser, d.b.a. Hanser Products Co., Saddle River, N.J. Filed Oct. 27, 1966.

BITS 'N PIECES

For Tire-Repair Inserts of Rubber and Similar Materials in So-Called Mushroom, Bow String, and Other Forms (Int. Cl. 12).
First use Mar. 1, 1965.

SN 261,101. H. K. Porter Company, Inc., Pittsburgh, Pa. Filed Dec. 19, 1966.

GOLD-STRIPE

For Conveyor Belting Composed of Cotton and Synthetic Fabrics (Int. Cl. 7).
First use June 1959.

SN 276,836. Habasit, Ltd., Reinach-Basel, Switzerland. Filed July 26, 1967.

SOUPLEX

For Flat Belting for Machinery (Int. Cl. 7).
First use July 1, 1963; in commerce July 1, 1963.

SN 276,838. Habasit, Ltd., Reinach-Basel, Switzerland. Filed July 26, 1967.

POLYCORD

For Flat Belting for Machinery (Int. Cl. 7).
First use July 1, 1963; in commerce July 1, 1963.

SN 279,699. Wolverine Fabricating & Mfg. Co., Inc., Inkster, Mich. Filed Sept. 5, 1967.

WOLVERINE *Gaskets*

Applicant disclaims the word "Gaskets," apart from the mark as shown.
For Gasket Material and Gaskets (Int. Cl. 17).
First use Aug. 11, 1967.

SN 280,047. The B. F. Goodrich Company, Akron, Ohio. Filed Sept. 11, 1967.

TITAN

For Hose, Made Wholly or Partly of Rubber or Having Rubber Incorporated Therewith (Int. Cl. 17).
First use March 1898.

SN 281,786. The General Tire & Rubber Company, Akron, Ohio. Filed Oct. 4, 1967.

≡ GTW ≡

For Tires (Int. Cl. 12).
First use Sept. 12, 1967.

SN 283,001. The Goodyear Tire & Rubber Company, Akron, Ohio. Filed Oct. 20, 1967.

VYTA-GLASS

For Tires (Int. Cl. 12).
First use June 13, 1967.

Class 36 — Musical Instruments and Supplies

SN 264,644. Babolat, Maillot, Witt, Lyon, France. Filed Feb. 14, 1967.

SAVAREZ

For Guitar Strings (Int. Cl. 15).
First use 1952; in commerce 1958.

SN 266,884. Bernardo Herger, Rio Piedras, Puerto Rico. Filed Mar. 16, 1967.

GUARANI

For Phonograph Records and Magnetic Tapes (Int. Cl. 9).
First use July 16, 1957.

SN 267,761. Martin Electronics Manufacturing Corp., Hialeah, Fla. Filed Mar. 28, 1967.

Call-Control

For Communication Tape Recorders (Int. Cl. 9).
First use June 17, 1966.

SN 268,763. Rajah Zeetar Corp., Brooklyn, N.Y. Filed Apr. 10, 1967.

RAJAH ZEETAR

For Stringed Musical Instruments—Namely, Guitars and Sitars (Int. Cl. 15).
First use on or about Jan. 2, 1967.

SN 269,310. Bernardo Herger, Rio Piedras, Puerto Rico. Filed Apr. 17, 1967.

RICO-VOX

For Phonograph Records and Magnetic Tapes (Int. Cl. 9).
First use June 16, 1968.

SN 270,145. Joseph J. Meadow, Jr., d.b.a. Scenic Sound, Lookout Mountain, Tenn. Filed Apr. 27, 1967.

SCENIC SOUND

No claim is made to the word "Sound" except in association with the mark as shown.
For Phonograph Records (Int. Cl. 9).
First use Mar. 11, 1967.

SN 270,809. Ponder & Best, Inc., Los Angeles, Calif. Filed May 5, 1967.

VIVITONE

For Magnetic Tape (Int. Cl. 9).
First use Sept. 20, 1966.

SN 272,720. The Gramophone Company Limited, Hayes, Middlesex, England. Filed May 31, 1967.

WAVERLEY

For Phonograph Records (Int. Cl. 9).
First use January 1966; in commerce July 1966.

SN 273,310. Rhythm Band, Inc., Fort Worth, Tex. Filed June 7, 1967.

ARTIST LTD.

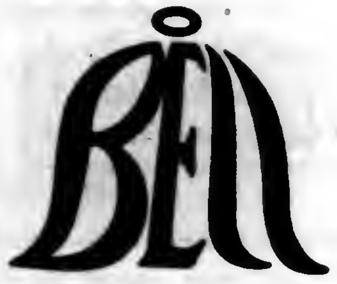
For Musical Instruments of the Percussion Type Having a Series of Metal Tone Bars Graduated in Length and Sounded by Striking With Mallets and Recorders (Int. Cl. 15).
First use June 28, 1961.

SN 273,901. Playtape, Inc., New York, N.Y. Filed June 14, 1967.

"Hipster"

For Portable Cartridge Tape Players (Int. Cl. 9).
First use Mar. 1, 1967.

SN 275,219. Bell Records, Inc., New York, N.Y. Filed July 3, 1967.



For Phonograph Records (Int. Cl. 9).
First use Sept. 1, 1950.

SN 275,220. Bell Records, Inc., New York, N.Y. Filed July 3, 1967.

MALA

For Phonograph Records (Int. Cl. 9).
First use Jan. 29, 1960.

SN 276,639. Camp Associates, Chicago, Ill. Filed July 24, 1967.

AMAZON ACE

For Magnetic Tape on Which Episodes Are Recorded for Radio Broadcast (Int. Cl. 9).
First use May 2, 1967.

SN 276,930. Ehrenreich Photo-Optical Industries, Inc., Garden City, N.Y. Filed July 27, 1967.

ULTIMA

Owner of Reg. No. 721,945.
For Tape Recorders (Int. Cl. 9).
First use in or about July 1960.

SN 278,903. Shout Records, Inc., New York, N.Y. Filed Aug. 23, 1967.

SHOUT

For Phonograph Records (Int. Cl. 9).
First use June 27, 1966.

SN 285,696. Ernie Ball, Inc., Tarzana, Calif. Filed Nov. 28, 1967.

SUPER SLINKY

Without waiving common law rights, applicant disclaims the word "Super" apart from the mark as shown.
For Strings for Musical Instruments—Namely, Guitars (Int. Cl. 15).
First use in or about August 1963.

SN 285,697. Ernie Ball, Inc., Tarzana, Calif. Filed Nov. 28, 1967.

CUSTOM GAUGE

Without waiving common law rights, applicant disclaims the word "Gauge" apart from the mark as shown.
For Strings for Musical Instruments—Namely, Guitars (Int. Cl. 15).
First use on or about Jan. 31, 1962.

Class 37 — Paper and Stationery

SN 269,472. Eugene Potter Thornton, Murrells Inlet, S.C. Filed Apr. 18, 1967.

THORNWOOD

For Loose Leaf School Paper and Wood Cased Pencils (Int. Cl. 16).
First use Dec. 15, 1966.

SN 270,051. James W. Fair, d.b.a. Study-Scope Company, Tyler, Tex. Filed Apr. 26, 1967.

STUDY-SCRIBE

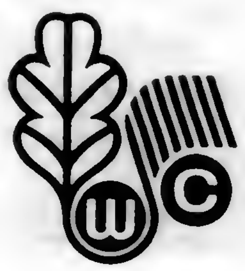
For Folder With Transparent Sheet for Writing Answers to Questions (Int. Cl. 16).
First use on or about Jan. 25, 1967.

SN 272,457. Allied Paper Corporation, Chicago, Ill. Filed May 26, 1967.

CAMELIA MATTE

Applicant disclaims the word "Matte" except as a part of the combination word mark "Camelia Matte."
For Blade-Coated Textbook Papers (Int. Cl. 16).
First use Mar. 20, 1967.

SN 275,970. Wescor Corporation, Hawesville, Ky. Filed July 13, 1967.



For Semichemical Corrugating Medium Material (Int. Cl. 16).
First use Apr. 21, 1967.

Class 38 — Prints and Publications

SN 187,113. The Joseph & Feiss Company, Cleveland, Ohio. Filed Feb. 20, 1964.

CLOTHESMANSHIP

For Booklet Published From Time to Time, and at Least Once Annually, for Advertising Men's Tailored Clothing—Namely, Suits, Topcoats, Overcoats, Slacks, and Jackets (Int. Cl. 16).
First use Feb. 15, 1963.

SN 263,738. Billboard Publications, Inc., Cincinnati, Ohio, by change of name from The Billboard Publishing Company, Cincinnati, Ohio. Filed Feb. 1, 1967.

AMERICAN ARTIST

For Magazine (Int. Cl. 16).
First use in or about January 1940.

SN 271,136. Dennison Manufacturing Company, Framingham, Mass. Filed May 10, 1967.

STENSO

Owner of Reg. Nos. 409,667 and 744,095.
For Lettering and Numbering Aids—Namely, Self-Adhesive and Transfer Letters and Numbers (Int. Cl. 16).
First use Feb. 27, 1967.

SN 271,796. Hoeganaes Corporation, New York, N.Y. Filed May 18, 1967.

P/M NEWSLETTER

For Trade Letter for the Powder Metallurgy Industry (Int. Cl. 16).
First use April 1967.

SN 274,212. The Register and Tribune Syndicate, Inc., Des Moines, Iowa. Filed June 19, 1967.

TUMBLEWEEDS

For Newspaper and Magazine Cartoon Feature (Int. Cl. 16).
First use Sept. 6, 1965.

SN 274,213. The Register and Tribune Syndicate, Inc., Des Moines, Iowa. Filed June 19, 1967.

SOFT-SELL SAM

For Newspaper and Magazine Cartoon Feature (Int. Cl. 16).
First use Mar. 6, 1967.

SN 275,164. The Optical Publishing Co., Inc., Pittsfield, Mass. Filed June 30, 1967.

Optical Spectra

The drawing is lined for the colors blue, green, yellow, and red.
For Technical Magazine Distributed Periodically to the Optical Industry (Int. Cl. 16).
First use Feb. 17, 1967.

SN 278,712. Magazine Management Company, New York, N.Y. Filed Aug. 21, 1967.

STAG

For Magazine Published Periodically (Int. Cl. 16).
First use in or about December 1949.

SN 281,817. The Petroleum Engineer Publishing Company, Dallas, Tex. Filed Oct. 4, 1967.

pm report...

For Periodic Report on Modern Management in the Oil and Gas Industry (Int. Cl. 16).
First use Apr. 1, 1967.

SN 290,052. McGraw-Hill, Inc., New York, N.Y. Filed Feb. 1, 1968.

POSTGRADUATE MEDICINE

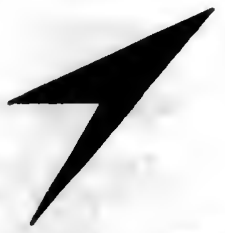
For Monthly Medical Magazine (Int. Cl. 16).
First use January 1947.

SN 292,329. Success Motivation Institute, Inc., Waco, Tex. Filed Mar. 4, 1968.

SUCCESS MOTIVATION

Owner of Reg. No. 722,844 and others.
For Educational and Training Courses Comprising Books, Booklets, and Related Printed Instructional Material, and Sound Recordings Pertaining Thereto (Int. Cl. 16).
First use at least as early as Mar. 16, 1962.

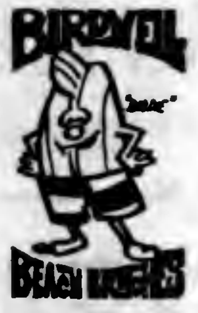
SN 292,330. Success Motivation Institute, Inc., Waco, Tex. Filed Mar. 4, 1968.



Owner of Reg. No. 722,587 and others.
For Educational and Training Courses Comprising Books, Booklets, and Related Printed Instructional Material, and Sound Recordings Pertaining Thereto (Int. Cl. 16).
First use at least as early as Mar. 16, 1962.

Class 39 — Clothing

SN 247,380. Carrie E. Mann, d.b.a. Birdwell Clothes, Santa Ana, Calif. Filed Mar. 14, 1966.



Applicant disclaims the words "Beach Britches" apart from the mark as shown.
For Surfing Trunks (Int. Cl. 25).
First use August 1962.

SN 248,360. Pioneer Dress Corporation, Sumter, S.C. Filed June 17, 1966.

LIFE·SET

For Boys' Slacks, Shirts, Jackets, Coats, and Suits Consisting of Coats or Jackets and Slacks; and Girls' Slacks, Shirts, Dresses, Skirts, Jackets, Jumpers, and Blouses (Int. Cl. 25).
First use Mar. 12, 1965.

SN 255,482. United States Rubber Company, New York, N.Y. Filed Sept. 29, 1966.

KNOCKAROUNDS

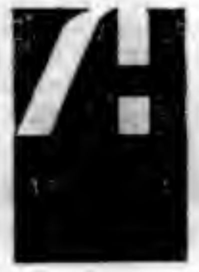
For Canvas and Rubber Shoes (Int. Cl. 25).
First use Sept. 9, 1966.

SN 256,278. Formaid Co., Boston, Mass. Filed Oct. 12, 1966.

THE MISTIES

For Brassieres (Int. Cl. 25).
First use Sept. 13, 1966.

SN 260,388. American Hospital Supply Corporation, Evanston, Ill. Filed Dec. 9, 1966.



The words "Hospital Supply" are disclaimed apart from the mark as shown.

For Gowns, Nightshirts, Pajamas, Robes, Slippers, Infants' Shirts and Gowns, Aprons, Shoes and Shoe Covers, Bibs, and Diapers (Int. Cl. 25).

First use on or before Sept. 1, 1964.

SN 261,706. Blue Star Shoes, Inc., Lawrence, Mass. Filed Dec. 30, 1966.

GUIDELINE

For Children's Shoes (Int. Cl. 25).

First use Nov. 9, 1966.

SN 264,691. J. P. Stevens & Co., Inc., New York, N.Y. Filed Feb. 14, 1967.

TEEN SCENE

The word "Teen" is disclaimed apart from the mark as shown.

For Hosiery (Int. Cl. 25).

First use Feb. 3, 1967.

SN 265,066. Henry A La Pensee, Inc., New York, N.Y. Filed Feb. 20, 1967.

HENRY
A LA
PENSÉE

"Henry A La Pensee" is not the name of any known living individual.

For Women's Dresses, Coats, Suits, Sweaters; and Accessories—Namely, Scarves, Gloves, and Belts (Int. Cl. 25).

First use May 15, 1938.

SN 266,236. The Kendall Company, Walpole, Mass. Filed Mar. 8, 1967.

BRACER

Owner of Reg. No. 501,939.

For Support Hose (Int. Cl. 25).

First use Oct. 6, 1966.

SN 268,244. Trimfoot Company, St. Louis, Mo. Filed Apr. 3, 1967.

WEE KIDS

Owner of Reg. No. 715,812.

For Children's Shoes (Int. Cl. 25).

First use on or about Mar. 3, 1939.

SN 273,362. Austin Reed Limited, London, England. Filed June 8, 1967.

AUSTIN REED
Of Regent Street

"Austin Reed" was the founder of applicant corporation, now deceased. Applicant disclaims the words "of Regent Street" apart from the mark as shown, reserving all common law rights which it may have acquired in said term. Owner of British Reg. No. 873,776, dated Jan. 1, 1965; and U.S. Reg. No. 578,138.

For Complete Articles of Clothing for Men—Namely, Jackets, Suits, Topcoats, Trousers, Raincoats, Shirts, Collars, Socks, Underwear, Neckties, Gloves, and Shoes (Int. Cl. 25).

First use 1933; in commerce 1952.

SN 273,491. Endicott Johnson Corporation, Endicott, N.Y. Filed June 9, 1967.

TRAK TRED

For Shoe Soles (Int. Cl. 25).

First use Mar. 15, 1967.

SN 273,524. W. S. Peebles & Co., Inc., Lawrenceville, Va. Filed June 9, 1967.

GOLDEN CROWN

For Men's and Boys' Outer Shirts, Sweaters, and Socks (Int. Cl. 25).

First use September 1964.

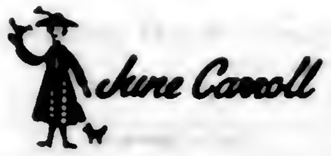
SN 274,413. The Christie Brothers Fur Corp., New York, N.Y. Filed June 21, 1967.

THE BROTHERS CHRISTIE

For Fur Garments (Int. Cl. 25).

First use Sept. 1, 1965.

SN 274,703. Bayard Shirt Corp., New York, N.Y. Filed June 26, 1967.



"June Carroll" is the name of a living individual whose consent is of record.

For Dresses (Int. Cl. 25).

First use May 9, 1967.

SN 275,848. Grey Hosiery Mills, d.b.a. Mary Grey Hosiery Mills, Bristol, Va. Filed July 12, 1967.

kneelets
by
Mary Grey

"Mary Grey" identifies "Mary Grey Sabine," whose consent is of record. Owner of Reg. Nos. 396,554, 565,274, and others.

For Knee-Length Hosiery for Women Adopted for Wear With Pants and Long Skirts (Int. Cl. 25).

First use May 1966.

SN 279,380. Danchin, La Madeleine, France. Filed Aug. 30, 1967.

DANCHIN

Owner of French Reg. No. 700,300, dated Sept. 10, 1965.

For Tailored Suits, Overcoats, Blazers, Dresses, Skirts, and Lingerie (Int. Cl. 25).

SN 279,590. Anne Fogarty, Inc., New York, N.Y. Filed Sept. 5, 1967.

ANNE FOGARTY

"Anne Fogarty" is the name of a living individual whose consent is of record. Owner of Reg. No. 713,232.

For Ladies' Clothing and Accessories Therefor—Namely, Dresses, Suits, Blouses, Costumes, Coats, Slacks, Jackets, Shoes, and Fur Garments (Int. Cl. 25).

First use at least by July 1960.

SN 280,901. Unishops, Inc., Jersey City, N.J. Filed Sept. 21, 1967.

LOCAL 10

For Men's and Boys' Work Jeans, Dress Shirts, Sport Shirts, Sweaters, Slacks; Boys' Outerwear—Namely, Outdoor Jackets; and Men's and Boys' Suits (Int. Cl. 25).

First use July 10, 1967.

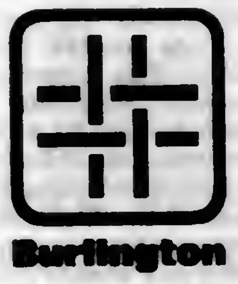
SN 283,142. Modern Globe, Inc., Pawtucket, R.I. Filed Oct. 23, 1967.

LOLLI-TOTS

For Pajamas and Underwear (Int. Cl. 25).

First use on or about Oct. 2, 1967.

SN 283,978. Burlington Industries, Inc., New York, N.Y. Filed Nov. 2, 1967.



Owner of Reg. Nos. 138,483, 504,523, and 740,085.

For Men's, Women's, and Children's Hosiery (Int. Cl. 25).

First use Sept. 21, 1967.

SN 288,745. Maidenform, Inc., New York, N.Y. Filed Jan. 15, 1968.

UNDER-COVER

Owner of Reg. No. 585,345.

For Foundation Garments and Lingerie (Int. Cl. 25).

First use Dec. 17, 1951.

Class 40—Fancy Goods, Furnishings, and Notions

SN 205,825. Reiner Industries, Inc., Pico Rivera, Calif. Filed Nov. 9, 1964.

Applicant disclaims the exclusive right to the representation of the pin curl clip apart from the mark as shown. Owner of Reg. Nos. 529,085, 671,882, and 769,617.

For Ladies' Hair Accessories—Namely, Hair Rollers, Headbands, and Bows (Int. Cl. 26).

First use in or about February 1962.

SN 278,626. Franklin Tsu, Kowloon, Hong Kong. Filed Aug. 1, 1967.

HAIRLON

For Wigs and Wiglets (Int. Cl. 26).

First use May 1, 1966; in commerce May 1, 1966.

Subj. to Intf. with SN 263,541.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 269,173. Commercial Carpet Corporation, New York, N.Y. Filed Apr. 14, 1967.

WOOL 6

The word "Wool" is disclaimed apart from the mark as shown.

For Carpets and Rugs Wholly or in Substantial Part of Wool (Int. Cl. 27).

First use Mar. 13, 1967.

SN 269,939. Stevcoknit Textile Co., New York, N.Y. Filed Apr. 24, 1967.

Acritones

For Fabric Piece Goods for Making Into Dresses, Sportswear, and Blouses (Int. Cl. 24).

First use Aug. 28, 1963.

SN 283,293. West Point-Pepperell, Inc., West Point, Ga. Filed Oct. 24, 1967.

LESCARE

For Carpets and Rugs (Int. Cl. 27).
First use Sept. 28, 1967.

SN 283,793. Gordax Corporation of America, New York, N.Y. Filed Oct. 31, 1967.

JUNGLAND

For Rugs (Int. Cl. 27).
First use Feb. 27, 1967.

SN 283,865. Cannon Mills Company, Kannapolis, N.C. Filed Nov. 1, 1967.

TOGA

For Towels, Wash Cloths, and Terry Cloth (Int. Cl. 24).
First use Oct. 9, 1967.

SN 283,979. Burlington Industries, Inc., New York, N.Y. Filed Nov. 2, 1967.

Burlington

Owner of Reg. Nos. 138,483, 504,523, and 740,085.
For Greige and Finished Fabrics in the Piece of All Types for Use in Men's, Women's, and Children's Apparel, in Home Furnishings, Carpets and Rugs, and in the Industrial Field (Int. Cl. 24).
First use Oct. 19, 1967.

SN 293,004. Shapiro & Son Bedspread Corp., New York, N.Y. Filed Mar. 12, 1968.

EVERPUFF

For Bedspreads (Int. Cl. 24).
First use Mar. 1, 1968.

Class 43 — Thread and Yarn

SN 275,623. Brunswick Worsted Mills, Inc., Moosup, Conn. Filed July 10, 1967.

Brunswick

Owner of Reg. No. 509,847.
For Knitting Yarn (Int. Cl. 23).
First use about Jan. 1, 1960.

SN 283,977. Burlington Industries, Inc., New York, N.Y. Filed Nov. 2, 1967.

Burlington

Owner of Reg. Nos. 138,483, 504,523, and 740,085.
For Yarns (Int. Cl. 23).
First use Sept. 11, 1967.

Class 44 — Dental, Medical, and Surgical Appliances

SN 236,468. American Hospital Supply Corporation, Evanston, Ill., assignee of Convertors Incorporated, Newark, N.J. Filed Jan. 14, 1966.

IN THE SAME TRADITION

Applicant disclaims the words "Lister" and "Semmelweis" apart from the mark as shown.
For Sterile, Disposable, Non-Woven Surgical Drapes, Towels, and Covers; and Sterile Surgical Dressings (Int. Cl. 5).
First use on or before Feb. 1, 1964.

SN 287,613. American Optical Corporation, Southbridge, Mass. Filed Dec. 27, 1967.

AO

Owner of Reg. Nos. 268,220, 443,356, and 444,749.
For Apparatus for Diagnostic and Treating Purposes and Components Thereof—Namely, Cardiac Monitors; Defibrillators; Heartbeat Pacing Apparatuses; Alarm and Recorder Logic Units; Data Storage Systems; Oscilloscopes; Chart Recorders; Heart Rate Meters; Electrodes; Cardiac Resuscitation Instruments; Diagnostic and Monitoring Systems; Oximeters; Fluid Pumps; Fluid Pump Drive Modules; Depolarization Instruments; Heart-Lung Machines, Including Components Thereof and Accessories Therefor; Oxygen Exchange Equipment, and Accessories Therefor, Including Size Conversion Kits, Discs and Spacers, Leveling Devices, Catheters, Filters, Stopcocks, and Clamps; Heat Exchangers; Filter and Bubble Traps; Reservoirs; Crank Handles; Pressure Gauges; Hypothermia Apparatuses; Valves; Bag Masks; Autoclaving Boxes; Cannulae and Cannula Sets; Connectors; and Tubing (Int. Cl. 10).
First use Oct. 11, 1961.

Class 45 — Soft Drinks and Carbonated Waters

SN 266,227. The Grand Union Company, East Paterson, N.J. Filed Mar. 8, 1967.

PENGUIN

For Carbonated Beverages Used as Soft Drinks and as Mixers (Int. Cl. 32).
First use at least as early as May 27, 1937.

SN 271,119. Branaco-Op International Inc., d.b.a. Branaco-Op Int. Inc., Newark, N.J. Filed May 10, 1967.

JUPINA

For Soft Drinks (Int. Cl. 32).
First use Apr. 27, 1964.
Subj. to Intf. with SN 273,403.

SN 281,681. Canada Dry Corporation, New York, N.Y. Filed Oct. 3, 1967.

COMBO

For Carbonated Beverages Used as Soft Drinks and as Mixers (Int. Cl. 32).
First use on or before July 31, 1967.

Class 46 — Foods and Ingredients of Foods

SN 223,811. Moccomaat N.V., IJsselstein, Netherlands. Filed July 20, 1965.

MOCCOMAAT

Owner of Dutch Reg. No. 149,325, dated July 5, 1963.
For Coffee (Int. Cl. 30).

SN 243,258. New England Apple Products Co., Inc., Littleton, Mass. Filed Apr. 12, 1966.

The name "Johnny Appleseed" is that of the deceased historical character, and the pictorial representation is that of said character.
For Apple Juice, Apple-Cranberry Juice, Apple Sauce, Apricot Nectar, Cider, Cider Vinegar, Cranberry Juice, Orange Food Drink, Prune Juice, and Vinegar (Int. Cls. 29, 30, 32, and 33).
First use 1919 on vinegar.

SN 250,130. Bendicks (Mayfair) Limited, Winchester, England. Filed July 13, 1966.

BENDICKS SUPERFINE CHOCOLATES

No exclusive claim is made to the words "Superfine Chocolates" apart from the mark as shown.
For Chocolates (Int. Cl. 30).
First use in or about 1933; in commerce in or before July 1964.

SN 250,932. Ralston Purina Company, St. Louis, Mo., assignee of Chic-N-Krisp, Inc., Kansas City, Mo. Filed July 25, 1966.

ChicnKrisp

Applicant disclaims the word "Chicn," apart from the mark shown, but waives none of its common law rights thereto. Owner of Reg. No. 767,946.
For Frozen, Uncooked, Batter-Coated Chicken Parts (Int. Cl. 29).
First use Jan. 8, 1963.

SN 252,397. Meat Industry Suppliers, Inc., Northfield, Ill. Filed Aug. 15, 1966.

HEART OF SPICE

No registration rights are claimed for the word "Spice" apart from the mark shown, but applicant waives none of its common law rights therein.
For Spices (Int. Cl. 30).
First use on or about Jan. 13, 1942.

SN 255,561. Vieon's Donuts, Inc., Houston, Tex. Filed Sept. 30, 1966.

VIEON'S

For Doughnuts (Int. Cl. 30).
First use Feb. 1, 1966.

SN 260,148. General Industries Corporation, Salt Lake City, Utah. Filed Dec. 6, 1966.

Owner of Reg. Nos. 655,568 and 813,564.
For Frozen Confection—Namely, Fruit Ices and Ice Cream (Int. Cl. 30).
First use Nov. 23, 1966.

SN 262,260. General Foods Corporation, White Plains, N.Y. Filed Jan. 10, 1967.

MINUTE

Owner of Reg. Nos. 52,119, 819,994, and others.
For Powdered Preparation for Making an Instant Breakfast Drink Which Is a Substitute for the Breakfast Meal (Int. Cl. 30).
First use Dec. 8, 1966.

SN 265,096. North Pacific Canners & Packers, Inc., Portland, Oreg. Filed Feb. 20, 1967.

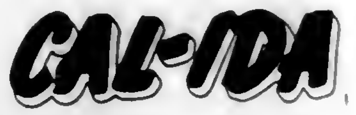
FLAV-R-DIET

For Canned and Frozen Fruits and Vegetables (Int. Cl. 29).
First use July 9, 1965.

SN 265,744. Star-Kist Foods, Inc., Terminal Island, Calif. Filed Mar. 1, 1967.

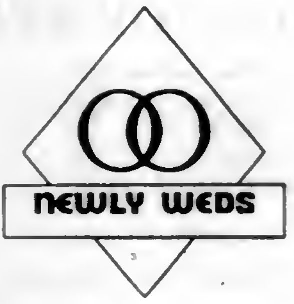
Owner of Reg. No. 428,331.
For Canned Fish (Int. Cl. 29).
First use Nov. 3, 1945.

SN 267,192. J. R. Simplot Company, Boise, Idaho. Filed Mar. 20, 1967.



Owner of Reg. Nos. 554,662 and 788,798.
For Processed Dehydrated Potato Flakes (Int. Cl. 29).
First use at least as early as Apr. 15, 1966.

SN 267,347. Newly Weds Baking Co., Chicago, Ill. Filed Mar. 22, 1967.



Owner of Reg. No. 555,827.
For English Muffins and Breading and Cracker Meal Mixes (Int. Cl. 30).
First use prior to Jan. 15, 1965.

SN 267,413. The New Pines, Inc., Miami, Fla., assignee of Antonio Fernandez, d.b.a. Los Pinos Nuevos, Miami, Fla. Filed Mar. 23, 1967.

LOS PINOS NUEVOS

The words "Los Pinos Nuevos" are the Spanish for "the new pines."
For Bread, Crackers, Biscuits, and Cake; Candies, Pastry, Preserves, Candied Fruit, and Nougat-Like Pastes (Int. Cl. 30).
First use Sept. 12, 1961.

SN 269,057. Carnation Company, Los Angeles, Calif. Filed Apr. 13, 1967.

CARNATION

Owner of Reg. Nos. 75,751, 788,233, and others.
For Frozen Fresh and Cooked Vegetables (Int. Cl. 29).
First use Apr. 12, 1967.

SN 269,172. Chelten House Products Inc., Philadelphia, Pa. Filed Apr. 14, 1967.

CHELTEN HOUSE

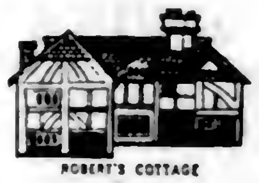
Owner of Reg. No. 620,039.
For Salad Dressing, Ham Glaze, Sauces—Namely, Marinade and Basting Sauce, Hollandaise Sauce, Tartar Sauce, Raisin Sauce, Spare Rib Sauce, Seafood Cocktail Sauce, Barbecue Sauce, Bearnaise Sauce, and Wine Sauce; Garlic Spread, Vinegar, Spices, Meat Tenderizer, Preserved Fruits, Honey, Tapioca Mix, Cheese, Cocktail Onions Packed in Liquid, Olives and Stuffed Olives Sold in Bottles, Prepared Antipasto-Type Vegetables Sold in Bottles, Prepared Melon Sold in Bottles, Caviar, Clam Chowder Fish Soups, Grenadine, Rock Candy Syrup, Rock Candy, Preserved Cocktail Cherries in Syrup, Chutney, Capers, Jams and Jellies, Ginger, Cocktail Clams, Cocktail Oysters, Sardines, Anchovies, Antipasto, Cocktail Frankfurters, and Pate de Foi (Int. Cls. 29 and 30).
First use Oct. 9, 1953.

SN 269,522. The Dietene Company, d.b.a. The Delmark Company, Minneapolis, Minn. Filed Apr. 19, 1967.

SMART

For Low Calorie Meal Substitute in Powder Form for Mixing With Liquids To Make a Beverage (Int. Cl. 5).
First use Apr. 17, 1967.

SN 270,788. John Parkyn Jeffcock, Shamley Green, Surrey, England. Filed May 5, 1967.



Owner of British Reg. No. B882,426, dated July 28, 1965.
For Fresh and Frozen Poultry, Jellies (for Food), Jams, Marmalade, and Lemon Cheese Curd, Fresh Eggs, Butter, Margarine, Fluid Cream, Whey, Yogurt, Fruit Curd, Fruit Preserves, and Vegetable Preserves (Int. Cl. 29).

SN 271,606. Empacadora del Caribe, Inc., San Juan, Puerto Rico. Filed May 16, 1967.

LECHONCITO

The English translation of the Spanish word "Lechoncito" is "shoat" or "young pig."
For Lard (Int. Cl. 29).
First use July 22, 1964.

SN 272,406. Riviana Foods Inc., Houston, Tex. Filed May 25, 1967.

RIVER

Owner of Reg. No. 561,034.
For Rice (Int. Cl. 30).
First use March 1912.

SN 272,832. Hartz Mountain Products Corp., New York, N.Y. Filed June 1, 1967.

WONDER FLAKES

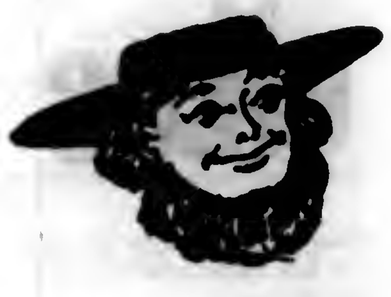
The word "Flakes" is disclaimed apart from the mark as shown.
For Tropical Fish Food (Int. Cl. 31).
First use Mar. 3, 1967.
Subj. to Intf. with SN 266,369.

SN 273,099. The Pillsbury Company, Minneapolis, Minn. Filed June 5, 1967.

FRENCH FRAUDS

For Snack Food Product Prepared From Dehydrated Potatoes and Corn Flour (Int. Cl. 30).
First use May 3, 1967.

SN 273,525. Pennsylvania Dutch Co., Inc., d.b.a. Pennsylvania Dutch Company, Pennsylvania Dutch Foods, and Pennsylvania Dutch Candies, Mount Holly Springs, Pa. Filed June 9, 1967.



The portrait shown on the mark is fanciful.
For Confectionery—Namely, Candy, Fudge, Coated Nuts, and Chocolate Covered Pretzels; Canned or Bottled Fruits, Berries, Cantaloupe, and Vegetables; Canned Applesauce; Watermelon Rind; Soups; Prepared Foods—Namely, Baked Beans, Scrapple, and Potato Salad; Fruit Jellies, Jams, and Marmalade, Apple Butter and Prune Butter; Peanut Butter; Honey; Dried Fruits; Salted Nuts; Molasses; Pure Fruit Syrups for Pancakes, Toppings, and Table Use; Sauces—Namely, Barbecue Sauce, Huckleberry Sauce, Catsup Sauce, Chili Sauce, Cocktail Sauce, Ham Glaze Sauce, Horseradish Flavor Sauce, Sharp Mustard Sauce, Pepper-Mustard Sauce and Relish Sauce; Salad Dressings; Food Dips of a Cheese Nature; French Fried Onion Rings; Stuffed Gherks; Bur Gherkins; Parched Corn; Pickled Vegetables; Pimento, Dill Tomatoes, Chow Chow, Vegetable Relishes, Barbecue Relish, Olives; Snack Mixes Containing Corn Puffs, Pretzel Sticks, Prepared Cereals, Pepitas and Nuts; Pretzels, Food Dressings of an Herb Nature; Cracker Balls Which Are Hard Trenton Crackers; and Canned or Bottled Fruit and Vegetable Juices (Int. Cls. 29, 30, and 32).
First use July 6, 1957.

SN 275,650. Fountain Industries, Inc., Albert Lea, Minn. Filed July 10, 1967.

FOUNTAIN BRAND

For Coffee, Tea, Non-Dairy Creme, Sugar, and Broth Concentrate for Mixing With Hot Water and Sold in Special Disposable Dispenser Cartridges (Int. Cl. 30).
First use May 31, 1966.

SN 275,910. The Borden Company, New York, N.Y. Filed July 13, 1967.

NEO-MULL-SOY

Owner of Reg. No. 336,539.
For Hypoallergenic Infant Soy Formula for Use as a Milk Formula Replacement (Int. Cl. 5).
First use Jan. 30, 1967.

SN 277,020. Canada Packers Limited, Toronto, Ontario, Canada. Filed July 28, 1967.

**DANSK
KØKKEN**

No registration rights are claimed for the word "Dansk" apart from the mark as shown. The words "Dansk Kokken" are translated to mean "Danish kitchen."
For Pork Products—Namely, Canned Hams, Canned Shoulders, and Sliced Bacon (Int. Cl. 29).
First use Mar. 28, 1966; in commerce Mar. 28, 1966.

SN 277,535. Carnation Company, Los Angeles, Calif. Filed Aug. 4, 1967.

CARNATION

Owner of Reg. Nos. 75,751, 841,705, and others.
For Weight Control Foods—Namely, Canned Fruits and Vegetables, and Salad Dressing (Int. Cl. 5).
First use June 23, 1967.

SN 277,536. Carnation Company, Los Angeles, Calif. Filed Aug. 4, 1967.

SLENDER

Owner of Reg. Nos. 574,591 and 840,600.
For Weight Control Foods—Namely, Canned Fruits and Vegetables, and Salad Dressing (Int. Cl. 5).
First use June 23, 1967.

SN 278,870. Carnation Company, Los Angeles, Calif. Filed Aug. 23, 1967.

CONTADINA

The English translation of the Italian word "Contadina" is "peasant." Owner of Reg. Nos. 124,957, 565,166, and others.
For Canned Pizza Sauce (Int. Cl. 30).
First use at least as early as Apr. 30, 1954.

SN 279,125. Vincent Bar-None Company, Inc., Denver, Colo. Filed Aug. 25, 1967.

BAR-NONE

Owner of Reg. Nos. 232,357, 690,620, and others.
For Prepared Table Syrup; Salads—Namely, Green Vegetable, Gelatin, and Salad Dressing Salads; Relish, Pimento Cheese Spread; Dips—Namely, Blue Cheese, Garlic, French Onion, and Clam; and Pizza—Namely, Cheese, Pepperoni, and Sausage (Int. Cls. 29 and 30).
First use Sept. 11, 1944.

SN 279,194. H. P. Hood & Sons, Inc., d.b.a. Southern Sun Growers, Boston, Mass. Filed Aug. 28, 1967.

SOUTHERN SUN

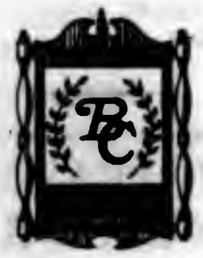
Owner of Reg. Nos. 661,411 and 710,682.
For Fresh and Reconstituted Orange Juice, Canned Concentrated Orange Juice, and Fresh and Frozen Fruit Segments (Int. Cls. 29, 31, and 32).
First use Feb. 1, 1957.

SN 279,652. Hynite Corporation, Oak Creek, Wis. Filed Sept. 5, 1967.

PROTEENYTE

For Protein Supplement for Swine Feed (Int. Cl. 31).
First use Aug. 15, 1967.

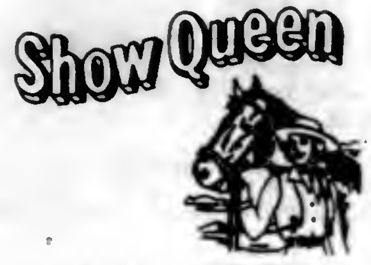
SN 279,923. The B & C Baking Co. Inc., d.b.a. The B-C Baking Co., Inc., and B-C Baking Co., Inc., Dayton, Ohio. Filed Sept. 8, 1967.



For Fruit Cake (Int. Cl. 30).
First use Aug. 31, 1967.

SN 280,983. Tani Farms, Santa Maria, Calif. Filed Sept. 22, 1967.

Show Queen



The portrait shown does not represent any living person.
For Fresh Vegetables (Int. Cl. 31).
First use June 15, 1961.

SN 281,576. Harvest Brand, Inc., Pittsburg, Kans. Filed Oct. 2, 1967.

SWEET GEORGIA BROWN

For Livestock Feeds (Int. Cl. 31).
First use Apr. 12, 1967.

SN 283,162. Bonanza Macaroni Co., Toronto, Ontario, Canada. Filed Oct. 23, 1967.

BONANZA

For Macaroni and Spaghetti (Int. Cl. 30).
First use June 1, 1967; in commerce July 1, 1967.

SN 283,335. Frito-Lay, Inc., Dallas, Tex. Filed Oct. 25, 1967.

STILTS

For Puffed Corn Snacks (Int. Cl. 30).
First use Aug. 2, 1967.

SN 284,752. Sunshine Biscuits, Inc., New York, N.Y. Filed Nov. 13, 1967.

Pretz·O·s

For Pretzels (Int. Cl. 30).
First use Oct. 25, 1961.

SN 284,761. Topps Chewing Gum, Incorporated, Brooklyn, N.Y. Filed Nov. 13, 1967.

KRAZY LITTLE COMICS

Owner of Reg. No. 321,716.
For Chewing Gum (Int. Cl. 30).
First use Oct. 30, 1967.

SN 285,042. National Food Industries, Inc., Miami, Fla. Filed Nov. 16, 1967.

RICO'S

For Banana Chips and Plantain Chips (Int. Cl. 30).
First use May 14, 1967.

SN 285,215. Elkes Biscuits Limited, Uttoxeter, England. Filed Nov. 20, 1967.

elkes

For Biscuits (Other Than Biscuits for Animals), Chocolate Cakes, and Chocolate Tea Cakes (Int. Cl. 30).
First use Oct. 12, 1964.

SN 285,764. Riviana Foods Inc., Houston, Tex. Filed Nov. 28, 1967.

MAHATMA

Owner of Reg. Nos. 297,713, 790,083, and others.
For Rice Oil (Int. Cl. 29).
First use Oct. 30, 1967.

SN 286,111. Duffy-Mott Company, Inc., New York, N.Y. Filed Dec. 4, 1967.

LORD MOTT'S

Owner of Reg. Nos. 160,454, 839,231, and others.
For Hollandaise Sauce (Int. Cl. 30).
First use Oct. 11, 1967; 1836 as to "Lord Mott's."

SN 286,425. Golden Shore Seafoods, Inc., Brunswick, Ga. Filed Dec. 7, 1967.

Flying Jib

For Frozen Breaded Shrimp and Shrimp Pieces (Int. Cl. 29).
First use at least as early as December 1961.

SN 286,750. Anderson, Clayton & Co., Dallas, Tex. Filed Dec. 12, 1967.

LIFE

For Margarine (Int. Cl. 29).
First use June 6, 1967.

SN 286,764. Lacnutrients, Inc., Hillside, N.J. Filed Dec. 12, 1967.

PMT

For Pure Milk Tablets (Int. Cl. 29).
First use Dec. 6, 1967.

SN 286,880. Crystal Pure Candy Company, Chicago, Ill. Filed Dec. 14, 1967.

CRYSTAL PURE

Owner of Reg. No. 782,604.
For Candy (Int. Cl. 30).
First use at least as early as 1922.

SN 286,994. Associated Wild Rice Producers, Inc., Isle, Minn. Filed Dec. 15, 1967.

OLD FORT

For Dry Packaged Wild Rice, Canned Precooked Wild Rice, Canned Soups, and Packaged Pancake Mix (Int. Cls. 29 and 30).
First use Oct. 22, 1954.

SN 288,740. Crest Brokerage Company, Los Angeles, Calif. Filed Jan. 15, 1968.

Conquistador

For Frozen Shellfish (Int. Cl. 29).
First use Jan. 3, 1968.

SN 290,142. Mead Johnson & Company, Evansville, Ind. Filed Feb. 2, 1968.

GET UP&GO

For Dietary Powder That Can Be Mixed With Milk and Be Used for a Nutritionally Complete Meal (Int. Cl. 5).
First use on or prior to June 30, 1967.

SN 291,011. Tani Farms, Santa Maria, Calif. Filed Feb. 14, 1968.

Cabrillo

"Cabrillo" is a Spanish word meaning "cheese made from goats' milk."
For Fresh Vegetables (Int. Cl. 31).
First use Jan. 22, 1968.

SN 292,852. Mattel, Inc., Hawthorne, Calif. Filed Mar. 11, 1968.

FROSTEROOP

For Frosting for Edible Toy Cake and Frosting Mix for Making Frosting (Int. Cl. 30).
First use Jan. 29, 1968.

SN 292,870. Universal Packers Corporation, d.b.a. J.D. Packing Co., Oxnard, Calif. Filed Mar. 11, 1968.

HOT SHOT

For Tomato Cocktail Consisting of the Juices of Tomatoes, Green Chilies, and Onions (Int. Cl. 32).
First use Feb. 2, 1968.

Class 47 — Wines

SN 288,227. Palomino & Vergara, Jerez de la Frontera, Cadiz, Spain. Filed Jan. 5, 1968.

TIO MATEO

The mark "Tio Mateo" may be translated as "Uncle Mateo" or "Uncle Matthew." Owner of Spanish Reg. No. 123,910, dated May 3, 1945.
For Wines and Vermouths (Int. Cl. 33).

Class 50 — Merchandise Not Otherwise Classified

SN 289,290. Faster-Form Corporation, New Hartford, N.Y. Filed Jan. 22, 1968.

VINCENZA

For Preserved Flowers (Int. Cl. 26).
First use Aug. 30, 1967.

SN 292,331. Sullifoam, Inc., Willow Grove, Pa. Filed Mar. 4, 1968.

POLY-PALLETS

"Pallets" is disclaimed apart from the mark as shown.
For Freight Handling Pallets (Int. Cl. 20).
First use Feb. 15, 1968.

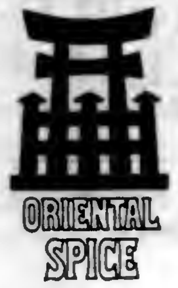
Class 51 — Cosmetics and Toilet Preparations

SN 255,672. Yardley of London, Inc., Totowa, N.J. Filed Oct. 3, 1966.

SLINK PINK

Applicant disclaims any exclusive right in the word "Pink" apart from the mark as shown.
For Lipstick, Mascara, Pressed Powder and Foundation (Int. Cl. 3).
First use Sept. 14, 1966.

SN 261,376. Ellen Kaye Laboratories, Inc., St. Paul, Minn. Filed Dec. 23, 1966.



The word "Spice" is disclaimed apart from the mark as shown.
For After Shave Lotion and Cologne (Int. Cl. 3).
First use July 1, 1966.

SN 263,307. Yardley of London, Inc., Totowa, N.J. Filed Jan. 25, 1967.

INTERNATIONAL COLLECTION

For Emollient Bath Oil, Deep Emollient Cleanser, and Liquid Foundation (Int. Cl. 3).
First use Jan. 3, 1967.

SN 266,786. Rexall Drug and Chemical Company, d.b.a. Vanda Cosmetics Company, Los Angeles, Calif. Filed Mar. 15, 1967.

RONDEAU

For Perfume (Int. Cl. 3).
First use Feb. 3, 1967.

SN 268,641. Yardley of London, Inc., Totowa, N.J. Filed Apr. 7, 1967.

POLISH-UP

For Fluid Foundation, Skin Freshener, and Lip Polish (Int. Cl. 3).
First use Mar. 8, 1967.

SN 270,045. Candygram, Inc., d.b.a. Perfume-By-Wire, Beverly Hills, Calif. Filed Apr. 26, 1967.

THE WORLD'S MOST EXQUISITE GIFT

For Perfumes (Int. Cl. 3).
First use Sept. 1, 1966.

SN 272,795. Amole, Incorporated, Dayton, Ohio. Filed June 1, 1967.

CROWN MAGIC

Owner of Reg. No. 827,310.
For Cosmetic Products—Namely, Bubble Bath (Int. Cl. 3).
First use at least as early as Nov. 12, 1965.

SN 273,115. Rexall Drug and Chemical Company, d.b.a. Vanda Cosmetics Company, Los Angeles, Calif. Filed June 5, 1967.

VANDA

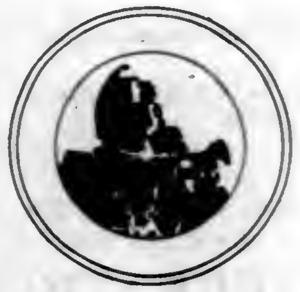
Owner of Reg. Nos. 827,301 and 827,998.
For Body Deodorant (Int. Cl. 5).
First use May 3, 1966.

SN 273,412. Chas. Pfizer & Co., Inc., New York, N.Y. Filed June 8, 1967.

TOPLESS

For Lipstick (Int. Cl. 3).
First use Dec. 9, 1966.

SN 273,907. Shields, Inc. of Attleboro, Mass., New York, N.Y. Filed June 14, 1967.



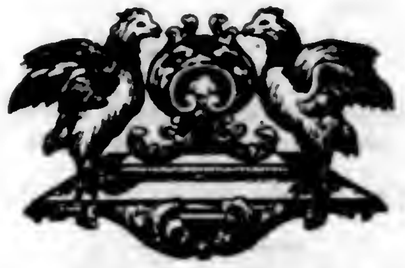
The mark consists of the figure of a Roman soldier.
For Men's Toiletries—Namely, Cologne and After Shave Lotion (Int. Cl. 3).
First use Mar. 15, 1967.

SN 274,080. The Mennen Company, Morristown, N.J. Filed June 15, 1967.

KONSERVERA

The word "Konservera" is the Swedish term for "conserve."
For Hair Groom (Int. Cl. 3).
First use May 2, 1967.

SN 274,831. A. Niggi & C. S.N.C., Imperia, Italy. Filed Mar. 13, 1967.



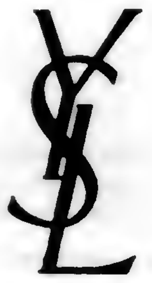
For Perfumes, Toilet Water, and Bath Salts (Int. Cl. 3).
First use June 5, 1966; in commerce June 20, 1966.

SN 275,033. Chap Stick Company, Lynchburg, Va. Filed June 29, 1967.

BEACH PAINT

Applicant disclaims the word "Paint" apart from the mark as shown.
For Body Makeup (Int. Cl. 3).
First use June 16, 1967.

SN 275,348. Lanvin-Charles of the Ritz, Inc., New York, N.Y. Filed July 5, 1967.



The mark consists of the letters "YSL." Owner of Reg. Nos. 766,417 and 767,211.
For Perfume, Toilet Water, Bath Oil, and Dusting Powder (Int. Cl. 3).
First use at least as early as Mar. 24, 1965.

SN 275,669. Inexco S.A., Fribourg, Switzerland. Filed July 10, 1967.

GARANCE

Owner of Swiss Reg. No. 190,952, dated Mar. 23, 1962.
For Perfumes and Cosmetic Products—Namely, Cologne, Toilet Water, Skin and Facial Creams and Lotions, Bath Oils and Salts, Face Powder, Hair Tonics, Lipstick, Nail Enamels, Eye Shadow, Eye Pencils, Mascara, and Personal Deodorants (Int. Cls. 3 and 5).

SN 275,736. Avon Products, Inc., New York, N.Y. Filed July 11, 1967.

UNTIL NOW

For Perfume, Solid Perfume, Perfume Oil, Cologne, Cologne Mist, Powder Sachet, Cream Sachet, and Dusting Powder (Int. Cl. 3).
First use June 27, 1967.

SN 275,989. Aerosol Techniques Research Center, Inc., Milford, Conn. Filed July 14, 1967.

HANG LOOSE

For Hair Spray (Int. Cl. 3).
First use May 1, 1967.

SN 275,990. Aerosol Techniques Research Center, Inc., Milford, Conn. Filed July 14, 1967.

SWING LOOSE

For Hair Spray (Int. Cl. 3).
First use May 1, 1967.

SN 276,215. Samuel Bonat & Bro., Inc., West Paterson, N.J. Filed July 18, 1967.

CHAMPAGNE SPARKLE

For Hair Conditioner (Int. Cl. 3).
First use June 13, 1967.

SN 276,305. Bristol-Myers Company, New York, N.Y. Filed July 19, 1967.

THE BODY LIFT

Applicant disclaims the word "Body" apart from the mark as shown.
For Body Moisturizing Lotion (Int. Cl. 3).
First use May 1, 1967.

SN 276,468. Pure Pharmacal Company, Houston, Tex. Filed July 20, 1967.

PRUROIL

For Bath Oil (Int. Cl. 3).
First use at least as early as June 19, 1967.

SN 276,469. Pure Pharmacal Company, Houston, Tex. Filed July 20, 1967.

FLEXILUBE

For Skin Moisturizing Lotion (Int. Cl. 3).
First use at least as early as June 19, 1967.

SN 276,729. Arnolds Incorporated, Little Rock, Ark. Filed July 25, 1967.

ARNOLDS

For Pressurized Hair Spray (Int. Cl. 3).
First use on or about July 12, 1967.

SN 276,732. John H. Breck, Inc., Wayne, N.J. Filed July 25, 1967.

VISIBLE BEAUTY

For Permanent Wave Preparation (Int. Cl. 3).
First use July 6, 1967.

SN 276,811. Bristol-Myers Company, New York, N.Y. Filed July 26, 1967.

LASH

For After Shower Body Rub (Int. Cl. 3).
First use May 17, 1967.

SN 276,813. Bristol-Myers Company, New York, N.Y. Filed July 26, 1967.

WAKE UP 'N GO

For After Shower Body Rub (Int. Cl. 3).
First use May 17, 1967.

SN 277,140. Bristol-Myers Company, New York, N.Y. Filed July 31, 1967.

WAKE UP 'N LIVE

For After Shower Body Rub (Int. Cl. 3).
First use May 17, 1967.

SN 277,141. Bristol-Myers Company, New York, N.Y. Filed July 31, 1967.

TURN ON

For After Shower Body Rub (Int. Cl. 3).
First use May 17, 1967.

SN 277,254. Bristol-Myers Company, New York, N.Y. Filed Aug. 1, 1967.

EXTRADENT

For Denture Cleanser (Int. Cl. 3).
First use Dec. 1, 1966.

SN 277,429. Bristol-Myers Company, New York, N.Y. Filed Aug. 3, 1967.

FRESH DAY

For Denture Cleanser (Int. Cl. 3).
First use Dec. 1, 1966.

SN 277,430. Bristol-Myers Company, New York, N.Y. Filed Aug. 3, 1967.

BRIGHT PLUS

For Denture Cleanser (Int. Cl. 3).
First use Dec. 1, 1966.

SN 277,767. Avon Products, Inc., New York, N.Y. Filed Aug. 8, 1967.

MOUNTAIN LAUREL

For Bubble Bath, After Bath Freshener, Bath Oil, Skin Softener, Body Lotion, Cream Lotion, Dusting Powder, and Talc (Int. Cl. 3).
First use July 24, 1967.

SN 277,769. Avon Products, Inc., New York, N.Y. Filed Aug. 8, 1967.

UNDER THE SUN

For Skin Colorant and a Tanning Lotion (Int. Cl. 3).
First use July 24, 1967.

SN 278,020. The Mennen Company, Morristown, N.J. Filed Aug. 10, 1967.

CAPTAIN KIDD

Owner of Reg. No. 825,088.
For Hairdressing (Int. Cl. 3).
First use Jan. 21, 1966.

SN 278,021. The Mennen Company, Morristown, N.J. Filed Aug. 10, 1967.

TOUR PAC

Owner of Reg. No. 830,751.
For After-Shave Lotion (Int. Cl. 3).
First use Jan. 21, 1966.

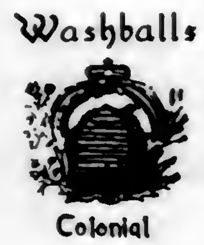
SN 289,950. Skyline Ind., Inc., Charlottesville, Va. Filed Jan. 31, 1968.

MICRO-SHAVE

For Shaving Cream in Aerosol Spray Containers (Int. Cl. 3).
First use Oct. 18, 1967.

Class 52 — Detergents and Soaps

SN 200,232. Carolina Company, Inc., d.b.a. The Carolina Soap & Candle Makers, Southern Pines, N.C. Filed Aug. 20, 1964.



The drawing is lined for shading purposes only. Applicant disclaims the word "Washballs" apart from the mark as shown without waiving any common law rights therein.
Owner of Reg. No. 765,230.
For Toilet Soap (Int. Cl. 3).
First use May 1955.

SN 265,917. Chas. Pfizer & Co., Inc., New York, N.Y. Filed Mar. 3, 1967.

Imprévu

The English translation of the mark is "Unforeseen."
Owner of Reg. No. 801,480.
For Toilet Soap (Int. Cl. 3).
First use Sept. 30, 1966.

SN 274,081. The Mennen Company, Morristown, N.J. Filed June 16, 1967.

KONSERVERA

The word "Konservera" is the Swedish term for "conserve."
For Hair Shampoo (Int. Cl. 3).
First use May 2, 1967.

SN 275,737. Avon Products, Inc., New York, N.Y. Filed July 11, 1967.

UNTIL NOW

For Toilet Soap (Int. Cl. 3).
First use June 27, 1967.

SN 276,130. H.R.L. Inc., d.b.a. HRLubricants Inc., Los Angeles, Calif. Filed July 17, 1967.

CSC

For Engine Cooling System Cleaner (Int. Cl. 3).
First use June 19, 1967.

SN 281,731. Thomas Gill Soap Company, White Plains, N.Y. Filed Oct. 3, 1967.

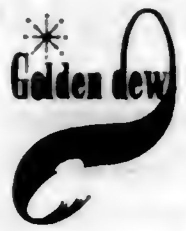
PEDISOAK

For Foot Soap (Int. Cl. 3).
First use Sept. 14, 1967.

SN 281,789. A. H. Good Corporation, Summit, N.J. Filed Oct. 4, 1967.

For Antibacterial Skin Cleanser (Int. Cl. 3).
First use Sept. 13, 1967.

SN 281,802. Like Me Products Co., Millard, Nebr. Filed Oct. 4, 1967.



For Wig Shampoo (Int. Cl. 3).
First use May 9, 1967.

SN 282,081. Gulf Oil Corporation, Pittsburgh, Pa. Filed Oct. 9, 1967.

The drawing is lined for the colors orange and blue. Owner of Reg. No. 621,650 and others.
For Liquid Window Cleaner (Int. Cl. 3).
First use Oct. 11, 1966.

SN 282,082. Gulf Oil Corporation, Pittsburgh, Pa. Filed Oct. 9, 1967.

GULF

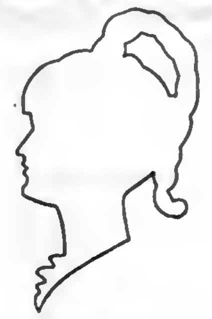
Owner of Reg. No. 621,651 and others.
For Liquid Window Cleaner (Int. Cl. 3).
First use Oct. 11, 1966.

SN 282,977. Carolina Company, Inc., d.b.a. The Carolina Soap & Candle Makers, Southern Pines, N.C. Filed Oct. 20, 1967.

SOAPIES

For Scented Laundry Soap (Int. Cl. 3).
First use on or about Feb. 16, 1966.

SN 283,105. J. P. Corrigan, d.b.a. Shyanne Co., Reno, Nev. Filed Oct. 23, 1967.



For Glass Cleaner (Int. Cl. 3).
First use Oct. 17, 1967.

SN 284,233. Optometics, Inc., Santa Ana, Calif. Filed Nov. 6, 1967.

ALPHA-CC

For Contact Lens Cleaner (Int. Cl. 3).
First use June 1, 1962.

SN 291,815. Miraco Manufacturing, Inc., Minneapolis, Minn. Filed Feb. 26, 1968.

MAGIC MAID

For All Purpose Liquid Detergent Concentrates (Int. Cl. 3).
First use Aug. 1, 1967.

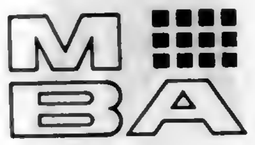
SERVICE MARKS

Class 100 — Miscellaneous

SN 238,802. Travel Guild of America, Inc., Baltimore, Md. Filed Feb. 14, 1966.

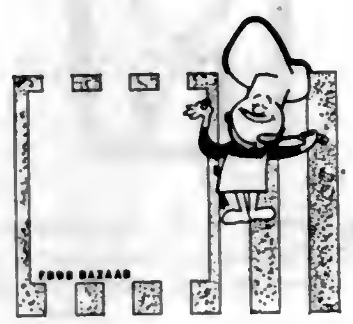
For Association Services to Members—Namely, Furnishing Maps and Other Travel Information, Providing Free Insurance Coverage, Providing Discounts for Purchases of Film, Books, Magazines, Records, and General Merchandise, and Arranging for Reduced Accommodation, Entertainment, and Travel Rates (Int. Cl. 42).
First use May 1964.

SN 250,502. Milwaukee Bar Association, Milwaukee, Wis. Filed July 18, 1966.



For Association Services—Namely, Promoting the Interests of Lawyers, Conducting Various and Sundry Activities To Promote the Profession of Law, and Dissemination of Information to the Public Advising Them of Their Rights and the Aims of the Profession (Int. Cl. 42).
First use on or about July 7, 1961.

SN 258,941. Transamerica Development Company, Phoenix, Ariz. Filed Nov. 17, 1966.



The series of dots in the drawing represent shading rather than color. No claim is made to the exclusive right to use "Food" apart from the expression "Food Bazaar."
For Restaurant Services (Int. Cl. 42).
First use Jan. 1, 1966.

SN 259,490. United Aircraft Corporation, Sunnyvale, Calif. Filed Nov. 25, 1966.

UTC

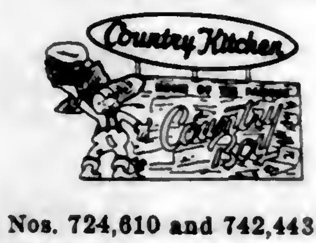
Owner of Reg. Nos. 726,599, 815,125, and others.
For Consulting Services in the Field of Aerospace Technology (Int. Cl. 42).
First use Feb. 4, 1960.

SN 266,145. The Copley Press, Inc., d.b.a. Copley News Service, La Jolla, Calif. Filed Mar. 7, 1967.

CNS

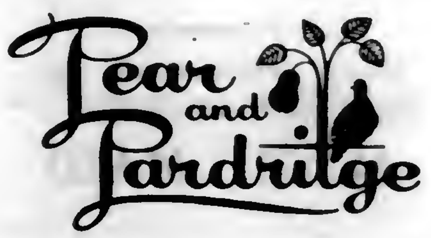
For Supplying News Reports and Articles to Various Newspapers Throughout the World (Int. Cl. 42).
First use Dec. 31, 1966.

SN 267,816. Country Kitchen Incorporated, of Middletown, Ohio, Cincinnati, Ohio. Filed Mar. 29, 1967.



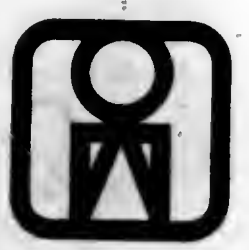
Owner of Reg. Nos. 724,610 and 742,443.
For Resturant Services (Int. Cl. 42).
First use Nov. 27, 1939.

SN 273,206. Pear and Pardritge, Inc., Lansing, Mich. Filed June 6, 1967.



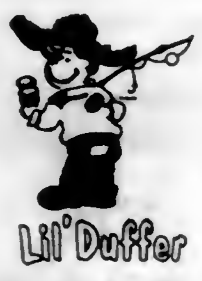
For Restaurant, Catering, and Banquet Services (Int. Cl. 42).
First use Nov. 23, 1966.

SN 273,555. Ingersoll Incorporated, Rockford, Ill. Filed June 12, 1967.



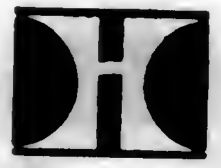
For Consulting Service to the Metalworking Industry Involving the Study, Planning, Development, and Evaluation of Metalworking Procedures, Methods, and Equipment (Int. Cl. 42).
First use Apr. 1, 1967.

SN 274,432. Lil' Duffer of America, Inc., Topeka, Kans. Filed June 21, 1967.



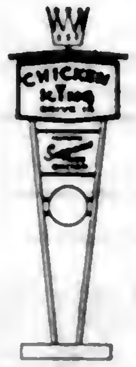
For Restaurant Services (Int. Cl. 42).
First use July 8, 1966.

SN 277,170. Hilton Hotels Corporation, Chicago, Ill. Filed July 31, 1967.



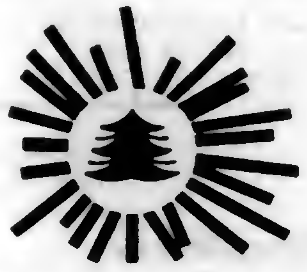
For Hotel and Restaurant Services and Reservation Services (Int. Cl. 42).
First use Mar. 13, 1967.

SN 278,043. Supreme Fried Chicken, Inc., Fayetteville, N.C. Filed Aug. 10, 1967.



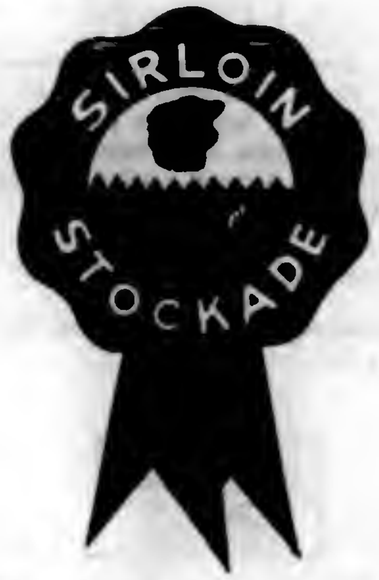
No claim is made to the wording "Chicken," "Drive In," "Featuring," and "Fried Chicken."
For Drive-In Restaurant Services (Int. Cl. 42).
First use on or about June 13, 1966.
Subj. to Intf. with SN 269,878.

SN 282,431. Big West Oil Company of Montana, d.b.a. Spokane House Motor Hotel, Spokane, Wash. Filed Oct. 13, 1967.



For Hotel and Restaurant Services (Int. Cl. 42).
First use July 1, 1965.

SN 283,284. Sirloin Stockade, Inc., Oklahoma City, Okla. Filed Oct. 24, 1967.



No registration rights are claimed for the word "Sirloin," apart from the mark, as shown, but aplicant waives none of its common law rights therein or any feature thereof. The drawing is lined for the colors brown, blue, and red.
For Restaurant and Related Carry-Out Food and Beverage Services (Int. Cl. 42).
First use Oct. 1, 1967.

Class 101 — Advertising and Business

SN 234,878. Carson Pirie Scott & Co., d.b.a. Carriage Lane, Chicago, Ill. Filed Dec. 20, 1965.

Carriage Lane

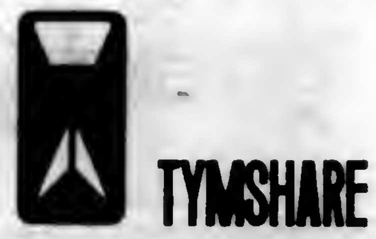
For General Department Store Services (Int. Cl. 35).
First use Nov. 13, 1964.

SN 251,735. John C. Lucht, New York, N.Y. Filed Aug. 4, 1966.

MEDIA AMERICANA

For Public Relation Services, and More Specifically, Dissemination of Information About Clients' Package Designs and Advertising to Potential Customers of the Clients (Int. Cl. 35).
First use May 1, 1966.

SN 256,155. Tymshare Inc., Los Altos, Calif. Filed Oct. 10, 1966.



The design portion of the mark consists of a white hour glass in a black background with yellow colored sand. The word "Tymshare" is disclaimed apart from the mark as shown.
For Providing a Shared Computer (Int. Cl. 35).
First use July 1965.

SN 259,387. American Dairy Queen Corporation, Minneapolis, Minn. Filed Nov. 25, 1966.

DAIRY QUEEN

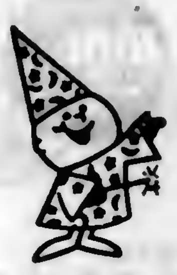
Owner of Reg. Nos. 225,888, 811,416, and others.
For Rendering Technical Assistance to Operators of Frozen Custard Stores in All Phases of Their Business Operation (Int. Cl. 35).
First use June 1946.

SN 259,536. Employee Communications Service, Inc., New York, N.Y. Filed Nov. 28, 1966.

ECS

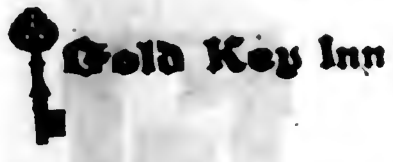
For Supplying Information to Employees of Benefit Programs Sponsored by Their Employers (Int. Cl. 35).
First use Oct. 1, 1965.

SN 259,947. Manette, Inc., Minneapolis, Minn. Filed Dec. 2, 1966.



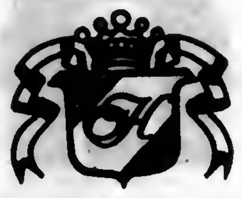
For Printing Services (Int. Cl. 35).
First use Dec. 13, 1965.

SN 265,098. Motel Management, Inc., Detroit, Mich. Filed Feb. 20, 1967.



Applicant disclaims the word "Inn" apart from the mark as shown. Owner of Reg. No. 745,973.
For Management of Real Estate Properties, Such as Office Buildings, Apartment Houses, Hotels, Motels, and Motor Inns (Int. Cl. 35).
First use Oct. 1, 1966.

SN 266,757. Heritage Land Sales, Inc., Miami, Fla. Filed Mar. 15, 1967.



The drawing is lined for gold.
For Real Estate Brokerage Services (Int. Cl. 35).
First use Jan. 15, 1965.

SN 266,797. Star Stations, Inc., Omaha, Nebr. Filed Mar. 15, 1967.

BRIDAL FAIR

Applicant disclaims the word "Bridal" apart from the mark as shown.
For Promoting the Sale of Clients' Goods and Services That Relate to a Bride's Trousseau, Wedding Party Clothes and Accessories, and Items Normally Suitable for Use by Newlyweds, by Special Showings, Promotions, and Displays, and by Preparing Radio and Printed Advertising Relative to Such Goods (Int. Cl. 35).
First use on or about Jan. 10, 1967.

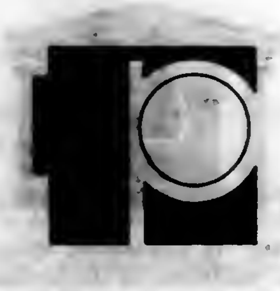
SN 268,419. Arthur S. Kransley and Company, Incorporated, d.b.a. Information Sciences Associates, Cherry Hill, N.J. Filed Apr. 5, 1967.

BANKSERV

For Installing Software Systems for Bank Applications—Namely, Furnishing Application Programming or Software Systems Comprised of Computer Programs, Instructions, and Documentation for Automating Banking Services Such as Credit Card Accounting, Sales and Loan Authorization, Fuel Oil Accounting, Payroll, Installment Loan, Corporate Trust, and Demand Deposit Accounting (Int. Cl. 35).
First use Mar. 6, 1967.

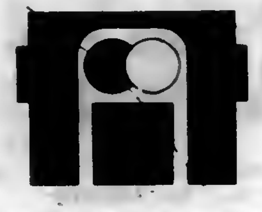
Class 102 — Insurance and Financial

SN 250,948. Financial Programs, Inc., Denver, Colo. Filed July 25, 1966.



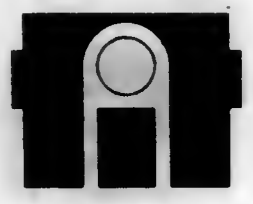
For Stock Brokerage Services (Int. Cl. 36).
First use July 20, 1965.

SN 250,949. Financial Programs, Inc., Denver, Colo., assignee of Financial Industrial Income Fund, Inc., Denver, Colo. Filed July 25, 1966.



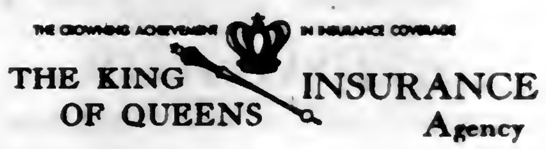
For Operating a Mutual Fund (Int. Cl. 36).
First use July 20, 1965.

SN 250,950. Financial Programs, Inc., Denver, Colo., assignee of Financial Industrial Fund, Inc., Denver, Colo. Filed July 25, 1966.



For Operating a Mutual Fund (Int. Cl. 36).
First use Sept. 20, 1965.

SN 263,287. Charles W. Parker, d.b.a. The King of Queens Insurance Agency, Jackson Heights, N.Y. Filed Jan. 25, 1967.


THE CROWNING ACHIEVEMENT IN INSURANCE COVERAGE
THE KING OF QUEENS
INSURANCE
Agency

Owner of Reg. No. 685,305.
For Insurance Agency Services (Int. Cl. 36).
First use Oct. 1, 1966.

SN 272,608. Insurance Company of North America, Philadelphia, Pa. Filed May 29, 1967.

INA AGPAK

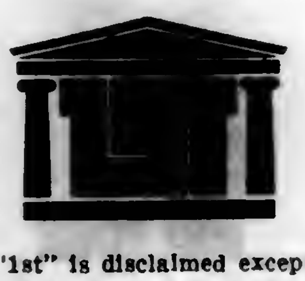
Owner of Reg. Nos. 713,296, 820,496, and others.
For Underwriting Agricultural Aircraft Insurance (Int. Cl. 36).
First use Feb. 18, 1967.

SN 272,609. Insurance Company of North America, Philadelphia, Pa. Filed May 29, 1967.

INA CHIEFTAIN

Owner of Reg. Nos. 713,296, 820,496, and others.
For Underwriting Automobile Insurance (Int. Cl. 36).
First use Feb. 1, 1967.

SN 274,963. First National Bank of Huntsville, Alabama, Huntsville, Ala. Filed June 28, 1967.



The expression "1st" is disclaimed except as used together with an inset within the frame of the building.
For General Banking Services (Int. Cl. 36).
First use Apr. 11, 1965.

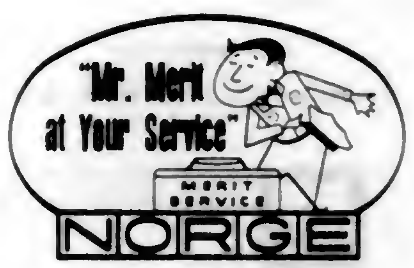
SN 293,086. Insurance Company of North America, Philadelphia, Pa. Filed Mar. 13, 1968.

INA-LIFE

Owner of Reg. Nos. 713,296, 810,270, and others.
For Underwriting of Insurance—Namely, Life, Accident, and Health Insurance (Int. Cl. 36).
First use October 1963.

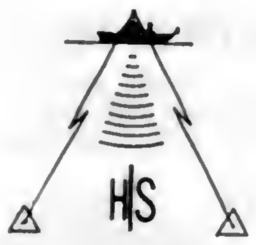
Class 103 — Construction and Repair

SN 251,117. Borg-Warner Corporation (Delaware corporation), Chicago, Ill., assignee of Borg-Warner Corporation (Illinois corporation), Chicago, Ill. Filed July 27, 1966.


"Mr. Merit at Your Service"
MERIT SERVICE
NORGE

No claim is made to the exclusive right to use the word "Service," but applicant waives none of its common law rights therein. Owner of Reg. Nos. 719,783, 801,329, and others.
For Installation, Maintenance, Service, and Repair of Home Appliances (Int. Cl. 37).
First use on or prior to June 20, 1966.

SN 252,259. International Hydrographic Services, Inc., Silver Spring, Md. Filed Aug. 12, 1966.

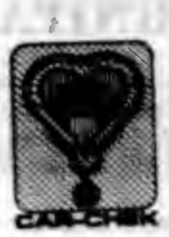


For Operation and Repair of Microwave Distance Measuring Equipment (Int. Cl. 37).
First use June 25, 1964.

SN 264,269. Work Wear Corporation, Cleveland, Ohio. Filed Feb. 8, 1967.

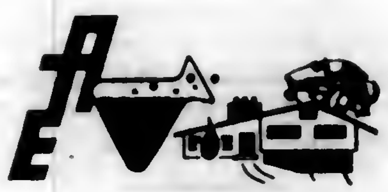
Owner of Reg. No. 819,542.
For Furnishing Work Uniforms, Industrial Towels, and Linens on a Periodic Basis (Int. Cl. 37).
First use Feb. 2, 1967.

SN 265,983. Car-Chek Diagnostic Systems, Inc., Omaha, Nebr. Filed Mar. 6, 1967.



The term "Car-Chek" and the pictorial representation of an automobile are disclaimed apart from the mark as shown. The drawing is lined for the colors green and red, but color is not claimed as a feature of the mark.
For Determining Necessary Automotive Repairs (Int. Cl. 37).
First use June 1, 1966.

SN 268,564. Alliance Exterminating Co., Inc., Merrick, N.Y. Filed Apr. 7, 1967.



The drawing is cross-hatched for shading purposes only.
For Pest Control Services (Int. Cl. 37).
First use Feb. 15, 1966.

SN 274,704. Bear Manufacturing Company, Rock Island, Ill. Filed June 26, 1967.

ACTIONALYSIS

For Automotive Diagnostic Testing Services (Int. Cl. 37).
First use May 30, 1967.

SN 281,392. Pride Manufacturing, Inc., Fort Worth, Tex. Filed Sept. 28, 1967.

NATIONAL PRIDE

For Automatic Vehicle Wash Service (Int. Cl. 37).
First use Mar. 20, 1964.

Class 105 — Transportation and Storage

SN 263,881. Ace Van and Storage Co., Inc., Washington, D.C. Filed Feb. 3, 1967.

For Packing, Moving, and Storage of Goods of Others (Int. Cl. 39).
First use June 15, 1945.

SN 265,572. United Tours, Inc., Miami, Fla. Filed Feb. 27, 1967.

**CENTRAL
AMERICA
à la
Carta**

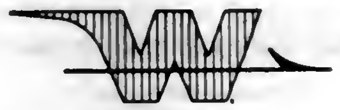
The drawing is lined for the colors pink and yellow. Owner of Reg. No. 804,871.
For Arranging and Conducting Travel Tours (Int. Cl. 39).
First use Dec. 15, 1966.

SN 265,880. American Airlines, Inc., New York, N.Y. Filed Mar. 3, 1967.

JIM WILSON SERVICE

The word "Service" is disclaimed apart from the mark as shown. "Jim Wilson" is a fictitious name.
For Transportation of Human Remains by Air Freight (Int. Cl. 39).
First use Jan. 11, 1960.

SN 267,213. Wright Air Lines, Inc., Cleveland, Ohio. Filed Mar. 20, 1967.



The drawing is lined for red.
For Air Transportation Service (Int. Cl. 39).
First use Apr. 26, 1966.

SN 267,754. Heritage Tours, Inc., New York, N.Y. Filed Mar. 28, 1967.

HERITAGE TOURS

Applicant disclaims the exclusive right to the use of the word "Tours" apart from the mark as shown.
For Travel Tour Services (Int. Cl. 39).
First use May 17, 1965.

SN 282,428. Avis Rent-A-Car System, Inc., Garden City, N.Y. Filed Oct. 13, 1967.

INSTA-CAR

For Vehicle Rental and Leasing Services (Int. Cl. 39).
First use Sept. 11, 1967.

SN 283,769. Continental Air Lines, Inc., Los Angeles, Calif. Filed Oct. 31, 1967.

CONTINENTAL HOLIDAYS

For Air Transportation of Persons and Property (Int. Cl. 39).
First use Oct. 25, 1967.

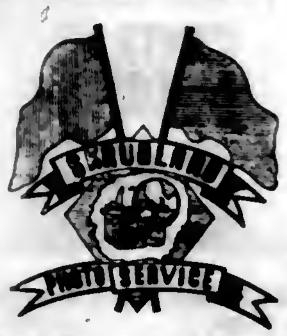
Class 106 — Material Treatment

SN 262,616. Piedmont Chemical Industries, Inc., High Point, N.C. Filed Jan. 16, 1967.

SYNTHA-SET

For Finishing, Sizing, and Stabilizing the Fabrics of Others (Int. Cl. 40).
First use Dec. 2, 1966.

SN 266,104. Gabriel Skrudland, d.b.a. Skrudland Photo Service, Chicago, Ill. Filed Mar. 6, 1967.



The drawing is lined for red and blue. The words "Photo Service" are disclaimed apart from the mark as shown.

For Mail Order Film Processing Service (Int. Cl. 40).

First use Nov. 23, 1966.

SN 266,447. Paris Processing Corp., New York, N.Y. Filed Mar. 10, 1967.

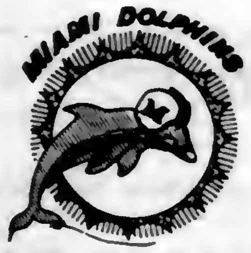
WANARA

For Embossing of Pile Fabrics of Others (Int. Cl. 40).

First use on or about Feb. 3, 1967.

Class 107 — Education and Entertainment

SN 254,303. Miami Dolphins, Ltd., Miami, Fla. Filed Sept. 12, 1966.



The drawing is lined for the colors green and orange.

For Entertainment Services—Namely, Providing Professional Football Games and Exhibitions (Int. Cl. 41).

First use Feb. 1, 1966.

SN 255,874. Thomas H. Cloyd, Fort Jones, Calif. Filed Oct. 6, 1966.

WILDERNESS UNLIMITED

For Recreation Services—Namely, Outdoor Club Services Including Guides, Pack Trip Reservations, and Boat Charter and Rental (Int. Cl. 41).

First use Feb. 24, 1966.

SN 262,322. Barry Ennis, Wayne, N.J. Filed Jan. 12, 1967.

THE HUM-DINGERS

For Musical Entertainment Service Rendered by a Band (Int. Cl. 41).

First use Dec. 18, 1965.

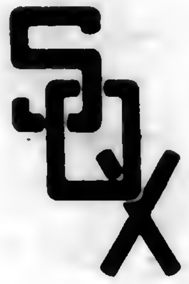
SN 263,943. Jerome G. Reed, d.b.a. ENR Technitape Network, Pittsburgh, Pa. Filed Feb. 3, 1967.

TECHNITAPE

For Providing Periodically on a Subscription Basis Cartridges of Sound Track Tapes Containing Recordings of Matters of Special Interest to Subscribers Adapted To Be Reproduced on Playback Equipment Loaned to the Subscriber by Applicant (Int. Cl. 41).

First use on or about Aug. 14, 1962.

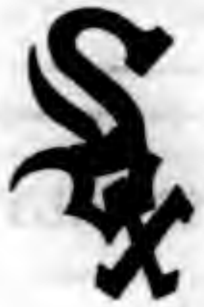
SN 267,303. Artnell Company, Chicago, Ill. Filed Mar. 22, 1967.



For Entertainment Services in the Nature of Professional Baseball Exhibitions (Int. Cl. 41).

First use April 1951.

SN 267,306. Artnell Company, Chicago, Ill. Filed Mar. 22, 1967.



For Entertainment Services in the Nature of Professional Baseball Exhibitions (Int. Cl. 41).

First use April 1951.

SN 271,709. Benjamin Hulkower and Seymour Kushner (joint owners), Brooklyn, N.Y. Filed May 17, 1967.

THE MARK III ORCHESTRA

Applicant disclaims the word "Orchestra" apart from the mark as shown.

For Entertainment Services Rendered by an Orchestra (Int. Cl. 41).

First use April 1960.

COLLECTIVE MEMBERSHIP MARKS

Class 200

SN 273,058. The General Church of the New Jerusalem, Bryn Athyn, Pa. Filed June 5, 1967.

THE GENERAL CHURCH OF THE NEW JERUSALEM

For Indicating Membership in Applicant.

First use at least as early as 1897.

TRADEMARK REGISTRATIONS ISSUED

PRINCIPAL REGISTER

Class 1 — Raw or Partly Prepared Materials

850,034. VYCELL. The Goodyear Tire & Rubber Company. SN 256,357. Pub. 3–19–68. Filed 10–13–66.

850,035. ABC. W. P. Adams II, d.b.a. ABC Ranch. SN 264,891. Pub. 3–19–68. Filed 2–17–67.

850,036. R AND DESIGN. The Richardson Company. SN 269,567. Pub. 3–19–68. Filed 4–19–67.

850,037. CUSH-N-FOAM. Hudson Foam Plastics Corporation. SN 287,616. Pub. 3–19–68. Filed 12–27–67.

Class 2 — Receptacles

850,038. CAMEO. Shamrock-Neatway Products, Inc. SN 184,518. Pub. 2–22–66. Filed 1–13–64.

850,039. PLAST-I-LINED. The Greif Bros. Cooperage Corporation. SN 251,538. Pub. 3–19–68. Filed 8–2–66.

850,040. FELKER. H. D. Hudson Manufacturing Company. SN 254,877. Pub. 3–19–68. Filed 9–21–66.

850,041. TOMAC. American Hospital Supply Corporation. SN 260,390. Pub. 3–19–68. Filed 12–9–66.

Class 3 — Baggage, Animal Equipments, Portfolios, and Pocketbooks

850,042. ANTLER. Antler Limited. SN 261,353. Pub. 3–19–68. Filed 12–23–66.

850,043. HANDI-TOTE. School House Products, Inc. SN 272,101. Pub. 3–19–68. Filed 5–22–67.

Class 4 — Abrasives and Polishing Materials

850,044. RESILITE MARK II. Armour and Company, d.b.a. Armour Abrasives Company. SN 272,001. Pub. 3–19–68. Filed 5–22–67.

850,045. PROCLAIM. Alberto-Culver Company. SN 287,113. Pub. 3–19–68. Filed 12–18–67.

850,046. UNIQUE. Simoniz Company. SN 287,788. Pub. 3–19–68. Filed 12–29–67.

Class 6 — Chemicals and Chemical Compositions

850,047. AIRECON. Union Carbide Corporation. SN 253,578. Pub. 7–18–67. Filed 8–31–66.

850,048. QUICK AID. General Fire Extinguisher Corp. MULTIPLE CLASS (Classes 6 and 28). SN 257,705. Pub. 3–19–68. Filed 11–1–66.

850,049. K–70. Universal Oil Products Company. SN 262,231. Pub. 3–19–68. Filed 1–9–67.

850,050. THERMO-LUBE. Quikrete Company. SN 266,452. Pub. 3–19–68. Filed 3–10–67.

850,051. NEOFLEX. Shell Oil Company. SN 274,099. Pub. 3–19–68. Filed 6–16–67.

850,052. Y47. National Lead Company. SN 274,445. Pub. 3–19–68. Filed 6–21–67.

850,053. STAKILL. Industrial Weed Killers, Inc. SN 274,626. Pub. 3–19–68. Filed 6–23–67.

Class 8 — Smokers' Articles, Not Including Tobacco Products

850,054. 1712 CZECHOSLOVAKIA AND DESIGN. Borske Sklo, Narodni Podnik. MULTIPLE CLASS (Classes 8 and 33). SN 263,739. Pub. 3–19–68. Filed 2–1–67.

Class 9 — Explosives, Firearms, Equipments, and Projectiles

850,055. SHOT BAG. Commercial Solvents Corporation. SN 261,046. Pub. 3–19–68. Filed 12–19–66.

850,056. T-LINE. Coast Fuse Mfg. Co., assignee of Coast Fuse, Inc. SN 271,691. Pub. 2–20–68. Filed 5–17–67.

Class 10 — Fertilizers

850,057. MASTER GARDENER. Martinsburg Forest Products, Inc. SN 244,446. Pub. 3–7–67. Filed 4–27–66.

Class 12 — Construction Materials

850,058. FIRE-GLASS. Johns-Manville Corporation. SN 257,960. Pub. 3–19–68. Filed 11–4–66.

850,059. ELASTATURF. The Borden Company. SN 259,402. Pub. 3–19–68. Filed 11–25–66.

850,060. FIRE/SHEATH. National Gypsum Company. SN 264,678. Pub. 3–19–68. Filed 2–14–67.

850,061. SEALO. Ranco Industrial Products Corporation. SN 269,454. Pub. 3–19–68. Filed 4–18–67.

850,062. DECORATOR. Clopay Corporation. SN 270,046. Pub. 3–19–68. Filed 4–26–67.

Class 13 — Hardware and Plumbing and Steam-Fitting Supplies

850,063. ROLL OF BARBED WIRE IN FORM OF A HEDGEHOG (DESIGN). Westfälische Union Aktiengesellschaft für Eisen- und Drahtindustrie. SN 251,674. Pub. 3–19–68. Filed 8–3–66.

850,064. DUC-TIE. E. F. Harster Company. SN 255,529. Pub. 3–19–68. Filed 9–30–66.

850,065. LO-NOISE HUSH PIPE. Mason Industries, Inc. SN 260,262. Pub. 3–19–68. Filed 12–7–66.

850,066. ADVANCE AND DESIGN. Advance Food Service Equipment, Inc. SN 263,652. Pub. 3–19–68. Filed 1–31–67.

850,067. SAF-T-HANDLE. Hills-McCanna Company (Delaware corporation), assignee of Hills-McCanna Company (Illinois corporation). SN 263,761. Pub. 3–19–68. Filed 2–1–67.

850,068. UNIFLOW. Whitten Corporation. SN 271,557. Pub. 3–19–68. Filed 5–15–67.

850,069. POW-R-SEAL. ACF Industries, Incorporated. SN 271,898. Pub. 3–19–68. Filed 5–19–67.

850,070. CLIPACK. E-Z Products Company. SN 278,882. Pub. 3–19–68. Filed 6–8–67.

850,071. DRIL-KWICK. Parker-Kalon Corporation. SN 273,407. Pub. 3–19–68. Filed 6–9–67.

850,072. ADJUST-A-SEEL. A.P.M. Corporation. SN 273,434. Pub. 3–19–68. Filed 5–15–67.

Class 14 — Metals and Metal Castings and Forgings

850,073. VIKING SHIP (DESIGN). Nelsen Steel & Wire Company, Incorporated. SN 257,642. Pub. 3–19–68. Filed 10–31–66.

850,074. VIKING "100." Nelsen Steel & Wire Company, Incorporated. SN 257,643. Pub. 3–19–68. Filed 10–31–66.

850,075. ZERANIN. Isabellenhuette Heusler, Kommanditgesellschaft. SN 260,160. Pub. 3–19–68. Filed 12–6–66.

850,076. JP. National Steel Corporation. SN 273,521. Pub. 3–19–68. Filed 6–9–67.

Class 15 — Oils and Greases

850,077. HRLUBRICANTS AND DESIGN. H.R.L. Inc., d.b.a. HRLubricants Inc. SN 274,620. Pub. 3–19–68. Filed 6–23–67.

850,078. LONE STAR. Golden Imperial, Inc. SN 277,455. Pub. 3–19–68. Filed 8–3–67.

Class 16 — Protective and Decorative Coatings

850,079. DURAGARD. Sun Chemical Corporation. SN 225,682. Pub. 8–8–67. Filed 8–13–65.

850,080. CHEMFIL. Miles Chemical and Filter Company, Inc. MULTIPLE CLASS (Classes 16 and 52). SN 248,723. Pub. 8–22–67. Filed 6–22–66.

850,081. WIL-COAT. American Light Alloys, Inc. SN 258,967. Pub. 9–12–67. Filed 11–18–66.

850,082. NAM-A-LAC. Mobile Paint Mfg. Co., Inc. SN 259,258. CONCURRENT USE. Pub. 8–29–67. Filed 11–22–66.

850,083. MONOCRYL. United Paint Mfg. Co. SN 266,604. Pub. 3–19–68. Filed 3–13–67.

850,084. ULTRADEC. Phelan-Faust Paint Manufacturing Company. SN 267,442. Pub. 3–19–68. Filed 3–23–67.

850,085. LIN-SPEED. Geo. Brothers. SN 269,165. Pub. 3–19–68. Filed 4–14–67.

850,086. KEM-1-COAT. The Sherwin-Williams Company. SN 269,695. Pub. 3–19–68. Filed 4–20–67.

850,087. LASTINA. The Egyptian Lacquer Manufacturing Company. SN 274,504. Pub. 3–19–68. Filed 6–22–67.

850,088. DURA AND DESIGN. Hotopp Paint & Varnish Co. SN 275,141. Pub. 3–19–68. Filed 6–30–67.

Class 17 — Tobacco Products

850,089. MINIT. R. J. Reynolds Tobacco Company. SN 264,588. Pub. 3–19–68. Filed 2–13–67.

850,090. CALUMET. R. J. Reynolds Tobacco Company. SN 280,254. Pub. 3–19–68. Filed 9–13–67.

850,091. DUVAL. R. J. Reynolds Tobacco Company. SN 280,255. Pub. 3–19–68. Filed 9–13–67.

850,092. COURIER. R. J. Reynolds Tobacco Company. SN 280,256. Pub. 3–19–68. Filed 9–13–67.

850,093. REGATTA. R. J. Reynolds Tobacco Company. SN 280,257. Pub. 3–19–68. Filed 9–13–67.

850,094. POINTER. R. J. Reynolds Tobacco Company. SN 280,258. Pub. 3–19–68. Filed 9–13–67.

850,095. GOLD STRIPE. R. J. Reynolds Tobacco Company. SN 280,259. Pub. 3–19–68. Filed 9–13–67.

850,096. GLOBE. R. J. Reynolds Tobacco Company. SN 280,261. Pub. 3–19–68. Filed 9–13–67.

Class 18 — Medicines and Pharmaceutical Preparations

850,097. VITMOL. Merck & Co., Inc. SN 259,445. Pub. 3–19–68. Filed 11–25–66.

850,098. SOL. La Preferida Tropical Products, Inc. SN 259,838. Pub. 3–19–68. Filed 12–1–66.

850,099. PROCTETS. The Kendall Company. SN 271,153. Pub. 3–19–68. Filed 5–10–67.

Class 19 — Vehicles

850,100. J5. Bombardier Snowmobile Ltd. SN 266,194. Pub. 3–19–68. Filed 3–8–67.

850,101. AK AND DESIGN. Auto-Kool, Inc. SN 268,284. Pub. 3–19–68. Filed 4–4–67.

850,102. EAGLE GRIP. S. H. Leggitt Company. SN 271,629. Pub. 3–19–68. Filed 5–16–67.

Class 20 — Linoleum and Oiled Cloth

850,103. MARLON. American Rubber Corporation. SN 256,340. Pub. 3–19–68. Filed 10–13–66.

850,104. HORIZON. Congoleum-Nairn Inc. SN 263,351. Pub. 3–19–68. Filed 1–26–67.

850,105. FLAMENCO. Congoleum-Nairn Inc. SN 263,353. Pub. 3–19–68. Filed 1–26–67.

Class 21 — Electrical Apparatus, Machines, and Supplies

850,106. MERCOID CONTROL. The Mercoid Corporation. MULTIPLE CLASS (Classes 21 and 26). SN 245,732. Pub. 3–19–68. Filed 5–16–66.

850,107. LIFELONG AND DESIGN. Proctor-Silex Incorporated, by merger and assignment from The Proctor-Silex Corporation. SN 248,251. Pub. 3–19–68. Filed 6–16–66.

850,108. FROST-AWAY. The Manitowoc Company, Inc. SN 250,712. Pub. 3–19–68. Filed 7–21–66.

850,109. CYCLEMASTER. Automatic Valve Corporation. SN 253,271. Pub. 3–19–68. Filed 8–29–66.

850,110. FIREPOWER. Abbey Automation Systems, Inc. SN 254,029. Pub. 3–19–68. Filed 9–8–66.

850,111. HAICO. Hi-Altitude Instrument Co., Inc. SN 255,944. Pub. 3–19–68. Filed 9–30–66.

850,112. WANLASS ELECTRIC CO. WE AND DESIGN. Wanlass Electric Co. SN 256,161. Pub. 3–19–68. Filed 10–10–66.

850,113. UNICOM. Dictograph Products Inc. SN 262,773. Pub. 3–19–68. Filed 1–18–67.

850,114. CRYSTAL-AIRE. United Air Specialists, Inc. SN 263,417. Pub. 3–19–68. Filed 1–26–67.

850,115. TECRAFT. Sireno Signal Mfg. Corp. SN 263,957. Pub. 3–19–68. Filed 2–3–67.

850,116. MO AND DESIGN. Alpha Industries, Inc. SN 265,780. Pub. 3–19–68. Filed 3–2–67.

850,117. MERCATHODE. Brunswick Corporation. SN 268,692. Pub. 3–19–68. Filed 4–10–67.

850,118. AVANTEK. Avantek, Inc. SN 269,497. Pub. 3–19–68. Filed 4–19–67.

850,119. ETHYL. Ethyl Corporation. SN 269,874. Pub. 3–19–68. Filed 4–24–67.

850,120. FLAIR. Bantam-Lite, Inc. SN 270,341. Pub. 3–19–68. Filed 5–1–67.

850,121. MINIWALL. Stromberg-Carlson Corporation. SN 274,468. Pub. 3–19–68. Filed 6–21–67.

850,122. MINK. H. J. Theiler Corporation. SN 274,470. Pub. 3–19–68. Filed 6–21–67.

850,123. MICROCYCLE. Charles Messenger. SN 274,556. Pub. 3–19–68. Filed 6–22–67.

850,124. K LINE AND DESIGN. Spartans Industries, Inc. SN 274,670. Pub. 3–19–68. Filed 6–23–67.

850,125. ROTOVERTER. System Analyzer Corp. SN 274,674. Pub. 3–19–68. Filed 6–23–67.

850,126. ADT. American District Telegraph Company. SN 274,699. Pub. 3–19–68. Filed 6–26–67.

850,127. PAGEANT. Federal Pacific Electric Company. SN 275,129. Pub. 3–19–68. Filed 6–30–67.

850,128. SEA HOOK. Ansac Industries, Inc. SN 275,607. Pub. 3–19–68. Filed 7–10–67.

850,129. EQUALITY AND DESIGN. Equality Plastics, Inc. SN 275,649. Pub. 3–19–68. Filed 7–10–67.

850,130. APC–7. Amphenol Corporation. SN 275,735. Pub. 3–19–68. Filed 7–11–67.

850,131. WAVERLY. Dee-Jay Overseas Trading Company, Inc. SN 275,975. Pub. 3–19–68. Filed 7–13–67.

850,132. WAVERLY SENTINEL. Dee-Jay Overseas Trading Company, Inc. SN 275,976. Pub. 3–19–68. Filed 7–13–67.

850,133. SBC AND DESIGN. South Bay Cable Corp. SN 276,180. Pub. 3–19–68. Filed 7–17–67.

Class 22 — Games, Toys, and Sporting Goods

850,134. CARDINAL. Aktiebolaget Urfabriken. SN 245,660. Pub. 3–19–68. Filed 5–16–66.

850,135. CRAJO BALL. Robert E. Rodgers, Jr., d.b.a. Crajo Sports Company. SN 255,462. Pub. 3–19–68. Filed 9–29–66.

850,136. MAKAHA. Richard L. Stevenson. SN 255,652. Pub. 3–19–68. Filed 10–3–66.

850,137. TOBY. Aktiebolaget Urfabriken. SN 260,222. Pub. 3–19–68. Filed 12–7–66.

850,138. SKI MATE. Raymond L. Hall. SN 260,662. Pub. 3–19–68. Filed 12–13–66.

850,139. CY MANN. Mangel Stores Corporation. SN 266,344. Pub. 3–19–68. Filed 3–9–67.

850,140. SLAP STICK. Milton Bradley Company. SN 267,799. Pub. 3–19–68. Filed 3–29–67.

850,141. SPIDER. Eyerly Aircraft Co. SN 268,172. Pub. 3–19–68. Filed 4–3–67.

850,142. PUZZLE PICKS. Kohner Bros., Inc. SN 270,494. Pub. 3–19–68. Filed 5–2–67.

850,143. PIZZA PARTY. Loral Corporation. SN 271,948. Pub. 3–19–68. Filed 5–19–67.

850,144. OLE' BEN'S SPECK-TAKER. Ridge Runner Lures, Inc. SN 272,389. Pub. 3–19–68. Filed 5–25–67.

850,145. SPRING BLOC. Spring Bloc Corporation of America. SN 273,536. Pub. 3–19–68. Filed 6–9–67.

850,146. LONE RANGER. Wrather Corporation. SN 273,917. Pub. 3–19–68. Filed 6–14–67.

850,147. CHEMFLITE. Chemold Corp. SN 274,411. Pub. 3–19–68. Filed 6–21–67.

850,148. OCTOPUS. Eyerly Aircraft Co. SN 277,903. Pub. 3–19–68. Filed 8–9–67.

850,149. BATHHOUSE BRASS. Mattel, Inc. SN 282,746. Pub. 3–19–68. Filed 10–18–67.

850,150. FUN SPOTS. Mattel, Inc. SN 282,748. Pub. 3–19–68. Filed 10–18–67.

850,151. UCKUCK BIRD. Mattel, Inc. SN 283,392. Pub. 3–19–68. Filed 10–26–67.

850,152. TIFF. Mattel, Inc. SN 287,255. Pub. 3–19–68. Filed 12–20–67.

850,153. TWISTEX. Erwin Weller Company. SN 287,286. Pub. 3–19–68. Filed 12–20–67.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

850,048. (See Class 6 for this trademark.)

850,154. THRUSTBLOC AND DESIGN. Thrustbloc Limited. SN 239,090. Pub. 3–19–68. Filed 2–17–66.

850,155. MIL PAK. The Cross Company. SN 240,711. Pub. 3–19–68. Filed 3–11–66.

850,156. ROBYCO. John W. Roby & Co., Inc. SN 252,895. Pub. 3–19–68. Filed 8–22–66.

850,157. KLEKO. Monogram Industries, Inc. SN 255,221. Pub. 3–19–68. Filed 9–27–66.

850,158. PORTA-TABLE. Porta-Table Corporation. SN 257,079. Pub. 3–19–68. Filed 10–24–66.

850,159. ROADBUILDER. Missouri-Rogers Corporation. SN 260,065. Pub. 3–19–68. Filed 12–5–66.

850,160. CPV AND DESIGN. Combination Pump Valve Company. SN 260,240. Pub. 3–19–68. Filed 12–7–66.

850,161. NORTON-AIRE. Norton-Aire, Inc. SN 261,156. Pub. 3–19–68. Filed 12–20–66.

850,162. DEVELCO. Develco, Incorporated. MULTIPLE CLASS (Classes 23 and 26). SN 261,364. Pub. 3–19–68. Filed 12–23–66.

850,163. INPARCO AND DESIGN. International Parts Corporation. SN 263,070. Pub. 3–19–68. Filed 1–23–67.

850,164. INPARCO. International Parts Corporation. SN 263,071. Pub. 3–19–68. Filed 1–23–67.

850,165. TOMAC. American Hospital Supply Corporation. SN 264,493. Pub. 3–19–68. Filed 2–13–67.

850,166. MCR TRW AND DESIGN. TRW Inc. SN 264,611. Pub. 3–19–68. Filed 2–13–67.

850,167. X–80. Carl Pohl. SN 265,844. Pub. 3–19–68. Filed 3–2–67.

850,168. LEVEL-LINE. Hewitt-Robins Incorporated. SN 267,331. Pub. 3–19–68. Filed 3–22–67.

850,169. MORAMATIC. Feed Service Corporation. SN 267,621. Pub. 3–19–68. Filed 3–27–67.

850,170. BIG THUMB. Channel Construction, Inc. SN 267,726. Pub. 3–19–68. Filed 3–28–67.

850,171. ALCO. Allyn Distributing Company. SN 270,868. Pub. 3–19–68. Filed 5–8–67.

850,172. KWIK TIP. Esco Corporation. SN 270,912. Pub. 3–19–68. Filed 5–8–67.

850,173. VACUFOIL. Huyck Corporation. SN 270,919. Pub. 3–19–68. Filed 5–8–67.

850,174. RE-NU. J. Wiss and Sons Co. SN 271,196. Pub. 3–19–68. Filed 5–10–67.

850,175. PHOENIX AND DESIGN. Nicholson File Company. SN 271,382. Pub. 3–19–68. Filed 5–12–67.

850,176. AIR-ROL. Rollway Bearing Company, Inc. SN 271,519. Pub. 3–19–68. Filed 5–15–67.

850,177. MULTI-POWER. Alfred W. Schmidt. SN 271,529. Pub. 3–19–68. Filed 5–15–67.

850,178. THE PANCAKE LINE. Alfred W. Schmidt. SN 271,530. Pub. 3–19–68. Filed 5–15–67.

850,179. AD-A-CARD. Custom-Bilt Machinery, Inc. SN 271,925. Pub. 3–19–68. Filed 5–19–67.

850,180. P AND DESIGN. National Presto Industries, Inc. MULTIPLE CLASS (Classes 23, 26, 34, and 44). SN 272,535. Pub. 1–16–68. Filed 5–29–67.

850,181. TROY-BILT. Watco Machine Products, Inc. SN 281,734. Pub. 3–19–68. Filed 10–3–67.

850,182. MILK MAID AND DESIGN. Wilbur A. Larson, d.b.a. Hi-Life Rubber Products. SN 282,656. Pub. 3–19–68. Filed 10–17–67.

850,183. FIGURE OF A MILK MAID. Wilbur A. Larson, d.b.a. Hi-Life Rubber Products. SN 282,657. Pub. 3–19–68. Filed 10–17–67.

850,184. LOC PACK. Minnesota Mining and Manufacturing Company. SN 282,750. Pub. 3–19–68. Filed 10–18–67.

Class 26—Measuring and Scientific Appliances

850,106. (See Class 21 for this trademark.)

850,162. (See Class 23 for this trademark.)

850,180. (See Class 23 for this trademark.)

850,185. SOFLENZ. Bausch & Lomb Incorporated, assignee of National Patent Development Corporation. SN 234,833. Pub. 3–19–68. Filed 12–17–65.

850,186. CELLOSCOPE. Particle Data, Inc. SN 243,164. Pub. 3–19–68. Filed 4–11–66.

850,187. VICKERS. Vickers Limited. SN 245,874. Pub. 10–17–67. Filed 4–18–66.

850,188. TATI. Machine-O-Matic, Inc. SN 251,938. Pub. 3–19–68. Filed 8–8–66.

850,189. BBN. Bolt Beranek and Newman Inc. SN 254,229. Pub. 3–19–68. Filed 9–12–66.

850,190. SUBTRAC AND DESIGN. General Dynamics Corporation. SN 255,795. Pub. 3–19–68. Filed 10–5–66.

850,191. AUTOSCAN. Autoscan, Inc. SN 255,859. Pub. 3–19–68. Filed 10–6–66.

850,192. PHONIC EAR. H C Electronics, Inc. SN 255,884. Pub. 3–19–68. Filed 10–6–66.

850,193. EMBY. Sickles Enterprises, Inc. SN 256,477. Pub. 3–19–68. Filed 10–14–66.

850,194. FOPEN. Conductron Corporation. SN 257,035. Pub. 3–19–68. Filed 10–24–66.

850,195. SEE AIDS AND DESIGN. Wire Hardware Mfg. Inc. SN 257,678. Pub. 3–19–68. Filed 10–31–66.

850,196. ATHENA. Athena Controls, Incorporated. SN 257,921. Pub. 3–19–68. Filed 11–4–66.

850,197. 54XL. Howe Richardson Scale Company. SN 260,256. Pub. 3–19–68. Filed 12–7–66.

850,198. DPI SOLAR AND DESIGN. Data Pathing Incorporated. SN 262,404. Pub. 3–19–68. Filed 1–12–67.

850,199. MONOCARD. Avant Incorporated. SN 265,390. Pub. 3–19–68. Filed 2–24–67.

850,200. KARD-A-MATIC. Ross Porta-Plant, Inc. SN 265,438. Pub. 3–19–68. Filed 2–24–67.

850,201. SCOTT-GLO. Scott Industries, Inc. SN 265,441. Pub. 3–19–68. Filed 2–24–67.

850,202. NAVIDERS. Roy H. Jellissen, d.b.a. R. Jellisen Mfg. Co. SN 267,635. Pub. 3–19–68. Filed 3–27–67.

850,203. MATH-MASTER. Gamco Industries, Inc., d.b.a. Educational Computer Products. SN 269,179. Pub. 3–19–68. Filed 4–14–67.

850,204. FORMATEL. Electronic Automation Systems, Inc. SN 269,869. Pub. 3–19–68. Filed 4–24–67.

850,205. SAC. Science Accessories Corporation. SN 271,966. Pub. 3–19–68. Filed 5–19–67.

850,206. CHRONO-TEMP. Paragon Electric Company, Inc. SN 272,203. Pub. 3–19–68. Filed 5–23–67.

850,207. CHRONO-SPRAY. Paragon Electric Company, Inc. SN 272,204. Pub. 3–19–68. Filed 5–23–67.

850,208. THERMOTIP. Baldwin-Lima-Hamilton Corporation, d.b.a. BLH Electronics. SN 273,735. Pub. 3–19–68. Filed 6–13–67.

850,209. INTERBLOC. Standard Gage Company, Inc. SN 275,879. Pub. 3–19–68. Filed 7–12–67.

850,210. MISCELLANEOUS DESIGN. Electro Development Corporation. SN 276,233. Pub. 3–19–68. Filed 7–18–67.

850,211. A.O.K. AND DESIGN. A.O.K. Tool Corp. SN 277,415. Pub. 3–19–68. Filed 8–3–67.

850,212. NOLTE AND DESIGN. Kingmann-White, Inc. SN 278,112. Pub. 3–19–68. Filed 8–11–67.

850,213. PERMA CUBE AND DESIGN. Perfect Film & Chemical Corporation. SN 287,041. Pub. 3–19–68. Filed 12–15–67.

850,214. EPOI. Ehrenreich Photo-Optical Industries, Inc. SN 288,258. Pub. 3–19–68. Filed 1–8–68.

Class 27—Horological Instruments

850,215. CARLISLE. Associated Barr Stores, Inc., d.b.a. Barr's, and Barr's Jewelers. SN 246,433. Pub. 3–19–68. Filed 5–24–66.

850,216. MISCELLANEOUS DESIGN. Bulova Watch Company, Inc. SN 271,337. Pub. 3–19–68. Filed 5–12–67.

Class 28—Jewelry and Precious-Metal Ware

850,217. POOLE. Poole Silver Co., Inc. SN 274,890. Pub. 3–19–68. Filed 6–27–67.

850,218. WILL 'O' WISP. Oneida Ltd. SN 277,202. Pub. 3–19–68. Filed 7–31–67.

850,219. Q. Union Carbide Corporation. SN 279,123. Pub. 3–19–68. Filed 8–25–67.

Class 31—Filters and Refrigerators

850,220. SAVANT. Richard D. Johnson. SN 265,638. Pub. 3–19–68. Filed 2–28–67.

850,221. AQUAZUR. Degremont S.A. SN 268,034. Pub. 3–19–68. Filed 3–31–67.

850,222. POSIPORE. Purolator Products, Inc. SN 269,346. Pub. 3–19–68. Filed 4–17–67.

Class 32—Furniture and Upholstery

850,223. MODULE-X. U.S. Plywood-Champion Papers Inc., by merger and change of name from United States Plywood Corporation. SN 260,117. Pub. 3–19–68. Filed 12–2–66.

850,224. ROTOSELL. Edgar W. Blair. SN 269,625. Pub. 3–19–68. Filed 4–20–67.

850,225. THE HEART OF YOUR MATTRESS ACME SPRINGS AND DESIGN. Acme Spring Company. SN 279,034. Pub. 3–19–68. Filed 8–25–67.

Class 33—Glassware

850,054. (See Class 8 for this trademark.)

850,226. TITANISED. United Glass Limited. SN 254,749. Pub. 3–19–68. Filed 9–19–66.

Class 34—Heating, Lighting, and Ventilating Apparatus

850,180. (See Class 23 for this trademark.)

850,227. HW (DESIGN). Harper-Wyman Company. SN 247,228. Pub. 3–19–68. Filed 6–3–66.

850,228. DUO-PRISM. Holophane Company, Inc. SN 262,790. Pub. 3–19–68. Filed 1–18–67.

850,229. GALLERY. The Tappan Company. SN 267,688. Pub. 3–19–68. Filed 3–27–67.

850,230. TRIDENT. Midland-Ross Corporation. SN 267,962. Pub. 3–19–68. Filed 3–30–67.

850,231. LITTLE DANDY. American Electrical Heater Company. SN 268,141. Pub. 3–19–68. Filed 4–3–67.

Class 35—Belting, Hose, Machinery Packing, and Nonmetallic Tires

850,232. AROSELLOS AND DESIGN. Parker-Hannifin Corporation. SN 251,226. Pub. 3–19–68. Filed 7–28–66.

850,233. FITZ-ALL. The Fitzgerald Manufacturing Company. SN 257,266. Pub. 3–19–68. Filed 10–26–66.

850,234. FITZ-IT. The Fitzgerald Manufacturing Company. SN 257,268. Pub. 3–19–68. Filed 10–26–66.

850,235. GRAFOIL. Union Carbide Corporation. SN 272,117. Pub. 3–19–68. Filed 5–22–67.

850,236. UNIROYAL MASTER. Uniroyal, Inc. SN 272,525. Pub. 3–19–68. Filed 5–26–67.

850,237. PYRATHANE. Pyramid Incorporated. SN 288,163. Pub. 3–19–68. Filed 1–5–68.

Class 36—Musical Instruments and Supplies

850,238. IRAMAC. Iramac N.V., d.b.a. Iramac. SN 256,283. Pub. 3–19–68. Filed 10–12–66.

850,239. SUPER-SENSITIVE. Harold V. Allbaugh, d.b.a. Super-Sensitive Musical String Co. SN 261,441. Pub. 3–19–68. Filed 12–27–66.

850,240. EXECU-CORDER. Consolidated Merchandising Corp. SN 263,024. Pub. 3–19–68. Filed 1–23–67.

850,241. ODYSSEY. Columbia Broadcasting System, Inc. SN 265,047. Pub. 3–19–68. Filed 2–20–67.

850,242. DOT. Dot Records, Incorporated, d.b.a. Dot Recording Co. SN 265,283. Pub. 3–19–68. Filed 2–23–67.

850,243. EMBER INTERNATIONAL AND DESIGN. Ember Records International Inc. SN 266,415. Pub. 3–19–68. Filed 3–10–67.

850,244. ROGUE. The Fred Gretsch Company, Inc. SN 286,461. Pub. 3–19–68. Filed 12–8–67.

850,245. TORNADO. The Fred Gretsch Company, Inc. SN 286,462. Pub. 3–19–68. Filed 12–8–67.

Class 37—Paper and Stationery

850,246. TUFTANE. The B. F. Goodrich Company. SN 269,183. Pub. 3–19–68. Filed 4–14–67.

850,247. SAF-T-SCRIPT. Saf-T-Script, Inc. SN 273,991. Pub. 3–19–68. Filed 6–15–67.

850,248. VANISH. Eagle Pencil Company. SN 274,052. Pub. 3–19–68. Filed 6–16–67.

850,249. SUPER DUPER. S. M. Flickinger Co. Inc. SN 274,200. Pub. 3–19–68. Filed 6–19–67.

Class 38—Prints and Publications

850,250. TAIL OF AIRPLANE (DESIGN). UTA, Inc. SN 254,746. Pub. 3–19–68. Filed 9–19–66.

850,251. HP AND DESIGN. Hewlett-Packard Company. SN 259,426. Pub. 3–19–68. Filed 11–25–66.

850,252. SRT. Santa Rita Technology, Inc. SN 268,481. Pub. 3–19–68. Filed 4–5–67.

850,253. ENJOY. Leisure League Travel, Inc. SN 271,946. Pub. 3–19–68. Filed 5–19–67.

Class 39—Clothing

850,254. TIGER TREADS. Norween Shoe Manufacturing Co., Inc. SN 205,715. Pub. 3–19–68. Filed 11–6–64.

850,255. JANE & JANE. Jane & Jane Limited. SN 235,406. Pub. 3–19–68. Filed 12–28–65.

850,256. EMILIO (SIGNATURE). Emilio Pucci Societa a Responsabilita Limitata. SN 248,029. Pub. 3–19–68. Filed 6–14–66.

850,257. KNEE FREE. Magnet Mills, Inc. SN 258,824. Pub. 3–19–68. Filed 11–16–66.

850,258. SANI-TOES. Automatic Thread Control Corp. SN 258,883. Pub. 3–19–68. Filed 11–17–66.

850,259. MODEL 38. Farah Manufacturing Co., Inc. SN 258,989. Pub. 3–19–68. Filed 11–18–66.

850,260. SIGNORINA. Fata Imports, Inc. SN 259,310. Pub. 3–19–68. Filed 11–28–66.

850,261. TOMAC. American Hospital Supply Corporation. SN 260,393. Pub. 3–19–68. Filed 12–9–66.

850,262. MISCELLANEOUS DESIGN. Maternity Modes. SN 265,537. Pub. 3–19–68. Filed 2–27–67.

850,263. SHHH . . . HH!! SECRET. Chadbourn Gotham, Inc. SN 268,923. Pub. 3–29–67. Filed 4–12–67.

850,264. MARTIAL ARTS WORLD AND DESIGN. Honda Associates, Inc. SN 269,893. Pub. 3–19–68. Filed 4–24–67.

850,265. SWING-SETTE. The H. W. Gossard Co. SN 270,915. Pub. 3–19–68. Filed 5–8–67.

850,266. ROYAL CUP. Proudfoot Hosiery Corp. SN 272,306. Pub. 3–19–68. Filed 5–24–67.

850,267. HOCHSCHILD KOHN AND DESIGN. Hochschild Kohn & Co., Incorporated. SN 272,724. Pub. 3–19–68. Filed 5–31–67.

850,268. JENNIFER DALE. Style Undies, Inc. SN 282,407. Pub. 3–19–68. Filed 10–12–67.

850,269. LARAMIE. Blue Bell, Inc. SN 283,192. Pub. 3–19–68. Filed 10–24–67.

850,270. SIL-KLEEN. Belle Neckwear Co., Inc. SN 283,613. Pub. 3–19–68. Filed 10–30–67.

850,271. WINDSOR FASHIONS AND DESIGN. A. S. Beck Shoe Corporation. SN 283,972. Pub. 3–19–68. Filed 11–2–67.

850,272. PANT A LIZERS. Phil Rose of California, Incorporated. SN 284,030. Pub. 3–19–68. Filed 11–2–67.

850,273. PLUMPKINS. Plumpkins, Inc., assignee of Young America Knits, Inc. SN 284,776. Pub. 3–19–68. Filed 11–13–67.

850,274. ACA. Apparel Corporation of America. SN 284,979. Pub. 3–19–68. Filed 11–16–67.

850,275. APRIL SHOWERS. Apparel Corporation of America. SN 284,980. Pub. 3–19–68. Filed 11–16–67.

850,276. "IMPOSSIBLE." Character Foundations, Inc. SN 285,200. Pub. 3–19–68. Filed 11–20–67.

Class 40—Fancy Goods, Furnishings, and Notions

850,277. DOTTIES. Dotties Limited. SN 255,881. Pub. 3–19–68. Filed 10–6–66.

850,278. MULTICOMB. Smoothy Products, Inc. SN 263,621. Pub. 3–19–68. Filed 1–30–67.

850,279. MATCHMAKER. Chicago Trading Corporation. SN 265,043. Pub. 3–19–68. Filed 2–20–67.

850,280. EMPIRE. Abbott Tresses, Inc. SN 266,842. Pub. 3–19–68. Filed 3–16–67.

850,281. KOMACHI HAIR. Komachiya Honten Co., Ltd. SN 270,581. Pub. 3–19–68. Filed 5–3–67.

850,282. STC. S. H. Hirsch, Inc. SN 277,917. Pub. 3–19–68. Filed 8–9–67.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

850,283. FABRICA EXOTICA. Kaplan Products and Textiles, Inc. SN 230,841. Pub. 3–19–68. Filed 10–21–65.

850,284. BEACON HOUSE. Beacon Looms Inc. SN 270,540. Pub. 3–19–68. Filed 5–3–67.

850,285. MINI-COVER. Malden Novelty Company. SN 276,150. Pub. 3–19–68. Filed 7–17–67.

850,286. SCOTLAINE AND DESIGN. Societa Commercio Tessuti Lanerie Drapperie "Scotland" S.p.A. SN 284,141. Pub. 3–19–68. Filed 11–6–67.

Class 44 — Dental, Medical, and Surgical Appliances

850,180. (See Class 23 for this trademark.)

850,287. SURG-ADE. Charles J. Slicklen Company, Inc. SN 214,795. Pub. 6–28–66. Filed 3–23–65.

850,288. SILICAP. Etablissement Dentaire Ivoclar. SN 236,579. Pub. 3–7–67. Filed 1–17–66.

850,289. ULTRA BRAND. H. Jelinek Dental Alloys, Inc. SN 256,559. Pub. 3–19–68. Filed 10–17–66.

850,290. PE AND DESIGN. Williams Gold Refining Company Incorporated. SN 266,269. Pub. 3–19–68. Filed 3–8–67.

850,291. ICS. The Motloid Company, Incorporated. SN 267,839. Pub. 3–19–68. Filed 3–29–67.

850,292. GALAXY. Foremost-McKesson, Inc., by change of name from McKesson & Robbins, Incorporated, d.b.a. Gentec Hospital Supply Company. SN 269,199. Pub. 3–19–68. Filed 4–14–67.

850,293. TONOPAK. I.G.R. Corporation, assignee of Adolph Posner and Richard Inglima (joint owners). SN 272,629. Pub. 3–19–68. Filed 5–29–67.

850,294. PARTEX. Parke, Davis & Company. SN 282,753. Pub. 3–19–68. Filed 10–18–67.

Class 45 — Soft Drinks and Carbonated Waters

850,295. MR. MISTY. American Dairy Queen Corporation. SN 256,709. Pub. 3–19–68. Filed 10–19–66.

850,296. SNACKTIME. Fairmont Foods Company. SN 261,825. Pub. 3–19–68. Filed 1–3–67.

850,297. BELFAST. New Century Beverage Company. SN 284,549. Pub. 3–19–68. Filed 11–13–67.

Class 46 — Foods and Ingredients of Foods

850,298. SLENDOR SWEET. International Salt Company. SN 238,743. Pub. 3–19–68. Filed 2–14–66.

850,299. HYGEL. Textron, Inc. (Delaware corporation), assignee of Textron, Inc. (Rhode Island corporation). SN 243,268. Pub. 3–19–68. Filed 4–12–66.

850,300. SILVER BRAND. Armour and Company. SN 248,582. Pub. 3–19–68. Filed 6–21–66.

850,301. CAJUN COUNTRY. Breaux Bridge Fine Food Compagnie, Inc. SN 249,726. Pub. 3–19–68. Filed 7–7–66.

850,302. CHILLO. The Pillsbury Company. SN 251,231. Pub. 6–27–67. Filed 7–28–66.

850,303. WITH A NAME LIKE SMUCKER'S IT HAS TO BE GOOD. The J. M. Smucker Company. SN 255,025. Pub. 3–19–68. Filed 9–23–66.

850,304. IN EVERY HOUSE AND DESIGN. House Foodstuff Industry Co., Ltd. SN 257,274. Pub. 3–19–68. Filed 10–26–66.

850,305. REPRESENTATION OF A COOK (DESIGN). Rixona Conserven N.V. SN 258,644. Pub. 3–19–68. Filed 10–28–66.

850,306. SNACK-STRAMI. Columbia Packing Company. SN 259,520. Pub. 3–19–68. Filed 11–28–66.

850,307. SCHMIDT'S DELICATESSEN AND DESIGN. Schmidt Baking Company, Inc. SN 262,512. Pub. 3–19–68. Filed 1–13–67.

850,308. HUMPTY DUMPTY AND DESIGN. Pacific Alaska Fisheries, Inc. SN 266,573. Pub. 11–28–67. Filed 3–13–67.

850,309. CONE-AN-ZA. The Borden Company. SN 268,352. Pub. 3–19–68. Filed 4–5–67.

850,310. COUNTRY CRISP. The Red Barn System, Inc. SN 269,347. Pub. 3–19–68. Filed 4–17–67.

850,311. KAOMEL. SCM Corporation, assignee of The Glidden Company, d.b.a. Durkee Famous Foods. SN 269,420. Pub. 3–19–68. Filed 4–18–67.

850,312. FROST CREST. San Antonio Foreign Trading Co. SN 270,613. Pub. 3–19–68. Filed 5–3–67.

850,313. WHITE COW. Threemor Sales Co. SN 271,546. Pub. 3–19–68. Filed 5–15–67.

850,314. PINK COW. Threemor Sales Co. SN 271,547. Pub. 3–19–68. Filed 5–15–67.

850,315. MR. CREAM. Consolidated Foods Corporation, d.b.a. Joe Lowe Company. SN 273,372. Pub. 3–19–68. Filed 6–8–67.

850,316. TASTILOPE. Heggblade-Marguleas Co. SN 273,552. Pub. 3–19–68. Filed 6–12–67.

850,317. PURE GOLD AND DESIGN. Pure Gold, Inc. SN 276,172. Pub. 3–19–68. Filed 7–17–67.

850,318. TOTEM PAK. Geo. A. Hormel & Company. SN 276,447. Pub. 3–19–68. Filed 7–20–67.

850,319. CASSEROLE. East Point Seafood Company. SN 276,652. Pub. 3–19–68. Filed 7–24–67.

850,320. LA PROVIDENCIA AND DESIGN. Carbonell y Cia, de Cordoba, S.A. SN 278,664. Pub. 3–19–68. Filed 8–21–67.

850,321. SHUR-GAIN. Canada Packers Limited. SN 284,534. Pub. 3–19–68. Filed 11–13–67.

850,322. HOLLERS. Kellogg Company. SN 286,464. Pub. 3–19–68. Filed 12–8–67.

850,323. GARDENSIDE. Safeway Stores, Incorporated. SN 287,123. Pub. 3–19–68. Filed 12–18–67.

850,324. SIXY. Philip Morris Incorporated, d.b.a. Clark Gum Co. SN 287,493. Pub. 3–19–68. Filed 12–26–67.

850,325. WEST ROAD. Tani Farms. SN 287,789. Pub. 3–19–68. Filed 12–29–67.

Class 47 — Wines

850,326. WAN FU. H. Sichel Son, Inc., assignee of Sichel & Fils Freres. SN 271,290. Pub. 3–19–68. Filed 5–11–67.

850,327. ANDRE AND DESIGN. E. & J. Gallo Winery, d.b.a. The Andre Champagne Cellars. SN 288,259. Pub. 3–19–68. Filed 1–8–68.

850,328. ER THE VINTNERS OF EDEN ROC AND DESIGN. E. & J. Gallo Winery, d.b.a. The Vintners of Eden Roc. SN 288,260. Pub. 3–19–68. Filed 1–8–68.

Class 49 — Distilled Alcoholic Liquors

850,329. BONNIE CHARLIE. Charles Kinloch & Company Limited. SN 249,652. Pub. 3–19–68. Filed 7–6–66.

850,330. WHITE HORSE'S HEAD (DESIGN). White Horse Distillers, Limited. SN 255,740. Pub. 3–19–68. Filed 10–4–66.

850,331. RUMONA. Schieffelin & Co. SN 267,066. Pub. 3–19–68. Filed 3–17–67

850,332. ELIXIR D'ANVERS ETC. AND DESIGN. F. X. de Beukelaer. SN 275,645. Pub. 3–19–68. Filed 7–10–67.

Class 50 — Merchandise Not Otherwise Classified

850,333. TRAVELAB. PM & E Electronics, Inc. SN 243,800. Pub. 5–16–67. Filed 4–19–66.

850,334. ART WOOD. Warner Press, Inc. SN 264,995. Pub. 3–19–68. Filed 2–17–67.

850,335. LIVING TONES. Edith Citron, d.b.a. Living Tones. SN 271,128. Pub. 3–19–68. Filed 5–10–67.

850,336. BLOCKHEAD. Blockhead, Inc. SN 271,436. Pub. 3–19–68. Filed 5–15–67.

850,337. QIK-EEZ. Chart-Pak, Inc. SN 273,254. Pub. 3–19–68. Filed 6–7–67.

850,338. KOROLINED. The Enamel Products Company. SN 278,676. Pub. 3–19–68. Filed 8–21–67.

Class 51 — Cosmetics and Toilet Preparations

850,339. VISAGE 9. L'Oreal. SN 248,494. Pub. 3–19–68. Filed 6–20–66.

850,340. GOLDEN MANNER GO MAN AND DESIGN. Shaklee Products. SN 255,825. Pub. 3–19–68. Filed 10–5–66.

850,341. JUST FOR YOU. Apex Beauty Products Manufacturing Corporation, d.b.a. Apex Beauty Products. SN 257,685. Pub. 3–19–68. Filed 11–1–66.

850,342. SWITCH HITTER. Colgate-Palmolive Company. SN 259,302. Pub. 3–19–68. Filed 11–23–66.

850,343. LINC-O-LIN. International Laboratories Limited. SN 260,435. Pub. 3–19–68. Filed 12–9–66.

850,344. HOUSE OF CRAYTON. John K. Diederichs, d.b.a. House of Crayton. SN 260,784. Pub. 3–19–68. Filed 12–14–66.

850,345. MINI-BLUSH. Yardley of London, Inc. SN 268,118. Pub. 3–19–68. Filed 3–31–67.

850,346. LIME ICE. Carter-Wallace, Inc. SN 268,575. Pub. 3–19–68. Filed 4–7–67.

850,347. ABASCUS. Yardley of London, Inc. SN 268,638. Pub. 3–19–68. Filed 4–7–67.

850,348. COME HITHER. Gabrieleen Company, Inc. SN 269,413. Pub. 3–19–68. Filed 4–18–67.

850,349. SKIMMER. Yardley of London, Inc. SN 269,814. Pub. 3–19–68. Filed 4–21–67.

850,350. SATURA-CARRALENE. Sterling Drug Inc. SN 287,706. Pub. 3–19–68. Filed 12–28–67.

Class 52 — Detergents and Soaps

850,080. (See Class 16 for this trademark.)

850,351. JET AIR. Jet Air Products Co. SN 257,493. Pub. 3–19–68. Filed 10–28–66.

850,352. LUSTRE-X. Kandu Chemicals, Inc. SN 269,665. Pub. 3–19–68. Filed 4–20–67.

850,353. POSTPONE. Clairol Incorporated. SN 275,228. Pub. 3–19–68. Filed 7–3–67.

850,354. MOMENTS NOTICE. Clairol Incorporated. SN 275,229. Pub. 3–19–68. Filed 7–3–67.

850,355. PLUS ONE. Intercontinental Chemical Corporation. SN 279,196. Pub. 3–19–68. Filed 8–28–67.

850,356. WASH-OUT. American Home Products Corporation. SN 283,191. Pub. 3–19–68. Filed 10–24–67.

850,357. BIZ. The Procter & Gamble Company. SN 287,864. Pub. 3–19–68. Filed 1–2–68.

Service Marks

Class 100 — Miscellaneous

850,358. CONSERV. Conserv, Inc. SN 234,178. Pub. 3–19–68. Filed 12–8–65.

850,359. SHANE'S. S & S Food Service, Inc. SN 250,036. Pub. 3–19–68. Filed 7–11–66.

850,360. NOTEL MOTEL. Robert E. Ladum. SN 252,581. Pub. 3–19–68. Filed 8–17–66.

850,361. DIAMOND LIL'S AND DESIGN. Zimgo Corporation, Inc. SN 254,851. Pub. 3–19–68. Filed 9–12–66.

850,362. BURKE'S LAW. E. J. Burke, Jr., Inc. SN 254,583. Pub. 3–19–68. Filed 9–16–66.

850,363. STAGECOACH INN. Stagecoach Properties, Inc. SN 263,123. Pub. 3–19–68. Filed 1–23–67.

850,364. PICCADILLY. Restaurant & Waldorf Associates, Inc. SN 287,704. Pub. 3–19–68. Filed 12–28–67.

850,365. ZUM ZUM AND DESIGN. Trattoria, Inc. SN 287,707. Pub. 3–19–68. Filed 12–28–67.

Class 101 — Advertising and Business

850,366. WINCHESTER DAYS. Winchester Retail Merchants Association, Inc. SN 241,294. Pub. 3–19–68. Filed 3–17–66.

850,367. SKYTACULAR. The Goodyear Tire & Rubber Company. SN 251,624. Pub. 3–19–68. Filed 8–3–66.

850,368. PRIVADIAL. Dial-Dictation, Inc. SN 252,079. Pub. 3–19–68. Filed 8–10–66.

850,369. PEP. Package Exhibit Programs, Inc. SN 252,885. Pub. 3–19–68. Filed 8–22–66.

850,370. MAN ON A UTILITY POLE (DESIGN). Carter-Watsey & Associates, Inc. SN 255,291. Pub. 3–19–68. Filed 9–28–66.

850,371. COMORO. E'Con Mills, Inc. SN 264,809. Pub. 3–19–68. Filed 2–16–67.

850,372. PONDEROSA. Joseph Chevrolet Co. MULTIPLE CLASS (Classes 101 and 103). SN 267,336. Pub. 3–19–68. Filed 3–22–67.

850,373. MISCELLANEOUS DESIGN. O. L. Schilffarth & Company. SN 274,245. Pub. 3–19–68. Filed 6–19–67.

Class 102 — Insurance and Financial

850,374. DIPLAN AND DESIGN. E. Rowan Steinschneider. SN 244,363. Pub. 3–19–68. Filed 4–26–66.

850,375. THE PILOT PILOT MOUNTAIN·NORTH CAROLINA AND DESIGN. Pilot Life Insurance Company. SN 263,939. Pub. 3–19–68. Filed 2–3–67.

Class 103 — Construction and Repair

850,372. (See Class 101 for this trademark.)

850,376. CRITOGRAPH. Stearns-Roger Corporation. SN 251,752. Pub. 3–19–68. Filed 8–4–66.

850,377. CONSOLIDATED MOTEL-HOTEL SERVICES AND DESIGN. Consolidated Maintenance Corporation, d.b.a. Consolidated Motel-Hotel-Services. SN 255,420. Pub. 3–19–68. Filed 9–29–66.

850,378. MH AND DESIGN. Consolidated Maintenance Corporation, d.b.a. Consolidated Motel-Hotel-Services. SN 255,421. Pub. 3–19–68. Filed 9–29–66.

Class 104 — Communication

850,379. GOODYEAR. The Goodyear Tire & Rubber Company. SN 251,763. Pub. 3–19–68. Filed 8–3–66.

Class 105 — Transportation and Storage

850,380. CW. Central Wisconsin Motor Transport Company. SN 253,120. Pub. 3–19–68. Filed 8–25–66.

850,381. EJA. Executive Jet Aviation, Inc. SN 253,743. Pub. 3–19–68. Filed 9–2–66.

850,382. CC INC. AND DESIGN. Commercial Carriers, Inc. SN 265,404. Pub. 3–19–68. Filed 2–24–67.

850,383. DTR. Davis Transport & Rentals, Inc. SN 283,804. Pub. 3–19–68. Filed 10–25–67.

850,384. BEL-PAK. Belgian Line, Incorporated. SN 284,065. Pub. 3–19–68. Filed 11–3–67.

Class 106 — Material Treatment

850,385. LUSTRE FROST. Lustre Finish, Inc. SN 232,996. Pub. 3–19–68. Filed 11–19–65.

850,386. ININFLA. Injection Rapide et Conservation des Bois par Procede Nouveau. SN 260,663. Pub. 3–19–68. Filed 12–13–66.

Class 107 — Education and Entertainment

850,387. THE SAXONS. The Saxons. SN 267,678. Pub. 3–19–68. Filed 3–27–67.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 1 — Raw or Partly Prepared Materials

850,388. John Flynn & Sons, Inc., Salem, Mass. SN 268,487. Filed P.R. 4–6–67; Am. S.R. 4–3–68.

FUZZ FREE SUEDE

For Tanned Leather (Int. Cl. 18).
First use Feb. 18, 1965.

Class 6 — Chemicals and Chemical Compositions

850,389. Kendall Chemical Company, Inc., Kendall, Fla. SN 264,748. Filed P.R. 2–15–67; Am. S.R. 4–9–68.

SHOCK STOP

For Liquid Chemical Preparation for Preventing Static Electricity on Any Surface (Int. Cl. 1).
First use Dec. 22, 1966.

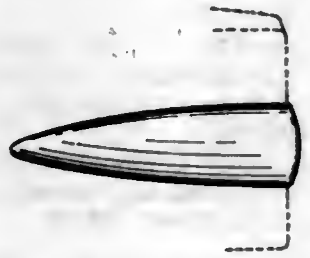
850,390. Crown Chemical Company, Inc., Indianapolis, Ind. SN 285,885. Filed P.R. 11–30–67; Am. S.R. 3–15–68.

ACID AID

For Acid Extender in Powder Form (Int. Cl. 1).
First use December 1964.

Class 8 — Smokers' Articles, Not Including Tobacco Products

850,391. Ronson Corporation, Woodbridge, N.J. SN 228,194. Filed P.R. 9–20–65; Am. S.R. 7–27–67.



The mark comprises a fanciful bullet design.
For Lighters Intended Primarily for Lighting Cigarettes, Cigars, and Pipes (Int. Cl. 34).
First use September 1957.

Class 12 — Construction Materials

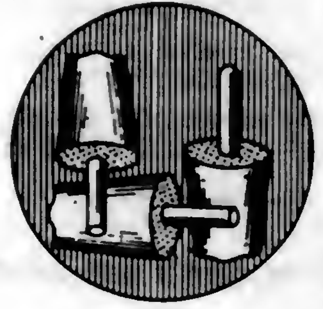
850,392. U.S. Plywood-Champion Papers Inc., New York, N.Y., by merger and change of name from United States Plywood Corporation, New York, N.Y. SN 262,981. Filed P.R. 1–20–67; Am. S.R. 3–4–68.

TRI PLY

For Laminated Sheeting Comprising a Wood Veneer for Use as Wall Covering, Trim, Decorative Panel and Furniture Inserts, Decorative Surfaces for Furniture and Table Tops, and Laminates for Applying to Various Substrates in the Building, Construction, and Furniture Fields (Int. Cl. 19).
First use on or about Dec. 16, 1966.

Class 13 — Hardware and Plumbing and Steam-Fitting Supplies

850,393. Nestor Moseres, Barranquilla, Colombia. SN 245,738. Filed P.R. 5–16–66; Am. S.R. 3–12–68.



The drawing is lined for the color red.
For Combination of Tray, Molds, and Sticks for Making Frozen Confections (Int. Cl. 21).
First use Apr. 1, 1966; in commerce Apr. 5, 1966.

850,394. Jack Gasnick, d.b.a. Cross at the Green Enterprises, New York, N.Y. SN 264,519. Filed P.R. 2–13–67; Am. S.R. 2–27–68.

BUCKLE UP FOR SAFETY

For Safety Belts and Harnesses (Int. Cl. 9).
First use Jan. 17, 1965.

850,395. Daryl Industries, Inc., Miami, Fla. SN 271,135. Filed P.R. 5–10–67; Am. S.R. 3–19–68.

SAFE-T-RAILS

For Aluminum Railing Systems for Building Exteriors (Int. Cl. 6).
First use on or about Feb. 26, 1967.

Class 16 — Protective and Decorative Coatings

850,396. The Freeman Supply Co., Toledo, Ohio. SN 254,679. Filed P.R. 9–19–66; Am. S.R. 11–13–67.

SURE-PART

For All-Purpose Parting Compounds and Release Agents for Molds and the Like (Int. Cl. 1).
First use on or before Sept. 12, 1966.

850,397. Nu-Brite Chemical Company, Inc., Taunton, Mass. SN 267,653. Filed P.R. 3–27–67; Am. S.R. 3–12–68.

STURBRIDGE

For Interior and Exterior Oil and Latex Base Paints and Enamels, Paint Primers, Varnishes and Floor and Wood Sealers (Int. Cl. 2).
First use on or about December 1966.

Class 18 — Medicines and Pharmaceutical Preparations

850,398. The Norwich Pharmacal Company, Norwich, N.Y. SN 280,522. Filed P.R. 9–18–67; Am. S.R. 3–28–68.

COATABILITY

For Bismuth Subsalicylate Ingredient in a Pharmaceutical Preparation (Int. Cl. 5).
First use Apr. 27, 1966.

Class 22 — Games, Toys, and Sporting Goods

850,399. Schaper Manufacturing Company, Inc., Minneapolis, Minn. SN 267,788. Filed P.R. 3–29–67; Am. S.R. 2–28–68.

Don't Spill the Beans

For Equipment Sold as a Unit for Playing a Parlor Game (Int. Cl. 28).
First use Feb. 24, 1967.

Class 46 — Foods and Ingredients of Foods

850,400. Avoset Company, Oakland, Calif. SN 262,668. Filed P.R. 1–17–67; Am. S.R. 2–12–68.

MIX'N SPRED

For Sandwich Spread Product—Namely, a Dried Food Product To Which Water May Be Added To Provide a Spreadable Mixture, the Principal Ingredients of the Dried Food Product Being Hydrogenated Vegetable Fat, Isolated Plant Protein, Cracker Meal, and Buttermilk Solids (Int. Cl. 29).
First use Dec. 21, 1966.

850,401. National Dairy Products Corporation, Chicago, Ill. SN 264,224. Filed P.R. 2–8–67; Am. S.R. 3–29–68.

STIXPAK

For Cheese (Int. Cl. 29).
First use Sept. 22, 1966.

850,402. Hunt-Wesson Foods, Inc., Fullerton, Calif. SN 279,651. Filed 9–5–67.

BUTTERY FLAVOR

For Vegetable Cooking Oil (Int. Cl. 29).
First use Aug. 12, 1966.

Class 47 — Wines

850,403. San Martina Wines, Inc., d.b.a. Léme Freres and Wine Imports of America, Yonkers, N.Y. SN 275,174. Filed P.R. 6–30–67; Am. S.R. 2–29–68.

LÉME Frères

For Wines (Int. Cl. 33).
First use October 1963.

Class 51 — Cosmetics and Toilet Preparations

850,404. Bishop Industries Inc., Union, N.J., by change of name from Hazel Bishop Inc., Union, N.J. SN 251,603. Filed P.R. 8–3–66; Am. S.R. 4–4–68.

QUICK GROOM

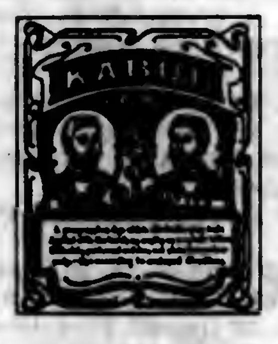
For Hair Spray (Int. Cl. 3).
First use June 30, 1966.

850,405. Sybil Ives Incorporated, White Plains, N.Y. SN 261,532. Filed P.R. 12–27–66; Am. S.R. 4–3–68.

ANTI-FRIZZ

For Neutralizer (Int. Cl. 3).
First use Aug. 11, 1966.

850,406. I. G. Cantu, d.b.a. Kabul Laboratories, Laredo, Tex. SN 276,002. Filed 7–14–67.



For Preparation for Dyeing the Hair (Int. Cl. 3).
First use Jan. 1, 1945.

Class 52 — Detergents and Soaps

850,407. Camp Chemical Co. Inc., Brooklyn, N.Y. SN 259,500. Filed P.R. 11-28-66; Am. S.R. 4-1-68.

UN-CLOG

For Sulphuric Acid Liquid Drain Opener (Int. Cl. 3).
First use Nov. 18, 1963.

Service Marks

Class 100 — Miscellaneous

850,408. International Pen Pal, Inc., New Hyde Park, N.Y. SN 264,831. Filed P.R. 2-16-67; Am. S.R. 3-13-68.

INTERNATIONAL PEN PAL

For Arranging Correspondence Between Compatible Persons (Int. Cl. 42).
First use Feb. 4, 1967.

Class 101 — Advertising and Business

850,409. Gerald L. Brown, d.b.a. Club Party, Los Angeles, Calif. SN 272,573. Filed P.R. 5-29-67; Am. S.R. 3-29-68.

CLUB PARTY

For Promoting the Sale of Goods of Others by Sponsoring Meals Prepared With the Said Goods and Providing Prizes in Exchange for the Labels From the Goods (Int. Cl. 35).
First use Jan. 5, 1968.

850,410. Frederick Nassar, d.b.a. House of Negatives, Tampa, Fla. SN 275,158. Filed 6-30-67.

[redacted]

For Making Photographic Negatives for Lithographic, Offset Printing, and Engraving Purposes (Int. Cl. 35).
First use Feb. 1, 1963; Jan. 1, 1960, as to "House of Negatives."

TRADEMARK REGISTRATIONS RENEWED

69,140. "S" AND CIRCULAR DESIGN. Cl. 4 (Int. Cl. 3). 5-19-08.
70,205. NICHROME. Cl. 21 (Int. Cl. 9). 8-11-08.
155,909. STANDARD OIL CO. (NEW JERSEY). Cl. 12 (Int. Cl. 19). 6-6-22.
156,551. STANDARD OIL CO. (NEW JERSEY). Cl. 15 (Int. Cl. 4). 6-27-22.
156,552. STANDARD. Cl. 15 (Int. Cl. 4). 6-27-22.
211,361. "STANDARD" AND DESIGN. Cl. 15 (Int. Cl. 4). 4-6-26.
227,457. "STANDARD" AND DESIGN. Cl. 52 (Int. Cl. 4). 5-3-27.
227,458. "STANDARD" AND DESIGN. Cl. 4 (Int. Cl. 4). 5-3-27.
228,002. "STANDARD" AND DESIGN. Cl. 12 (Int. Cl. 19). 5-17-27.
230,521. WELMAID. Cl. 24 (Int. Cl. 21). 7-26-27.
236,654. SO-DA-LICIOUS. Cl. 45 (Int. Cl. 32). 12-20-27.
238,834. "DELTA." Cl. 39 (Int. Cl. 25). 2-14-28.
239,088. GREY-ROCK. Cl. 35 (Int. Cl. 7). 2-21-28.
241,112. K AND DESIGN. Cl. 46 (Int. Cl. 29). 4-17-28.
242,829. ANCHOR BRAND. Cl. 13 (Int. Cl. 6). 6-5-28.
242,830. REPRESENTATION OF AN ANCHOR. Cl. 13 (Int. Cl. 6). 6-5-28.
243,828. SILVERFLEX. Cl. 44 (Int. Cl. 10). 7-3-28.
246,735. KOLOKILL. Cl. 6 (Int. Cl. 5). 9-11-28.
246,953. CHAIN STORE AGE. Cl. 38 (Int. Cl. 16). 9-18-28.
434,570. UNOLYN. Cl. 42 (Int. Cl. 24). 11-25-47.
435,747. MARTINS AND DESIGN. Cl. 17 (Int. Cl. 34). 1-6-48.
436,819. CARBUROL. Cl. 15 (Int. Cl. 4). 2-24-48.
436,937. COLOR INTERPLAY. Cl. 51 (Int. Cl. 3). 3-2-48.
437,025. ADSORBOL. Cl. 1 (Int. Cl. 1). 3-2-48.
437,235. FACSIMILE AND DESIGN. Cl. 44 (Int. Cl. 5). 3-9-48.
437,581. ALL-A-ROUND. Cl. 29 (Int. Cl. 21). 3-30-48.
437,591. BUG-FIX. Cl. 6 (Int. Cl. 5). 3-30-48.
437,600. UNITED FEATURE COMICS. Cl. 38 (Int. Cl. 16). 3-30-48.
437,772. PURSUIT. Cl. 52 (Int. Cl. 3). 3-30-48.
437,861. PAYALIN. (Cl. 51 (Int. Cl. 3). 3-30-48.
437,948. LITTLE ELPEE AND DESIGN. Cl. 38 (Int. Cl. 16). 4-6-48.
438,059. BOOSTER NATURAL TWIST. Cl. 17 (Int. Cl. 34). 4-6-48.
438,060. RAILROAD TWIST. Cl. 17 (Int. Cl. 34). 4-6-48.
438,233. AIRPORTER. Cl. 19 (Int. Cl. 12). 4-13-48.
438,257. WEBB. Cl. 23 (Int. Cl. 7). 4-13-48.
438,522. PYRIDEX. Cl. 18 (Int. Cl. 5). 4-27-48.
438,810. CALPRETA. Cl. 42 (Int. Cl. 24). 5-11-48.
439,175. RENOWN. Cl. 21 (Int. Cl. 28). 6-8-48.
439,306. GLAM-A. Cl. 39 (Int. Cl. 25). 6-15-48.
439,381. UNION QUALITY SINCE 1893 AND DESIGN. Cl. 2 (Int. Cl. 6). 6-22-48.
439,552. CB. Cl. 43 (Int. Cl. 23). 7-6-48.
439,580. TUBBS CORDAGE CO. AND DESIGN. Cl. 7 (Int. Cl. 22). 7-6-48.
439,981. SOLTROL. Cl. 52 (Int. Cl. 3). 8-3-48.
440,012. BLACK DUCK. Cl. 51 (Int. Cl. 3). 8-3-48.
440,023. CINCHO-SEPTINE. Cl. 18 (Int. Cl. 5). 8-3-48.
440,364. DI-AZO-MUL. Cl. 18 (Int. Cl. 5). 8-24-48.
440,388. CAL-FLOR-DRY. Cl. 52 (Int. Cl. 4). 8-31-48.
440,629. PEROLINE. Cl. 15 (Int. Cl. 4). 9-14-48.
440,681. SAMSON SHOES AND DESIGN. Cl. 39 (Int. Cl. 25). 9-21-48.
440,730. CHARD. Cl. 23 (Int. Cl. 7). 9-21-48.
440,789. GREASOMETER. Cl. 26 (Int. Cl. 9). 9-28-48.
500,144. LOYALTY. Cl. 11 (Int. Cl. 16). 4-27-48.
500,307. FLAWLESS. Cl. 51 (Int. Cl. 3). 5-11-48.
500,488. CONSOLIDATED. Cl. 37 (Int. Cl. 16). 6-1-48.
500,527. DULCET. Cl. 18 (Int. Cl. 5). 6-1-48.
500,532. SHAVINE. Cl. 51 (Int. Cl. 3). 6-1-48.
500,615. STATEN ISLAND. Cl. 46 (Int. Cl. 30). 6-8-48.
500,648. PRISMATIC. Cl. 51 (Int. Cl. 3). 6-15-48.
500,738. CONSOLIDATED WATER POWER & PAPER CO. Cl. 37 (Int. Cl. 16). 6-29-48.
501,210. PAN-STIK. Cl. 51 (Int. Cl. 3). 7-27-48.
501,301. BLUE DAWN. Cl. 46 (Int. Cl. 31). 8-3-48.
501,407. PURSUIT. Cl. 51 (Int. Cl. 3). 8-3-48.
501,420. CUPROFIX. Cl. 6 (Int. Cl. 1). 8-3-48.
501,436. BLUD-X. Cl. 52 (Int. Cl. 3). 8-10-48.
501,468. CHILDCRAFT. Cl. 38 (Int. Cl. 16). 8-10-48.
501,507. ELIZABETH ARDEN. Cl. 51 (Int. Cls. 3 and 5). 8-10-48.
501,518. BOSS-RIB. Cl. 12 (Int. Cl. 6). 8-10-48.
501,587. MISCELLANEOUS DESIGN. Cl. 43 (Int. Cl. 23). 8-17-48.
501,664. FAIRBANKS. Cl. 19 (Int. Cl. 12). 8-17-48.
501,716. NUBBEE. Cl. 43 (Int. Cl. 23). 8-17-48.
501,843. ARDENA. Cl. 51 (Int. Cls. 3 and 5). 8-24-48.
501,880. MARLATE. Cl. 6 (Int. Cl. 5). 8-24-48.
501,885. CLERESPAN. Cl. 12 (Int. Cl. 6). 8-24-48.
501,914. DEE-AITCH. Cl. 6 (Int. Cl. 5). 8-31-48.
501,916. FIELD AND DESIGN. Cl. 34 (Int. Cl. 11). 8-31-48.
501,949. JACOLOGNE. Cl. 51 (Int. Cl. 3). 8-31-48.
501,952. LITTLE STAR. Cl. 51 (Int. Cl. 3). 8-31-48.
502,152. MURIEL. Cl. 17 (Int. Cl. 34). 9-14-48.
502,235. A TIMME TUFT. Cl. 42 (Int. Cl. 24). 9-21-48.
502,396. GIRL IN PURITAN DRESS (DESIGN). Cl. 42 (Int. Cl. 24). 9-21-48.

TRADEMARK REGISTRATIONS CANCELED

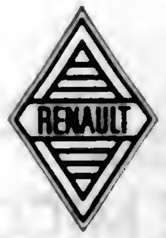
Section 8

The following registrations issued Apr. 17, 1962

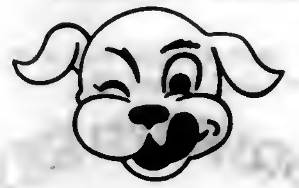
729,909. DUVRAL. Cls. 1 and 6.
729,915. Q TOWELS. Cl. 2.
729,916. WRAP-A-NAP. Cl. 2.
729,917. CARABAO BRAND AND DESIGN. Cl. 2.
729,920. NOVO. Cl. 2
729,921. FINALE. Cl. 3.
729,935. BEAU-LITE. Cl. 8.
729,936. STARLET. Cl. 9.
729,943. F-48 AND CIRCULAR DESIGN. Cl. 10.
729,945. FORTIWELD. Cl. 12.
729,948. WELD-KOTE. Cl. 12.
729,956. BATHLINE OF AMERICA AND DESIGN. Cl. 12.
729,957. EVERYTHING FOR FASTENING. Cl. 13.
729,959. FORTIWELD. Cl. 13.
729,962. JET STREAM. Cl. 13.
729,963. SHARONSTEEL IN DIAMOND DESIGN. Cl. 13.
729,965. SWIVEL-MIST. Cl. 13.
729,967. PERMA-WEAR. Cl. 13.
729,969. FASTEN/ATION. Cl. 13.
729,977. CE COLUMBIA IN HEXAGON DESIGN. Cls. 14 and 23.
729,978. PYRODUR. Cl. 14.
729,985. FLEXAQUA. Cl. 16.
729,989. ALO-EASE. Cl. 18.
729,990. MYLOMIDE. Cl. 18.
729,992. MONTLHERY. Cl. 19.
729,994. GLASSHAWK. Cl. 19.
729,995. SAILSTAR. Cl, 19.
730,004. FORECASTER ORIGINALS. Cl. 21.
730,011. WEGEPHONE. Cl. 21.
730.012. HYNETIC. Cl. 21.
730,013. PTC AND DESIGN. Cl. 21.
730,019. L AND SHIELD DESIGN. Cl. 21.
730,021. DOUBLE-MITE. Cl. 21.
730,022. CANDU. Cl. 21.
730,023. SHOPPER'S WORLD. Cl. 22.
730,024. COPCO. Cl. 22.
730,030. ROTO-DRIVE. Cl. 23.
730,032. SHARONSTEEL AND DESIGN. Cl. 23.
730,039. REMEX AND DESIGN. Cl. 23.
730,042. AGRICO. Cl. 23.
730,044. APPLICON. Cl. 23.
730,047. TYMASTER. Cl. 23.
730,048. TERRA. Cl. 23.
730,051. TAPER MAGIC. Cl. 23.
730,052. AUTOMIX. Cl. 23.
730,057. ARROW (DESIGN). Cl. 24.
730,061. STRATA PRINTER. Cl. 26.
730,062. VUE-O-CRITIC. Cl. 26.
730,063. TRANSCAL. Cl. 26.
730,065. SHOW-BOX. Cl. 26.
730,074. PERISCREENER. Cl. 26.
730,075. 505. Cl. 26.
730,076. TRANSAMATIC I. Cl. 26.
730,078. SCRAM. Cl. 26.
730,079. IR AND DESIGN. Cl. 26.
730,080. ROYAL HONG KONG. Cl. 28.
730,083. WALDORF. Cl. 30.
730,086. TROPICOOL. Cl. 31.
730,088. COMPACT. Cl. 31.
730,095. STAR. Cl. 34.
730,097. DUAL-PAC. Cl. 34.
730,099. COPPER-RAMA AND DESIGN. Cl. 34.
730,100. COPPERAMA AND DESIGN. Cl. 34.
730,102. AIR ISOLATOR. Cl. 34.
730,105. AN-COR AND DESIGN. Cl. 34.
730,106. "LITTLE DEVIL." Cl. 34.
730,107. JETTRONAIRE. Cl. 34.
730,112. MUL-TI-COR. Cl. 35.
730,113. DARLINGTON. Cl. 35.
730,121. INLAND WATERWAY GUIDE. Cl. 38.
730,125. PORTRAIT OF A MAN. Cl. 39.
730,127. "ALLURE." Cl. 39.
730,129. REVERSIT AND DESIGN. Cl. 39.
730,132. KATHY CABOT AND DESIGN. Cl. 39.
730,133. W-WINSTED. Cl. 39.
730,135. FARAH 658 Cl. 39.
730,136. SABLE FINISH. Cl. 39.
730,138. PRO-MATE AND DESIGN. Cl. 39.
730,140. HIDE-A-WAY TAB. Cl. 39.
730,141. M.F./E.E.S. Cl. 39.
730,144. CORCORAN TWO 'N ONE. Cl. 39.
730,150. GRO-NEK. Cl. 39.
730,156. FULTON DURALAP AND DESIGN. Cl. 42.
730,157. BRIGHT STAR. Cl. 42.
730,164. PARK LANE. Cl. 42.
730,165. LA MADELAINE. Cl. 43.
730,166. FARR'S. Cl. 44.
730,168. PETE'S FAMOUS PIZZA PIE AND DESIGN. Cl. 46.
730,169. MF AND DESIGN. Cl. 46.
730,172. CHEF BILL AND DESIGN. Cl. 46.
730,174. BACTOCIDE. Cl. 46.
730,176. GIRL AND CALF (DESIGN). Cl. 46.
730,177. UNCLE-PIC. Cl. 46.
730,178. COUNTRY SUPPER. Cl. 46.
730,180. WHITE FACE BRANDS'. Cl. 46.
730,182. PRIDE. Cl. 46.
730,188. PAL AND DESIGN. Cl. 46.
730,198. BLUE PEARL. Cl. 46.
730,199. PALLAS. Cl. 49.
730,201. SCROLL ART. Cl. 50.
730,202. PLASTEC AND DESIGN. Cl. 50.
730,203. KANGAROLL-PAK. Cl. 50.
730,204. DESIGN OF COW. Cl. 100.
730,218. WARM-N-DRY. Cl. 39.
730,219. LONDON LOOK. Cl. 39.
730,222. PINKED MARGINAL EDGE FORMING PART OF BUST PAD. Cl. 40.
730,223. SHAVETAN. Cl. 51.

TRADEMARK REGISTRATIONS AMENDED, DISCLAIMED, CORRECTED, ETC.

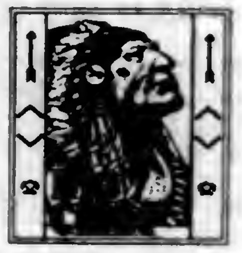
240,774. RENAULT AND DESIGN. Cl. 19. 4-10-28. Societe Anonyme des Usines Renault. Renault, Inc., New York, N.Y. Amended to appear:



380,553. REPRESENTATION OF A DOG'S HEAD. Cl. 46. 8-27-40. Albers Bros. Milling Company. Carnation Company, Los Angeles, Calif. Amended to appear:



438,110. BIG CHIEF AND DESIGN. Cl. 37. 4–6–48. Western Tablet & Stationery Corporation. Westab Inc., Dayton, Ohio. Amended to appear:



624,872. RADAR LITE. Cl. 21. 4–10–56. Burgess Battery Company. Clevite Corporation, Cleveland, Ohio. Amended to appear:

RADAR LITE

677,401. SILVER SKILLET. Cl. 46. 4–21–59. Silver Skillet Brands, Inc. Silver Skillet Food Products Company, Skokie, Ill. Amended: In the statement, column 1, after line 1, *, now by change of name Silver Skillet Food Products Company* is inserted.

765,806. FOUR STAR AND DESIGN. Cl. 21, 3–3–64. Four Star Products Corp., Yonkers, N.Y. Amended: In the statement, column 2, line 6, before "electric" *and* is inserted and in lines 6 and 7, ", and dry cell batteries" is deleted.

835,225. MALTA REINA. Cl. 48. 9–12–67. Metropolis Brewery of N.J., Inc., Trenton, N.J. Corrected: In the statement, column 1, line 1, "New York" should be deleted and *New Jersey* should be inserted.

843,962. SPIRAL-UNI-SEAM. Cl. 12. 2–13–68. Associated Pipe & Fitting Corp., Clifton, N.J. Corrected: In the statement, column 1, line 1, "Pipe" should be deleted and *Pile* should be inserted.

845,885. DATACOMP. Cl. 26. 3–12–68. Clary Corporation. Clary Datacomp Systems, Inc., San Gabriel, Calif. Corrected: In the statement, column 1, before line 1, *Clary Datacomp Systems, Inc., assignee of* should be inserted.

846,914. VALLEY. Cls. 12, 13, and 23. 4–2–68. Valmont Industries, Inc., by change of name from Valley Manufacturing Company, Valley, Nebr. Corrected: In the statement, column 2, lines 6 through 8, the description of goods should be deleted and *self-propelled mobile irrigation system and expansion chucks* should be inserted.

847,531. BALL-IN-THE-BOX. Cl. 2. 4–16–68. Allied Chemical Corporation, New York, N.Y. Corrected: In the statement, column 2, line 2, "Apr. 2" should be deleted and *Apr. 21* should be inserted.

847,533. PRO-GRIP. Cls. 4, 6, 22, 39, 42, 44, and 52. 4–16–68. Manufacturer's Specialty Co., Inc., St. Louis, Mo. Corrected: In the statement, column 2, line 18, "1958" should be deleted and *1948* should be inserted.

847,598. PIN-IT AND DESIGN. Cl. 26. 4–16–68. Orco Products, Inc., Dayton, Ohio. Corrected: In the statement, column 1, line 1, "Arco" should be deleted and *Orco* should be inserted.

REGISTRATIONS PUBLISHED UNDER SEC. 12(c)

The following marks registered under the act of 1905, or the act of 1881, are published under the provisions of section 12(c) of the Trademark Act of 1946. These registrations are not subject to opposition but are subject to cancellation under section 14 of the act of 1946.

Class 6—Chemicals and Chemical Compositions

436,545. Feb. 10, 1948. Sun Chemical Corporation, New York, N.Y. Pub. by registrant.

TRIPLE-SEC

For Substances or Chemicals for Producing a Water Repellent and/or Waterproof Finishes for Textiles (Int. Cl. 1).

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

243,424. June 19, 1928. Charles R. Nalle, Philadelphia, Pa. Pub. by registrant.

adjusta
CASTERS AND GLIDES

No claim is made to the words "Casters and Glides" apart from the mark as shown.

For Casters and Glides (Int. Cl. 6).

Class 17—Tobacco Products

221,461. Nov. 30, 1926. Cuesta, Rey & Co., Tampa, Fla. Pub. by Moro Cigar Co., Inc., Miami, Fla.

PRIMO DEL REY

For Cigars.

Class 21—Electrical Apparatus, Machines, and Supplies

357,421. June 7, 1938. Dictograph Products Company, Inc., New York, N.Y. Pub. by Dictograph Products, Inc., Danbury, Conn.

TELEMATIC

For Radio Receivers and Parts Therefor.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

437,498. Mar. 23, 1948. Florida Land Clearing Equipment Co., Jacksonville, Fla. Pub. by Fleco Corporation, Jacksonville, Fla.

FLECO

For Machine Operated Detachable Stumpers and Root Rakes (Int. Cl. 7).

Class 26—Measuring and Scientific Appliances

438,806. May 11, 1948. The Electro-Mechanical Instrument Co., Perkasie, Pa. Pub. by Electro-Mechanical Instrument Company, Inc., Perkasie, Pa.

EMICO

For Ammeters, Milliammeters and Voltmeters (Int. Cl. 9).

Class 27—Horological Instruments

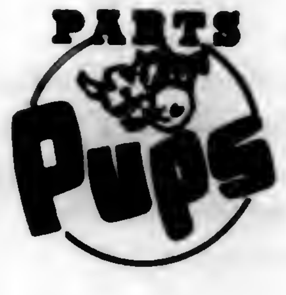
225,980. Mar. 29, 1927. Fratelli Borletti, Milan, Italy. Pub. by Fratelli Borletti S.p.A., Milan, Italy.

VEGLIA

For Alarm Clocks.

Class 38—Prints and Publications

437,859. Mar. 30, 1948. Genuine Parts Company, Atlanta, Ga. Pub. by registrant.



For Publications, Issued Periodically (Int. Cl. 16).

Class 44—Dental, Medical, and Surgical Appliances

435,697. Jan. 6, 1948. James F. Wilson, d.b.a. Elastrator Company, Davis, Calif. Pub. by Elastrator Patents, Inc., Davis, Calif.

ELASTRATOR

For Instruments and Rings for Castrating and Docking Livestock (Int. Cl. 10).

Class 47—Wines

310,845. Mar. 13, 1934. Trans-Continental Agencies Ltd., London, England. Pub. by Companhia Geral de Agricultura das Vinhas do Alto Douro S.A.R.L., Vila Nova de Gaia, Portugal.

HOOPER'S

For Port Wine.

439,431. June 29, 1948. Bragno & Company, Chicago, Ill. Pub. by registrant.

Martha Washington

For Wines (Int. Cl. 33).

INDEX OF REGISTRANTS

JUNE 4, 1968

(Registered ; Renewed ; Canceled ; Amended, Disclaimed, Corrected, etc. ; New Certificates ; 12c Publications.)

ABC Ranch : *See*—
  Adams, W. P., II.
ACF Industries, Inc., New York, N.Y. 850,069, pub. 3–19–68. Cl. 13.
A.O.K. Tool Corp., Ozone Park, N.Y. 850,211, pub. 3–19–68. Cl. 26.
A.P.M. Corp., Englewood, N.J. 850,072, pub. 3–19–68. Cl. 13.
Abbey Automation Systems, Inc., Linden, N.J. 850,110, pub. 3–19–68. Cl. 21.
Abbott Laboratories, North Chicago, Ill. 500,527, ren. 6–4–68. Cl. 18.
Abbott Tresses, Inc., Pittsburgh, Pa. 850,280, pub. 3–19–68. Cl. 40.
Acme Spring Co., Los Angeles, Calif. 850,225, pub. 3–19–68. Cl. 32.
Adams, W. P., II, d.b.a. ABC Ranch, Omaha, Nebr. 850,035, pub. 3–19–68. Cl. 1.
Advance Food Service Equipment, Inc., Westbury, N.Y. 850,066, pub. 3–19–68. Cl. 13.
Aerosol Techniques, Inc., Bridgeport, Conn. 729,965, canc. Cl. 13.
Aktiebolaget Urfabriken, Svangsta, Sweden. 850,134, pub. 3–19–68. Cl. 22.
Aktiebolaget Urfabriken, Svangsta, Sweden. 850,137, pub. 3–19–68. Cl. 22.
Albers Bros. Milling Co., to Carnation Co., Los Angeles, Calif. 380,553. Am. 7(d). Cl. 46.
Alberto-Culver Co., Melrose Park, Ill. 850,045, pub. 3–19–68. Cl. 4.
All American Aviation, Inc., to All American Engineering Co., Wilmington, Del. 434,570, ren. 6–4–68. Cl. 42.
All American Engineering Co. : *See*—
  All American Aviation, Inc.
Allbaugh, Harold V., d.b.a. Super-Sensitive Musical String Co., Chicago, Ill. 850,239, pub. 3–19–68. Cl. 36.
Allied Chemical Corp., New York, N.Y. 847,531, cor. Cl. 2.
Allyn Distributing Co., Denver, Colo. 850,171, pub. 3–19–68. Cl. 23.
Alpha Industries, Inc., Newton Upper Falls, Mass. 850,116, pub. 3–19–68. Cl. 21.
Amchem Products, Inc. : *See*—
  American Chemical Paint Co.
American Agricultural Chemical Co., The, New York, N.Y. 730,042, canc. Cl. 23.
American Chemical Paint Co., to Amchem Products, Inc., Ambler, Pa. 440,629, ren. 6–4–68. Cl. 15.
American Chemical Paint Co., to Amchem Products, Inc., Ambler, Pa. 440,789, ren. 6–4–68. Cl. 26.
American Dairy Queen Corp., Minneapolis, Minn. 850,295, pub. 3–19–68. Cl. 45.
American District Telegraph Co., New York, N.Y. 850,126, pub. 3–19–68. Cl. 21.
American Electrical Heater Co., Detroit, Mich. 850,231, pub. 3–19–68. Cl. 34.
American Home Products Corp., New York, N.Y. 850,356, pub. 3–19–68. Cl. 52.
American Hospital Supply Corp., Evanston, Ill. 850,041, pub. 3–19–68. Cl. 2.
American Hospital Supply Corp., Evanston, Ill. 850,165, pub. 3–19–68. Cl. 23.
American Hospital Supply Corp., Evanston, Ill. 850,261, pub. 3–19–68. Cl. 39.
American Light Alloys, Inc., Little Falls, N.J. 850,081, pub. 3–19–68. Cl. 16.
American Rubber Corp., Albertville, Ala. 850,103, pub. 3–19–68. Cl. 20.
Amphenol Corp., Broadview, Ill. 850,130, pub. 3–19–68. Cl. 21.
An-Cor Industrial Plastics, Inc., Buffalo, N.Y. 730,105, canc. Cl. 34.
Andre Champagne Cellars, The : *See*—
  Gallo, E. & J., Winery.
Antler Ltd., Bury, England. 850,042, pub. 3–19–68. Cl. 3.
Anzac Industries, Inc., Cleveland, Ohio. 850,128, pub. 3–19–68. Cl. 21.
Apex Beauty Products : *See*—
  Apex Beauty Products Mfg. Corp.
Apex Beauty Products Mfg. Corp., d.b.a. Apex Beauty Products, Baltimore, Md. 850,341, pub. 3–19–68. Cl. 51.
Apparel Corp. of America, Knoxville, Tenn. 850,274–5, pub. 3–19–68. Cl. 39.
Arden, Elizabeth, Sales Corp., New York, N.Y. 501,507, ren. 6–4–68. Cl. 51.
Arden, Elizabeth, Sales Corp., New York, N.Y. 501,843, ren. 6–4–68. Cl. 51.
Armour Abrasives Co. : *See*—
  Armour and Co.
Armour and Co., from Armour & Co., d.b.a. Armour Creameries, Chicago, Ill. 730,176, canc. Cl. 46.
Armour & Co., from Armour & Co., Chicago, Ill. 730,178, canc. Cl. 46.
Armour and Co., d.b.a. Armour Abrasives Co., Chicago, Ill. 850,044, pub. 3–19–68. Cl. 4.
Armour & Co., Chicago, Ill. 850,300, pub. 3–19–68. Cl. 46.
Armour Creameries : *See*—
  Armour & Co.
Arquette, Cliff, Gettysburg, Pa. 730,125, canc. Cl. 39.
Associated Barr Stores, Inc., d.b.a. Barr's, and Barr's Jewelers, Philadelphia, Pa. 850,215, pub. 3–19–68. Cl. 27.
Associated Pipe & Fitting Corp., Clifton, N.J. 843,962, cor. Cl. 12.
Athena Controls, Inc., Conshohocken, Pa. 850,196, pub. 3–19–68. Cl. 26.
Atlas Shirt Co., Inc., New York, N.Y. 730,140, canc. Cl. 39.
Auto-Kool, Inc., Lawton, Okla. 850,101, pub. 3–19–68. Cl. 19.
Automatic Thread Control Corp., Valley Stream, N.Y. 850,258, pub. 3–19–68. Cl. 39.
Automatic Valve Corp., Farmington, Mich. 850,109, pub. 3–19–68. Cl. 21.
Automotive Warehouse Distributor, Inc., Denver, Colo. 730,039, canc. Cl. 23.
Autoscan, Inc., Culver City, Calif. 850,191, pub. 3–19–68. Cl. 26.
Avant, Inc., Lincoln, Mass. 850,199, pub. 3–19–68. Cl. 26.
Avantek, Inc., Santa Clara, Calif. 850,118, pub. 3–19–68. Cl. 21.
Avery Adhesive Products, Inc., San Marino, Calif. 730,044, canc. Cl. 23.
Avoset Co., Oakland, Calif. 850,400. Cl. 46.
BLH Electronics : *See*—
  Baldwin-Lima-Hamilton Corp.
Baldwin-Lima-Hamilton Corp., d.b.a. BLH Electronics, Chicago, Ill. 850,208, pub. 3–19–68. Cl. 26.
Bantam-Lite, Inc., New York, N.Y. 850,120, pub. 3–19–68. Cl. 21.
Barr's : *See*—
  Associated Barr Stores, Inc.
Barr's Jewelers : *See*—
  Associated Barr Stores, Inc.
Bastian-Blessing Co., The, Chicago, Ill. 437,948, ren. 6–4–68. Cl. 38.
Bausch & Lomb Inc., Rochester, N.Y., from National Patent Development Corp., New York, N.Y. 850,185, pub. 3–19–68. Cl. 26.
Beacon Looms Inc., New York, N.Y. 850,284, pub. 3–19–68. Cl. 42.
Beck, A. S., Shoe Corp., New York, N.Y. 850,271, pub. 3–19–68. Cl. 39.
Belgian Line, Inc., New York, N.Y. 850,384, pub. 3–19–68. Cl. 105.
Bell Industries, Inc., New York, N.Y. 730,164, canc. Cl. 42.
Belle Neckwear Co., Inc., New York, N.Y. 850,270, pub. 3–19–68. Cl. 39.
Bergische Stahl Industrie, Remscheid, Germany. 729,976, canc. Cl. 14.
Bishop, Hazel, Inc. : *See*—
  Bishop Industries Inc.
Bishop Industries Inc., from Hazel Bishop Inc., Union, N.J. 850,404. Cl. 51.
Blair, Edgar W., Republic, Mo. 850,224, pub. 3–19–68. Cl. 32.
Blockhead, Inc., New York, N.Y. 850,336, pub. 3–19–68. Cl. 50.
Blue Bell, Inc., Greensboro, N.C. 850,269, 3–19–68. Cl. 39.
Bolt Beranek & Newman Inc., Cambridge, Mass. 850,189, pub. 3–19–68. Cl. 26.
Bombardier Snowmobile Ltd., Valcourt, Quebec, Canada. 850,100, pub. 3–19–68. Cl. 19.
Borden Co., The, New York, N.Y. 850,059, pub. 3–19–68. Cl. 12.
Borden Co., The, New York, N.Y. 850,309, pub. 3–19–68. Cl. 46.
Borske Sklo, Narodni Podnik, Novy Bor, Czechoslovakia. 850,054. pub. 3–19–68. Multiple Class (Classes 8 and 33).
Bostwick Steel Lath Co., The, Niles, Ohio. 501,518, ren. 6–4–68. Cl. 12.
Bradley, Milton, Co., Springfield, Mass. 850,140, pub. 3–19–68. Cl. 22.
Bragno & Co., Chicago, Ill. 439,431, 12(c) pub. 6–4–68. Cl. 47.
Breaux Bridge Fine Food Compagnie, Inc., Breaux Bridge, La. 850,301, pub. 3–19–68. Cl. 46.
Brown, Gerald L., d.b.a. Club Party, Los Angeles, Calif. 850,409. Cl. 101.
Brunswick Corp., Chicago, Ill. 850,117, pub. 3–19–68. Cl. 21.
Bulova Watch Co., Inc., Flushing, N.Y. 850,216, pub. 3–19–68. Cl. 27.
Burgess Battery Co., to Clevite Corp., Cleveland, Ohio. 624,872. Am. 7(d). Cl. 21.
Burke, E. J., Jr., Inc., Buffalo, N.Y. 850,362, pub. 3–19–68. Cl. 100.
CFC Corp., North Hollywood, Calif. 730,202, canc. Cl. 50.
Cabot, Kathy, Inc., Boston, Mass. 730,132, canc. Cl. 39.
Calico Printer's Assn. Ltd., The, Manchester, England. 438,810, ren. 6–4–68. Cl. 42.
Camloc Fastener Corp., Paramus, N.J. 729,969, canc. Cl. 13.
Camp Chemical Co. Inc., Brooklyn, N.Y. 850,407. Cl. 52.
Canada Packers Ltd., Toronto, Ontario, Canada. 850,321, pub. 3–19–68. Cl. 46.

Cantu, I. G., d.b.a. Kabul Laboratories, Laredo, Tex. 850,406. Cl. 51.
Caplan, A. I., to A. I. Caplan, d.b.a. Caplan's Army Store, St. Johnsbury, Vt. 440,681, ren. 6–4–68. Cl. 39.
Caplan's Army Store: *See—*
  Caplan, A. I.
Carbonell y Cia, de Cordoba, S.A., Cordoba, Spain. 850,320, pub. 3–19–68. Cl. 46.
Carson Chemical Co.: *See—*
  Morehouse Mfg. Co.
Carter-Wallace, Inc., New York, N.Y. 850,346, pub. 3–19–68. Cl. 51.
Carter-Watsey & Associates, Inc., Lake Wales, Fla. 850,370, pub. 3–19–68. Cl. 101.
Cellulose Products Corp., Milltown, N.J. 729,916, canc. Cl. 2.
Central States Thread Corp., Cincinnati, Ohio. 501,587, ren. 6–4–68. Cl. 43.
Central Wisconsin Motor Transport Co., Wisconsin Rapids, Wis. 850,380, pub. 3–19–68. Cl. 105.
Chadbourn Gotham, Inc., Charlottle, N.C. 850,263, pub. 8–29–67. Cl. 39.
Chain Store Publishing Corp., The, to Lebhar-Friedman Publications, Inc., New York, N.Y. 246,953, ren. 6–4–68. Cl. 38.
Champ Hats, Inc., Philadelphia, Pa. 730,141, canc. Cl. 39.
Channel Construction, Inc., Keene, N.H. 850,170, pub. 3–19–68. Cl. 23.
Character Foundations, Inc., New York, N.Y. 850,276, pub. 3–19–68. Cl. 39.
Chart-Pak, Inc., Leeds, Mass. 850,337, pub. 3–19–68. Cl. 50.
Chef Bill: *See—*
  White, William S.
Chemold Corp., Jamaica, N.Y. 850,147, pub. 3–19–68. Cl. 22.
Chicago Trading Corp., New York, N.Y. 850,279, pub. 3–19–68. Cl. 40.
Citron, Edith, d.b.a. Living Tones, Boston, Mass. 850,335, pub. 3–19–68. Cl. 50.
Clairol Inc., New York, N.Y. 850,353–4, pub. 3–19–68. Cl. 52.
Clark Gum Co.: *See—*
  Morris, Philip, Inc.
Clary Corp., to Clary Datacomp Systems, Inc., San Gabriel, Calif. 845,885, cor. Cl. 26.
Clopay Corp., Cincinnati, Ohio. 850,062, pub. 3–19–68. Cl. 12.
Closter Mills, Inc., Emerson, N.J. 730,127, canc. Cl. 39.
Clover Lamp Co., Inc., Philadelphia, Pa. 730,004, canc. Cl. 21.
Club Party: *See—*
  Brown, Gerald L.
Coast Fuse, Inc.: *See—*
  Coast Fuse Mfg. Co.
Coast Fuse Mfg. Co., from Coast Fuse, Inc., Livermore, Calif. 850,056, pub. 2–20–68. Cl. 9.
Cochran, Jacqueline, to Jacqueline Cochran, Inc., Newark, N.J., and New York, N.Y., to Jacqueline Cochran, Inc., New York, N.Y. 437,772, ren. 6–4–68. Cl. 52.
Cochran, Jacqueline, d.b.a. Jacqueline Cochran, and Jacqueline Cochran Cosmetics, to Jacqueline Cochran, Inc., Newark, N.J., to Jacqueline Cochran, Inc., New York, N.Y. 501,407, ren. 6–4–68. Cl. 51.
Cochran, Jacqueline, d.b.a. Jacqueline Cochran, and Jacqueline Cochran Cosmetics, to Jacqueline Cochran, Inc., Newark, N.J., to Jacqueline Cochran, Inc., New York, N.Y. 501,949, ren. 6–4–68. Cl. 51.
Cochran, Jacqueline, d.b.a. Jacqueline Cochran, and Jacqueline Cochran Cosmetics, to Jacqueline Cochran, Inc., Newark, N.J., to Jacqueline Cochran, Inc., New York, N.Y. 501,952, ren. 6–4–68. Cl. 51.
Cochran, Jacqueline, Cosmetics: *See—*
  Cochran, Jacqueline.
Cochran, Jacqueline, Inc.: *See—*
  Cochran, Jacqueline.
Colgate-Palmolive Co., New York, N.Y. 850,342, pub. 3–19–68. Cl. 51.
Columbia Broadcasting System, Inc., New York, N.Y. 850,241, pub. 3–19–68. Cl. 36.
Columbia Engineering Co., Inc., Newark, N.J. 729,977, canc. Multiple Class (Classes 14 and 23).
Columbia Packing Co., Boston, Mass. 850,306, pub. 3–19–68. Cl. 46.
Columbia Plastics Corp., Culver City, Calif. 730,024, canc. Cl. 22.
Combination Pump Valve Co., Philadelphia, Pa. 850,160, pub. 3–19–68. Cl. 23.
Commercial Carriers, Inc., Jeffersonville, Ind. 850,382, pub. 3–19–68. Cl. 105.
Commercial Solvents Corp., New York, N.Y. 850,055, pub. 3–19–68. Cl. 9.
Communications Control Corp., Van Nuys, Calif. 730,022, canc. Cl. 21.
Compagnie d'Applications Mecaniques a l'Electronique, au Cinema et a l'Atomistique (C.A.M.E.C.A.), Paris, France. 730,065, canc. Cl. 26.
Companhia Geral de Agricultura das Vinkas do Alto Douro S.A.R.L.: *See—*
  Trans-Continental Agencies Ltd.
Conco Inc.: *See—*
  Conkey, H. D., & Co.
Conductron Corp., Ann Arbor, Mich. 850,194, pub. 3–19–68. Cl. 26.
Congoleum-Nairn Inc., Kearny, N.J. 850,104–5, pub. 3–19–68. Cl. 20.
Conkey, H. D., & Co., to Conco Inc., Mendota, Ill. 501,916, ren. 6–4–68. Cl. 34.
Conserv, Inc., Long Beach, Calif. 850,358, pub. 3–19–68. Cl. 100.
Consolidated Cigar Corp.: *See—*
  Lorillard, P., Co.
Consolidated Foods Corp., d.b.a. Joe Lowe Co., Englewood, N.J. 850,315, pub. 3–19–68. Cl. 46.
Consolidated Maintenance Corp., d.b.a. Consolidated Motel-Hotel-Services, Cambridge, Mass. 850,377–8, pub. 3–19–68. Cl. 103.
Consolidated Merchandising Corp., New York, N.Y. 850,240, pub. 3–19–68. Cl. 36.
Consolidated Motel-Hotel-Services: *See—*
  Consolidated Maintenance Corp.
Consolidated Papers, Inc.: *See—*
  Consolidated Water Power & Paper Co.
Consolidated Water Power & Paper Co., to Consolidated Papers, Inc., Wisconsin Rapids, Wis. 500,488, ren. 6–4–68. Cl. 37.
Consolidated Water Power & Paper Co., to Consolidated Papers, Inc., Wisconsin Rapids, Wis. 500,738, ren. 6–4–68. Cl. 37.
Continental Seafood Corp., Chicago, Ill. 730,198, canc. Cl. 46.
Control Dynamics Corp., North Hollywood, Calif. 730,021, canc. Cl. 21.
Corcoran, Joseph F., Shoe Co. Inc., Stoughton, Mass. 730,144, canc. Cl. 39.
Crajo Sports Co.: *See—*
  Rodgers, Robert E., Jr.
Cross at the Green Enterprises: *See—*
  Gasnick, Jack.
Cross Co., The, Fraser, Mich. 850,155, pub. 3–19–68. Cl. 23.
Crown Chemical Co., Inc., Indianapolis, Ind. 850,390. Cl. 6.
Cuesta, Rey, & Co., Tampa, by Moro Cigar Co., Inc., Miami, Fla. 221,461, 12(c) pub. 6–4–68. Cl. 17.
Custom-Bilt Machinery, Inc., York, Pa. 850,179, pub. 3–19–68. Cl. 23.
Cyprus Mines Corp.: *See—*
  Sierra Talc Co.
Daly-Herring Co., to Daly-Herring Co., Kinston, N.C. 501,914, ren. 6–4–68. Cl. 6.
Daryl Industries, Inc., Miami, Fla. 850,395. Cl. 13.
Data Pathing Inc., Sunnyvale, Calif. 850,198, pub. 3–19–68. Cl. 26.
Davis Transport & Rentals, Inc., Jacksonville, Fla. 850,383, pub. 3–19–68. Cl. 105.
Daystrom, Inc., Murray Hill, N.J. 730,063, canc. Cl. 26.
De Beukelaer, F. X., Anvers, Belgium. 850,332, pub. 3–19–68. Cl. 49.
Dee-Jay Overseas Trading Co., Inc., Hialeah, Fla. 850,131–2, pub. 3–19–68. Cl. 21.
Degremont S.A., Suresnes (Seine), France. 850,221, pub. 3–19–68. Cl. 31.
De Markoff, Alexandra, Sales Corp.: *See—*
  Robbins, Anatole, Inc.
Develco, Inc., Norwalk, Conn. 850,162, pub. 3–19–68. Multiple Class (Classes 23 and 26).
Dial-Dictation, Inc., Cranston, R.I. 850,368. Cl. 101.
Dictograph Products Co., Inc., New York, N.Y., by Dictograph Products, Inc., Danbury, Conn. 357,421, 12(c) pub. 6–4–68.
Dictograph Products, Inc.: *See—*
  Dictograph Products Co., Inc.
Dictograph Products Inc., Danbury, Conn. 850,118, pub. 3–19–68. Cl. 21.
Diederichs, John K., d.b.a. House of Crayton, Cicero, Ill. 850,344, pub. 3–19–68. Cl. 51.
Dollfus-Mieg & Cie, Societe Anonyme: *See—*
  Thiriez, J., Pere & Fils & Cartier-Bresson.
Dot Recording Co.: *See—*
  Dot Records, Inc.
Dot Records, Inc., d.b.a. Dot Recording Co., Hollywood, Calif. 850,242, pub. 3–19–68. Cl. 36.
Dotties Ltd., Sussex, England. 850,277, pub. 3–19–68. Cl. 40.
Driver-Harris Co.: *See—*
  Driver-Harris Wire Co.
Driver-Harris Wire Co., to Driver-Harris Co., Harrison, N.J. 70,205, ren. 6–4–68. Cl. 21.
Du Pont de Nemours, E. I., & Co., Wilmington, Del. 501,880, ren. 6–4–68. Cl. 6.
Durkee Famous Foods: *See—*
  SCM Corp.
Dynamic Models, Inc., Van Nuys, Calif. 730,052, canc. Cl. 23.
E-Z Products Co., Culver City, Calif. 850,070, pub. 3–19–68. Cl. 13.
Eagle Pencil Co., Danbury, Conn. 850,248, pub. 3–19–68. Cl. 37.
East Point Seafood Co., Seattle, Wash. 850,319, pub. 3–19–68. Cl. 46.
E'Con Mills, Inc., Chattanooga, Tenn. 850,371, pub. 3–19–68. Cl. 101.
Educational Computer Products: *See—*
  Gamco Industries, Inc.
Edwards Packing Co., Lakeland, Fla. 501,301, ren. 6–4–68. Cl. 46.
Egyptian Lacquer Mfg. Co., Kearny, N.J. 850,087, pub. 3–19–68. Cl. 16.
Ehrenreich Photo-Optical Industries, Inc., Garden City, N.Y. 850,214, pub. 3–19–68. Cl. 26.
Elastrator Co.: *See—*
  Wilson, James F.
Elastrator Patents, Inc.: *See—*
  Wilson, James F.
Electro Development Corp., Seattle, Wash. 850,210, pub. 3–19–68. Cl. 26.
Electro-Mechanical Instrument Co., The, by Electro-Mechanical Instrument Co., Inc., Perkasie, Pa. 438,806, 12(c) pub. 6–4–68. Cl. 26.
Electronic Automation Systems, Inc., Grand Island, N.Y. 850,204, pub. 3–19–68. Cl. 26.
Ember Records International Inc., New York, N.Y. 850,243, pub. 3–19–68. Cl. 36.
Enamel Products Co., The, Cleveland, Ohio. 850,338, pub. 3–19–68. Cl. 50.
Equality Plastics, Inc., New York, N.Y. 850,129, pub. 3–19–68. Cl. 21.
Esco Corp., Portland, Oreg. 850,172, pub. 3–19–68. Cl. 23.

Esta Medical Laboratories, Inc.: *See—*
  Lanteen Medical Laboratories, Inc.
Etablissement Dentaire Ivoclar, Schaan, Liechtenstein. 850,288, pub. 3–7–67. Cl. 44.
Ethyl Corp., Richmond, Va. 850,119, pub. 3–19–68. Cl. 21.
Everhot All-Copper, Inc., Boston, Mass. 730,099–100, canc. Cl. 34.
Executive Jet Aviation, Inc., Columbus, Ohio. 850,381, pub. 3–19–68. Cl. 105.
Eyerly Aircraft Co., Salem, Oreg. 850,141, pub. 3–19–68. Cl. 22.
Eyerly Aircraft Co., Salem, Oreg. 850,148, pub. 3–19–68. Cl. 22.
FMC Corp.: *See—*
  Niagara Sprayer Co.
Factor, Max, & Co., Hollywood, Calif. 501,210, ren. 6–4–68. Cl. 51.
Fairbanks Co., The, Binghamton, N.Y. 501,664, ren. 6–4–68. Cl. 19.
Fairmont Foods Co., Omaha, Nebr. 850,296, pub. 3–19–68. Cl. 45.
Farac Oil & Chemical Co., Chicago, Ill. 729,985, canc. Cl. 16.
Farah Mfg. Co., Inc., El Paso, Tex. 730,135, canc. Cl. 39.
Farah Mfg. Co., Inc., El Paso, Tex. 850,259, pub. 3–19–68. Cl. 39.
Fata Imports, Inc., Los Angeles, Calif. 850,260, pub. 3–19–68. Cl. 39.
Federal Pacific Electric Co., Newark, N.J. 850,127, pub. 3–19–68. Cl. 21.
Feed Service Corp., Crete, Nebr. 850,169, pub. 3–19–68. Cl. 23.
Field Enterprises Educational Corp.: *See—*
  Quarrie Corp., The.
Firestone Tire & Rubber Co., The, Akron, Ohio. 730,118, canc. Cl. 35.
First Spice Mixing Co., Inc., Long Island City, N.Y. 730,174, canc. Cl. 46.
First Texas Chemical Mfg. Co., to First Texas Pharmaceuticals, Inc., Dallas, Tex. 440,023, ren. 6–4–68. Cl. 18.
First Texas Chemical Mfg. Co., to First Texas Pharmaceuticals, Inc., Dallas, Tex. 440,364, ren. 6–4–68. Cl. 18.
First Texas Pharmaceuticals, Inc.: *See—*
  First Texas Chemical Mfg. Co.
Fitzgerald Mfg. Co., The, Torrington, Conn. 850,233–4, pub. 3–19–68. Cl. 35.
Fleco Corp.: *See—*
  Florida Land Clearing Equipment Co.
Flickinger, S. M., Co., Inc., Buffalo, N.Y. 850,249, pub. 3–19–68. Cl. 37.
Flor-Dry Co., The: *See—*
  Warren, Lucille J.
Florida Land Clearing Equipment Co., by Fleco Corp., Jacksonville, Fla. 437,498, 12(c) pub. 6–4–68. Cl. 23.
Floridin Co., The: *See—*
  Warren, Lucille J.
Flynn, John, & Sons, Inc., Salem, Mass. 850,388. Cl. 1.
Flexible Co., The, Loudonville, Ohio. 438,233, ren. 6–4–68. Cl. 19.
Foremost-McKesson, Inc., from McKesson & Robbins, Inc., d.b.a. Gentec Hospital Supply Co., New York, N.Y. 850,292, pub. 3–19–68. Cl. 44.
Forger & Lamb, Liverpool, N.Y. 729,994, canc. Cl. 19.
Four Star Products Corp., Yonkers, N.Y. 765,806. Am. 7(d). Cl. 21.
Fratelli Borletti, by Fratelli Borletti S.p.A., Milan, Italy. 225,980, 12(c) pub. 6–4–68. Cl. 27.
Fratelli Borletti S.p.A.. *See—*
  Fratelli Borletti.
Freeman Supply Co., The, Toledo, Ohio. 850,396. Cl. 16.
Frelon, Renee, Inc., Chicago, Ill. 437,861, ren. 6–4–68. Cl. 51.
Fulton Industries, Inc., Atlanta, Ga. 730,156, canc. Cl. 42.
Gabrieleen Co., Inc., Chicago, Ill. 850,348, pub. 3–19–68. Cl. 51.
Gallo, E. & J., Winery, d.b.a. The Andre Champagne Cellars, Modesto, Calif. 850,327–8, pub. 3–19–68. Cl. 47.
Gamco Industries, Inc., d.b.a. Educational Computer Products, Big Spring, Tex. 850,203, pub. 3–19–68. Cl. 26.
Gasnick, Jack, d.b.a. Cross at the Green Enterprises, New York, N.Y. 850,394. Cl. 13.
General Dynamics Corp., Rochester, N.Y. 850,190, pub. 3–19–68. Cl. 26.
General Fire Extinguisher Corp., Northbrook, Ill. 850,048, pub. 3–19–68. Multiple Class (Classes 6 and 23).
Gentec Hospital Supply Co.: *See—*
  Foremost-McKesson, Inc.
Genuine Parts Co., Atlanta, Ga. 437,859, 12(c) pub. 6–4–68. Cl. 38.
Geo. Bros., Great Barrington, Mass. 850,085, pub. 3–19–68. Cl. 16.
Gilroy/Mays Co., Inc., South Bend, Ind. 729,989, canc. Cl. 18.
Glamour Apparel: *See—*
  Lewin, Joseph.
Glidden Co., The: *See—*
  SCM Corp.
Golden Imperial, Inc., Indianapolis, Ind. 850,078, pub. 3–19–68. Cl. 15.
Goodrich, B. F., Co., The, Akron, Ohio. 850,246, pub. 3–19–68. Cl. 37.
Goodyear Tire & Rubber Co., The, Akron, Ohio. 850,034, pub. 3–19–68. Cl. 1.
Goodyear Tire & Rubber Co., The, Akron, Ohio. 850,367, pub. 3–19–68. Cl. 101.
Goodyear Tire & Rubber Co., The, Akron, Ohio. 850,379, pub. 3–19–68. Cl. 104.
Gossard, H. W., Co., The, Chicago, Ill. 850,265, pub. 3–19–68. Cl. 39.
Greif Bros. Cooperage Corp., The, Delaware, Ohio. 850,039, pub. 3–19–68. Cl. 2.
Gretsch, Fred, Co., Inc., The, Brooklyn, N.Y. 850,244–5, pub. 3–19–68. Cl. 36.
Gutman-Lann Glove Co., Inc., New York, N.Y. 729,921, canc. Cl. 3.
HC Electronics, Inc., Tiburon, Calif. 850,192, pub. 3–19–68. Cl. 26.
HR Lubricants Inc.: *See—*
  H.R.L. Inc.
H.R.L. Inc., d.b.a. HR Lubricants Inc., Los Angeles, Calif. 850,077, pub. 3–19–68. Cl. 15.
Hall, Raymond L., Whippany, N.J. 850,138, pub. 3–19–68. Cl. 22.
Hall, Virginia, Inc., Macon, Ga. 730,222, canc. Cl. 40.
Hardy, James G., & Co., Inc., New York, N.Y. 502,396, ren. 6–4–68. Cl. 42.
Harper-Wyman Co., Hinsdale, Ill. 850,227, pub. 3–19–68. Cl. 34.
Harster, E. F., Co., St. Louis, Mo. 850,064, pub. 3–19–68. Cl. 13.
Hart, Frank A., Riverdale, N.Y. 437,591, ren. 6–4–68. Cl. 6.
Heggblade-Marguleas Co., San Francisco, Calif. 850,316, pub. 3–19–68. Cl. 46.
Hereford Heaven Brands, Inc., d.b.a. White Face Brands, Oklahoma City, Okla. 730,180, canc. Cl. 46.
Hewitt-Robins Inc., Stamford, Conn. 850,168, pub. 3–19–68. Cl. 23.
Hewlett-Packard Co., Palo Alto, Calif. 850,251, pub. 3–19–68. Cl. 38.
Hi-Altitude Instrument Co., Inc., Denver, Colo. 850,111, pub. 3–19–68. Cl. 21.
Hicks, Wesley L., d.b.a. W. L. Hicks, Buffalo, N.Y. 730,177, canc. Cl. 46.
Hi-Life Rubber Products: *See—*
  Larson, Wilbur A.
Hills-McCanna Co., from Hills-McCanna Co., Carpentersville, Ill. 850,067, pub. 3–19–68. Cl. 13.
Hirsch, S. H., Inc., New York, N.Y. 850,282, pub. 3–19–68. Cl. 40.
Hochschild Kohn & Co., Inc., Baltimore, Md. 850,267, pub. 3–19–68. Cl. 39.
Holophane Co., Inc., New York, N.Y. 850,228, pub. 3–19–68. Cl. 34.
Honda Associates, Inc., New York, N.Y. 850,264, pub. 3–19–68. Cl. 39.
Hormel, Geo. A., & Co., Austin, Minn. 850,318, pub. 3–19–68. Cl. 46.
Hotopp Paint & Varnish Co., Jersey City, N.J. 850,088, pub. 3–19–68. Cl. 16.
Houdaille Industries, Inc., Buffalo, N.Y. 729,948, canc. Cl. 12.
House of Beauregard, Inc., The, Nashville, Tenn. 729,935, canc. Cl. 8.
House of Crayton: *See—*
  Diederichs, John K.
House Foodstuff Industry Co., Ltd., Osaka, Japan. 850,304, pub. 3–19–66. Cl. 46.
House of Negatives: *See—*
  Nassar, Frederick.
Hudnut, Richard, Morris Plains, N.J. 436,937, ren. 6–4–68. Cl. 51.
Hudnut, Richard, Morris Plains, N.J. 500,307, ren. 6–4–68. Cl. 51.
Hudson Foam Plastics Corp., Edgewater, N.J. 850,037, pub. 3–19–68. Cl. 1.
Hudson, H. D., Mfg. Co., Chicago, Ill. 850,040, pub. 3–19–68. Cl. 2.
Hughes Brushes, Inc., assor. to Tek Hughes, Inc., New York, N.Y., to International Playtex Corp., Dover, Del. 437,581, ren. 6–4–68. Cl. 29.
Humble Oil & Refining Co.: *See—*
  Standard Oil Co. (Inc. in N.J.).
Huntington Laboratories, Inc., Huntington, Ind. 440,012, ren. 6–4–68. Cl. 51.
Huntington Laboratories, Inc., Huntington, Ind. 501,436, ren. 6–4–68. Cl. 52.
Hunt-Wesson Foods, Inc., Fullerton, Calif. 850,402. Cl. 46.
Huyck Corp., Rensselaer, N.Y. 850,173, pub. 3–19–68. Cl. 23.
I.G.R. Corp., from Adolph Posner and Richard Inglima, New York, N.Y. 850,293, pub. 3–19–68. Cl. 44.
I.R. Systems, Inc., West Springfield, Mass. 730,079, canc. Cl. 26.
Indian Head Inc.: *See—*
  Ulmann, Bernhard, Co., Inc.
Industrial Weed Killers, Inc., Lubbock, Tex. 850,053, pub. 3–19–68. Cl. 6.
Injection Rapide et Conservation des Bois par Procede Nouveau, Doubs, France. 850,386, pub. 3–19–68. Cl. 106.
Inland Waterway Guide, Inc., Fort Lauderdale, Fla. 730,121, canc. Cl. 38.
Intercontinental Chemical Corp., Cincinnati, Ohio. 850,355, pub. 3–19–68. Cl. 52.
International Laboratories Ltd., Surrey, England. 850,343, pub. 3–19–68. Cl. 51.
International Parts Corp., Chicago, Ill. 850,163–4, pub. 3–19–68. Cl. 23.
International Pen Pal, Inc., New Hyde Park, N.Y. 850,408. Cl. 100.
International Playtex Corp.: *See—*
  Hughes Brushes, Inc.
International Salt Co., Clarks Summit, Pa. 850,298, pub. 3–19–68. Cl. 46.
Iramac: *See—*
  Iramac N.V.
Iramac N.V., d.b.a. Iramac, Bussum, Netherlands. 850,238, pub. 3–19–68. Cl. 36.
Isabellenhuette Heusler, Kommanditgesellschaft, Dillenburg, Hessen, Germany. 850,075, pub. 3–19–68. Cl. 14.

Ives, Sybil, Inc., White Plains, N.Y. 850,405. Cl. 51.
Jane & Jane Ltd., London, England. 850,255, pub. 3–19–68. Cl. 39.
Jelinek, H., Dental Alloys, Inc., New York, N.Y. 850,289, pub. 3–19–68. Cl. 44.
Jellissen, R., Mfg. Co.: *See*—
Jellissen, Roy H.
Jellissen, Roy H., d.b.a. R. Jellissen Mfg. Co., River Grove, Ill. 850,202, pub. 3–19–68. Cl. 26.
Jet Air Products Co., Dallas, Tex. 850,351, pub. 3–19–68. Cl. 52.
Johns-Manville Corp., New York, N.Y. 850,058, pub. 3–19–68. Cl. 12.
Johnson, Richard D., Des Plaines, Ill. 850,220, pub. 3–19–68. Cl. 31.
Joseph Chevrolet Co., Groesbeck, Ohio. 850,372, pub. 3–19–68. Multiple Class (Classes 101 and 103).
Kabul Laboratories: *See*—
Cantu, I. G.
Kendall Chemical Co., Inc., Kendall, Fla. 850,389. Cl. 6.
Kandu Chemicals, Inc., New York, N.Y. 850,352, pub. 3–19–68. Cl. 52.
Kanner, Joseph, Hat Co., Inc., South Norwalk, Conn. 730,136, canc. Cl. 39.
Kaplan Products & Textiles, Inc., New York, N.Y. 850,283, pub. 3–19–68. Cl. 42.
Kellogg Co., Battle Creek, Mich. 850,322, pub. 3–19–68. Cl. 46.
Kendall Co., The, Walpole, Mass. 850,099, pub. 3–19–68. Cl. 18.
Kingmann-White, Inc., Placentia, Calif. 850,212, pub. 3–19–68. Cl. 26.
Kinloch, Charles, & Co. Ltd., London, England. 850,329, pub. 3–19–68. Cl. 49.
Knickerbocker Rubber Co., Chicago, Ill. 729,962, canc. Cl. 13.
Kohner Bros. Inc., East Paterson, N.J. 850,142, pub. 3–19–68. Cl. 22.
Komachiya Honten Co., Ltd., Tokyo, Japan. 850,281, pub. 3–19–68. Cl. 40.
Kraft Cheese Co., to National Dairy Products Corp., Chicago, Ill. 241,112, ren. 6–4–68. Cl. 46.
Kresge, S. S., Co., Detroit, Mich. 730,157, canc. Cl. 42.
Ladum, Robert E., Portland, Oreg. 850,360, pub. 3–19–68. Cl. 100.
Lamco Products Co., to Welmaid Products, Inc., Chicago, Ill. 230,521, ren. 6–4–68. Cl. 24.
Lanteen Medical Laboratories, Inc., Chicago, Ill., to Esta Medical Laboratories, Inc., New York, N.Y. 438,522, ren. 6–4–68. Cl. 18.
La Preferida Tropical Products, Inc., Chicago, Ill. 850,098, pub. 3–19–68. Cl. 18.
Larson, Wilbur A., d.b.a. Hi-Life Rubber Products, Johnson Creek. Wis. 850,182–3, pub. 3–19–68. Cl. 23.
Lebhar-Friedman Publications, Inc.: *See*—
Chain Store Publishing Corp., The.
Leggitt, S. H., Co., Marshall, Mich. 850,102, pub. 3–19–68. Cl. 19.
Lehigh, Inc., Easton, Pa. 730,102, canc. Cl. 34.
Leisure League Travel, Inc., Princeton, N.J. 850,253, pub. 3–19–68. Cl. 38.
Leme Freres & Wine Imports of America: *See*—
San Martina Wines, Inc.
Levin, Charles, & Co., Lincolnwood, Ill. 730,051, canc. Cl. 23.
Lewin, Joseph, d.b.a. Glamour Apparel, New York, N.Y., to Smoler Bros. Inc., Chicago, Ill. 439,306, ren. 6–4–68. Cl. 39.
Little Devil Pre-Heater Corp., New York, N.Y. 730,106, canc. Cl. 34.
Living Tones: *See*—
Citron, Edith.
Loral Corp., New York, N.Y. 850,143, pub. 3–19–68. Cl. 22.
L'Oreal, Paris, France. 850.339, pub. 3–19–68. Cl. 51.
Lorrillard, P., Co., to Consolidated Cigar Corp., New York, N.Y. 502,152, ren. 6–4–68. Cl. 17.
Lowe, Joe, Co.: *See*—
Consolidated Foods Corp.
Lustre Finish, Inc., Grand Rapids, Mich. 850,385, pub. 3–19–68. Cl. 106.
Macbeth Corp., Newburgh, N.Y. 730,062, canc. Cl. 26.
Machine-O-Matic, Inc., Evanston, Ill. 850,188, pub. 3–19–68. Cl. 26.
Magnet Miles, Inc., New York, N.Y. 850,257, pub. 3–19–68. Cl. 39.
Malden Novelty Co., Malden, Mass. 850,285, pub. 3–19–68. Cl. 42.
Mangel Stores Corp., New York, N.Y. 850,139, pub. 3–19–68. Cl. 22.
Manitowoc Co., Inc., The, Manitowoc, Wis. 850,108, pub. 3–19–68. Cl. 21.
Manufacturer's Specialty Co., Inc., St. Louis, Mo. 847,533, cor. Multiple Class (Classes 4, 6, 22, 39, 42, 44, and 52).
Martins Ltd., London, England, to Rothmans of Pall Mall Ltd., Zurich, Switzerland. 435,747, ren. 6–4–68. Cl. 17.
Martinsburg Forest Products, Inc., Martinsburg, W. Va. 850,057, pub. 3–7–67. Cl. 10.
Mason Industries, Inc., Hollis, N.Y. 850,065, pub. 3–19–68. Cl. 13.
Maternity Modes, Niles, Ill. 850,262, pub. 3–19–68. Cl. 39.
Mattel, Inc., Hawthorne, Calif. 850,149–52, pub. 3–19–68. Cl. 22.
Maudesley, Bentley, & Co., Ltd., to United Lublicants Ltd., London, England. 436,819, ren. 6–4–68. Cl. 15.
McCormick, James H., Hickory, Pa. 730,218, canc. Cl. 39.
McKesson & Robbins, Inc.: *See*—
Foremost-McKesson, Inc.
Meinecke & Co., Inc., New York, N.Y. 729,967, canc. Cl. 13.
Mercoid Corp., The, Chicago, Ill. 850,106, pub. 3–19–68. Cl. 21.
Merk & Co., Inc., Rahway, N.J. 850,097, pub. 3–19–68. Cl. 18.
Messenger, Charles, North Hollywood, Calif. 850,123, pub. 3–19–68. Cl. 21.
Metropolis Brewery of N.J., Inc., Trenton, N.J. 835,225, cor. Cl. 48.
Midland-Ross Corp., Toledo, Ohio. 850,230, pub. 3–19–68. Cl. 34.
Miles Chemical and Filter Co., Inc., Troy, Mich. 850,080, pub. 3–19–68. Multiple Class (Classes 16 and 52).
Milk Foods, Inc., Modesto, Calif. 730,169, canc. Cl. 40.
Minneapolis Instrument Co.: *See*—
Pratt, Margaret A.
Minnesota Mining & Mfg. Co., St. Paul, Minn. 850,184, pub. 3–19–68. Cl. 23.
Missouri-Rogers Corp., Joplin, Mo. 850,159, pub. 3–19–68. Cl. 23.
Mobile Paint Mfg. Co., Inc., Mobile, Ala. 850,082, pub. 3–19–68. Cl. 16.
Monogram Industries, Inc., Monterey Park, Calif. 850,157, pub. 3–19–68. Cl. 23.
Montecatini, Societa Generale Per l'Industria Mineraria e Chimica, Milan, Italy. 729,909, canc. Multiple Class (Classes 1 and 6).
Morehouse Mfg. Co., d.b.a. The Shaving Powder Co., to Carson Chemical Co., Savannah, Ga. 500,532, ren. 6–4–68. Cl. 51.
Morganton Hosiery Mills, Inc.: *See*—
Rollins Hosiery Mills.
Moro Cigar Co., Inc.: *See*—
Cuesta, Rey & Co.
Morris, Philip, Inc., d.b.a. Clark Gum Co., New York, N.Y. 850,324, pub. 3–19–68. Cl. 46.
Moseres, Nestor, Barranquilla, Colombia. 850,393. Cl. 13.
Motloid Co., Inc., The, Chicago, Ill. 850,291, pub. 3–19–68. Cl. 44.
Moto-Mower, Inc., Oak Park, Mich. 730,048, canc. Cl. 23.
Moyer Mfg. Co., The, Youngstown, Ohio. 730,138, canc. Cl. 39.
Nalle, Charles R., Philadelphia, Pa. 243,424, 12(c) pub. 6–4–68. Cl. 13.
Nassar, Frederick, d.b.a. House of Negatives, Tampa, Fla. 850,410. Cl. 101.
National Dairy Products Corp.: *See*—
Kraft Cheese Co.
National Dairy Products Corp., Chicago, Ill. 850,401. Cl. 46.
National Eye Research Foundation, The, Chicago, Ill. 730,074, canc. Cl. 26.
National Gypsum Co., Buffalo, N.Y. 850,060, pub. 3–19–68. Cl. 12.
National Lead Co., New York, N.Y. 850,052, pub. 3–19–68. Cl. 6.
National Patent Development Corp.: *See*—
Bausch & Lomb Inc.
National Presto Industries, Inc., Eau Claire, Wis. 850,180, pub. 1–16–68. Multiple Class (Classes 23, 26, 34, and 44).
National Steel Corp., Pittsburgh, Pa. 850,070, pub. 3–19–68. Cl. 14.
Nelsen Steel & Wire Co., Inc., Franklin Park, Ill. 850,073–4, pub. 3–19–68. Cl. 14.
New Century Beverage Co., San Francisco, Calif. 850,297, pub. 3–19–68. Cl. 45.
New York Merchandise Co., Inc., New York, N.Y. 439,175, ren. 6–4–68. Cl. 21.
Niagara Sprayer Co., Middleport, to FMC Corp., New York, N.Y. 246,735, ren. 6–4–68. Cl. 6.
Nicholas International Ltd., Toronto, Ontario, Canada. 729,990. canc. Cl. 18.
Nicholson File Co., Providence, R.I. 850,175, pub. 3–19–68. Cl. 23.
North & Judd Mfg. Co., to North & Judd Mfg. Co., New Britain, Conn. 242,829–30, ren. 6–4–68. Cl. 13.
Northeastern Commercial Co., Inc., Stoughton, Mass. 729,956. canc. Cl. 12.
Norton-Aire, Inc., Erie, Pa. 850,161, pub. 3–19–68. Cl. 23.
Norween Shoe Mfg. Co., Inc., Norwich, N.Y. 850,254, pub. 3–19–68. Cl. 39.
Norwich Pharmacal Co., The, Norwich, N.Y. 850,398. Cl. 18.
Novo Industrial Corp., New York, N.Y. 729,920. canc. Cl. 2.
Nu-Brite Chemical Co., Inc., Taunton, Mass. 850,397. Cl. 16.
Ohaus Scale Corp., Union, N.J. 730,075, canc. Cl. 26.
Oneida Ltd., Oneida, N.Y. 850,218, pub. 3–19–68. Cl. 28.
Orco Products, Inc., Dayton, Ohio. 847,598. cor. Cl. 26.
Oriental Marine Products Ltd., Victoria, Hong Kong. 730,080, canc. Cl. 28.
Owen, R. C., Co., Gallatin, Tenn. 438,059–60, ren. 6–4–68. Cl. 17.
PM & E Electronics, Inc., East Providence, R.I. 850,333, pub. 5–16–67. Cl. 50.
Pacific Alaska Fisheries, Inc., Seattle, Wash. 850,308, pub. 11–28–67. Cl. 46.
Package Exhibit Programs, Inc., Chicago, Ill. 850,369, pub. 3–19–68. Cl. 101.
Pal Foods: *See*—
Sessions Co., Inc.
Pallas, J. & J., S.A., Nerac, France. 730,199, canc. Cl. 49.
Paragon Electric Co., Inc., Two Rivers, Wis. 850,206, pub. 3–19–68. Cl. 26.
Paragon Electric Co., Inc., Two Rivers, Wis. 850,207, pub. 3–19–68. Cl. 26.
Park Avenue Man Co.: *See*—
Slome, Irving.
Parke, Davis & Co., Detroit, Mich. 850,294, pub. 3–19–68. Cl. 44.
Parker-Hannifin Corp., Cleveland, Ohio. 850,232, pub. 3–19–68. Cl. 35.
Parker-Kalon Corp., Clifton, N.J. 850,071, pub. 3–19–68. Cl. 13.

Particle Data, Inc., Elmhurst, Ill. 850,186, pub. 3–19–68. Cl. 26.
Perfect Film & Chemical Corp., Manhasset, N.Y. 850,213, pub. 3–19–68. Cl. 26.
Pete's Frozen Foods, Inc., Rockford, Ill. 730,168, canc. Cl. 46.
Phelan-Faust Paint Mfg. Co., St. Louis, Mo. 850,084, pub. 3–19–68. Cl. 16.
Phillips Petroleum Co., Bartlesville, Okla. 439,981, ren. 6–4–68. Cl. 52.
Pick Hotels Corp., Chicago, Ill. 730,204, canc. Cl. 100.
Piedmont Shirt Co., Greenville, S.C. 730,150, canc. Cl. 39.
Pillsbury Co., The, Minneapolis, Minn. 850,302, pub. 6–27–67. Cl. 46.
Pilot Life Insurance Co., Greensboro, N.C. 850,375, pub. 3–19–68. Cl. 102.
Plantabbs Corp., Baltimore, Md. 729,943, canc. Cl. 10.
Plaque Craft, Inc., Baltimore, Md. 730,201, canc. Cl. 50.
Plumpkins, Inc., from Young America Knits, Inc., New York, N.Y. 850,273, pub. 3–19–68. Cl. 39.
Pohl, Carl, Brigantine, N.J. 850,167, pub. 3–19–68. Cl. 23.
Poole Silver Co., Inc., Taunton, Mass. 850,217, pub. 3–19–68. Cl. 28.
Porta-Table Corp., Chicago, Ill. 850,158, pub. 3–19–68. Cl. 23.
Posner, Adolph, and Richard Inglima: *See*—
I.G.R. Corp.
Pratt, Margaret A., d.b.a. Minneapolis Instrument Co., Minneapolis, Minn. 730,166, canc. Cl. 44.
Precision Transformer Corp., Elk Grove Village, Ill. 730,013, canc. Cl. 21.
Pride, Inc., Philadelphia, Pa. 730,182, canc. Cl. 46.
Procter & Gamble Co., The, Cincinnati, Ohio. 850,357, pub. 3–19–68. Cl. 52.
Proctor-Silex Corp., The, from Proctor-Silex Inc., Philadelphia, Pa. 850,107, pub. 3–19–68. Cl. 21.
Proudfoot Hosiery Corp., New York, N.Y. 850,266, pub. 3–19–68. Cl. 39.
Pucci, Emilio, Societa a Responsabilita Limitata, Florence, Italy. 850 256, pub. 3–19–68. Cl. 39.
Pure Gold, Inc., Redlands, Calif. 850,317, pub. 3–19–68. Cl. 46.
Purolator Products, Inc., Rahway, N.J. 850,222, pub. 3–19–68. Cl. 31.
Pyramid Inc., Newton, Iowa. 850,237, pub. 3–19–68. Cl. 35.
Quarrie Corp., The, to Field Enterprises Educational Corp., Chicago, Ill. 501,468, ren. 6–4–68. Cl. 38.
Queen Mantel & Tole Co., Inc., Atlanta, Ga. 730,095, canc. Cl. 34.
Quikrete Co., Columbus, Ohio. 850,050, pub. 3–19–68. Cl. 6.
Radiation Technology, Inc., Atlanta, Ga. 730,078, canc. Cl. 26.
Ranco Industrial Products Corp., Cleveland, Ohio. 850,061, pub. 3–19–68. Cl. 12.
Raybestos-Manhattan, Inc.: *See*—
United States Asbestos Co.
Red Barn System. Inc., The, Fort Lauderdale, Fla. 850,310, pub. 3–19–68. Cl. 46.
Reliance Dental Mfg. Co., Chicago, Ill. 437,235, ren. 6–4–68. Cl. 44.
Remington Corp., Auburn, N.Y. 730,086, canc. Cl. 31.
Republic Steel Corp.: *See*—
Truscon Steel Co.
Restaurant & Waldorf Associates, Inc., New York, N.Y. 850,364, pub. 3–19–68. Cl. 100.
Reynolds, Dwight E., El Monte, Calif. 730,030, canc. Cl. 23.
Reynolds, R. J., Tobacco Co., Winston-Salem, N.C. 850,089–96, pub. 3–19–68. Cl. 17.
Reynolds Yarns Inc., New York, N.Y. 730,165, canc. Cl. 43.
Richardson Co., The, Melrose Park, Ill. 850,036, pub. 3–19–68. Cl. 1.
Richardson, Howe, Scale Co., Clifton, N.J. 850,197, pub. 3–19–68. Cl. 26.
Ridge Runner Lures, Inc., Shreveport, La. 850,144, pub. 3–19–68. Cl. 22.
Rixona Conserven N.V., Warffum, Netherlands. 850,305, pub. 3–19–68. Cl. 46.
Robbins, Anatole, Inc., Los Angeles, Calif., to Alexandra de Markoff Sales Corp., New York, N.Y. 500,648, ren. 6–4–68 Cl. 51.
Roby, John W., & Co., Inc., Seattle, Wash. 850,156, pub. 3–19–68. Cl. 23.
Rodgers, Robert E., Jr., d.b.a. Crajo Sports Co., Oxnard, Calif. 850,135, pub. 3–19–68. Cl. 22.
Rollins Hosiery Mills, Des Moines, Iowa, to Morganton Hosiery Mills, Inc., Morganton, N.C. 238,834, ren. 6–4–68. Cl. 39.
Rollway Bearing Co., Inc., Liverpool, N.Y. 850,176, pub. 3–19–68. Cl. 23.
Ronson Corp., Woodbridge, N.J. 850 391. Cl. 8.
Rose, Phil, of California, Inc., Los Angeles, Calif. 850,272, pub. 3–19–68. Cl. 39.
Ross Porta-Plant, Inc., Brownwood, Tex. 850,200, pub. 3–19–68. Cl. 26.
Rothmans of Pall Mall Ltd.: *See*—
Martins Ltd.
SCM Corp., New York, N.Y., from The Glidden Co., d.b.a. Durkee Famous Foods, Cleveland, Ohio. 850,311, pub. 3–19–68. Cl. 46.
S & S Food Service, Inc., Macon, Ga. 850,359, pub. 3–19–68. Cl. 100.
Safeway Stores, Inc., Oakland, Calif. 850,323, pub. 3–19–68. Cl. 46.
Saf-T-Script, Inc., New York, N.Y. 850,247, pub. 3–19–68. Cl. 37.
San Antonio Foreign Trading Co., San Antonio, Tex. 850,312, pub. 3–19–68. Cl. 46.
San Martina Wines, Inc., d.b.a. Leme Freres, and Wine Importers of America, Yonkers, N.Y. 850,403. Cl. 47.
Sandoz Chemical Works, Inc., New York, N.Y., to Sandoz, Inc., Hanover, N.J. 501,420, ren. 6–4–68. Cl. 6.
Sandoz, Inc.: *See*—
Sandoz Chemical Works, Inc.
Sanitor Mfg. Co., Kalamazoo, Mich. 729,915, canc. Cl. 2.
Santa Rita Technology, Inc., Menlo Park, Calif. 850,252, pub. 3–19–68. Cl. 38.
Saxons, The, New York, N.Y. 850,387, pub. 3–19–68. Cl. 107.
Schaper Mfg. Co., Inc., Minneapolis, Minn. 850,399, Cl. 22.
Schieffelin & Co., New York, N.Y. 850,331, pub. 3–19–68. Cl. 49.
Schilffarth, O. L., & Co., Milwaukee, Wis. 850,373, pub. 3–19–68. Cl. 101.
Schmidt, Alfred W., Seville, Ohio. 850,177–8, pub. 3–19–68. Cl. 28.
Schmidt Baking Co., Inc., Baltimore, Md. 850,307, pub. 3–19–68. Cl. 46.
Scholl Mfg. Co., Inc., The, Chicago, Ill. 248,828, ren. 6–4–68. Cl. 44.
School House Products, Inc., New York, N.Y. 850,048, pub. 3–19–68. Cl. 3.
Science Accessories Corp., Southport, Conn. 850,205, pub. 3–19–68. Cl. 26.
Scott Industries, Inc., Lancaster, N.Y. 850,201, pub. 3–19–68. Cl. 26.
Seilheimer Beverage Co.: *See*—
Seilheimer Beverage Co., Inc.
Seilheimer Beverage Co., Inc., to E. W. Seilheimer, d.b.a. Seilheimer Beverage Co., Hackensack, N.J. 236,654, ren. 6–4–68. Cl. 45.
Seilheimer, Edward W.: *See*—
Seilheimer Beverage Co., Inc.
Sessions Co., Inc., d.b.a. Pal Foods, Enterprise, Ala. 730,188, canc. Cl. 46.
Shaklee Products, Hayward, Calif. 850,340, pub. 3–19–68. Cl. 51.
Shamrock-Neatway Products, Inc., Minneapolis, Minn. 850,038, pub. 2–22–66. Cl. 2.
Sharon Steel Corp., Sharon, Pa. 729,963, canc. Cl. 13.
Sharon Steel Corp., Sharon, Pa. 730,032, canc. Cl. 23.
Shaving Powder Co., The: *See*—
Morehouse Mfg. Co.
Shell Oil Co., New York, N.Y. 850,051, pub. 3–19–68. Cl. 6.
Sherwin-Williams Co., The, Cleveland, Ohio. 850,086, pub. 3–19–68. Cl. 16.
Shoppers World Co., Cicero, Ill. 730,023, canc. Cl. 22.
Shriro Trading Corp., New York, N.Y. 729,917, canc. Cl. 2.
Sichel & Fils Freres: *See*—
Sichel, H., Son, Inc.
Sichel, H., Son, Inc., New York, N.Y., from Sichel & Fils Freres, Bordeaux, France. 850,326, pub. 3–19–68. Cl. 47.
Sickles Enterprises, Inc., Scottsdale, Ariz. 850,193, pub. 3–19–68. Cl. 26.
Sierra Talc Co., to Cyprus Mines Corp., Los Angeles, Calif. 437,025. ren. 6–4–68. Cl. 1.
Silver Skillet Brands, Inc., to Silver Skillet Food Products Co., Skokie, Ill. 677,401. Am. 7(d). Cl. 46.
Simca, Paris, France. 729,992, canc. Cl. 19.
Simoniz Co., Chicago, Ill. 850,046, pub. 3–19–68. Cl. 4.
Sireno Signal Mfg. Corp., Kearny, N.J. 850,115, pub. 3–19–68. Cl. 21.
Sicklen, Charles J., Co., Inc., Long Island City, N.Y. 850,287, pub. 6–28–66. Cl. 44.
Slome, Irving, d.b.a. Park Avenue Man Co., New York, N.Y. 730,228, canc. Cl. 51.
Smoler Bros. Inc.: *See*—
Lewin, Joseph.
Smoothy Products, Inc., Burbank, Calif. 850,278, pub. 3–19–68. Cl. 40.
Smucker, J. M., Co., The, Orrville, Ohio. 850,303, pub. 3–19–68. Cl. 46.
Societe Anonyme des Usines Renault, Inc., New York, N.Y. 240,774. Am. 7(d). Cl. 19.
Societa Commercio Tessuti Lanerie Drapperie "Scotland" S.p.A., Milan, Italy. 850,286, pub. 3–19–68. Cl. 42.
Sonotec, Inc., Santa Ana, Calif. 730,019, canc. Cl. 21.
South Bay Cable Corp., Gardena, Calif. 850,133, pub. 3–19–68. Cl. 21.
Spartans Industries, Inc., New York, N.Y. 850,124, pub. 3–19–68. Cl. 21.
Spring Bloc Corp. of America, New York, N.Y. 850,145, pub. 3–19–68. Cl. 22.
Stagecoach Properties, Inc., Salado, Tex. 850,363, pub. 3–19–68. Cl. 100.
Standard Gage Co., Inc., Poughkeepsie, N.Y. 850,209, pub. 3–19–68. Cl. 26.
Standard Milling Co., Chicago, Ill., to Standard Milling Co., Kansas City, Mo. 500,615, ren. 6–4–68. Cl. 46.
Standard Oil Co. (Inc. in N.J.), Bayonne, N.J., and New York, N.Y., to Humble Oil & Refining Co., Houston, Tex. 155,909, ren. 6–4–68. Cl. 12.
Standard Oil Co. (New Jersey). Bayonne, N.J., and New York, N.Y., to Humble Oil & Refining Co., Houston, Tex. 156,551–2, ren. 6–4–68. Cl. 15.
Standard Oil Co. (New Jersey), Bayonne, N.J., to Humble Oil & Refining Co., Houston, Tex. 211,361, ren. 6–4–68. Cl. 15.
Standard Oil Co. (New Jersey). Bayonne. N.J., to Humble Oil & Refining Co., Houston, Tex. 227,457–8, ren. 6–4–68. Cl. 52.
Standard Oil Co. (New Jersey), Bayonne, N.J., to Humble Oil & Refining Co., Houston, Tex. 228,002, ren. 6–4–68. Cl. 12.
"Star" Bonifacio Echeverria, S.A., Eibar, Guipuzcoa. Spain 729,936, canc. Cl. 9.

Stearns-Roger Corp., Denver, Colo. 850,376, pub. 3–19–68. Cl. 103.
Steel City Furnace Corp., Springdale, Pa. 730,107, canc. Cl. 34.
Steinschneider, E. Rowan, Winnetka, Ill. 850,374, pub. 3–19–68. Cl. 102.
Sterling Bolt Co., Chicago, Ill. 729,957, canc. Cl. 13.
Sterling Drug Inc., New York, N.Y. 850,350, pub. 3–19–68. Cl. 51.
Stevenson, Richard L., Los Angeles, Calif. 850,136, pub. 3–19–68. Cl. 22.
Stromberg-Carlson Corp., Rochester, N.Y. 850,121, pub. 3–19–68. Cl. 21.
Style Undies, Inc., Ozone Park, N.Y. 850,268, pub. 3–19–68. Cl. 39.
Sun Chemical Corp., New York, N.Y. 436,545, 12(c) pub. 6–4–68. Cl. 6.
Sun Chemical Corp., New York, N.Y. 850,079, pub. 3–19–68. Cl. 16.
Super-Sensitive Musical String Co.: *See*—
  Allbaugh, Harold V.
Svenska Relafabriken A.B.N. Aktiebolag, Tyreso, Sweden. 730,011, canc. Cl. 21.
Swift & Co., Chicago, Ill. 69,140, ren. 6–4–68. Cl. 4.
System Analyzer Corp., Nokomis, Ill. 850,125, pub. 3–19–68. Cl. 21.
TRW Inc., Euclid, Ohio. 850,166, pub. 3–19–68. Cl. 23.
Talman Corp., West Warwick, R.I. 729.995, canc. Cl. 19.
Tani Farms, Santa Maria, Calif. 850,325, pub. 3–19–68. Cl. 46.
Tappan Co., The, Mansfield, Ohio. 850,229, pub. 3–19–68. Cl. 34.
Textron, Inc., from Textron, Inc., Providence, R.I. 850,299, pub. 3–19–68. Cl. 46.
Theiler, H. J., Corp., Whitinsville, Mass. 850,122, pub. 3–19–68. Cl. 21.
Thiriez, J., Pere & Fils & Cartier-Bresson, Lille, to Dollfus-Mieg & Cie, Societe Anonyme, Paris, France. 439,552, ren. 6–4–68. Cl. 43.
Threemor Sales Co., Brooklyn, N.Y. 850,313–4, pub. 3–19–68. Cl. 46.
Thrustbloc Ltd., Oakville, Ontario, Canada. 850,154, pub. 3–19–68. Cl. 23.
Timme, E. F., & Son, to E. F. Timme & Son, Inc., New York, N.Y. 502.235, ren. 6–4–68. Cl. 42.
Timme, E. F., & Son, Inc.: *See*—
  Timme, E. F., & Son.
Todd Shipyards Corp., New York, N.Y. 730.097, canc. Cl. 34.
Tornado-France, Paris, France. 730,057, canc. Cl. 24.
Trans-Continental Agencies Ltd., London, England, by Companhia Geral de Agricultura das Vinkas do Alto Douro S.A.R.L., Vila Nova de Gaia, Portugal. 310,845, 12(c) pub. 6–4–68. Cl. 47.
Transcopy, Inc., Newton, N.J. 730,076, canc. Cl. 26.
Trattoria, Inc., New York, N.Y. 850,365, pub. 3–19–68. Cl. 100.
Trimount Clothing Co., Inc., Boston, Mass. 730,219, canc. Cl. 39.
Truscon Steel Co., Youngstown, to Republic Steel Corp., Cleveland, Ohio. 501,885, ren. 6–4–68. Cl. 12.
Tubbs Cordage Co., San Francisco, Calif. 439,580, ren. 6–4–68. Cl. 7.
UTA, Inc., Wichita, Kans. 850.250, pub. 3–19–68. Cl. 38.
Ulmann, Bernhard, Co., Inc., to Indian Head Inc., New York, N.Y. 501,716, ren. 6–4–68. Cl. 43.
Union Carbide Corp., New York, N.Y. 850,047, pub. 3–19–68. Cl. 6.
Union Carbide Corp., New York, N.Y. 850,219, pub. 3–19–68. Cl. 28.
Union Carbide Corp., New York, N.Y. 850.235, pub. 3–19–68. Cl. 35.
Union Steel Chest Corp., Leroy, N.Y. 439,381, ren. 6–4–68. Cl. 2.
Uniroyal, Inc., New York, N.Y. 850,236, pub. 3–19–68. Cl. 35.
United Air Specialists, Inc., Cleveland, Ohio. 850,114, pub. 3–19–68. Cl. 21.
United Feature Syndicate, Inc., New York, N.Y. 437,600, ren. 6–4–68. Cl. 38.
United Geophysical Corp., Pasadena, Calif. 730,061, canc. Cl. 26.
United Glass Ltd., Middlesex, England. 850,226, pub. 3–19–68. Cl. 33.
United Lubricants Ltd.: *See*—
  Maudesley, Bentley, & Co., Ltd.
United Paint Mfg. Co., Spokane, Wash. 850,083, pub. 3–19–68. Cl. 16.
United Shoe Machinery Corp., Boston, Mass. 730,047, canc. Cl. 23.
United States Asbestos Co., Manheim, Pa., to Raybestos-Manhattan, Inc., Passaic, N.J. 239,088, ren. 6–4–68. Cl. 35.
United States Plywood Corp.: *See*—
  U.S. Plywood-Champion Papers Inc.
U.S. Plywood-Champion Papers Inc., from United States Plywood Corp., New York, N.Y. 850,223, pub. 3–19–68. Cl. 32.
U.S. Plywood-Champion Papers Inc., from United States Plywood Corp., New York, N.Y. 850,392. Cl. 12.
United Steel Companies Ltd., The, Sheffield, England. 729,945, canc. Cl. 12.
United Steel Companies Ltd., The, Sheffield, England. 729,959, canc. Cl. 13.
Universal Oil Products Co., Des Plaines, Ill. 850,049, pub. 3–19–68. Cl. 6.
Valmont Industries, Inc., by change of name from Valley Mfg. Co., Valley, Nebr. 840,914, cor. Multiple Class (Classes 12, 13, and 23).
Vickers Ltd., London, England. 850,187, pub. 10–17–67. Cl. 26.
Victor Mfg. & Gasket Co., Chicago, Ill. 730,112, canc. Cl. 35.
Vintners of Eden Roc, The: *See*—
  Gallo, E. & J., Winery.
Wanlass Electric Co., Santa Ana, Calif. 850,112, pub. 3–19–68. Cl. 21.
Warner Press, Inc., Anderson, Ind. 850,334, pub. 3–19–68. Cl. 50.
Warren, Lucille J., d.b.a. The Flor-Dry Co., St. Paul, Minn., to The Floridin Co., Hancock, W. Va. 440,388, ren. 6–4–68. Cl. 52.
Watco Machine Products, Inc., Troy, N.Y. 850,181, pub. 3–19–68. Cl. 23.
Webb Corp., The, Webb City, Mo. 438,257, ren. 6–4–68. Cl. 23.
Weller, Erwin, Co., Sioux City, Iowa. 850,153, pub. 3–19–68. Cl. 22.
Welmaid Products, Inc.: *See*—
  Lamco Products Co.
Western Tablet & Stationery Corp., to Westab Inc., Dayton, Ohio. 438,110, Am. 7(d). Cl. 37.
Western Machine Tool Works, Holland, Mich. 440,730, ren. 6–4–68. Cl. 23.
Westfalische Union Aktiengesellschaft fur Eisen- und Drahtindustrie, Hamm, Westphalia, Germany. 850,063, pub. 3–19–68. Cl. 13.
Westinghouse Electric Corp., Pittsburgh, Pa. 730,012, canc. Cl. 21.
White Face Brands: *See*—
  Hereford Heaven Brands, Inc.
White Horse Distillers, Ltd., Glasgow, Scotland. 850,330, pub. 3–19–68. Cl. 49.
White, William S., d.b.a. Chef Bill, Hickman Mills, Mo. 730,172, canc. Cl. 46.
Whitten Corp., Bellingham Center, Mass. 850,068, pub. 3–19–68. Cl. 13.
Wilkinson, M., & Co. Ltd., Bradford, England. 730,129, canc. Cl. 39.
Williams Gold Refining Co. Inc., Buffalo, N.Y. 850,290, pub. 3–19–68. Cl. 44.
Wilson, James F., d.b.a. Elastrator Co., by Elastrator Patents, Inc., Davis, Calif. 435.697, 12(c) pub. 6–4–68. Cl. 44.
Winchester Retail Merchants Association, Inc., Winchester, Va. 850.366, pub. 3–19–68. Cl. 101.
Winsted Hosiery Co., The, Winsted, Conn. 730,133, canc. Cl. 39.
Wire Hardware Mfg. Inc., Michigan City, Ind. 850,195, pub. 3–19–68. Cl. 26.
Wirth, L. W., Inc., New York, N.Y. 730 083, canc. Cl. 30.
Wiss, J., & Sons Co., Newark, N.J. 850,174, pub. 3–19–68. Cl. 23.
Wood Conversion Co., St. Paul, Minn. 730.203, canc. Cl. 50.
Wrather Corp., Beverly Hills, Calif. 850,146, pub. 3–19–68. Cl. 22.
Write Inc., New York, N.Y. 500,144, ren. 6–4–68. Cl. 11.
Yardley of London, Inc., Totowa, N.J. 850,345, pub. 3–19–68. Cl. 51.
Yardley of London, Inc., Totowa, N.J. 850,347, pub. 3–19–68. Cl. 51.
Yardley of London, Inc., Totowa, N.J. 850,349, pub. 3–19–68. Cl. 51.
Young America Knits, Inc.: *See*—
  Plumpkins, Inc.
Zero Mfg. Co., Inc., Washington, Mo. 730.088, canc. Cl. 31.
Zimgo Corp., Inc., Des Moines, Iowa. 850,361, pub. 3–19–68. Cl. 100.

U.S. GOVERNMENT PRINTING OFFICE: O—1968

U.S. DEPARTMENT OF COMMERCE
OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE
June 11, 1968 Volume 851 Number 2

PATENTS

NOTICES

Board of Appeals Decisions Rendered in the Month of April 1968

Examiner affirmed	168
Examiner affirmed in part	28
Examiner reversed	35
Total	231

Tentative Schedule of Moves Into Building 2—Crystal Plaza

We expect to move employees into Crystal Plaza Building 2 beginning June 7, 1968, and extending through July 14, 1968. These plans are based on proposed completion dates furnished by Charles E. Smith Management Company and on acceptance of the completed space by General Services Administration. The installation of telephones is one other factor which will determine how closely we can adhere to this occupancy schedule.

The tentative schedule which has been determined for occupancy of Building 2 is:

JUNE 7–9

Correspondence and Mail Branch
Deposit Account Section (Finance Branch)
Attorneys' Copy Pick-Up Boxes
Supply and Receiving Room (Office Services)
Labor Section (Office Services)

JUNE 14–16

Trademark Examining Operation
Issue and Gazette Branch
Quality Control

JUNE 21–23

Board of Appeals
Board of Patent Interferences
Trademark Trial and Appeal Board
Office of the Director of Administration
Director, Budget & Finance Division
Budget Branch
Head, Finance Branch
Office Services Branch
Printing & Records Management Branch

JUNE 28–30

Director, Office of Patent Services
Assignment Branch
Application Branch
Special Services Branch
Document Services Branch
  (excluding the Reproduction Section)
Employee Accounts and Accounting & Cost Analysis Sections (Finance Branch)
Automatic Data Processing Division

JULY 5–7*

Director, Office of Research, Development & Analysis
Research and Development Division
Organization & Systems Analysis Division
Weekly Issue Section (Patent Copy Sales Branch)
Service Branch (Office of Examining and Documentation Control)
Mechanical Documentation Group

JULY 12–14*

Patent Documentation Administrator
Chemical Documentation Group
Electrical Documentation Group
Personnel Division (including Employee Development Branch)
Patent Office Academy
Drafting Branch

Once the above relocations are completed, we will then be in a position to move the patent files, the Record Room, numerical set of foreign patents, and the bindery shop. No dates have been determined, as yet, for moving the latter units.

*There is a possibility that the last two scheduled moves will be delayed by as much as two weeks because of the telephone strike.

EDWARD J. BRENNER,
Commissioner.

May 6, 1968.

Private Law 90–211

90th CONGRESS, H.R. 11254

April 12, 1968

AN ACT

For the relief of Jack L. Good

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That, notwithstanding the provisions of section 151, title 35, United States Code, or any provision of existing law, the Commissioner of Patents is authorized and directed to accept the late payment of the final fee (prescribed in section 41(a), title 35, United States Code), in the application for United States Letters Patent of Jack L. Good of Palestine, Arkansas, serial number 381,830, filed July 10, 1964, and allowed July 28, 1966, for a stump pulverizing apparatus, as though no abandonment or lapse had ever occurred: *Provided,* That such final fee is paid within three months of the date this Act is approved. Upon payment of such fee, the Commissioner is authorized to issue to the said Jack L. Good the patent for which application was so made. No patent granted on said application shall be held invalid on the ground that the final fee was not paid within the period specified in title 35, United States Code.

Approved April 12, 1968.

New Applications Received During April 1968

Patents	8060
Designs	494
Plant Patents	6
Reissues	34
Total	8594

Issue—June 11, 1968

Patents	1101	No. 3,387,304 to No. 3,388,404, incl.
Designs	132	No. 211,313 to No. 211,444, incl.
Reissues	8	No. 26,402 to No. 26,409, incl.
Total	1241	

Disclaimer

3,369,216.—*George B. Loper*, Duncanville, Tex. SYSTEM FOR REDUCING THE TRANSMISSION OF NOISE IN MARINE SEISMIC SURVEYING. Patent dated Feb. 13, 1968. Disclaimer filed May 8, 1968, by the assignee, *Mobil Oil Corporation*.

Hereby enters this disclaimer to claims 1 to 4 and the entire term of said patent.

Disclaimer and Dedication

3,325,296.—*Willard C. Braaten*, Waukegan, Ill. ARTIFICIAL SWEETENING COMPOSITION AND METHOD OF PRODUCING THE SAME. Patent dated June 13, 1967. Disclaimer and dedication filed Apr. 30, 1968, by the assignee, *Norse Chemical Corporation*.

Hereby disclaims and dedicates to the Public the terminal portion of the term of the patent subsequent to May 15, 1977.

Adjudicated Patents

(D.C.R.I.) North and Carman Patent No. 2,694,168 (317—284), for GLASS-SEALED SEMICONDUCTOR CRYSTAL DEVICE. Claims 60 and 61 *Held* valid and infringed. *Hughes Aircraft Co. v. General Instrument Corp.*, 275 F. Supp. 961; 155 USPQ 5.

(D.C. Calif.) Toti Patent No. 2,720,684 (52—78), for SLAT AWNING. Claims 1 and 3 *Held* not infringed. *Toti v. U-Neek Aluminum Products Co.*, 276 F. Supp. 287; 156 USPQ 548.

(D.C.R.I.) Barnes and Carman Patent No. 2,742,383 (148—33.2), for GLASS-SEALED SEMICONDUCTOR CRYSTAL DEVICE. Claims 2, 4, 10 and 11 *Held* valid and infringed. *Hughes Aircraft Co. v. General Instrument Corp.*, 275 F. Supp. 961; 155 USPQ 5.

(D.C. Tex.) Schneider Patent No. 2,784,038 (302—64), for MEANS FOR PNEUMATICALLY CONVEYING PLASTIC PARTICULATE MATERIAL. Claims 1 and 2 *Held* valid and infringed. *Fuller Co. v. Metal Arts Co.*, 276 F. Supp. 605; 156 USPQ 345.

(D.C.N.Y.) Rosenbaum and Harvey Patent No. 2,792,572 (2—90), for KNIT GARMENT, *Held* invalid. *Mock Fashioning Associates v. Manhattan Shirt Co.*, 276 F. Supp. 363; 155 USPQ 217.

(D.C. Ohio) Benjamin Patent No. 3,035,845 (279—47), for COLLET CHUCK. Claim 3 *Held* valid and not infringed. *Erickson Tool Co. v. Balas Collet Co.*, 277 F. Supp. 226; 156 USPQ 103.

(D.C.N.Y.) Celmer Patent No. 3,083,104 (99—103), for METHODS FOR RECOVERING LIQUIDS FROM VEGETATIVE MATERIALS. Claims 1, 2, 22 to 25, 30 and 31 *Held* valid but not infringed. *Taylor Wine Co. v. Celmer*, 278 F. Supp. 740; 155 USPQ 679.

(D.C. Ill.) Dinerstein and Cummings Patent No. 3,137,122 (58—116), for RESILIENT MEANS FOR DRIVING ESCAPE WHEEL, *Held* invalid. *Amphenol Corp. v. General Time Corporation*, 275 F. Supp. 903; 155 USPQ 246.

(D.C. Mo.) Perry Reissue Patent No. 23,422 (51—320), for METHOD OF CLEANING METAL BY PROJECTING UNDER PRESSURE A STREAM OF FLUID CARRYING IN SUSPENSION PELLETIZED BLACK WALNUT SHELLS, *Held* invalid and not infringed. *Agrashell, Inc. v. Hammons Products Co.*, 279 F. Supp. 522; — USPQ —.

(D.C. Ill.) Yeo and Wald Reissue Patent No. 25,526 (72—274), for AIR HEATING GAS BURNER. Claims 1, 11, 13, 15 and 17 *Held* valid and infringed. *Maxon Premix Burner Co. v. Mid Continent Metal Products Co.*, 279 F. Supp. 164; 155 USPQ 434.

PATENT EXAMINING CORPS

R. A. WAHL, Assistant Commissioner

CONDITION OF PATENT APPLICATIONS AS OF MAY 20, 1968

PATENT EXAMINING OPERATIONS AND GROUPS * Denotes date of oldest application for each Operation.	Actual Filing Date of Oldest Case Awaiting Action: New	Actual Filing Date of Oldest Case Awaiting Action: Amended
CHEMICAL EXAMINING OPERATION—I. MARCUS, Director.		
GENERAL CHEMISTRY AND PETROLEUM CHEMISTRY, GROUP 110—R. L. CAMPBELL, Manager Inorganic Compounds; Inorganic Compositions; Organo-Metal and Organo-Metalloid Chemistry; Metallurgy; Metal Stock; Electro Chemistry; Batteries; Hydrocarbons; Mineral Oil Technology; Lubricating Compositions; Gaseous Compositions; Fuel and Igniting Devices.	9- 7-65	4-26-63
GENERAL ORGANIC CHEMISTRY, GROUP 120—M. STERMAN, Manager Heterocyclic; Amides; Alkaloids; Azo; Sulfur; Misc. Esters; Carbohydrates; Herbicides; Poisons; Medicines; Cosmetics; Steroids; Oxo and Oxy; Quinones; Acids; Carboxylic Acid Esters; Acid Anhdrides; Acid Halides.	10- 1-65	*12-28-62
HIGH POLYMER CHEMISTRY, PLASTICS AND MOLDING; GROUP 140—L. J. BERCOVITZ, Manager Synthetic Resins; Rubber; Proteins; Macromolecular Carbohydrates; Mixed Synthetic Resin Compositions; Synthetic Resins With Natural Polymers and Resins; Natural Resins; Reclaiming; Pore-Forming; Compositions (Part) e.g.: Coating; Molding; Ink; Adhesive and Abrading Compositions; Molding, Shaping, and Treating Processes.	10-20-65	1- 6-64
COATING AND LAMINATING, BLEACHING, DYEING AND PHOTOGRAPHY, GROUP 160—J. R. LIBERMAN, Manager Coating; Processes and Misc. Products; Laminating Methods and Apparatus; Stock Materials; Adhesive Bonding; Special Chemical Manufactures; Special Utility Compositions; Bleaching; Dyeing and Photography.	*4- 9-65	2-18-63
SPECIALIZED CHEMICAL INDUSTRIES AND CHEMICAL ENGINEERING, GROUP 170—W. B. KNIGHT, Manager Fertilizers; Foods; Fermentation; Analytical Chemistry; Reactors; Sugar and Starch; Paper Making; Glass Manufacture; Gas; Heating and Illuminating; Cleaning Processes; Liquid Purification; Distillation; Preserving; Liquid and Solid Separation; Gas and Liquid Contact Apparatus; Refrigeration; Concentrative Evaporators; Mineral Oils Apparatus; Misc. Physical Processes.	9- 7-65	1-29-64
ELECTRICAL EXAMINING OPERATION—N. H. EVANS, Director.		
INDUSTRIAL ELECTRONICS AND RELATED ELEMENTS, GROUP 210—J. F. COUCH, Acting Manager Generation and Utilization; General Applications; Conversion and Distribution; Heating and Related Art Conductors; Switches; Miscellaneous.	1- 4-66	2-14-64
SECURITY, GROUP 220—S. BOYD, Manager Ordnance, Firearms and Ammunition; Radar, Underwater Signalling, Directional Radio, Torpedoes, Seismic Exploring, Radio-Active Batteries; Nuclear Reactors, Powder Metallurgy, Rocket Fuels; Radio-Active Material.	1-13-67	11-17-64
INFORMATION TRANSMISSION, STORAGE AND RETRIEVAL, GROUP 230—M. L. LEVY, Manager Communications; Multiplexing Techniques; Facsimile; Data Processing, Computation and Conversion; Storage Devices and Related Arts.	*2-24-65	*6-18-62
ELECTRONIC COMPONENT SYSTEMS AND DEVICES, GROUP 250—W. L. CARLSON, Manager Semi-Conductor and Space Discharge Systems and Devices; Electronic Component Circuits; Wave Transmission Lines and Networks; Optics; Radiant Energy; Measuring.	3- 2-65	8-15-62
PHYSICS, GROUP 280—R. L. EVANS, Manager Photography; Sound and Lighting; Indicators and Optics; Measuring and Testing; Geometrical Instruments.	2-14-66	3-22-65
DESIGNS, GROUP 290—S. BOYD, Manager Industrial Arts; Household, Personal and Fine Arts.	8-16-67	7- 5-66
MECHANICAL EXAMINING OPERATION—F. H. BRONAUGH, Director.		
HANDLING AND TRANSPORTING MEDIA, GROUP 310—A. BERLIN, Manager Conveyors; Hoists; Elevators; Article Handling Implements; Store Service; Sheet and Web Feeding; Dispensing; Fluid Sprinkling; Fire Extinguishers; Coin Handling; Check Controlled Apparatus; Classifying and Assorting Solids; Boats; Ships; Aeronautics; Motor and Land Vehicles and Appurtenances; Railways and Railway Equipment; Brakes; Rigid Flexible and Special Receptacles and Packages.	11-25-66	5- 7-66
MATERIAL SHAPING, ARTICLE MANUFACTURING, TOOLS, GROUP 320—N. BERGER, Manager Manufacturing Processes, Assembling, Combined Machines, Special Article Making; Metal Deforming; Sheet Metal and Wire Working; Metal Fusion—Bonding, Metal Founding; Metallurgical Apparatus; Plastics Working Apparatus; Plastic Block and Earthenware Apparatus; Machine Tools for Shaping or Dividing; Work and Tool Holders Woodworking; Tools; Cutlery; Jacks.	5-23-66	1-15-64
AMUSEMENT, HUSBANDRY, PERSONAL TREATMENT, INFORMATION, GROUP 330—A. RUEGG, Manager Amusement and Exercising Devices; Projectors; Animal and Plant Husbandry; Butchering; Earth Working and Excavating; Fishing, etc.; Tobacco; Artificial Body Members; Dentistry; Jewelry; Surgery; Toiletry; Printing; Typewriters; Stationery; Information Dissemination.	*4-22-66	5-14-64
HEAT AND POWER ENGINEERING, GROUP 340—C. F. GAREAU, Manager Power Plants; Combustion Engines; Fluid Motors; Pumps; Turbines; Heat Generation and Exchange; Refrigeration; Ventilation; Drying; Vaporising; Temperature and Humidity Regulation; Machine Elements; Power Transmission.	3- 1-67	1-21-66
FIXED CONSTRUCTIONS, SUPPORTS, AND HARDWARE, GROUP 350—T. J. HICKEY, Manager Joints; Fasteners; Rod, Pipe and Electrical Connectors; Miscellaneous Hardware; Locks; Building Structures; Closure Operators; Bridges; Closures; Earth Engineering; Drilling; Mining; Furniture; Receptacles; Supports; Cabinet Structures.	11-30-66	12- 8-64
TEXTILES, CLEANING AND FLUID HANDLING, GROUP 360—W. S. COLE, Manager Fluid Handling, including Valves; Conduits; Filling Receptacles; Lubrication; Joint Packing; Bathroom Fixtures; Centrifugal Separators; Cleaning; Coating; Pressing; Agitating; Foods; Textiles; Apparel and Shoes and their Manufacture; Sewing Machines; Winding and Reeling.	5- 9-66	*5-29-63

Total number of pending applications (excluding Designs)	193,096
Total number of Design applications pending	3,486

Expiration of patents: The patents within the range of numbers indicated below expire during June 1968, except those which may have been extended under the provisions of the Veterans Patent Extension Act (64 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 690. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1963.*

Patents	Numbers 2,555,300 to 2,558,715, inclusive
Plant Patents	Numbers 1,013 to 1,018, inclusive

DECISIONS IN PATENT AND TRADEMARK CASES

U.S. Court of Customs and Patent Appeals

In re Edward M. Jones

No. 7732. Decided March 16, 1967

[54 CCPA 1218; 373 F.2d 1007; 153 USPQ 77]

1. Patentability—Printed Matter—Printing as Structure—Code Disc for Analogue-to-Digital Encoder.

"That claim [involving a code member for an analogue-to-digital encoder having a 'series of pattern areas'], and the others likewise, do not, in our opinion, define 'printed matter' in the sense in which that term has heretofore been used to indicate various sorts of indicia whose primary purpose is the conveying of intelligence to a reader. What we find on the disc we would not characterize as indicia or printing but as structure, albeit the 'pattern areas' of claim 1 are not necessarily transparent and opaque, respectively, and might be produced by some sort of printing technique. A dark area on a light base can be an element of structure. See the note entitled 'The Patentability of Printed Matter: Critique and Proposal,' 18 George Washington L. Rev. 475, 484, June 1950. In the claims other than claim 1 the tracks are made up of transparent and opaque areas."

2. Same—Same—Machine or Manufacture and Process—Code Disc for Analogue-to-Digital Encoder—35 U.S.C. 101.

"* * * the entire group of claims is under rejection on the same ground, non-statutory subject matter [printed matter], in that they are not directed, in the Board's words, to 'a novel structure or physical process required under 35 U.S.C. 101.' The statutory language with which we are concerned is, of course, 'process, machine, manufacture, or composition of matter, or any new and useful improvement thereof * * *.' As to the claims to the disc [for an analogue-to-digital encoder], the relevant terms are either machine or manufacture. Appellant regards these claims, correctly we think, as directed to either a manufacture or to a 'subcombination' of a machine. Claims 6 and 8 he deems to be within the term process as defined in 35 U.S.C. 100(b), the pertinent part of which says, 'The term "process" means process, art or method * * *.' In terms, these claims are to 'The method of encoding analog information into digital values corresponding to the trigonometric function of the analog information comprising' certain steps thereafter defined, including use of a disc of the kind defined in the disc claims."

3. Same—Same—*In re Sterling* and *Cincinnati Traction Co.* v. *Pope* Distinguished.

"The Examiner's basis of rejection as stated in his answer was that claims 1–8 are 'drawn to non-statutory subject matter [printed matter] in accordance with *In re Sterling*, 1934 CD 494,' 21 CCPA 1134, 70 F.2d 910, 21 USPQ 519. We have considered that case and fail to see that it supports the rejection. It involved claims to a 'savings check' or a check book containing savings checks at intervals. This court found, first of all, that the claims were unpatentable over the prior art. The savings check, subject of claim 1, was the only novel feature of the check book claims. * * * The court then distinguished, as it had in a prior case, the famous streetcar transfer ticket case, *Cincinnati Traction Co.* v. *Pope*, 210 Fed. 443 (6th Cir. 1913), where the *arrangement* of printed matter, as distinguished from the intelligence conveyed by the words, provided, in relation to the transfer, a new structural facility and was held patentable."

4. Same—Same—Code Disc for Analogue-to-Digital Encoder.

"Certainly there is no 'printing' in this case in the form of words or other symbols intended to convey intelligence to a reader nor in the form of rulings as on a business form. The user of the disc [for an analogue-to-digital encoder] is not supposed to contemplate it as he would a mathematical table, weighing scale chart, or the like in order to derive some information. The disc is devised, made and used as a component part of a machine utilizing optics and electronics to perform functions of which we are not fully apprised by the record. We think it is error to confuse the lines on a patent drawing, which may have the appearance of 'printed matter,' with functional elements of a mechanism which in use actuate other mechanisms or electrical circuits or devices intended to be illustrated by the drawing. We see no basis for applying the *Sterling* case here."

5. Same—Same—Printing as Structure—*Ex parte Gwinn* Distinguished.

Held, with respect to the decision in *Ex parte Gwinn*, it is not controlling "for the reason that what the Patent Office deems to be printed matter in the disc [for an analogue-to-digital encoder] we consider to be structure."

6. Same—Process—Mental Step.

"Since we are dealing with the rejection that the claims are non-statutory, and since we find in claims 6 and 8 as much as in the other claims to the disc which we consider to be statutory, we do not feel that the single possibly mental step of addition is sufficient to make them subject to this rejection. Absent this step, the claims would not be non-statutory; they are not rendered so by its addition."

7. Application—Disclosure—New Matter.

"Claims 9 and 10 are rejected only on the ground of new matter. The rejection is predicated on the presence in the claims, which were added late in the prosecution together with an attempt to add to the specification, of '*means* for adding an electrical potential equal to one-half of the electrical potential representing a quantum electrically connected to the photocells confronting the other tracks of the code disc.' (Our emphasis. Claim 10 words it somewhat differently.) Appellant does not deny that he fails to disclose the means but says it was either disclosed in the Lippel article or would be obvious to one of ordinary skill in the art. Appellant cannot positively claim what he has not disclosed and he has disclosed no means. We will affirm this rejection."

MODIFIED.

Marshall A. Burmeister for appellant.

Joseph Schimmel (*Jere W. Sears*, of counsel) for the Commissioner of Patents.

Before Worley, *Chief Judge*, Rich, Smith, and Almond, *Associate Judges*, and Judge William H. Kirkpatrick [1]

Rich, *J.*, delivered the opinion of the court.

This appeal is from a decision of the Patent Office Board of Appeals, adhered to on reconsideration, affirming the rejection of claims 1–10 of application Serial No. 659,717, filed May 16, 1957, entitled "Non-Linear Code Member." No claim has been allowed.

Claims 1–5 and 7 are directed to a code disc per se and claims 6 and 8 set forth a "method of encoding analog information into digital values" utilizing the disc. Claims 9 and 10 are directed to combinations of elements of an "analog-to-digital encoder" in which the disc is one of the elements.[2]

The Examiner made four separate rejections: (1) Claims 1–8 were rejected as unpatentable over Schmidt Patent 2,907,996 of October 6, 1959 (copending). This patent would appear to have issued on application Serial No. 512,032, filed May 31, 1955, by Vernon E. Schmidt, referred to in the application at bar, and was assigned to D. H. Baldwin Company, assignee of the present application. For reasons we need not recite, the Board found Schmidt not to be a prior art reference and reversed this rejection. (2) Claims 1–8 were rejected further as "non-statutory being for printed matter and depicting merely a concept of a number system to the base 2." The Board affirmed this rejection. (3) Claims 6 and 8 were further rejected "as for an improper method claim" in being for the function of the apparatus. The Board reversed this rejection. (4) Claims 9 and 10 were rejected as based on new matter attempted to be inserted by an amendment which was refused entry. The Board affirmed this rejection. The appeal raises the issue of the propriety of rejections (2) and (4). By reason of their nature, no prior art is relied on and none is of record here, other than that admitted in the application.

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[1] Senior District Judge, Eastern District of Pennsylvania, sitting by designation.

[2] It may be of some help in understanding this somewhat obscure invention to have in mind the following definitions from Webster's Seventh New Collegiate Dictionary:

Analogue computer *n*: a calculating machine that operates with numbers represented by directly measurable quantities (as voltages, resistances, or rotations).

Digital computer *n*: a computer that operates with numbers expressed directly as digits in a decimal, binary, or other system.

The Invention

We shall undertake to describe the invention, as we understand it, only sufficiently to make clear what the legal issue is with respect to rejection (2), supra. The "code member" may be in the form of a rotating disc and the specification states that in such form it may be employed in angular position encoders of the type described by Bernard Lippel in an article entitled "A High-Precision Analog-to-Digital Converter," Proceedings of the National Electronics Conference, vol. 7, pp. 206–215, February 1952, from which article appellant's brief has extracted the following illustration to aid in explanation:

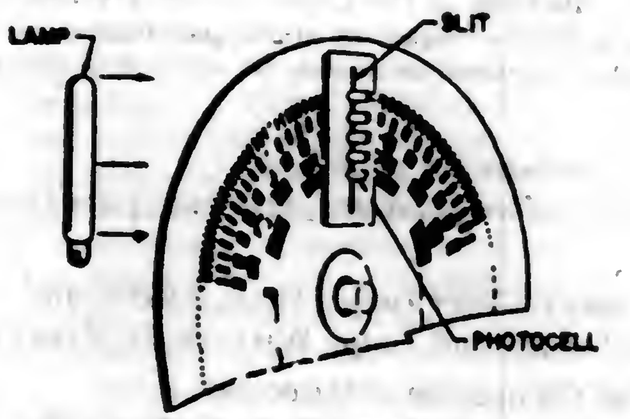
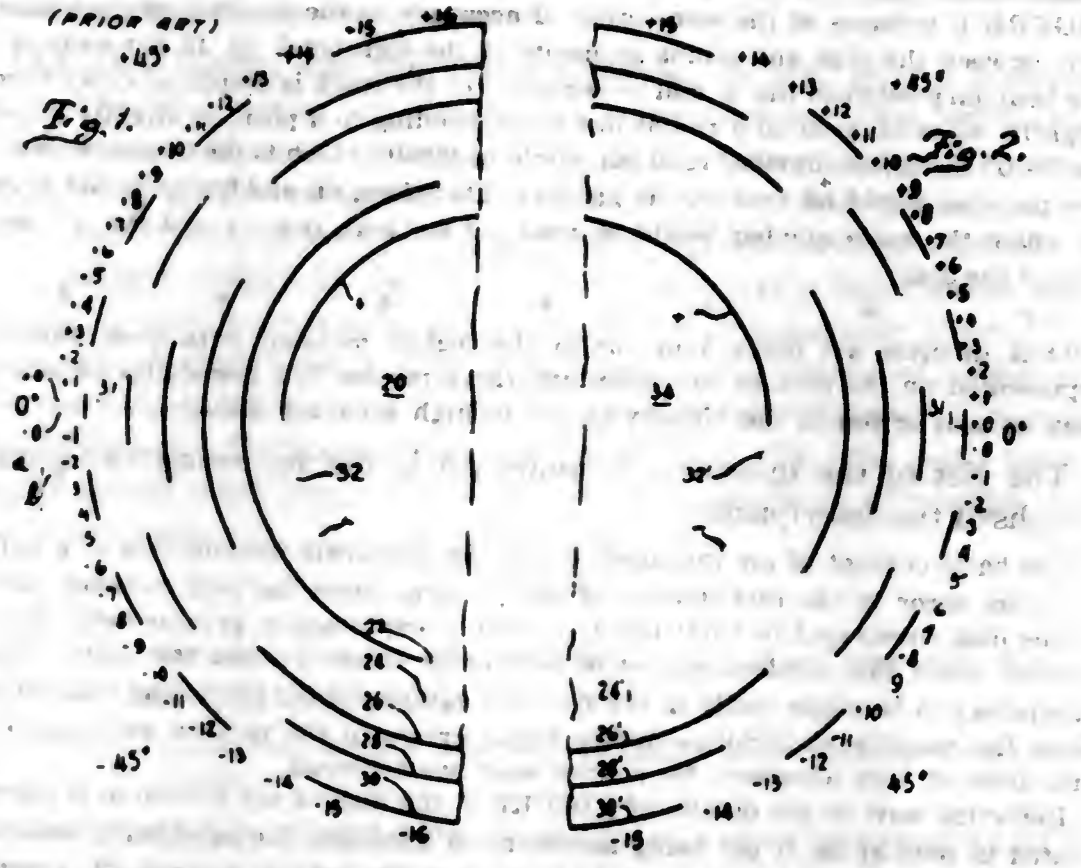


Fig. 1—Optical encoder.

In this illustration, the lamp produces, along a radius of the disc, a line of light which may pass through one or more transparent areas of the disc represented by the dark areas. On the other side of the disc from the lamp is a slit behind which are photocells in line with the coaxial tracks, five as shown, on which the transparent areas are positioned. The disc is, in effect, divided into a plurality of narrow pie-shaped sectors equal in number to the number of transparent and opaque areas in the finest divided track, which is shown as the outermost track. For each sector the combination of transparent and opaque areas contained therein is unique. Thus, if the lamp is flashed, the angular rotation of the disc from a reference point can be read out through the photocells by reason of their responses to either light or darkness (no light). The disc above shown appears to have a linear pattern but appellant states in his specification that the use of non-linear code patterns was known, from which may be directly read out binary numbers corresponding to a trigonometric function of an angle of displacement of a shaft from a nominal position, such non-linearity being a limitation of the appealed claims. For example, the shaft and disc angular rotation from a zero point (or "fiducial mark") may be expressed as the sine of the angle, in the form of a binary number as read by the photocells from the transparent and opaque areas in the segment underlying the slit at the time of illumination.

Appellant's application contains the following drawing, FIG. 1 on the left being half of a prior art disc and FIG. 2 on the right illustrating the improvement thereon in accordance with the invention:



Counting in from the periphery, it will be noted that in FIG. 1 on the left there are five concentric tracks 22, 24, 26, 28, and 30 portions of which are opaque as indicated by the heavy lines. Where there is no line it is to be assumed the track is transparent, i.e., light would be transmitted to an overlying photocell. A read-out along a horizontal radius through the zero point on this disc would encounter all dark areas and the binary number result would be 00000. The sixth track, 32, the opaque portion of which terminates, theoretically, exactly on the radius passing through the zero point, or center of zero segment 31, is shown as opaque for positive (+) numbers and transparent for negative (−) numbers and is known as the "sign track" (not to be confused with "sine") and indicates whether the number read-out is positive or negative.

Appellant's specification thus states a problem encountered in making and using the prior art FIG. 1 disc, which problem the invention is said to solve:

> In the distribution of code patterns in a logical manner, as is the prior practice, to provide for non-linear codes such as would correspond to the sine of an angle, the code pattern will contain in its track corresponding to the *least-significant* digit, a fiducial mark or segment representing zero degrees (and also 180°, as the disk is symmetrical about the 90°–270° axis). In line with such marks is usually found a transition between a section of a concentric track on the disk corresponding to the *positive* sign of a trigonometric function and a portion corresponding to a *negative* sign. In the code representation, the least significant digit pattern is one quantum wide, and in the ideal disk the transition from positive to negative sign occurs exactly in the center. Consequently, as will be explained in detail hereinafter, not only will an error of as much as two quanta be produced if the sign-pattern transition is more than one-half quantum in error from its ideal position, but also, an ambiguity will exist.

This general statement is made more specific later in the specification:

> Disks of the prior art type illustrated in FIGURE 1 have met service demands wherein the number of digits required is relatively low. In disks approaching the

> accuracies of the order of 2^n, which may be produced by apparatus of the type disclosed in a co-pending application Serial No. 512,032, filed May 31, 1955, in the name of Vernon E. Schmidt, entitled Code Generator, assigned to the same assignee, the quantum distance, such as that represented in the sector "+1" in FIGURE 1, becomes of the same order of accuracy as the location of the boundary between the plus and minus segments of the sign track 32. If, for example, the boundary between the + and — segments of the track is displaced downward slightly, so as to occur in a radial line corresponding to a position slightly below the "—0" sector, the number read out would be 00001, which is the correct *number* but the *sign* would be read out as *positive*. Therefore, an ambiguity would arise in which the *same* number would be read out for both the —1 and the +1 sectors of the disk.
>
> * * * * * * *
>
> Thus in prior art disks, laid out in the logical manner, with each number represented on the disk by one quantum, there resides this possibility of larger than normal errors in the vicinity of "0" in high accuracy disks.

The gist of the invention is contained in the following two paragraphs of the description:

> The basic concept of my invention lies in the deliberate introduction of a half-quantum error in the distribution of the patterns upon the code member, such as the disk illustrated in FIGURE 2. As will be explained in greater detail hereinafter, since this deliberately-introduced error exists around the entire disk, provision can be made easily in the read-out equipment for correcting this error. Thus the possible ambiguities due to slight errors in the pattern are removed, and disks of high accuracy, for a given size, are achieved.
>
> Referring now to the details of FIGURE 2, the disk of my invention is represented in part at 34, it not being necessary to illustrate the remainder, because of symmetry. The disk 34 has plus and minus segments in a track 32′ (corresponding elements in the disk of FIGURE 1 and FIGURE 2 have corresponding base numbers). Tracks corresponding to FIGURE 1 are illustrated at 24′, 26′, 28′ and 30′. These tracks represent from 24′ to 30′, respectively, the most-significant to least-significant digits of the number corresponding to the position [sic] of a disk from the zero position. The fiducial mark 31′ can be seen as being two quanta in length, whereas the prior art fiducial mark 31 (in FIGURE 1) is one quantum in length.

Appellant's brief summarizes the invention and its advantage thus:

> FIGURE 2 of this application shows the present invention in which the "0" sector is made twice as long as numerical calculations would make it, that is, twice as long as the prior art "0" sector shown in FIGURE 1 (Tr. 8). As a result, the code disc of the present invention may be displaced from the zero or nominal position up to one-half of the sector length further without producing a change in the electrical output. This error is carried about the entire disc, so that each and every output of the disc is low by one half count. The electrical output of the code disc may then be made accurate by simply adding one half count to the numerical output.

As the brief also points out, and it is not disputed, the "0" sector in the "least significant" outer track has the shortest arc length and it is this length that limits the possible resolution of the disc because the transition point of the innermost sector which indicates plus or minus must be accurately aligned with the center of the shortest outermost sector. By doubling its length, and then electrically compensating for the error thus deliberately introduced, appellant has solved a problem by what seems to us to be a structural change in the disc, which also brings about a new dimensional and hence functional relationship between the shortest segment in the outer track and the transition point in the innermost track, allowing greater latitude in positioning the latter.

Illustrative of the disc claims is claim 1:

> 1. In a code member of the type wherein a plurality of series of pattern areas are arranged for line readout of non-linear code numbers representative of displacements of said member from a nominal position, a series of areas in said plurality having at least one area which is bisected by the line readout at said nominal position and which extends one quantum distance in both directions from said nominal position, the remaining areas in said series being also two quanta in length, and at least two additional sign-determining areas whose boundary occurs at said nominal position.

[1] That claim, and the others likewise, do not, in our opinion, define "printed matter" in the sense in which that term has heretofore been used to indicate various sorts of indicia whose primary purpose is the conveying of intelligence to a reader. What we find on the disc we would not characterize as indicia or printing but as structure, albeit the "pattern areas" of claim 1 are not necessarily transparent and opaque, respectively, and might be produced by some sort of printing technique. A dark area on a light base can be an element of structure. See the note entitled "The Patentability of Printed Matter: Critique and Proposal," 18 George Washington L. Rev. 475, 484, June 1950.[3] In the claims other than claim 1 the tracks are made up of transparent and opaque areas.

Opinion

We shall consider first the rejection of claims 1–8 as "non-statutory." The Board said of them:

> Claims 1 to 5 and 7 set forth a code disc and claims 6 and 8 set forth a method of making a code disc * * *.

The statement is in accord with the record except as to claims 6 and 8. We agree with appellant's statement that

> These claims are directed to this method of generating an output with a code disc, such as set forth in the subcombination claims * * * 1 through 5 and 7, and thereafter "adding a binary '½' from the binary number represented by the other tracks to give a digital number representing the trigonometric function of the analog information."

[2] Notwithstanding this preliminary error in appraisal, the entire group of claims is under rejection on the same ground, non-statutory subject matter, in that they are not directed, in the Board's words, to "a novel structure or physical process required under 35 U.S.C. 101." The statutory language with which we are concerned is, of course, "process, machine, manufacture, or composition of matter, or any new and useful improvement thereof * * *." As to the claims to the disc, the relevant terms are either machine or manufacture. Appellant regards these claims, correctly we think, as directed to either a manufacture or to a "subcombination" of a machine. Claims 6 and 8 he deems to be within the term process as defined in 35 U.S.C. 100(b), the pertinent part of which says, "The term 'process' means process, art or method * * *." In terms, these claims are to "The method of encoding analog information into digital values corresponding to the trigonometric function of the analog information comprising" certain steps thereafter defined, including use of a disc of the kind defined in the disc claims.

[3] The Examiner's basis of rejection as stated in his answer was that claims 1–8 are "drawn to non-statutory subject matter in accordance with *In re Sterling*, 1934 CD 494," 21 CCPA 1134, 70 F.2d 910, 21 USPQ 519. We have considered that case and fail to see that it supports the rejection. It involved claims to a "savings check" or a check book containing savings checks at intervals. This court found, first of all, that the claims were unpatentable over the prior art. The savings check, subject of claim 1, was the only novel feature of the check book claims. The opinion says:

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[3] The paragraph we have particularly in mind reads:

Printed matter can, of course, produce physical results as in an optical instrument such as an actinometer or a grating where lines diffract or otherwise produce an optical effect on light. Another device in which printed matter produces physical results is where printed marks actuate a photo-electric cell. Similarly, if an arrangement of lines is used for sighting as in a telescope reticle it is also physical structure. There has been no suggestion in any decision or legal commentary that the arrangement of printed matter in such situations is nonpatentable even if it constitutes a mathematical arrangement.

> Considering claim 1, * * * the physical structure is practically the same as the corresponding physical structure of Watrous. The *language* printed upon the respective checks and stubs differs, but we have held in a number of cases that the mere arrangement of printed matter on a sheet or sheets of *paper* does not constitute patentable subject matter. * * * [cases cited] if arrangement of printed matter may not constitute patentable novelty, it would seem obvious that the *substance or language* of that which is printed may not do so. [Emphasis ours.]

The court then distinguished, as it had in a prior case, the famous streetcar transfer ticket case, *Cincinnati Traction Co.* v. *Pope*, 210 Fed. 443 (6th Cir. 1913), where the *arrangement* of printed matter, as distinguished from the intelligence conveyed by the words, provided, in relation to the transfer, a new structural facility and was held patentable.

[4] Certainly there is no "printing" in this case in the form of words or other symbols intended to convey intelligence to a reader nor in the form of rulings as on a business form. The user of the disc is not supposed to contemplate it as he would a mathematical table, weighing scale chart, or the like in order to derive some information. The disc is devised, made and used as a component part of a machine utilizing optics and electronics to perform functions of which we are not fully apprised by the record. We think it is error to confuse the lines on a patent drawing, which may have the appearance of "printed matter," with functional elements of a mechanism which in use actuate other mechanisms or electrical circuits or devices intended to be illustrated by the drawing. We see no basis for applying the *Sterling* case here.

The Board did not mention the *Sterling* case but cited two others in support of the rejection, *Ex parte Gwinn*, 112 USPQ 439 (Bd. App.) and *Ex parte Jenny*, 130 USPQ 318 (Bd. App.). *Gwinn* is a lengthy opinion dealing with the patentability of a "parlor golf" game using dice having the usual spots on them, possibly with some variations like blank faces and colors. Apparently the dice, the only apparatus involved, were found to be wholly lacking in patentable features, the rules of the game being found irrelevant to patentability. The Solicitor, remarking that we have never commented on that case, extracts from it two principles therein stated which he approvingly indicates were applied here by the Board. They are:

> (A) that where the *sole* distinction set out in the claims over the prior art is in the printed matter, there being *no new feature* of physical structure and *no new relation* of printed matter to physical structure, such claims may not be allowed; * * *
>
> (B) that it is only where the claims define *either* new features of structure *or* new relations of printed matter to structure, *or* both, which new features or new relations give rise to some new and useful function or effect or result that claims may properly be allowed. [Emphasis by the Board.]

We have no quarrel with these statements as a summary of the cases on which they were based but they are uncritical with respect to how one determines whether certain "printed matter" is also "structure."

[5] We do not consider them to be controlling in this case for the reason that what the Patent Office deems to be printed matter in the disc we consider to be structure. Anyway there is nothing in this case comparable to the dice involved in *Gwinn* and no printed rules are involved either. *Jenny* involved a method of changing "field intensity profiles" into "a high resolution function field intensity profile map on graph paper." The rejection sustained was on the ground that the claimed method consisted of steps which are "mental, conventional drafting practice, and printed matter." The three steps of the method were (1) "chording" the curve to reduce gross changes, (2) "splining" the chorded curve which is merely averaging out the rapid variations, and (3) "plotting" curves representing the difference between the splined curve and its original profile. We see no relevance of the holding of unpatentability of such a method to the issue here. The disc and the method of its use here claimed do not appear to us to involve any mental steps with the possible exception of the final step in method claims 6 and 8, "adding a binary '½' from the binary number represented by the other tracks" to the readout. The appellant does not propose to make this addition mentally but by making provision therefor in the read-out *equipment*. The Solicitor's point is that we should regard it as a mental step in the absence of a disclosure of some actual means to accomplish this step in the application. He cites *In re Abrams*, 38 CCPA 945, 188 F.2d 165, 89 USPQ 266, which was also discussed and relied on in *Jenny*, supra, on which the Solicitor does not rely. **[6]** Since we are dealing with the rejection that the claims are non-statutory, and since we find in claims 6 and 8 as much as in the other claims to the disc which we consider to be statutory, we do not feel that the single possibly mental step of addition is sufficient to make them subject to this rejection. Absent this step, the claims would not be non-statutory; they are not rendered so by its addition.

[7] Claims 9 and 10 are rejected only on the ground of new matter. The rejection is predicated on the presence in the claims, which were added late in the prosecution together with an attempt to add to the specification, of "*means* for adding an electrical potential equal to one-half of the electrical potential representing a quantum electrically connected to the photocells confronting the other tracks of the code disc." (Our emphasis. Claim 10 words it somewhat differently.) Appellant does not deny that he fails to disclose the means but says it was either disclosed in the Lippel article or would be obvious to one of ordinary skill in the art. Appellant cannot positively claim what he has not disclosed and he has disclosed no means. We will affirm this rejection.

The decision of the Board is reversed as to claims 1–8 and affirmed as to claims 9 and 10.

MODIFIED.

KIRKPATRICK, *J.*, dissenting.

I find myself unable to agree with the majority.

The change in the pattern of the prior art disc consists of doubling the length of the zero indication along the edge of the disc. This is important because, if the pattern is intended to represent the sine of the angle, the plus or minus sign of the number will change at this point, and a mistake as to the sign would lead to a reading of, say, three degrees instead of 357 degrees of rotation. The applicant avoids such large errors by electing to tolerate an inability to detect accurately a minute rotation near the zero point. As a result of lengthening the zero mark and continuing the same spacing around the edge of the disc as existed in the prior art, when the scale or pattern on the disc is read, it will always read one-half lower than it would have read if the original pattern had been undisturbed. I do not think that this change of pattern is a change in an article of manufacture.

I attach no significance to the fact that the scale or pattern is to be read by a bank of photocells instead of the human eye. I have difficulty in distinguishing the subject matter said to be patentable from the arrangements of numbers on the dial of an ordinary bathroom scale. Certainly, the method of reading it should not be controlling.

U.S. Court of Customs and Patent Appeals

IN RE JULIAN ROBERT ANTHONY BEALE

No. 7755. Decided June 15, 1967

[54 CCPA 1472; 378 F.2d 970; 154 USPQ 14]

1. APPLICATION—DISCLOSURE—RIGHT TO MAKE.

"We think it is of no legal significance here whether Beale either recognized all aspects of the role of indium or indicated recognition in his specification. The question here is whether he discloses subject matter conforming to each and every limitation of the copied claims and if, in fact, indium functions as a carrier in his disclosed process then his disclosure supports the claims, all other limitations concedely being met."

2. CLAIM—CONSTRUCTION OF CLAIMS—UNAMBIGUOUS TERMS ACCORDED BROADEST REASONABLE MEANING.

"It is appropriate to mention here the principle of law that unambiguous terms in copied claims will be given the broadest meaning they will reasonably support and that limitations will not be read into them."

3. APPLICATION—DISCLOSURE—RIGHT TO MAKE—WORDS AND PHRASES—"CARRIER."

"Using the same *words* in a disclosure as are used in the claims is not always the determining factor in determining the issue of support. *In re Walter*, 48 CCPA 1094, 292 F.2d 547, 130 USPQ 168 (1961). It has not been shown to our satisfaction that there is anything ambiguous or unusual about the word 'carrier' in this art, replete though it is with unusual terminology. We are of the opinion that Beale is within his rights in relying, as he does, on the dictionary definitions of the word. Nor, having in mind certain arguments of the Examiner in his answer, does it appear to us that Schwartz, were we to consider his specification relevant, used the word in any unusual way. He speaks of a 'carrier material,' of 'carrier metal,' and of the 'carrier.' It is simply a metal which carries other ingredients, all of them together constituting the alloy 13."

4. SAME—SAME—SAME.

"In his answer, the Examiner makes extensive arguments additional to those in his rejections in an attempt to justify his initial opinion that Beale's specification does not support the claims [copied from the Schwartz patent to provoke interference] only because of their inclusion of the word 'carrier.' In doing this he examines into what Schwartz uses for carriers, what he says about the reasons for using these materials, lead and tin, and considers whether Beale obtains the same or similar advantages in using his own alloy, in which he asserts indium acts as a carrier. We regard as legally unjustifiable this attempt to limit the meaning of 'carrier' by reference to the Schwartz specification. While it may be that Schwartz gets some results from using the carriers he specifically discloses, which may or may not be obtained using appellant's indium, he has not limited the claims to the carriers he discloses or even to similar 'electrically inert' metals. He has specified 'carriers' broadly, and that is a functional term. In our judgment, if Beale's indium, as used, functions as a carrier, that limitation is satisfied. *In re Walter*, supra."

5. SAME—SAME—SAME.

"By virtue of this same fact, that carriers for conductivity-type directing impurities are old in the art, and because the invention resides in the *process* as defined by the other limitations of the claims [copied by Beale to provoke an interference with the Schwartz patent], in combination, to produce the process as a whole, we cannot agree with either the Board or the Solicitor (the Examiner never having made the argument) that, in defining the process as a whole, 'carrier' is a term which requires for support disclosure of more than one carrier. We note that Schwartz was granted his patent with that term in his claims on the basis of mention of only two, lead and tin, both of the *same* inert type. No one has yet argued that Beale's process would *infringe* the claims. The situation seems to us parallel to the disclosure of a device made up of several elements, one of which is a rivet or a bolt described in the claim as 'fastening means.' Normally one would not be required to disclose more than one such means to support the claim. Whether lead, tin, or indium be used as the carrier, substantially the same process is carried out and essentially the same product results, at least as far as the record shows. While there may indeed be minor differences, they have not been pointed out in the claims as part of the invention."

6. APPEAL TO U.S. COURT OF CUSTOMS AND PATENT APPEALS—MATTER BEFORE COURT—NEW REJECTIONS.

"It does not appear to us that apellant was ever previously faced with this 'different invention' argument of the Solicitor, either before the Examiner or the Board. He should not be required to meet new rejections for the first time in this court."

7. APPLICATION—DISCLOSURE—RIGHT TO MAKE—*In re Gemassmer* CONSTRUED.

"The *Gemassmer* case, cited by the Board, does not seem to us to be in point. The majority in that case deemed the use of a high speed mixer to be a critical 'limitation' of the process invented and disclosed and ruled that claims not containing a limitation to a high speed mixer did not 'point out appellant's invention.' Here we do not deem the use of indium to be a critical 'limitation' of the appellant's process, and neither has the Patent Office, as is indicated by the allowance to appellant of many claims without any such limitation."

Jack Oisher for appellant.

Joseph Schimmel (*Fred W. Sherling*, of counsel) for the Commissioner of Patents.

Before WORLEY, *Chief Judge*, RICH, SMITH, and ALMOND, *Associate Judges*, and Judge WILLIAM H. KIRKPATRICK [1]

RICH, *J.*, delivered the opinion of the court.

This appeal is from the decision of the Patent Office Board of Appeals affirming the rejection of claims 52–54 of application Serial No. 676,563, filed August 6, 1957, originally entitled "Method of Manufacturing Semi-Conductor Devices."

Appellant Beale copied the three appealed claims from Schwartz et al. patent (hereinafter "Schwartz") No. 3,001,895 [2] to provoke an interference. They stand rejected on the sole ground of lack of support in Beale's specification. The Examiner's language was that the claims are "unwarranted by the disclosure."

The single issue in this case presents a simple problem of law, which turns on a single word, against the background of a very complex technology, some understanding of which is necessary to a comprehension of the issue.

The process of the appealed claims is directed to the making of junction transistors and is, we are told, now known in the art as the alloy-diffusion process. The claims are broad enough to cover the making of either P-N-P or N-P-N junction transistors but the drawings and illustrative embodiments in both cases relate to the P-N-P type and we shall therefore use that type in explaining the invention. Reproduced below are FIGS. 2, 3, and 4 of Schwartz showing stages in the production, followed by FIG. 1 which illustrates a finished transistor.

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[1] Senior District Judge, Eastern District of Pennsylvania, sitting by designation.

[2] The Schwartz et al. patent issued to International Business Machines Corporation, Sept. 26, 1961, and the claims were copied by an amendment dated Feb. 5, 1962. Beale's application appears to be assigned to North American Philips Co., Inc., and has been involved in three other interferences, Nos. 92,269; 92,270; and 92,271. Beale prevailed in the first two and the third was dissolved.

FIG. 2

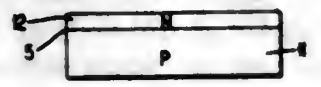


FIG. 3

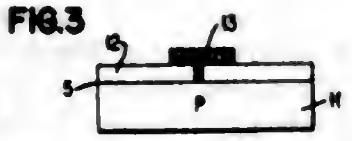


FIG. 4

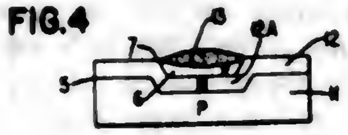
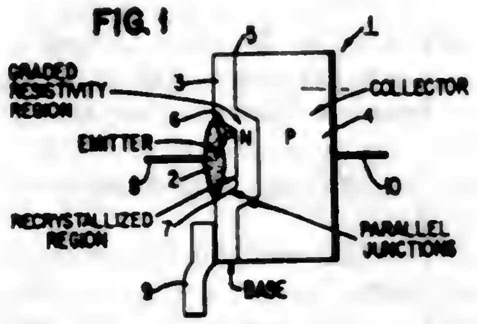


FIG. 1



In viewing these drawings it should be borne in mind that they are in reality schematic diagrams greatly exaggerated in size and not showing the various parts in their true relative proportions.

Referring to FIGS. 2, 3, and 4, a small piece or wafer of semiconductor material 11, such as germanium (Ge) of p-type conductivity, is provided by diffusion with a relatively thin surface layer 12 of opposite or n-type conductivity, the two layers providing a PN junction 5. As shown in FIG. 3, a small quantity or pellet 13 of alloy is placed on an exposed surface of layer 12, heated to a temperature above its melting point but below the melting point of the germanium crystal, held at temperature for a desired time and then cooled, producing a structure illustrated in FIG. 4.

The controversy here revolves about the composition of alloy pellet 13. According to the claims, it comprises a "carrier" and two conductivity-type directing impurities which are of opposite types. In this art, one impurity is known as an acceptor impurity which creates p-type conductivity when incorporated in a semiconductor body and the other is known as a donor impurity which creates n-type conductivity in a semiconductor body. Exemplary materials involved in this case are gallium (Ga) which is an acceptor and antimony (Sb) which is a donor. The n-type layer 12 in FIGS. 2 and 3 may be produced by diffusion of Sb into the surface of the Ge crystal 11. One of Schwartz' alloy examples is 96.6% lead [3] as carrier, 0.2% antimony and 0.2% gallium. To indicate the true size of what is shown in the drawings in an actual transistor, the Ge crystal wafer is described in one Schwartz example as .06 x .06 inch, and .006 inch thick. The other example describes the Ge crystal as .0023 inch thick with arsenic, another donor impurity, diffused into its surface to produce the n-type layer to a depth of 0.0005 inch. Pellet 13 is described as a .01 x .01 inch cylinder.

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[3] What makes up the balance to 100% is not stated. At another point he discloses 99.6% lead and 0.2% each of antimony and gallium, which totals 100%.

There are other qualifying factors with respect to the acceptor and donor impurities contained in the alloy pellet of importance to the practice of the claimed invention. The donor is selected so that it has a much higher diffusion constant than the acceptor, that is, it advances faster into the crystal from the melt. The impurities are also selected so that the acceptor solubility in the germanium is higher than that of the donor.

Referring to FIG. 4, when the alloying pellet 13 containing the donor and acceptor impurities is fused to the crystal surface 12 by heating the pellet in contact with the crystal until it melts, a number of things occur. A small portion of the Ge crystal dissolves in the melt, forming a small crater the depth of which represents the furthest advance of the melt (liquid-solid interface or alloy-front), determined by the temperature and the solubility of the Ge in the alloy. The melt quickly saturates and can accept no more Ge. Solid-state diffusion of the impurities in the melt takes place into the underlying Ge solid crystal 11. The donor, having the higher diffusion constant advances faster into the Ge. Heating is continued until the advancing donor impurity converts the underlying p-type Ge to n-type Ge, shown at 12A. It will be noted that this n-type layer joins the diffused n-type layer 12, previously formed. The n-type Ge layer, 12–12A, constitutes the active "base" layer of the transistor. Its position in the crystal and particularly its thickness are important to obtaining the desired electrical characteristics and the invention involves control of these parameters but it is not deemed necessary to decision to discuss them.

As the melt cools, further significant events take place. Diffusion terminates, fixing the location of the collector-base junction, portion 11 of p-type Ge becoming the "collector." As the melt begins to solidify, the solubility of the Ge dissolved in it decreases and atoms of Ge precipitate out and regrow at the original solid crystal lattice, forming a recrystallized Ge region 6. The impurities having been selected so that acceptor solubility in the Ge was higher than that of the donor, more acceptor impurities exist in the recrystallized Ge region 6 than donor impurities with the result that region 6 exhibits p-type conductivity and forms an "emitter" junction with the adjacent diffused base region 12A. The cooled pellet 13, being metallic, forms an ohmic [4] conductive contact to the emitter recrystallized region. A conductor 8 may be attached thereto as shown in FIG. 1. A collector contact and conductor 10 are attached to the other side of the original Ge crystal and a base contact 9 is applied to surface 12, thus producing the finished transistor of FIG. 1.

We have used the Schwartz drawings only because they seem easier to read and are more detailed but Beale's drawings show substantially the same thing, additionally showing an oven in which the melting can be done in a hydrogen atmosphere and in the presence of a vaporized antimony source as a donor impurity to provide the diffused n-type conductive layer 12 on the original p-type germanium crystal wafer 11. Typical heating is to 700–800° C. for from 20 minutes to an hour.

Claim 52, which may now be at least partially intelligible to the reader, is as follows:

> 52. The process of making a transistor comprising, a first step of heating a semiconductor body of an original conductivity-type in contact with a material

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[4] An "ohmic" contact is defined in the transistor art as one which does not rectify or inject excess carriers. Hunter, "Handbook of Semiconductor Electronics," pp. 3–14, sec. 3.8.

> *comprising a carrier*, capable of forming an alloy with said semiconductor body at a temperature below the melting temperature of said body, and selected quantities of an original and an opposite conductivity-type directing impurity, said opposite conductivity-type directing impurity having a diffusion co-efficient greater than the diffusion co-efficient of said original conductivity-type directing impurity, said original conductivity-type directing impurity having a segregation co-efficient greater than the segregation co-efficient of said opposite conductivity-type directing impurity, said heating step being performed at a temperature above that at which said carrier is molten and below the melting temperature of said body, said quantities of said original and said opposite conductivity-type directing impurities being so selected and said heating step being continued at said temperature for such a time that only said opposite conductivity-type directing impurity diffuses significantly into said body to a predetermined depth thereby forming by said diffusion only a single region in said body, which region is of opposite conductivity-type to said body; and a second step of cooling said body thereby forming by segregation a recrystallized region of said original conductivity-type in said body and applying an ohmic contact to each of said original conductivity-type portion of said body and recrystallized region. [Emphasis ours.]

Claim 53 differs from 52 in specifying the step of forming a diffused layer (12) in the body *before* the alloying step and claim 54 differs from 53 in specifying that the base zone (12A) formed by diffusion during the alloying process is an extension of the original prediffused surface layer (12). The significant thing is that all three claims contain the words "comprising a carrier," "carrier" being the single word creating the issue here.

The Patent Office does not question appellant Beale's support in his disclosure for every element or step recited in the process claims other than the "carrier." Adverting to the claim language, what do we find with respect to the carrier in plain English? The reference is to the pellet of alloying material 13, above described. That pellet is referred to in the claims as "material." The material "comprises" (1) a "carrier" capable of forming an alloy with the semiconductor body and of melting at a temperature below the melting temperature of said body and (2) two conductivity-type directing impurities of opposite type and having certain other specified characteristics not relevant to the issue.

In copying the claims and presenting his justification under Patent Office Rule 205(b), Beale pointed out that he discloses the use of an alloying material in the form of a pellet of indium (In) containing the acceptor gallium (Ga) and the donor antimony (Sb), both well-known conductivity-type directing impurities. The examples on which he relied give the alloy ingredient proportions as 99% In, 1% Ga in Example 1, modified in Example 3 by inclusion also of 0.2% Sb.[5] He therefore relies on indium as his disclosure of carrier, in which are carried the two different type donor and acceptor impurities antimony and gallium. While, in our view, it is not important to the legal issue, the "carriers" disclosed in the Schwartz patent are lead or tin, the example of lead containing as impurities gallium and antimony, 0.2% each; the tin example includes 0.2% each of copper and antimony.

In his initial refusal to admit the claims, the Examiner took the position that they were "unwarranted by the disclosure" because "There is no basis in the applicant's specification * * * to support the inclusion of a carrier in the alloy dot material." To support this (it not being denied that Beale does not use the *word* carrier) the Examiner insisted that it was *not* "recognized" in the specification that indium was a carrier but that it *was* recognized that indium was an acceptor impurity. He took this to indicate the assumed fact with respect to applicant's state of mind that "applicant did not recognize that In was acting as a carrier * * *." **[1]** We think it is of no legal significance here whether Beale either recognized all aspects of the role of indium or indicated recognition in his specification.[6] The question here is whether he discloses subject matter conforming to each and every limitation of the copied claims and if, in fact, indium functions as a carrier in his disclosed process then his disclosure supports the claims, all other limitations concededly being met. The Examiner's next action was his final rejection in which he repeated the same reasons. Appeal to the Board was then taken.

[2] It is appropriate to mention here the principle of law that unambiguous terms in copied claims will be given the broadest meaning they will reasonably support and that limitations will not be read into them. *Field* v. *Stow*, 18 CCPA 1437, 49 F.2d 840, 9 USPQ 347 (1931). **[3]** Using the same *words* in a disclosure as are used in the claims is not always the determining factor in determining the issue of support. *In re Walter*, 48 CCPA 1094, 292 F.2d 547, 130 USPQ 168 (1961). It has not been shown to our satisfaction that there is anything ambiguous or unusual about the word "carrier" in this art, replete though it is with unusual terminology. We are of the opinion that Beale is within his rights in relying, as he does, on the dictionary definitions of the word. Nor, having in mind certain arguments of the Examiner in his answer, does it appear to us that Schwartz, were we to consider his specification relevant, used the word in any unusual way. He speaks of a "carrier material," of "carrier metal," and of the "carrier." It is simply a metal which carries other ingredients, all of them together constituting the alloy 13.

[4] In his answer, the Examiner makes extensive arguments additional to those in his rejections in an attempt to justify his initial opinion that Beale's specification does not support the claims only because of their inclusion of the word "carrier." In doing this he examines into what Schwartz uses for carriers, what he says about the reasons for using these materials, lead and tin, and considers whether Beale obtains the same or similar advantages in using his own alloy, in which he asserts indium acts as a carrier. We regard as legally unjustifiable this attempt to limit the meaning of "carrier" by reference to the Schwartz specification. While it may be that Schwartz gets some results from using the carriers he specifically discloses, which may or may not be obtained using appellant's indium, he has not limited the claims to the carriers he discloses or even to similar "electrically inert" metals. He has specified "carriers" broadly, and that is a functional term. In our judgment, if Beale's indium, as used, functions as a carrier, that limitation is satisfied. *In re Walter*, supra.

Having considered the Beale disclosure, the prior art patents and texts relied upon by Beale to illuminate the technical aspects of this invention, and the arguments presented, we are persuaded that in

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[5] His full Rule 205(b) statement with respect to the alloy reads:

> Example 3 on page 12, which incorporates Exs. 1 and 2 by reference, describes a process for making a transistor in which a p-type Ge body is heated in contact with an indium pellet.
>
> Ge melts at 950° C. but In alloys with Ge at 700° C.
>
> The In pellet contains the acceptor Ga and the donor Sb, well-known impurities. For completeness, Ga has a much higher segregation co-efficient in Ge than In. See USP 2,836,521, col. 3, USP 2,977,262, and 2,862,840.
>
> Sb, a donor, has a greater diffusion constant than the acceptor Ga.
>
> Ga, the acceptor, has a higher segregation constant than Sb.

[6] One fact which cannot be gainsaid is that as soon as Beale saw the Schwartz patent and read its claims he "recognized" the 99% indium in his alloy pellet as corresponding to the lead or tin which Schwartz chose to define in his claims as "carrier."

Beale's disclosed process the indium does function as a carrier within the intendment of that term as used in the claims. We so hold notwithstanding the fact that it also has the properties of an acceptor impurity. There is no apparent reason why it cannot have these properties and also function as a carrier, when used in the quantity relative to the other alloy ingredients disclosed by Beale.

We are, therefore, constrained to disagree with the grounds presented by the Examiner for refusing to admit the claims and to declare the interference.

The Board, in a very short opinion, appears to have predicated its affirmance on a ground entirely different from that advanced by the Examiner, a ground also urged upon us by the Solicitor. If we read the opinion aright, the Board begins with the admission that according to Beale's disclosure—to use the Board's own words—"Indium thus serves as a carrier." But, says the Board, indium is described as an acceptor and the specification gives the impression (to the Board) "that the acceptor indium must be used in combination with certain conductivity type directing impurities for obtaining his desired result." This led the Board to conclude, apparently, that only *one* carrier is disclosed and hence to this further conclusion:

> We find no disclosure or suggestion therein that *any* carrier as now *broadly* claimed could be employed in *appellant's* process. *Therefore*, we agree with the Examiner that the claims on appeal are *unwarranted* by the disclosure. * * * We call attention to a more pertinent decision, *In re Gemassmer*, 138 USPQ 230, 51 CCPA [729], [319 F.2d 541], where a *critical limitation* in appellant's application was held insufficient support for *broader* claims copied for purpose of interference. [Emphasis ours.]

Thus it appears to us that whereas the Examiner based his rejection on his opinion that *no* carrier was disclosed by Beale, the Board found indium to be *a* carrier and then proceeded to its own determination—never hinted at by the Examiner—that disclosure of a *single* carrier or a *particular* desired carrier was not support for a claim containing a broad provision for a carrier. This is a complete shift of position. The Examiner and the Board found the claims "unwarranted" for entirely different reasons. The Patent Office brief before us recognizes this in stating:

> The Examiner held that appellant never recognized indium as a carrier in his disclosure (R–80), but the Board held that appellant disclosed the use of indium as a carrier (R–93). However, the Board held that appellant has made "no disclosure or suggestion therein that any carrier as now broadly claimed could be employed in appellant's process" (R–94).

The Solicitor's brief then proceeds to limit "carrier" to what he thinks Schwartz meant by the term by limiting it to the class of carriers he disclosed (lead and tin, electrically *inert*) and from then on alternates the argument between saying Schwartz and Beale made "different" inventions, so that "carrier" must be so *limited* it does not find support in indium, and saying "carrier" is so *broad* it cannot find support in a single carrier, indium. The major emphasis seems to be on the breadth argument but they appear side by side in the following passage:

> Appellant has disclosed a different invention from that of the patent, and as a matter of principle, appellant should not be allowed to make claims to a different or broader invention, *In re Sus*, supra. [49 CCPA 1301, 306 F.2d 494, 134 USPQ 301.]
>
> It is clear that appellant's disclosure of only one specific material that acts as a carrier does not support the broad terminology of the appealed claims.

Whichever way the rejection is argued, we find it lacking in merit. Our study of the patent and the application convinces us that Schwartz and Beale made essentially the same invention, not different inventions.[7] They use different carriers but they are a minor aspect of the invention as a whole. The record shows that carriers are an old tool in this art. Neither Schwartz nor Beale devised them and the invention of neither resides in the carrier per se. As one example we may cite French Patent 1,128,423 published prior to appellant's filing date in which indium, lead, tin, and other metals, are all disclosed as constituting 95% or more of alloys also containing doping impurities and used to form emitter electrodes, wherein it would seem appropriate to characterize them as "carriers."

[5] By virtue of this same fact, that carriers for conductivity-type directing impurities are old in the art, and because the invention resides in the *process* as defined by the other limitations of the claims, in combination, to produce the process as a whole, we cannot agree with either the Board or the Solicitor (the Examiner never having made the argument) that, in defining the process as a whole, "carrier" is a term which requires for support disclosure of more than one carrier. We note that Schwartz was granted his patent with that term in his claims on the basis of mention of only two, lead and tin, both of the *same* inert type. No one has yet argued that Beale's process would not *infringe* the claims. The situation seems to us parallel to the disclosure of a device made up of several elements, one of which is a rivet or a bolt described in the claim as "fastening means." Normally one would not be required to disclose more than one such means to support the claim. Whether lead, tin, or indium be used as the carrier, substantially the same process is carried out and essentially the same product results, at least as far as the record shows. While there may indeed be minor differences, they have not been pointed out in the claims as part of the invention.

[7] The *Gemassmer* case, cited by the Board, does not seem to us to be in point. The majority in that case deemed the use of a high speed mixer to be a *critical* "limitation" of the process invented and disclosed and ruled that claims not containing a limitation to a high speed mixer did not "point out appellant's invention." Here we do not deem the use of indium to be a critical "limitation" of the appellant's process, and neither has the Patent Office, as is indicated by the allowance to appellant of many claims without any such limitation. In any event, that is not the question here, which is whether indium functions as a carrier so that claims calling for a carrier find support in the disclosure.

Appellant has succinctly summed up in his brief the essence of his invention in the following statement:

> The only requirements to carry out this invention were the presence of an electrode that could form a melt with the semiconductor containing both acceptor and donor impurities, one of which would diffuse rapidly into the underlying crystal to form the base region and the other of which would dominate the recrystallized region formed during cooling to form the emitter region. Thus, the indium disclosed in the specific example in Beale's application performed a *dual function*. First, part of it acted as the active acceptor, namely, those atoms of the indium that were retained in the recrystallized region, constituting less than 0.001% of the indium present. *Second, it served as a carrier or vehicle for establishing a melt* containing dissolved semiconductor material for introducing

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[6] [7] It does not appear to us that appellant was ever previously faced with this "different invention" argument of the Solicitor, either before the Examiner or the Board. He should not be required to meet new rejections for the first time in this court.

> into that melt some of itself as the acceptor and the donor impurity incorporated in it, from which melt the donor would diffuse into the underlying crystal.

Appellant has further made it clear that in the example relied on the indium also contained the acceptor impurity gallium which has far greater (100 times) solubility in germanium than indium wherefore for every atom of indium substituted for a germanium atom in the crystal lattice there will be many more atoms of gallium substituted, with the result that the determination of the p-type conductivity will be overwhelmingly due to the gallium and the relative effect of the indium will be negligible. The Solicitor has not controverted this argument.

Because we are convinced that appellant's disclosed use of indium in his alloy is in fact as a carrier for the gallium and antimony contained therein as conductivity-type directing impurities, because we see no necessity for any disclosure of additional carriers, others of which were known to the art, to support the term in the claims of the type here involved, and because appellant's invention does not reside in the selection the carrier named by way of example, we consider the rejection on the ground of lack of support, however rationalized, to be unwarranted.

The decision of the Board is reversed.

REVERSED.

WORLEY, *Chief Judge*, did not participate.

SMITH, *J.*, concurring.

I concur in the result reached here by the majority because the Patent Office has failed to established through competent proofs either that the term "carrier" is a limited term or that appellant's specification does not disclose a "carrier" to one of ordinary skill in the art, 35 U.S.C. 112. The rejection is based on section 112 and I believe appellant has overcome this rejection. In my opinion, based on the evidence of record, appellant's "right to make" the counts in an inter partes proceeding is an open question.

U.S. Court of Customs and Patent Appeals

IN RE ROBERT M. COLE

No. 7748. Decided March 9, 1967

[54 CCPA —; 373 F.2d 532; 152 USPQ 807]

1. PATENTABILITY—DOUBLE PATENTING.

"As the Examiner noted in his answer, there are only three significant differences between appellant's claims and claim 5 of Relph, which patent is assigned to appellant's assignee, A. B. Dick Company. One of these differences is not even reflected in appealed claim 1, namely the presence of a wetting agent, particularly a butanol, in the aqueous etching solution. This is not an essential element of appellant's invention, however, but rather is only a preferred embodiment, according to the specification. In any event, inclusion of a butanol in an aqueous etching solution for converting the non-imaged areas of a lithographic printing plate to a hydrophilic surface is old in this art, as shown by Sugarman Australian Patent No. 210,374, which corresponds to Belgian Patent No. 541,668 of October 15, 1955."

2. SAME—SAME.

In sustaining a rejection for double patenting based on claim 5 of the Relph patent, the court found that "A second difference resides in the fact that claim 5 of Relph is limited to alkyd resins, while appellant's claims recite resins broadly as binders for the common photoconductor, zinc oxide"; and stated that "However, appellant's specification discloses a preference for alkyd resins, and the same resin-oxide ratios as recited in claim 5 of Relph * * *"

3. SAME—SAME.

"The third difference noted by the Examiner [in the rejection for double patenting] is the one on which appellant chiefly relies, namely the fact that his plates are 'electrostatically latent imaged' while those *disclosed* by Relph are *directly* imaged. However, the claims of Relph including claim 5, recite 'imaging' broadly, without any limitation to a particular method of imaging the printing plates. We think it is evident that neither Relph nor the Examiner of his application considered any specific mode of imaging printing plates to be a restrictive feature of the Relph invention. If the invention had been considered limited to any given imaging method, such a limitation would have been inserted in the claims prior to issuance of the Relph patent. In the absence of any such limitation, we must consider the claims of Relph to read on and cover, at a minimum, the direct imaging method disclosed by Relph and all equivalent known methods of imaging lithographic printing plates. Sugarman discloses that '[t]here are several known methods for preparing the hydrophobic image on a lithographic printing plate,' including appellant's method * * *."

4. SAME—SAME—OBVIOUSNESS.

"Thus, as we interpret the claims of Relph, appellant is claiming an invention which is obvious in view of that *claimed* by Relph in his claim 5, taken together with Sugarman, and the appealed claims were properly rejected on the ground of double patenting of the obviousness type."

5. SAME—SAME—FILING DATES IRRELEVANT.

"Although appellant argues that his date of invention was prior to the filing date of Relph, we think it is well settled that filing dates are of no concern in double patenting situations. See, e.g., *In re Bowers*, 53 CCPA 1590, 359 F.2d 886, 149 USPQ 570."

AFFIRMED.

Herman Hersh (*George A. Degman*, of counsel) for appellant.

Joseph Schimmel (*L. F. Parker*, of counsel) for the Commissioner of Patents.

Before WORLEY, *Chief Judge*, RICH, SMITH, and ALMOND, *Associate Judges*, and Judge WILLIAM H. KIRKPATRICK *

ALMOND, *J.*, delivered the opinion of the court.

This is an appeal from the decision of the Board of Appeals affirming the rejection of claims 1 to 5 of appellant's application Serial No. 30,064, filed May 19, 1960, for "Method of Imaging Lithographic Plates and Element for Use in Same."

Appellant's specification describes his invention as follows:

> In accordance with the practice of this invention, a resin-zinc oxide containing xerographic master plate is electrostatically charged, imaged and then treated with a resin developer. The imaged xerographic plate is then subsequently treated by known methods to cure the resin into a water-insoluble, water-repellent, ink-receptive imaging material. The plate is then subjected to an aqueous etch which renders the non-imaged portion of the plate hydrophilic or water-receptive and ink-repellent, without destroying the ink-receptive, water-repellent, hydrophobic characteristics of the imaged areas of the plate. * * *

Claim 1 is illustrative:

> The process of producing a planographic printing plate directly from a *resin-zinc oxide-coated* xerographic master plate which comprises treating an *electrostatically latent imaged* xerograph plate with a resinous toner to form an image corresponding to the latent electrostatic image, converting the toner to a water-repellent, ink-receptive state and then etching the plate with an aqueous solution of a water-soluble, aliphatic *polycarboxylic acid* to convert the non-imaged portion of the plate to a water-receptive, ink-repellent, hydrophilic surface. [Emphasis added.]

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* Senior District Judge, Eastern District of Pennsylvania, sitting by designation.

Claim 2 recites the preferred presence of a wetting agent in the aqueous etching solution, which agent is limited in claim 3 to a water-miscible alcohol and further limited in claims 4 and 5 to a butanol. Claims 3 to 5 specify the use of oxalic acid, appellant's preferred polycarboxylic acid.

Although several grounds of rejection were applied against these claims, we need to consider only the rejection of all claims for double patenting in view of claim 5 of Relph Patent No. 3,157,117, which claim reads as follows:

> 5. The method of producing a coated planographic printing plate, comprising coating a base sheet with a composition having a solvent as the diluent and containing an *alkyd resin* as the adhesive, a finely divided zinc oxide and an inert filler, the zinc oxide being present in the ratio of 1 to 8 parts by weight of zinc oxide to one part by weight of the alkyd resin, drying the coating on the surface of the base sheet, *imaging* the coated surface to provide an ink-receptive, water-repellent imaged portion, and treating the surface of the plate with a 5 to 15% *oxalic acid* solution to convert the hydrophobic characteristics of the coated surface in the non-imaged areas to a hydrophilic ink-repellent, water-receptive surface. [Emphasis added.]

[1] As the Examiner noted in his answer, there are only three significant differences between appellant's claims and claim 5 of Relph, which patent is assigned to appellant's assignee, A. B. Dick Company. One of these differences is not even reflected in appealed claim 1, namely the presence of a wetting agent, particularly a butanol, in the aqueous etching solution. This is not an essential element of appellant's invention, however, but rather is only a preferred embodiment, according to the specification. In any event, inclusion of a butanol in an aqueous etching solution for converting the non-imaged areas of a lithographic printing plate to a hydrophilic surface is old in this art, as shown by Sugarman Australian Patent No. 210,374, which corresponds to Belgian Patent No. 541,668 of October 15, 1955.

[2] A second difference resides in the fact that claim 5 of Relph is limited to alkyd resins, while appellant's claims recite resins broadly as binders for the common photoconductor, zinc oxide. However, appellant's specification discloses a preference for alkyd resins, and the same resin-oxide ratios as recited in claim 5 of Relph, as follows:

> * * * the preferred resinous substances to bind the zinc oxide onto the paper backing sheet are the alkyd resins.
>
> * * * * * * *
>
> The alkyd resin is combined with the zinc oxide to produce a weight ratio of alkyd resin to oxide within the range of from 1–1 to 1–8. * * *

The fact that the starting plates of appellant and Relph are the same is evident from the following disclosure in the application before us:

> The starting zinc oxide alkyd resin plates are described in greater detail as to their method of preparation in the application of Earl B. Relph and Henry A. Dahl, Serial No. 693,626, filed October 31, 1957.

The aforementioned application matured into the Relph patent of record on November 17, 1964.

[3] The third difference noted by the Examiner is the one on which appellant chiefly relies, namely the fact that his plates are "electrostatically latent imaged" while those *disclosed* by Relph are *directly* imaged. However, the claims of Relph, including claim 5, recite "imaging" broadly, without any limitation to a particular method of imaging the printing plates. We think it is evident that neither Relph nor the Examiner of his application considered any specific mode of imaging printing plates to be a restrictive feature of the Relph invention. If the invention had been considered limited to any given imaging method, such a limitation would have been inserted in the claims prior to issuance of the Relph patent. In the absence of any such limitation, we must consider the claims of Relph to read on and cover, at a minimum, the direct imaging method disclosed by Relph and all equivalent known methods of imaging lithographic printing plates. Sugarman discloses that "[t]here are several known methods for preparing the hydrophobic image on a lithographic printing plate," including appellant's method, which Sugarman describes as follows:

> * * * producing an electrostatic latent image, directly on the surface of the photoconductive coating, developing said latent image with a hydrophobic developer powder, fixing said developer powder to said coating and then producing a hydrophilic material in the areas of the coating not covered by the fixed powder image. * * *

[4] Thus, as we interpret the claims of Relph, appellant is claiming an invention which is obvious in view of that *claimed* by Relph in his claim 5, taken together with Sugarman, and the appealed claims were properly rejected on the ground of double patenting of the obviousness type.

[5] Although appellant argues that his date of invention was prior to the filing date of Relph, we think it is well settled that filing dates are of no concern in double patenting situations. See, e.g., *In re Bowers*, 53 CCPA 1590, 359 F.2d 886, 149 USPQ 570.

The decision of the Board is affirmed.

AFFIRMED.

PATENT SUITS

Notices under 35 U.S.C. 290: Patent Act of 1952

2,579,390, E. E. Mills, METHOD OF MAKING HOLLOW ARTICLES, filed Jan. 13, 1965, D.C., S.D.N.Y., Doc. 65–C–97, *Continental Can Co., Inc.* v. *Union Carbide Corp.* Stipulation and order, action is dismissed without prejudice, Jan. 30, 1968.

2,901,040, J. G. Livingstone, FITTING AND SEALING MEANS THEREFOR, filed Feb. 1, 1968, D.C., N.D. Ohio (Cleveland), Doc. C68–81, *Jay G. Livingstone* v. *Dover Molded Products Company.*

2,731,701, E. S. Klausner, CLIPS FOR FACILITATING THE ERECTION AND STRIPPING OF CONCRETE FORMS FOR THE BUILDING INDUSTRY; **3,121,933**, A. R. Dragunas, ERECTION AND STRIPPING OF CONCRETE FORMS, filed Oct. 21, 1964, D.C., S.D.N.Y., Doc. 64–C–3195, *Edward S. Klausner* v. *Capitol Steel Corporation et al.* Stipulation and order of dismissal, Jan. 30, 1968.

2,835,933, R. L. Evans, DOOR FRAME, filed Apr. 11, 1967, D.C. Va. (Roanoke), Doc. 67–C–34–R, *Kewanee Mfg. Co.* v. *Kilodyne, Inc., and Rupert L. Evans.* Kewanne owner of said patent, valid, defendants have infringed, defendants permanently enjoined, defendants' counterclaim is dismissed, Jan. 29, 1968.

2,881,092, J. Sedlacsik, Jr., SPRAY DEVICE ACTUATED BY SUPERSONIC MEANS, filed Nov. 13, 1962, D.C. N.J., Doc. C–931–62, *Ransburg Electro-Coating Corporation* v. *John Sedlacsik, Jr., and Inter-Planetary Research & Development Corporation.* Judgment of no cause for action, Oct. 18, 1967.

2,895,450, A. P. Hope, SYSTEM FOR MOVING LIQUIDS, filed June 8, 1967, D.C., W.D. Wis. (Madison), Doc. 67–C–67, *Werner Machinery Company* v. *Rath Manufacturing Co., Inc.* Settled Aug. 31, 1967.

2,903,077, I. Kamlukin, SOIL TILLING DEVICE, filed Aug. 31, 1967, D.C., E.D. Mich. (Detroit), Doc. 30323, *Simplicity Manufacturing Company, Inc.* v. *Yard-Man Incorporated.*

2,911,722, Benfield and Blechner, DENTAL TRAY, filed Feb. 2, 1968, D.C., E.D.N.Y. (Brooklyn), Doc. 68C–123, *Research Dental Mfg. Corp.* v. *Precious Metals Research Works, Inc.*

2,912,819, J. J. Waldman, WATERPROOF WATCH CROWN, filed Sept. 5, 1967, D.C., E.D. Pa., Doc. 43501, *Waldman Corp.* v. *Borton & Chase, Inc.*

2,956,114, Ginsburg, Henderson, Dolby and Anderson, BROAD BAND MAGNETIC TAPE SYSTEM AND METHOD, filed Jan. 22, 1968, D.C., C.D. Calif. (Los Angeles), Doc. 67–231–FW, *Ampex Corporation* v. *Sony Corporation.*

2,979,961, W. F. Ludwig, DRUMHEAD CONSTRUCTION, filed Dec. 9, 1963, D.C., N.D. Ill. (Chicago), Doc. 63c2215, *Ludwig Drum Co.* v. *H. H. Slingerland, Jr., Nona Slingerland and Dorothy Mueller, doing business as Slingerland Drum Company.* On stipulation, order cause hereby dismissed without prejudice, Aug. 28, 1967.

3,039,935, Rentshler, Larson, Langlois, Alverson and Liggett, PRODUCTION OF CRYSTALLINE GLUCOSE, filed Jan. 30, 1967, D.C., S.D. Iowa (Davenport), Doc. 3–730–D, *A. E. Staley Manufacturing Company* v. *Standard Brands, Incorporated.* Order of dismissal, Jan. 31, 1968.

3,043,310, A. S. Milinowski, TREATMENT HEAD FOR ATHERMAPEUTIC APPARATUS; **3,181,535**, same, ATHERMAPEUTIC APPARATUS, filed July 12, 1965, D.C., W.D.N.Y. (Buffalo), Doc. C–11,498, *Diapulse Corporation of America* v. *Rochester Leasing Corp., and Rochester Capital Leasing Corp.* Final judgment, patents are invalid, defendants and intervener have not infringed, Jan. 8, 1968.

3,078,650, Anderson and Wolff, AIR CLEANER, filed Aug. 28, 1967, D.C., N.D. Ill. (Chicago), Doc. 67c1478, *Donaldson Company, Inc.* v. *Fram Corporation.*

3,099,875, J. Lelis, COMBINATION DISASSEMBLING, ASSEMBLING AND WORK HOLDING DEVICE FOR MACHINE SHOPS, filed Sept. 1, 1967, D.C., E.D. Pa. (Philadelphia), Doc. 43480, *Atex, Inc., and John Lelis* v. *J. Mar Metal Fabricating Co.*

3,114,349, S. Schuman, STERILIZATION INDICATORS, **filed** Jan. 17, 1968, D.C., E.D.N.Y. (Brooklyn), Doc. 68C–68, *Propper Mfg. Co., Inc.* v. *Sam Mehlinger & Co. Inc.*

3,121,933. (See 2,731,701.)

3,125,147, E. J. Hakka, ANTI-SKID DEVICE, **filed** Aug. 30, 1967, D.C., N.D. Ohio (Cleveland), Doc. C67–628, *Studebaker Corporation* v. *Algripco, Inc.*

3,128,079, M. S. De Groff, SURGICAL TURBINE, **filed** Feb. 5, 1968, D.C., W.D. Pa. (Pittsburgh), Doc. 68–162, *Porta-Drill, Inc. and Robert M. Hall* v. *ARO Corporation.*

3,128,551, J. A. Crown, ADJUSTABLE INJECTOR RAZOR, **filed** Sept. 14, 1964, D.C. Del. (Wilmington), Doc. 2917, *Philip Morris, Inc.* v. *Eversharp, Inc.* Stipulation and order that the complaint and counterclaim are dismissed without prejudice, Sept. 5, 1967.

3,181,535. (See 3,043,310.)

3,196,497, Malmrose and Peterson, LOCK ARRANGEMENT FOR WINDOW STRUCTURE, **filed** June 20, 1966, D.C., E.D. Mich. (Detroit), Doc. 28553, *Kewanee Mfg. Co.* v. *Copco Steel and Engineering Co.* Consent judgment for permanent injunction Feb. 6, 1968.

3,249,270, B. Zukerman, GARMENT SUPPORT MEANS, **filed** Sept. 7, 1967, D.C., S.D.N.Y., Doc. 67–C–3248, *Mr. Hanger, Inc.* v. *Warbern Plastics, Inc.*

3,250,088, P. N. Hanebuth, TIP ASSEMBLY FOR A FLEXIBLE SHAFT ASSEMBLY, **filed** Sept. 5, 1967, D.C., N.D. Ill. (Chicago), Doc. 67c1529, *Stewart-Warner Corp.* v. *Freightliner Corp.*

3,260,028, R. L. Fraser, METHOD OF CONSTRUCTING A BUILDING, **filed** Sept. 7, 1967, D.C., W.D. Tex. (San Antonio), Doc. C–67–85–SA, *R. Lee Fraser* v. *City of San Antonio, Texas et al.*

3,274,724, J. H. Brandt, RIFLE BOLT MECHANISM, **filed** Aug. 28, 1967, D.C., E.D. Tex. (Fort Worth), Doc. 1786, *John H. Brandt* v. *Ranger Arms, Inc.*

3,298,124, F. L. Jahn, DISPLAY DEVICES, **filed** Aug. 30, 1967, D.C.N.Y., Doc. 67–C–3337, *Eaton Paper Corporation* v. *Hudson Photographic Industries, Inc.*

3,323,437, J. V. Knab, FILTER SYSTEM, **filed** Sept. 7, 1967, D.C., W.D.N.Y. (Buffalo), Doc. C–1967–334, *Westinghouse Electric Corporation* v. *Walter Kiddie & Company, Inc.*

3,329,842, H. W. Brown, SPEED CONTROLLERS FOR PORTABLE DEVICES, **filed** Aug. 31, 1967, D.C., N.D. Ill. (Chicago), Doc. 67c1513, *Cutler-Hammer Inc.* v. *Skil Corp.*

REISSUES

JUNE 11, 1968

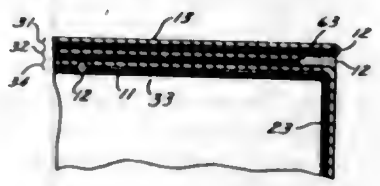
Matter enclosed in heavy brackets [ ] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

26,402
SEALABLE OVERLAP CARTON

George G. Rumberger, Portage, Mich., assignor, by mesne assignments, to Brown Company, New York, N.Y., a corporation of Delaware

Original No. 3,194,473, dated July 13, 1965, Ser. No. 133,420, Aug. 23, 1961. Application for reissue Nov. 24, 1967, Ser. No. 689,735

14 Claims. (Cl. 229—37)



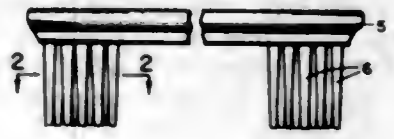
Carton blanks and cartons formed therefrom having an inner flap, full outer flap, and intermediate flap hinged to a carton panel opposite the panel to which the outer flap is hinged, the intermediate flap being recessed along an edge so as to be narrower than said outer flap and provide an area of overhang of said intermediate flap by said outer flap along a transverse side of said intermediate flap perpendicular to its hinge line, at least one of said flaps provided with adhesive adapted to be disposed and activated in the area of overhang, the adhesive securing the outer flap to the inner flap in the area of overhang. Preferably the carton is constructed of laminated sheet material with said adhesive being provided from between the plies of said laminated sheet material.

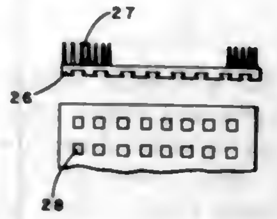
26,403
PLASTIC BRISTLE BRUSH

Louis F. Kutik, Fort Lauderdale, Fla., assignor of fifty percent to Erich W. Gronemeyer, Fort Lauderdale, Fla.

Original No. 3,214,777, dated Nov. 2, 1965, Ser. No. 352,689, Mar. 17, 1964. Application for reissue Aug. 29, 1966, Ser. No. 582,181

3 Claims. (Cl. 15—187)





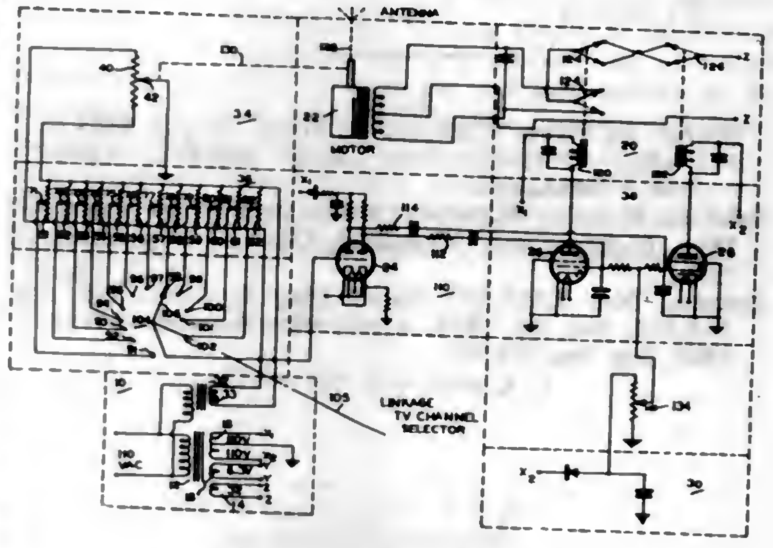
This invention proposes a plastic brush having a body portion and a plurality of bristles integrally formed therewith. The bristles are of specific shape, being rectangular in cross-sectional shape and tapering from the body portion to a reduced tip. The bristles are made in a multi-part mold having cooperating bristle cavity-defining portions so that any inherent flash formed during molding results in the presence of fins at each bristle corner and at the bristle tip to provide an improved scrubbing action.

26,404
SELECTIVE REMOTE POSITION CONTROL SERVOSYSTEM

Lawrence M. Lunn, James L. Shields, and Jean C. De Vault, by Cornell-Dubilier Electric Corporation, Newark, N.J., a corporation of Delaware, assignee

Original No. 3,043,998, dated July 10, 1962, Ser. No. 60,097, Oct. 3, 1960. Application for reissue Apr. 19, 1967, Ser. No. 647,883

6 Claims. (Cl. 318—29)



An antenna rotator for television receivers, having relaying means controlling a motor and controlled by an A-C energized phase-sensitive bridge to adjust the position of the antenna to an optimum position for each channel, and including preset impedances one of which is selected by switching means in accordance with the selected channel, the position of the antenna being thus determined by the selected preset impedance.

26,405
MOLDED IN PLACE RUBBER SEAT BUTTERFLY VALVE

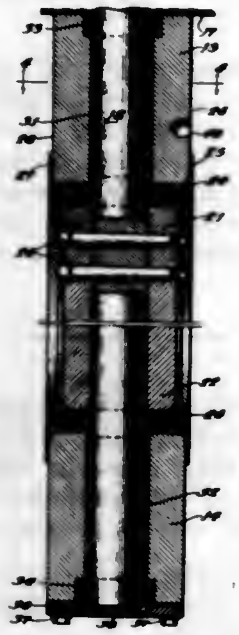
Henry R. Killian, Naperville, Ill., assignor to Henry Pratt Company, a corporation of Illinois

Original No. 3,122,353, dated Feb. 25, 1964, Ser. No. 110,165, May 15, 1961, which is a division of Ser. No. 836,710, Aug. 28, 1959. Application for reissue Aug. 30, 1965, Ser. No. 485,670

7 Claims. (Cl. 251—306)

6. A butterfly valve, comprising:
a rigid housing having a valve cavity therein,
a valve closure mounted in the housing,
means associated with the housing for fixing the position of a rubber valve seat in the valve cavity,

and a rubber valve seat vulcanized in place in the cavity in contact with the housing and adapted to receive a valve closure in predetermined position with reference to the housing,



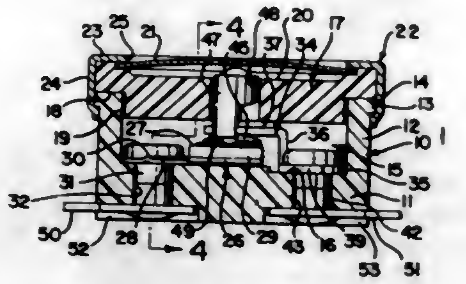
said rubber valve seat being in tension with respect to the housing at substantially all areas in contact with the housing.

26,406
SNAP ACTING THERMAL DISC WITH BENT-OVER ANGULATED LEAF SPRING CONTACT MEMBER

John D. Bolesky, Mansfield, Ohio, assignor to Therm-O-Disc, Incorporated, Mansfield, Ohio, a corporation of Ohio

Original No. 3,317,693, dated May 2, 1967, Ser. No. 405,416, Oct. 21, 1964. Application for reissue Nov. 9, 1967, Ser. No. 685,997

11 Claims. (Cl. 337—343)



A bimetallic disc operated thermostat is disclosed which includes a body formed with switch cavities. A fixed contact is mounted on one side location of the switch cavity and a mobile contact is mounted on a diametrically opposite side location. The mobile contact includes a portion extending along the bottom wall of the cavity to a location adjacent the side wall substantially midway between the two mounting locations, and a cantilever arm extending substantially the entire distance across the cavity joined to the mounting portion at a reverse bend. The fixed contact includes a portion extending from its mounting to a location overlying the free end of the cantilever arm. The mobile contact is formed with a fold which operates to maintain engagement between the bottom wall of the cavity and the mobile contact adjacent to the reverse bend.

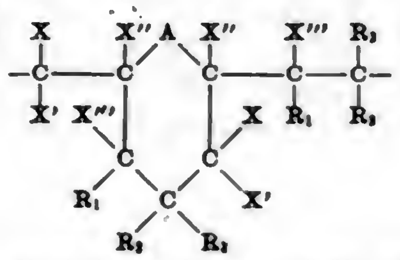
26,407
SATURATED LINEAR COPOLYMERS

George B. Butler, Gainesville, Fla., assignor to Peninsular Chem Research, Inc., Gainesville, Fla., a corporation of Florida

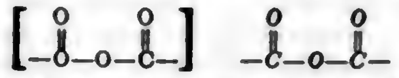
No Drawing. Original No. 3,320,216, dated May 16, 1967, Ser. No. 436,677, Mar. 2, 1965. Application for reissue July 28, 1967, Ser. No. 675,261

12 Claims. (Cl. 260—78.5)

1. Novel linear high molecular weight copolymers useful in forming molded or fiber or film articles consisting essentially of the repeating unit of the structure:



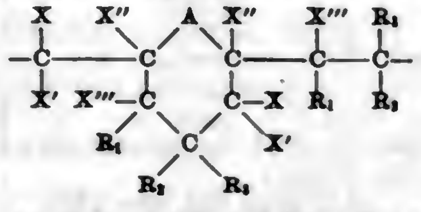
wherein A is an element selected from the group consisting of Groups IVa, Va, and VIa of the Periodic Table, said groups including elements 6, 7, and 8, respectively, the free valences of which, *when A stands for an element other than oxygen,* are satisfied by bonding to a radical selected from the group consisting of oxygen, hydrogen, lower alkyl, lower alkylene, cyano-lower alkyl, monocyclic aryl, carboxy-lower alkyl and halogen; wherein R_1 and R_2 are selected from the group consisting of hydrogen, lower alkyloxy, carboxy lower alkyl, nitrile and carboxyhalide, and together R_1 and R_2 represent [when A stands for an element other than oxygen,] the anhydride radical



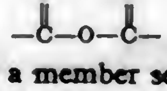
$$\left[-\overset{\overset{O}{\|}}{C}-O-\overset{\overset{O}{\|}}{C}-\right] \quad -\overset{\overset{O}{\|}}{C}-O-\overset{\overset{O}{\|}}{C}-$$

wherein R_3 stands for a member selected from the group consisting of hydrogen and lower alkyl; and wherein X, X', X'', and X''' are selected from the group consisting of hydrogen, lower alkyl, monocyclic aryl, nitrile, halogen, and carboxy-lower alkyl.

7. A process for the preparation of linear copolymers consisting essentially of the repeating unit of the structure:

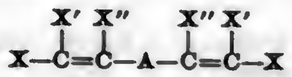


wherein A is an element selected from the group consisting of Groups IVa, Va, and VIa of the Periodic Table, the free valencies of which, *when A stands for an element other than oxygen,* are attached to a radical selected from the group consisting of oxygen, hydrogen, lower alkyl, lower alkylene, cyano-lower alkyl, monocyclic aryl, carboxy-lower alkyl and halogen; wherein R_1 and R_2 are selected from the group consisting of hydrogen, lower alkyloxy, carboxy lower alkyl, nitrile and carboxyhalide, and together R_1 and R_2 represent, [when A stands for an element other than oxygen,] the anhydride radical



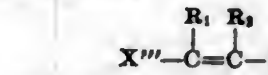
$$-\overset{\overset{O}{\|}}{C}-O-\overset{\overset{O}{\|}}{C}-$$

wherein R_3 stands for a member selected from the group consisting of hydrogen and lower alkyl; and wherein X, X', X'', and X''' are selected from the group consisting of hydrogen, lower alkyl, monocyclic aryl, nitrile, halogen, and carboxy-lower alkyl, which comprises copolymerizing approximately 1 molar part of a 1:4-diene monomer of the formula



$$X-\overset{X'}{\overset{|}{C}}=\overset{X''}{\overset{|}{C}}-A-\overset{X''}{\overset{|}{C}}=\overset{X'}{\overset{|}{C}}-X$$

with approximately 2 molar parts of a monoolefin monomer having the formula



$$X'''-\overset{R_1}{\overset{|}{C}}=\overset{R_2}{\overset{|}{C}}-R_3$$

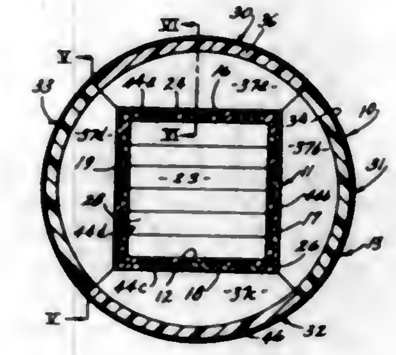
where X, X', X'', X''', R_1, R_2, and R_3 have the definitions stated above in the presence of a catalytic amount of a free radical catalyst in a reaction medium, at a total monomer concentration of at least about 15%, by weight, of the total ingredients, and at a temperature above 0° C. and below the decomposition of said monomers for a necessary period of time of at least one hour.

26,408
CONTAINER ASSEMBLY FOR AGING WHISKEY

Carlos B. Lake, 527 S. Westnedge, Kalamazoo, Mich. 49007

Original No. 3,259,055, dated July 5, 1966, Ser. No. 372,786, June 5, 1964. Application for reissue Apr. 24, 1967, Ser. No. 641,722

5 Claims. (Cl. 99—277.1)



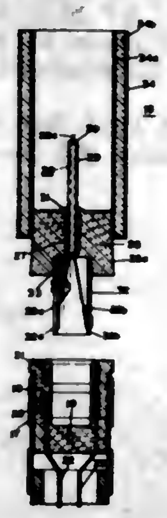
A rectangular container having side walls and end walls formed from elongated, flat strips of wood having water-tight joint means therebetween. The side walls are held against the end walls by side members which are engaged by annular bands encircling the container.

26,409
EXPENDABLE PHASE CHANGE DETECTOR DEVICE

Richard J. Hance, Philadelphia, Pa., assignor to Leeds & Northrup Company, a corporation of Pennsylvania

Original No. 3,267,732, dated Aug. 23, 1966, Ser. No. 286,312, June 7, 1963, which is a continuation-in-part of Ser. No. 238,906, Nov. 20, 1962. Application for reissue Mar. 20, 1967, Ser. No. 628,514

17 Claims. (Cl. 73—359)



An expendable phase change prefabricated detector device for use in obtaining a cooling curve of molten material outside of the melting furnace. The device includes well structure having a relatively small volume and open at the top thereof to receive and retain molten material placed therein. Temperature-sensing means is supported within the well structure and is provided with electrical conductors extending through the wall and carried by an extension on the well structure. The extension includes means for holding the electrical conductors in fixed position of predetermined polarity for engagement with associated contact structures of corresponding polarity in connecting the temperature sensing means to a measuring circuit.

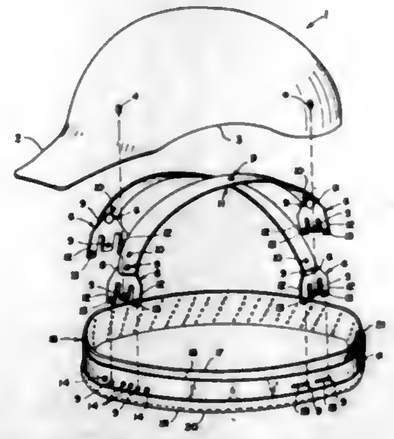
PATENTS

GRANTED JUNE 11, 1968

GENERAL AND MECHANICAL

3,387,304
SAFETY CAP SUSPENSION

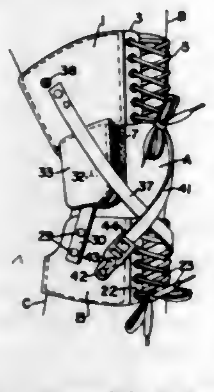
Jack N. Simpson and William R. Bohner, Reading, Pa., assignors to ESB Incorporated, a corporation of Delaware
Filed Mar. 10, 1965, Ser. No. 438,491
1 Claim. (Cl. 2—3)



1. A crown strap suspension for safety headgear comprising a pair of cross straps of plastic strip material, the ends of said straps having longitudinally disposed holes, a plurality of plastic suspending elements each having a top central portion having a hole therein, a corresponding plurality of collar buttons, each of said suspending elements being attached to the end of a different one of said straps by aligning the hole in the central portion of said suspending element with a selected one of the holes in said straps enabling adjustment of the height of the suspension, each of said suspending elements having a central finger for attachment to the inside surface of said headgear and having side fingers having holes therein with collar buttons and a headband having selectively overlapped end portions for adjusting the girth of the headband and having slots adjacent each of said end portions into which said collar buttons of the side fingers extend, whereby adjustment in height may be made without detaching said suspending elements from said headgear.

3,387,305
KNEE PROTECTOR

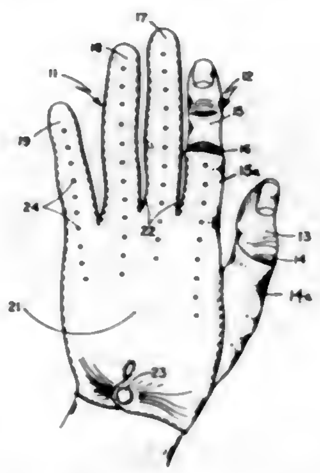
Clarence E. Shafer, Adams City, Colo. (% Rocky Mountain Sports, 327 S. Union, Pueblo, Colo. 81003)
Filed Feb. 9, 1966, Ser. No. 526,181
5 Claims. (Cl. 2—22)



A knee protector comprising bands of rigid material adapted to encircle the leg above and below the knee, and a pair of inextensible straps having their ends secured to said respective bands, the straps freely crossing each other at a point just below the knee cap. The protector also includes a rigid portion extending downwardly from the upper band alongside the knee at each side.

3,387,306
GOLF GLOVE

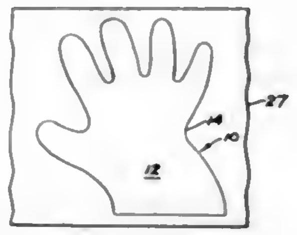
John Korey, 75 Prentice Road, Newton, Mass. 02159
Filed Nov. 3, 1966, Ser. No. 591,846
1 Claim. (Cl. 2—159)



A golf glove made of soft material such as kidskin. It is shaped to fit the hand, having the normal full third, fourth, and fifth fingers, but has its thumb extend to the knuckle and its index finger extend to the second knuckle inward from the end of the finger. The thumb and index finger portions are open and not covered, whereas the other fingers as well as the back and palm are covered although they may have air holes or similar perforations. The glove is suitable for putting as well as driving.

3,387,307
PLASTIC GLOVE

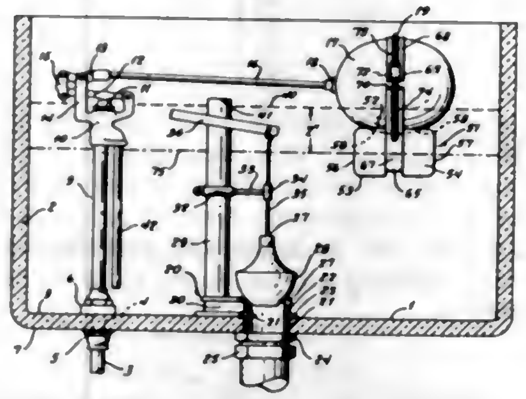
Robert A. Blatz, Clayton, Calif., assignor, by mesne assignments, to Handgards, Inc., Pittsburgh, Pa., a corporation of Nebraska
Original application May 12, 1964, Ser. No. 366,696, now Patent No. 3,329,548. Divided and this application Jan. 12, 1967, Ser. No. 630,155
3 Claims. (Cl. 2—167)



In a glove or boot of the type comprising two sheets of thin thermoplastic material fused together along a foot outline or a hand outline with or without finger openings, to provide an enclosure for a hand or foot, at least one of the sheets has on its inside surface an even coating of separating material compatible with the plastic and fusable into the seam, the coating is finely powdered and distributed evenly over the surface thereof to keep the two sheets from tending to stick together except where they are fused together at the seam. The thin thermoplastic material may be polyethylene or copolymers of polyethylene and ethylacrylate, and the coating may be finely powdered polyethylene.

3,387,308
FLOAT MEANS FOR FLUSH TANKS

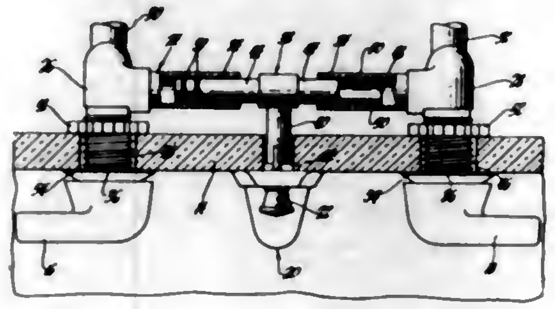
Ottavio A. Capra, 152—14 84th Drive, Jamaica, N.Y. 11432
Filed Oct. 14, 1965, Ser. No. 495,837
11 Claims. (Cl. 4—18)



A buoyant member for positioning beneath the ball float of a flush tank, with surface formations on the buoyant member to mate with the surface of the ball float, and a securing band formed to interengage with the buoyant member and the ball float to secure the buoyant member in place beneath the ball float.

3,387,309
LAVATORY FITTING

Earl Delmar Johnson, Frankfort, Ind., assignor to Indiana Brass Company, Frankfort, Ind., a corporation of Indiana
Filed Nov. 10, 1965, Ser. No. 507,214
4 Claims. (Cl. 4—192)

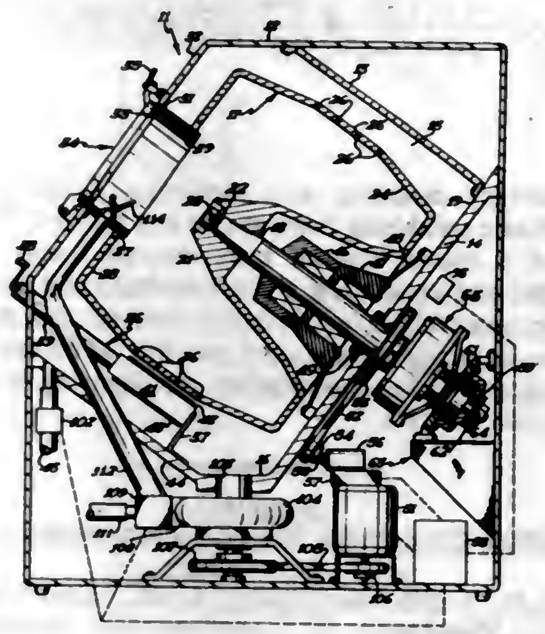


In a preferred form this invention is embodied in a lavatory fitting assembly in which facing valve bodies telescopingly receive a central conduit or T-fitting connected to the spout structure. The telescoping arrangement of the central conduit bodies relative to the valve body allows the subject mechanism to be adjustably fitted to lavatory basins having variably spaced apertures to which the mechanism is mounted.

3,387,310
WASHING APPARATUS AND METHOD

Donald E. Marshall, Edina, Minn.
(4904 Sunnyside Road, Minneapolis, Minn. 55424)
Continuation-in-part of application Ser. No. 552,807, May 25, 1966. This application Sept. 22, 1966, Ser. No. 586,918
34 Claims. (Cl. 8—158)

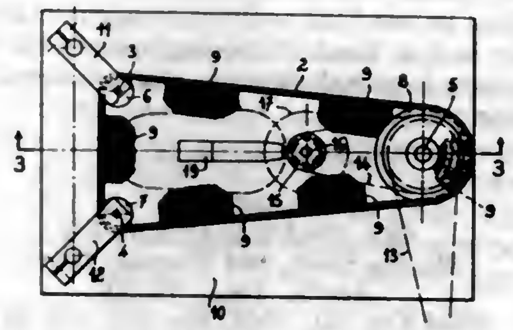
An improved machine and method for cleaning clothes in which the clothes to be washed are rotated in a washing chamber at a relatively high speed so that the clothes and the wash water form and maintain an annular layer about the axis of rotation of the chamber. Periodically, abruptly during the washing operation, the clothes and the wash water in the chamber are tumbled and rearranged. In the improved machine described herein, a brake is periodically used to abruptly stop the rotation of the chamber and this abrupt stopping of the chamber causes the clothes and wash water therein to tumble and to be rearranged. The improved machine also includes a recoil means which partially rotates the chamber in the opposite direction after the brake has stopped the rotation of the chamber and before the chamber is again rotated at relatively high speed.



During the washing operation, a jet of high pressure wash water is directed against the annular layer and this jet may be used to assist or accomplish the tumbling and rearrangement of the clothes in the chamber. Also, wash water is continually removed from the chamber at a predetermined rate throughout the washing operation so that a certain volume of wash water always remains in the chamber in excess of that necessary to saturate the clothes.

3,387,311
SHOE CLEANING MACHINE

Fernand Doskocil, 9 Rue Edouard-Vaillant, Romans, France, and Roger Blanc, Rue Ampere, Izeaux, France
Filed July 21, 1965, Ser. No. 474,218
Claims priority, application France, July 24, 1964, 983,041, Patent 1,415,597; July 9, 1965, 46,207, Patent 88,561
5 Claims. (Cl. 15—36)

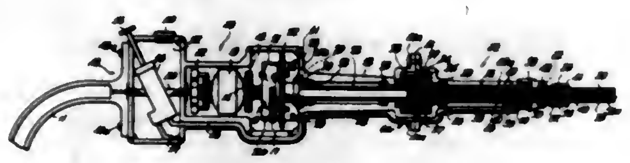


A shoe cleaning machine having a cleaning station constituted by an endless belt having bundles of bristles at the central part of the inner side of the belt, said belt being stretched between rollers with vertical axes associated in pairs and causing the belt to follow a substantially triangular path.

3,387,312

CLEANING DEVICE

Wallace W. Westphal, 2017 W. 92nd St.,
Leawood, Kans. 66206
Filed Sept. 9, 1965, Ser. No. 486,167
6 Claims. (Cl. 15—97)

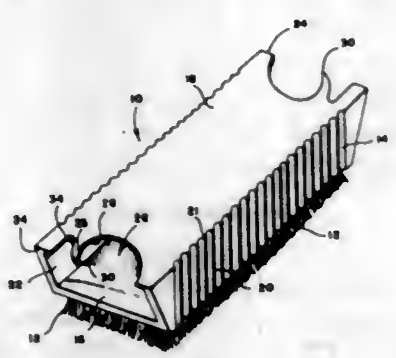


A unitary cleaning and sanitizing device having a hemispheric scrubbing head at one end thereof. The device includes a motor and an interconnected gear train for actuating and oscillating the scrubbing head. A cleaning solution reservoir is an integral part of the device and includes a pump means and conduit structure for controllably dispensing the solution out through the cleaning head when desired.

3,387,313

COMBINED SCRUB BRUSH AND FINGERNAIL CLEANER

Robert H. Smith, Bridgeport, Conn., and Leonard D. Kurtz, Woodmere, N.Y., assignors to Deknatel, Inc., Queens Village, New York
Filed Oct. 19, 1965, Ser. No. 500,493
4 Claims. (Cl. 15—111)



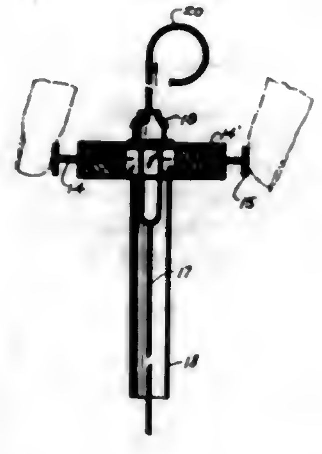
A combined surgical handbrush and fingernail cleaning device. The fingernail cleaning device is formed as a sharp prong at one end of the top of the brush, the prong extending in a plane generally perpendicular to the direction in which the brush bristles extend so that the device can be held in one hand without changing the position of the brush in that hand while employing both the bristles and the sharp fingernail cleaning prong to clean the fingernails of the other hand.

3,387,314

OIL GAUGE CLEANER

Marion Shirk, 504 Wonsley Drive,
Austin, Tex. 78753
Filed Oct. 20, 1966, Ser. No. 588,683
1 Claim. (Cl. 15—210)

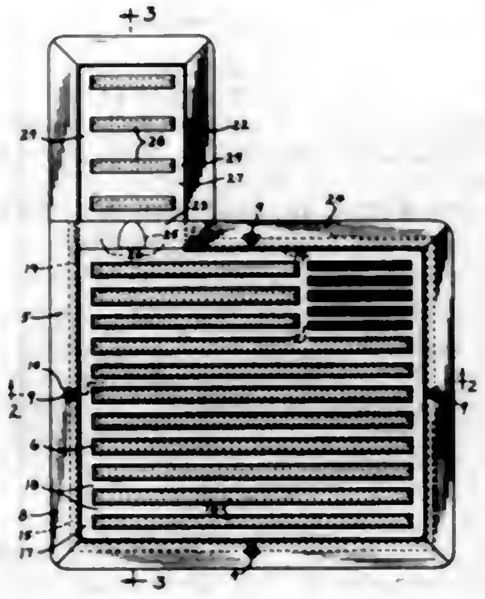
A device securable to an engine block, and fitted around an oil dip stick gauge, the device comprising a housing enclosing a pair of felt wipers normally retained in spaced apart relation by means of a spring, the felt wipers being manually urged toward each other so to wipe off a dip stick gauge slideable therebetween, thereby eliminating the necessity of requiring extra rags or papers for cleaning off the same prior to taking an oil level reading.



3,387,315

SHOE SCRAPER FLOOR GRATINGS FOR AUTOMOBILE FLOORS

Stanley S. Stata, 301 Longwood St.,
Rockford, Ill. 61108
Filed Sept. 15, 1966, Ser. No. 579,623
12 Claims. (Cl. 15—215)



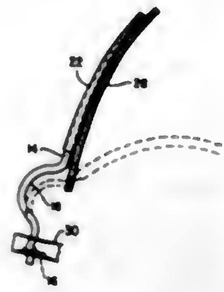
A combined automobile shoe-scraping floor mat and hold-down frame wherein there is provided a toe board extension. The frame has a front cross-over portion overlying the junction of the toe board extension and pan in such a way as to allow free drainage thereunder.

3,387,316

WINDSHIELD WIPER

John P. Pearse, Halcyon Farm, R.F.D. 1, Box 231,
Swanton, Ohio 43558
Filed Dec. 3, 1964, Ser. No. 415,611
3 Claims. (Cl. 15—250.36)

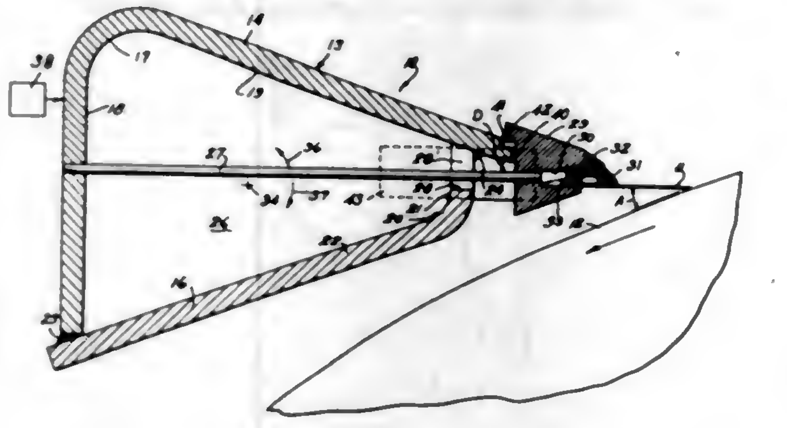
1. A windshield wiper device for curved windshields, comprising a one-piece continuous elongated strip-like element formed of a spring-like material, a major length of said element extending inwardly from the outer free end thereof being curved and constituting a windshield wiping section, the opposite end portion of said element constituting an attachment section formed for securement to a driving means and an intermediate section between and integral with said wiping section and attachment section, said intermediate section being bowed outwardly with respect to said wiping section and attachment section and flexible in a direction normal to the windshield to provide spring tension for urging said wiping section into engagement with the windshield, and a flexible resilient wiping medium carried by said wiping section and covering at least the surface of the said wiping section adjacent the windshield.



3,387,317

DOCTOR BACK

Donald B. De Noyer and Clarence D. McNabb, Beloit, Wis., assignors to Beloit Corporation, Beloit, Wis., a corporation of Wisconsin
Filed July 25, 1966, Ser. No. 567,730
2 Claims. (Cl. 15—256.51)



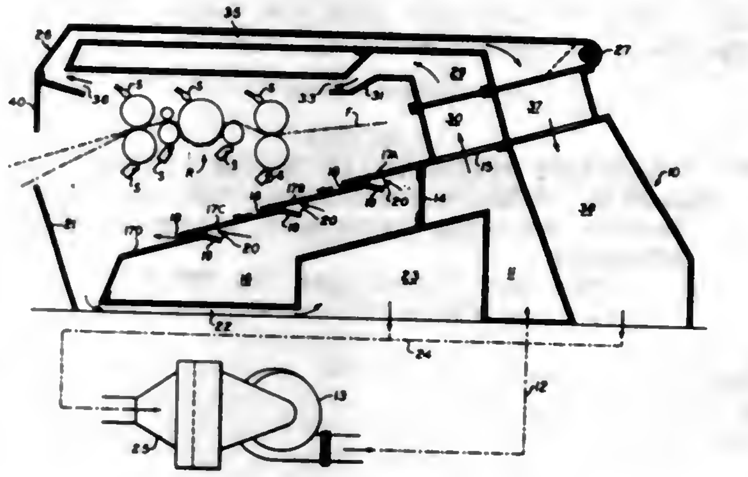
The invention is directed to a doctor for scraping the surface of a roll of a paper making machine. The doctor includes a back adjacent the roll being scraped and extending along the axial length of the roll, the back is pivoted about an axis parallel to the surface of the roll so as to be selectively rotated about its axis toward and away from the roll surface. A scraping blade extends along the axial length of the roll and is engageable with the surface of the roll. A plurality of resilient rods are connected between the back and the blade to resiliently support the blade. Stop means are provided between the resilient rods and the back to limit the amount of resilient travel of the rods.

3,387,318

BLOW CLEANING

Ernst Nagel, Zurich, Switzerland, and Joachim Furstenberg, Esslingen (Neckar), Germany, assignors to Pneumafil Corporation, Charlotte, N.C., a corporation of Delaware
Filed May 4, 1965, Ser. No. 453,081
Claims priority, application Switzerland, May 5, 1964, 5,861/64
4 Claims. (Cl. 15—306)

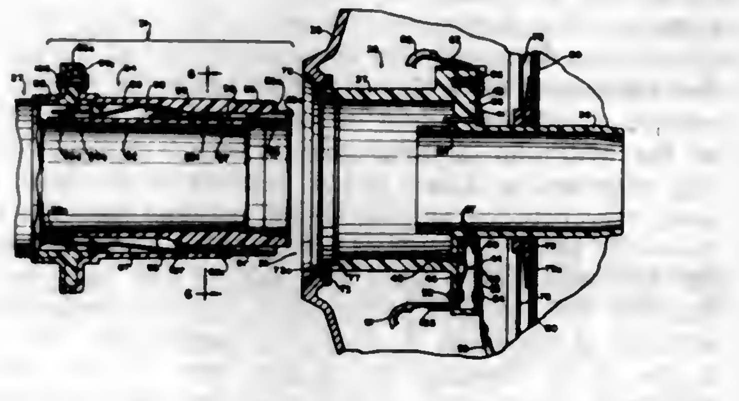
Pneumatic cleaning means for removing foreign matter from areas adjacent the path of travel of textile fibers passing through yarn processing apparatus, said means including blower means positioned adjacent the areas to be cleaned with the blower means coupled to duct means having a discharge orifice directing an air stream in a path substantially parallel to and in the same direction as the path of travel of the textile fibers being processed, and suction means spaced from the discharge orifice to pick up the air discharged by the orifice and any foreign matter entrained in the air stream.



3,387,319

AIRFLOW-ELECTRIC COUPLING FOR VACUUM CLEANER

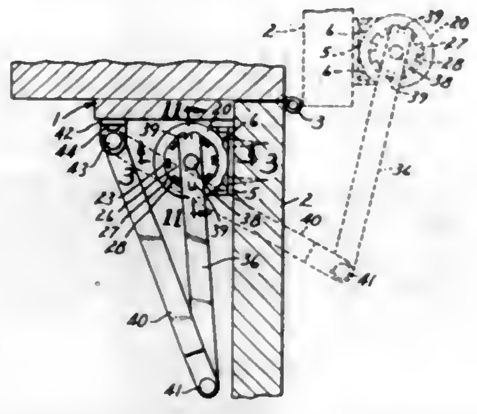
John T. Ferraris, Stamford, and John J. Kowalewski, Riverside, Conn., assignors to Electrolux Corporation, Old Greenwich, Conn., a corporation of Delaware
Filed June 28, 1965, Ser. No. 467,634
9 Claims. (Cl. 15—327)



A coupling for connecting an air hose having integral electric conductors to a suction inlet of a vacuum cleaner for providing both an airflow, rotatable, sealed connection as well as an electrical connection therebetween. A hose end coupling member is connected to one end of the hose which is adapted to fit into a hollow receptacle member carried by the end piece of a vacuum cleaner tank. The extreme end of the hose coupling member is provided with a pair of coaxially arranged circular contacts or slip rings coupled to the hose conductors and a latch mechanism for holding the hose in the hollow receptacle member. The hollow receptacle member is included in the suction inlet of the vacuum cleaner which introduces dirt-ladened air to the cleaner filter. The receptacle member carries a pair of normally energized or live contacts in an inaccessible location relative to the suction inlet and an associated pair of normally open movable contacts each of which is coupled with a dielectric push rod extending into the suction inlet for engagement with the hose coupling whereby these contacts are closed. The movable contacts are electrically connected with receptacle contacts including a conductive push rod extending into the suction inlet which engage the slip rings of the hose end coupling thereby energizing the integral hose conductors without exposing "live" conductors which are accessible from the suction inlet when the hose is not inserted therein.

3,387,320
ROTARY HYDRAULIC DOOR CLOSER

Russell W. Waldo, St. Paul, Minn., assignor to Ideal Security Hardware Corporation, a corporation of Minnesota
Filed Nov. 7, 1966, Ser. No. 592,541
1 Claim. (Cl. 16—58)

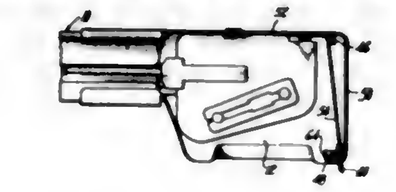


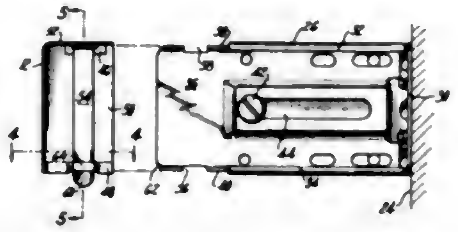
The present door closer involves a generally vertically disposed cylindrical casing having a closed bottom and an intermediate transverse wall element dividing the interial of the casing into an upper spring chamber and a lower hydraulic chamber, the upper chamber being closed by a cover element non-rotatably mounted on the upper end of the casing. An axial shaft is journalled in the casing and is formed to provide a radial vane in the hydraulic chamber, the edges of the vane being closely spaced from adjacent wall surface portions of the casing and transverse wall element. The casing is formed to provide a radial partition extending for the axial length of the hydraulic chamber and having a radially inner edge disposed in closely spaced relation to the shaft, the space therebetween and the spaces between the vane and hydraulic chamber surfaces providing restricted passages for hydraulic liquid from one side of the vane to the opposite side thereof during door opening and closing rotation of the shaft. A sleeve is journalled on the shaft in the spring chamber and in the cover element, and is yieldingly urged in the direction of door closing rotation of the shaft, and a pair of cooperating door closing arms having pivotally connected adjacent ends, one of the arms being pivotally connected to a bracket and the other thereof being rigidly but releasably secured to the shaft and the sleeve, the casing and bracket having means for connection to a door and door frame respectively.

3,387,321
MOUNTING STRUCTURE FOR DRAPERY TRAVERSE RODS

Edward T. Janus, Wallingford, Conn., assignor to The Stanley Works, New Britain, Conn., a corporation of Connecticut
Filed Sept. 22, 1965, Ser. No. 489,298
1 Claim. (Cl. 16—94)

A two-handed releasable mounting structure for drapery traverse rods wherein a pulley housing on the rod is secured to an adjustable bracket plate by a spring latch arm fixed to the top of the pulley housing and extending downwardly across the end of the bracket plate

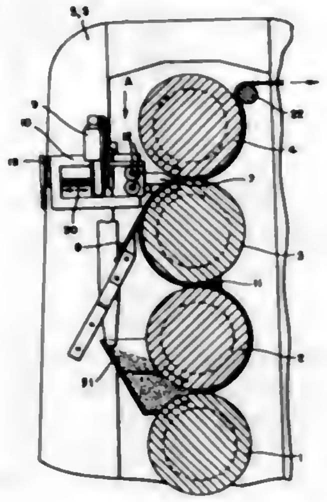




which extends into the housing with the latch are biased into a notch in the lower edge of the plate.

3,387,322
APPARATUS FOR THE PRODUCTION OF HOMOGENEOUS SHEETING

Josef Woellhaf and Herbert Wagner, Ludwigshafen (Rhine), Wilhelm Uhl, Frankenthal, Pfalz, and Otto Hedderich, Schifferstadt, Pfalz, Germany, assignors to Badische Anilin- & Soda-Fabrik, Aktiengesellschaft, Ludwigshafen (Rhine), Germany
Filed Aug. 17, 1965, Ser. No. 480,347
Claims priority, application Germany, Aug. 19, 1964, B 78,163
3 Claims. (Cl. 18—2)



Apparatus for the production of homogeneous calendered thermoplastic sheeting embodying a plurality of superposed parallel rollers with gaps therebetween, a reciprocal blade at the gap of the uppermost rollers for removing thermoplastic material from the last gap and returning it to the material fed to the gap between the two lowermost rollers.

3,387,323
MOLD WITH CORE HAVING THREAD FORMING PORTIONS

Robert Wyllie and James F. Ropes, South Bend, Ind., assignors to Nyloncraft, Inc., Mishawaka, Ind., a corporation of Indiana
Filed Mar. 14, 1966, Ser. No. 533,958
10 Claims. (Cl. 18—2)

A mold for producing articles having internal screw threads, consisting of two principal sections movable axi-

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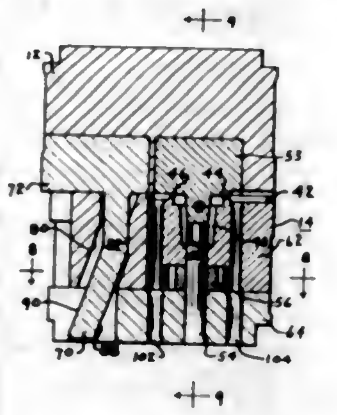
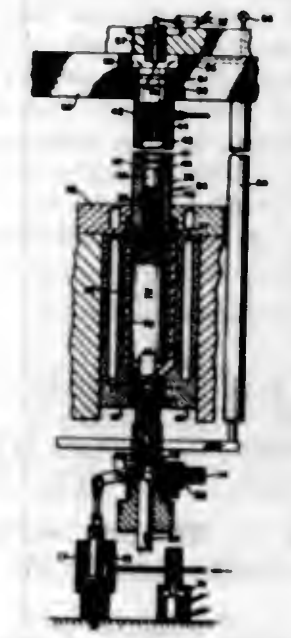
ally from one another and having core parts in the mold cavities which are rotated relative to one another in order to release the threaded articles produced in the mold. One of the relatively movable core parts contains spaced threaded portions and the other core part contains filler



members disposed between the threaded portions of the first core part.

3,387,324
BLOW MOLDING APPARATUS

Emery I. Valyi, 5200 Sycamore Ave., Riverdale, Bronx, N.Y. 10471
Continuation-in-part of applications Ser. No. 326,410, Nov. 27, 1963, and Ser. No. 353,004, Mar. 8, 1964. This application Apr. 25, 1966, Ser. No. 544,898
8 Claims. (Cl. 18—5)

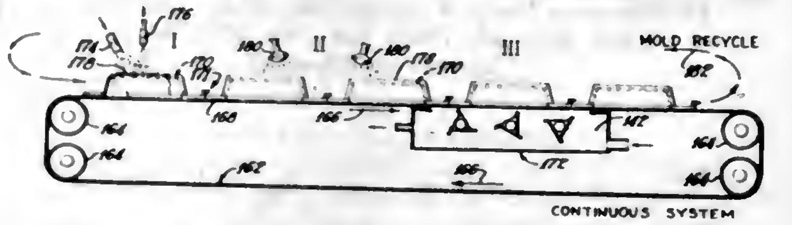


A two-piece blow core on which a parison is molded, with the blow core seated in a parison die, and having blow ports which are closed by a sleeve. The blow core is supported by the sleeve which closes the blow ports when pressure is exerted for seating the blow core in the parison die. When the blow core is inserted in a blow mold, the sleeve is retracted by a pressure cylinder for opening the blow ports.

3,387,325
MOLD COOLING SYSTEM AND METHOD FOR POLYMERIZING RESINS

Ralph H. Sonneborn, Newark, Ohio, and Fernando Alvarez De Toledo, Crainhem, Belgium, assignors to Owens-Corning Fiberglas Corporation, Toledo, Ohio, a corporation of Delaware
Original application May 27, 1964, Ser. No. 370,535, now Patent No. 3,337,674. Divided and this application Nov. 14, 1966, Ser. No. 606,485
8 Claims. (Cl. 18—6)

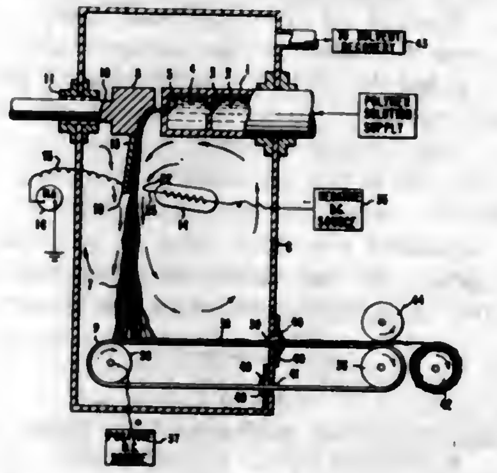
Mold cooling system and apparatus wherein a mold plate is placed adjacent to a body of heat-exchange liquid and means is provided for developing a multiplicity of



droplets from the heat-exchange liquid and propelling the droplets into direct contact with the mold plate.

3,387,326
APPARATUS FOR CHARGING AND SPREADING A WEB

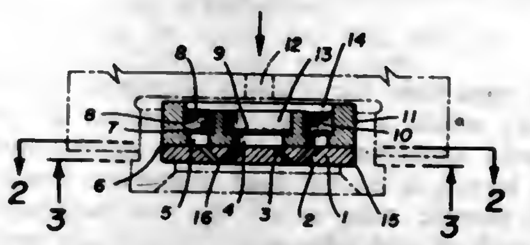
Herbert John Hollberg, Richmond, Va., and John Edward Owens, Hockessin Hills, Hockessin, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed June 4, 1964, Ser. No. 372,623
3 Claims. (Cl. 18—8)



An apparatus for spreading, electrostatically charging, and forwarding a fibrous web concomitantly formed with a vapor blast. The apparatus includes a spinning means for forming and directing the web to a baffle which serves to spread the web and direct it to a corona charging device located downstream from the baffle.

3,387,327
FILAMENT SPINNING APPARATUS

Wilbur J. Privott, Jr., Raleigh, and Rodney M. Chapman, Kinston, N.C., assignors to Monsanto Company, St. Louis, Mo., a corporation of Delaware
Filed June 9, 1966, Ser. No. 556,476
3 Claims. (Cl. 18—8)



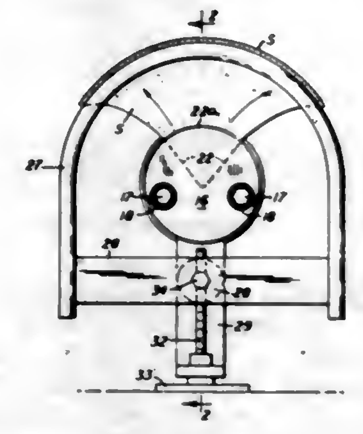
In this invention, a spinnerette produces a self-crimping filament from a source of a thermoplastic filament-forming material by admitting to an extrusion orifice at least two streams of different cross-sectional areas but substantially equal mass flow rates to form a mono-conjugated filament having, upon the stretching thereof, substantially different degrees of orientation across its cross-section.

This invention relates to an apparatus for producing synthetic textile fibers, and more particularly, to an improved spinnerette construction for the production of self-crimping synthetic filaments and fibers.

3,387,328

EXTRUSION APPARATUS

Thomas W. Winstead, Baltimore, Md.
(Williamson Lane, Cockeysville, Md. 21030)
Filed July 29, 1965, Ser. No. 475,734
9 Claims. (Cl. 18—12)

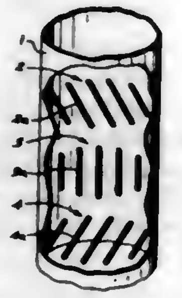


Apparatus for forming foamed plastic sheets wherein an expandible thermoplastic strip is first extruded in a radial path through an extrusion head having a fan-shaped feed reservoir bounded by an arcuate extrusion orifice. All points along this orifice are equidistant from the axis of the feed reservoir so as to provide uniform and uninterrupted distribution of pressure flow along the die lips. Adjacent the die orifice an arcuate spreading yoke, which is substantially concentric with the arcuate die lips, underlies the expanded extruded strip to provide maximum accommodation of the widthwise expansion thereof and prevents the formation of wrinkles and eliminates strains.

3,387,329

PROCESSING APPARATUS FOR GAS-GENERATING COMPOSITIONS

John N. Godfrey, Alexandria, Va., assignor to The Susquehanna Corporation, a corporation of Delaware
Original application Oct. 20, 1965, Ser. No. 498,780, now Patent No. 3,359,350, dated Dec. 19, 1967. Divided and this application Mar. 9, 1967, Ser. No. 646,772
2 Claims. (Cl. 18—12)

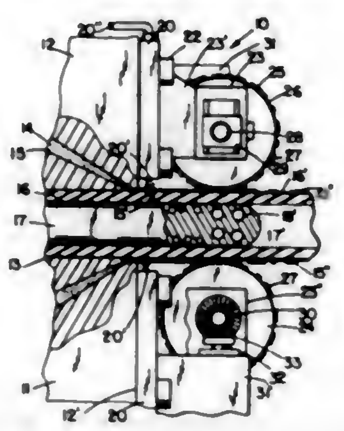


1. An apparatus for aligning elongated metallic heat conductors within a viscous, combustible, gas-generating matrix, said apparatus comprising in combination a passageway having a plurality of alignment means serially disposed therein transversely to the longitudinal axis thereof, each of said alignment means being spaced from other alignment means along the longitudinal axis of said passageway, each of said alignment means comprising a plurality of substantially parallel elongated members, said members being separated by a distance sufficient to permit passage of said heat conductors, and the elongated members of each of said alignment means being radially angularly displaced from the elongated members of other of said alignment means thereby defining channels in said passageway having boundaries not longitudinally colinear with the boundaries of channels defined by other alignment means.

3,387,330

EXTRUSION APPARATUS AND METHOD

Jerome H. Lemelson, 85 Rector St.,
Metuchen, N.J. 08840
Continuation-in-part of application Ser. No. 142,405, Oct. 2, 1961. This application June 8, 1964, Ser. No. 373,482
3 Claims. (Cl. 18—13)

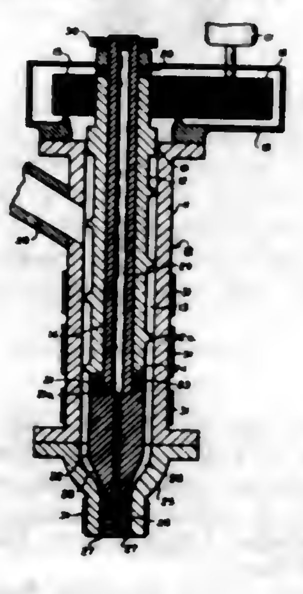


1. Apparatus for embossing surface patterns in extrusions as they are continuously fed from an extrusion die comprising in combination with an extruder including means for expressing a material therefrom to a predetermined shape, means for coating the exterior of said extrusion with a material having a different color than the material comprising the base of the extrusion, an embossing means disposed for receiving the extrusion, said embossing means having at least two rolls adapted to engage substantially equal areas of the opposite faces of said extrusion and to exert equal pressures thereon so as not to axially deform the extrusion in passing between said rolls, at least one of said rolls having a surface shaped for embossing the surface of said extrusion and means for power rotating said embossing roll at substantially the same speed as the speed of said extrusion for operating said roll to separate the coating material in an embossed pattern so that the color of the base extrusion shows through the coating material.

3,387,331

APPARATUS FOR EXTRUDING SEAMLESS PLASTIC TUBING

Miro Billings, Mahwah, N.J., assignor to Rexall Drug and Chemical Company, Los Angeles, Calif., a corporation of Delaware
Filed July 27, 1965, Ser. No. 475,131
2 Claims. (Cl. 18—14)



Apparatus for producing seamless plastic tubing has:

(1) stationary housing,
(2) hollow shaft,

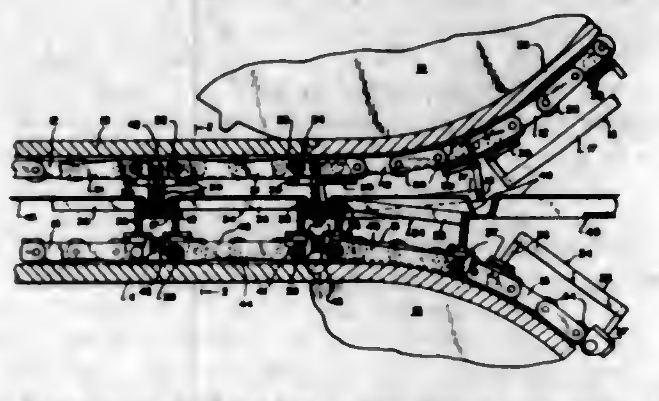
(3) extruding means journaled on shaft defining annular passageway,
(4) hollow die core atached to one of shaft's ends in coaxial relation to extruding means and contiguous to discharge end,
(5) die member attached to housing, encompassing die core to define die orifice, and
(6) source for passing pressurized fluid through hollow shaft and die core.

The shaft rotates at differential rate of speed to rate of rotation of extruding means so a predetermined relative rotation is effected between die core and extruding means.

3,387,332

MOLDING APPARATUS

Ronald D. Pitsch, Oshkosh, Wis., assignor to American Excelsior Corporation, a corporation of Delaware
Filed Aug. 18, 1966, Ser. No. 573,318
3 Claims. (Cl. 18—19)

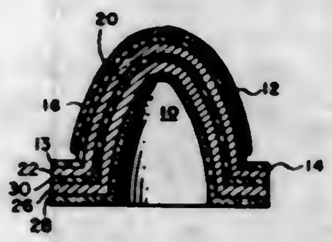


1. Apparatus for forming a dish shaped receptacle having a bottom and sides, comprising: a pair of cooperating shaping frame members each comprising a frame with sides having edges, both frames being of similar shape and a first frame being smaller than the second so as to fit therein in internested relationship; means for directing a sheet of shapable material in a path; means for arranging said shaping frame members on opposite sides of said sheet in internested relationship engaging said sheet with corresponding sides of both frames being spaced apart, the sheet material thereby being distorted around an outer edge of the smaller frame and around an inner edge of the larger frame to form a dish shaped distortion in said sheet; and means for separating said distortion from said sheet as a dish shaped receptacle.

3,387,333

ELECTRICALLY HEATED MOLD

Theodore F. Irvine, North Hollywood, and William C. Maithouse, Los Angeles, Calif., assignors to Lockheed Aircraft Corporation, Burbank, Calif.
Filed Jan. 27, 1965, Ser. No. 428,298
5 Claims. (Cl. 18—35)

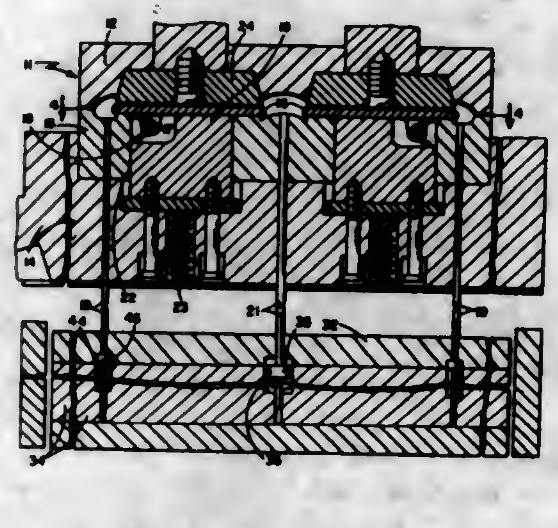


An electrically heated mold is provided in which a woven thermally-conductive layer is interposed between a resistance heating element and the mold forming surface for preventing hot spots or thermal gradients at the mold surface. The conductive layer comprises metallic strands for high thermal conductivity interwoven with nonmetallic strands to prevent delamination. A heat reflecting layer is disposed in supporting relationship with respect to the heating element on the side opposite the conductive or heat transfer layer.

3,387,334

MOLDING APPARATUS

Paul J. Belanger, Leominster, and Edgar J. Richard, Fitchburg, Mass., assignors to Foster Grant Co., Inc., Leominster, Mass., a corporation of Delaware
Filed June 10, 1964, Ser. No. 373,968
4 Claims. (Cl. 18—36)



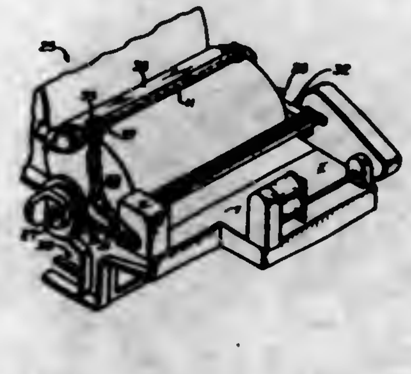
1. Apparatus for molding an undercut portion into a molded object; said apparatus including:

complementary mold cavity blocks;
one of said blocks including a core member pivotally mounted for movement relative thereto for forming a substantially continuous groove in said molded object;
said core member being in the form of a substantially rigid unitary plate for forming the entire groove;
at least one ejector pin located at the lateral extremity of said one mold block;
said ejector pin being movable to initially partially peel the molded object from the core member;
whereby the core member is withdrawn from the remaining portion of the undercut upon continued movement of the ejector pin relative to the mold cavity block.

3,387,335

CARD DOFFER CHEEK CLEANING

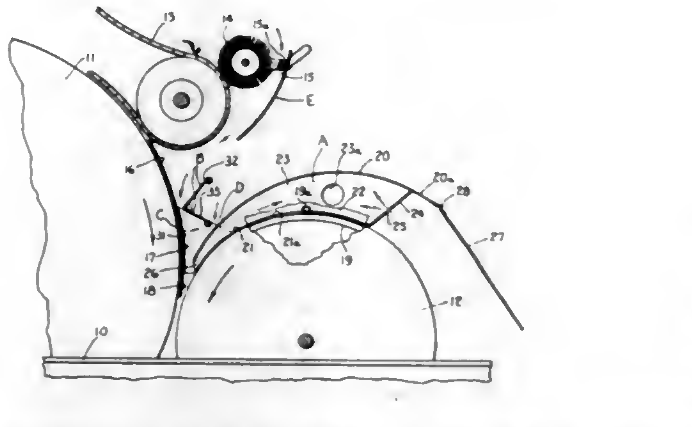
Otis L. Landers and Malcolm L. McKenzie, Charlotte, N.C., assignors to Pneumafil Corporation, Charlotte, N.C., a corporation of Delaware
Filed July 30, 1964, Ser. No. 386,177
5 Claims. (Cl. 19—107)



1. In a textile card having a doffer cylinder and a doffer bonnet mounted on a card base, a suction tube

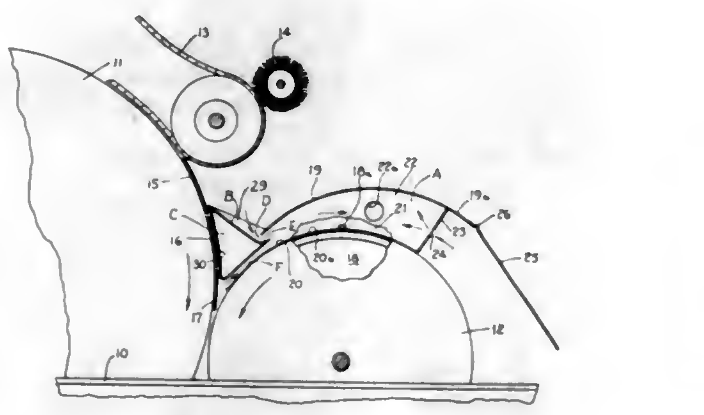
extending across the cylinder secured to the doffer bonnet; at least one downwardly extending pick-up tube connected to said suction tube, said pick-up tube having an inlet orifice at the end of the doffer cylinder closely adjacent the gap between the cylinder and the base.

3,387,336
TRAY FOR CARDING MACHINE CLEANER
John E. Crowley, Jr., P.O. Box 15511,
Charlotte, N.C. 28210
Filed May 8, 1967, Ser. No. 636,782
4 Claims. (Cl. 19—107)



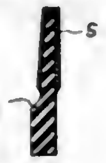
An elongated tray is provided for use with a suction plenum having an elongated suction orifice across and adjacent the area in which the lap is transferred from the main cylinder to the doffer cylinder of a carding machine. The tray is positioned by spaced longitudinal supports for guiding waste material into the orifice. The tray is spaced from an upper surface of the plenum thus, providing a suction orifice to clean the upper surface of the plenum and guard against foreign objects falling into the card clothing. A guide or guard is positioned forwardly and adjacent the brush for guiding waste from the flats into the tray.

3,387,337
TRAY AND SHELF FOR CARDING MACHINE CLEANER
John E. Crowley, Jr., P.O. Box 15511,
Charlotte, N.C. 28210
Filed May 8, 1967, Ser. No. 636,783
3 Claims. (Cl. 19—107)



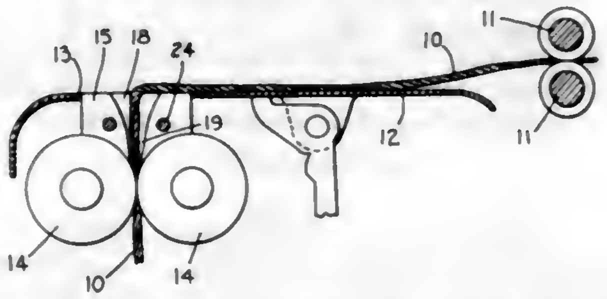
An elongated tray having a shelf therein is positioned across a suction orifice which is positioned at the transfer point of the lap between the main cylinder and the doffer cylinder. A shelf is carried by the tray, which extends forwardly thereof, adjacent the suction orifice for catching relatively small foreign objects preventing impingement thereof upon the main cylinder and the doffer cylinder. The tray guides toppings and other waste directly into the orifice and the shelf prevents the toppings from falling between the main cylinder and the doffer cylinder when the suction equipment is shut down for cleaning out the waste collection areas therein.

3,387,338
METALLIC CARD CLOTHING
Hiroyuki Kanai, 67 Matsunouchi-cho, Ashiya, Japan; Takashi Morikawa, 155—1 Higashisonodacho 4-chome, Amagasaki, Japan; and Noboru Arita, 12—1 Karigaoka 9-chome, Hirakata, Japan
Filed June 3, 1965, Ser. No. 461,029
Claims priority, application Japan, Oct. 30, 1964, 39/61,693
3 Claims. (Cl. 19—114)



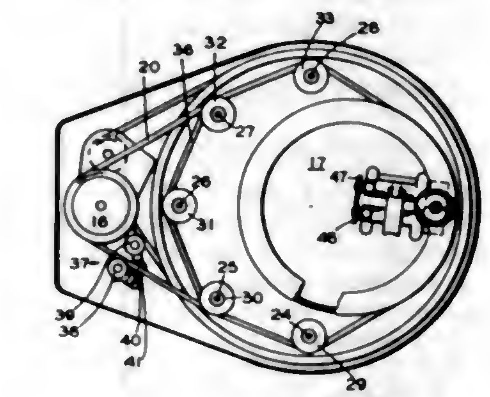
Metallic card clothing in which the teeth are made of an inner material between the outer side surfaces of the individual teeth is relatively resilient so that the teeth can withstand repetitive impulse loading during a carding operation. The outer side surfaces comprise an abrasion-resistant material that is harder than the inner material. The inner material is exposed along the edges, including the working edge of the teeth and the abrasion-resistant material comprises the marginal edges of the edges of the individual teeth. The resilient core material of the teeth keeps the teeth from breaking due to impulse loading and the hardened surfaces of the sides of the teeth resist wear along the teeth opposite side surfaces. The exposure of the inner material along the edges of the teeth precludes material breaking off of the teeth along the edges.

3,387,339
SLIVER CONDENSER FOR DRAWING FRAMES
Carlos Salles Bofill, Provenza 226,
Barcelona, Spain
Filed Sept. 14, 1964, Ser. No. 396,214
2 Claims. (Cl. 19—150)



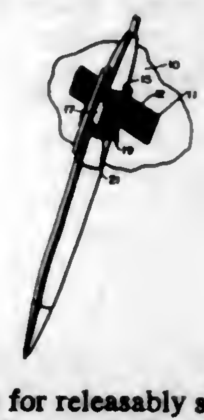
1. For use in drawing frames and the like having a plate for the sliver beyond the exit of the sliver from the drafting elements, and calender rolls which deliver the sliver to a can, the improvement including, an element of essentially prismatic shape having, an upper flat face, lateral concave cylindrical faces below said upper face with a radius corresponding to the calender rolls converging at virtually a tangential angle forming a lower edge, a passageway extending from said upper face through said lower edge formed by a surface curvilinear shape with an upper convex taper blending smoothly with a lower concave tapering portion, and an exit orifice of small dimensions, said exit orifice including a prolongation of the lower portions in a narrow cylindrical portion, whereby the element rests freely on its cylindrical faces upon the two calender rolls so that the lower edge with exit orifice coincides with the line of tangency of the calender rolls.

3,387,340
SLIVER COILER
John R. Caldwell and Cary H. Hall, Hampton, Ga., assignors by mesne assignments, to Gunter & Cooke, Inc., a corporation of North Carolina
Filed Oct. 3, 1966, Ser. No. 583,890
9 Claims. (Cl. 19—159)



A sliver coiler comprising a first driven element rotatably mounted in the coiler spectacle, a second driven element mounted for rotation in the first driven element about an axis offset from the axis of rotation of the first driven element, and a coupling adapter for operatively connecting the second driven element in driving relation to the coiler main drive, the coupling adapter comprising a plurality of pulleys mounted on pedestals fixed to the first driven element and driving belt means interconnecting the coiler main drive, the pulleys and the second driven element to impart positive driving force to the latter irrespective of the relative position thereof with respect to the main coiler drive.

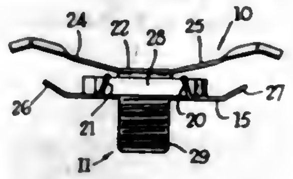
3,387,341
FASTENING DEVICE
Jack K. Mates, Scarsdale, N.Y., and Pardee Peter Stanos, Youngstown, Ohio; said Mates assignor to American Velcro, Inc., New York, N.Y., a corporation of New Hampshire
Filed June 2, 1967, Ser. No. 643,255
6 Claims. (Cl. 24—73)



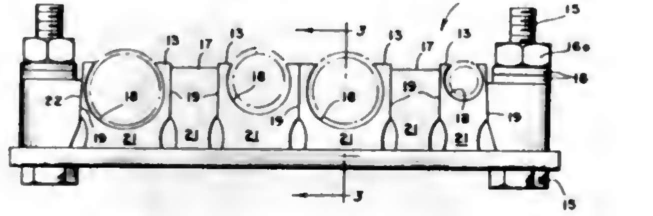
A fastening device for releasably securing an instrument to a supporting surface including a sleeve-like adaptor which can be removably mounted on the instrument and tape means on the adaptor including hook-like burr elements on its surface for releasably securing the device to hook-like elements on the supporting surface.

3,387,342
RESILIENT MOULDING FASTENER
Clifford Alexander Seckerson, Iver Heath, England, assignor to United-Carr Incorporated, Boston, Mass., a corporation of Delaware
Filed June 27, 1967, Ser. No. 649,329
Claims priority, application Great Britain, July 4, 1966, 29,828/66; Sept. 6, 1966, 39,813/66
8 Claims. (Cl. 24—73)

The invention relates to a clip for retaining a bolt within a conventional moulding of the type having inturned longitudinal edges joined by a web. The clip comprises a generally flat base having a slot adapted to receive the shank of the bolt laterally so that the head of the bolt lies on the upper surface of the base and a resilient arm integral with the base and having a portion overlying the base which both limits movement of the bolt axially through the slot and, in assembly in the moulding presses resiliently against the web of the moulding to prevent vibration and provide frictional resistance to movement of the clip lengthwise along the moulding.

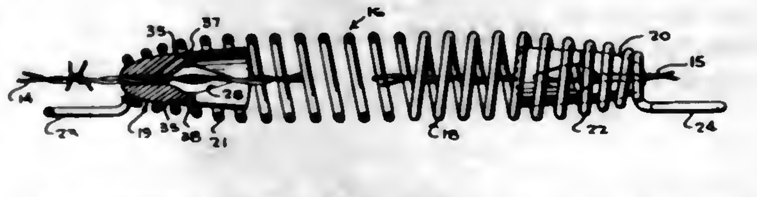


3,387,343
PIPE-CLIP ARRANGEMENT
Leslie G. Fitz-Gerald, Yeovil, England, assignor to Westland Aircraft, Limited
Filed Apr. 28, 1967, Ser. No. 634,710
Claims priority, application Great Britain, Nov. 9, 1966, 50,313/66
18 Claims. (Cl. 24—81)



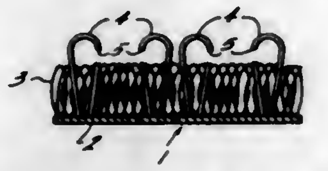
An arrangement for simultaneously securing a plurality of generally parallel pipes, cables or the like including an elongated base member extending transversely across the pipes and a plurality of individual pipe retaining elements, one for each pipe, mounted on the base member between a pair of clamps. The pipe retaining elements receive the pipes in arcuate portions thereof, and trap the pipes therein when the clamps are manipulated to push all of the pipe retaining elements together.

3,387,344
TENSIONING DEVICE
Mark G. Santi, Rte. 3, Box 331-J,
Ocala, Fla. 32670
Filed Jan. 24, 1967, Ser. No. 611,347
10 Claims. (Cl. 24—126)



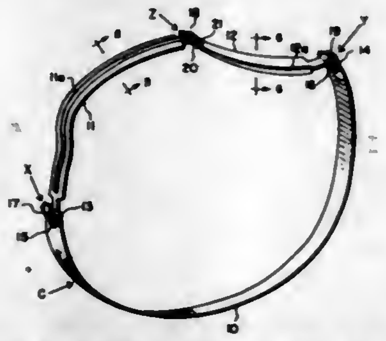
A tensioning device for a strand of material in the form of a coil having a tapered end with an opening therein for receiving the strand therethrough, a pair of movable gripping jaws disposed within the coil spring, the jaws having contact surfaces engageable with the tapered coil spring end in camming relation whereby the jaws are moved relative to each other and the jaws having opposed gripping surfaces engageable with the strand disposed therebetween in gripping relation when the contact surfaces engage the tapered coil spring end in camming relation and the jaws are caused to be moved together.

3,387,345
SEPARABLE FASTENING DEVICE
Jean-Claude Savoir, Coppet, Switzerland, assignor to Velcro S.A., Grisons, Switzerland, a corporation of Switzerland
Filed Mar. 23, 1967, Ser. No. 625,424
Claims priority, application Switzerland, Apr. 1, 1966, 4,851/66
5 Claims. (Cl. 24—204)



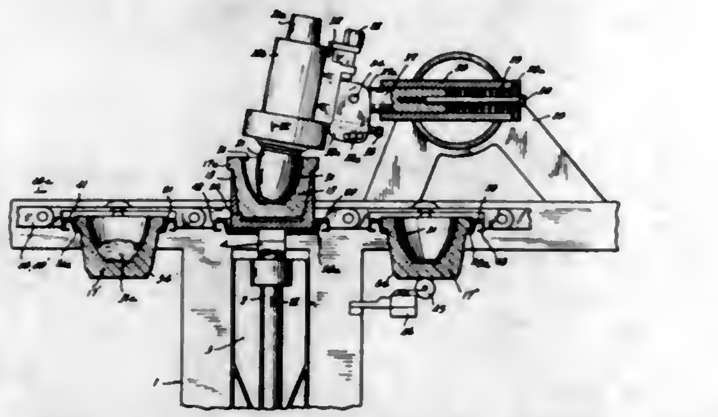
Separable fastener comprising two flexible tapes of the hook and loop type, at least one of the tapes having on one surface of the base sheet thereof both hooks and loops with the active portions of the hooks extending from the base sheet for a greater distance than the loops.

3,387,346
BAG CLAMP
Kenneth N. Hasenbank, Minneapolis, Minn., assignor to Toro Manufacturing Corporation, Minneapolis, Minn., a corporation of Minnesota
Filed Mar. 28, 1966, Ser. No. 537,960
6 Claims. (Cl. 24—270)



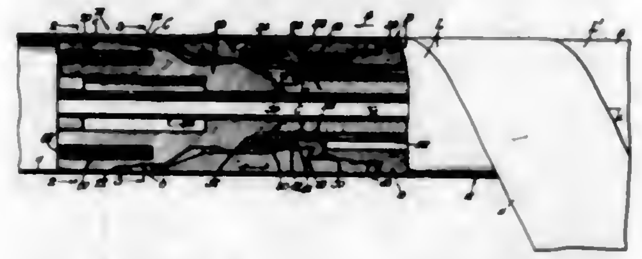
A bag clamp attached to the mouth of a bag for clamping same on a tube or similar support. The clamp is an annular member comprising three sections hingedly linked together in end-to-end relationship which provide a toggle type, over-center locking action to hold the clamp in contracted formation, the bag assuming the shape of the clamp in both expanded and contracted formations.

3,387,347
APPARATUS FOR SHAPING POTTERY IN REVOLVING CERAMIC-MASS CONTAINING MOLDS
Willy John, Selb, Germany, assignor to Gebrueder Netzsch, Selb, Germany
Filed Feb. 23, 1965, Ser. No. 434,453
Claims priority, application Germany, Feb. 21, 1964, N 24,487
12 Claims. (Cl. 25—26)



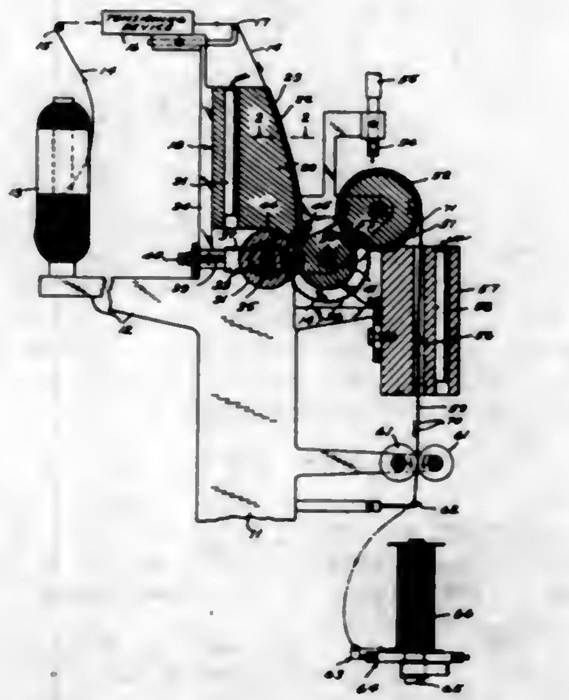
An apparatus for shaping articles of pottery, in which a plurality of rows of molds are intermittently transported to a position of alignment with a corresponding row of jigger heads mounted on upper ends of rotating spindles, which in turn are carried by a carriage reciprocable in a vertical plane so that the molds in an aligned row may be simultaneously lifted during upward movement of the carriage into a position in which a plurality of shaping tools mounted on a common slide will jigger ceramic masses in the molds, and wherein the slides and the plurality of tools carried thereby are movable in a horizontal plane while the molds are in the lifted position to simultaneously move the shaping tools relative to the lifted molds.

3,387,348
DEVICE FOR MAKING AN INTERNALLY COATED TUBULAR BLANK
John Kilgallon, Lachine, Quebec, Canada, assignor to Crompton & Knowles Corporation, Worcester, Mass., a corporation of Massachusetts
Filed Nov. 17, 1964, Ser. No. 411,939
9 Claims. (Cl. 25—38)



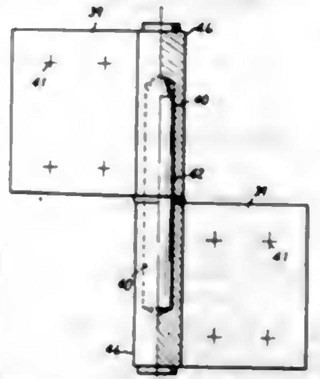
A tubular blank is fed successively over a form-fitting mandrel and therefrom spaced, substantially form-fitting plunger having a shank which extends with clearance through an aperture in the mandrel to form therein a passage for a liquid coating material from a source to a reservoir formed between the mandrel and plunger for interiorly coating the passing blank at the reservoir.

3,387,349
DIFFERENTIAL FEED ROLL CRIMPER AND METHOD
Alexander L. Trifunovic and Steve E. Zeis, Wilmington, Del., assignors to Joseph Bancroft & Sons Company, Wilmington, Del., a corporation of Delaware
Filed Apr. 8, 1965, Ser. No. 446,555
17 Claims. (Cl. 28—1)



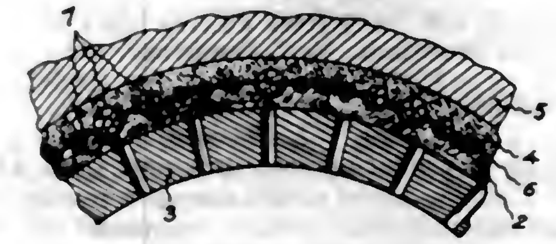
Yarn crimping apparatus having a pair of feed rolls driven at different peripheral speeds, one of which is provided with grooves and ridges for forming a coil crimp in the yarn fed therebetween. In one embodiment, the feed rolls are disposed to feed yarn into the stuffer crimper having a crimping chamber in which the yarn is folded over and crimped so as to superimpose a stuffer crimper on the coil crimp.

3,387,350
HINGE AND METHOD OF MAKING THE SAME
Sadaji Ando, Osaka, Japan, assignor to Nippon Hatsujo Kabushiki Kaisha, Yokohama, Japan
Filed Oct. 22, 1965, Ser. No. 501,812
Claims priority, application Japan, Dec. 31, 1964, 40/96; Feb. 1, 1965, 40/5,718
9 Claims. (Cl. 29—11)



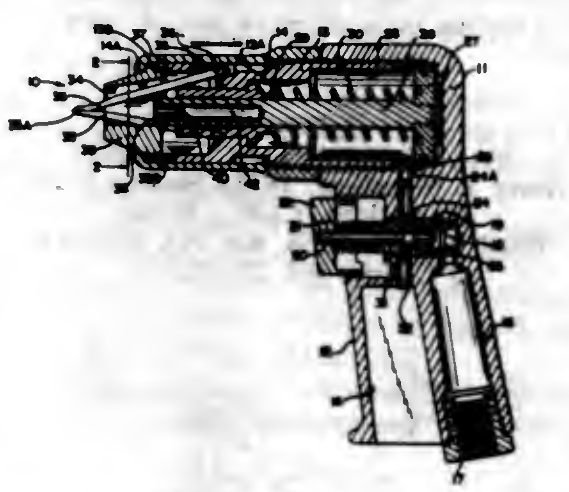
A hinge composed of a pair of winged bearing members and a pin. Each wing bearing member is composed of a wing and a round bar extending longitudinally along one edge of the wing and merging integrally and smoothly into the wing which extends laterally from the round bar. The round bars are bored to receive the hinge pin. The metal which constitutes the winged bearing members of the hinge is characterized by a substantially homogeneous grain structure and a substantially uniform distribution of stresses. These latter results are achieved at least in part by rolling the metal which is used for the hinge from a primary intermediate product into a secondary intermediate product while twisting the metal so as to apply to the secondary intermediate product compressive forces which act with respect to the secondary intermediate product in a direction differently from the compressive forces which act with respect to the primary intermediate product, and then this second intermediate product is rolled into a tertiary intermediate product with a further change in the direction of compressive forces acting with respect to the tertiary intermediate product, as compared to the direction of the compressive forces acting with respect to the secondary intermediate product.

3,387,351
METHOD OF MAKING STAMPING AND EMBOSSING ROLLERS
Karl-Heinz Roosen, Schiefbahn, Germany, assignor to Kleinewefers Gravuren G.m.b.H., Krefeld, Germany
Filed May 31, 1966, Ser. No. 553,856
Claims priority, application Germany, May 28, 1965, K 56,250
14 Claims. (Cl. 29—148.4)



1. A method of making engraving rollers for simulated relief patterns on material such as textiles, paper, synthetics, metal foil and the like which comprises; wrapping a member having the pattern to be printed in relief thereon into the form of a cylinder so the edges of the member are substantially abutting and with the side of said member which is to form the pattern on the inside, supporting the now cylindrical member from the inside while substantially eliminating evidence of the joint where the edges of the member abut, supporting the cylindrical member from the outside while it is supported from the inside, removing the support from the inside thereof to expose the inside of said cylindrical member while the member remains supported from the outside, and reproducing in reverse the relief pattern exposed on the inside of the cylindrical member on a hard cover sleeve adapted for mounting on the body of an engraving roll to provide the sleeve surface with a relief pattern which is complementary to the exposed inside surface of said cylindrical member.

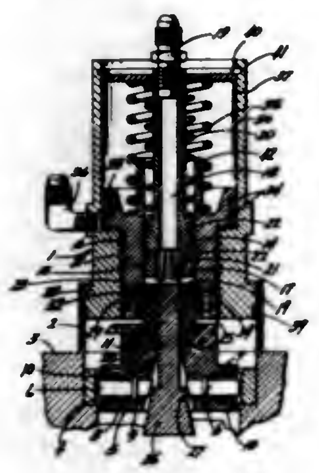
3,387,352
MANUALLY-LOADABLE POWER-OPERATED TOOL FOR INSTALLING ANTI-SKID STUDS IN VEHICULAR TIRES
Harvey J. Walter, Parma, Ohio, assignor to The Black and Decker Manufacturing Company, Towson, Md., a corporation of Maryland
Filed May 31, 1966, Ser. No. 554,182
4 Claims. (Cl. 29—212)



The device disclosed herein is a power-operated portable tool for inserting studs into automotive tires and includes a housing having a power-operated plunger means therein adapted to carry a stud and install it within a hole or recess in the tire. Actuation of the plunger means is controlled by a trigger on a handle rigid with the housing, and a plurality of resiliently-biased, normally-closed fingers are guided for limited radial movement relative to a supporting guide means, disposed at the outer end of the housing, and are adapted to be inserted into the tire recess whereupon when the trigger is actuated and the plunger means moves forwardly, the fingers radially enlarge the recess to receive the stud.

3,387,353
DEVICE FOR REMOVING VALVE SEATS AND THE LIKE
Sergio P. Romero, 1423 W. State St., Rockford, Ill. 61102
Filed Mar. 11, 1966, Ser. No. 533,657
6 Claims. (Cl. 29—213)

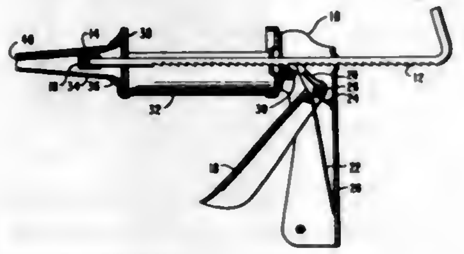
This is a two-stage device for removing valve seats and the like. A main large diameter piston is operable in a main cylinder under pressure from a first fluid pressure supply source against an action of a spring means bearing on the main piston, a secondary smaller piston reciprocable in a second cylinder, provided for compactness in the main piston, is connected with an expansion type chuck that is moveable with the main piston under action of fluid pressure from a separate second fluid supply source so as to be operable independently of the first mentioned piston and its retracting spring means, there being a second spring means in concentric relation to the other spring means for compactness tending to hold the second piston in retracted



position. In that way there is good assurance of the valve seat to be removed being properly gripped before the main piston is operated to cause the removal of the valve seat. The chuck has a reduced inner end portion coaxial therewith threadedly engageable in the main piston so that the chuck is detachable and replaceable by another chuck suitable for operating on a different size of valve seat to be removed.

3,387,354
VALVE INSERTING DEVICE

Harry J. Mossberg, 18215 Roscoe Blvd., Northridge, Calif. 91324
Filed July 20, 1966, Ser. No. 566,662
3 Claims. (Cl. 29—221.5)

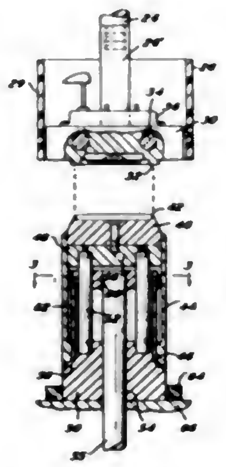


The invention relates to a hand-held tool which will insert a valve stem into a tubeless tire from the outside. The tool engages the threaded end of the stem and by a notched-trigger advance system forces the stem into the stem hole in the tire.

3,387,355
APPARATUS FOR PROVIDING A SUBSTRATE WITH A LINER

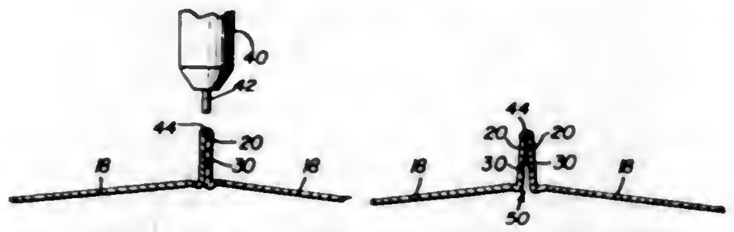
Walter Raymond Herring, Unionville, Pa., assignor, by mesne assignments, to Container Corporation of America, Chicago, Ill., a corporation of Delaware
Filed Apr. 8, 1963, Ser. No. 271,126
14 Claims. (Cl. 29—235)

14. Apparatus for joining a barrier film to a substrate comprising an annular base having a curved guide surface extending downwardly and outwardly, a carriage above said base, circumferentially disposed flexible forming members secured to said carriage, free end portions of said members extending along said guide surface, means for selectively moving said carriage toward said base so that the terminal portion of each of said members are caused by said guide surface to flex outwardly and move through an arcuate path with respect to the axis of movement of said carriage, whereby said flexing movement of said members may cause a barrier film to be joined to a substrate.



3,387,356
METHOD OF ASSEMBLING OBSERVATORY DOME

William T. Clark, P.O. Box 885, Jackson, Miss. 39205
Continuation-in-part of application Ser. No. 205,900, June 28, 1962. This application Mar. 22, 1966, Ser. No. 536,353
2 Claims. (Cl. 29—471.7)



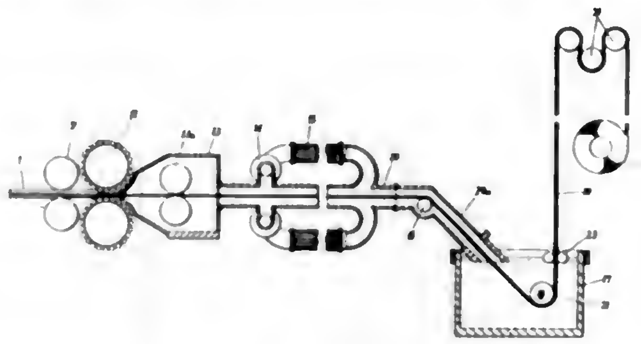
1. A method of assembling an arcuate dome comprising a plurality of arcuate sheet metal segments which comprises the steps of:

(a) providing a plurality of arcuate sheet metal segments of a sphere each having exteriorly disposed upstanding marginal flanges;
(b) placing the segments in side-by-side relation with adjacent flanges of adjacent segments being in face-to-face engagement while supporting the segments over a precision convex form the curvature of which corresponds to the desired curvature of the dome;
(c) applying compressive pressure to said adjacent flanges while releasably joining the flanges by spot welding the flanges together at a plurality of points spaced along the length thereof; and
(d) autogenously fusing the outer edges of said adjacent releasably joined flanges without fusing the spot welded areas whereby the heat required to fuse the flanges releases the spot-welds thus providing expansion-contraction joints between adjacent segments.

3,387,357
METHOD OF MAKING CLAD METAL

Tadeusz Sendzimir, % T. Sendzimir, Inc., Waterbury, Conn.
Filed Mar. 29, 1963, Ser. No. 269,028
10 Claims. (Cl. 29—494)

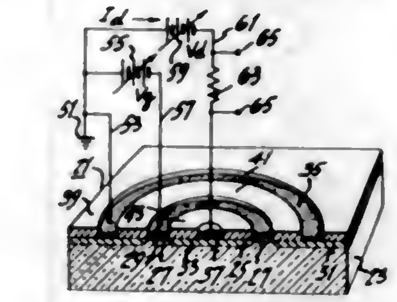
1. A process of producing clad structures from a base metal and a cladding metal which does not readily weld with the base metal, which process comprises the steps of forming a composite structure consisting, in the order named, of a first body of the base metal, a first layer of cladding metal, a layer of welding separator, a second layer of cladding metal and a second body of base metal, the said composite structure constituting a slab, heating the said slab to a hot rolling temperature in non-oxidizing conditions and passing the said slab through a planetary mill and effecting therein a reduction of the order of at



least about 20:1 whereby temperature conditions at the mid-section of said slab during the said reduction are maintained at least substantially isothermic and high enough to weld the cladding metal to the base metal, and thereafter separating the rolled composite into two single clad strips.

3,387,358
METHOD OF FABRICATING SEMICONDUCTOR DEVICE

Frederic P. Heiman, Cranbury, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Original application Sept. 7, 1962, Ser. No. 222,019. Divided and this application Nov. 7, 1966, Ser. No. 592,581
4 Claims. (Cl. 29—571)



A silicon insulated gate field-effect transistor is fabricated by:

(1) Depositing relatively thick, heavily N-doped pyrolytic silicon dioxide on the surface of a silicon wafer only over the areas which are to be the source and drain regions of the device;

(2) Heating the wafer in dry oxygen to cause diffusion of doping impurities from the oxide into the silicon wafer to form the source and drain regions and at the same time to cause thermal oxidation of the exposed surface areas so as to provide a relatively thin gate insulator and a channel in the device; and

(3) Forming contact openings in the deposited oxide and applying source, drain and gate metallization. The gate metal may overlap the deposited oxide over the source and drain.

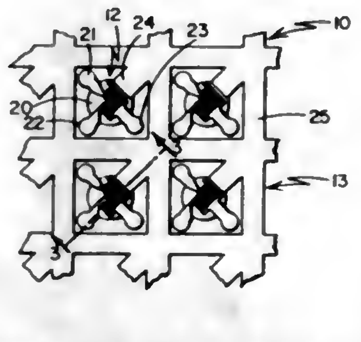
3,387,359
METHOD OF PRODUCING SEMICONDUCTOR DEVICES

Brian Dale, West Peabody, and Robert C. Ingraham, Topsfield, Mass., assignors to Sylvania Electric Products Inc., a corporation of Delaware
Filed Apr. 1, 1966, Ser. No. 539,444
13 Claims. (Cl. 29—577)

1. The method of producing semiconductor devices including the steps of

providing an array of semiconductor elements comprising a plurality of semiconductor elements, each semiconductor element including a body of semiconductor material and a plurality of supporting beams projecting from the body, and a supporting grid, one of the supporting beams of each semiconductor element being fixed to the supporting grid to position the semiconductor elements in a predetermined pattern,

providing an array of mounting headers comprising a member of non-conductive material having a plurality of groups of conductive regions thereon, each group of regions being arranged to provide the conductive portions of a mounting header for a semiconductor element, the groups of conductive regions being arranged on the member of non-conductive material in a predetermined pattern,



moving the array of mounting headers to position one of the groups of conductive regions at a bonding location with the conductive regions of the group oriented in a predetermined manner,

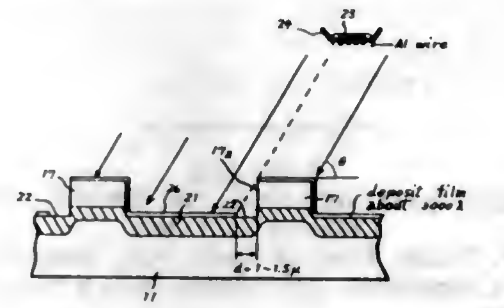
moving the array of semiconductor elements to position one of the semiconductor elements at a transfer location with the supporting beams oriented in a predetermined manner,

moving the semiconductor element at the transfer location with respect to the group of conductive regions at the bonding location to place supporting beams of said semiconductor element in contact with conductive regions of said group, and

bonding supporting beams of said semiconductor element to the contacted conductive regions of said group.

3,387,360
METHOD OF MAKING A SEMICONDUCTOR DEVICE

Keiichi Nakamura and Yoshiyasu Kuroo, Tokyo, Japan, assignors to Sony Corporation, Tokyo, Japan, a corporation of Japan
Filed Apr. 1, 1965, Ser. No. 444,765
6 Claims. (Cl. 29—579)



Method of attaching electrical leads to electrodes of a semiconductor device in which a stepped configuration is provided in the device and an electrically conductive metal is vaporized on said device at such an angle that the steps shield the area immediately adjacent the steps while metallic films are being deposited on the device, after which electrical leads are secured to said films.

3,387,361

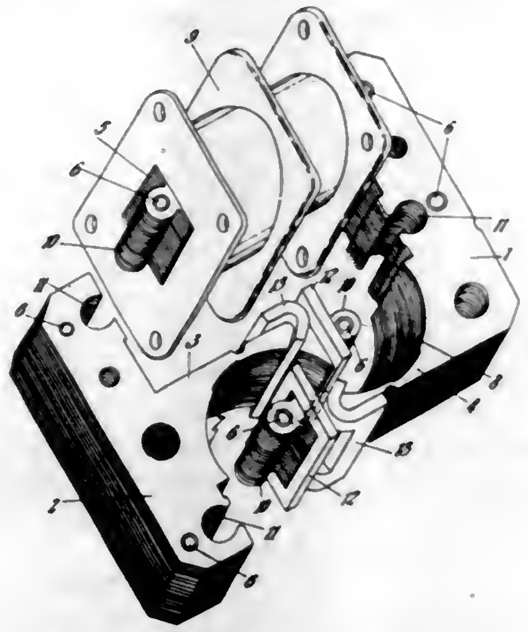
METHOD OF CONSTRUCTING THE STATOR FOR A SINGLE PHASE INDUCTION MOTOR

Eric Rowland and Edward William Wilkins, Swindon, England, assignors to Garrard Engineering Limited (formerly The Garrard Engineering and Manufacturing Company Limited), Swindon, England, a British company

Continuation-in-part of application Ser. No. 181,097, Mar. 20, 1962. This application Jan. 26, 1965, Ser. No. 428,042

Claims priority, application Great Britain, Apr. 6, 1961, 12,341/61

2 Claims. (Cl. 29—596)



A method of constructing a stator for a single phase induction motor. This method includes the steps of manufacturing a pair of separate paramagnetic metal stator members with configurations which give one of these stator members a generally U-shape with a bight having a pair of side legs extending therefrom, and the other stator member a generally T-shape with a head having a central leg extending therefrom, and with the free ends of the legs and the inner edges of the bight and head having complementary interlocking formations. This manufacturing step also includes providing at one edge of the central leg and at the inner edge of one side leg configurations which conjointly define, when the stator members are assembled, a substantially cylindrical stator tunnel completely closed laterally by paramagnetic metal. The method further includes positioning at least one starting winding on one of the legs adjacent the free end thereof and in embracing relation therewith before assembling the pair of stator members, and then assembling the pair of members by relative movement thereof parallel to the axis of the tunnel to interlock the formations and to retain the starting winding against displacement.

3,387,362

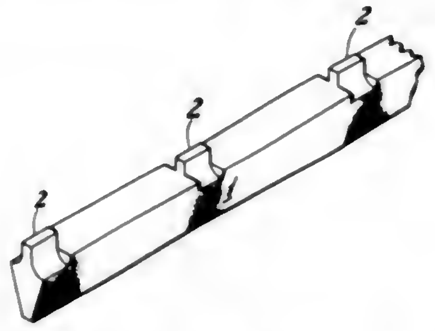
COINED BAR METHOD OF FABRICATING COMMUTATORS

Eugene P. Noris, Port-Au-Peck, N.J., assignor to The Bendix Corporation, Eatontown, N.J., a corporation of Delaware

Filed June 3, 1966, Ser. No. 555,151

3 Claims. (Cl. 29—597)

1. A method of fabricating commutators comprising coining risers on a bar to extend higher than the top surface of the bar and having a width less than the bar, placing a plurality of said bars in a circular arrangement in a compression fixture having slots to receive the risers, compressing the bars together with insulation between the bars to form an assembly, removing the assembly from the fixture, cutting the assembly transversely of its axis to form individual commutators each having a riser at one end thereof, and machining to true up the commutator.



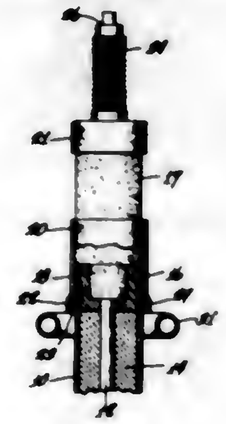
3,387,363

METHOD OF MAKING ELECTRIC HEATING ELEMENTS

Alben C. Boggs, Pittsburgh, Pa., assignor to Edwin L. Wiegand Company, Pittsburgh, Pa.

Filed Jan. 13, 1965, Ser. No. 425,168

1 Claim. (Cl. 29—619)



Hermetically sealing an end of a sheathed electric resistance heating element by use of a pre-formed fusible member disposed within a sealing sleeve.

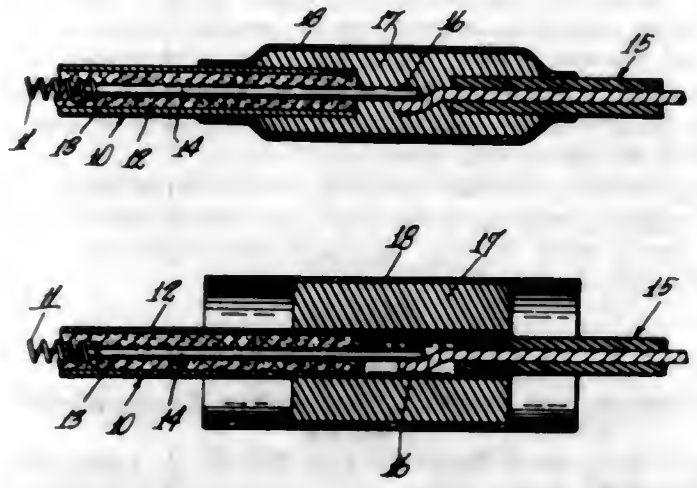
3,387,364

METHOD OF TERMINATING RESISTORS

Alben C. Boggs, Pittsburgh, Pa., assignor to Edwin L. Wiegand Company, Pittsburgh, Pa.

Filed July 30, 1963, Ser. No. 298,679

3 Claims. (Cl. 29—621)



1. The method of making a hermetically sealed electrical connection to a metallic sheathed, electric heating element having a terminal conductor protruding therefrom, which comprises

electrically connecting the bared end of an insulated lead wire to the protruding portion of said terminal conductor,

depositing a mass of flowable, uncured, rubber-like material about the connection between said wire and said conductor,

disposing a heat-shrinkable, flexible dielectric sleeve over said mass of material and with respective ends of such sleeve extending beyond said material and over the adjoining end of the element sheath and the insulation of the lead wire,

radially shrinking the intermediate portion of said sleeve about said mass of material by the application of heat thus compressing such mass about the electrical connection aforesaid and at the same time radially shrinking the opposite ends of said sleeve about the element sheath and the wire insulation respectively,

and curing said rubber-like mass of material in position by the application of heat aforesaid.

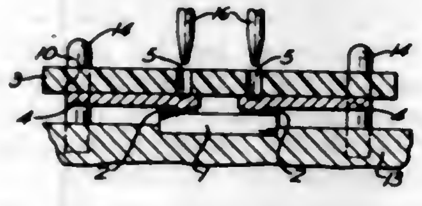
3,387,365

METHOD OF MAKING ELECTRICAL CONNECTIONS TO A MINIATURE ELECTRONIC COMPONENT

John P. Stelmak, 325 Walnut St., Greensburg, Pa. 15601

Filed Sept. 28, 1965, Ser. No. 490,863

3 Claims. (Cl. 29—628)



An insulating base member is provided with perforations arranged in the same pattern as metal dot contacts on a miniature electronic component. One side of the base member is provided with permanent electric conductors having inner ends covering the perforations. The base member is placed over the component with the inner ends of the conductors on the dot contacts. The perforations are used for gaining access to the underlying conductors for bonding them to the underlying contacts in order to permanently connect the base member and contacts.

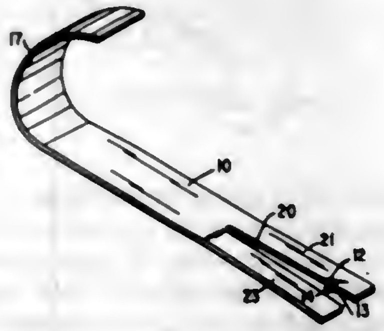
3,387,366

FILM SLITTER

John C. Whitman, Port Byron, N.Y., assignor to Agway Inc., Syracuse, N.Y., a corporation of Delaware

Filed Mar. 28, 1967, Ser. No. 626,545

2 Claims. (Cl. 30—2)



A flat member is incised to form a triangular portion, the apex area of which is bent outwardly from the flat member to provide a pointed barb for penetrating and slitting the film as the member is moved along the film.

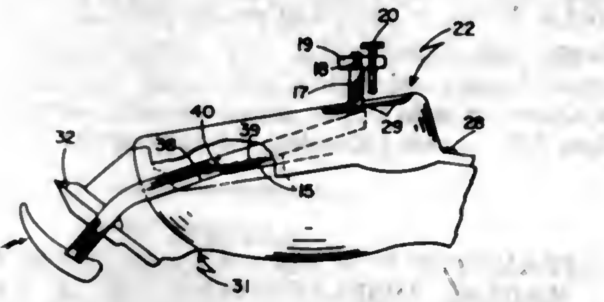
3,387,367

HAIR CLIPPER WITH ADJUSTABLE AUXILIARY COMB

Joseph Merzon, 45 Auburn St., Brookline, Mass. 02146

Filed Dec. 12, 1966, Ser. No. 600,839

1 Claim. (Cl. 30—201)



The adjustable auxiliary comb has the two sides of its open frame slideable on angular shelves formed on either side of the body of the clipper. The cover portion of the clipper forms a channel with each shelf when it engages the body of the clipper. The back of the frame has an upright member which engages with a control member on the outside of the cover for lateral sliding and raising or lowering by threading.

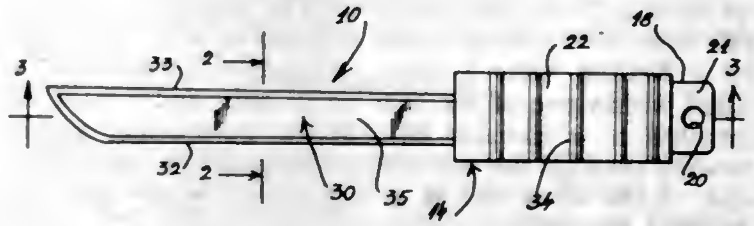
3,387,368

KNIFE WITH NON-STICKING BLADE

William V. Scheck, Ridgefield, N.J. (108—110 Wooster St., New York, N.Y. 10012)

Filed June 7, 1967, Ser. No. 644,322

9 Claims. (Cl. 30—348)



The disclosure describes a knife having a non-sticking jacket formed of polytetrafluorethylene (Teflon), nylon, or other self-lubricating plastic. The jacket can be made as a separate or separable member for interchanging with other knives or for replacement by other jackets.

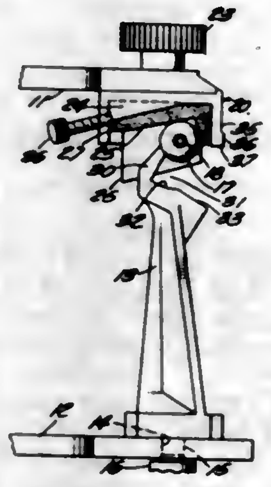
3,387,369

DENTAL ARTICULATOR

Kenneth H. Swanson, % California Lutheran College Centrum, 60 W. Olsen Road, Thousand Oaks, Calif. 91360

Filed Feb. 10, 1966, Ser. No. 536,497

8 Claims. (Cl. 32—32)



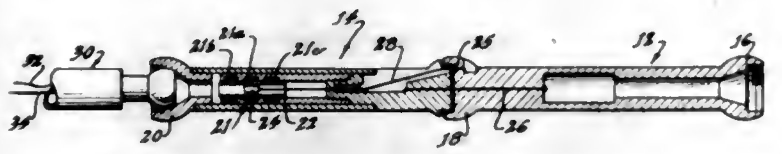
1. In a dental articulator having separable upper and lower frames with condyle posts mounted on the lower

frame and having shaped ends for engaging downwardly facing open sockets mounted on the upper frame to form the pivotal juncture between the frames, the improvement comprising; each said post having an offset portion supporting said shaped end forming a rearwardly open area beneath said shaped end, and each said open socket having a rear wall means normally depending adjacent said shaped end to limit forward movement of said upper frame and fitting under said shaped end in open positions of said upper frame thereby permitting greater than 90° opening pivoting of said upper frame.

3,387,370

APPARATUS FOR MEASURING INCREMENTAL RADIAL DISPLACEMENT OF A CHANNEL WALL

Byron B. Brenden and Jack C. Spanner, Richland, Wash., assignors to the United States of America as represented by the United States Atomic Energy Commission
Filed Sept. 8, 1966, Ser. No. 578,432
1 Claim. (Cl. 33—1)

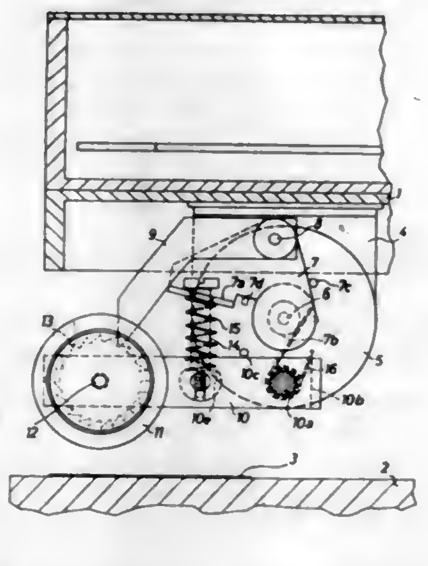


Apparatus for measuring bowing in long tubes such as nuclear-reactor process tubes. The apparatus comprises two rods with enlarged ends coupled in a universal joint by a flexible wire, a linear differential transformer located within one of the rods on its axis, and a rigid wire attached to a movable core of the transformer and extending through the one rod and connected to an adjacent end of the other rod at a region therewithin but offset from its axis.

3,387,371

APPARATUS FOR PRODUCING IMPRINTS ON PAPER OR THE LIKE

Othmar Schneider and Wolfgang Viehrig, Munich, Germany, assignors to Agfa-Gevaert Aktiengesellschaft, Leverkusen, Germany
Filed Dec. 2, 1966, Ser. No. 598,740
Claims priority, application Germany, Dec. 10, 1965, A 51,037
16 Claims. (Cl. 33—18)

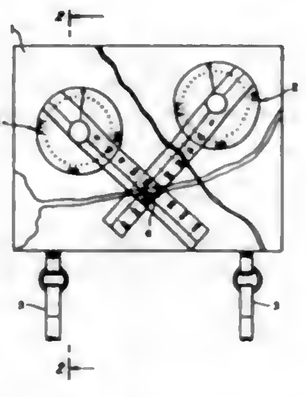


Apparatus for applying graphite marks to sheets comprises a holder which carries a graphite wheel and is rockable to move the wheel into and away from engagement with a sheet. The wheel is rotated during engagement with the sheet to produce a sharply outlined mark.

3,387,372

PICTORIAL PLOTTING BOARD AND RELATED PLOTTING DEVICE

Steve Sabadishin, 1165 U.S. Rte. 22, North Plainfield, N.J. 07060
Filed July 19, 1965, Ser. No. 473,133
5 Claims. (Cl. 33—76)

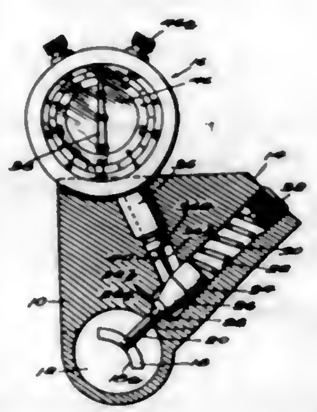


On an inflight lap-held plotting board is placed a navigational map, and upon the map a plotting device including a transparent plastic compass rose having a dished configuration, a linear scale member mounted upon the compass rose for selective rotation relative thereto, and a pin for affixing the compass rose to the plotting board and map, with the dished configuration being deflected to establish a frictional force between the compass rose and the map for securing the compass rose against movement relative to the map during deliberate rotation of the linear scale member.

3,387,373

FINGER RING GAUGES

Francis H. Harrington, Hampton, N.H., and John S. Dehne, Boston, Mass., assignors to Dieges & Clust, Providence, R.I., a corporation of New York
Filed Apr. 12, 1967, Ser. No. 630,417
5 Claims. (Cl. 33—147)

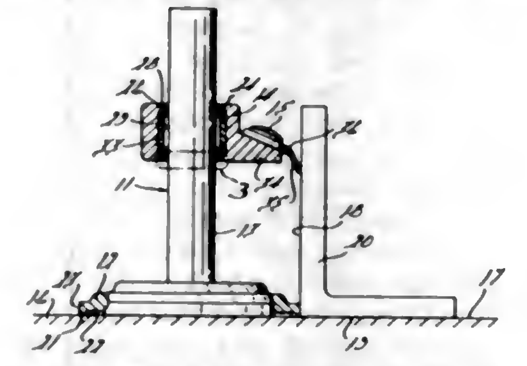


A dial-type finger ring gauge comprising a body member having a finger-receiving hole extending therethrough, an edge portion of which provides a fixed contact surface, a movable contact operative in said hole and having a contact surface opposed to said fixed contact surface, an indicating dial mounted on said body member in a readily viewable position thereon, and means carried by said body member for translating motion of said movable contact in accordance with variations in finger size and profile into motion of the pointer of said dial thereby to provide a visual indication of finger-ring size and profile.

3,387,374

PERPENDICULARITY GAGE

Lawson O. Gordon, 22418 Rio Vista, St. Clair Shores, Mich. 48081
Filed Nov. 9, 1966, Ser. No. 593,008
1 Claim. (Cl. 33—174)

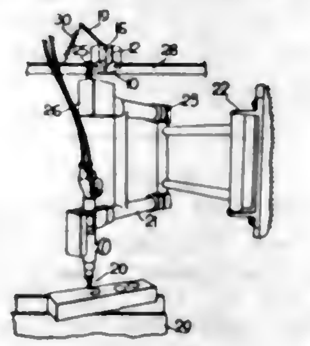


A gauge fixture having a base with a flat undersurface and a cylindrical side surface which engages the lower part of a workpiece. The base centrally supports a post on which is slidably mounted a carrier for a dial indicator.

3,387,375

TEMPLATE FOR THE GAS CUTTING OF HOLES

Lloyd A. Nowotny, Milwaukee, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed June 16, 1967, Ser. No. 646,667
4 Claims. (Cl. 33—174)

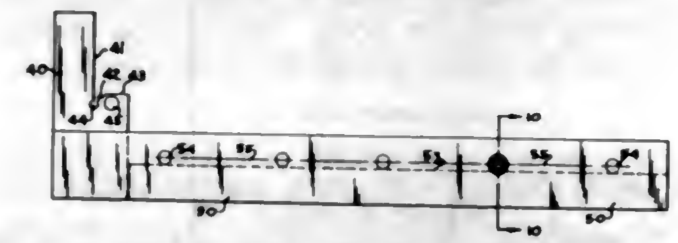


A circular template for use in combination with a template tracing gas cutting machine having an acute sector-shaped indentation in the periphery thereof. A sector-shaped member, having a sector angle smaller than that of the indentation, is pivotally secured therein to provide a small sector shaped slot at one pivot position and another small sector-shaped slot at the other pivot position.

3,387,376

TEMPLATE FOR USE IN MOUNTING MOLDING ON PANELS

Duel Garland Hedgspeth and Louis E. Himelreich, Louisville, Ky., assignors to H. J. Scheirich Company, Louisville, Ky., a corporation of Kentucky
Original application Dec. 14, 1965, Ser. No. 513,708. Divided and this application Aug. 28, 1967, Ser. No. 663,829
3 Claims. (Cl. 33—174)

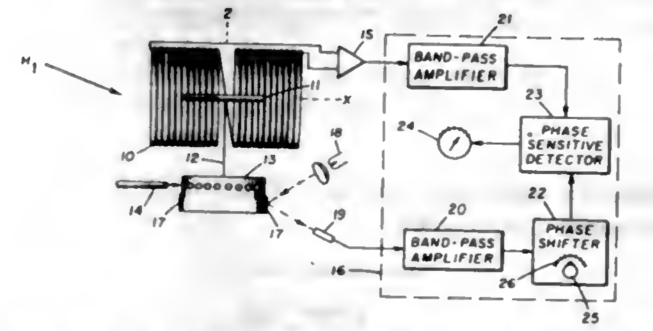


A template for locating the positions at which holes are to be formed in a panel having an emplaced molding strip thereon. The template is adapted to engage with the emplaced strip in order to establish the proper location of the holes into which pegs on a complementary molding strip may be subsequently fitted.

3,387,377

MAGNETOMETER UTILIZING A MAGNETIC CORE ROTATED WITHIN A STATIONARY COIL PERPENDICULAR TO THE COIL AXIS

Bobbie J. Patton, Dallas, Tex., assignor to Mobil Oil Corporation, a corporation of New York
Filed Dec. 22, 1964, Ser. No. 420,324
3 Claims. (Cl. 33—204)

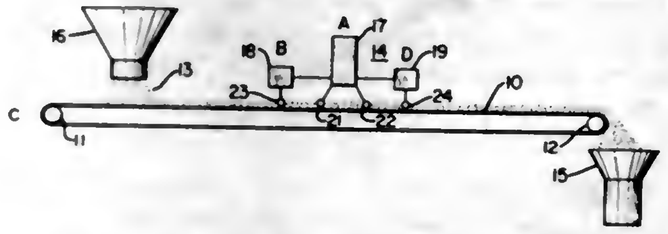


The specification discloses a magnetometer comprising an elongated member of high magnetic susceptibility rotated within a stationary coil about an axis perpendicular to the axis of the coil for inducing a signal in the coil having a magnitude and phase related, respectively, to the magnitudes and direction of an unknown magnetic field to be measured. The signal induced in the coil has a frequency twice that of the frequency of rotation. This signal is filtered to eliminate signal components due to remanent magnetism of the member. The resulting signal is compared with a reference signal of the same frequency for determining the phase of the signal induced in the coil.

3,387,378

METHOD AND APPARATUS FOR HIGH FREQUENCY TREATMENT OF MATERIALS

Roy R. Newsom, Escondido, Calif., assignor to Control Systems Corporation, a corporation of Colorado
Filed July 2, 1965, Ser. No. 469,265
12 Claims. (Cl. 34—1)



A high frequency apparatus produces pulsed fields of energy for drying or otherwise treating materials and effects economic use of power in such treatment. The apparatus applies energy at different frequencies and directed into the material along different axes. The application of pulsed energy to material in different successive directions and different rates of application of energy is employed in the control of chemical actions and processes.

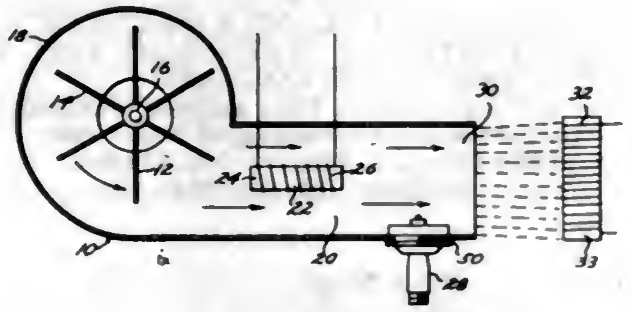
3,387,379

METHOD FOR DRYING AND TREATING HAIR OR OTHER NATURAL FIBERS VIA ULTRASONICS

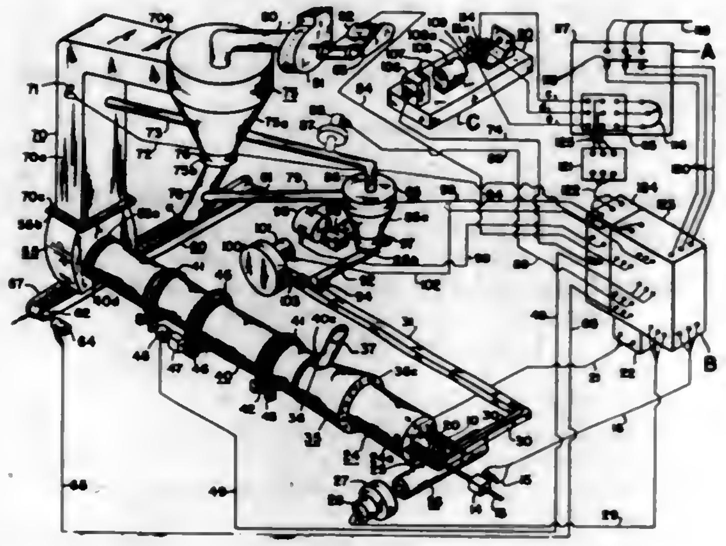
Ralph W. Goble, Boulder, Colo., assignor to Engineering & Development Company of Colorado, Boulder, Colo., a corporation of Colorado
Division of application Ser. No. 297,162, July 23, 1963, now Patent No. 3,254,424, dated June 7, 1966. Continuation-in-part of application Ser. No. 190,924, Apr. 30, 1962. This application Sept. 13, 1965, Ser. No. 486,881
14 Claims. (Cl. 34—3)

1. The method of treating natural fibers comprising the

steps of arranging the fibers into a predetermined configuration, wetting the fibers with an aqueous medium and subjecting same to a stream of fluid which is modulated at ultrasonic frequencies.

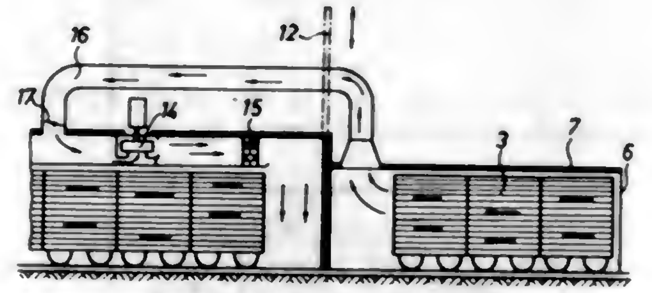


3,387,380
COAL DRYING APPARATUS
Willis L. Pritts, Jr., 182 S. High St.,
Scottdale, Pa. 15683
Continuation-in-part of application Ser. No. 4,804, Jan. 26, 1960. This application May 5, 1961, Ser. No. 107,972
4 Claims. (Cl. 34—48)



1. In apparatus for drying a burden of coal pieces in an elongated rotatable kiln having opposed inlet and outlet end portions, a mixing chamber unit having opposed inlet and outlet portions and having its inlet portion connected to the inlet end portion of the kiln for delivering a tempered mixture of air and hot combustion gas thereto, a delivery chute extending into said mixing chamber unit and towards the inlet portion of the kiln for feeding the coal burden to the kiln, means for supplying atmospheric air to said mixing chamber unit for mixing with and tempering hot combustion gas therein, an elongated combustion chamber unit having opposed inlet and outlet end portions and having its outlet end portion connected to the inlet end portion of said mixing chamber unit to supply hot combustion gas thereto, a pilot mixing chamber having opposed inlet and outlet end portions and having its outlet end portion connected to the inlet end portion of said combustion chamber unit, means for supplying air and a fuel vapor to said pilot mixing chamber unit for supporting a pilot flame within the inlet portion of said combustion chamber unit, a discharge chamber unit connected to the outlet end portion of the kiln and having a portion for delivering the dried coal burden from the kiln, a conveyor constructed to receive the dried coal burden from said discharge chamber unit, a suction duct unit connected to an upper outlet end portion of said discharge chamber unit for drawing hot gas and dried coal dust therealong, a cyclone separator collector unit connected to an outlet end portion of said suction duct unit for receiving the hot gas and dried coal dust and separating out and collecting the dried coal dust, a delivery chute connected to said cyclone unit for delivering the dried coal dust therefrom to said conveyor, a second cyclone unit connected by a suction line to said delivery chute for drawing-off a portion of the dried coal dust therefrom, a fuel supply duct connected to a discharge end portion of said second cyclone unit, motor-driving means for positively feeding the dried coal dust from said second unit into said fuel supply duct, means proportioning the feed of said motor-driving means to the temperature of the hot gas being drawn along said suction duct unit, means connected to said fuel supply duct for applying a positive flow of air to mix with the dried coal dust being supplied thereto and feed the mixture positively forwardly along said fuel supply duct, said fuel supply duct being connected to the inlet end portion of said combustion chamber unit for feeding the mixture of air and dried coal dust thereto for ignition by the pilot flame and combustion therein to evolve hot combustion gas, an igniter projecting into said pilot mixing chamber unit adjacent the inlet end portion of said combustion chamber unit for igniting the pilot gas mixture and initiating the pilot flame, and control means for stopping and starting the supply of fuel vapor to said pilot mixing chamber unit and for stopping and starting the feed of the mixture of air and dried coal dust to said combustion chamber unit.

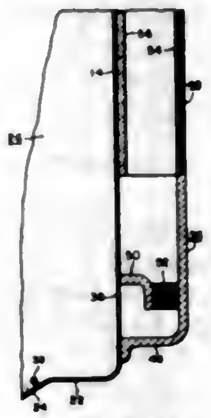
3,387,381
AIR DRIER FOR STACKED MATERIALS
Robert Hildebrand, Nuertinger Str. 68, Oberboihingen, Wurttemberg, Germany
Filed Jan. 11, 1967, Ser. No. 608,588
Claims priority, application Germany, Jan. 12, 1966, H 58,216
6 Claims. (Cl. 34—66)



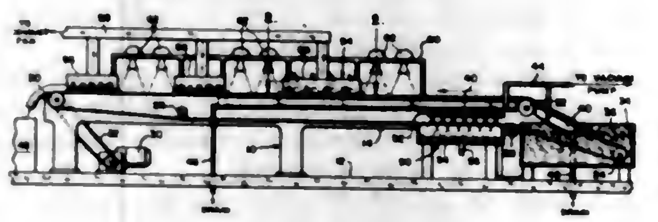
A large air drier of a very simple construction comprising successive preheating, drying, and cooling zones through which stacked materials may be moved intermittently, and which may be operated at a low cost by preheating the fresh air which is added to the heated air circulating within the drying zone by first drawing this air from the outside through the cooling zone.

3,387,382
VAPOR CONDENSER FOR DISHWASHER VENT SYSTEM
Hugh C. Williamson, Columbus, Ohio, assignor to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Mar. 8, 1966, Ser. No. 532,634
2 Claims. (Cl. 34—72)

Vapor condenser apparatus comprising a condensing plate shielded from the dishwater tub by thermal insulating material, the plate and thermal insulating material being located at the upper end of a housing serving both as a water fill housing and as a venting housing.

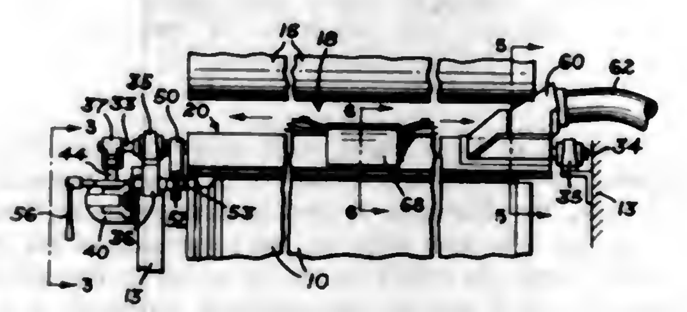


3,387,383
METHOD AND APPARATUS FOR REMOVING MOISTURE FROM MATERIAL
Chris Stamos, Chicago, Philip C. Reeves, Arlington Heights, and James D. Wender, Jr., Lombard, Ill., assignors to Roberts & Schaeffer Company, Division of Thompson-Starrett Company, Inc., Chicago, Ill., a corporation of Illinois
Filed Aug. 11, 1965, Ser. No. 478,943
1 Claim. (Cl. 34—90)



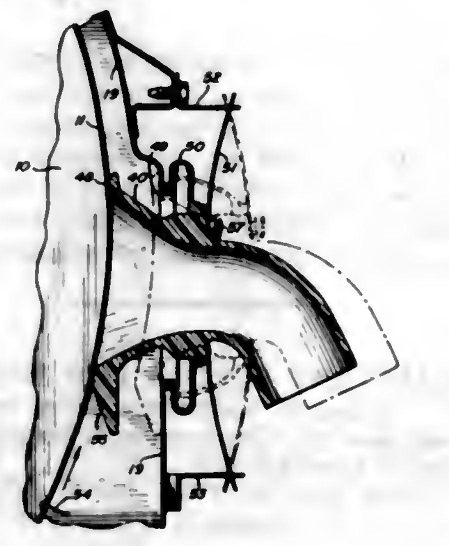
A method and means for removing moisture from wet material comprising depositing moist material on one side of a filter cloth; subjecting the other side of the filter cloth to sub-atmospheric pressure to remove a portion of the moisture from the material; subjecting the material to high energy sound vibrations; and removing moisture from the air surrounding the material.

3,387,384
PAPER DRYING MACHINERY
Frederic H. Sutton, Metairie, La., assignor to The Black Clawson Company, Hamilton, Ohio, a corporation of Ohio
Filed Mar. 30, 1966, Ser. No. 538,823
6 Claims. (Cl. 34—114)



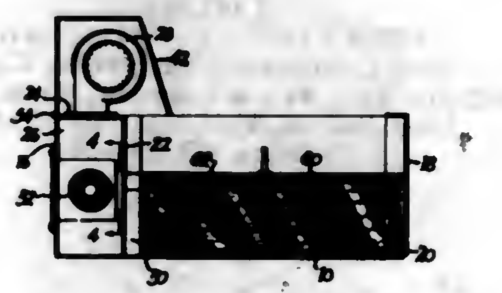
A paper dryer having parallel spaced dryer drums and endless felts directed around the drums for holding a paper web in form contact therewith, includes a plurality of doctor assemblies which extend through the elongated open ended pockets defined between the drums and the adjacent portions of the felts. Each doctor assembly has a doctor plate movable into contact with the corresponding drum surface and defines a longitudinally extending passageway with a centrally disposed outlet. Heated air is supplied to one end of each passageway, and a deflector overlies each outlet for directing opposing streams of heated air from the central portion of each pocket towards both open ends for purging humid air from the pocket.

3,387,385
NOZZLE FOR LIQUID EXTRACTION APPARATUS
Vincent C. Mandarino, Jr., and Leo H. Sauer, St. Joseph, Mich., assignors to Whirlpool Corporation, a corporation of Delaware
Filed Oct. 22, 1965, Ser. No. 500,829
5 Claims. (Cl. 34—133)



A liquid extraction apparatus such as a laundry dryer having a suction nozzle adapted to bear against the perforate periphery of a rotatable drum with means for rotating the drum relative to the nozzle, the nozzle being provided with yieldable means biasing it against this perforate periphery and means on the nozzle engageable by an object projecting from the perforate periphery to move the nozzle away from the drum and thus minimize or completely avoid injury to the drum or nozzle or both.

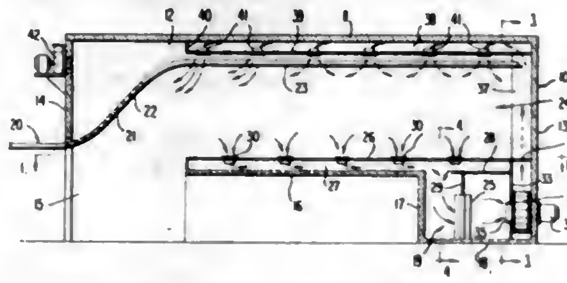
3,387,386
PHOTOGRAPHIC PRINT AND FILM DRIER
Donald Gaubatz, 22439 Pardee Court,
Dearborn Heights, Mich. 48125
Filed Jan. 24, 1966, Ser. No. 522,483
3 Claims. (Cl. 34—145)



A photographic print drier includes a box-like structure with spaced outer walls and a partition wall dividing the structure into two compartments one for heating and the other for drying by delivering a flow of warm air through a stack of photographic prints separated from each other by blotters to enable the simultaneous drying of a relatively large number of prints.

3,387,387
CURING AND DRYING APPARATUS

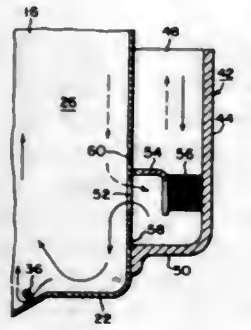
Bryan J. Perry, Jr., Greenville, S.C., assignor to Kitchen & Perry, Inc., Greenville, S.C., a corporation of South Carolina
Continuation-in-part of application Ser. No. 491,216, Sept. 29, 1965. This application Nov. 3, 1967, Ser. No. 680,374
5 Claims. (Cl. 34—208)



An apparatus for the curing or drying of free-hanging moving articles in a zone where uniform temperature is maintained in all parts of the zone along with continuous recirculation of heated air. An elevated curing or heating chamber assures natural entrapment of heated air without the necessity for closures or seals and with only the minimum requirement for exhaust to maintain safety.

3,387,388
SINGLE VENT SYSTEM FOR DISHWASHER

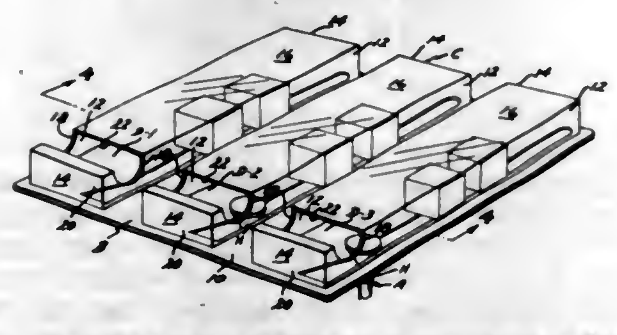
Hugh C. Williamson, Columbus, Ohio, assignor to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Dec. 17, 1965, Ser. No. 514,641
5 Claims. (Cl. 34—234)



Domestic dishwasher venting arrangement in which the heating element for drying is disposed relative to slot means in the lower portion of a side wall to induce air flow through the slot means during the drying cycle, the slot means constituting the sole vent means for the dishwasher chamber.

3,387,389
EDUCATIONAL VISUAL AID

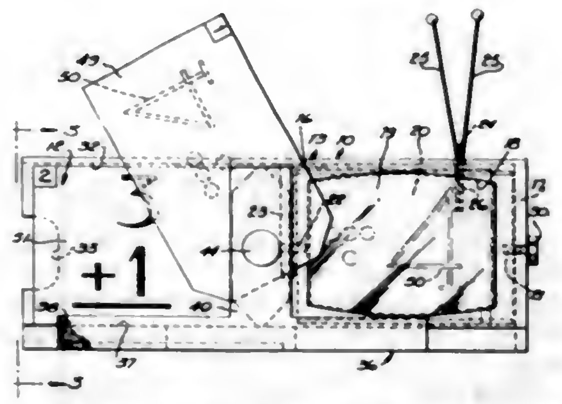
Fred E. Weirauch, Marysville, Calif.
(1242 21st Ave., Apt. 2, Longview, Wash. 98632)
Filed Jan. 26, 1966, Ser. No. 523,096
5 Claims. (Cl. 35—31)



An educational visual aid which comprises a flat, rigid base with a plurality of slots therein. A transparent rigid hollow structure is bonded to one side of the base to form a plurality of elongated confined spaces, each of the spaces being in communication with one of the slots. A plurality of insignia-bearing cubes or similar bodies are confined within the spaces and means that are extensible through the slots are provided for manipulating the bodies to demonstrate various mathematical relationships.

3,387,390
FLASH CARD GAME AND STAND

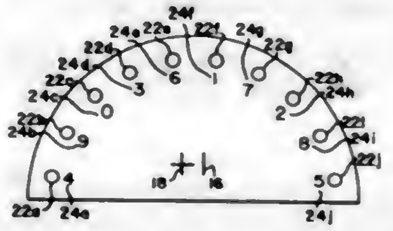
Ruth G. Chuy and Daniel T. Chuy, both of 15447 Sorrento, Detroit, Mich. 48227
Filed Sept. 12, 1966, Ser. No. 578,778
9 Claims. (Cl. 35—31)



1. A device of the class described, comprising:
(a) a housing;
(b) a mirror mounted in said housing;
(c) a set of flash cards mounted in spaced relation to said housing and movable individually into position in front of the mirror for viewing successively the rear face of each card; and,
(d) each of said flash cards being provided with an answer on the rear face thereof corresponding to a problem on the front face of the succeeding card, with the first card of the set of cards having no problem on its front face and the last card of the set of cards having no answer on its rear face.

3,387,391
FLASH CARDS FOR TEACHING ARITHMETIC

Angela D. Bartolo, 88 Martin Road, Livingston, N.J. 07039
Filed Feb. 1, 1967, Ser. No. 613,187
6 Claims. (Cl. 35—31)

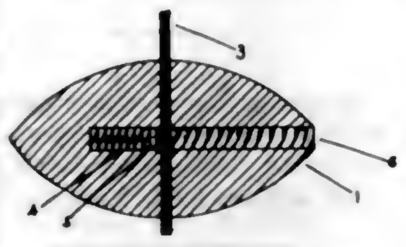


A series of flash cards with shape of semi-discs has printed on one surface thereof a particular numeral, for example, the numeral 3, and a mathematical function, i.e. a plus sign and also, on the same side, a set of unrelated numerals which are to be added to the addend 3. Adjacent each one of the unrelated numerals is a hole passing through the card. On the back of the card, there is a numeral associated with each hole, which numeral is the sum of the addend three plus the unrelated addend associated with the particular hole. Also on the back of the card is the same numeral 3 with the inverse function, i.e. a minus sign. The student utilizing the card would look at one side of the card and try to add the numeral three plus one of the unrelated addends. To check his answer, the student sticks a pencil or other object through the hole and looks at the reverse side of the card checking the sum on the reverse side adjacent the hole to see if his answer is correct. He will then note and understand that the answer on the back of the card is a sum which if the numeral three is subtracted therefrom as indicated on the back of the card will give him the first unrelated addend on the plus side of the card. Accordingly, he is being taught addition and subtraction at the same time, and further, the full recognition of the inverse relationship of these two mathematical functions. This is accomplished in an extremely simple manner as the student need only use a pencil and the easily printed flash cards. Further, a stack of flash cards can be provided for each number up to ten with each flash card being of a different color so as to be easily differentiated one from another by the student. Still further, another set of flash cards can be made for the inverse mathematical functions of multiplication and division. These flash cards are used in the same manner as those used to teach addition and subtraction.

In general, this invention relates to a new and improved set of flash cards for teaching arithmetic and, more particularly, relates to a new and improved method of utilizing flash cards to teach inverse mathematical relationships to young students.

3,387,392
ABACUS WITH MECHANICAL MEANS FOR HOLDING UNIT COUNTERS IN POSITION

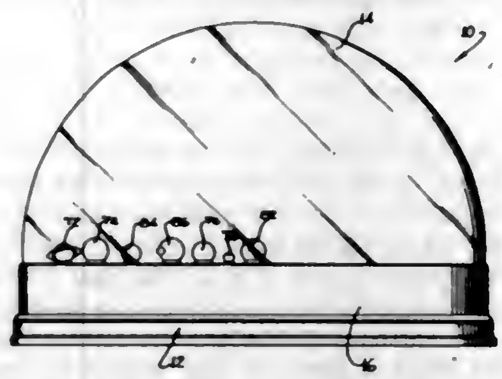
Donald A. Kurz, 617 Illinois Road, Lake Forest, Ill. 60045
Filed Dec. 30, 1965, Ser. No. 518,766
1 Claim. (Cl. 35—33)



The invention resides in the provision of an abacus designed particularly for use in teaching where the counter carrying rods are positioned vertically and wherein counters slidable on said rods are frictionally held against gravity in any position on the rod to which they are moved. The frictional means consists of a spring inserted in a hole bored laterally in each counter and surmounted by a ball bearing to engage one of the rods.

3,387,393
TOY PLANETARIUM

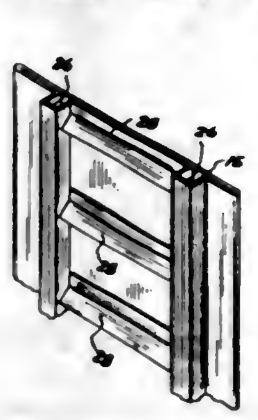
Clair O. Musser, 12997 Blairwood Drive, Studio City, Calif. 91604
Filed Jan. 21, 1966, Ser. No. 522,239
5 Claims. (Cl. 35—45)



A planetarium as disclosed which has a base with a flat, non-magnetic top. A plurality of concentric ring gears are rotatably mounted on the base underneath the top. A single motor is loaded on the base 18, connected to a drive shaft carrying a plurality of pinion gears simultaneously rotating all of these ring gears. A member simulating a planet is located generally above each ring gear on the top of the base. Magnetic coupling means couple the members simulating planets and the corresponding ring gears so that these members are rotated as the ring gears are rotated through the operation of the motor means.

3,387,394
SIGN CONSTRUCTION

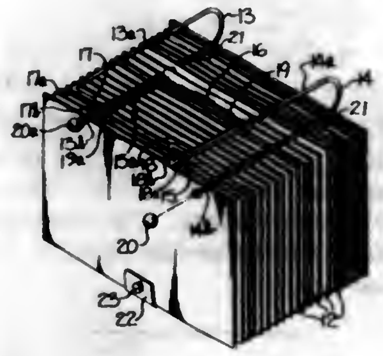
Willy T. Werner, 12326 E. McNichols Road, Detroit, Mich. 48234
Filed Sept. 15, 1965, Ser. No. 487,401
8 Claims. (Cl. 40—76)



A display sign of the type in which three different advertising messages are presented in sequence by rotation of a plurality of three-sided louvers and in which panels are secured to core members to make up the louvers by means of brackets and clips which secure these members together upon relative movement in one direction, a lock between the core members and panels to prevent movement in a direction permitting disengagement and a spring biased pin carried by the louvers to snap into engagement with a frame to rotatably support the upper end of the louvers.

3,387,395
DISPLAY CARD CARRIER

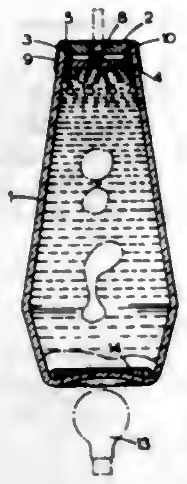
Robert E. Merritt and Warren C. Nichols, Mount Airy, N.C., assignors to Renfro-Hosiery Mills Company, Mount Airy, N.C., a corporation of North Carolina
Filed Apr. 1, 1966, Ser. No. 539,479
7 Claims. (Cl. 40—102)



A display card carrier including two coextensive spaced, U-shaped guideways with a handle conveniently located between the guideways for supporting a plurality of display cards in a balanced condition during transportation. The position of the handle between the guideways also permits the carrier to be lifted by one hand when the cards are in a displayed condition.

3,387,396
DISPLAY DEVICES

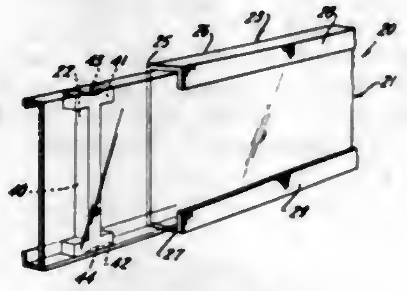
David George Smith, London, England, assignor to Crestworth Limited, London, England
Filed Mar. 4, 1965, Ser. No. 437,218
Claims priority, application Great Britain, Mar. 18, 1964, 11,555/64
4 Claims. (Cl. 40—106.21)



A display device comprising a container having two substances therein, with one of the substances being of a heavier specific gravity and immiscible with the other substance, with the first substance being of such a nature that it is either substantially solid at room temperature or is so viscous at room temperature that neither will emulsify with the other liquid, and when heat is applied to the container, the first substance will become flowable and move about in the other substance.

3,387,397
CHANGEABLE DISPLAY DEVICE

William V. Buchanan and Richard D. Muir, both of 429 Main St., Newfield, N.Y. 14867
Filed Oct. 23, 1965, Ser. No. 503,595
2 Claims. (Cl. 40—140)

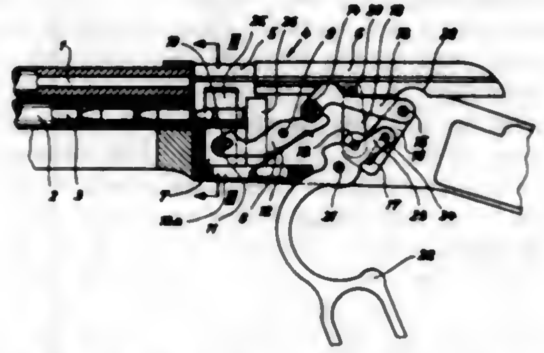


A changeable display device which is assembled by snapping a plurality of characters into an elongated channel-like transparent holder where they are positively retained by channel flanges. The transparent holder is in turn mounted in a frame-like opaque channel structure having inturned lips.

3,387,398
CARTRIDGE FEED IN LEVER-OPERATED RIFLE

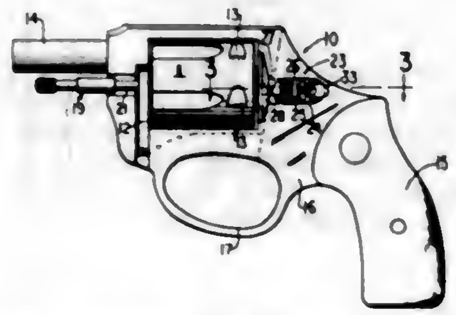
Karl Arndt, Lauf, near Nurnberg, Germany
Filed Mar. 4, 1966, Ser. No. 531,990
Claims priority, application Germany, Mar. 4, 1965, R 40,039
1 Claim. (Cl. 42—17)

A cartridge feed for guns comprising a box-like vertically displaceable conveyer for the cartridge in the rifle receiver. The conveyer is actuated by a lever mechanism which moves it upward from a normal position to a position in front of the rifle barrel. The cartridge is guided by the receiver along both its longitudinal sides and at its rear end by a stop plate.



3,387,399
REVOLVER LATCH MECHANISM

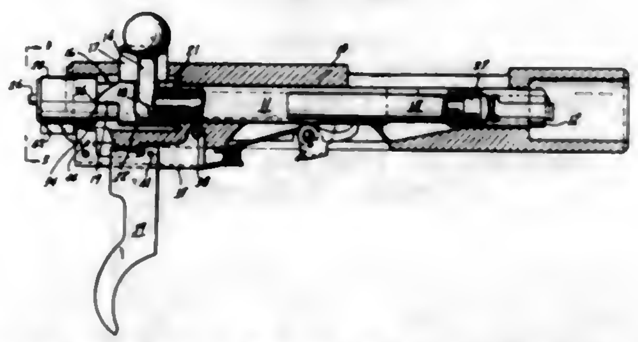
Douglas S. McClenahan, 980 Mill Hill Road, Southport, Conn. 06940
Filed Apr. 25, 1966, Ser. No. 544,917
4 Claims. (Cl. 42—62)



A revolver having a frame with integral side walls, one of the side walls having an aperture for receiving a cylinder release latch, the side walls receiving the butt therebetween and the release latch having an adjustable pin.

3,387,400
AUTOMATIC SAFETY DEVICE WITH MANUAL RELEASE FOR BOLT ACTION FIREARMS

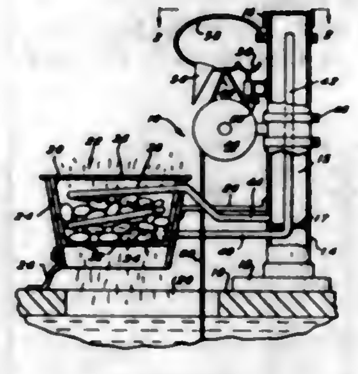
Joseph A. Badali, Branford, Victor Alexander Kulikowski, Hamden, and Edwin S. Vartanian, North Haven, Conn., assignors to Olin Mathieson Chemical Corporation, a corporation of Virginia
Filed May 8, 1967, Ser. No. 636,787
3 Claims. (Cl. 42—70)



2. In a bolt action firearm, the combination of a tubular bolt including an aperture for receiving one end of a bolt handle having a transverse bore, a striker rod within the bolt having a searing head at one end and a working head at the opposite end, said striker rod being received within said transverse bore operative to anchor said bolt handle, a coil spring surrounding the striker rod abutting the working head at one end and seated against the bolt handle at the other end, said spring being under compressive stress operative to urge the striker towards a firing position, a safety defining cam means carried by the bolt and movable relative to the bolt, said cam means making a driving connection with the bolt and with the searing head, said cam means being operable to cock the striker when the bolt is opened, said cam means being further operable by virtue of its being movable relative to the bolt to hold the striker cocked after the bolt is closed.

3,387,401
FISHING DEVICE

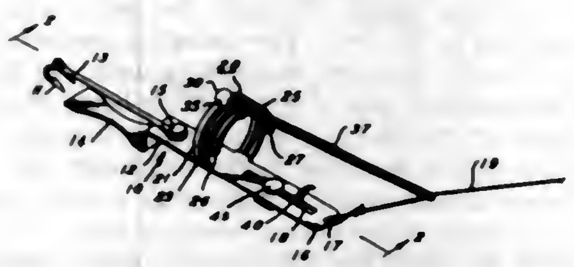
John J. Steinmach, 1621 Downton St., Philadelphia, Pa. 19140
Filed Oct. 14, 1965, Ser. No. 495,803
5 Claims. (Cl. 43—17)



A fishing device including a means for directing heat into a hole chopped in ice so as to prevent the same from freezing over. Heat is also directed to a fishing reel so that the reel will not freeze. An indicator responsive to a fish biting on the line may be utilized so that a fisherman may be at a remote location since the device does not require his constant attention.

3,387,402
LIVE FISH BAIT MEANS

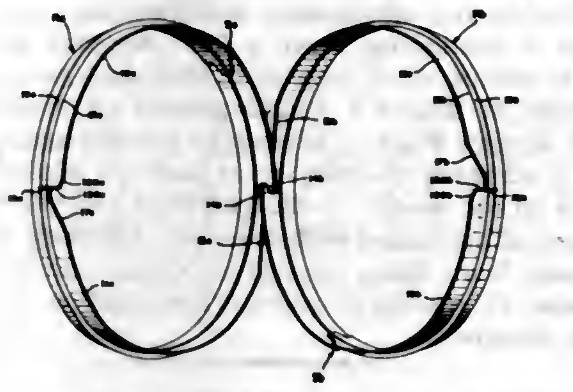
Wilburt W. Mays, 2020 N. 8th St., Philadelphia, Pa. 19148
Filed Oct. 21, 1965, Ser. No. 500,084
8 Claims. (Cl. 43—41)



A live bait fishing lure, comprising: an elongated base formed of a length of plate with a fish hook at one end and having means for attachment of a fish line at the opposite end; a retainer ring affixed on said base and projecting on one side thereof between said means and hook, said ring being transverse of said length to receive therewithin live bait in alignment with said base; a spike projecting from said base between said opposite end and said ring, said spike being adapted for impaling and securing said bait thereon with said ring and base providing a protective guard therefor; said base including a longitudinal slot therethrough between said opposite end and said ring, said spike projecting through said slot of said base at said one side thereof and being movable therealong, said spike having a screw clamp for securing said spike at a desired position within said slot; a clacker flexibly attached to said ring, and a connector means joining said clacker to said fishing line at a point beyond said opposite end whereby said fish line may be jerked to excite said clacker. Said fishing lure also provides for said ring being split into a sturdy support segment, a flexible segment which may be adjusted tightly about said bait by squeezing and collapsing toward said base, and a semisegment providing fingers which may be squeezed together on both sides of said bait for secure containment thereof on said lure, and said length of plate having a reverse bend at one end of said base providing a Z-shaped guard configuration across said hook.

3,387,403
TUBULAR COUPLING

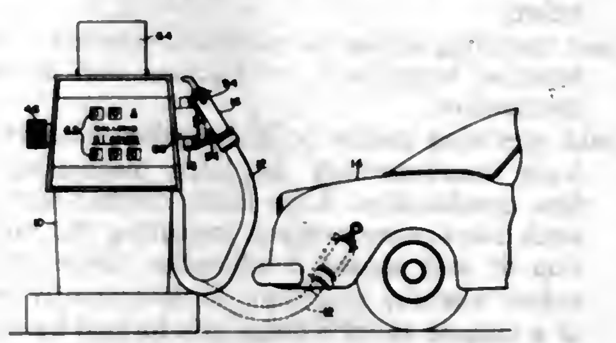
Lindsley B. Crouch, Fillmore, N.Y., assignor to Cuba Specialty Manufacturing Co., Inc., Houghton, N.Y., a corporation of New York
Filed Dec. 9, 1965, Ser. No. 512,757
10 Claims. (Cl. 43—65)



1. A coupling for joining two tubular members and comprising a pair of rings severally connected to said members and removably joined together in overlapping and interlocking relationship, each ring including an annular, generally axially outstanding flange divided into first and second semi-annular portions, said first flange portion terminating at one end and having its opposite end provided with a generally circumferentially extending lug, said second flange portion being cut away at one end to provide a generally circumferentially extending notch adjacent said lug and being cut away at its opposite end to provide a cut-out adjacent said one end of said first flange portion, said rings being reversed and their flange portions being slightly distorted spirally so that said lug on said first flange portion of each ring interlocks with said lug on said first portion of the other ring and fits inside said first flange portion of the other ring, said second flange portion on each ring overlaps said first flange portion of the other ring, said one end on said first flange portion of each ring abuts said one end on said first flange portion of the other ring, and said first flange portion on each ring closes said cut out in said second flange portion of the other ring.

3,387,404
TOY GASOLINE PUMP

Mel Appel, Livingston, N.J., assignor to Buddy L Corp., East Moline, Ill., a corporation of Illinois
Filed Aug. 2, 1966, Ser. No. 569,622
6 Claims. (Cl. 46—39)



A toy pump including register means driven by an electric motor housed with the simulated pump body and activated by a switch contained in the simulated nozzle of a simulated hose, the switch including a projecting actuator associated with a nozzle-mounted permanent magnet that attracts itself to the metallic structure of an associated toy vehicle so as to depress the actuator to close the switch.

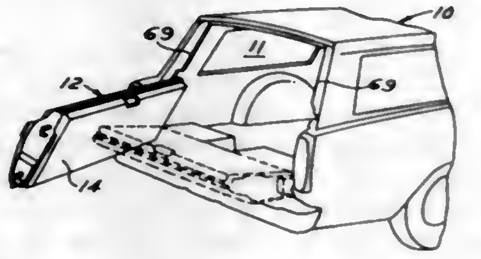
3,387,405
CONTINUOUS FILM MULCH FROM POLYVINYL ALCOHOL AND ASPHALT OR WAX

John M. Iwasyk and Bernard C. Lawes, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed June 27, 1966, Ser. No. 560,848
37 Claims. (Cl. 47—9)

1. A process for mulching soil which comprises applying thereto and substantially simultaneously gelling thereon as a continuous layer a fluid aqueous foam which has a volume of at least 0.1 cubic foot per pound and contains at least 0.5 weight percent of dissolved polyvinyl alcohol which is at least 80 percent hydrolyzed and has a reference viscosity of at least 30 centipoises, and, based on the weight of said polyvinyl alcohol, at least 50 percent of emulsified asphalt or wax softening below 220° F., said foam being applied at a rate corresponding to at least 15 pounds of polyvinyl alcohol per acre of soil to be covered.

3,387,406
DUAL-HINGED TAILGATE

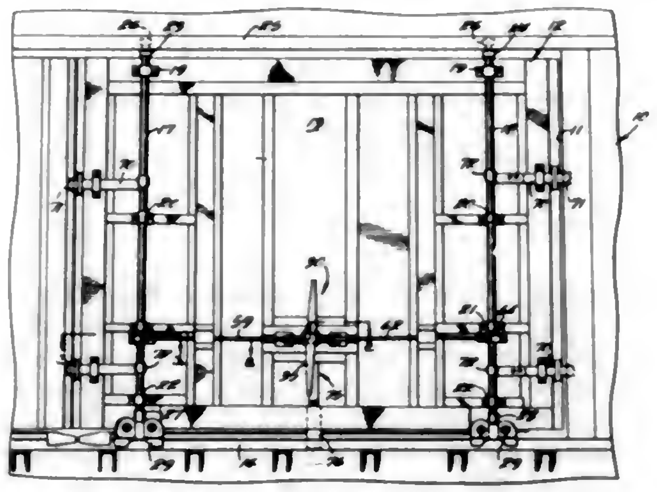
Gerald C. Coker, Livonia, and Boleslaw W. Bodek, Inkster, Mich., assignors to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Aug. 24, 1966, Ser. No. 574,793
10 Claims. (Cl. 49—192)



1. In a vehicle body of the station wagon type having a passenger-cargo carrying area,
body members framing a substantially upright access opening to said passenger-cargo carrying area,
a dual action door for said opening,
said dual action door when closing said access opening being in a substantially upright position and coupled to said body members by attachment means at four points of attachment,
at one side of the door the attachment means at the bottom comprising a multi-hinge mechanism and at the top a first combination hinge-latch mechanism,
at the other side of the door the attachment means comprising at the bottom a second combination hinge-latch mechanism and at the top a latch mechanism,
and operating means on said door coupled to the combination hinge-latch mechanisms and to the latch mechanism,
said operating means being operable selectively to release simultaneously the latch mechanism of said first combination hinge-latch mechanism and said latch mechanism without impairing the hinge function of said second combination hinge-latch mechanism whereby said door is downwardly swingable as a tailgate about a hinge axis formed by the double hinge mechanism and said second combination hinge-latch mechanism,
or said operating means being selectively operable to release the latch mechanism of said second combination hinge-latch mechanism and the latch mechanism located at said other side of the door without impairing the hinge function of the first combination hinge-latch mechanism whereby said door is vertically swingable about a hinge axis formed by the double hinge mechanism and the first combination hinge-latch mechanism.

3,387,407
SELF-LOCKING LEVERLESS DOOR OPERATING MECHANISM

Thomas C. Soddy, Downers Grove, Ill., assignor to The Youngstown Steel Door Company, Cleveland, Ohio, a corporation of Ohio
Filed Mar. 11, 1966, Ser. No. 533,529
4 Claims. (Cl. 49—220)

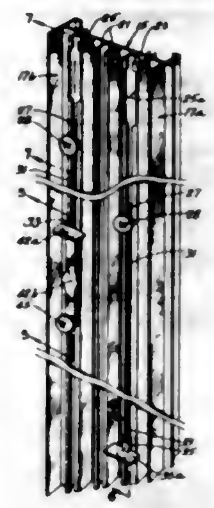


Disclosed is a self-locking leverless door operating mechanism for a railroad car having a door opening in at least one wall thereof. The door has a pair of vertically extending rotating pipes secured thereto with crank means on either ends of each of the pipes. The support means on the car cooperate with the crank means to support the door for lateral movement into and out of the door opening. An operating means to rotate the pipes and crank means is carried by the door. The operating means includes a hollow internally threaded member mounted on the door with the longitudinal axis of the member being transverse to the plane of the door. An internally threaded shaft extends into and in threaded engagement with the member and has a handle secured to its outer end. A sleeve is slidably supported on the hollow member with means connecting it to the shaft for movement together transverse to the door, the connection is such that it permits the shaft to rotate independently of the sleeve. A bell crank is pivotally mounted on the door adjacent the handle and rod means interconnect the bell crank with the pipes. The sleeve and bell crank linkage is such that manual rotation of the handle will impart sliding movement to the sleeve and result in pivoting movement of the bell crank. The threads of the hollow member and shaft, because of their generally parallel relationship to the door, resists rotation of the pipes from forces exerted on the inside of the door thereby to provide a self-locking characteristic of the operating mechanism.

3,387,408
REMOVABLE SASH CONSTRUCTION FOR WINDOWS

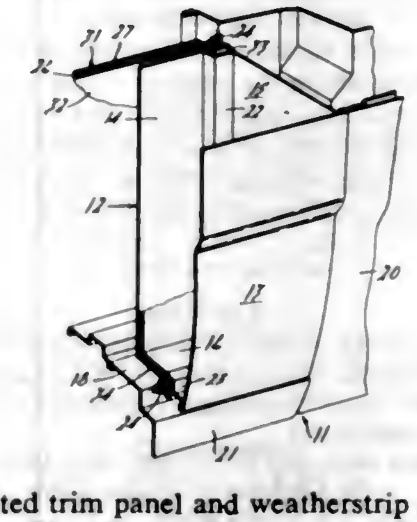
Michael J. Nardulli, 7959 W. Grand Ave., Elmwood Park, Ill. 61529
Filed Oct. 28, 1964, Ser. No. 407,175
5 Claims. (Cl. 49—446)

1. In a window installation, the combination with companion frame jambs presenting vertical guide means, sashes operable along the guide means, vertical spring in the latter opposite one of the sides of the sashes for counterbalancing the latter; of movable supports secured to the guide means and suspending the upper ends of the springs, blocks carrier by the lower ends of the springs with lateral projection engaging the sashes from underneath, and means for securing the supports at different heights.



3,387,409
INTEGRATED TRIM PANEL AND WEATHERSTRIP ASSEMBLY

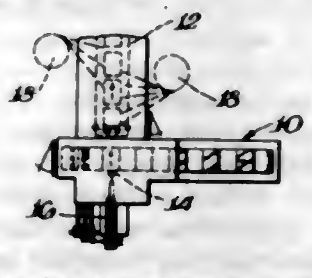
John P. Gorys, Detroit, and Peter L. Jensen, Livonia, Mich., assignors to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Mar. 24, 1967, Ser. No. 625,859
8 Claims. (Cl. 49—486)



An integrated trim panel and weatherstrip assembly for a vehicle door. The trim panel is supported for adjustment relative to the door for positioning the integral weatherstrip in sealing contact with the adjacent surfaces of the vehicle body members defining the door opening.

3,387,410
CONTINUOUS CLEANING APPARATUS

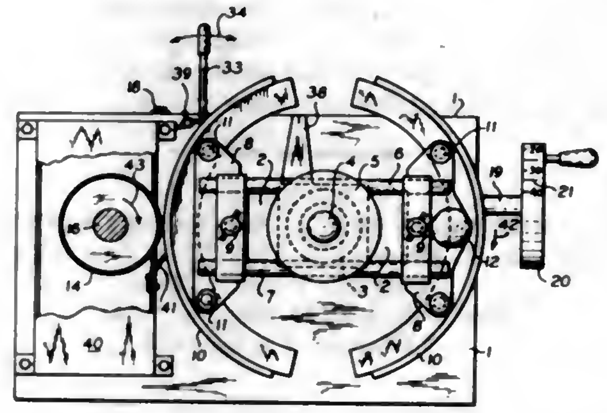
George W. Powell, Hagerstown, Md., assignor to The Pangborn Corporation, Hagerstown, Md., a corporation of Delaware
Filed Nov. 18, 1966, Ser. No. 595,426
10 Claims. (Cl. 51—15)



A continuous cleaning apparatus includes an axial flow barrel which is alternatively rotated both clockwise and counterclockwise at the end of each revolution, a conveyor moves articles to be cleaned toward the barrel and it is driven by the same drive mechanism for the barrel in such a manner that the conveyor moves in only one direction regardless of the direction of movement of the barrel.

3,387,411
BRAKE-SHOE GRINDING DEVICE

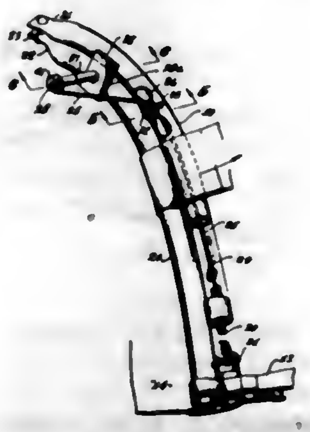
Frank Atzberger, 97—26 Sutphin Blvd., Jamaica, N.Y. 11435
Filed June 15, 1965, Ser. No. 464,019
5 Claims. (Cl. 51—95)



A brake-shoe grinding device for refinishing brake-shoes as a workpiece, which comprises a frame having a recess and slide means are movable in the recess of the frame. A threaded spindle is rotatably but axially immovably mounted in the slide means, so that upon rotation of the spindle, the slide means is displaced. A bolt extends horizontally from the slide means and at least one support means is secured to the bolt for movement in axial direction of and rotation about the bolt. Grinding means supported for rotation are in substantially parallel relation to the bolt, and means for adjusting the distance between the grinding means and the support means are arranged, the adjusting means include separately controllable coarse and fine adjusting means and the threaded spindle constitutes the coarse adjusting means. The adjusting means include a hand wheel for moving the slide means along in axial direction of the threaded spindle, and means are provided for biasing the slide means out of engagement with the grinding means.

3,387,412
CLOSURE FOR INFLATABLE STRUCTURE

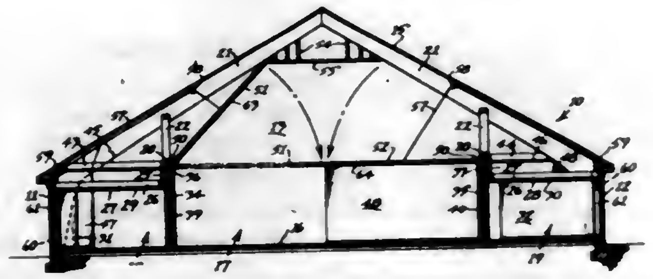
John P. Kwake, 2507 Carob Drive, Los Angeles, Calif. 90046
Filed July 5, 1966, Ser. No. 562,553
10 Claims. (Cl. 52—2)



A closure or door for an inflatable structure which comprises a pair of juxtaposed frame members pivotally interconnected, one of the frame members being mounted in the wall of the inflatable structure and defining a portion of an entryway therein and the other frame member being carried in the closure, substantially conforming to the shape of the entryway. The two frame members are maintained in abutment, unless normally separated, by a spring and cable combination partially carried within one frame member and attached at the spring end within that one frame member and extending around a rotatably-mounted guide or pulley to the other frame member to which the cable is attached. An extension extending in a direction away from the direction of opening is attached to the other frame member and the cable is connected to this extension in a way such that upon manually locking the cable, the cable can be separated from the extension. A stop plate is provided at the base of the extension to restrict lateral movement of the cable as the closure is opened to prevent tearing of the inflatable structure material.

3,387,413
CONVERTIBLE BUILDING CONSTRUCTION

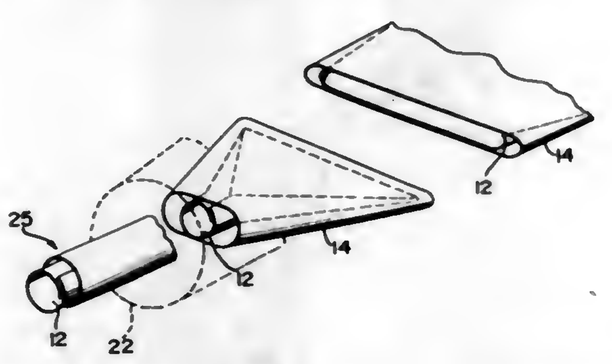
Brooks T. Huey, 216 1717 West End Bldg.,
Nashville, Tenn. 37203
Filed Feb. 3, 1966, Ser. No. 524,798
3 Claims. (Cl. 52—69)



A convertible building construction including a floor, frame, outside walls, an upper ceiling and a pair of longitudinal beams spaced inwardly of the outside walls having track means supporting longitudinal foldable doors; a pair of lower ceiling panels hinged to the longitudinal beams for swinging movement between a lower ceiling plane and an upper position engaging the upper ceiling, and transverse track means and transverse foldable partition walls extending between each outside wall and the inside edge of each corresponding lower ceiling panel.

3,387,414
EXTENDIBLE BOOM

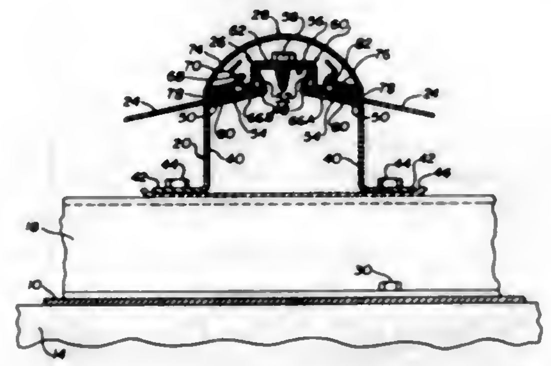
Charles D. Adams, Annandale, Va., assignor to Melpar, Inc., Falls Church, Va., a corporation of Delaware
Filed Oct. 23, 1965, Ser. No. 503,802
14 Claims. (Cl. 52—108)



An extendible structurable boom member comprising a heat shrinkable material and a metal foil material wound as a strip coil on a storage drum. During deployment, the strip is unwound and heated causing the shrinkable material to curl the metal foil to the desired boom configuration. The shrinkable material is employed as either a sheath about the foil or as a tape secured to the foil.

3,387,415
WALL STRUCTURE HAVING INWARDLY ARCHED PANELS

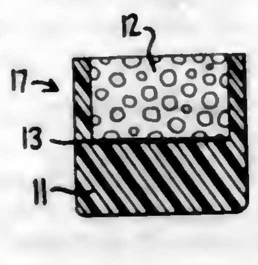
Murray C. McFarlane, Burlington, Ontario, Canada, assignor to H. H. Robertson Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Apr. 29, 1965, Ser. No. 451,867
Claims priority, application Canada, May 1, 1964, 901,825
5 Claims. (Cl. 52—222)



A wall panel structure including stationary spaced vertical supports; normally flat facing sheets, each positioned between an adjacent pair of vertical supports with its opposite edges engaged in vertical lengthwise grooves provided in the vertical supports and bowed inwardly between its opposite edges; clip members secured to and at spaced locations along the vertical support; and trim caps disposed in covering relation with the vertical supports. The clip members are arranged to restrain the opposite edges of the facing sheets from excessive outward movement. The clip members also support the trim cap members.

3,387,416
SEALING AND SPACING ELEMENT

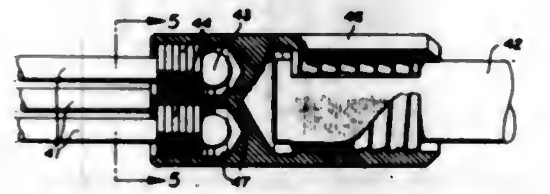
Thomas P. Martin, West Caldwell, N.J., assignor to Pittsburgh Plate Glass Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Oct. 28, 1965, Ser. No. 505,571
10 Claims. (Cl. 52—208)



A sealing and spacing element which permits the sealing and spacing of solid surfaces to each other without the necessity for auxiliary channels, gaskets or the like comprises an elongated strip of tacky, dirt, moisture and air-impervious sealant composition comprising an at least partially vulcanized rubbery polymer to which there is adhered a longitudinally juxtaposed strip of cellular elastomer. Preferred sealant compositions are a mixture of a polymer of a 4-carbon monoolefin and a copolymer of a monoolefin containing 4-carbon atoms and a diolefin containing 4 to 6 carbon atoms, or an ethylene-propylene-diene rubbery terpolymer. The sealing element can be employed to seal and space glass, metal, wood, plastics or other solid surfaces, such as automobile windshields to automobile bodies. A seal is obtained by applying the element between the surfaces to be sealed and applying sufficient pressure to at least partially compress the element.

3,387,417
PRESTRESSING APPARATUS

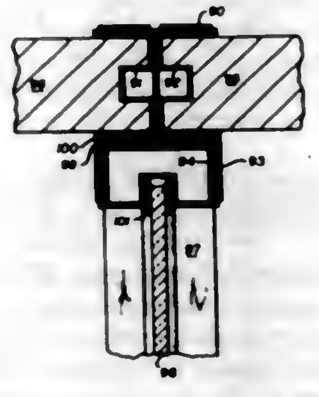
James W. Howlett, Richmond Annex, Calif., assignor to Howlett Machine Works, a corporation of California
Original application June 8, 1964, Ser. No. 373,464, now Patent No. 3,327,380, dated June 27, 1967. Divided and this application Dec. 9, 1966, Ser. No. 600,472
7 Claims. (Cl. 52—223)



Prestressing apparatus for a bearing plate for applying tensioning force to a bearing plate to be applied to concrete or the like to be prestressed and including a coupling means for a plurality of buttonhead wire tendons which are individually secured by threaded sleeves in a plurality of threaded bores formed in one end face of the coupling means, and a second tendon secured to the coupling means and extending from an opposite end face thereof in generally end to end relation with the wire tendons.

3,387,418
MOLDING AND PARTITION ASSEMBLY SYSTEM

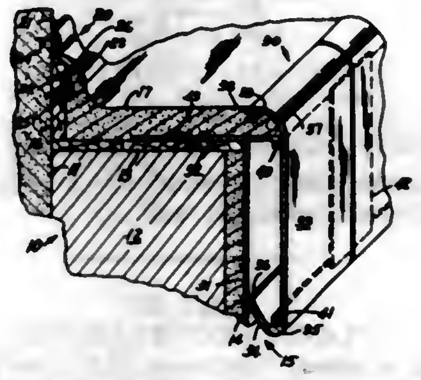
James W. Tyrer, 982 Top View Road,
Bloomfield Hills, Mich. 48013
Filed July 15, 1964, Ser. No. 382,835
10 Claims. (Cl. 52—242)



1. Movable partition jointure which comprises in combination; (1) an H stud which extends vertically from a supporting floor toward a ceiling, said H stud being characterized by two stud leg sections affixed at their midpoints by a stud cross section perpendicular to the face planes of said stud leg sections, said stud leg sections characterized by the ends thereof having protruding shoulder sections; (2) a half H stud characterized by leg sections joined by means of a cross section perpendicular to the face planes of said leg sections, one end of each leg section extending slightly beyond one face of said cross section to form shoulders, said half H stud being positioned vertical on said floor in relationship to said H stud that the shoulders of said half H stud seat on the shoulders of said H stud and the face plane of said cross section of said half H stud is parallel to the face planes of said leg sections of said H stud; and (3) three panels, the face planes of which are perpendicular to said floor, the vertical edges of said panels being seated within and supported by the leg sections of said studs.

3,387,419
DECKING WITH TRIM STRIP

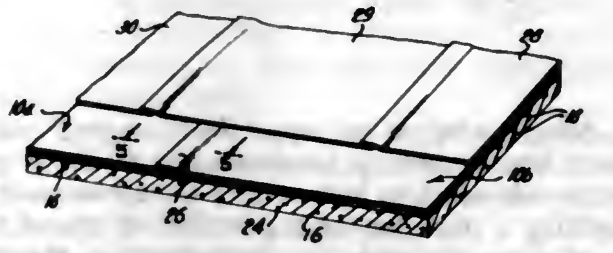
Henry Kamberg, 1239 Vienna Way, Venice, Calif. 90291, and Jack K. Wood, 6641 Wooster, Los Angeles, Calif. 90056
Filed Oct. 22, 1965, Ser. No. 500,582
9 Claims. (Cl. 52—255)



This invention relates to decking and, in particular, to a combination which includes a horizontal decking which projects from a wall and has a hanging face at its free end with a layer of initially plastic material atop at least a portion of the decking, forming a generally horizontal top surface. An elongated wall strip is provided which is attached to the wall. An elongated edge strip includes an attachment flange which is attached to the decking. The two strips have fairing flanges which are adapted to receive and provide reference surfaces for the initially plastic material, which material, once put in place, hardens to form the top of the decking.

3,387,420
VENTILATING COVERING ELEMENT FOR BUILT-UP ROOFING

Ernest G. Long, Martinsville, N.J., assignor to Johns-Manville Corporation, New York, N.Y., a corporation of New York
Continuation of application Ser. No. 333,003, Dec. 24, 1963. This application Feb. 15, 1967, Ser. No. 616,414
10 Claims. (Cl. 52—302)

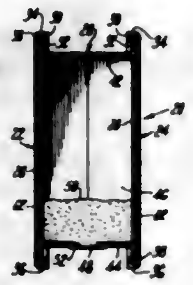


A ventilating felt for use between a roof deck and a roof membrane is coated with a bituminous layer provided with interconnecting grooves. The felt is installed on the roof with the grooved side down to permit air and water vapor entrapped between the roof covering and the deck to escape.

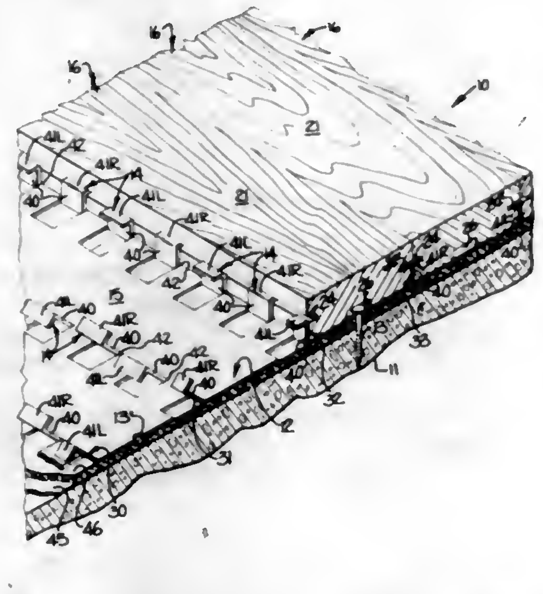
3,387,421
STRUCTURAL WALL AND THE LIKE

Alan L. Robertson, Newington, Conn., assignor to The United Research and Development Company, Incorporated, a corporation of Connecticut
Filed June 30, 1965, Ser. No. 468,440
6 Claims. (Cl. 52—310)

A load bearing masonry wall assembly is constructed using nonstructural building units having parallel facing members interconnected by a weighted cell of smaller exterior dimensions. The assembly of a plurality of such units into courses in a dry condition forms interconnecting passageways which are subsequently filled with a structural binder material adapted to support substantially all the structural load of the wall.

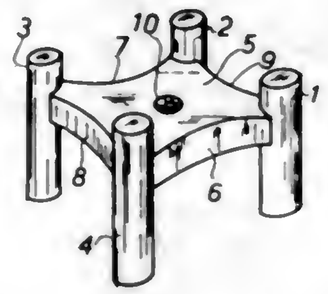


3,387,422
FLOOR CONSTRUCTION
Philip H. Wanzer, Charlotte, N.C., assignor to The Bright-Brooks Lumber Company of Charlotte, Inc., Charlotte, N.C., a corporation of North Carolina
Filed Oct. 28, 1966, Ser. No. 590,412
15 Claims. (Cl. 52—387)



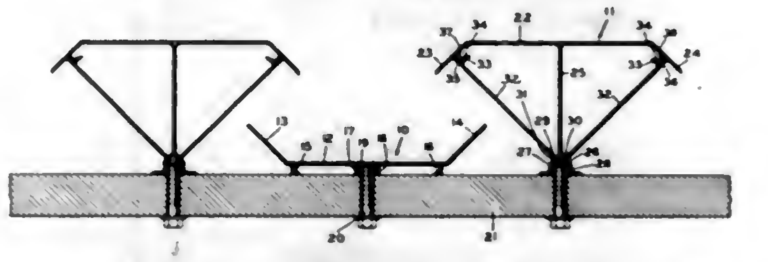
1. Means adapted to supportingly engage and interconnect boards having longitudinally medially grooved opposite side edges to form a floor therefrom, said means comprising a plate having a plurality of spaced parallel rows of upwardly projecting connector lugs thereon, the distance between adjacent rows of said lugs being adapted to accommodate corresponding boards with corresponding lugs engaging opposite side edges of the respective boards, each lug comprising a leg integrally joined at its lower end to said plate along a leg juncture line, a tongue angularly joined to the upper end of each leg and being spaced a predetermined distance from said plate, the leg juncture lines of all the lugs in each row being in alignment along said row, and tongues of certain of said lugs in each row extending in one direction normal to said row and tongues of others of said lugs in each row extending in an opposite direction from said one direction, said tongues being adapted to be received in the grooved side edges of adjacent boards, whereby boards may be positioned between adjacent rows of said lugs and held against said plate by said lugs in forming a floor.

3,387,423
REINFORCEMENT SPACER FOR THE SUPPORT OF REINFORCING BARS IN MOLDING FORMS FOR CONCRETE
Olav Andreas Andersen, Oslo, Norway, assignor to Arne Brenna, Oslo, Norway
Filed Sept. 19, 1966, Ser. No. 580,299
Claims priority, application Sweden, Sept. 24, 1965, 12,390/65
3 Claims. (Cl. 52—678)



A spacer for reinforcing bars in concrete comprises a quadrilateral plate interconnecting four parallel posts. The plate is closer to one end of the posts than to the other and the edges of the plate are curved inwardly so that the spacer will rest on each of four sides on the sides of two adjacent posts and on the other two sides on the ends of the posts, the spacer providing four different heights and/or widths of recesses within which reinforcing bars may be cradled.

3,387,424
COOLING TOWER SCREEN
Raymond McGuinness, Morristown, N.J., assignor to Construction Specialties, Inc., Cranford, N.J., a corporation of New Jersey
Filed Jan. 17, 1967, Ser. No. 609,921
8 Claims. (Cl. 52—732)

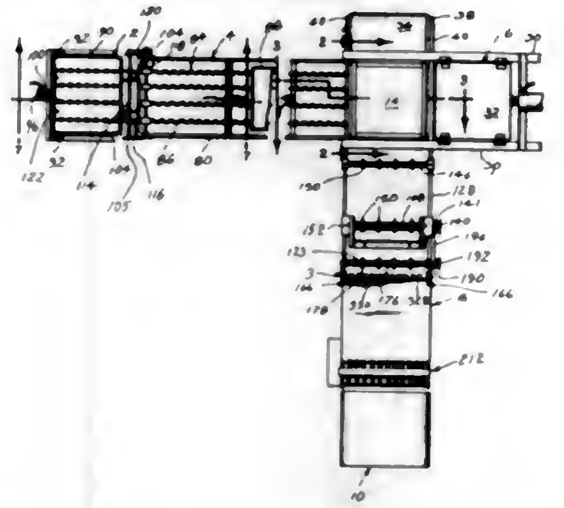


This application relates to screens for cooling towers and similar structures, the screens including a plurality of spaced apart but overlapping blades to screen the structure and afford ventilating spaces between the blades and braces which can be inserted before, during or after assembling the screens on the structure to stabilize and prevent flutter of the blades by the wind without substantially reducing the area of the ventilating spaces.

3,387,425
PROCESS FOR PREPARING AEROSOL PACKAGES
Lloyd T. Flanner, Florham Park, N.J., assignor to Allied Chemical Corporation, New York, N.Y., a corporation of New York
No Drawing. Filed Dec. 8, 1964, Ser. No. 416,900
8 Claims. (Cl. 53—22)

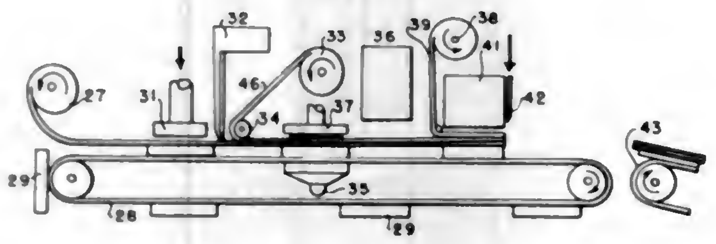
Process for preparing aerosol by introducing into an aerosol container a dispensable liquid concentrate, closing the container with a valved closure and then introducing through the valved closure as propellant a saturated solution of a compressed gas selected from the group consisting of carbon dioxide, nitrous oxide and nitrogen in a normally gaseous, liquefied chlorofluorinated saturated aliphatic hydrocarbon.

3,387,426
APPARATUS AND METHOD FOR PACKAGING
Herman G. Kraut, New Britain, and Albert E. Lemaire, Wallingford, Conn., assignors to The Stanley Works, New Britain, Conn., a corporation of Connecticut
Filed Feb. 2, 1966, Ser. No. 524,623
45 Claims. (Cl. 53—22)



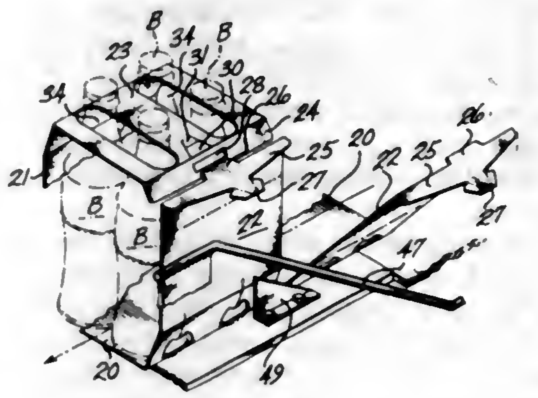
39. In a method of packaging, the steps comprising: placing an air-pervious substrate onto an air-pervious support member at a first position, placing articles to be packaged on said substrate, moving said support member along a first path onto an elevatable element, clamping a length of thermoplastic sheet material about its margins in a position overlying said elevatable element and support member, heating said clamped length of thermoplastic film to plasticity, elevating said support member to a position closely underlying said clamped length of thermoplastic film, drawing suction through said support member to draw the thermoplastic film about the articles and into bonding engagement with the substrate to form a packaging assembly, lowering said support member to a position below said first path, discharging said support element from said elevatable member, returning said discharge support element to said first portion along a second path below said first path, and elevating said discharged support member from the level of its second path to the level of its first path of movement.

3,387,427
METHOD OF FORMING A CARTON ENCLOSED PACKAGE FROM A PREFORMED FOLDABLE BLANK
Richard R. Perdue, Taylors, S.C., assignor to W. R. Grace & Co., Duncan, S.C., a corporation of Connecticut
Filed May 10, 1963, Ser. No. 279,550
4 Claims. (Cl. 53—27)



1. A method of forming a sealed package from a carton blank and thermoplastic film comprising the steps of:
(a) pressing a flat, pre-scored blank into conformity with a female mold so that flanges are formed completely around the upper periphery of the mold;
(b) coating the flanges with a heat-activatable adhesive;
(c) heating a thermoformable thermoplastic film to forming temperature;
(d) covering the mouth of the mold with the heated film so that the film adheres to the adhesive completely around the periphery of the blank;
(e) thermoforming the film into a substantially conforming liner for the blank;
(f) filling the lined blank with the product to be packaged;
(g) covering the mouth of the filled blank with a heat sealable cover material; and,
(h) sealing the cover material to the thermoformable film.

3,387,428
PACKAGING MACHINE
Grover C. Currie, Jr., Charlotte, N.C., assignor to Weyerhaeuser Company, Tacoma, Wash., a corporation of Washington
Filed Feb. 25, 1966, Ser. No. 530,050
20 Claims. (Cl. 53—49)



1. A machine for forming a carton blank into a package containing articles, said blank having a bottom panel located centrally of said blank, a first panel on one end of said blank, a second panel between said first panel and said bottom panel, a third panel between said first panel and said second panel, a fourth panel on the other end of said blank, and a fifth panel between said fourth panel and said bottom panel, said first panel having a supporting aperture therein and said fourth panel having a supporting tab extending inwardly towards said bottom panel from the inward side of said fourth panel, said fourth panel having a locking tab outwardly of said supporting tab and said third panel of said blank having a locking aperture, said machine comprising
a conveyor, said conveyor having an infeed end and an outfeed end downstream of said infeed end;
means over said infeed end of said conveyor for placing a carton blank on said conveyor;
means located adjacent said conveyor and downstream of said first means for placing articles on said bottom panel;
first forming means adjacent said conveyor and downstream of said first means for folding said first panel upwardly;
second forming means adjacent said conveyor and downstream of said first forming means for folding said second panel upwardly;
first holding means adjacent said conveyor and downstream of said second forming means for holding said second panel in an upright position with respect to said bottom panel;
third forming means adjacent said conveyor and downstream of said second forming means, said third forming means being movable transversely of said conveyor for bending said third panel downwardly;

second holding means over said conveyor and located downstream of said third forming means for holding said third panel in position over said conveyor and said articles;

fourth forming means adjacent said conveyor on the side of said conveyor opposite said first forming means and substantially in alignment with said first and second forming means for folding said fourth panel downwardly;

fifth forming means on said conveyor opposite side and downstream of said fourth forming means for bending said fifth panel upwardly;

a vertical guide on said conveyor opposite side and downstream of said fifth forming means and in alignment with said third forming means for guiding said first panel downwardly toward the contained articles and simultaneously holding said fifth panel outwardly from said articles;

a horizontal guide in alignment with and outwardly of said vertical guide for holding said fourth panel in a substantially horizontal position;

third holding means on said conveyor opposite side for holding said fifth panel against said articles;

means for aligning said supporting tab and supporting aperture, said aligning means being located downstream of said vertical guide, said aligning means having associated therewith means for holding said fourth panel in a horizontal position and means for holding said third panel downwardly against said articles;

sixth forming means adjacent and downstream of said aligning means for folding said fourth panel upwardly into contact with said first panel and said supporting tab through said supporting aperture;

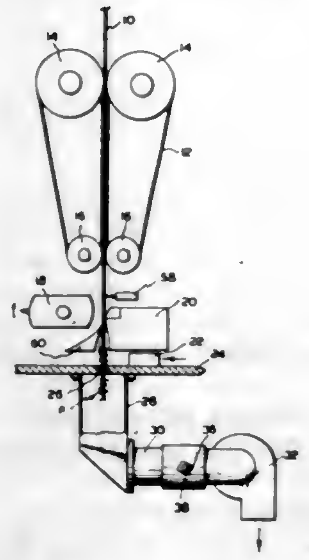
means adjacent said conveyor and downstream of said sixth forming means for forcing said locking tab through said locking aperture.

3,387,429
WEB FEEDING METHOD AND APPARATUS

William Alden Peabody, Jr., Henrico County, Va., assignor to Reynolds Metals Company, Richmond, Va., a corporation of Delaware

Filed Aug. 28, 1964, Ser. No. 392,740

7 Claims. (Cl. 53—228)



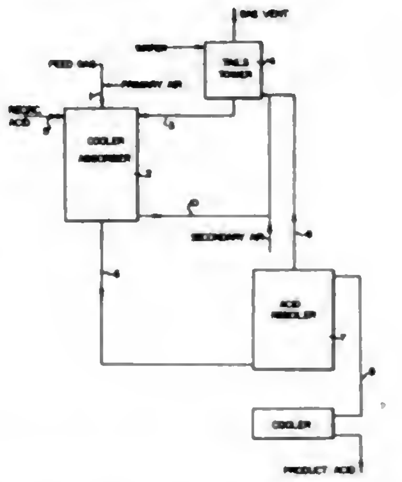
Automatic or semi-automatic machinery for wrapping articles such as cigarette packages in a transparent overwrap. In particular, the invention is directed to the proper feeding of thin gauge, and often flimsy, wrapping material into the path of the articles to be wrapped, and efficiently retaining the same thereat by a subjacent suction device until wrapping commences.

3,387,430
HYDROCHLORIC ACID PROCESS

George Sarvadi, Jr., Aurora, Ohio, assignor to Falls Industries Incorporated, Solon, Ohio, a corporation of Ohio

Continuation-in-part of application Ser. No. 162,885, Dec. 28, 1961. This application May 7, 1965, Ser. No. 458,811

9 Claims. (Cl. 55—51)



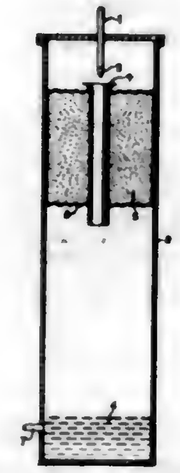
1. In a process for the production of concentrated hydrochloric acid comprising a first absorption step of absorbing by a dilute aqueous solution of hydrochloric acid in an aqueous absorber while cooling the same, the hydrogen chloride from an initial hydrogen chloride gas stream containing a substantial amount of chlorinated organic contaminants having a boiling point of at least approximately 75° C. and a second absorption step of absorbing by water the hydrogen chloride and effluent gas stream from said first absorption step, the improvement comprising reducing the partial pressure of said contaminants in said initial and effluent gas streams by dilution with an inert gas prior to each of said first and second absorption steps thereby reducing the contact time between the organic contaminants and the respective absorbing liquids reboiling said concentrated acid solution in a reboiler to expel volatiles therefrom, and contacting said volatiles with said water in said second absorption step.

3,387,431
DESULFURIZING OF WATER

Gerald H. Siebert, 4802 Black Road, Monclova, Ohio 43542

Filed June 13, 1966, Ser. No. 557,206

8 Claims. (Cl. 55—51)



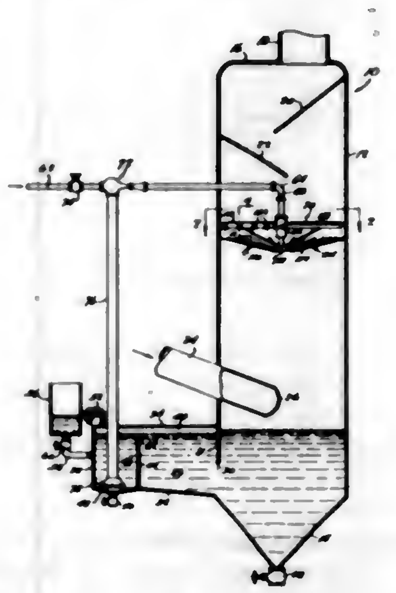
An apparatus and method for removing an absorbed gas (hydrogen sulfide) from a liquid (water) by projecting a dispersed stream of the liquid into a closed chamber, inducing air to flow with the liquid through a restricted tubular passage in the chamber, directing the air with gas released from the liquid through a return passage to bring the air back to the entrance of the tubular passage to be recirculated with the stream of liquid, and gas removing means (iron oxide) in the return passage to remove the gas from the air.

3,387,432
SCRUBBERS

Vincent Ferrara, 936 N. 8th St., Reading, Pa. 18503

Filed Apr. 22, 1966, Ser. No. 551,823

(8 Claims. (Cl. 55—228)



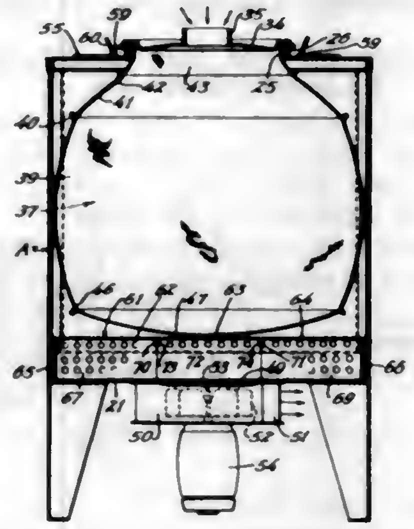
A gas scrubber and reactor comprising: a vertical casing having a gas outlet at its upper end; a gas inlet adjacent its lower end; a vat of scrubbing fluid below said inlet; baffles below said outlet; rotary spray means intermediate said baffles and said inlet and means for delivering power and scrubbing fluid to said rotary spray means.

3,387,433
DUST COLLECTOR

Kenneth J. Mackey, St. Paul, Minn., assignor to The Torit Corporation, Ramsey County, Minn., a corporation of Minnesota

Filed Oct. 10, 1966, Ser. No. 585,678

2 Claims. (Cl. 55—356)



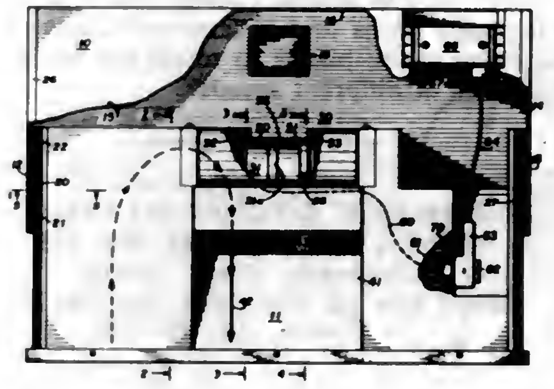
The invention describes a generally rectangular enclosure having a top wall provided with a central aperture encircled by an upwardly extending flange. A porous filter bag is provided with an open end of cylindrical shape of proper size to extend through the flange and fold over the top thereof. A drawstring tightens the bag end about the flange. A lid is provided with a peripheral gasket which seals the bag against the top of the flange. The lid is provided with an air inlet; and a blower on the bottom panel draws air through the bag from the inlet.

3,387,434
FLOW CONTROL FOR VENTILATING HOOD

James E. Stalker, Richardson, Tex., assignor to Home Metal Products Company, Plano, Tex., a corporation of Texas

Filed Jan. 21, 1965, Ser. No. 426,782

19 Claims. (Cl. 55—470)



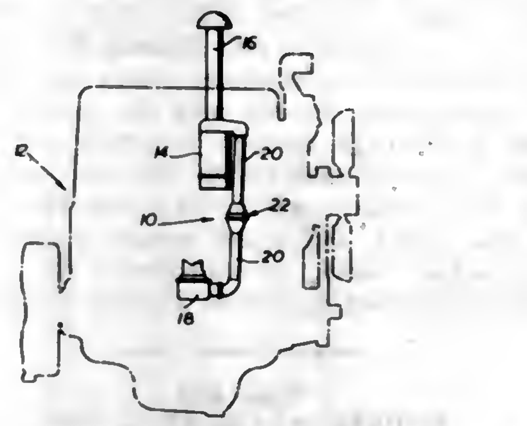
A ventilating kitchen hood including a casing in the form of a rectangular polyhedron with a short wide front opening and having a drawer slidable through the front opening. The drawer has an intake port extending across a portion of the bottom panel and includes duct structure having an air filter therein. A fan mounted within the casing draws air into the drawer, through the air filter and out of the casing.

3,387,435
SAFETY VALVE FILTER

Charles Broad, Jr., Westchester, Ill., assignor to International Harvester Company, Chicago, Ill., a corporation of Delaware

Filed Oct. 21, 1966, Ser. No. 588,589

7 Claims. (Cl. 55—482)

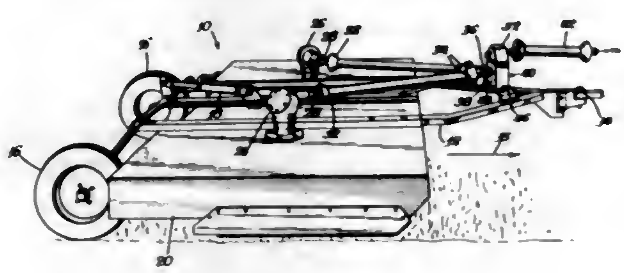


A safety filter positioned downstream of a conventional air cleaner in the induction system of an internal combustion engine, which safety filter retains virtually none of the dirt particles passing through the air cleaner during proper operation thereof, but which retains a sufficient number of the dirt particles passing through the air cleaner during improper operation thereto to substantially restrict the flow of air to, and to noticeably reduce the power output of, the engine.

3,387,436
ROTARY CUTTER

Roman J. Kasper, Downers Grove, Ill., assignor to International Harvester Company, Chicago, Ill., a corporation of Delaware

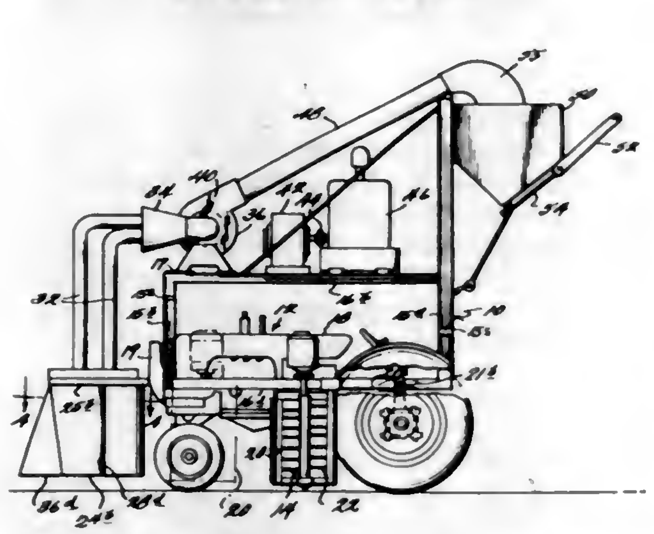
Filed Apr. 13, 1965, Ser. No. 447,827
7 Claims. (Cl. 56—6)



A mower having plural blades, and a gear box with different speed ratios and reverse providing a transmission for drive to the blades to rotate the blades in plural directions and at different speeds.

3,387,437
PNEUMATIC COTTON HARVESTER

Orlando N. Owen, P.O. Box 602,
Clarksdale, Miss. 38614
Filed July 26, 1967, Ser. No. 656,119
16 Claims. (Cl. 56—12)



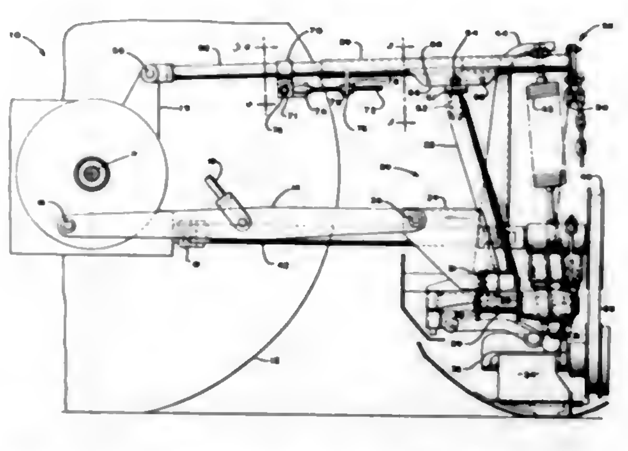
An improved method for pneumatically harvesting cotton is disclosed, as are the means related thereto. Said means include a substantially vertical fixed cylindrical housing subject to suction with a substantially vertical slot therein on the side of said housing, the improvement being a revolvable cylindrical casing having openings which communicate directly with the cotton plant. Said openings being large enough to enable cotton lint to be sucked through said casing and slot into the fixed housing. Also disclosed are means to cam the cotton plant against the casing, and guard means to cam the plant away from the casing. An attachment for a tractor to carry cotton picking apparatus is also disclosed.

3,387,438
MOWER STABILIZER ARM

Joseph C. Hurlburt, Leola, Pa., assignor to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware

Filed Oct. 23, 1965, Ser. No. 503,176
4 Claims. (Cl. 56—25)

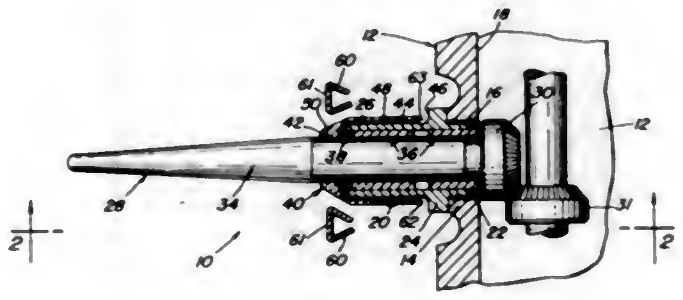
1. A stabilizer arm for use in mounting a mower on a tractor wherein the tractor has a pair of laterally spaced, rearwardly extending, vertically swingable drawbars and an upper rear hitch member disposed above and between said drawbars, and wherein said mower has a base frame having laterally spaced hitch members pivotally connectable, respectively, to said tractor drawbars, an upper hitch point disposed above and between said laterally spaced hitch members, and a laterally extending vertically swingable drag bar pivotally carried by said base frame at the rear thereof, said stabilizer arm extending rearwardly from said tractor upper rear hitch member to said mower base frame upper hitch point and comprising, first and second elongated coaxially disposed telescoping members, a pivot member connecting the forwardmost end of one of said telescoping members to said tractor upper rear hitch member, the other of said telescoping members extending rearwardly past said base frame upper hitch point and having a rear terminal end disposed generally above said drag bar, biaxial pivot means carried by said base frame at said upper hitch point and having a vertical pivot axis and a transverse horizontal pivot axis, means connecting said biaxial pivot means to said other of said telescoping members forwardly of its rear terminal end whereby said stabilizer arm is free to pivot both horizontally and vertically relative to said base frame while being fixed against fore-and-aft movement relative thereto, means innerconnecting said rear terminal end of said other telescoping member and said drag bar to pivotally raise and lower said drag bar in response to vertical pivotal movement of said stabilizer arm relative to said base frame, and manually operable means for extending and retracting said telescoping members relative to each other to effect fore-and-aft tilting adjustment of said base frame relative to said drawbars.



3,387,439
COTTON PICKING SPINDLE ASSEMBLY

James T. Tracy, Memphis, Tenn., assignor to International Harvester Company, Chicago, Ill., a corporation of Delaware

Filed June 28, 1965, Ser. No. 467,348
5 Claims. (Cl. 56—50)

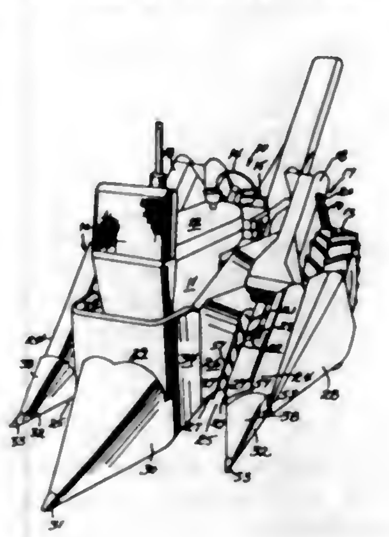


A cotton harvester having bars with spindles projecting therefrom and shields on the spindles having extensive cylindrical nut covering sleeves which have a running clearance with the nut and extend remotely from the cotton picking areas of the spindles.

3,387,440
IMPACT RELIEF MECHANISM FOR ROW DIVIDERS AND THE LIKE

Elof K. Karlsson, East Moline, Ill., assignor to International Harvester Company, Chicago, Ill., a corporation of Delaware

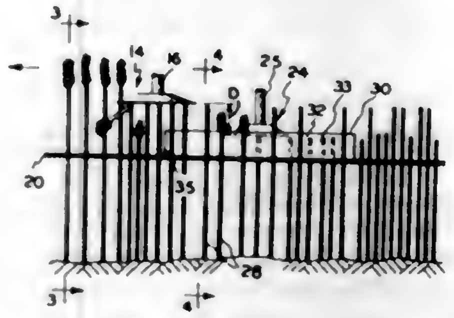
Filed Apr. 14, 1965, Ser. No. 448,064
5 Claims. (Cl. 56—119)



A corn harvesting machine having row dividers that extend downwardly and forwardly and terminate in ground-engageable shoes. The ground-engageable shoes are pivotally mounted about generally vertically axes and are retained in position by impact relief means. The ground-engageable shoes are upon impact with an obstruction adapted to swing out from the divider to prevent damage to the equipment.

3,387,441
SUGAR CANE HARVESTERS

Roland A. Robichaux, Courthouse Bldg.,
Thibodaux, La. 70301
Filed Aug. 19, 1965, Ser. No. 481,143
15 Claims. (Cl. 56—238)

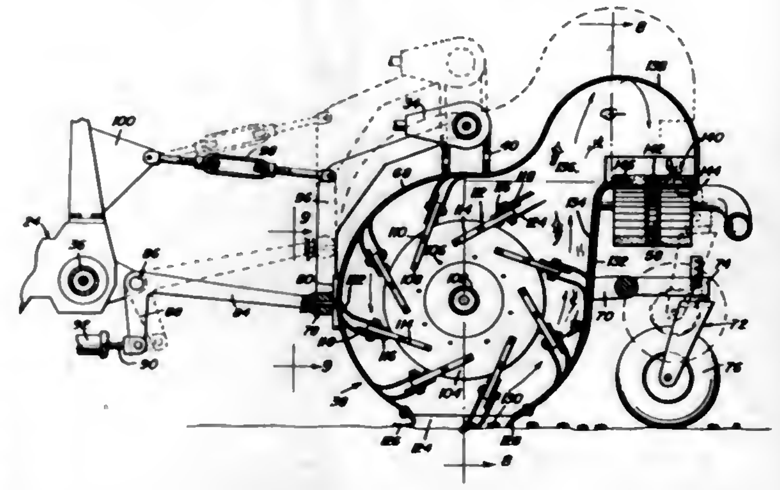


1. In the known type of sugar cane harvester composed of a mobile frame, cane topping means affixed to the said mobile frame for severing tops of sugar cane stalks, and conveying means mounted on said mobile frame for directing sugar cane stalks into the path of said topping means, the improvement in said cane topping means comprising:

(a) a first moving blade adapted to be mounted on said mobile frame at a spaced distance above the ground,
(b) a second moving blade adapted to be mounted on said mobile frame,
(c) said second moving blade being positioned rearwardly of said first moving blade and positioned closer to the ground than said first moving blade,
(d) said first moving blade and said second moving blade being positioned generally along and above a portion of the path traversed by said conveying means,
(e) a cane stalk guide means adapted to be mounted on said mobile frame closely adjacent to said first and second moving blades,
(f) at least a portion of said cane stalk guide means being disposed angularly with respect to a straight line between said first and second moving blades,
(g) whereby at least a portion of the sugar cane stalks severed by said first moving blade will be guided out of the path of said second moving blade.

3,387,442
NUT HARVESTING MACHINE

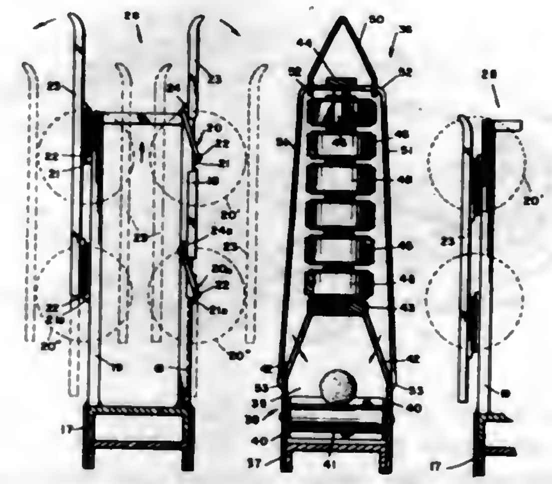
James A. Henson, Box 52, Chetopa, Kans. 67336
Filed Apr. 1, 1965, Ser. No. 444,688
13 Claims. (Cl. 56—328)



A pick-up housing is moved over the ground to draw in a crop of nuts lying on the ground by a ground and housing wall wiping action of flexible rotor blades. The crop is conveyed from the pick-up housing through a size sorting tumbler removing undesired debris. From the tumbler, the crop passes through a combing zone removing remaining debris before it is deposited into an elevator and carried toward a collection bin.

3,387,443
BRANCH SEPARATOR AND FRUIT PICKER

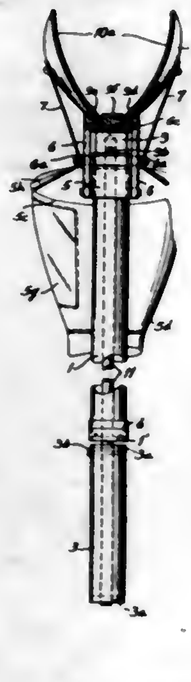
Kermit H. Burgin, R.R. 1, Whitestown,
Boone County, Ind. 46075
Filed Aug. 2, 1967, Ser. No. 657,834
10 Claims. (Cl. 56—328)



A combination of downwardly traveling members to divide tree branches and belts adjacent to and traveling laterally of the branch separating members for spinning fruit coming into contact therewith.

3,387,444
UNIVERSAL FRUIT PICKER

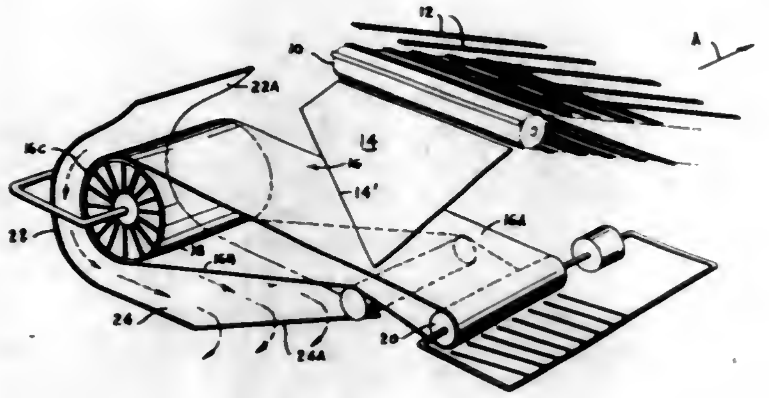
Ljubomir Krdžić, Lamartinova 20,
Belgrade, Yugoslavia
Filed Feb. 10, 1965, Ser. No. 431,673
Claims priority, application Yugoslavia, Aug. 15, 1964, M 107/64
1 Claim. (Cl. 56—334)



A fruit picker having a control member slidably mounted in a hollow tube for operating spoon shaped cups hingedly mounted on a work head at a remote end of the tube such that the cups are opened when the control member is retracted in the tube and opened when extended whereby the picker can engage the fruit to be picked and remove the fruit by lowering the picker which fruit is then deposited into a sleeve attached to the tube and conveyed thereby to a container carried by the operator.

3,387,445
GREEN PEANUT VINE TURNING MACHINE

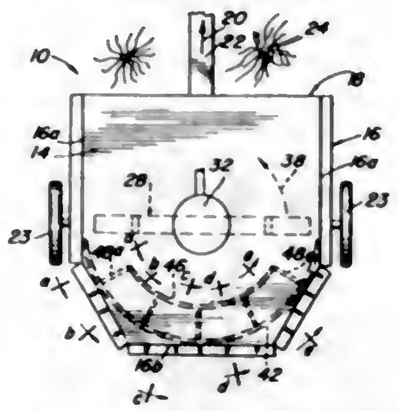
Eli W. Reinhardt and Henry E. Morris, both of
P.O. Box 72, Ashburn, Ga. 31714
Continuation-in-part of application Ser. No. 439,736, Mar. 15, 1965. This application Sept. 20, 1965, Ser. No. 488,316
8 Claims. (Cl. 56—370)



Vines with the roots attached are discharged in a continuous swath in upright position onto an inverting conveyer which rotates them through substantially 180 degrees about an axis extending generally in the direction of discharge for delivery of the vines onto the ground in an inverted roots-up position.

3,387,446
ROTARY PLANT CUTTER AND METHOD OF CUTTING

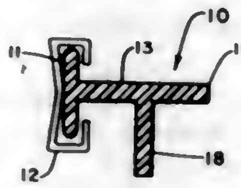
Roman J. Kasper, Downers Grove, Ill., assignor to International Harvester Company, Chicago, Ill., a corporation of Delaware
Filed Mar. 22, 1965, Ser. No. 441,674
9 Claims. (Cl. 56—503)



A rotary cutter having a blade rotatable in a generally horizontal plane and passing under a succession of progressively lengthened vertical webs.

3,387,447
TRAVELER RINGS

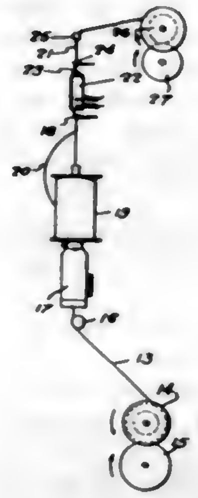
Harlan M. Trammell and Wade J. Truesdale, Rock Hill, S.C., and John A. Manning, Jr., Charlotte, N.C., assignors to Celanese Corporation of America, New York, N.Y., a corporation of Delaware
Filed Dec. 27, 1965, Ser. No. 516,389
6 Claims. (Cl. 57—119)



1. Traveler ring of a composition comprising a matrix of about 95 to 75 percent polyacetal resin and from about 5 to 25 percent particulate polytetrafluoroethylene resin.

3,387,448
STRETCHED AND STABILIZED YARNS AND FABRICS

James M. Lathem, Gainesville, Ga., and Frank E. Bobo, Jr., and Robert M. Matthews, Charlotte, N.C., assignors to Chadbourn Gotham, Inc., Charlotte, N.C., a corporation of North Carolina
Filed Dec. 30, 1963, Ser. No. 334,415
4 Claims. (Cl. 57—152)

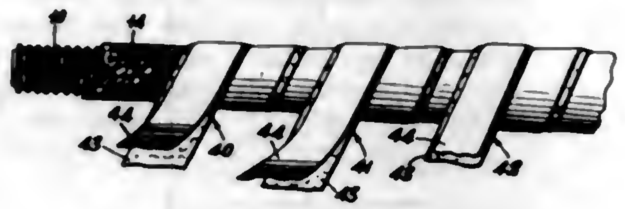


A stabilized spandex yarn made by stretching the yarn and heat setting in the stretched condition to provide reduced denier, increased yardage and reduced stretch over that which was originally present in the yarn.

This invention relates to improved synthetic elastomeric yarns and fabrics which have been drawn and stabilized, and to apparatus by which these improved yarns and fabrics may be produced.

3,387,449
METHOD OF MAKING HOSE FOR LOW-TEMPERATURE LIQUIDS

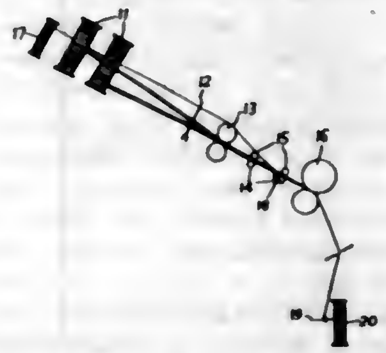
Frank D. Bond, Jr., Buffalo, Ladislas C. Matsch, Kenmore, and James A. Proctor, Tonawanda, N.Y., assignors to Union Carbide Corporation, a corporation of New York
Application May 20, 1963, Ser. No. 282,834, now Patent No. 3,240,234, dated Mar. 15, 1966, which is a division of application Ser. No. 10,598, Feb. 24, 1960. Divided and this application Aug. 30, 1965, Ser. No. 498,175
6 Claims. (Cl. 57—160)



1. A method for applying flexible, composite heat insulating material to the outer curved surface of a cylindrical conduit for transporting low temperature liquids, the composite insulation consisting of a multiplicity of radiation impervious metallic strips of thickness between about 0.002 and 0.2 mm. and low heat conductive fibrous layers, which method comprises the steps of providing said radiation-impervious metallic strips and low heat conductive fibrous layers in elongated overlaid strips with marginal fibrous material extending beyond both edges of each radiation-impervious metallic strip to form a composite strip; helically wrapping said composite strip around said curved surface from one end to the other end thereof so as to provide an overlap between adjacent edges of adjacent helices and thereby form a composite insulation layer; forming a second helically wound composite insulation layer around the outer surface of the first in the same manner so as to completely cover the first composite insulation layer; thereafter similarly applying additional layers of composite insulation in sufficient quantity to achieve a desired degree of thermal insulation for said curved surface.

3,387,450
PRODUCTION OF YARN

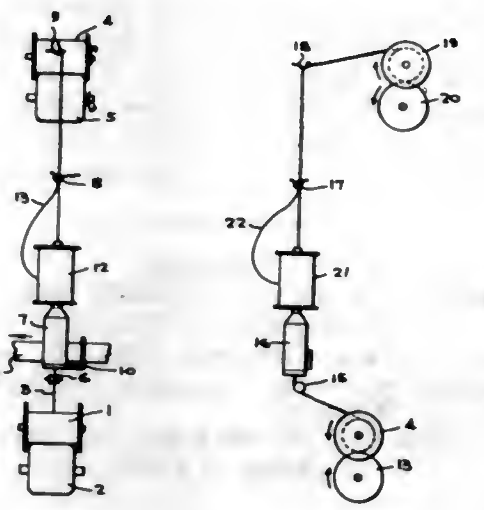
Thomas Desmond Brown, Riddlesden, Keighley, England, assignor to I.W.S. Nominee Company Limited, London, England, a corporation of England
Filed Sept. 28, 1966, Ser. No. 582,643
Claims priority, application Great Britain, Oct. 1, 1965, 41,830/65
7 Claims. (Cl. 57—160)



A textile yarn is produced by drafting and spinning a cover strand around a core strand such that the twist in the core strand is greater than the twist in the cover strand whereby when the yarn is relaxed the high twist core contracts and the yarn bulks.

3,387,451
COVERED STRETCH YARN AND METHOD FOR PRODUCING

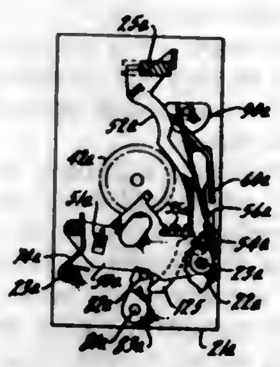
Francis B. Cape, Gainesville, Ga., and Frank E. Bobo, Jr., and Robert M. Matthews, Charlotte, N.C., assignors to Chadbourn Gotham, Inc., Charlotte, N.C., a corporation of North Carolina
Filed Feb. 27, 1967, Ser. No. 618,744
10 Claims. (Cl. 57—163)



A method of producing a covered stretch yarn and the stretch yarn produced, by drawing a spandex yarn and wrapping it with a nylon multifilament yarn while drawn, drawing the single wrap composite yarn and wrapping with a second nylon multifilament yarn while drawn. The yarn is set by steaming, either after the first and second wrapping stages, or only after the second wrapping stage.

3,387,452
SWITCH OPERATING ALARM TIMER

Thomas F. Ring, Raymond A. Keane, and Ralph C. Robinson, Athens, Ga., assignors to General Time Corporation, New York, N.Y., a corporation of Delaware
Continuation-in-part of application Ser. No. 368,547, May 19, 1964. This application Apr. 7, 1965, Ser. No. 447,609
10 Claims. (Cl. 58—21.155)

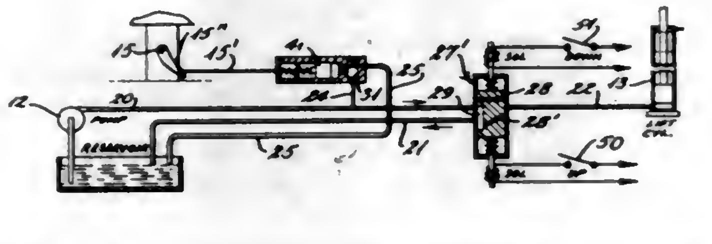


A switch operating and alarm timer in which a single cam times both a "drowse" interval, in which the alarm is temporarily silenced, and "sleep" intervals, in which the switch is operated for selected periods. A compound control lever for the switch is used for functional versatility and to give substantial lever throw. A compact, frictionless and inexpensive control lever biasing arrangement is used.

3,387,453

HYDRAULIC MECHANISM

Willie M. Suggs, 3113 Herbert Ave.,
Orlando, Fla. 32805
Filed Mar. 4, 1966, Ser. No. 531,720
8 Claims. (Cl. 60—52)

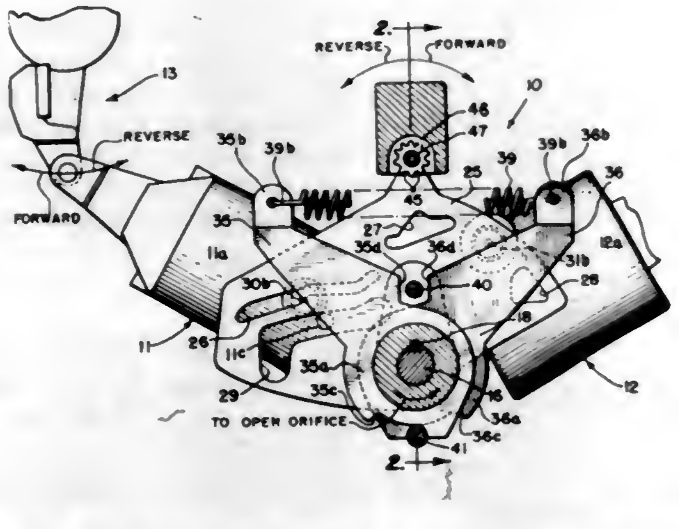


Apparatus for controlling fluid pressure to a lift cylinder by regulating the speed of a fluid pump. The apparatus includes a fluid actuated means directly connected to the motor which drives the pump and such fluid actuated means is controlled by a valve means which is movable between first and second positions by fluid pressure.

3,387,454

POSITIVE TRANSMISSION NEUTRAL CONTROL MECHANISM

Leonard Padleckas, Clarendon Hills, Ill., assignor to International Harvester Company, Chicago, Ill., a corporation of Delaware
Filed Oct. 27, 1966, Ser. No. 589,895
8 Claims. (Cl. 60—53)



1. In a control assembly, for a hydraulic power transmission in operative communication with a source of fluid under pressure and having pump and motor units, and comprising in operative relation

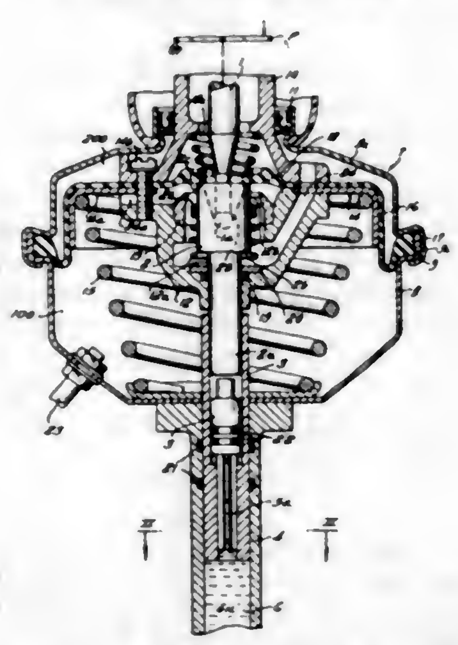
(1) swash plates respectively associated with said units and adjustable to vary the condition of the transmission, selectively to establish neutral, forward and reverse positions thereof,
(2) servo mechanisms, including hydraulic cylinders operative so to adjust said swash plates,
(3) means comprising valve ports operative to control the flow of fluid under pressure to and from said cylinders for actuating said servo mechanisms,
(4) a cam plate comprising cam means and correlatively operable valve porting slots operative from a neutral center position to open and close said ports whereby correspondingly to actuate said servo mechanisms and adjust said swash plates,
(5) means yieldingly biasing said cam plate in the neutral center position,
(6) means operable upon application of an external force to actuate said cam plate to selected positions of operation, including an approximate neutral position,
(7) and means arranged in co-operative relation with said biasing means and said cam plate for maintaining the latter in positive neutral position,
(8) a sub-assembly comprising
  (a) first clutch means carried by said cam plate,
  (b) second clutch means,
  (c) linkage including slip-clutch means operatively interconnecting said second clutch means and the final output of the transmission,

said first and second clutch means being interengageable to establish a positive interconnection therebetween upon actuation of said cam plate to approximate neutral position, and said slip-clutch means being correspondingly overruled upon the interengagement of said first and second clutch means, said sub-assembly and the parts thereof being so conformed and arranged to operate in relation to one another and to the other components of said control assembly that, upon said cam plate being operated to approximate neutral position said control assembly will operate automatically to establish said cam plate and said transmission in positive neutral position.

3,387,455

APPARATUS FOR PRESSURIZING FLUIDS

Giorgio Eggstein, Turin, Italy, assignor to Ernst Heinkel Aktiengesellschaft, Stuttgart-Zuffenhausen, Germany
Filed July 13, 1966, Ser. No. 564,785
Claims priority, application Germany, July 23, 1965,
H 56,667
4 Claims. (Cl. 60—54.6)

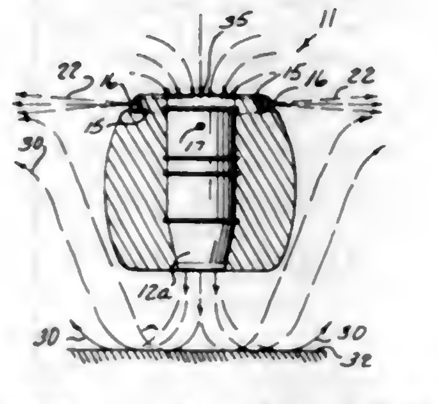


An apparatus for pressurizing fluids, for instance hydraulic fluids in a brake cylinder, in which the action of a first piston on the fluid in a first cylinder is supported by the action of a second piston on the first piston, and in which the second piston includes a flexible diaphragm dividing a second cylinder in two chambers, with one of which suction generating means communicate, and in which valve means formed in part by the flexible diaphragm cooperate with the other components of the apparatus in such a manner that, during movement of a first piston from a retracted position, the valve means is first moved to a position in which the chambers are sealed from each other, and then to a position in which the other chamber is connected to the atmosphere, so that the second piston moves in the same direction as the first piston under the influence of the pressure difference in the two chambers and thus supports the action of the first piston to compress the fluid in the first cylinder.

3,387,456

AERODYNAMIC SHIELD DEVICE FOR VTOL JET AIRCRAFT ENGINE EXHAUST

Aaron Feder and Rahim Lavi, Torrance, Calif., assignors to Northrop Corporation, Beverly Hills, Calif., a corporation of California
Filed June 21, 1966, Ser. No. 559,157
8 Claims. (Cl. 60—204)



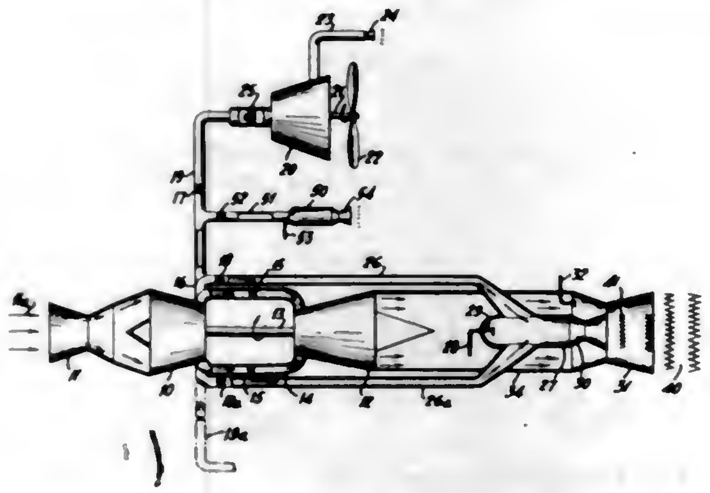
1. In a VTOL aircraft, said aircraft including jet engine means for providing thrust for vertical lift off the ground, the improvement comprising means for generating an aerodynamic shield for blocking the entry of engine exhaust gasses into the air intake of said engine means comprising

plenum chamber means located between the engine means exhaust and the engine means intake, and
means for supplying compressed air to said chamber means,
said chamber means having relatively narrow orifice means formed therein for directing a jet outwardly from said engine means in a plane substantially transverse to the longitudinal axis of said engine means to form a shield between said exhaust gasses and said engine air intake, said orifice means being symmetrically arranged about said engine means to provide insignificant net thrust thereon.

3,387,457

COMBINED TURBOJET AND TURBOPROP ENGINE

George H. Garraway, 20 Thorman Lane,
Huntington, N.Y. 11743
Filed Mar. 1, 1965, Ser. No. 436,211
The portion of the term of the patent subsequent to July 12, 1983, has been disclaimed
11 Claims. (Cl. 60—224)

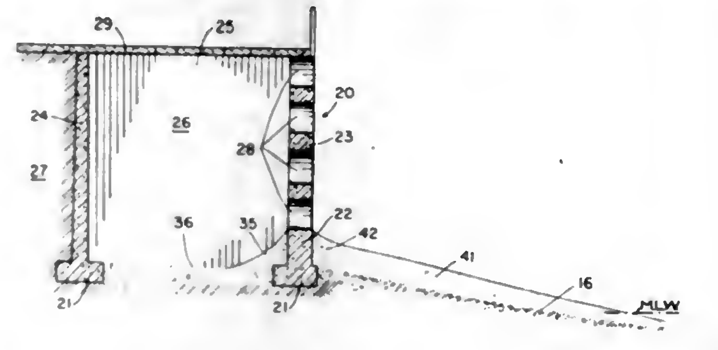


A turbo engine combining plural propulsive units supplied with pressurized air from a common turbine powered compressor such that a constant portion of the compressed air is utilized by the compressor-driving turbine and the balance of the compressed air is selectively divided between the plural propulsive units. The exhaust stream from the compressor driving turbine is used for heat exchange with one of the propulsive units. Combustion air may also be used for heat exchange. Additional heat energy may be added to this turbine exhaust stream to derive additional thrust.

3,387,458

SEAWALL STRUCTURES

Gerard Eugene Jarlan, Ottawa, Ontario, Canada, assignor to Canadian Patents and Development Limited, Ottawa, Ontario, Canada, a corporation of Canada
Filed Mar. 10, 1965, Ser. No. 438,705
9 Claims. (Cl. 61—3)

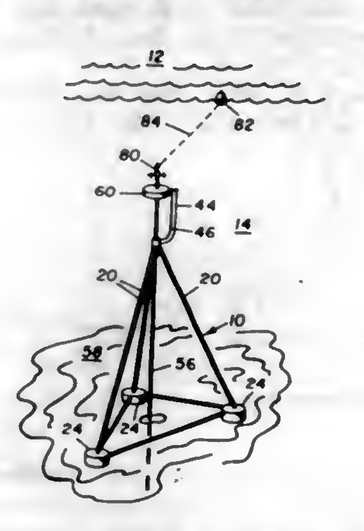


A wave-absorbing seawall for controlling bottom-eroding currents tending to remove fine material from a strand when under attack by waves, comprising a landward wall and a frontal wall which is extensively apertured by a multiplicity of horizontal ducts above a substantially imperforate base portion of low height, the ducts having transverse dimensions from about 12 to 24 inches or larger, the frontal wall being spaced up to 20 feet from the landward wall to define an open surge chamber, and the action at high water being to fill the chamber freely through the ducts as a wave rises and then to cause jets of water to stream outward as the sea recedes so as to develop brisk seaward flow of surface layers in shallow water inducing underneath this flow a reverse make-up current which moves up the slope carrying entrained particles; the latter current is periodic.

3,387,459

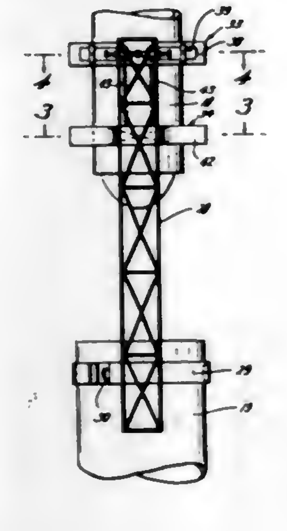
SELF-ADJUSTING TRIPOD STRUCTURE FOR SUPPORTING AN UNDERWATER WELL CONDUCTOR PIPE

William F. Manning, Springdale, Conn., assignor to Mobil Oil Corporation, a corporation of New York
Filed Dec. 13, 1965, Ser. No. 513,285
9 Claims. (Cl. 61—46.5)



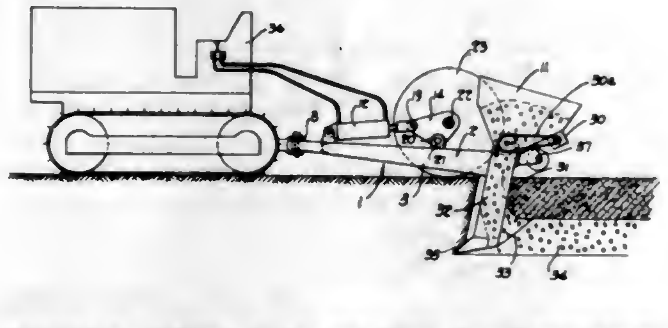
This specification discloses a method and apparatus for drilling and completing a subaqueous well in deep water such that the wellhead equipment is located just below the surface turbulent zone where it can be serviced easily by a diver. A tripod structure, with buoyant footings, is installed on the marine bottom from a floating vessel. The tripod structure has a slip bowl in a central connector portion in the upper end thereof for installing a pair of slips to hold a well conductor pipe, terminating just above the support structure, in tension. A well drilled through the conductor pipe is completed underwater at the upper end of the well conductor pipe.

3,387,460
MAGNETIC PILE STABBING APPARATUS AND METHOD
Dorothy N. Morris, 110 Stephanie,
Lafayette, La. 70501
Filed May 20, 1966, Ser. No. 551,688
13 Claims. (Cl. 61—53.5)



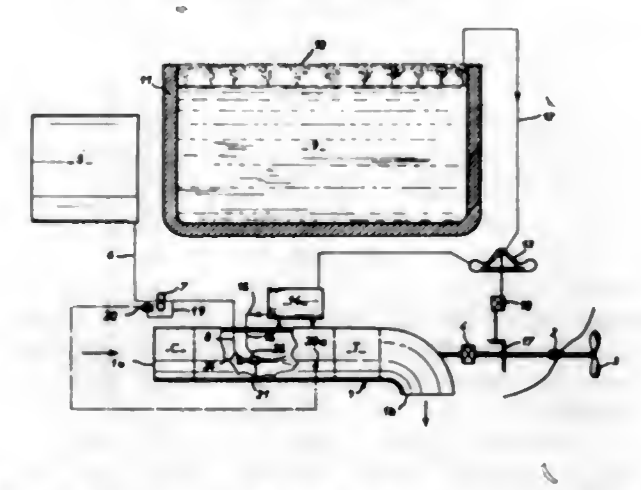
Apparatus and method for adding a magnetic responsive add-on pile section to a guide pile. In one embodiment of the invention, an electromagnet is utilized to attract and hold the pile section in a generally vertical position over the guide pile such that by lowering the pile section it is guided into the upper end of the guide pile. The invention is particularly useful in offshore installations where the driving of piling is subjected to effect of heavy seas which cause the pile section to be swung rather violently, particularly if the support for the pile section is a crane supported on a movable floating platform.

3,387,461
MACHINE AND METHOD FOR DRAINAGE LINE CONSTRUCTION
Carl F. Speicher and Marcus E. Speicher, Celina, Ohio, assignors to Speicher Bros., Inc., Celina, Ohio, a corporation of Ohio
Filed Apr. 2, 1965, Ser. No. 444,963
1 Claim. (Cl. 61—63)



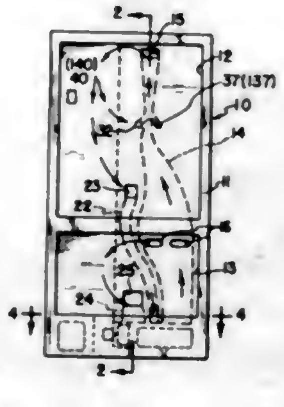
This invention relates to a machine for forming an underground conduit filled with a material having interstices of a size and spaced to provide for water flow therethrough, the machine having a hopper, and means to form the conduit and deposit material therein with vibrating means to prevent the material from clogging a chute or the like.

3,387,462
DUAL FUEL INJECTION DEVICE FOR PROPULSION MOTORS, MORE ESPECIALLY FOR METHANE-CARRYING SHIPS
Louis Jules Bauger, Vanves, Roland Robert Charles Beyler, Levallois-Perret, Robert Jean René Dubarry-Barbe, Issy-les-Moulineaux, Marc Pianko, La Celle St.-Cloud, and Walter Vesper, Dammarie-les-Lys, France, assignors to Société Nationale d'Etude et de Construction de Moteurs d'Aviation, Paris, France, a French company
Filed July 25, 1966, Ser. No. 567,418
Claims priority, application France, July 29, 1965, 26,492
5 Claims. (Cl. 62—50)



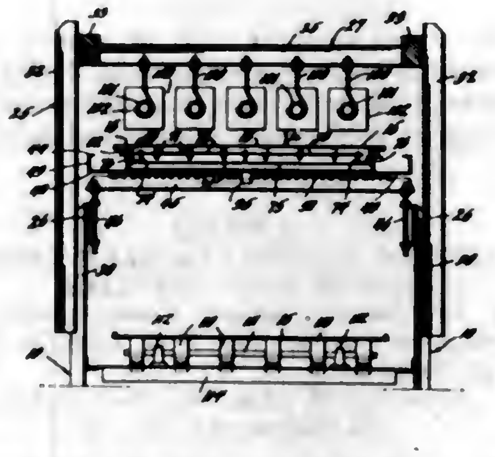
A device for supplying fuel to the combustion chamber of a gas turbine which is used to propel a ship which carries as cargo liquefied combustible gas, said device being adapted to supply said combustion chamber with a fuel which constitutes a combination of conventional gas turbine fuel derived from the ship's conventional fuel tanks together with the vapors which are formed in the ship's cargo tanks which contain said liquefied combustible gas.

3,387,463
REFRIGERATION APPARATUS WITH DEFROST MEANS
Edwin H. Frohbieter, Stevensville, Mich., assignor to Whirlpool Corporation, a corporation of Delaware
Filed Sept. 1, 1966, Ser. No. 576,636
16 Claims. (Cl. 62—140)



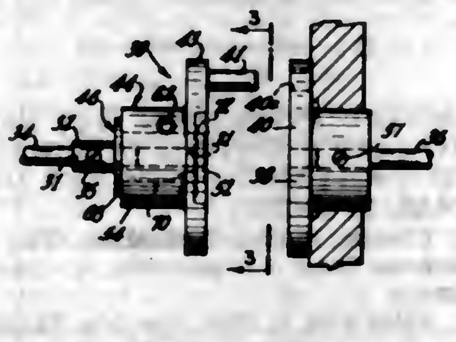
1. In a refrigeration apparatus;
means for chilling air;
cabinet means defining a compartment to be refrigerated;
duct means having a venturi portion and an outlet opening into said compartment for conducting chilled air from said chilling means through said outlet into said compartment;
air translation means upstream of said outlet for flowing chilled air from said chilling means through said duct means into said compartment; and
means defining a passage between said compartment and said duct means venturi portion and downstream of said air translation means for permitting air flowing through said duct means and outlet to draw air by venturi action from said compartment into said duct means to mix with said chilled air therein for subsequent discharge of the mixed air through said outlet into said compartment.

3,387,464
QUICK-FREEZE INSTALLATION WITH RADIANT COOLING
Walter H. Martin, 206 Atwater,
San Antonio, Tex. 78213
Filed Feb. 3, 1967, Ser. No. 613,809
7 Claims. (Cl. 62—380)



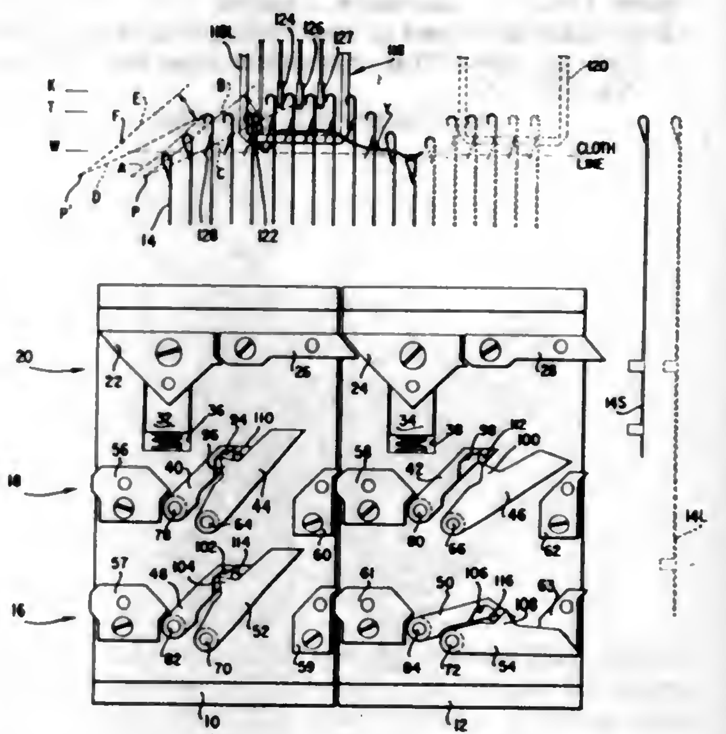
A conveyor belt carrying the articles to be refrigerated has an upper run which is supported for travel along shallow pans of liquid refrigerant and in heat conducting contact with such liquid. The pans have laterally disposed troughs for catching overflow or "leakage" beneath margins of the belt. The overflow drains through outlets from the troughs leading to a pump which forces the liquid through cooling means and back through horizontal nozzles into the pans. Idler rollers are disposed in the pans for supporting the belt, and the margins of the pans are provided with leveling guide strips for the belt. Refrigerating coils are disposed in close proximity to the upper article supporting surface of the belt for heat transfer by radiation. Adjustment means are provided for the pans, the conveyor belt, and the belt sheaves.

3,387,465
PHASE ADJUSTING COUPLING
Melvin F. Walker, Deer Park, N.Y., assignor to Designatronics, Inc., Mineola, N.Y.
Filed Aug. 8, 1966, Ser. No. 570,843
4 Claims. (Cl. 64—24)



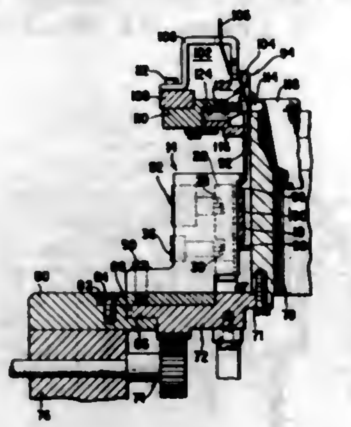
Coupling means for coupling two in-line shafts wherein means are provided for adjusting the phasing between the coupled shafts.

3,387,466
KNITTING MACHINE WITH TWO-SECTION RAISE CAM
Leonard A. Beckenstein, Farmingdale, N.Y., assignor to The Singer Company, New York, N.Y., a corporation of New Jersey
Filed Jan. 20, 1967, Ser. No. 610,604
7 Claims. (Cl. 66—38)



A camming arrangement is disclosed wherein the raise cam of an independent needle knitting machine is in two parts, the first serving to raise all needles to tuck level when the second part is set to raise needles to either knit or tuck levels.

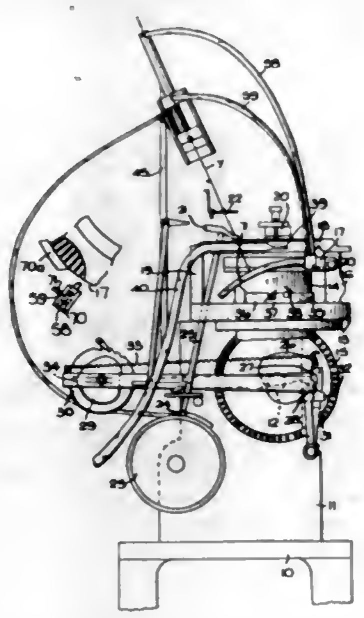
3,387,467
KNITTING MACHINE CAM-NEEDLE APPARATUS
Leonard A. Beckenstein, Farmingdale, N.Y., assignor to The Singer Company, New York, N.Y., a corporation of New Jersey
Filed Nov. 1, 1965, Ser. No. 505,805
3 Claims. (Cl. 66—57)



Knitting machine cam sections are disclosed as having parallel needle-abutting surfaces on both the raise and stitch cams thereof, which surfaces are of just slightly less distance apart than a pair of needle butts on cooperating needles. The raise cams are fixedly positioned, whereas the stitch cams are generally vertically positionable; and the needle butts so embrace the raise cams and stitch cams that either or both the upper and lower edges of such butts are substantially always in contact with at least their respective camming surfaces.

3,387,468
CIRCULAR KNITTING MACHINES

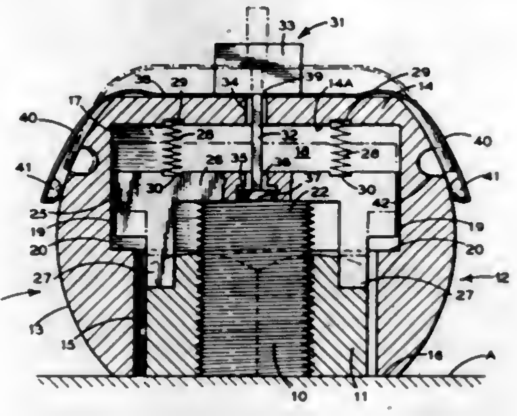
Denis Albert Edward Mattingly, London, and Reginald Selby Gilchrist, Welwyn Garden City, Hertfordshire, England, assignors to The Klinger Manufacturing Company Limited, Edmonton, London
Continuation-in-part of application Ser. No. 257,393, Feb. 11, 1963. This application Aug. 26, 1966, Ser. No. 575,339
11 Claims. (Cl. 66—133)



A float measuring procedure and apparatus in a circular knitting machine wherein yarn on its way to a beating feeder is drawn out laterally between movable and fixed yarn guiding means to form a measured bight between the feeder and a tension device for the incoming yarn. The yarn length so measured is then drawn through the feeder by suction into a nozzle from which it is guided for presentation to the knitting needles.

3,387,469
NUT LOCK

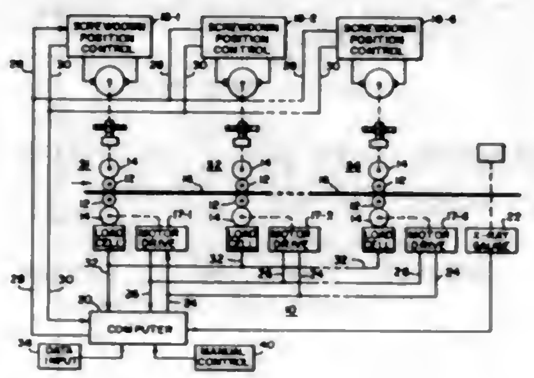
Alan R. Rabinowitz, 72—81 113th St.,
Forest Hills, N.Y. 11375
Filed Oct. 19, 1965, Ser. No. 497,715
12 Claims. (Cl. 70—232)



A nut lock having means for enclosing a nut on a stud together with key operated latch means for rendering the enclosing means ineffective and for allowing the nut to be turned on the stud.

3,387,470
METHOD FOR MEASURING ROLL CROWN AND IMPROVING THE OPERATION OF A ROLLING MILL

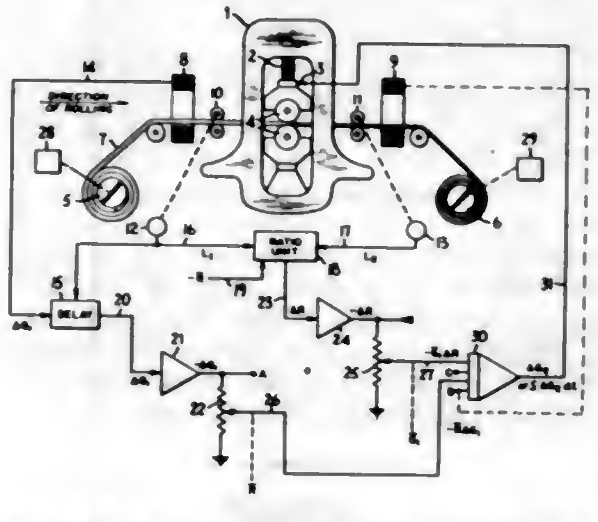
Andrew W. Smith, Jr., Pittsburgh, Pa., assignor to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Sept. 28, 1965, Ser. No. 490,832
11 Claims. (Cl. 72—8)


SCREWDOWN POSITION CONTROL
SCREWDOWN POSITION CONTROL
SCREWDOWN POSITION CONTROL
COMPUTER
DATA INPUT
MANUAL CONTROL

The roll crown of work rolls at a steel mill rolling stand is determined from time to time during stand use. Use is made of the roll crown in setting screwdown position for desired strip crown and desired delivery gauge.

3,387,471
SYSTEM TO AUTOMATICALLY CONTROL GAGE AND THE LIKE

Robert P. Freedman, Ledyard, Conn., assignor to General Dynamics Corporation, New York, N.Y., a corporation of Delaware
Filed Feb. 4, 1966, Ser. No. 525,036
12 Claims. (Cl. 72—9)



A rolling mill control system using the mass flow principle is provided with automatic control of the output thickness of the rolled material by modifying a measurement of the input thickness deviation from nominal thickness in accordance with the nominal draft ratio of the mill to compute the adjustment signal for the mill.

3,387,472
AUTOMATIC INTERLOCK TO FACILITATE AUTOMATIC CONTROL OF ROLLING MILL WITH VARYING NUMBERS OF OPERATIONAL STANDS

Charles Chester Pullen, Bethlehem, Pa., assignor to Bethlehem Steel Corporation, a corporation of Delaware
Filed Feb. 4, 1966, Ser. No. 525,082
4 Claims. (Cl. 72—14)

1. In a strip rolling mill comprising a first roll stand, a second roll stand, a third roll stand, and a control system to control an operation of a mill system including the following means for controlling said operation of the mill,

means associated with the first stand for generating a first signal indicative of the presence of strip in the stand and a second signal indicative of the absence of strip in the stand,

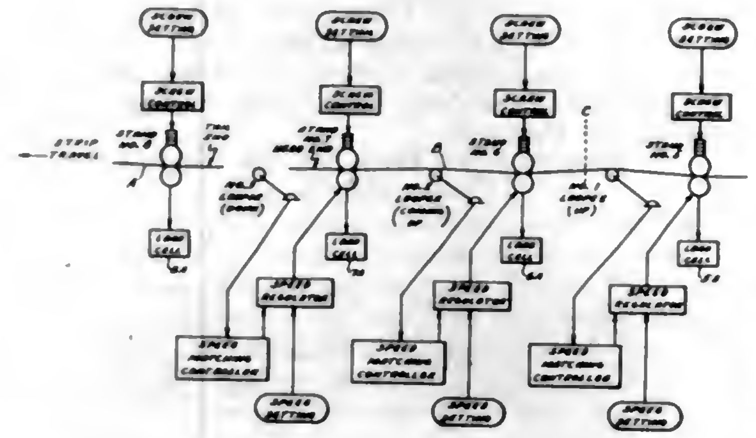
means associated with the third stand for generating a first signal indicative of the presence of strip in the stand and a second signal indicative of the absence of strip in the stand, and

first logic circuit means for controlling said operation of the mill in response to the following signals from said signal generating means,

a signal from the first stand indicating the presence of strip therein,

a signal from the third stand indicating the absence of strip therein, and

a subsequent signal from said third stand indicating the presence of strip therein,



the improvement comprising:

(A) means associated with the second stand for generating a first signal indicative of the presence of strip in the stand and a second signal indicative of the absence of strip in the stand, and

(B) second logic circuit means for controlling said operation of the mill system in response to the following signals from said signal generating means associated with the second and third stands when, but only when, no signal is received from the signal generating means associated with the first stand indicating the presence of strip therein prior to the reception of a signal from the second stand, viz.

(i) a signal from the second stand indicating the presence of strip therein,

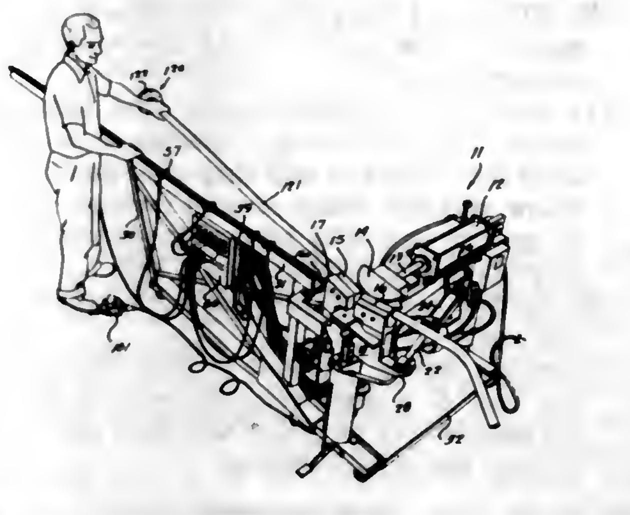
(ii) a signal from the third stand indicating the absence of strip therein, and

(iii) a subsequent signal from the third mill stand dicating the presence of strip therein.

3,387,473
TUBE AND BAR BENDING CONTROL DEVICE

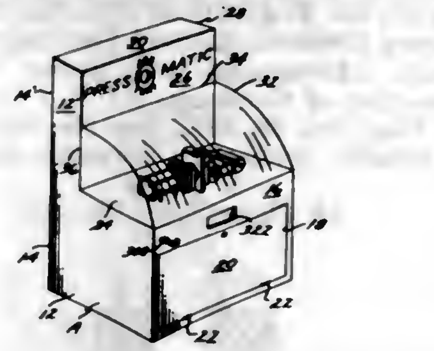
Harold Noordhoek, 300 NE. 167th St., North Miami, Fla. 33161, and Robert Noordhoek, Miami, Fla.; said Robert Noordhoek assignor to said Harold Noordhoek
Filed July 16, 1965, Ser. No. 472,514
16 Claims. (Cl. 72—22)

Control apparatus for a compression-type tube and bar bending machine. The control apparatus is adjusted in accordance with a program including distance to the bend, depth of the bend, and angular position of the bend. An indexing disc member is mounted on the end of the elongated object to be bent. The machine has a supporting bar to support the elongated object while it is fed manually between a movable main die and cooperating swingable opposing dies, with the indexing disc member held at selected locations along the supporting bar. The supporting bar has a linear distance scale with a series of push button control switches mounted adjustably along the scale. A jack board is provided, with horizontal and vertical rows of jacks to set up control circuits, including the switches, for respective double-wound latching relays which control the energization of a valve-control relay associated with the movable main die control valve. The double-wound relays become unlatched and de-energize the valve-control relay when a brush coupled with one of the swinging die members engages the stationary arcuate commutator. The release coils of the latching relays have energizing circuits including the brush and selected segments of the commutator, the segments being selected by means of the jack board and associated jumper cables. The double-wound relays become unlatched and deenergize the valve-controlled relays when the brush engages a commutator segment corresponding to a selected jumper cable connection on the jack board. This establishes the limiting position of the swingable opposing dies. The periphery of the indexing disc member has pin sockets corresponding to the number of bends to be formed, spaced angularly in the same manner as the desired bends. The sockets are successively engaged with pins at the selected locations spaced along the supporting bar as the successive bends are made in the elongated object.



3,387,474
COIN OPERATED AMUSEMENT DEVICE

Stephen Powers Shoemaker, Jr., 137 S. Pacific Ave., Redondo Beach, Calif. 90277; Daniel Duane Koby, 209 Rosecrans, Manhattan Beach, Calif. 90266; and Thomas B. Caplet, 2517 Via Carrillo, Palos Verdes Estates, Calif. 90274
Filed Feb. 14, 1966, Ser. No. 527,372
9 Claims. (Cl. 72—30)



1. A coin operated amusement device for sequentially forming consecutive segments of a coil of deformable strip material into souvenir articles of a predetermined configuration, including:

(a) a cabinet including a bottom, a wall structure extending upwardly from said bottom, and a top supported by said wall structure, which bottom, wall structure and top cooperatively define a confined space;

(b) first means for rotatably supporting said coil in said cabinet in said confined space;
(c) second means for guiding said strip as it unwinds from said coil upwardly through an opening formed in said top;
(d) third power-operated means for sequentially moving said strip to dispose consecutive sections thereof in a first position above said top;
(e) fourth power-operated means located above said top adjacent said first position that severs a central portion of each of said sections therefrom, and pressure forms each of said portions into one of said articles;
(f) fifth means for guiding said strip in which cut-out portions have been formed downwardly into said confined space;
(g) sixth power-operated means that sequentially severs each of said sections having a cut-out portion from the balance of said strip after said section moves below said top, which severed sections drop by force of gravity into said bottom to occupy a minimum of room in said confined space; and
(h) seventh means for delivered said article to an operator; and
(i) eighth means actuated by the deposit of at least one coin at a predetermined position in said device for sequentially actuating said third and fourth means to form one of said articles.

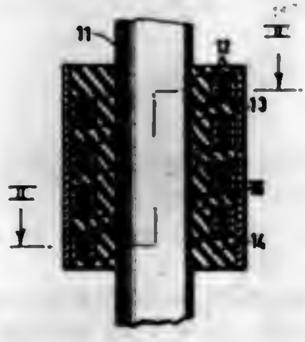
3,387,475
PROCESS FOR THE MANUFACTURE OF SHEET METAL ARTICLES COATED WITH A THERMOPLASTIC RESIN

Werner Seipp, Gerhard Drechsler, and Siegfried Bloeck, Singen Hohentwiel, Germany, assignors to Swiss Aluminium Ltd., Chippis, Switzerland, a joint-stock company of Switzerland
No Drawing. Filed Jan. 21, 1966, Ser. No. 522,070
Claims priority, application Switzerland, Jan. 26, 1965, 1,083/65
6 Claims. (Cl. 72—46)

1. A process for the manufacture of articles from sheet metal in which the sheet metal is first coated with a synthetic thermoplastic resin, the coated sheet is then formed into the article and the coating of resin on the article subsequently heated up to its melting point and allowed to cool, the rate of heating and the time which has elapsed since the forming operation being so correlated that stresses in the coating of resin are greatly reduced.

3,387,476
METHOD AND DEVICE FOR FORMING WORKPIECES ELECTRODYNAMICALLY

Karl-Georg Günther, Boxdorf, Germany, assignor to Siemens Aktiengesellschaft, Berlin, Germany, a corporation of Germany
Filed Oct. 28, 1965, Ser. No. 505,528
Claims priority, application Germany, Apr. 12, 1965, S 96,486
10 Claims. (Cl. 72—56)

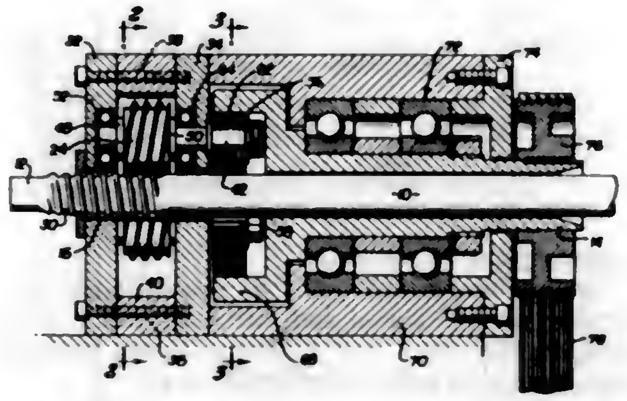


The electrodynamic method of forming workpieces includes surrounding the workpiece by concentric bifilar and mutually insulated windings, passing high power current surges in mutually opposed directions through the respective windings for producing mutually repulsive dynamic forces between the windings, and passing the dynamic forces through coupling material placed between the workpiece and the windings so as to act formingly upon the workpiece.

Device for carrying out the method includes concentric bifilar and mutually insulated windings, a quantity of coupling material which forms a hollow-cylindrical coupling structure and in which the windings are coaxially embedded, the coupling structure being adapted to closely surround the workpiece to be formed, the windings being serially interconnected and having terminal means to pass high power current surges in mutually opposed directions through the respective windings for causing the resulting mutually repulsive forces in the windings to act through the coupling material formingly upon the workpiece.

3,387,477
APPARATUS AND METHOD FOR ROLL FORMING FLEXIBLE TUBING

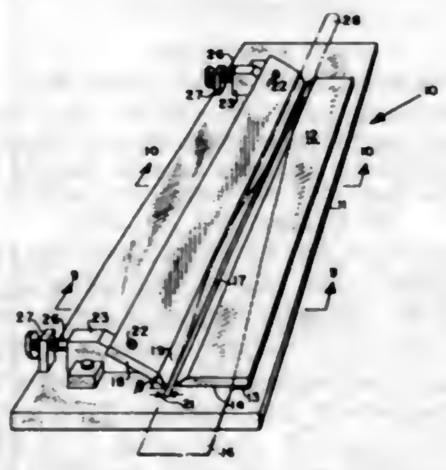
Samuel Shapper, North Hollywood, Calif., assignor to Price-Pfister Brass Mfg. Co., Pacoima, Calif., a corporation of California
Filed Nov. 29, 1965, Ser. No. 526,918
7 Claims. (Cl. 72—77)



Hollow tubing 10 is fed through an exterior mandrel 16. The tubing is worked upon by forming rollers 24, 26 and 28 that project through slots 18, 10 and 22 (FIG. 2) in the mandrel. The mandrel prevents the tubing 10 from bulging and no interior mandrel is required.

3,387,478
TUBE FORMING APPARATUS

Harvey Burr, Bronxville, N.Y., assignor to Anaconda Wire and Cable Company, a corporation of Delaware
Filed Apr. 14, 1966, Ser. No. 542,644
7 Claims. (Cl. 72—176)

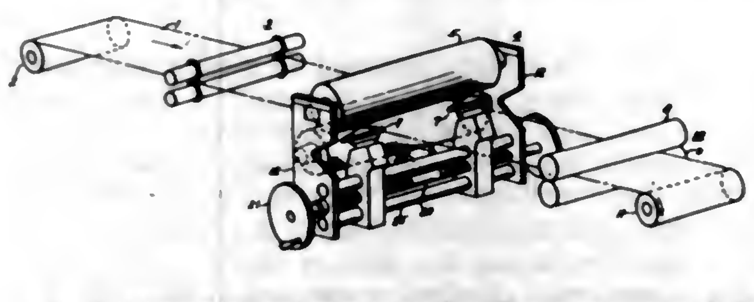


1. Apparatus for bending a tube from an advancing strip comprising:

(A) a base plate,
(B) a guide plate parallel to said base plate and spaced therefrom to define a passage confining and guiding said strip, said guide plate having an edge defining a lengthwise exit from said passage,
(C) means blocking said passage at an acute angle to said edge thereby compelling said strip to advance from said passage obliquely to said edge,
(D) a baffle having a flat, strip-deflecting surface opposing and sloping away from said edge.

3,387,479
BURR WIPER

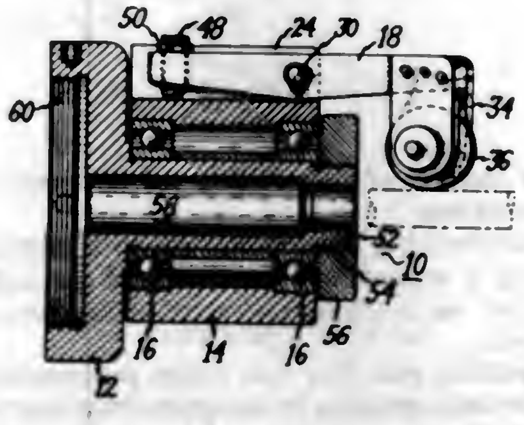
Robert L. Winkler, Baltimore, Md., assignor to Bethlehem Steel Corporation, a corporation of Delaware
Filed Apr. 22, 1966, Ser. No. 544,500
4 Claims. (Cl. 72—177)



1. A burr wiping apparatus for the treatment of the burred edges of an advancing metal strip comprising:
a disc mounted for rotation about its axis, the surface of said disc mounted to contact the burred edge of said strip on said surface within the quadrant defined by a line from the centerpoint of said disc parallel to and in the direction of travel of said strip, and a line through said centerpoint substantially perpendicular to and transverse of said strip.

3,387,480
ROLLER SCRIBE HEAD

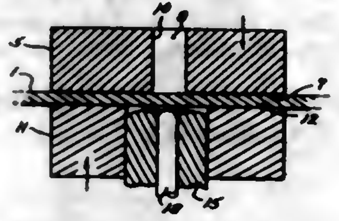
Garlan Lee Eaker, Rome, Ga., and James W. Morton, Hickory, N.C., assignors to General Electric Company, a corporation of New York
Filed Sept. 9, 1965, Ser. No. 486,139
2 Claims. (Cl. 72—203)



A roller scribe head having a plurality of rotatable cutters for scribing wire prior to shaving. Each cutter is rotatably mounted in a cutter arm which in turn is pivotally mounted on a rotating member of the scribe head. Each cutter is mounted at an angle to the axis of movement of the wire through the scribe head to provide rotation of both the cutters and the rotatable member of the head about the wire as the wire is pulled through the head. Adjusting means are provided on each cutter arm to adjust the position of the cutter with respect to the wire and thereby limit the depth of the scribing of the wire. A gauge member is provided to enable the accurate adjustment of the cutter arms to accurately position the cutters.

3,387,481
PROCESS FOR THE DEFORMATION OF SHEET MATERIAL

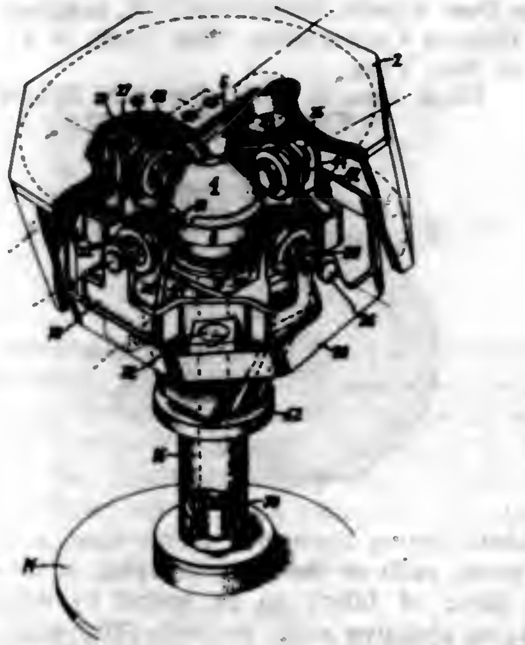
Leo M. Harvey, Los Angeles, and Ralph W. Hilton, Torrance, Calif., assignors to Harvey Aluminum (Incorporated), Torrance, Calif., a corporation of California
Continuation-in-part of application Ser. No. 468,449, June 30, 1965, which is a continuation of application Ser. No. 417,567, Dec. 11, 1964, now Patent No. 3,221,924. This application Feb. 27, 1967, Ser. No. 618,883
19 Claims. (Cl. 72—379)



The present invention relates to a method for the deformation of sheet material to form either solid or hollow projections extending therefrom. The manufacture of integrally formed projections in sheet material, of, for example, malleable metal and synthetic resins, is carried out by compressing to a plastic state a first area of the sheet surrounding a second area of the sheet upon which the projection is to be formed. To prevent the formation of wrinkles in areas of the sheet about the projection, a third area of the sheet lying contiguous to and surrounding the first area is held under a compressive force sufficient to prevent outward radial flow of resultant plastic material in the first zone without causing permanent deformation of the third area of the sheet.

3,387,482
BEARING SUSPENSION SYSTEM

Donald F. Wilcock, Pittsfield, Mass., and Gerald J. Kushner, Huntsville, Ala., assignors to General Electric Company, a corporation of New York
Filed Feb. 12, 1965, Ser. No. 432,097
6 Claims. (Cl. 73—1)

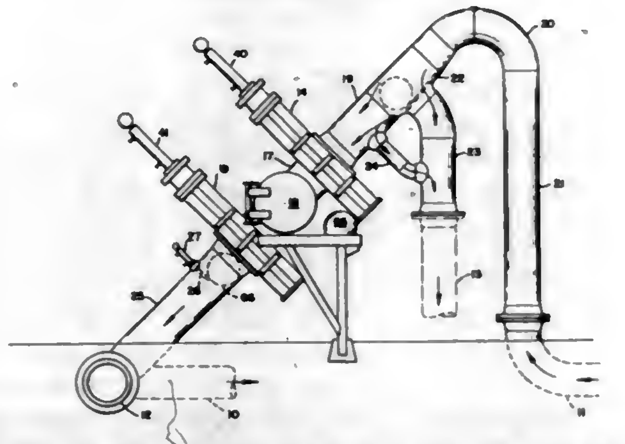


1. A suspension system which comprises platform means fixed to a spherically shaped rotor, a spherically shaped bearing surface supporting said rotor, housing means for the bearing surface mounted on a fixed support, three axis gimbal means comprising an outer gimbal and inner gimbal aligned so that the gimbal axes are mutually perpendicular in a horizontal plane with said gimbal

members being supported in pedestal means free to rotate about an axis in the vertical direction, the intersection of said gimbal axes coinciding substantially with the center of rotation for the rotor, said outer gimbal having sensing means thereon for indicating relative displacement between the gimbal and platform means, drive means mounted on the gimbal means being associated with said sensing means to maintain a fixed angular relationship therebetween, and means for supplying a pressurized fluid to the bearing surface.

3,387,483
FLOWMETER PROVING APPARATUS

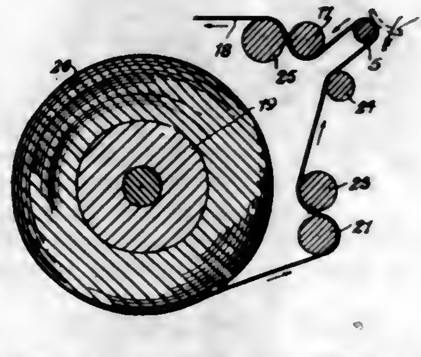
Lyle R. Van Arsdale, Houston, Tex., assignor to M & J Valve Company, Houston, Tex., a corporation of Delaware
Filed Nov. 5, 1965, Ser. No. 506,549
3 Claims. (Cl. 73—3)



Meter prover apparatus for measuring liquid flow. Interchange means is provided for removing a sphere from the outlet end of a meter prover loop and introducing it into the inlet end. The interchange means includes gate valves having aligned flow passages inclined to the horizontal (e.g., 45°) and constructed to provide sediment receiving sumps for the removal of foreign solids from the liquid.

3,387,484
FABRIC TESTING APPARATUS

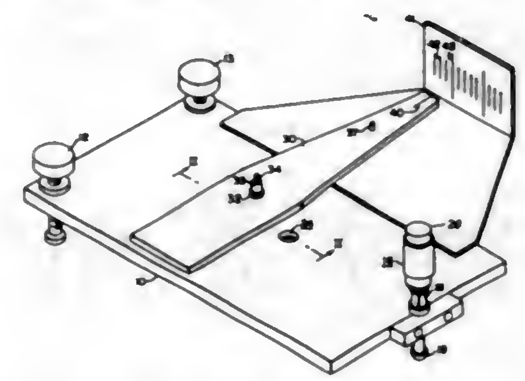
Thomas Dow Ainslie, Metuchen, N.J., assignor to Phillips-Van Heusen Corporation, New York, N.Y., a corporation of New York
Filed Mar. 2, 1966, Ser. No. 531,087
6 Claims. (Cl. 73—7)



A fabric testing apparatus comprising, a rotor having radial arms, each of the arms carrying at its end, a projecting piece of fabric to be tested by wiping contact against an abrasive strip or web. The strip or web is drawn from a supply roll and it passes about an abutment roller where it is contacted by successive pieces of the fabric as they are moved past it by the rotation of the rotor. A driven feed roller located beyond the abutment roller, moved the abrasive strip which passes over a tension roller and proceeds to a point of disposal. This arrangement is such that each piece of fabric contacts with a fresh area of the abrasive strip during the travel of the strip from the supply roll to the point of disposal.

3,387,485
BEARING TESTER

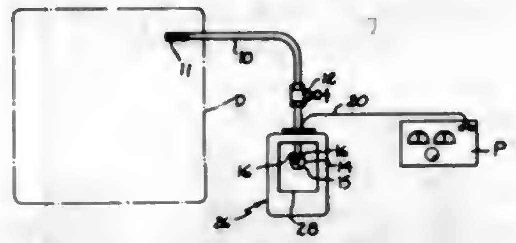
George E. Hall, Harmans, and Arthur B. Redpath, Beltsville, Md., assignors to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Jan. 12, 1967, Ser. No. 608,905
12 Claims. (Cl. 73—9)



A flat plate is initially adjusted to a horizontal position and receives a bearing to be tested. A torque arm, precalibrated with respect to effective weight, has a hub portion which is inserted into the central opening of the bearing. For a qualitative test the arm is gently moved to see if there are any abrupt changes in smooth rotation. For a quantitative test the plate is tipped by means of a micrometer head attached at one end of the plate and when the torque arm rotates under force of gravity a reading is noted indicative of the height of the end above or below its initial position. From the reading and a knowledge of the location of the effective weight, starting torque is obtained.

3,387,486
METHOD AND APPARATUS FOR DETERMINING THE DEWPOINT OF A GASEOUS MIXTURE

David Sinclair, Martinsville, N.J., assignor to Johns-Manville Corporation, New York, N.Y., a corporation of New York
Filed Dec. 21, 1966, Ser. No. 603,497
8 Claims. (Cl. 73—17)

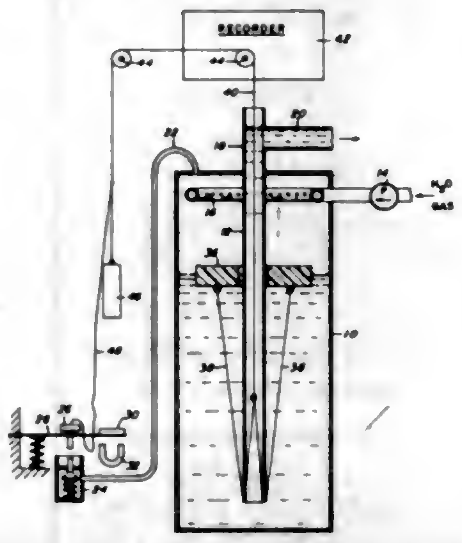


1. The method of determining the dewpoint of a gas which comprises:
(a) introducing a flow of said gas to a mirror surface having a temperature less than said gas and thereby
(b) cause moisture in said flow to condense on said surface;
(c) throttling said flow rate within progressively closer limits corresponding to the appearance and disappearance of moisture on said surface; and
(b) sensing and observing the temperature of said surface existing when said moisture condenses.

3,387,487
RECORDING GAS COLLECTOR

Arthur L. Hodges, Jr., Montpelier, Vt., assignor to the United States of America as represented by the Secretary of the Interior
Filed Oct. 18, 1965, Ser. No. 497,562
6 Claims. (Cl. 73—19)

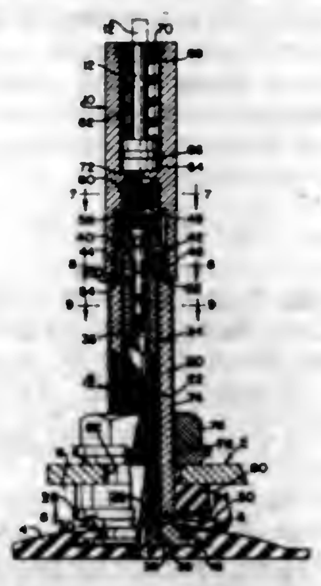
1. A system for recording insoluble gas content of a liquid comprising pumping means for delivering a substantially constant column of a gas-liquid mixture to a collector vessel;
liquid drain means connected to an upper portion of said vessel and having a standpipe extending to a predetermined vessel level;



gas venting means connected to an upper portion of the vessel;
means for operating the gas venting means responsive to liquid level in the vessel to open the venting means at a lower liquid level and close the venting means at a higher liquid level; and
means for recording liquid level in the vessel.

3,387,488
DEVICE FOR DETECTING A LEAK OR INJURY TO A PNEUMATIC TIRE

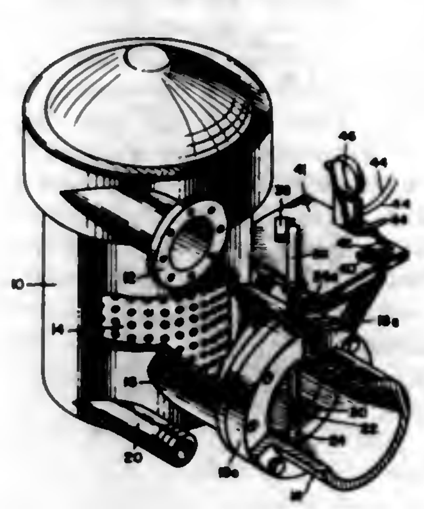
Odis Walker, 4017 Brookview Road,
Austin, Tex. 78722
Continuation-in-part of application Ser. No. 455,761, May 14, 1965. This application Sept. 7, 1967, Ser. No. 671,912
18 Claims. (Cl. 73—49)



A leak and injury indicator of a pneumatic tire of a tire and rim assembly, which is preferably incorporated into and used in conjunction with a valve stem, one conduit of which valve stem connects with the tire cavity within the tire exterior of an air tube or envelope therein, the other conduit of which valve stem is in fluid communication with the air envelope. An air pressure indicator is associated with the conduit which connects with the tire cavity within the tire, exterior of the air envelope to indicate a rise in pressure in the tire cavity, without permitting air to escape. The leak and injury indicator can also be used with tubeless tires to indicate the possibility of an air leak between the valve stem and the rubber grommet which is fitted within a hole in the rim.

3,387,489
BREAKAGE DETECTOR FOR SCREENING APPARATUS

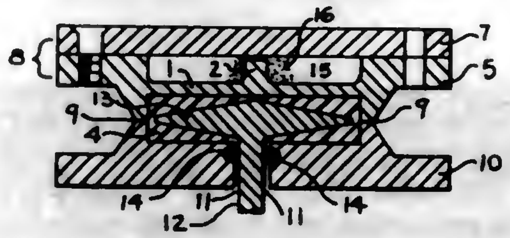
Douglas L. G. Young, Pierrefonds, Quebec, Canada, assignor to Canadian Ingersoll-Rand Company Limited, Montreal, Quebec, Canada, a corporation of Canada
Filed July 19, 1965, Ser. No. 473,069
9 Claims. (Cl. 73—61)



Means for detecting a breakage in a screening apparatus, comprising a rotatable shaft carrying a pair of opposing blade members in the discharge of the screening apparatus. One of the blade members is of solid construction; the other is of larger area, but includes a plurality of openings sufficient to cause such one to normally present greater resistance to the discharge. An arm member is connected to the shaft and actuates an electrical switch to set off an alarm when shive in the discharging blocks the openings in such other blade member.

3,387,490
RHEOMETER DIE IMPROVEMENT

Raleigh W. Wise, St. Albans, W. Va., assignor to Monsanto Company, St. Louis, Mo., a corporation of Delaware
Filed Sept. 27, 1965, Ser. No. 490,606
11 Claims. (Cl. 73—101)

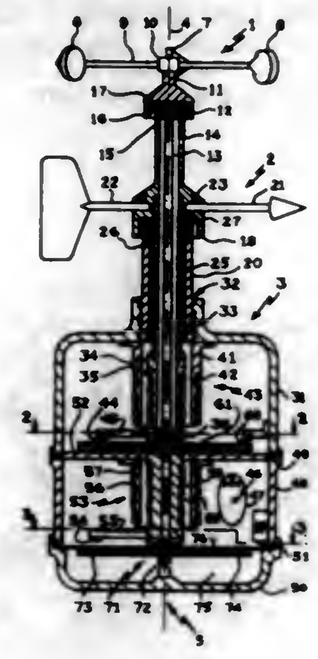


The disclosure is an improved rheometer die for confining an elastomer sample under pressure. A continuous wall of the die deforms so that the die cavity expands and contracts. Pressure is thereby maintained in the die cavity during the elastomer curing period which makes it possible to obtain an accurate cure curve for the elastomer.

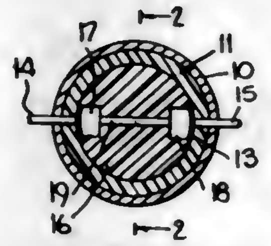
3,387,491
COMPASS-ORIENTED FLUID VELOCITY AND DIRECTION SENSOR

Harry E. Adams, 106 Gay St.,
Needham, Mass. 02192
Filed Mar. 4, 1966, Ser. No. 531,717
8 Claims. (Cl. 73—189)

A wind velocity and direction device in which signal impulses are generated, the frequency of which is proportional to wind speed and pulses are generated as a result of interaction between a wind direction sensing means and a magnetic compass, these pulses being indicative of the magnetic direction of the wind. The output is thus independent of the orientation of the device and it may be used on a moving vehicle.



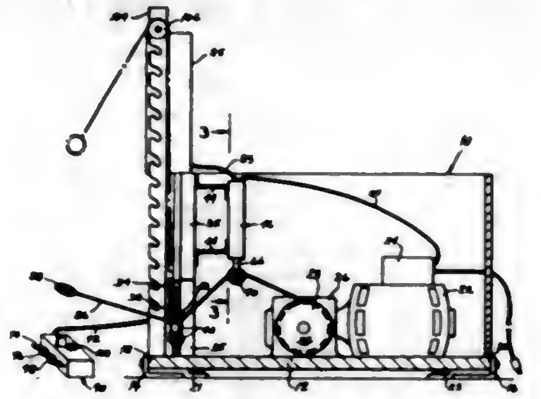
3,387,492
MAGNETIC FLOWMETERS FOR LOW FLOW RATES
Elmer D. Mannherz, Southampton, Charles P. Rohmann, Hatboro, and Henry Hermanns, Ardsley, Pa., assignors to Fischer & Porter Co., Warminster, Pa., a corporation of Pennsylvania
Filed May 2, 1966, Ser. No. 546,785
5 Claims. (Cl. 73—194)



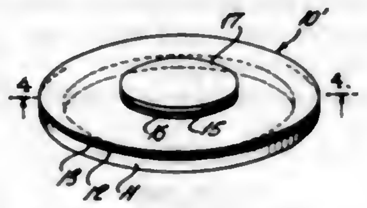
A magnetic flowmeter adapted to accurately measure low flow rates, the meter including a filler rod of insulating material which is inserted in a pipe section having a pair of electrodes disposed at diametrically opposed points, the rod having two parallel channels formed longitudinally therein at diametrically opposed positions encompassing the electrodes, whereby the fluid to be measured flows through these channels which serve to reduce the effective cross-sectional area of the pipe section thereby to increase the velocity of fluid therein.

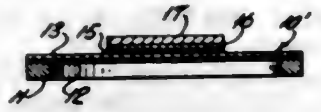
3,387,493
MOTOR-OPERATED EXERCISING DEVICE WITH LOAD RESPONSIVE INDICATING MEANS
Wallace S. Strittmatter, 330 Scout Drive, Belleville, Ill. 62221
Filed May 12, 1965, Ser. No. 455,212
8 Claims. (Cl. 73—379)

Motor-operated exercise therapy apparatus is suitable for programmed concentric, eccentric and isometric muscle contractions. A cable, whose outer end is held by the user in tension, is driven by a reversible variable speed motor powering a winding drum. The cable passes outward from the drum through force-measuring means which electrically displays to the user the force exerted by him. A motor control, positioned near the user, permits him to change the drum speed and direction of rotation, thus permitting the user to change from concentric to eccentric or isometric contractions.



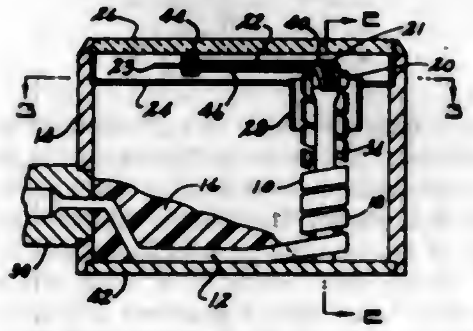
3,387,494
TENSIONED MEMBRANE
Marcel J. E. Golay, 116 Ridge Road, Rumson, N.J. 07760
Filed Apr. 28, 1966, Ser. No. 546,087
16 Claims. (Cl. 73—406)





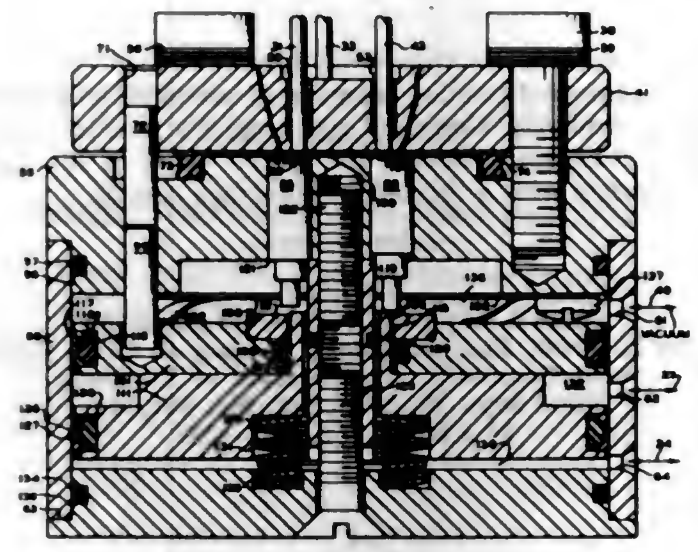
1. A composite tensioned membrane for the detection of differential pressures comprising at least two layers of different materials firmly supported at their peripheries, one of said layers consisting of arsenic and the other layer having physical characteristics to enable the measurement of small distensions of said membrane produced by said differential pressures.

3,387,495
MEANS FOR DAMPENING VIBRATIONS IN HELICAL BOURDON TUBE GAGES
Erich Himstedt, 200 W. Atara St., Monrovia, Calif. 91016
Filed Feb. 4, 1966, Ser. No. 525,047
5 Claims. (Cl. 73—414)



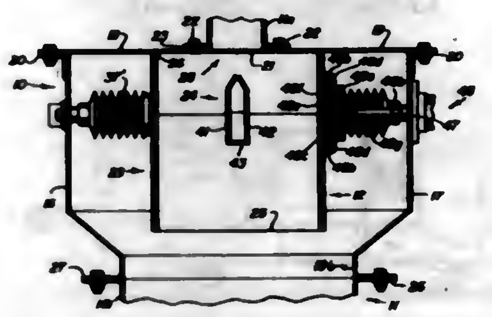
This invention relates to pressure gages of the multiconvolution helical Bourdon type, and especially to means for dampening shock and vibration in such gages. In one form the dampening means comprises an insert of tubular form draped over the pointer connection and extending within the coil in a manner to resist both lateral and axial vibrational motion of the coil. The insert may be made of heat shrinkable material which is flame-shrunk onto the pointer. Cooperating with this dampener insert is a vibration dampener bushing slipped onto the free end of the pointer, said bushing and insert being connected together into a unitary structure by an elongated sleeve telescoped over the pointer.

3,387,496
PNEUMATIC AMPLIFIER SAMPLING VALVE FOR CHROMATOGRAPHIC ANALYZERS
Arthur B. Broerman, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed June 20, 1966, Ser. No. 558,742
6 Claims. (Cl. 73—422)



1. A fluid-motor actuated valve system for distributing a first fluid to a selected conduit comprising, in combination: a first body having two opposite faces; first, second, and third spaced passages in said body, each of said spaced passages communicating between said faces; a second body having an upper face spaced from the lower face of said first body; a first flexible sealing diaphragm of a diameter at least sufficient to cover said spaced passages; first, second, and third cylindrical recesses in said upper face, opposite said first, second, and third spaced passages, respectively; first and second cylindrical passages traversing said second body, within the circle described by said cylindrical recesses; first and second plunger rods slidably disposed in said first and second cylindrical passages, respectively; the upper ends of said first and second rods adjacent said diaphragm and intermediate the ports of said first, second, and third spaced passages, so that said first rod seals against said diaphragm intermediate said first and second spaced passages, and so that said second rod seals against said diaphragm intermediate said second and third spaced passages; a first power piston disposed adjacent and below said second body and normally biased out of contact with said second rod; a first chamber defined by the lower face of said second body and the upper face of said first power piston; first biasing means disposed in said first chamber normally biasing said first piston downward; a second power piston disposed adjacent and below said first power piston adapted to contact said first plunger rod; a third body disposed adjacent and below said second piston and normally spaced therefrom; a second chamber defined at its upper end by the lower face of said first power piston and at its lower end by the upper face of said second power piston; a third chamber defined at its upper end by the lower face of said second power piston and at its lower end by said third body; said first chamber, said second chamber and said third chamber being pneumatically sealed from each other; a cylindrical casing the inner surface of which makes sealing contact with the peripheries of said power pistons, the upper edge of said casing makes sealing contact with said second body, and the lower edge of said casing makes sealing contact with said third body; means to secure said first, second, and third bodies and said power pistons adjacent to one another in a fixed relationship; a first conduit means connected to supply said first fluid to be distributed under a first pressure to said second spaced passage; a second conduit means connected to receive said first fluid from said first spaced passage; a third conduit means connected to receive said first fluid from said third spaced passage; a fourth conduit means connected to supply, during a first time interval, a second fluid under a second pressure greater than said first pressure to said second chamber to exert upward pressure on said first power piston, first overcoming said first biasing means and exerting force on said second plunger rod, contacting the upper side of said first power piston to force a first portion of said sealing diaphragm adjacent thereto to seal between the ports of said third and second spaced passages of said first body; said second fluid simultaneously exerting increasing downward pressure on said second power piston, thus retracting said second piston means, permitting said first plunger rod to break sealing contact with a second portion of said sealing diaphragm adjacent thereto, thereby establishing communication between the ports of said first and second spaced passages; whereby first fluid enters said valve system through said second passage and passes out of said system through said first passage; a fifth conduit adapted to supply fluid pressure to said third chamber during a second interval of time to bias said second piston upwardly, said fifth conduit adapted to vent said third chamber during said first time interval; said fourth conduit means adapted to vent said second chamber, during a second time interval, whereupon said power pistons revert to their first described position, during which said first fluid pressure will establish communication between said third and second spaced passages under said diaphragm, while maintaining sealing communication between said first and second spaced passages, whereby said first fluid enters said system through said second spaced passage and passes out of said system through said third passage.

3,387,497
MATERIAL SAMPLING APPARATUS
Fred R. Huntington, Salt Lake City, Utah, assignor to The Galligher Company, Salt Lake City, Utah, a corporation of Utah
Filed Jan. 21, 1966, Ser. No. 522,143
10 Claims. (Cl. 73—423)



Apparatus for obtaining periodic samples from a flowing stream of material, while protecting the samples and sampling mechanism from splash. A sampling hopper is mounted in and under protective structure for reciprocation across an inlet opening through the cover of such structure in substantially sealing contact with the undersurface of such cover. A sample cutter is mounted in the sampling hopper, across the material receiving opening thereof, for cutting through material that passes from the inlet opening of the protective cover down through the sampling hopper. In its reciprocation, the sampling hopper carries the sample cutter entirely through the stream of flowing material, from one extreme position of such hopper to the opposite extreme position. The mechanism which mounts and reciprocates the sampling hopper in the protective structure is itself advantageously protected by flexible sleeves. The protective structure is preferably a housing enclosing the sampling hopper and its mounting mechanism, and the sample cutter has a discharge pipe that extends through and reciprocates along a slot in a wall of the housing. Splash deflection plates are provided for the pipe internally of the housing to prevent contamination of the discharged samples.

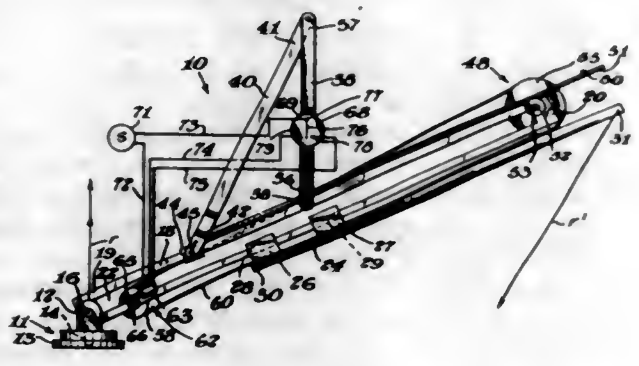
3,387,498

DEVICE FOR GENERATING ARCS

Douglas S. Chisholm, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Continuation-in-part of application Ser. No. 507,269, Nov. 12, 1965. This application July 28, 1967, Ser. No. 656,826

14 Claims. (Cl. 74—1)



An apparatus is described to trace a circular arc without access to the center of the circle employing a reference triangle at least one of whose sides is parallel to a reference radius of a circle.

3,387,499

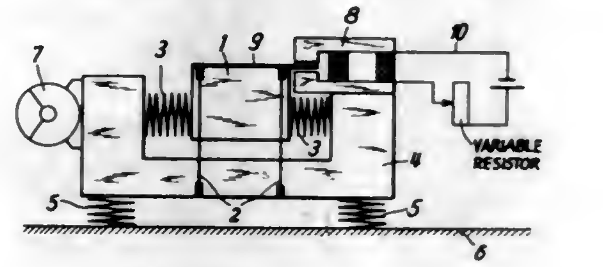
MECHANICAL VIBRATOR WITH ELECTROMAGNETIC DAMPING MEANS

Johannes Brüderlein, Rheinhausen, Germany, assignor to Beteiligungs- und Patentverwaltungsgesellschaft mit beschrankter Haftung, Essen, Germany

Filed Aug. 27, 1965, Ser. No. 483,181

Claims priority, application Germany, Sept. 2, 1964, B 78,363

13 Claims. (Cl. 74—61)



A resonant vibrator having a vibratory mass arranged to oscillate at a substantially constant frequency and at an amplitude which can be varied over a wide range by electric eddy current damping means associated with the mass for producing eddy currents which act to damp the amplitude of such oscillation.

3,387,500

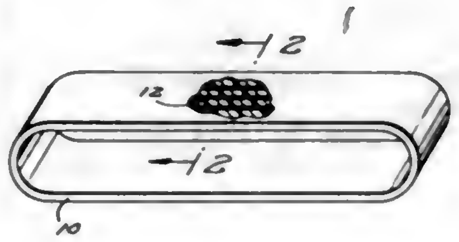
HIGH STRENGTH TRACTION MEMBER AND METHOD OF MAKING THE SAME

Ernst Hutzenlaub, Gehrden, and Hermann J. Schladitz, Munich, Germany, assignors to Schladitz-Whiskers, AG., Zug, Switzerland, a Swiss company

Filed Apr. 28, 1966, Ser. No. 546,007

Claims priority, application Switzerland, Apr. 29, 1965, 5,924/65

5 Claims. (Cl. 74—231)



An elongated traction member of elastomeric material having, similarly, elongated and generally parallel spaced tensile reinforcing inserts, the inserts being in the form of filaments with a thin metallic surface coating.

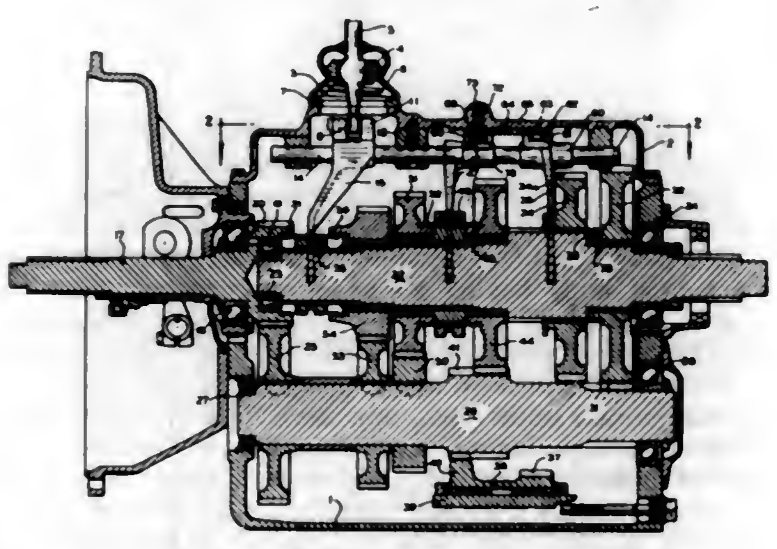
3,387,501

SHIFT LINKAGE TRANSMISSION

Barry L. Frost, Jackson, Mich., assignor to Clark Equipment Company, a corporation of Michigan

Filed Sept. 10, 1965, Ser. No. 486,403

11 Claims. (Cl. 74—335)



Shift linkage means for a transmission which changes equal movement of a shift selector lever in opposite directions from a neutral position to unequal movement of an associated shift fork in opposite directions from a neutral position.

3,387,502

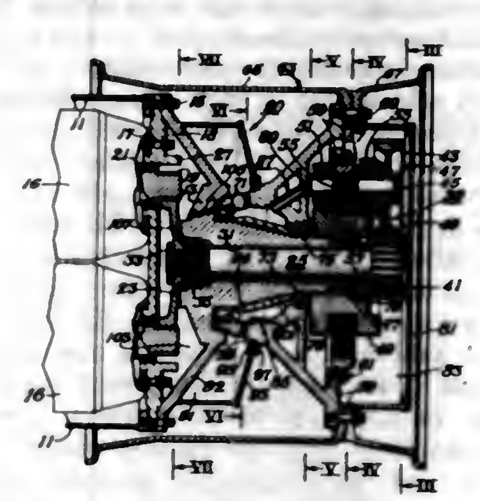
GEAR REDUCTION DRIVE UNITS EMBODIED IN VEHICLE WHEELS

Robert G. LeTourneau, P.O. Box 2307, Longview, Tex. 75601

Filed Mar. 1, 1966, Ser. No. 530,892

2 Claims. (Cl. 74—391

Arrangement for improving separation of foreign particles from lubricant fluid in a vehicle wheel which embodies a gear reduction drive unit and wherein the entire lubricant fluid supply is either contained within a plurality of rotating housings or otherwise arranged so as to be agitated and circulated as and when the wheel is rotated. The improvement provides a sump housing that essentially does not rotate but provides some circulation, and an arrangement of lubricant fluid circulation passages to accomplish circulation of the lubricant fluid through an intermediate chamber of reduced agitation and from there to the sump housing.



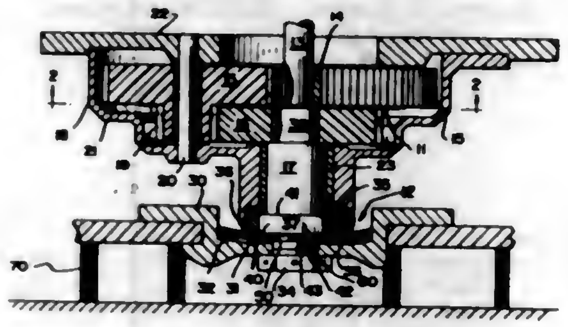
3,387,503

POWER TRANSMISSION AND CLUTCH MECHANISM

Frank J. Rychlik, 3484 Whirlaway Drive, Northbrook, Ill. 60062

Filed Feb. 21, 1967, Ser. No. 617,523

5 Claims. (Cl. 74—411)



A combined speed reducing transmission constructed of partially self-lubricating plastic gears and a unique slip-clutch for use between a rotatable driving source and a driven member and effective to absorb shock loads without damage to the transmission or to the driving source, and operable without loss of lubricant from the transmission housing.

3,387,504

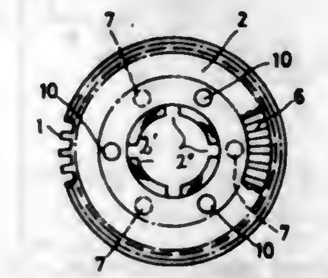
ROTARY MOTION TRANSMITTING DEVICE

Artur Fischer, 133 Gruenmettstetterstrasse, 7294 Tumlingen, Germany

Filed Aug. 16, 1966, Ser. No. 572,735

Claims priority, application Germany, Sept. 6, 1965, F 47,097

8 Claims. (Cl. 74—431)



A rotary member has an axis of rotation and is provided on its circumferential face with a first annulus of teeth, and on one of its axial end faces with a second annulus of teeth.

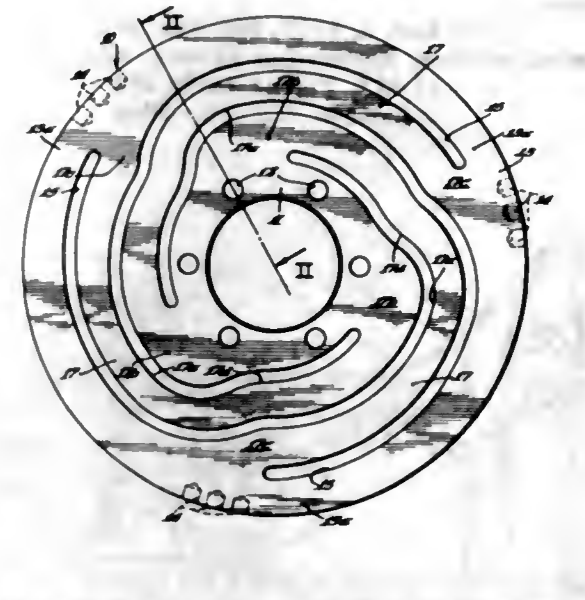
3,387,505

TUNED TORSIONAL VIBRATION DAMPER

Rollin Douglas Rumsey, Buffalo, N.Y., assignor to Houdaille Industries, Inc., Buffalo, N.Y., a corporation of Michigan

Filed Oct. 23, 1965, Ser. No. 503,406

17 Claims. (Cl. 74—574)



A torsional vibration damper has radially spaced hub and rim portions relatively torsionally displaceable in operation and connected by bendable spring spokes. Stop means to limit spring windup may be used. A hub member may mount the hub portion, and an inertia ring may be mounted on the rim portion.

3,387,506

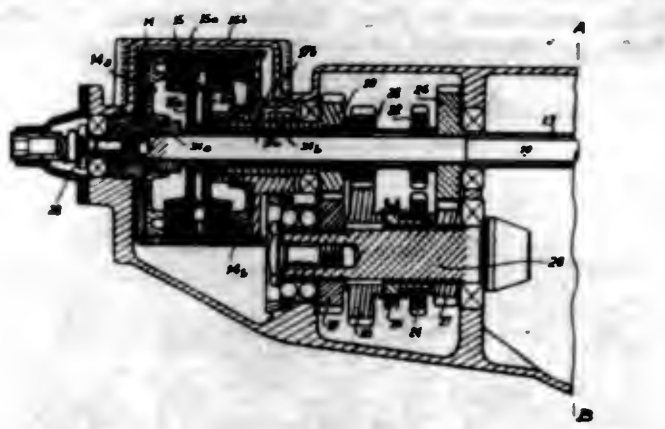
AUTOMATIC GEARBOX WITH CONVERTER

Jean G. Cadiou, Paris, France, assignor to Societe Anonyme Andre Citroen, Paris, France

Filed Aug. 3, 1965, Ser. No. 476,854

Claims priority, application France, Aug. 7, 1964, 984,498

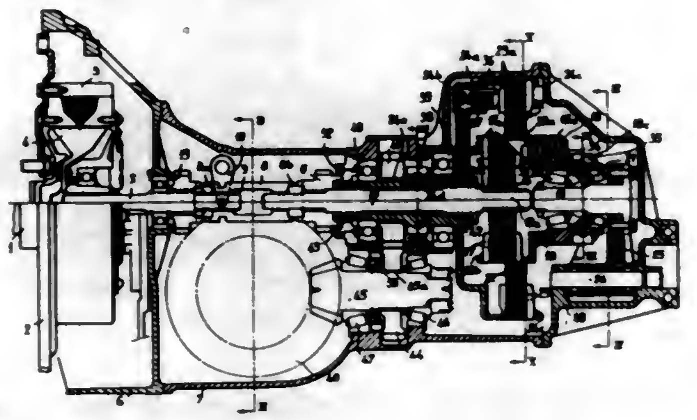
6 Claims. (Cl. 74—732)



An automatic gearbox with a hydraulic converter including two shafts disposed concentrically, one within the other and within the hydraulic converter. One of the shafts is capable of being selectively coupled by the aid of a first clutch means to the turbine member of the converter while the other ends of both shafts extend into the interior of a gear train housing where the shaft associated with the clutch is rigidly secured to a gear of a train. The other of the shafts is permanently coupled by one of its ends to the turbine member of the converter while at its opposite end it is provided with at least one other clutch means capable of entraining selectively at least one gear train of the gearbox by the intermediary of at least one sleeve mounted concentrically on the other shaft.

3,387,507
VARIABLE SPEED FRICTION TRANSMISSIONS FOR VEHICLES

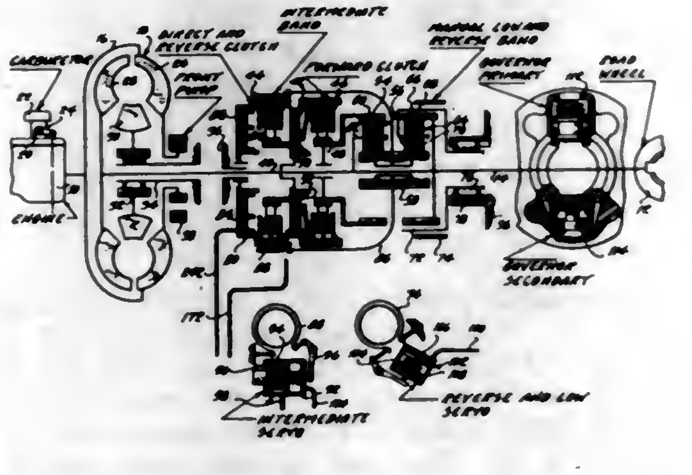
Gaëtan de Coye de Castelet, Billancourt, France, assignor to Regie Nationale des Usines Renault, Billancourt, France
Filed Oct. 6, 1965, Ser. No. 493,359
Claims priority, application France, Apr. 16, 1965, 13,627, Patent 1,450,492
5 Claims. (Cl. 74—796)



A transmission having a speed varying friction gear of the type comprising internally tangential conical friction surfaces, two stages of speed reduction, coaxial input and output shafts, and an intermediate shaft movable transversely while remaining parallel to the input and output shafts. The input and output shafts are both concentric and located on the same side of the speed varying mechanism.

3,387,508
MULTIPLE SPEED RATIO POWER TRANSMISSION CONTROL MECHANISM WITH PNEUMATICALLY OPERATED RATIO CONTROLLERS

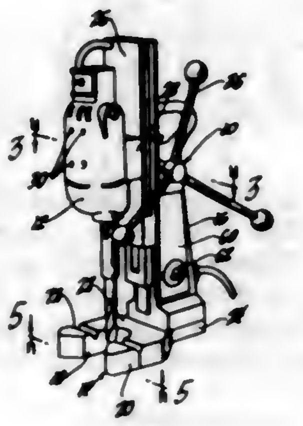
John J. Searles, Northville, and William C. Winn, Inkster, Mich., assignors to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Aug. 1, 1966, Ser. No. 569,217
12 Claims. (Cl. 74—864)

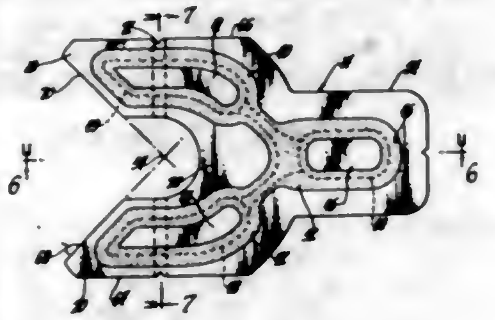


1. A control system for an automatic power transmission mechanism having fluid pressure operated servos capable of establishing each of several torque delivery paths between an internal combustion engine and a driven member, said engine having an air-fuel mixture intake manifold, a fluid pressure source, conduit structure connecting said pressure source and said servos, fluid pressure distributor valve means situated in and partly defining said conduit structure for controlling distribution of pressure from said source to each of said servos to effect speed ratio changes, throttle valve means for producing a fluid pressure signal that is proportional in magnitude to engine intake manifold pressure, said throttle valve means being in fluid communication with said distributor valve means whereby the latter is actuated in response to changes in the magnitude of said pressure signal, a manifold pressure passage interconnecting the engine intake manifold and said throttle valve means, a secondary valve means situated in and partly defining said manifold pressure passage including a movable valve element that blocks said manifold pressure passage when it assumes one position and accommodates pressure distribution through said manifold pressure passage when it assumes a second position, and a valve operator means in communication with said engine intake manifold and responsive to changes in the magnitude of the manifold pressure for moving said movable valve element to said second position when the manifold pressure is less than a predetermined value and for effecting movement of said movable valve element to said one position when the manifold pressure is greater than said predetermined value.

3,387,509
WORK TOOL FIXTURE

George J. Lupear, 8125 Marshalsea, Union Lake, Mich. 48085
Filed Sept. 20, 1965, Ser. No. 488,422
4 Claims. (Cl. 77—59)

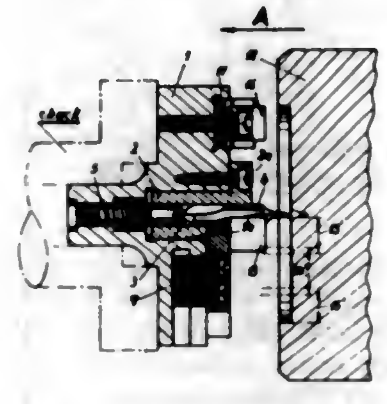




A work tool stand which includes a semicircular base with magnetic means of engagement to a supporting surface and for supporting a work tool centrally over the work area therewithin in a manner which precludes a base lifting leverage action and rotation of the base about the work area.

3,387,510
DEVICE FOR CUTTING TO LENGTH AND CENTERING WORKPIECES AND STOCK MATERIAL

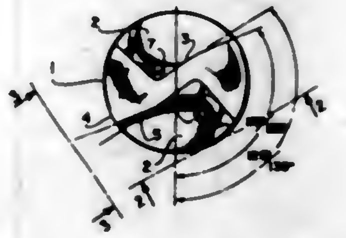
Hermann Landolt, Schaffhausen, Switzerland, assignor to Georg Fischer Aktiengesellschaft, Schaffhausen, Switzerland
Filed Jan. 21, 1966, Ser. No. 522,309
Claims priority, application Switzerland, Jan. 29, 1965, 1,293/65
1 Claim. (Cl. 77—65)

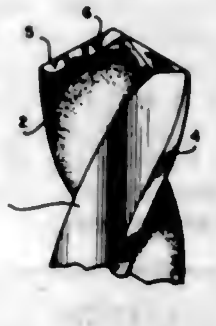


Device for cutting to length and centering workpieces in which a rotatable body has a central bushing for supporting a centering drill and has holders for cutting elements mounted thereon for cutting the end of the workpiece in respectively different radial regions thereof, with the said radial regions overlapping and with at least some of said cutting elements being adjustable axially on the body.

3,387,511
TWIST DRILL

William K. Ackart, Sr., North Hollywood, and Herman B. Barish, Woodland Hills, Calif., assignors to Lockheed Aircraft Corporation, Burbank, Calif.
Filed May 2, 1966, Ser. No. 546,857
5 Claims. (Cl. 77—70)

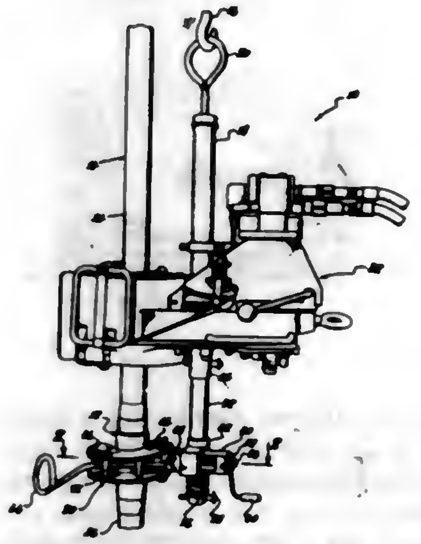




1. A twist drill having a plurality of cutting lips each cutting lip comprising a primary section extending inwardly from the periphery of the drill and a secondary section extending inwardly from the primary section, said primary section having a chisel edge angle of between 115° and 125°, and a positive rake angle of between 12° and 16°, said secondary section having a chisel edge angle of between 125° and 135° and a positive rake angle of between 4° and 6°.

3,387,512
BACKUP WRENCH

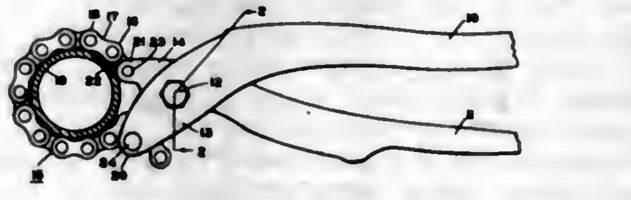
Andrew B. Campbell, San Marino, Calif., assignor to Hillman-Kelley, Los Angeles, Calif., a partnership
Filed Apr. 18, 1966, Ser. No. 543,329
7 Claims. (Cl. 81—54)



A back-up wrench for a power wrench used to make or break threaded joints. The back-up wrench is pivotally mounted on the power wrench for movement into and out of engagement with one part of the threaded joint, the power wrench being engageable with the other. The back-up wrench comprises a body having a stationary jaw and a movable jaw linearly movable relative to the stationary jaw to accommodate different pipe or tubing sizes, and pivotable relative to the stationary jaw to open and close the jaws. The pivot for the movable jaw is linearly movable with the movable jaw so as to maintain the stationary and movable jaws in substantially the same positions relative to the axes of pipes or tubings of different diameters. For this purpose, the movable jaw is pivotally mounted on a slide member slidable relative to the wrench body in directions to move the movable jaw toward and away from the stationary jaw.

3,387,513
CHAIN-TOOL

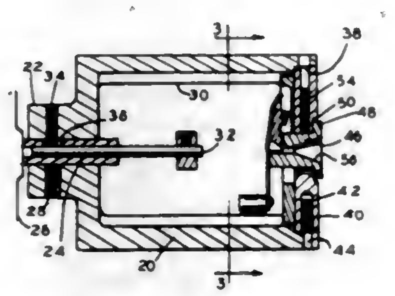
Sanford E. Coblitz, 567 Knollwood Ave., Ashtabula, Ohio 44004
Filed July 17, 1967, Ser. No. 653,916
5 Claims. (Cl. 81—66)



The device features a chain-tool disposed to hold a chain wrapped around an object to be squeezed. The chain-tool features a variable chain-receiving opening. The chain-tool includes a pair of jaws having an open-position range and a closed-position range. In the open-position range, the jaws increase the size of chain-receiving opening to an enlarged dimension through which the chain may be freely drawn, whereby the effective length of the chain wrapped around the object may be adjusted to take-up chain slack. In the closed-position range, the jaws restrict the size of the chain-receiving opening for holding the chain therein, whereby further closing of the jaws through said closed-position range squeeze-draws said chain about said object.

3,387,514
WIRE STRIPPER

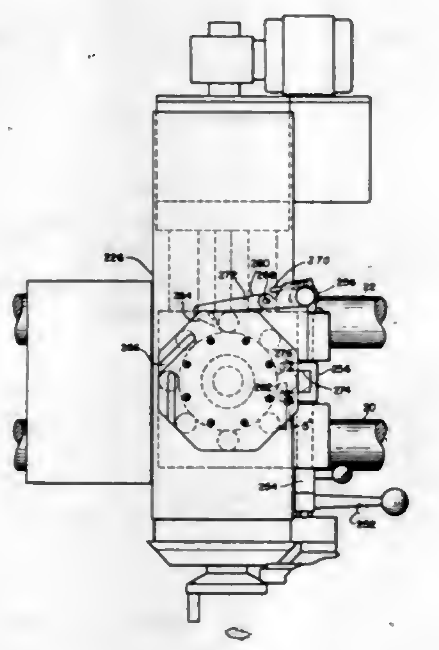
Louis M. Carpenter, 6900 Highbridge Road,
Fayetteville, N.Y. 13066
Filed Aug. 4, 1967, Ser. No. 658,401
10 Claims. (Cl. 81—9.51)



A rotary wire stripper employing a single blade in connection with a stepped guide sleeve to support the wire as the blade cutting edge moves into stripping position along the arc terminating at the guide sleeve step, or in which opposed blades are employed in conjunction with a slidable wire guide sleeve axially movable in a bushing, the sleeve acting to move the cutting edges of both blades on opposite like arcs terminating at the bushing, and in which the blade or blades are urged toward their terminal positions by centrifugal force.

3,387,515
MODULAR LATHES

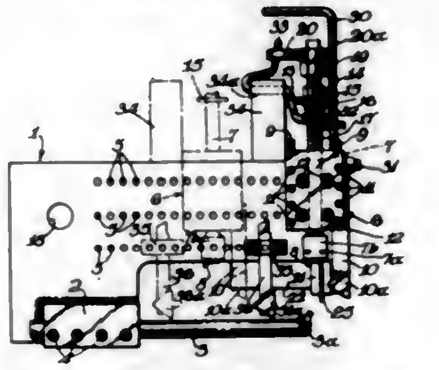
Peter D. George, 156 Crabtree Road,
Quincy, Mass. 02169
Continuation-in-part of application Ser. No. 367,720, May 15, 1964. This application Dec. 27, 1966, Ser. No. 604,889
10 Claims. (Cl. 82—2)



A turret indexing assembly is provided for use with lathes and the like to permit quick and precise movement of tools successively into cutting position. The turret is rotatably mounted on a carriage and is adapted to support cutting tools at evenly spaced angular positions. The head is provided with spherical elements which cooperate with a bifurcated yoke movable into and out of locking position with each of the spherical elements and adapted to center each tool with respect to the workpiece. A latch is provided and cooperates with the yoke to index the head from one position to the next.

3,387,516
LATHE TOOL ATTACHMENT

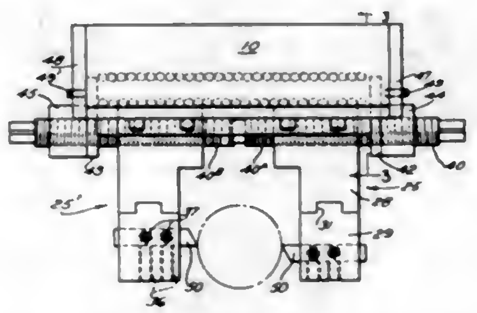
Joseph H. Martin, 16 S. Pennewell Drive, Edgemoor Gardens, Wilmington, Del. 19809
Filed Oct. 20, 1965, Ser. No. 498,618
4 Claims. (Cl. 82—25)



A lathe attachment is provided that holds secure more than one tool each of which can be moved toward or away from the work piece in the lathe, there being provided means for reciprocating the tools and connections between the tools effecting the reciprocating in unison so that a plurality of operations can be effected simultaneously on the workpiece.

3,387,517
TOOLHEAD

William J. Vandersteeg, Lansing, Ill., assignor to Madison Industries, Inc., a corporation of Rhode Island
Continuation of application Ser. No. 517,499, Dec. 3, 1965, which is a continuation-in-part of application Ser. No. 377,336, June 23, 1964. This application Dec. 7, 1966, Ser. No. 599,982
9 Claims. (Cl. 82—25)

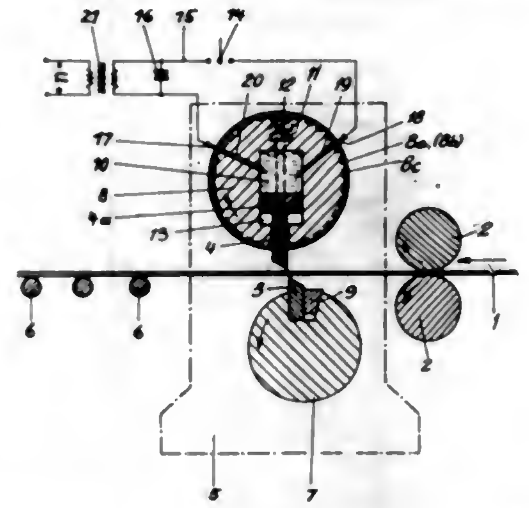


1. A toolhead comprising holder means, mountings for a pair of cutting tools at diametrically opposite sides of work to be operated upon, means for relatively adjusting said mountings means for connecting said mountings together, means having a straight line uninterrupted surface for commonly supporting said mountings for freedom of movement relative to said holder means so that cutting tools mounted in said mountings can, while both remaining in contact with the work, move together and in the same direction transversely of the axis of relative rotation of the tool head and the work to keep the tools centered with respect to the work.

3,387,518
FLYING TWO-DRUM SHEARS FOR CUTTING ROLLED STOCK

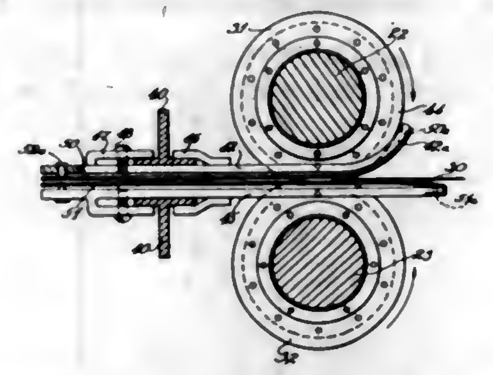
Karl-Heinz Bernhardt, Hilden, and Werner Marx, Dusseldorf, Germany, assignors to Schloemann Aktiengesellschaft, Dusseldorf, Germany, a German company
Filed Jan. 6, 1966, Ser. No. 519,045
Claims priority, application Germany, Jan. 9, 1965, Sch 36,357
9 Claims. (Cl. 83—37)

Flying two-drum shears for cutting rolled stock, one of the drums enclosing a piston slidable in a cylindrical cavity, and a blade, slidable in the cutting direction, connected, preferably integrally, with the piston, and means for producing shock waves of pressure in the cylindrical cavity, acting upon the piston, and thereby sharply advancing the said blade; and methods of cutting rolled stock with such shears.



3,387,519
STRIPPER ASSEMBLIES FOR SLITTING SHEARS

Joseph A. Nebel, 3004 W. 111th St., Chicago, Ill. 60655
Filed Feb. 1, 1966, Ser. No. 526,958
6 Claims. (Cl. 83—118)

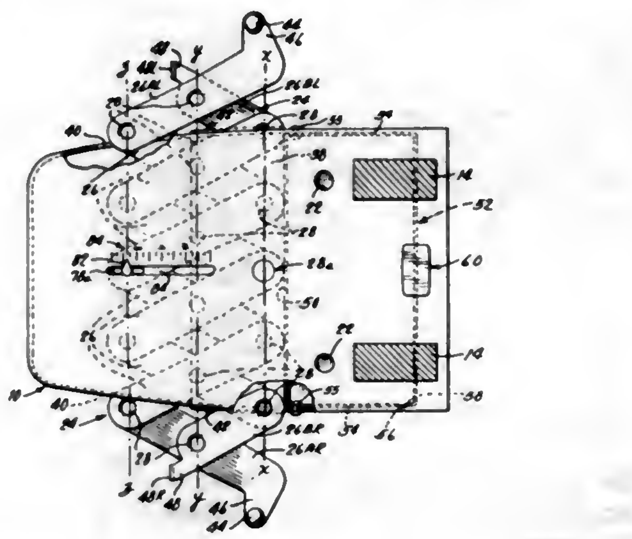


A stripper assembly for sheet material passed between rotary cutters comprising upper and lower transverse supports in the departing zone of the work, each support having a stripper clamped to it. The strippers are rigid and lined along their facing sides with strips secured to the related strippers in the inserting zone of the work. The strips are normally spaced in the departing zone thereof, but tensionable to yield when material of extra thickness is inserted between the cutters. The strips are limited from gathering closer than their normal spacing by having pins projecting outwardly through the related strippers to terminate with heads on the outside. The supports are T-bars with heads in opposed relation; and such heads are engaged by clamps from the strippers to secure them to the T-bars.

3,387,520
PERFORATING DEVICE WITH SHEET CENTERING GAUGE MEANS

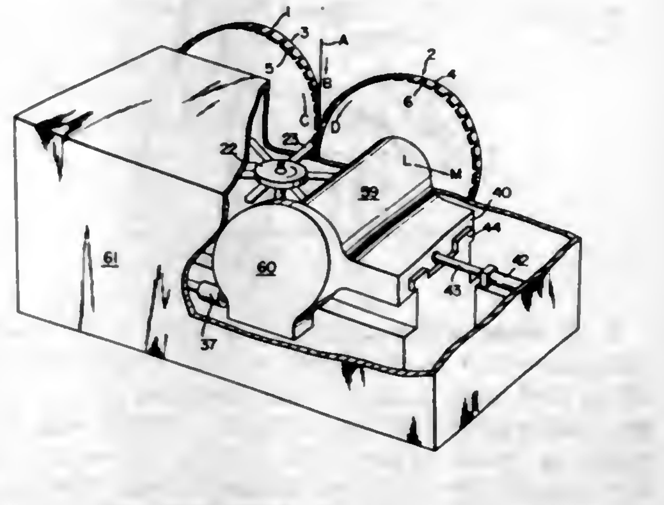
Hildaur L. Neilsen, 2 Juniper St., Metuchen, N.J. 08840
Filed Aug. 26, 1966, Ser. No. 575,273
14 Claims. (Cl. 83—167)

1. A device for perforating a sheet of paper adjacent to an edge thereof, comprising a base, paper-perforating means on said base, a lazy tongs assembly, pivotal mounting means located centrally of said assembly and pivotally interconnecting the latter and said base at a line extending centrally of said paper-perforating means, and gauge members at opposite ends of said lazy tongs, for engaging opposite edges of a sheet of paper placed therebetween to center the paper relatively to the paper-perforating means.



3,387,521
FIBER TOW CUTTING APPARATUS

Takeshi Okamoto, Iwakuni-shi, Japan, assignor to Teijin Seiki Co., Ltd., Osaka, Japan
Filed Apr. 11, 1966, Ser. No. 541,716
Claims priority, application Japan, Apr. 21, 1965, 40/23,577
2 Claims. (Cl. 83—355)

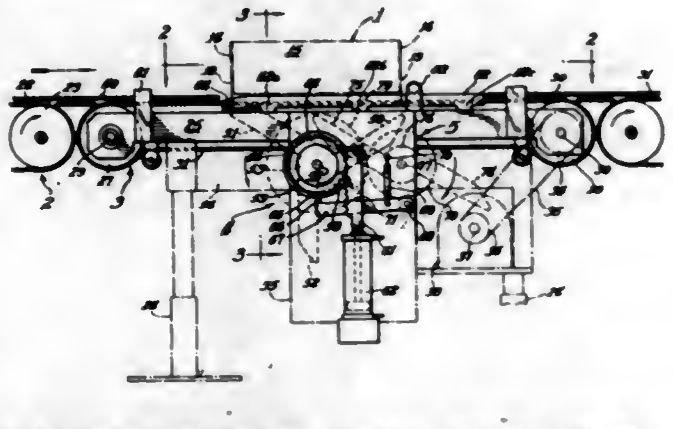


A fiber tow cutting apparatus having two side by side disks with slotted flanges thereon, the flanges being opposed and the slots of the flanges coming into alignment when the disks rotate relative to each other. The second disk is mounted on a shaft which is movable toward and away from the first disk. A rotating cutter is provided for cutting the tow, which is fed between the flanges of the two disks, the cutter having cutter blades moving in the direction in which the slots are aligned and through the aligned slots.

3,387,522
STRAIGHT LINE FLAP SLITTER

Wendell E. Standley, Lake Forest, Ill., assignor to Johns-Nigrelli-Johns, Inc., Skokie, Ill., a corporation of Illinois
Filed Feb. 16, 1967, Ser. No. 616,546
10 Claims. (Cl. 83—365)

The mechanism herein disclosed is employed to sever the corner connecting strips between the edges of downturned closure flaps which are held along the outer surfaces of the vertical walls of a paperboard case while the case is advanced in a straight line. Two rotary blade members are located at the opposite sides of and below the case path. During the advance of the case the blade members are simultaneously actuated to sever the strips at opposite corners.

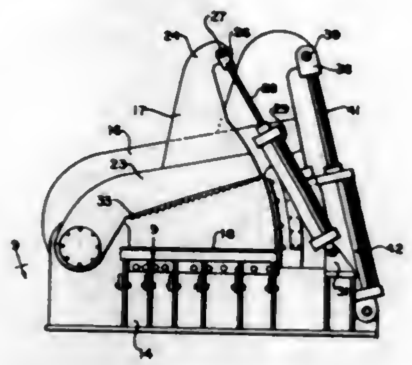


3,387,523
SHEAR CONSTRUCTION

Edwin B. Pray, Springfield Township, Hamilton County, Ohio, assignor to Constellation Steel Mill Equipment Corporation, Cincinnati, Ohio, a corporation of Ohio

Filed June 30, 1965, Ser. No. 468,485

4 Claims. (Cl. 83—461)



1. A shear which comprises a table, a stationary shear blade mounted on said table, a shear arm pivotally mounted on said table, a shear blade mounted on said shear arm for cooperating with the stationary shear blade, means for engaging work on the table to hold the work in position for shearing by the shear blades, a horn mounted on the table adjacent free ends of the shear blades, a bracket attached to the shear arm and extending transversely of the horn, means mounted on the bracket and engaging a side of the horn remote from the shear arm to hold free ends of the shear blades in operative position, and a work retaining plate mounted on the horn and extending upwardly from the table adjacent the path of movement of the free end of the shear blade on said shear arm to keep the work aligned with the shear blades.

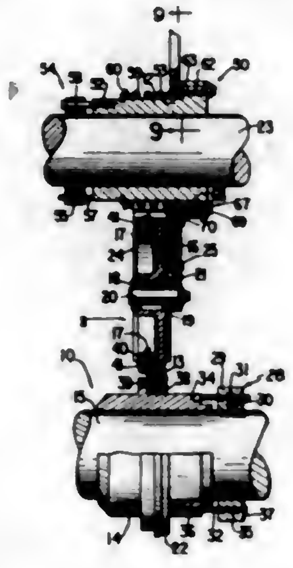
3,387,524
LEVER-POSITIONED ROTARY APPARATUS FOR SLITTING A TRAVELLING WEB

William F. Huck, 81 Greenway Terrace, Forest Hills, N.Y. 11375

Filed May 27, 1966, Ser. No. 553,557

6 Claims. (Cl. 83—482)

For slitting a travelling web, an annular blade on a wheel mounted on a lever is displaceable by swinging movement of the lever into and from lapping, canted engagement with a driven annular rotor blade located in the web path, the lever assembly being pressed axially toward cutting position by a spring that is counteracted by abutment members which hold the wheel blade spaced axially from the rotor blade during movement of the lever, and by eccentric means which hold it tilted relative to the rotor blade when the blades are in lapped relation for cutting.



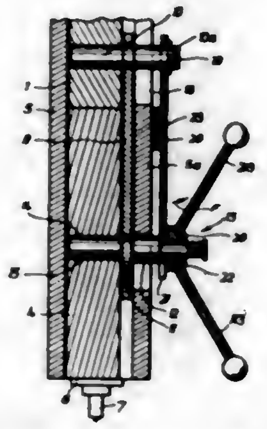
3,387,525
PROBING DEVICE ON PUNCH PRESSES AND THE LIKE

Emil Funke, Gevelsberg, Westphalia, Germany, assignor to Paul Ferd. Peddinghaus, Gevelsberg, Westphalia, Germany

Filed June 23, 1966, Ser. No. 559,946

Claims priority, application Germany, June 25, 1965, P 37,130

5 Claims. (Cl. 83—554)



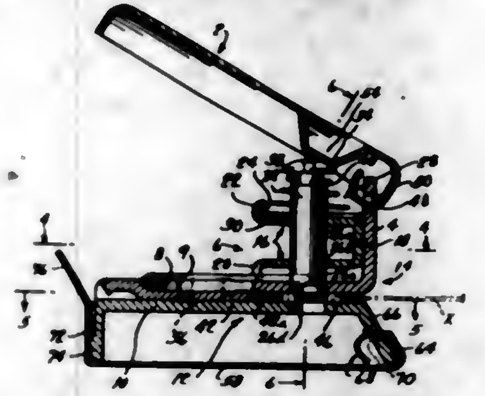
1. A probing device for prepositioning a punching carriage slidably mounted in the frame of a punching machine, said punching machine comprising a pressure member pivoted in the frame of the machine and adapted for abuttingly engaging said punching carriage at the end thereof opposite the punch end for actuating said carriage, an eccentric having shaft means rotatably carried by said carriage, a link member having one end pivoted to said pressure member and its other end engaged by said eccentric, a lever on said shaft means for rotating said eccentric for moving said carriage relative to said pressure member to cause a punch in the carriage to engage a workpiece in the machine preparatory to a punching operation, movement of said pressure member when said carriage is spaced therefrom and the punch therein is in engagement with a workpiece causing rotation of said eccentric until the pressure member engages and actuates said carriage, cooperating elements of clutch means on said lever and shaft means of said eccentric normally engaged when said pressure member is in retracted position, and means operated by advancing movement of said pressure member from its retracted position for disengaging said elements to permit rotation of said eccentric without rotation of said lever.

3,387,526
PAPER-PUNCHING DEVICE WITH SELECTIVELY DISPOSABLE PUNCHES

Hildaur L. Neilsen, 2 Juniper St., Metuchen, N.J. 08840

Filed June 9, 1966, Ser. No. 556,394

6 Claims. (Cl. 83—571)



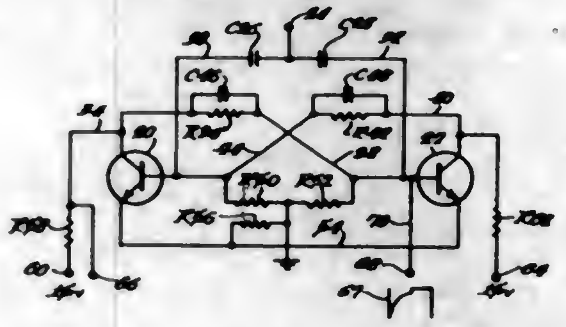
Separate punch assemblies are readily shiftable between sets of punch-receptive holes according to desired spacing of holes to be punched, said assemblies having yieldable detent means for holding them releasably in operative association with related sets of said holes.

3,387,527
ALL HARMONIC WAVE FREQUENCY DIVIDER

Ray B. Schrecongost, Park Ridge, Ill., assignor to Hammond Corporation, a corporation of Delaware

Filed May 14, 1965, Ser. No. 455,820

12 Claims. (Cl. 84—1.01)



An electric musical instrument frequency divider of the flip-flop bistable type for use at a single frequency, in which the input of each stage is connected to the output of the other through a series capacitor in parallel with a resistor, and in which the capacitor connecting the output of the first stage to the input of the second stage is several times as large as the other capacitor, of the order of at least three times as large, such that at the particular frequency, the waveform at the input to the second stage has a high order of both even and odd harmonics.

3,387,528
KEY MECHANISM FOR CLARINET

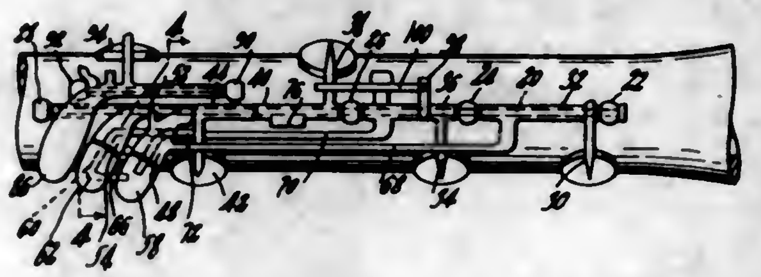
Rosario Mazzeo, Boston Symphony Hall, Boston, Mass.

Filed Oct. 7, 1965, Ser. No. 493,780

7 Claims. (Cl. 84—382)

The disclosure of the invention comprises mechanism for producing the bottom notes of a clarinet normally played with the little finger of either hand which includes an F/C key and finger plaque and an F♯/C♯ key and finger plaque, of which the F♯/C♯ finger plaque is located rearwardly of said F/C finger plaque, said F/C and F♯/C♯ finger plaques having finger engaging surfaces in substantial alignment transversely of the clarinet to be engaged alternatively by the extension and contraction of the little finger right hand.

In the preferred arrangement and E♭/B♭ key and finger plaque is provided, the E♭/B♭ finger plaque being located rearwardly of the E/B finger plaque, and said E/B and E♭/B♭ finger plaques having finger engaging surfaces in substantial alignment transversely of the clarinet in line with the little finger right hand to be engaged alternatively by the extension and contraction of said little finger right hand.



The F/C and F♯/C♯ keys are supported to turn about the same axis, and the F♯/C♯ key and finger plaque partially overlies and engages the F/C finger plaque to press the F/C key.

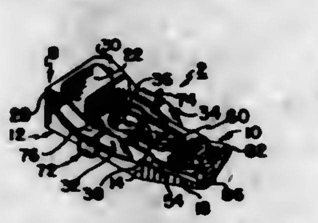
The E/B and E♭/B♭ keys are supported to turn on the same axis with the F/C and F♯/C♯ keys, and the E♭/B♭ key partially overlies and engages the E/B key to press same.

3,387,529
SLIDE-TYPE FASTENING DEVICE

Laurence H. Flora, North Olmsted, Ohio, assignor to Tinnerman Products, Inc., Cleveland, Ohio, a corporation of Ohio

Filed Sept. 23, 1966, Ser. No. 581,640

29 Claims. (Cl. 85—36)



A slide-type fastener for securement with a stud comprising a support-like base member and a resilient locking member adapted for detachable connection with the base member. The base member is provided with an opening for receipt of the stud and with a pair of shoulder portions on opposite sides of the opening which curve in a lengthwise direction outwardly and upwardly away from the opening. The body of the locking member is provided with a lengthwise extending slot. A pair of oppositely disposed resilient arms extend laterally outwardly from the body for snap-fastening and sliding and retaining engagement with the shoulder portions.

3,387,530
MIRROR REFLEX VIEWFINDER WITH ROOF EDGE PRISM

Helmut Ebertz, Stuttgart-Moehringen, Germany, assignor to Zeiss Ikon Aktiengesellschaft, Stuttgart, Germany

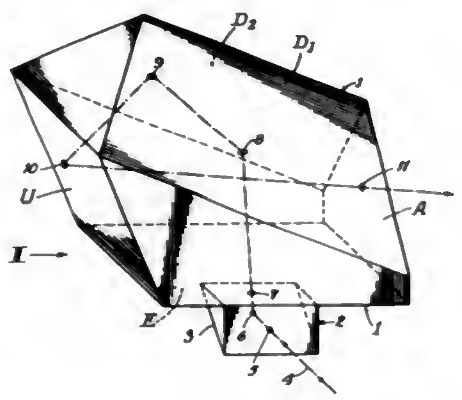
Filed Nov. 1, 1962, Ser. No. 234,601

Claims priority, application Germany, Nov. 11, 1961, Z 9,063

5 Claims. (Cl. 88—1.5)

1. In a mirror reflex viewfinder, the combination with a roof edge prism having a reflecting surface for turning the viewfinder image into an upright position, and an entrance surface arranged opposite of two roof faces, of additional prism means for projecting an indicating mark

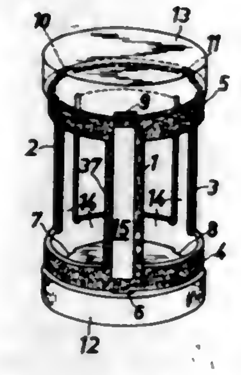
into the focusing plane of the viewfinder image, said prism means comprising a mirror surface arranged outside of said viewfinder focusing plane but within the range and confines of said prism entrance surface and another surface extending obliquely to said mirror surface



in intimate contact with said entrance surface, said mirror surface being inclined with respect to said prism entrance surface so that markings projected parallel to said prism entrance surface will be reflected in a path perpendicular to said entrance surface.

3,387,531
DEVICES FOR SUPPORTING, ADJUSTING AND DISPLACING AT LEAST ONE OF TWO OPTICAL PLATES LOCATED ACCORDING TO THE FABRY-PEROT PRINCIPLE

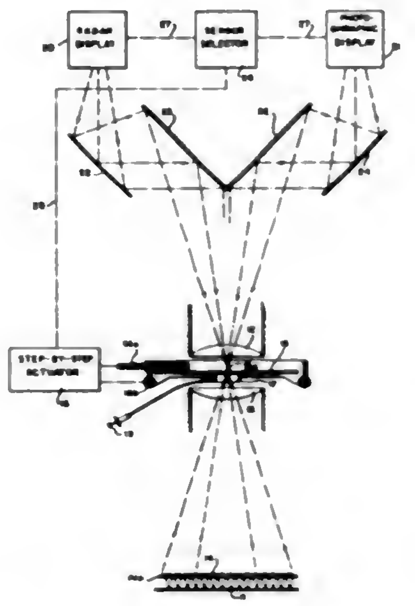
Gerhard Hesse, Jena, Germany, assignor to VEB Carl Zeiss Jena, Jena, Germany
Filed Nov. 5, 1964, Ser. No. 409,330
3 Claims. (Cl. 88—14)



1. A hollow body of electrostrictive material for supporting, adjusting and displacing at least one of two optical plates located according to the Fabry-Perot principle, having
two apertures in diametric opposition to each other, at least one of said apertures having before it one of said plates,
said body comprising two rings which are interconnected by webs separated by hollow spaces,
said webs being considerably narrower than said spaces,
one ring near each of said apertures,
said webs interconnecting said rings,
projections on said rings in prolongation of said webs, said plates being connected with said projections,
electrically conductive layers on the inner and outer surfaces of said webs, said layers being electrically insulated from each other by said webs of electrostrictive material,
a voltage source electrically connected with said layers, said voltage source being for producing electric potential and accordingly an electric field between the layers of each web, said electric field causing a change in the length of each web between said layers parallel to the generatrices of said hollow body,
an electric adjusting means for each web, said electric adjusting means being for differential changes in the potentials of said layers and accordingly for changing the angle enclosed by said plates,
and an electric control means for equal changes in the potentials of said layers of all said webs and accordingly for changing of the distances apart of said plates without changes in said angle.

3,387,532
MULTISENSOR OPTICAL RECORDING APPARATUS

Clayton W. Houghton, Smithtown, and Revere G. Sanders, Glen Head, N.Y., assignors to Aeroflex Laboratories Incorporated, a corporation of Delaware
Filed Aug. 6, 1965, Ser. No. 477,684
3 Claims. (Cl. 88—24)

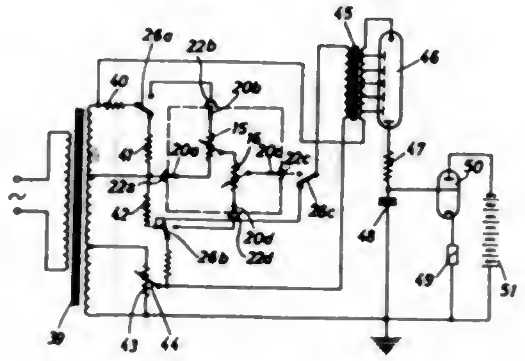


1. An optical apparatus for selectively recording substantially planar images from any of a plurality of sensors comprising:
an objective lens system;
optical means for translating to said lens system the images of all of said sensors disposed effectively at one focal plane of said lens system;
a planar lenticular array of minute lenslets disposed substantially at the conjugate focal plane of said lens system;
and an aperture element disposed at the nodal plane of said lens system and movable in discrete steps in at least one direction normal to the optical axis thereof;
whereby successive step-by-step movements of said aperture element record complete interdigitated images from selected sensors on a photosensitive element disposed in the focal plane of said lenticular array.

3,387,533
APPARATUS FOR OPTICAL COPYING OF PHOTOGRAPHIC NEGATIVES

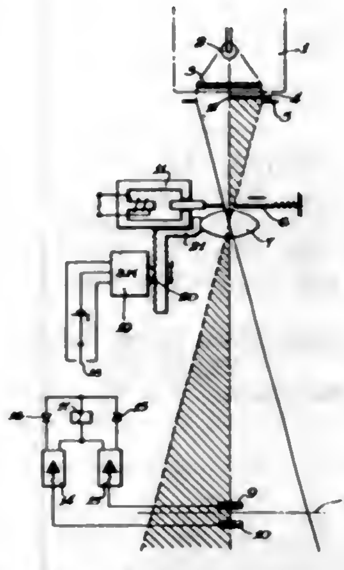
Richard Wick, Gunwald, near Munich, and Ambros Zeller and Hans-Ado Brandt, Munich, Germany, assignors to Agfa-Gevaert Aktiengesellschaft, Leverkusen, Germany
Filed Sept. 21, 1965, Ser. No. 489,032
Claims priority, application Germany, Sept. 25, 1964, A 47,164
18 Claims. (Cl. 88—24)

Apparatus for optical copying and enlarging of photographic negatives includes a support (2) which constitutes the top panel of a casing (1) and comprises a light permeable window (3) which admits light through a sheet of light sensitive paper on the support and into the interior of the casing. An image frame (14) on the support comprises shiftable masks (17, 18) which determine the size of the projected image of a negative on the paper. Two potentiometers (15, 16) counterbalance the effects due to changes in quantity of light passing through the paper in response to shifting of the masks. The image frame is releasably secured to the casing by means of fasteners (11, 12, 13) so that it can be removed to render a larger portion of the support available for placing the paper thereon.



3,387,534
AUTOMATIC FOCUSING DEVICE

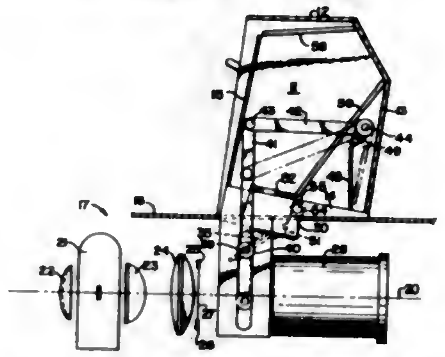
Siegfried Barbieri, Bressanone, near Balzano, Italy, assignor to Durst A.G.
Filed Sept. 30, 1965, Ser. No. 491,663
Claims priority, application Italy, May 12, 1965, 10,540/65
10 Claims. (Cl. 88—24)



1. An automatic focusing device for optical systems, said device including a pattern carrier, an objective lens, a projection plane, light means for illuminating the pattern on the projection plane through said objective lens, a shutter adjacent said pattern carrier, means for occulting a portion of said shutter whereby a portion of said projection plane is illuminated and a portion of said projection plane is non-illuminated, photo cell means at least partially in said illuminated portion of said projection plane, means for intermittently interrupting the path of light from said light means for creating a current in said photocell means when said system is out of focus, and means responsive to said current for moving one of said pattern carrier, objective lens and projection plane until a sharp focusing is achieved when said current is reduced to zero.

3,387,535
PREVIEWING MEANS FOR PROJECTORS

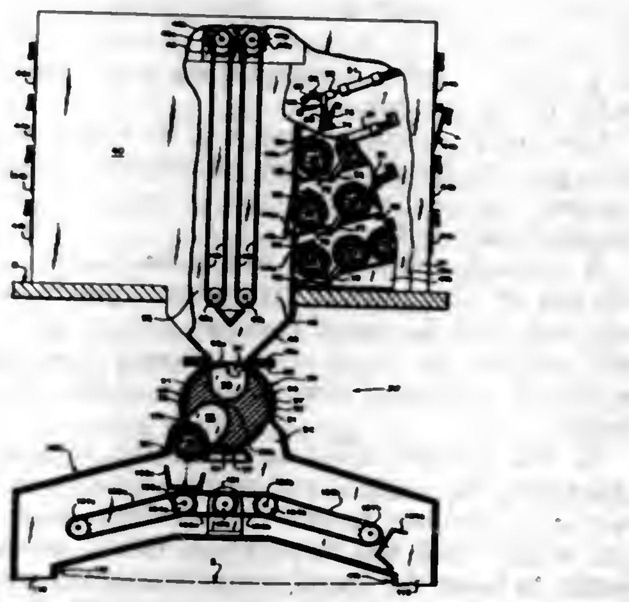
Frank P. Bennett, Northbrook, Ill., assignor, by mesne assignments, to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware
Filed Aug. 8, 1966, Ser. No. 570,899
12 Claims. (Cl. 88—24)



The previewing attachment includes a housing which is detachably mounted on the top of a slide projector. The previewer includes a mirror movable relative thereto between an operative and an inoperative position. In the operative position, this mirror intercepts the projector optical axis between the projection gate and the projector objective lens assembly. In this inoperative position, this mirror is moved out of the projector optical axis and does not interfere with normal projection on a remote screen. The previewer includes a rear projection screen and its own lens assembly for focusing an image on such screen when the aforementioned mirror is in its operative position.

3,387,536
MINISTORE LAUNCHING SYSTEM

Robert F. Kelly, Doylestown, Walter H. Myers, Chalfont, William H. Hazlett, Jr., Warrington, Lester Robert Drum, Southampton, and George A. Gimber, Hatboro, Pa., assignors to the United States of America as represented by the Secretary of the Navy
Filed Sept. 28, 1965, Ser. No. 491,056
10 Claims. (Cl. 89—1.5)



A launching system including a pair of magazines having inclined compartments each for receiving containerized stores of a respective type. Each compartment of each magazine includes a selectively operable store ejection mechanism which, when operated, allows the lowermost store in that compartment to pass into a chute. The chute includes a driven belt for controlling the lowering rate of an ejected store and directs it to a selector mechanism for automatically diverting the store to a selected one of port and starbound launchers. Each launcher is operable to eject a store from its container and eject the empty container from the launcher.

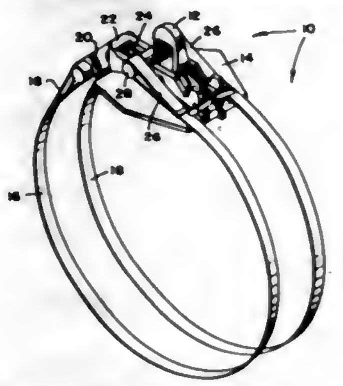
3,387,537

TORPEDO SUSPENSION BAND

George Chakoian, Lincoln, R.I., Russell T. Crowell, Lynnfield, Mass., and Nathan M. Southwick, Warwick, R.I., assignors to the United States of America as represented by the Secretary of the Navy

Filed Feb. 17, 1967, Ser. No. 617,785

2 Claims. (Cl. 89—1.5)



A latching mechanism including a sensitive trigger, maintains band locked on a missile and releases it from the missile upon application of a relatively small force applied to a trigger actuating wedge, which is separated from the band by a parachute or a static line.

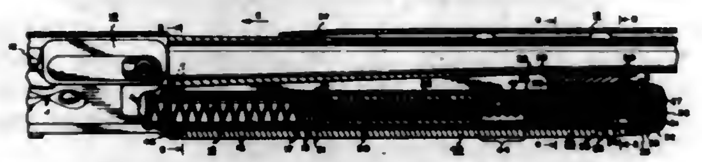
3,387,538

BARREL RECOIL STRUCTURE FOR FIREARMS

Val A. Browning, Ogden, Utah, assignor to Browning Industries, Incorporated, Ogden, Utah, a corporation of Utah

Filed Sept. 19, 1966, Ser. No. 580,459

6 Claims. (Cl. 89—177)



The present invention comprises an improvement in the recoil mechanisms of firearms such that the barrel recoil may be progressively slowed down after firing. This is accomplished by incorporation of a resilient tube, such as a urethane tube, circumscribing a compression spring in the recoil chamber.

Optionally, a resilient rod may be employed, with the spring in the recoil chamber encompassing the rod. The resilient member, whether rod or tube, will be resilient longitudinally and radially.

A piston, keyed to the barrel of the firearm, compresses the rod or tube, radially expanding the same in the manner such that the recoil member (rod or tube) frictionally engages the recoil spring, thereby supplying a progressively increasing braking action of the barrel during recoil.

A lost motion effect is preferably utilized through shortening the resilient rod or tube relative to the recoil spring so that the former becomes operative only after the initial recoil has taken place, this to allow the projectile to leave the barrel prior to commencement of the braking function.

3,387,539

RADIAL SEALS OF ROTARY ENGINES

Gaëtan de Coye de Castelet, Billancourt, France, assignor to Regie Nationale des Usines Renault, Billancourt, France

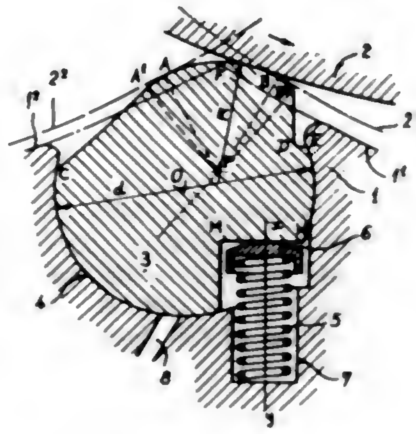
Filed Nov. 7, 1966, Ser. No. 592,436

Claims priority, application France, Nov. 25, 1965, 39,841, Patent 1,464,875

3 Claims. (Cl. 91—56)

1. Radial sealing strips for rotary engines of the type comprising a rotor having N lobes of epicycloidal contour revolving eccentrically in a stator of conjugate contour with (2N+1) lobes, said strips being pivotally mounted in grooves of substantially circular cross-sectional configuration which are formed in the stator parallel to and in close vicinity of the apex lines along which two adjacent lobes merge into each other, said strips being resiliently urged against the epicycloidal contour of the rotor along a generatrix thereof and characterised by their novel shape defined as follows:

> said strips comprise a portion bearing on the stator which comprise a first circular arc having substantially the same radius as the groove, and another portion bearing against the rotor which has the shape of a second circular arc having its center offset in relation to the center of said first circular arc by a distance such that all the extensions of the radiuses of said second circular arc lie on one side of the center of said second circular arc with respect to the center of said first circular arc, said second circular arc being so positioned that its endmost points are as close as possible to, and on either side of, said first circular arc.



3,387,540

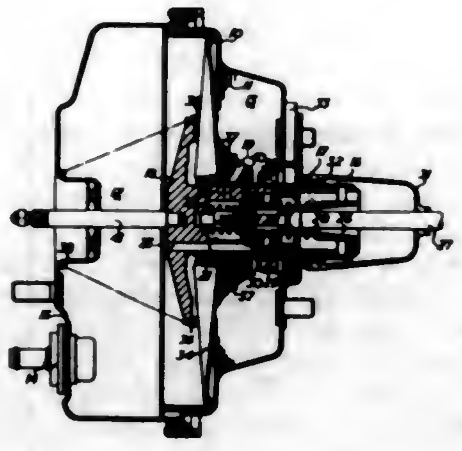
FLUID PRESSURE OPERATED BOOSTERS

Alexander J. Wilson, Warwickshire, England, assignor to Girling Limited, Tyseley, England, a British company

Original application Nov. 21, 1963, Ser. No. 325,227. Divided and this application Sept. 15, 1966, Ser. No. 579,542

Claims priority, application Great Britain, Nov. 21, 1962, 43,985/62

12 Claims. (Cl. 91—369)



In a pedal controlled vacuum booster particularly for braking systems, a deformable annular flexible plate abutting the pressure diaphragm and being adapted to dish to provide a reaction or "feel" on the pedal operated control valve. Though the plate can be of any construction whereby it deforms or dishes to provide "feel," one preferred construction is a diaphragm like plate having a series of radially directed flutes on its forward face adapted to abut against an annular abutment ring carried by the output member whereby the central part of the plate is moved rearwardly against the control valve.

3,387,541

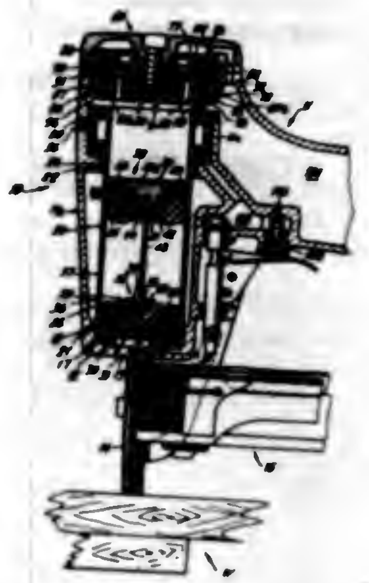
PNEUMATIC FASTENING MACHINES FOR STAPLES, NAILS, OR THE LIKE FASTENERS

Heinz E. Bade, Hamburg-Garstedt, Germany, assignor to Joh. Friedrich Behrens, Ahrensburg, Holstein, Germany, a partnership of Germany

Filed July 7, 1965, Ser. No. 469,993

Claims priority, application Germany, Feb. 23, 1965, B 80,673

21 Claims. (Cl. 91—461)



This pneumatic fastening machine for staples, nails and the like fasteners comprises a cylinder in which a piston reciprocates. Means is provides to feed fluid under pressure to the inlet end of the cylinder. Upper and lower slide rings, in contact with each other, slide down to a limited extent relative to the cylinder while maintaining a seal for the inlet to the cylinder. Thereafter the upper slide ring stops moving and the lower slide ring continues moving down to break the seal and admit compressed fluid to the cylinder. Furthermore, a work engaging means prevents operation of a valve until the work piece is actuated to thereby allow manual triggering of said valve to movement of the slide rings.

3,387,542

METHOD OF JOINING SETS OF STACKED, SUPERIMPOSED SHEETS, AND APPARATUS FOR APPLYING JOINING STRIPS

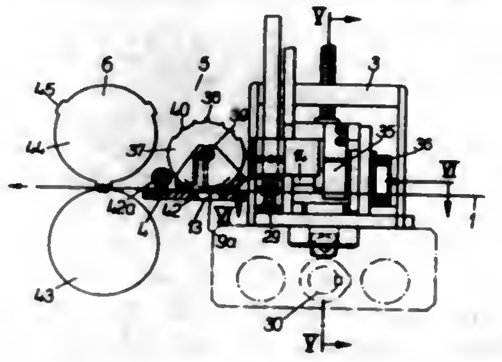
Karlheinz Gärtner, Neureut, near Karlsruhe, and Erwin Lörch, Karlsruhe, Germany, assignors to Messrs. Automation fur Graphische Technik G.m.b.H., Aarau, Switzerland, a corporation of Switzerland

Filed Oct. 4, 1965, Ser. No. 492,585

Claims priority, application Germany, Dec. 2, 1964, J 27,016

15 Claims. (Cl. 93—1)

A thin flexible strip of material is applied to the top surface of the top sheet of a set to partially overlap in edge perforation; the portion of the strip adjacent the perforation is adhered to the top surface, the remaining non-adhering portion of the strip is pressed through the perforation and the strip is folded and adhered against the bottom surface of the bottom sheet of the set. Apparatus to carry out the process includes a strip application station having a severing and application element movable in synchronism with the feed of the sets of material to sever a strip from a supply roll, and further contains an insertion station to insert the strip through a perforation, folded under and glued on the bottom sheet.



3,387,543

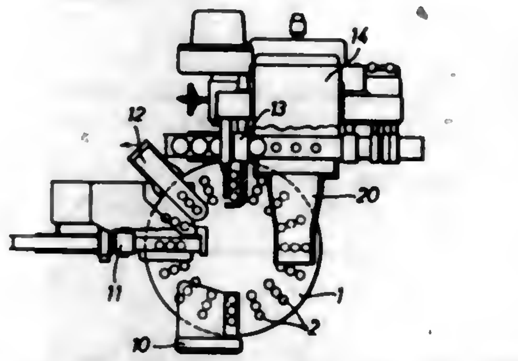
CONTAINER FORMING MACHINE

Hans Beckers, Monchen-Gladbach, Germany, assignor to Hamac-Hansella Gesellschaft mit beschrankter Haftung, a corporation of Germany

Filed Oct. 21, 1966, Ser. No. 588,398

Claims priority, application Germany, May 18, 1966, H 59,435

4 Claims. (Cl. 93—36)



1. A packaging installation including container-forming means and container filling and closing means, said container-forming means comprising means for punching container blanks from a continuous web of packaging material, means for feeding said web longitudinally in stepwise fashion between successive punching operations, means located above the web for forming said blanks into containers, said feeding means serving to advance the web before the completion of the forming operation and before the next successive punching operation in order to bring an unpunched portion of the web beneath said forming means, means for ejecting the formed containers on to the unpunched portion of the web, a transfer device for conveying the containers from the web to said filling and closing means, and means for introducing the containers into said transfer device.

3,387,544

FLEXIBLE SEALS

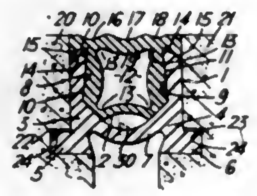
Kenneth B. W. MacLellan, Maryhill, Glasgow, and William A. A. Witham, Newton, Mearns, Scotland, assignors to MacLellan Rubber Limited, Glasgow, Scotland, a British company

Filed Apr. 20, 1966, Ser. No. 543,948

Claims priority, application Great Britain, May 11, 1965, 19,741/65

5 Claims. (Cl. 94—18)

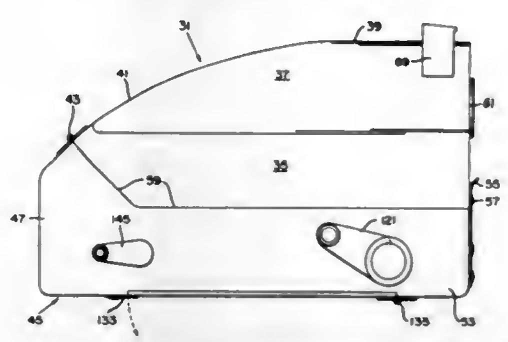
A flexible seal for a joint preferably formed in two parts, manufactured from a resilient material and including at least one longitudinal passage extending therethrough, the top face, of the seal, being formed with at least one concave depression such that under lateral compression of the seal the top face deforms in such a way that the seal does not bulge out of the joint, and the minimum cross-sectional area of the seal in a first longitudinal plane parallel



to said top face is greater than the minimum cross-sectional area of the seal in a second longitudinal plane at right angles to said first longitudinal plane.

3,387,545
PHOTOGRAPHIC PACKAGE UNIT

Paul J. Good, Springwater, N.Y., assignor, by mesne assignments, to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
Original application June 30, 1964, Ser. No. 379,159, now Patent No. 3,320,865, dated May 23, 1967. Divided and this application Nov. 10, 1966, Ser. No. 623,478
2 Claims. (Cl. 95—13)

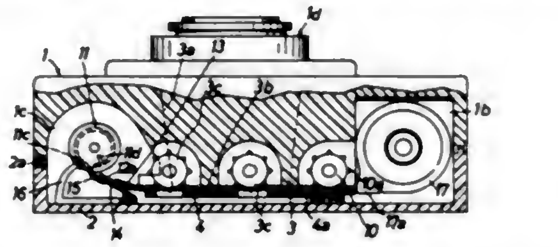


There is disclosed a package unit for insertion in a photographic camera, the unit having two substantially cylindrical members each substantially completely sealed except for a thin slot through which sheet material may pass from the interior to the outside of the cylindrical member, and two elongated thin webs, one integrally connecting one end of the first cylindrical member to the corresponding end of the second cylindrical member, the other web similarly connecting the second ends of the respective cylindrical members to each other, to hold the cylindrical members spaced from each other. A supply of sensitized sheet material is contained in one of the cylindrical members, with the end of the sheet material projecting out through the slot of that member. A supply of absorbent sheet material is contained in the second cylindrical member with the end of the absorbent sheet material projecting out through the slot of this member, the absorbent sheet material having absorbed therein a photographic processing liquid.

3,387,546
TAKE-UP FOR PHOTOGRAPHIC CAMERAS

Alfred Winkler, Heinz Ernst, and Heinrich Stierstorfer, Munich, Germany, assignors to Agfa Aktiengesellschaft, Leverkusen, Germany
Filed May 3, 1965, Ser. No. 452,580
Claims priority, application Germany, June 2, 1964, A 46,189
11 Claims. (Cl. 95—31)

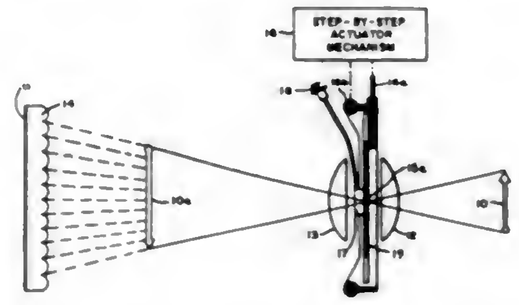
A photographic camera wherein the take-up spool is rotated by the film transportaing mechanism and has teeth which enter perforations at the leading end of the film to convolute the film around the spool in response to actuation of the film transporting mechanism. The spool has a recess which receives the leading end of the film and the housing of the camera is provided with devices which deflect the leading end of the film into the



recess and move the perforations in the leading end into the range of teeth on the spool.

3,387,547
MULTIPLEX STILL-FRAME CAMERA

Clayton W. Houghton, Smithtown, N.Y., assignor to Aeroflex Laboratories Incorporated, a corporation of Delaware
Continuation-in-part of application Ser. No. 477,895, Aug. 6, 1965. This application June 30, 1967, Ser. No. 650,349
9 Claims. (Cl. 95—36)

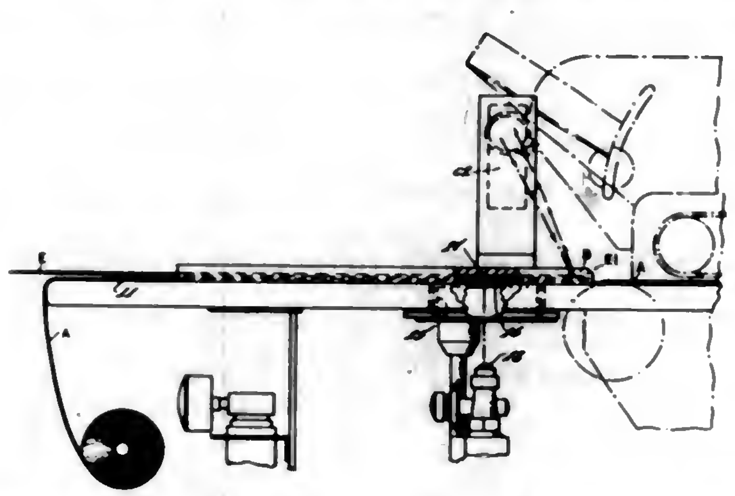


A system for photographically developing a plurality of dissected interdigitated images of a succession of scenes on a single photosensitive frame or format of desired size comprises an objective lens system for forming an aerial image of each scene and a two-dimensional array of minute objective lenses having a magnification substantially less than unity and having their object plane substantially coincident with the plane of such aerial image. A photosensitive surface, such as a photographic film or plate, is disposed in the conjugate image plane of the array of lenses. An aperture is located approximately in the nodal plane of the objective lens system and is movable in discrete steps in orthogonal directions in a plane substantially normal to the optical axis of the system. For each position of the aperture, the system forms a pattern of separated elemental image portions which collectively make up a complete scene, the patterns formed of successive scenes with different aperture positions being interdigitated. A viewing apparatus comprises a planar source of light and substantially the converse optical system from the camera and a viewing screen in the position occupied by the visual subject during taking.

3,387,548
AUTOMATIC MARKING AND CUTTING OF FLEXIBLE SHEETS

Roger S. Funk, % R. Funk & Co. Inc., 755 N. Easton Road, Doylestown, Pa. 18901
Filed Feb. 16, 1965, Ser. No. 432,952
9 Claims. (Cl. 95—73)

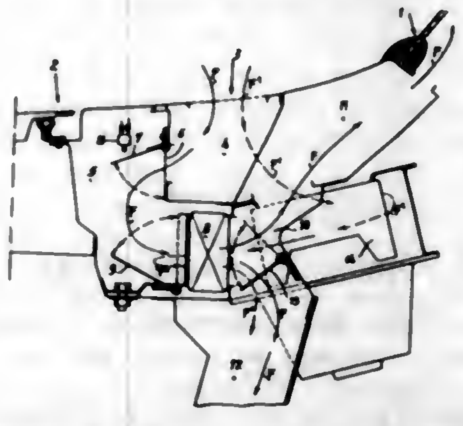
Apparatus for cutting prints from a traveling web according to the size of an original includes an optical sensing unit for sensing the leading edge of an original which is superposed on the traveling web as the web and original enter a printer, a marking device for marking the side of the web which is away from the original, a second optical device for sensing the mark as the web leaves the printer and a cutter controlled by the second



optical device for severing the web in accordance with the position of the mark.

3,387,549
AIR-CONDITIONING DEVICES FOR VEHICLES

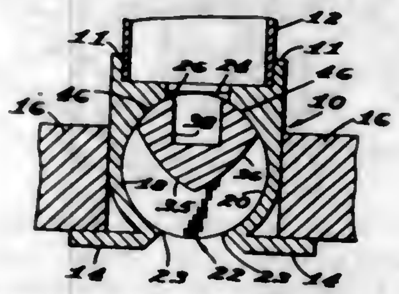
Gaëtan de Coye de Castelet, Billancourt, France, assignor to Regie Nationale des Usines, Renault, Billancourt, France
Filed Oct. 3, 1966, Ser. No. 583,573
Claims priority, application France, Oct. 21, 1965, 35,709, Patent 1,460,868
2 Claims. (Cl. 98—2)



An air conditioning device for a vehicle having an air intake for feeding fresh air into a feed chamber and means to distribute air from the feed chamber into the passenger compartment of the vehicle. The device includes two fresh air paths one of which flows by dynamic pressures and the other of which flows by the operation of fan means.

3,387,550
AIR DISTRIBUTOR VALVE

Quentin R. Thomson, 2804 E. Malvern, Tucson, Ariz. 85716
Filed May 26, 1966, Ser. No. 553,228
12 Claims. (Cl. 98—40)



1. An air distributor valve having an elongated housing with longitudinally extending transversely spaced side walls forming a chamber;

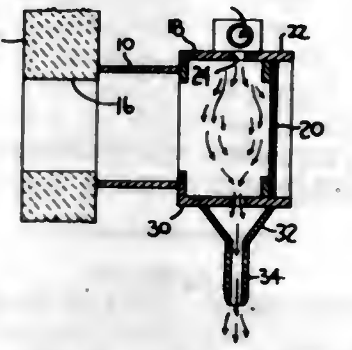
longitudinally extending air inlet and outlet passages provided in the housing adjacent the upstream and downstream longitudinal edges respectively of the side walls, at least one of said passages being formed by a series of alternate baffle sections which extend between the side walls and slotted sections which open to the chamber;

a valve member having alternate flow directing and flow obstructing sections mounted in the housing chamber, the flow obstructing sections supporting the valve member for rotating and longitudinal movement relative to the housing chamber whereby the valve member may be moved within the chamber to selectively position the valve member sections relative to the air passage sections;

the flow directing sections of the valve member permitting air flow between the inlet and outlet passages of the housing for discharge through the outlet passage in a direction controllable by rotating the valve member in the chamber, and the flow obstructing sections of the valve member restricting air flow between the inlet and outlet passages of the housing independently of the rotational position of the valve member in the chamber to the extent the flow obstructing sections are aligned with the slotted section of the one air passage by longitudinal movement of the valve member in the chamber.

3,387,551
AIR CURTAIN FOR OBSERVATION WINDOW

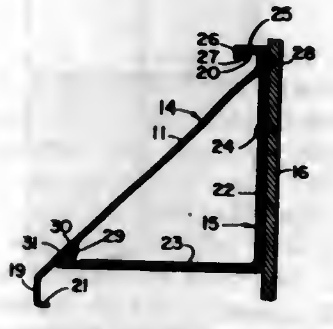
David E. Hughes, La Vale, Md., assignor to Pittsburgh Plate Glass Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed July 22, 1966, Ser. No. 567,144
2 Claims. (Cl. 98—88)



A window arrangement for a wall of a glass manufacturing apparatus is constructed so as to use a gas curtain to isolate the window from the atmosphere in the apparatus.

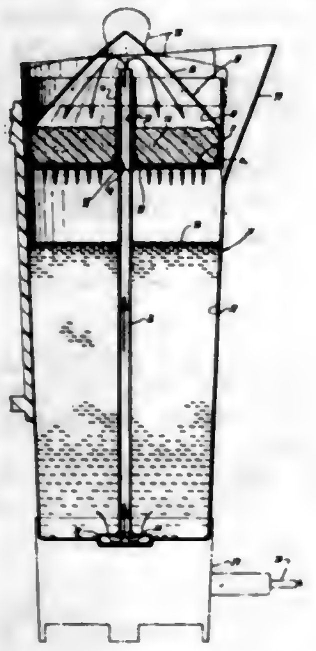
3,387,552
SNAP ON BRACE FOR LOUVER BLADES

George W. Minds, Jr., 2408 Forney St., Los Angeles, Calif. 90031
Filed Oct. 24, 1966, Ser. No. 588,830
3 Claims. (Cl. 98—121)



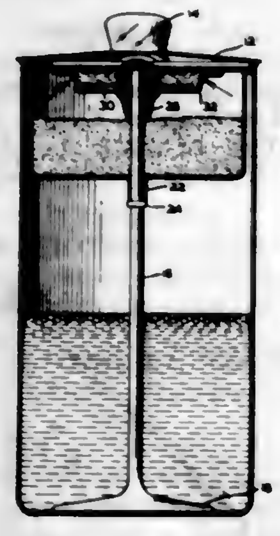
A brace for supporting elongated louver blades intermediate their ends is provided in the form of first and second leg portions defining generally an L-shape and including flanges at the ends of the legs for engaging suitable recesses and grooves respectively formed in the louver blade itself. The arrangement is such that intermediate portions of the louver blade may be snapped onto the brace by inserting the top edge portion into the upper flange structure of the one leg of the brace and then pivoting the louver blade downwardly so that a groove portion formed on the under side of the blade receives the second flange structure on the end of the second leg.

3,387,553
PREPACKED COFFEE PACKAGE
Antonio Tavera, Rte. 1, Box 1386,
Elk Grove, Calif. 95624
Filed Oct. 24, 1965, Ser. No. 504,702
13 Claims. (Cl. 99—295)



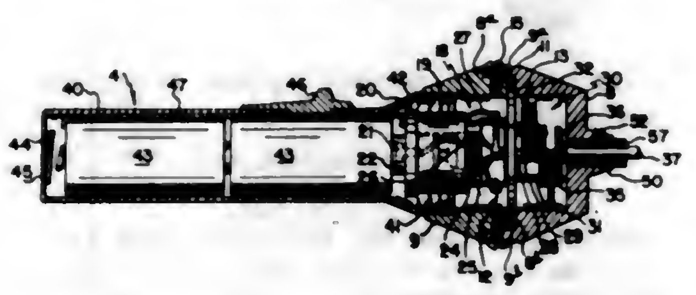
Disposable prepacked collapsible coffee package for use with a coffee percolator.

3,387,554
PRESSURIZER UNIT FOR COFFEE PERCOLATOR
Vincent W. Cherre, 22 Hitree Lane,
Rochester, N.Y. 14624
Continuation of application Ser. No. 583,704, Oct. 3, 1966. This application Dec. 4, 1967, Ser. No. 687,920
7 Claims. (Cl. 99—312)



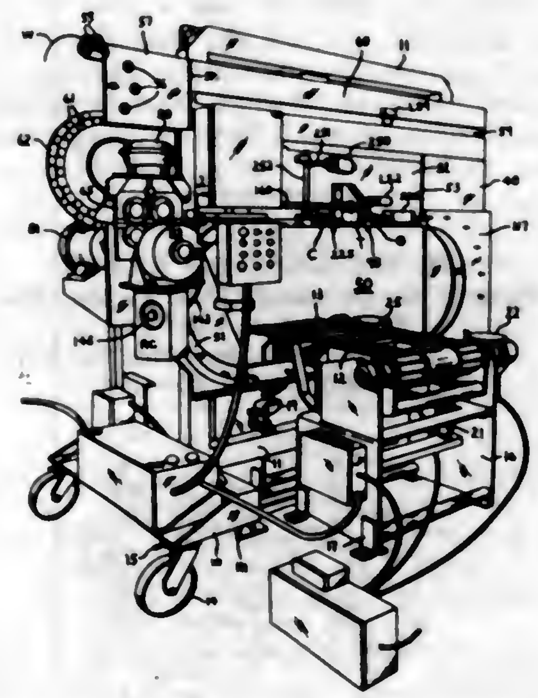
A coffee percolator having a hollow tubular member with a coffee ground basket thereon a pressurizer chamber unit mounted on the end of said tubular member superjacent said basket. The pressurizer chamber unit is formed with a plurality of apertures for discharging and directing fluid over the coffee grounds in the basket and sealing means are interposed between said tubular member and the chamber unit. This abstract is neither intended to define the invention of the application which, of course, is measured by the claims, nor is it intended to be limiting as to the scope of the invention in any way.

3,387,555
PORTABLE POWER OPERATED BARBECUE APPARATUS
Edward F. Moran, 510 Park Ave.,
Perkasie, Pa. 18944
Filed July 28, 1965, Ser. No. 475,363
5 Claims. (Cl. 99—421)



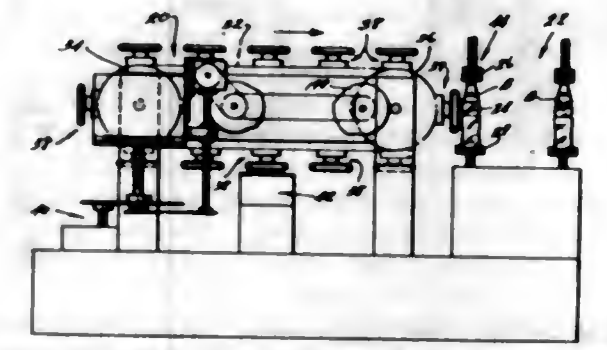
A portable, generally horizontally disposed, rotary, power operated, barbecue spit supported by a vertically adjustable support means and which is horizontally adjustable and swivellable in a generally horizontal plane relative to the vertical support means is provided. Also, a battery operated barbecue spit having a unitary drive assembly including a motor and gear reduction unit mounted on a support plate which is removably mounted between a pair of detachably connected housing sections is provided.

3,387,556
SNARE-TYPE WIRE BINDING MACHINE
Albert E. Cranston, Jr., Milwaukie, Oreg., Wilber C. Cranston, Niles, Ohio, and William J. Rowell, Portland, Oreg., assignors to Devco, Inc., Oak Grove, Oreg., a corporation of Oregon
Filed Mar. 25, 1966, Ser. No. 537,409
14 Claims. (Cl. 100—4)



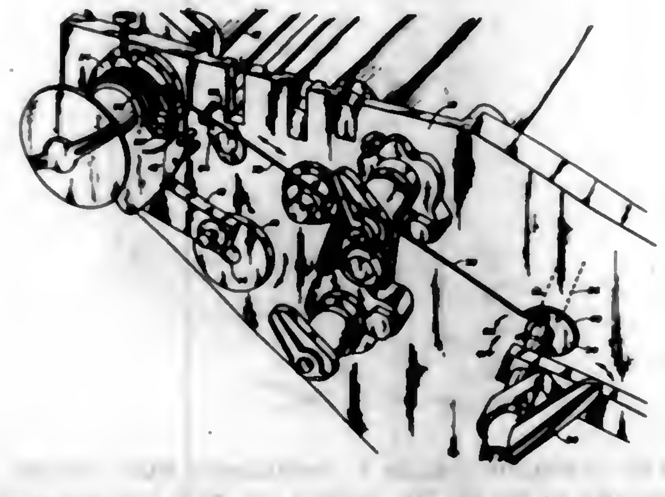
A wire feed mechanism pushes a metered length of binding wire around an oval guide track encircling a bundle passage in a movable platen. The platen clamps the bundle in binding position on a conveyor and the feed mechanism reverses, through a friction clutch and under the control of a timing device, to strip the wire from the guide track and tension it about the bundle. Then the wire is spliced and cut off and the platen releases the bundle.

3,387,557
ELECTROSTATIC PRINTING APPARATUS OF THE OFFSET TYPE
Alfred S. Decker, Toledo, George R. Obenshain, Sylvania, and Luther H. Wideman, Toledo, Ohio, assignors to Owens-Illinois, Inc., a corporation of Ohio
Filed Nov. 18, 1966, Ser. No. 595,490
6 Claims. (Cl. 101—35)



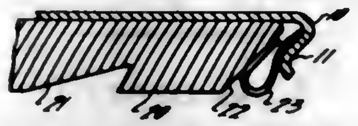
Electrostatic printing apparatus of the offset type especially adapted for use in decorating articles having curved or irregular surfaces on a production line basis. A plurality of offset plate carriages are mounted upon an endless chain conveyor for movement with the chains and also for movement between a normal position and a projected position relative to the chains so that the offset printing element can be projected into operative relationship at both an image application station and an image transfer or decorating station. The carriage further includes means for resiliently bulging the offset printing element outwardly into conformed contact with an article surface during the decorating operation.

3,387,558
INK AND WATER FOUNTAIN ROLLER CONTROLS FOR PRINTING PRESS
Sam D. McClain, 5372 South 36th West Ave.,
Tulsa, Okla. 74107
Filed Oct. 11, 1965, Ser. No. 494,564
2 Claims. (Cl. 101—351)



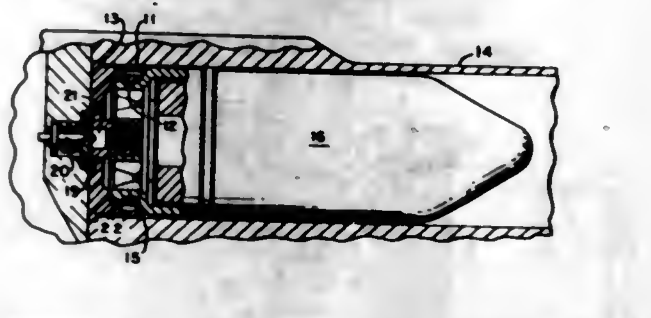
The invention may be described as an automatic ink and water shutoff means for a printing press. More particularly, the invention is an apparatus for use with a printing press of the type having an ink and water fountain roller each rotated by a pawl reciprocated against a circular ratchet and including a shaft having a handle affixed thereto for engaging and disengaging a plate cylinder. The invention includes means for automatically terminating the rotation of the ink and/or water fountain roller when the plate cylinder is disengaged. The invention consists of a cam carried by the plate engaging and disengaging shaft, the cam having a circular periphery eccentric to the axis of the shaft, and a length of stiff wire, the wire being circularly curved at one end forming at least a portion of a circle slidably received by the periphery of the cam whereby rotation of the cam as the shaft is rotated imparts a linear motion to the wire, the wire being semi-circularly curved at the other end in an arc having a radius of the arc of reciprocation of the pawl, said semi-circularly curved portion having slidable engagement with the pawl whereby when the shaft is rotated to disengage the plate cylinder the linear motion imparted to the wire by the cam moves the pawl away from reciprocation against the ratchet, thereby terminating rotation of the fountain roller.

3,387,559
HOLDING MEANS FOR LAMINATED RELIEF PRINTING PLATE
Ellwood J. Horner, Armonk, N.Y., assignor to R. Hoe & Co. Inc., New York, N.Y., a corporation of New York
Continuation-in-part of application Ser. No. 545,770, Apr. 27, 1966. This application Aug. 4, 1967, Ser. No. 658,515
3 Claims. (Cl. 101—383)



An elongated spring having a straight leg and a curved leg so as to fit complementally between a laminated relief printing plate and an edge of a saddle for holding the plate securely to the saddle. The plate is composed of a zinc printing layer to be etched and a supporting layer of aluminum and is curved so as to fit on the saddle by which the plate is mounted on a printing cylinder.

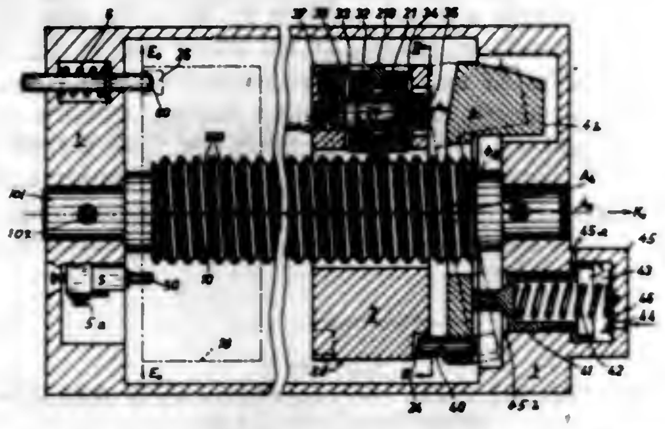
3,387,560
BREECH SEAL FOR ROCKET AMMUNITION
William J. Mertens, Richmond, Ind., assignor to Avco Corporation, Richmond, Ind., a corporation of Delaware
Filed Oct. 3, 1966, Ser. No. 583,630
6 Claims. (Cl. 102—43)



This invention is a sealing device which is quickly attachable to or detachable from a rocket. It is a unitary hollow polyethylene cylinder formed with a body portion adapted to be inserted into the firing chamber of a breech loading weapon to provide a seal. This body portion is formed with an annular forwardly extending bifurcation which defines two flanges. The first is a lip-like inner flange which is formed to maintain attachment of the cylinder to a rocket in the presence of handling forces but flexes to become severed from the rocket in response to gas pressures. The second or outer flange is spaced from the inner flange and provides a breech seal.

3,387,561
ACTUATOR ARRANGEMENT FOR A FLYING OBJECT

Heinrich Reich, Bickacker, and Walter Melli and James Gilhooley, Zurich, Switzerland, assignors to Contraves AG, Zurich, Switzerland
Filed Oct. 14, 1966, Ser. No. 588,243
Claims priority, application Switzerland, Oct. 15, 1965,
14,258/65
9 Claims. (Cl. 102—83)



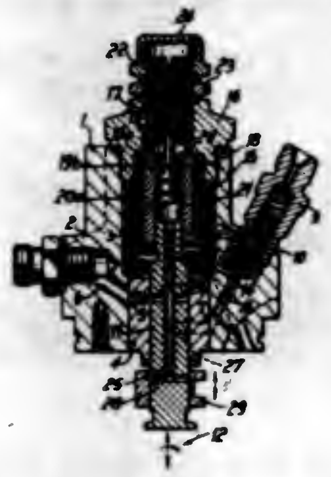
A rocket has a threaded axial spindle on which an actuator is mounted for axial and rotary movement by means of rollers rolling on the spindle thread so that the actuator moves due to inertia during flight and in a time period depending on the acceleration of the rocket to an end position for actuating a control element which causes ignition of an explosive charge.

ERRATUM

For Class 103—5 see:
Patent No. 3,387,644

3,387,562
FUEL INJECTION PUMP WITH MEANS FOR CHANGING THE SPEED-DELIVERY CHARACTERISTIC THEREOF

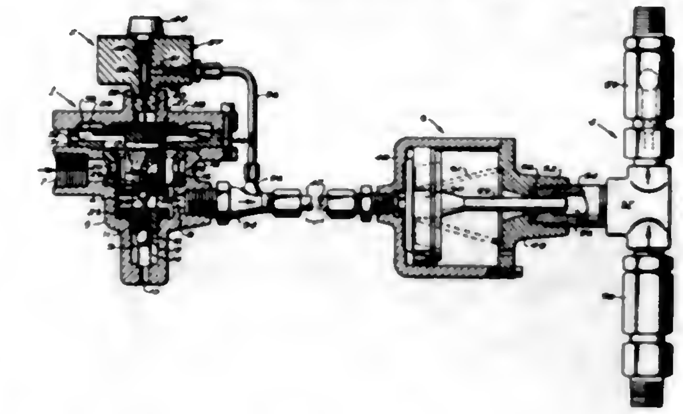
Willy Voit, Stuttgart, Germany, assignor to Robert Bosch G.m.b.H., Stuttgart, Germany
Filed Dec. 19, 1966, Ser. No. 602,848
Claims priority, application Germany, Dec. 24, 1965,
B 85,155
4 Claims. (Cl. 103—37)



A fuel injection pump for a multiple cylinder internal combustion engine and including a pumping and distributing member extending through one end of a cylindrical pumping chamber and being reciprocable therein and turnable about its axis so as to suck during its suction stroke fuel into the pumping chamber and to discharge the fuel into a respective cylinder of the engine during the compression stroke, and in which the other end of the pumping chamber is closed by an axially adjustable piston to thus adjust the volume of the pumping chamber independent of the stroke of the pumping and distributing member to change thereby the speed-delivery characteristic of the pump.

3,387,563
CHEMICAL INJECTOR

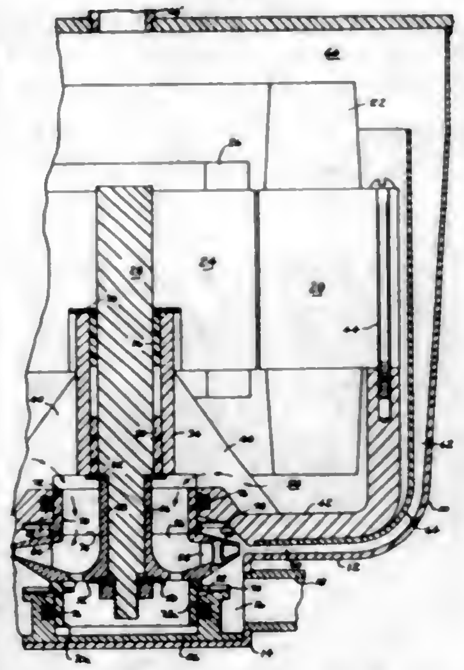
James F. Williams, Sylmar, Calif. (P.O. Box 4365, North Annex, San Fernando, Calif. 91342), and William A. Smith, 4111 Joseph Drive, Bakersfield, Calif. 93307
Filed Mar. 22, 1967, Ser. No. 625,113
4 Claims. (Cl. 103—50)



A snap action diaphragm valve, which when closed, vents to atmosphere, is coupled with a needle valve to effect slow pressurization and depressurization of the diaphragm chamber thereby causing the diaphragm valve to open and close periodically according to the setting of the needle valve. The periodic operation of the diaphragm valve is utilized to actuate a pump adapted to inject chemicals into a flow line.

3,387,564
PRESSURE BALANCING MEANS FOR PUMP IMPELLERS

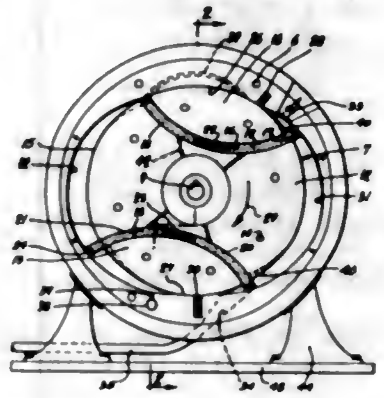
Warren Heathcote De Lancey, 4205 S. Murray Ridge Road, Elyria, Ohio 44035
Filed Aug. 4, 1966, Ser. No. 570,240
1 Claim. (Cl. 103—103)



This invention relates to centrifugal fluid pumps, and especially to means for sealing the high pressure side of the pump from the lower pressure side. A feature of the structure is the use of two equal area sealing sleeves engaging opposite side faces of the pump impeller to cancel out axial pressure imbalance, thus reducing frictional resistance and lessening wear on the impeller shaft thrust bearing.

3,387,565
ROTARY FLUID HANDLING DEVICE

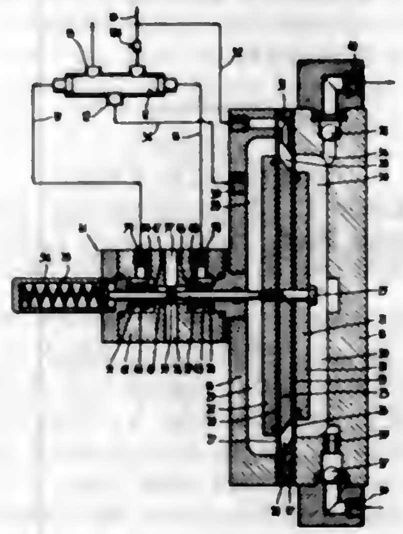
Louis Mezzetta, 8995 8th Ave., St. Michel, Quebec, Canada
Filed Feb. 21, 1966, Ser. No. 528,971
2 Claims. (Cl. 103—135)



The present invention concerns a rotary fluid handling device, such as a rotary internal combustion engine, comprising a cylindrical rotor rotatably mounted in a casing defining a raceway surrounding the rotor and having diametrically opposed portions concentric with and in sliding contact with the rotor and portions on each side of said concentric portion spaced from the rotor to define fluid chambers in the casing, said rotor carrying spring-urged piston curved blades bearing on said raceway, the peripheral surface of the rotor having cavities behind each piston blade, deepest adjacent the piston blade and tapering rearwardly and merging with the peripheral surface of the rotor, the casing having a transfer passage in communication with one chamber on one side of a concentric raceway portion and opening at its end within said concentric raceway portion, near but out of communication with the other fluid chamber, whereby fluid compressed in the first-named chamber will be transferred by said passage into a rotor cavity as said cavity moves opposite the discharge end of said transfer passage.

3,387,566
FLUID OPERATED PRIME MOVER

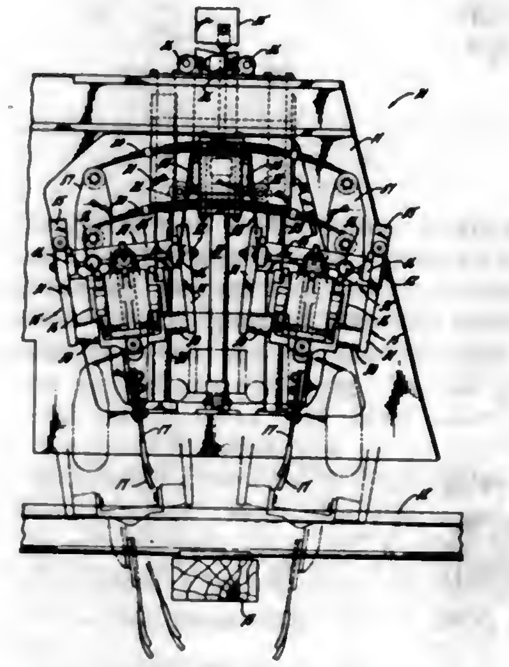
Peter L. Temple, Ascot Vale, Victoria, Australia, assignor to Imperial Chemical Industries of Australia and New Zealand Limited, Melbourne, Victoria, Australia, a company of Australia
Filed Dec. 12, 1966, Ser. No. 600,916
Claims priority, application Australia, Jan. 10, 1966,
248/66
4 Claims. (Cl. 103—152)



1. A fluid operated reciprocating prime mover comprising casing; a diaphragm assembly comprising a first diaphragm sealed across the casing and, spaced therefrom, a second diaphragm of greater area also sealed across the casing, said first and second diaphragms being connected to flex in unison; a first inlet for working fluid formed in the casing to the side of the diaphragm assembly remote from the first diaphragm; a second inlet for working fluid formed in the casing between said first and second diaphragms; and means responsive to flexing of the diaphragms to control the passage of working fluid to and from said casing.

3,387,567
TAMPER BLADE SUSPENSION ASSEMBLY

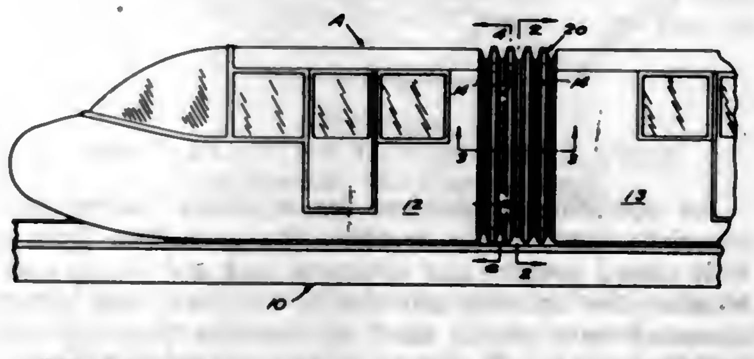
Donald W. Reynolds, Livonia, Mich., assignor to Jackson Vibrators, Inc., Ludington, Mich., a corporation of Illinois
Filed Jan. 26, 1966, Ser. No. 523,123
5 Claims. (Cl. 104—12)



A vibration motor support for railroad track ballast tamping machines in which the motor is held for controlled movement by a plurality of resilient cylindrical bodies having their ends anchored between the motor and sandwiching end members, the bodies being disposed with their ends on lines at right angles to the plane of the motor tamping blade.

3,387,568
FLEXIBLE CONNECTION BETWEEN ADJACENT MONORAIL COACHES

Alan B. Hawes, 8504 Seaview Ave., Wildwood Crest, N.J. 08260
Filed Apr. 15, 1966, Ser. No. 542,825
5 Claims. (Cl. 105—15)



The invention provides a flexible connection between adjacent monorail coaches in the form of a hood fabricated of semi-rigid plastic material and shaped to the same partial arcuate configuration as encircling flanges projecting outwardly from each of the adjacent ends of the coaches, a plurality of transverse corrugations formed in said hood to permit flexible expansion and compression longitudinally thereof, the corrugations at the ends of the hood being in frictional sliding engagement with said flanges and spring-biased hooks mounted near the lower edge of said hood and releasably clamped over the adjacent terminating lower edges of said flanges to provide the sole means of securing the hood to the coaches.

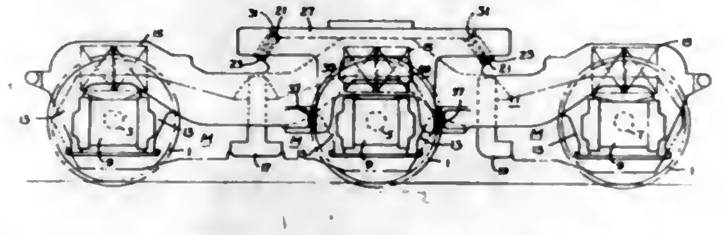
3,387,569

RAILWAY TRUCK AND SPRING BOLSTER STRUCTURE

Richard L. Lich, St. Louis, Mo., assignor to General Steel Industries, Inc., Granite, City, Ill., a corporation of Delaware

Filed Jan. 24, 1966, Ser. No. 522,767

14 Claims. (Cl. 105—196)



A railway vehicle truck in which the bolster is supported on each side of the rigid truck frame by a pair of elastomeric pad devices inclined lengthwise of the truck with their normals converging at a substantially lower level than the pad devices and longtudinal force transmitting means connecting the bolster and frame at the same lower level. This arrangement permits the bolster and frame to tip lengthwise of the truck with respect to each other, thus making equalizers unnecessary without requiring a very soft bolster spring support on the frame, and provides a low level transmission of tractive forces to minimize axle-to-axle weight transference.

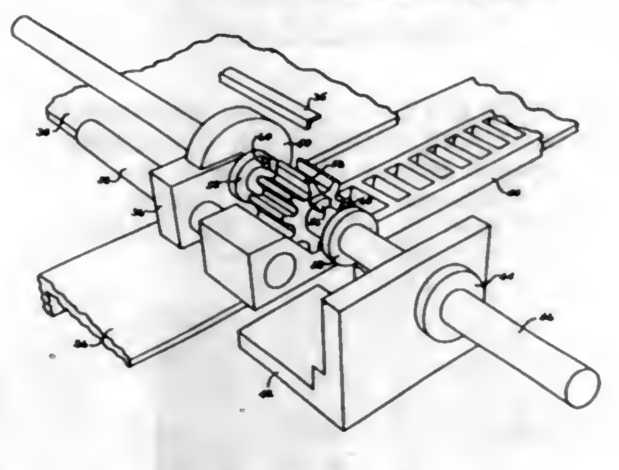
3,387,570

SEQUENTIAL HOPPER GATE OPERATING MECHANISM

Frank C. Pulcrano, St. Charles, and Carl E. Becker, St. Louis County, Mo., assignors to ACF Industries, Incorporated, New York, N.Y., a corporation of New Jersey

Filed Sept. 22, 1966, Ser. No. 581,383

7 Claims. (Cl. 105—282)



An operating mechanism for a sliding hopper gate especially for initially breaking the gate open from a fully closed position and having, a rack and pinion combination for opening and closing the gate, cam means mounted on a pinion shaft for rotation therewith and initially breaking the gate open independently of the rack and pinion combination upon an initial rotation of the pinion shaft from the fully closed position of the gate, and a lost motion connection between the rack and pinion to permit the independent actuation of the cam for initially breaking the gate open. After the gate has been initially opened by the cam, the rack and pinion combination effects subsequent movement of the gate to full open position upon continued rotation of the pinion shaft. The cam provides a relatively high mechanical advantage to provide a relatively high opening force at a slow opening speed, and the rack and pinion combination drives the gate to its full open position at a relatively fast opening speed and a relatively low mechanical advantage after the gate has been initially opened.

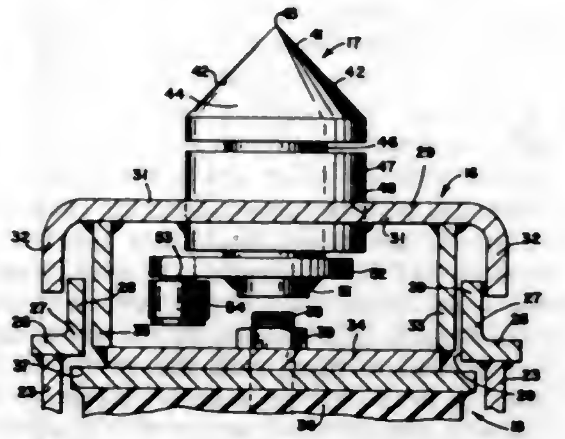
3,387,571

CONTAINER MOUNTING ARRANGEMENT FOR FLAT CAR

John W. Matushek, Harvey, and Herbert S. Wille and William Van Der Sluys, Homewood, Ill., assignors to Pullman Incorporated, Chicago, Ill., a corporation of Delaware

Filed Mar. 28, 1966, Ser. No. 538,087

6 Claims. (Cl. 105—366)



A mounting arrangement for supporting and securing a cubic container of the type having corner fittings on the floor of a railway car, said mounting arrangement comprising four container supporting and fastening assemblies, each assembly including a base having a longitudinally extending horizontal base, upstanding flanges extending from said base, a slide member overlying the free ends of said flanges, coacting guiding means on said flange and said slide member for guiding said slide member for lengthwise movement of said base, and elastomeric means having opposing faces fixed to said base and said slide member so that upon relative movement of said base and said slide member, said elastomeric means is elongated in shear, indexing and container locking means mounted on said slide member, and means detachably mounting said assemblies with each associated with a respective one of said corner fittings whereby said container is indexed and fastened to said car.

3,387,572

FOLDABLE TABLE

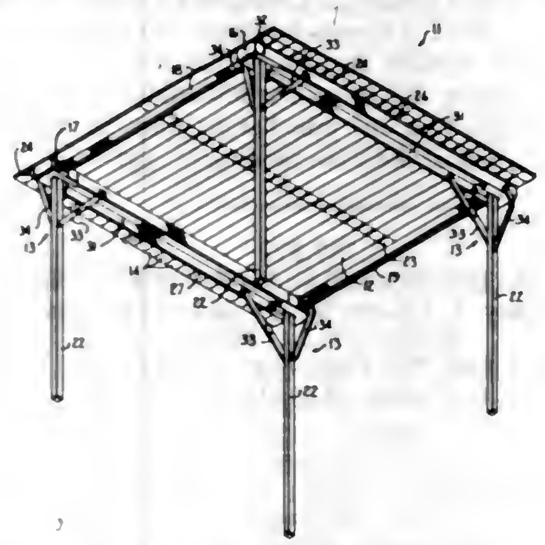
Martin T. Ulrich, Sunnyvale, Calif.

(2785 Scott Blvd., Santa Clara, Calif. 95050)

Filed Oct. 5, 1966, Ser. No. 584,456

3 Claims. (Cl. 108—34)

A foldable table is described which includes a table top formed from a plurality of adjacent slat members which are hingedly interconnected so that the table top can be coiled or extended into a substantially flat planer condition. Two leg units are pivotally secured to the underneath surface of the table top at diagonally opposite corners. Each of the leg units comprises a housing member which has two legs pivotally secured adjacent opposite ends thereof for pivotal movement between an inoperative position housed within the housing member and a table supporting position perpendicularly extended therefrom. Each of the housing members is pivotable along the underneath surface of the table top between a position parallel to the slat members so that the table top is coilable about them to provide a compact bundle and a position transverse to the slot members where the housing members act as structurally strong frame members supporting the table top in a flat condition. When the housing members are transverse to the slat members as aforesaid, the legs may be extended from such housing members into the table supporting position.



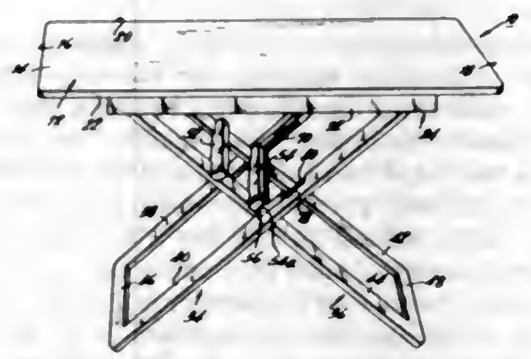
3,387,573

MULTILEVEL FOLDING TABLE

Abner Dean, 320 E. 57th St.,
New York, N.Y. 10022

Filed Feb. 17, 1967, Ser. No. 616,906

8 Claims. (Cl. 108—117)



A multilevel folding table which has two pairs of legs, each of which is pivoted at a different opposed side of the table top. The legs cross and nest one pair within the other pair. The outer pair of legs carries a locking bar which is pivoted thereon for movement between an upper and a lower position, and the inner pair of legs has a pair of transverse stops. When the bar is in its lower position and engages the lower stop, the table top is set at an elevated level; when the bar is in its upper position and engages the upper stop, the table top is at its lowered level. The pairs of legs can nest so that the table can assume a flattened position for storage purposes.

3,387,574

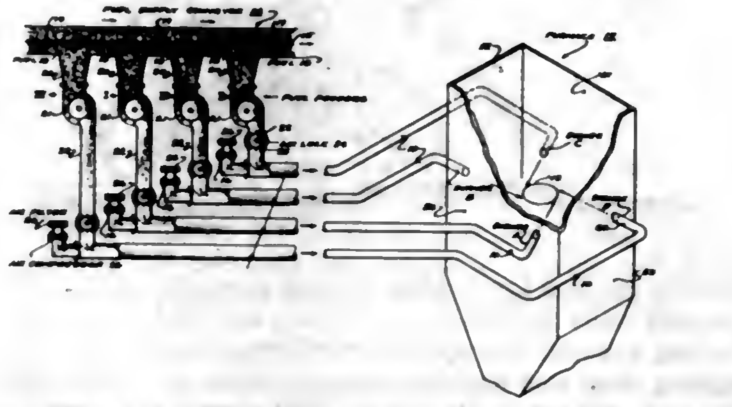
SYSTEM FOR PNEUMATICALLY TRANSPORTING HIGH-MOISTURE FUELS SUCH AS BAGASSE AND BARK AND AN INCLUDED FURNACE FOR DRYING AND BURNING THOSE FUELS IN SUSPENSION UNDER HIGH TURBULENCE

Joseph F. Mullen, West Hartford, Conn., assignor to Combustion Engineering, Inc., Windsor, Conn., a corporation of Delaware

Filed Nov. 14, 1966, Ser. No. 594,040

14 Claims. (Cl. 110—7)

A system, and method of operation thereof, for pneumatically transporting high-moisture fuels such as bagasse and bark and an included furnace for drying and burning those fuels in suspension under high turbulence. A transport pipeline supplied with primary air as by an air compressor has the high-moisture fuel metered thereinto at a rate of at least 3.5 times that of the transport air by weight, and such fuel-air mixture is delivered by the pipeline directly into the combustion furnace. Highly heated secondary air further is brought into the furnace at a rate of about twelve times that of the incoming primary air by weight, and is there turbulently mixed with the fuel and primary transporting air entering from the pipeline. The particular ratios of the fuel to the primary transport air and of the highly heated secondary air to the primary air enable the incoming fuel to be completely dried and burned in suspension on a self-sustaining basis.



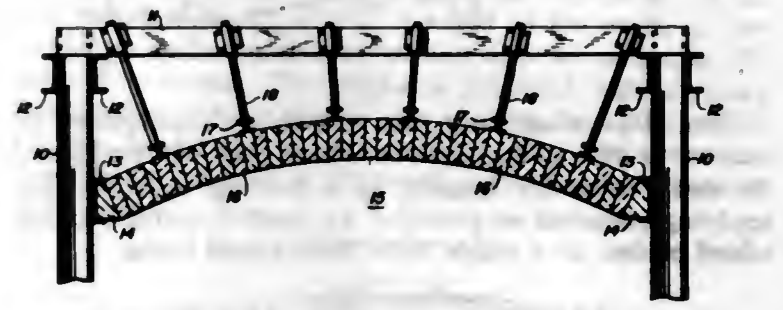
3,387,575

BASIC ROOF CONSTRUCTION FOR A METALLURGICAL FURNACE

Ralph C. Padfield, Bethlehem, Pa., assignor to Bethlehem Steel Company, a corporation of Pennsylvania

Continuation-in-part of application Ser. No. 330,028, Dec. 12, 1963. This application Sept. 8, 1964, Ser. No. 396,472

13 Claims. (Cl. 110—99)



1. In a metallurgical furnace a sprung arch roof extending transversely of the furnace, said roof consisting of basic bricks, rows of said basic bricks extending longitudinally of the furnace and comprising a construction wherein the joints between bricks in each row are offset with respect to the joints between bricks in the next adjacent rows.

3,387,576

SEED PLANTER DEPTH REGULATOR

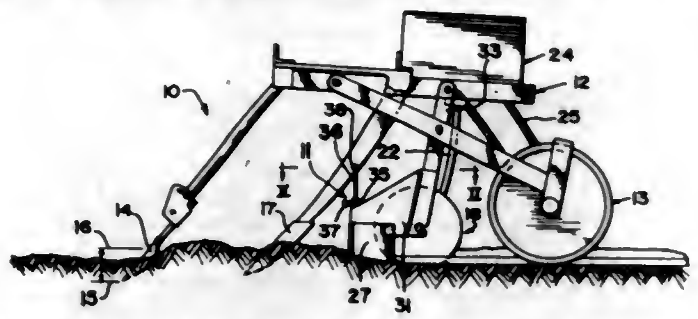
Alvin Gordon, 906 Cordele Road,
Sylvester, Ga. 31791

Filed Apr. 22, 1965, Ser. No. 450,024

4 Claims. (Cl. 111—85)

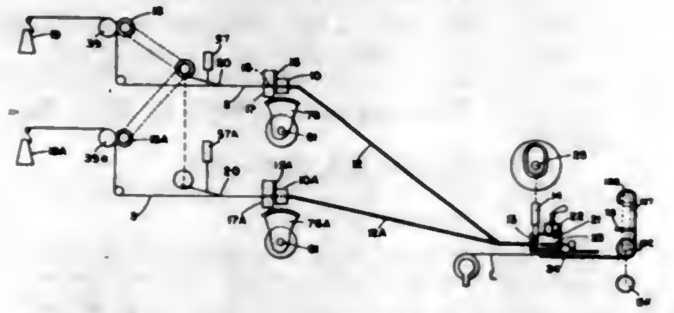
1. In an attachment for a seed planter including a frame, means for supporting said frame for movement over soil and furrow-forming means on said frame for opening a furrow in the soil to receive seeds, leveling means supported from said frame and in closely spaced relation ahead of said furrow-forming means and including a pair of generally vertical walls converging to join at a forward vertically extending narrow corner in alignment ahead of said furrow-forming means and having lower edges in-

clined downwardly and rearwardly from the lower end of said corner, said walls being arranged to move rocks, clods and the like to either side of the path of said furrow-forming means, said leveling means further including a downwardly and rearwardly inclined bottom plate having converging side edges adjoining said downwardly and rearwardly inclined lower edges of said generally vertical converging walls to form sharp corners, and said bottom plate having a rearwardly opening notch extending from a point spaced from said narrow corner to define a flat smoothing portion behind said corner, and upwardly extending mounting means secured to the upper surface of said smoothing portion.



3,387,577
MECHANISMS AND METHODS FOR MANUFACTURING CARPETS, RUGS AND THE LIKE

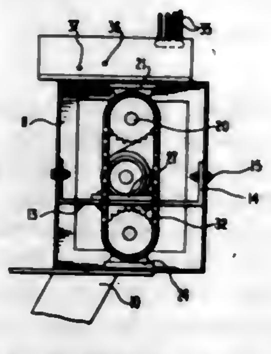
Abram N. Spanel, 344 Stockton St., Princeton, N.J. 08540, and Loy E. Barton, Princeton, N.J.; said Barton assignor to said Spanel
Filed Oct. 23, 1965, Ser. No. 503,342
18 Claims. (Cl. 112—79)



Yarn bits are cut from yarn strands and transported by suction to bit-loading stations where they are positioned by stop means for transfer to a backing layer by bit-applying elements as provided by needles, narrow blunt-edged blades, or a single wide blunt-edged blade.

3,387,578
MECHANISM FOR AND METHOD OF FEEDING YARN IN A TUFTING MACHINE

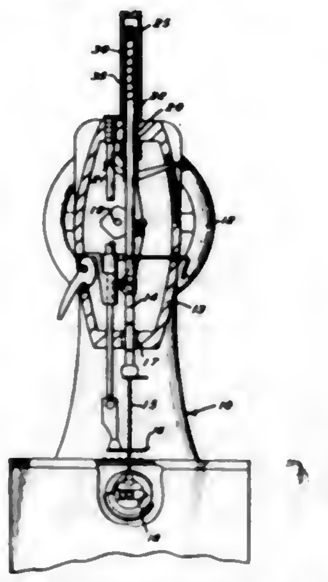
Joseph K. McCutchen, Ellijay, Ga. 30540
Filed Mar. 8, 1966, Ser. No. 532,805
10 Claims. (Cl. 112—79)



A method of and apparatus for feeding yarn to the needles of a multiple needle tufting machine of the type which produces both cut and uncut pile in a fabric base. The invention takes advantage of the inherent demand characteristics of the machine in that the yarn ends which are to make cut pile are under much more tension due to looper action than are the yarn ends which produce uncut or loop pile. By regulating the degree of frictional contact between the uncut pile yarn ends and the constant speed friction drive means, the feeding of these yarn ends may be varied with a corresponding variation in uncut pile height in a desired pattern, while the cut pile yarn ends continue to be fed in a constant manner to produce an even cut pile. The cut pile height may be varied by changing the speed of the yarn feeding means.

3,387,579
AUTOMATIC NEEDLE BAR POSITIONER

Anthony A. Ciccotelli, Jr., 505 Goff Ave., Oaklyn, N.J. 08107
Filed Oct. 11, 1965, Ser. No. 494,655
5 Claims. (Cl. 112—221)

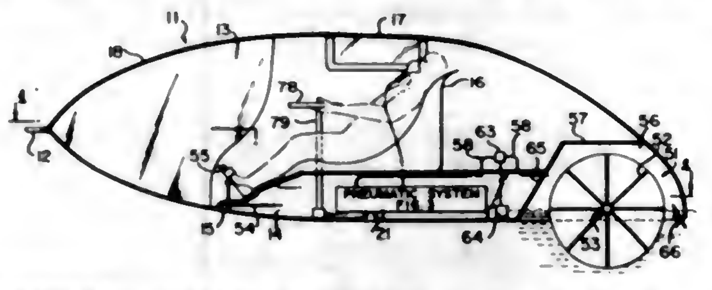


An automatic needle bar positioner on a sewing machine head having an aperture through the top with a needle drive bar reciprocating therethrough between upper and lower stroke limits comprising a sleeve affixed in said aperture between said head and said bar, said sleeve including an externally threaded portion extending above said top, a collar removably affixed on said bar over said sleeve, a biasing means bearing against said collar and urging said bar in a direction parallel to reciprocation thereof, to position said bar while said sewing machine is at rest, at a stroke limit of said reciprocating drive bar upon cessation of said reciprocation, and a hollow elongated tubular cap with an open internally threaded end engaging said threaded portion to enclose the upper end of said bar, collar and biasing means, said cap being readily unscrewed and said collar readily removed for an interchange of said biasing means to alternate positions between said collar and sleeve and said collar and cap, respectively, thereby providing a selective positioning of said bar to one of said stroke limits.

3,387,580
SUBMERSIBLE WATER CRAFT

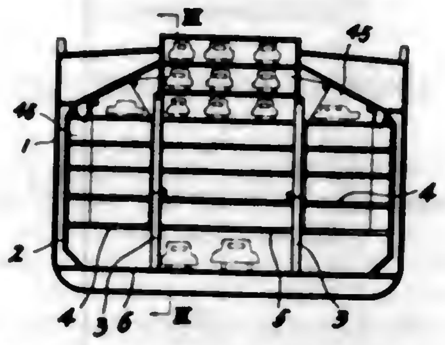
Harold H. Walker, 4801 Topping Road, Rockville, Md. 20853
Filed Oct. 22, 1965, Ser. No. 501,059
16 Claims. (Cl. 114—16)

A submersible vehicle having a hull with walls subject to rupture at relatively low pressure differentials existing thereacross, said hull being maintained intact at various depths of submergence by providing pressurized gas internally of the vehicle so as to maintain the pressure differential appearing across the hull waves somewhat less than that pressure required to cause rupture. Additionally provided is a paddle wheel locomotive device for submersible vehicles wherein the lower portion of the wheel is maintained submerged and the axial and upper portions of the wheel are maintained in a gaseous environment, the volume of said gaseous environment being maintained substantially constant independent of the depth of submergence of said vehicle.



3,387,581
CARGO SHIPS

Shigeru Suganuma, Tokyo, Japan, assignor to Nippon Kokan Kabushiki Kaisha, Tokyo, Japan
Filed Sept. 7, 1966, Ser. No. 577,698
Claims priority, application Japan, Sept. 15, 1965, 40/56,075
11 Claims. (Cl. 114—72)



A cargo ship for carrying bulk and non-bulk cargo. A cargo-receiving space of the ship is defined by upper and lower walls as well as by a pair of side walls which extend longitudinally of the ship in the fore-and-aft direction, and a pair of upright frames are situated between and extend parallel to each other as well as to the side walls. These frames removably carry shelves which extend between the frames for supporting non-bulk cargo, and a pair of lateral groups of shelves are situated between the frames and the side walls. A structure is provided for raising the lateral groups of shelves to a stored position adjacent the upper wall of the cargo-receiving space, so that with these lateral groups of shelves in their stored positions and with the shelves which extend between the frames removed it is possible to situate bulk cargo in the cargo-receiving space. The upright frames themselves are capable of being raised to stored positions, so that in this way the cargo space can be adapted very conveniently either for bulk cargo or for non-bulk cargo.

3,387,582
RADIO CONTROLLED FISHING BOAT

William R. Reeves, 865 E. High St., Apt. 404, Lexington, Ky. 40502
Filed May 6, 1966, Ser. No. 548,331
4 Claims. (Cl. 115—.5)

1. A radio controlled boat for carrying fishing tackle comprising:

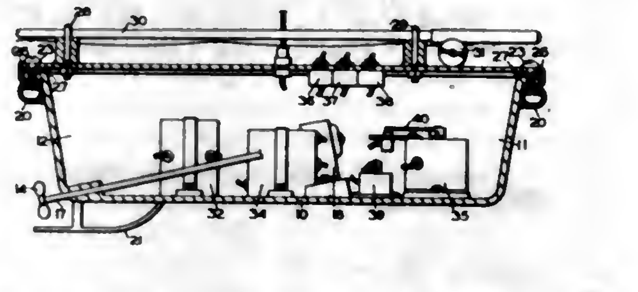
a hull drawing a shallow draft, said hull being generally rectangular in shape;

at least one propeller located on each the port and starboard sides of the stern end of the hull for driving the hull through the water;

independently driven motor means located inside said hull connected to said propellers by independent drive shafts for driving said propellers;

a radio receiver located within the hull and capable of generating an output signal in response to receipt of a radio signal;

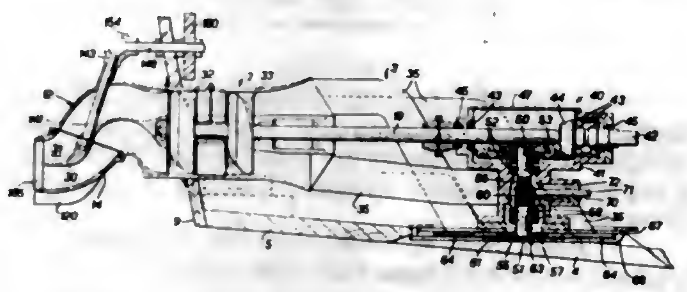
a servo mechanism for receiving said output signal from said receiver, and in response thereto actuating one or all of said independently driven motor means into operation;



means located on said boat for carrying fishing tackle, and a rod and reel located on said boat and held thereto by said means for carrying fishing tackle.

3,387,583
WATER JET PROPULSION APPARATUS

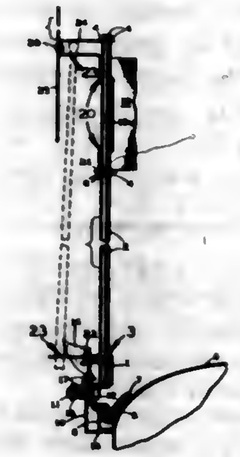
Siegfried Kuether, La Salle, Ontario, Canada, assignor to Tamco Limited, La Salle, Ontario, Canada
Original application Dec. 29, 1964, Ser. No. 421,796. Divided and this application Oct. 5, 1966, Ser. No. 600,293
Claims priority, application Canada, Feb. 14, 1964, 895,749
1 Claim. (Cl. 115—.5)



A water jet propulsion apparatus for watercraft of the type having a water inlet in the hull of the craft, an impeller connected to motor means and an outlet in the form of a nozzle. The intake is provided with a rotary weed cutting device that is operated by the drive means for the impeller. A clutch may be used for optionally coupling or uncoupling the weed cutting device from the drive means.

3,387,584
SIGNAL FOR AUTOMOBILES

Hershey Glantz, 1401 SW. 17 Terrace, Miami, Fla. 33145
Filed Sept. 16, 1966, Ser. No. 579,865
3 Claims. (Cl. 116—28)

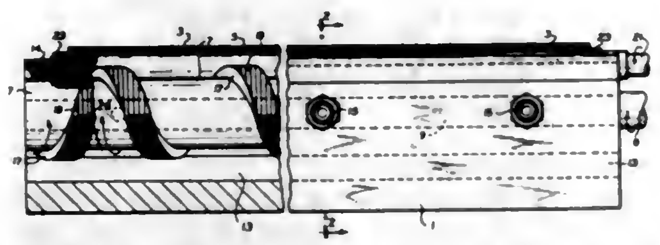


A flag-like identification structure supported on the upper end of a vertical staff member which is resiliently clamped to the gutter of an automobile.

3,387,585

APPARATUS FOR METERING A COATED CARRIER

John Jerome Farrell, 40 Abby Lane,
Green Brook, N.J. 08812
Filed Mar. 21, 1967, Ser. No. 624,754
7 Claims. (Cl. 118—104)

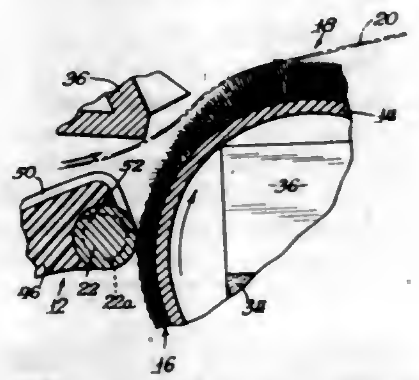


This specification discloses apparatus for metering the coating applied to a web. A round rod wrapped with a helix of wire contacts with the coating on the web and picks up excess coating. In order to make this metering apparatus suitable for organic solvent based coating (which tends to clog metering apparatus) as well as for aqueous based coating, the helical wire wrapping is continuously cleaned by contact with convolutions of helical fins on shafts that have threads, on the circumference of their helical fins, of the same pitch as the helical wire wrapping. The helical fins dip into solvent that cleans them continuously as they rotate.

3,387,586

MAGNETIC DEVELOPER APPARATUS

Loren E. Shelffo, Palatine, and Robert M. East, Mount Prospect, Ill., assignors to Addressograph-Multigraph Corporation, Mount Prospect, Ill., a corporation of Delaware
Filed June 6, 1966, Ser. No. 555,408
3 Claims. (Cl. 118—637)



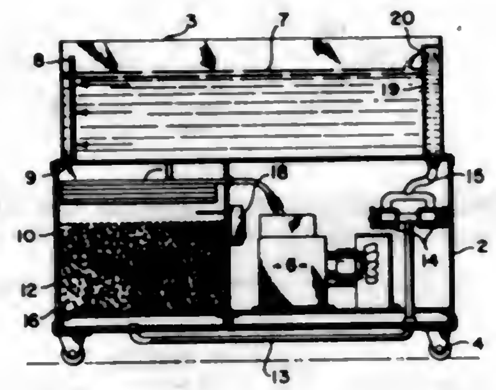
Developer mixture including magnetic and developer particles is supported adjacent a carrier drum mounted for rotation around a magnet structure establishing a region of relatively high flux density for forming developer material adhering to the drum into a brush. A circular cylindrical rod is positioned near the drum for evening or leveling the layer of adhering mixture before it enters the high flux density region. The rod may be rotated to present a fresh surface when the rod surface becomes uneven due to adhering developer material.

3,387,587

CULTURE SYSTEM

William E. Kelley, Euclid, and Jessop Smith, Gates Mills, Ohio, assignors to Aquarium Systems, Inc., Wickliffe, Ohio, a corporation of Ohio
Continuation-in-part of application Ser. No. 492,693, Oct. 4, 1965. This application Mar. 7, 1967, Ser. No. 633,322
18 Claims. (Cl. 119—2)

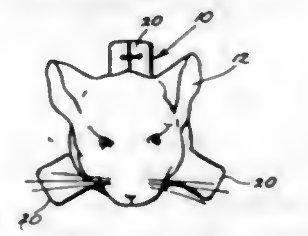
A culture system for the maintenance of captive marine life including a housing and a tank in which such life are maintained and means for controlling the temperture of the culture medium within the tank. The culture medium is circulated through biochemical filtration means associated with the tank to react chemically therewith to replenish the alkaline reserve and to promote the growth of bacteria therein. Means are also provided to circulate the culture medium throughout the system and to aerate the medium as it is reintroduced into the tank to facilitate gas exchange of carbon dioxide and oxygen therewith.



3,387,588

CAGED ANIMAL MOVEMENT CONTROLLING DEVICE

Merrill S. Bird, 1218 44th St.,
Des Moines, Iowa 50311
Filed June 9, 1966, Ser. No. 556,480
8 Claims. (Cl. 119—106)

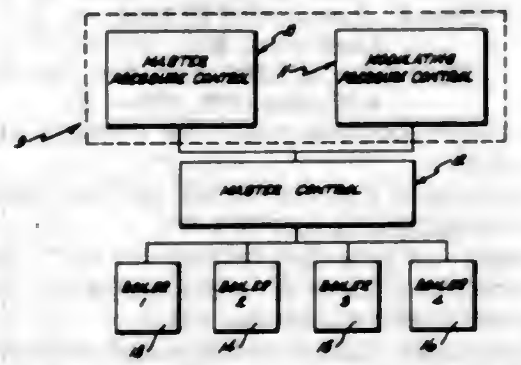


An animal collar to preclude the animal's passage through openings of a predetermined size wherein the collar includes a plurality of outwardly extending radial projections on the outer edge thereof. Three projections are preferably used, one of which extends upwardly and the other two projections extend downwardly and outwardly away from the animal's legs which may move therebetween.

3,387,589

MULTIPLE BOILER CONTROL SYSTEM

William Chan, Brookfield, and George L. Steffes, Elk Grove, Ill., assignors to Vapor Corporation, Chicago, Ill., a corporation of Delaware
Filed Sept. 12, 1966, Ser. No. 578,772
4 Claims. (Cl. 122—1)

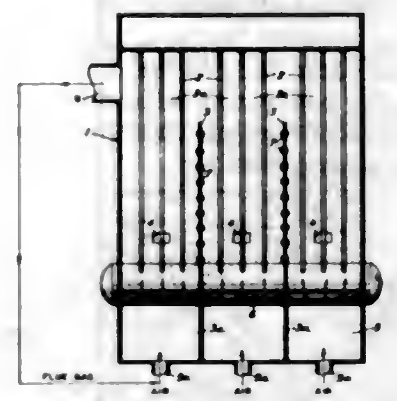


Multiple boiler control system for controlling the operation of a series of boilers connected to a common header and including a master pressure responsive switch responsive to the pressure in the header and having high and low pressure contacts for adding or subtracting boilers to the system, and a modulating pressure responsive switch responsive to the pressure in the header for modulating the operation of one of the boilers on the line between high and low fire conditions.

3,387,590

SYSTEM FOR REGULATING THE TOTAL HEAT OUTPUT IN A BURNING FLUIDIZED BED HEAT EXCHANGER OR BOILER

John W. Bishop, Alexandria, Va., assignor to the United States of America as represented by the Secretary of the Interior
Filed Mar. 16, 1967, Ser. No. 624,665
10 Claims. (Cl. 122—4)

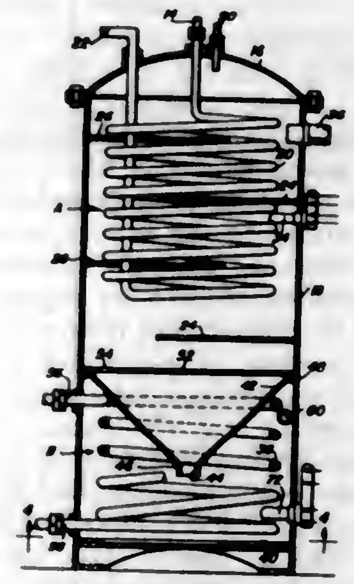


The degree of direct contact between a fluidized burning bed of coal and the immersed tubes of a boiler is varied by changing the height of the bed by means of a bed transfer screw connected to the boiler and an adjacent bed holding vessel. Alternatively, the boiler can be partitioned into a plurality of beds, and the degree of contact between beds and tubes is then varied by shutting down or starting up one or more beds.

3,387,591

STEAM OPERATED HOT WATER HEATER WITH PREHEATER

James A. Phillips, Jr., Quantico, Md., assignor of thirty percent to James A. Phillips, Sr., and Leah M. Phillips, both of Quantico, Md., jointly
Continuation-in-part of application Ser. No. 431,018, Feb. 8, 1965. This application Feb. 17, 1967, Ser. No. 616,915
8 Claims. (Cl. 122—32)

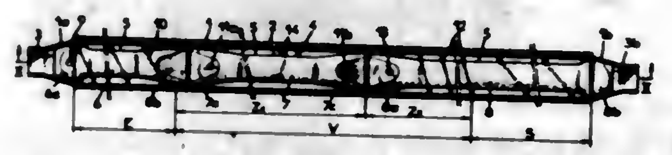


A water heater employing a primary steam heating coil (coil A) which absorbs and uses the latent heat of the steam passing through the coil together with a condensate latent heat salvage coil (coil B) disposed in the bottom of the water heater which is completely separated from the primary heating coil in the top part of the water heater. Coil B is connected to the steam traps of other steam using devices in the same plant or installation in order to absorb the latent heat of the steam which is normally lost is it is discharged from such steam traps through vents to the atmosphere and thereby raise the temperature of the incoming water in the lower part of the water heater. A truncated cone (point down) is placed in the water heating tank with the lower point of the cone being cut out to provide communication between the lower end of the water heating tank and the upper end thereof which primarily prevents convectional currents between the top and bottom portions of the tank. A flat plate having peripherally spaced holes overlies the cone so that water between the plate and the cone is substantially immobilized or static thus serving as a secondary means to retard convectional currents and as an insulating barrier between coil B and coil A in the upper portion of the heater tank.

3,387,592

TUBULAR HEAT-TRANSFER ELEMENTS

Lucien Frédéric Henri Marcel Fouché, Neuilly, and Marc Roger Armand, Saint Germain-en-Laye, France, assignors to Fives-Penhoet, Paris, France, a corporation of France
Filed Oct. 26, 1966, Ser. No. 589,625
Claims priority, application France, Oct. 29, 1965, 36,788
7 Claims. (Cl. 122—406)



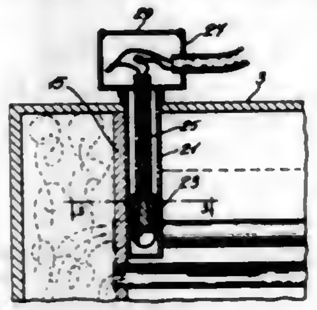
1. A tubular heat-transfer element, for heat-transfer and steam-generator of the forced-circulation type, comprising a tube of substantially rectilinear general configuration about which a heating fluid is circulated and within which a fluid under pressure to be heated is circulated, said tube comprising an economizer section, a vaporizer section, said vaporizer section having in turn a first zone in which the heat-transfer coefficient is relatively high and a second zone in which said heat-transfer coefficient is relatively low and a superheater section, a core member fitted internally and coaxially in said tube and extending substantially throughout the tube length, an annular space between said tube and said core member the cross-sectional area of said annular space being substantially the same along the tube, and helical fins housed in said annular space and provided in said economizer section, in said second vaporizer zone and said superheater section, whereby the fluid to be heated is caused to follow a helical path in said economizer section, a substantially rectilinear path in said first vaporizer zone and again a helical path in said second zone and in said superheater section.

3,387,593

SAFETY DEVICE FOR FIRED PRESSURE VESSELS

Roch Henri Gingras, 970 Vanier St., St-Laurent,
Quebec, Canada
Filed Mar. 3, 1966, Ser. No. 531,523
12 Claims. (Cl. 122—504.1)

A safety device for detecting overheat in a fired pressure vessel formed of a container having the shape of a well and made of heat conducting material whereby to act as a heat transfer member. The container is mounted in direct contact with the heating surface of the fired pressure vessel and extends to and through the outer shell of the vessel. A heat sensitive element is loosely mounted in the container and is removable through the outer shell. The heat sensitive element is responsive to detect overheat upon a predetermined temperature rise in the fired pressure vessel.



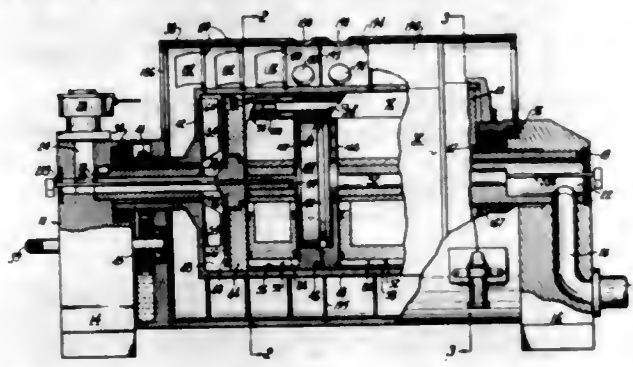
3,387,594

ROTARY INTERNAL COMBUSTION ENGINE

Ted W. Birk, P.O. Box 865, Berlin, N.Y. 12022

Original application June 15, 1964, Ser. No. 374,897, now Patent No. 3,299,866, dated Jan. 24, 1967. Divided and this application Aug. 30, 1966, Ser. No. 576,097

14 Claims. (Cl. 123—1)



1. A thermodynamic process for an internal combustion engine comprising the steps of inducing a fuel-air charge in the compression chamber, compressing the charge in the compression chamber, transferring a compressed work charge from the compression chamber to a combustion chamber with the last portion of the work charge being discharged into the combustion chamber at a higher velocity than the first portion to increase the turbulence and homogeneity of the entire work charge in the combustion chamber, igniting the work charge in the combustion chamber, expanding the ignited work charge in the combustion chamber for converting the thermal energy of the ignited work charge into mechanical energy, and exhausting the expanded work charge from the combustion chamber.

3,387,595

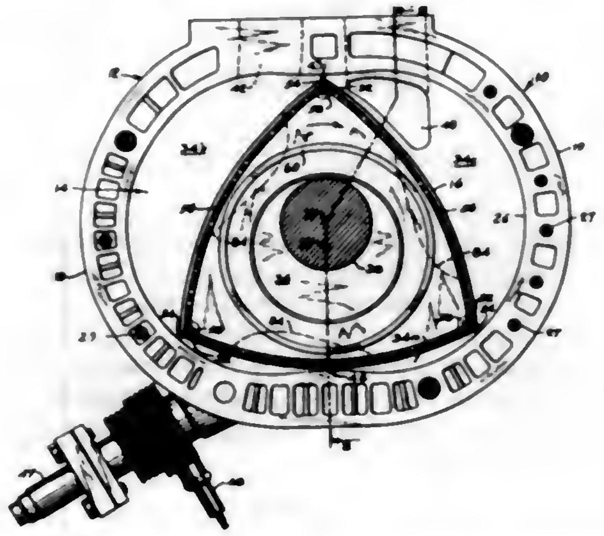
ROTARY COMBUSTION ENGINE WITH PRECOMBUSTION CHAMBER

Max Bentele, Ridgewood, N.J., assignor to Curtiss-Wright Corporation, a corporation of Delaware

Filed May 1, 1962, Ser. No. 191,523

15 Claims. (Cl. 123—8)

1. A rotary internal combustion engine having a cycle including the four strokes of intake, compression, expansion and exhaust and comprising an outer hollow body and an inner body supported for relative turning movement within the outer body, and turning on an axis eccentric of and parallel to the axis of the outer body, said bodies having respective facing surfaces defining a plurality of variable volume working chambers, said facing surfaces comprising the outer surface of the inner body and the inner surface of the outer body which includes a plurality of arched lobe-defining portions spaced circumferentially on the axis of the outer body, said outer surface of the inner body including a plurality of apex portions spaced circumferentially about the axis of the inner body, said apex portions including seals which extend parallel to the axis of the inner body and engage the inner surface of the outer body, intake passage means arranged to communicate with the space between the exterior of the inner body and interior of the outer body for successively feeding all said chambers as the bodies relatively move, exhaust passage means also arranged to communicate with said space, means forming a precombustion chamber, a nozzle connected to said means for injecting fuel into said precombustion chamber, and means in said precombustion chamber for igniting the fuel, said outer body including passage means adjacent a lobe junction for connecting the precombustion chamber with each of the working chambers after intake and before exhaust while working chamber volume is relatively small, the passage means being disposed to one side of a location along the inner surface of the outer body where pressure on both sides of an apex seal is the same and including separate passages spaced apart at the inner surface of the outer body in the direction of motion of the inner body for connecting adjacent working chambers through the precombustion chamber when an apex seal is between the spaced passages.



15. A fuel injection rotary piston internal combustion engine of the type in which fuel and air are intermixed within the engine proper, which comprises: a first engine member forming an outer engine body with a main chamber having an air inlet for drawing in air and an exhaust gas outlet for discharging exhaust gas, and a second engine member arranged within said main chamber and rotatable relative to said first engine member, said first and second engine members confining with each other a plurality of continuously varying chamber means including a compression and combustion chamber means, said second engine member being operable to convey air drawn in through said inlet to said compression and combustion chamber means while forming the compression and combustion chamber means with said first engine member, one of said engine members being provided with sealing edges extending parallel to the axis of rotation of said second engine member and sealingly engaging respective adjacent surface portions of the other engine member for sealing all of said chamber means relative to each other, said first engine member being provided with auxiliary chamber means and with passage means leading from said auxiliary chamber means into said chamber means which are confined by said first and second engine members for permitting an exchange of a turbulent fuel air mixture between said auxiliary chamber means and said compression and combustion chamber means, fuel injection nozzle means leading into at least one of said two last-mentioned chamber means for injecting fuel thereinto, the entrance of said passage means into said chamber means confined by said first and second engine members being so located with regard to said sealing edges that the respective sealing edge adjacent said entrance will in the direction of rotation of said second engine member pass by said entrance and permit communication between said passage means and said compression and combustion chamber means only shortly before the end of the desired compression of air in said compression and combustion chamber means, whereby a turbulent flow of compressed air into and through said auxiliary chamber means will be created.

3,387,596

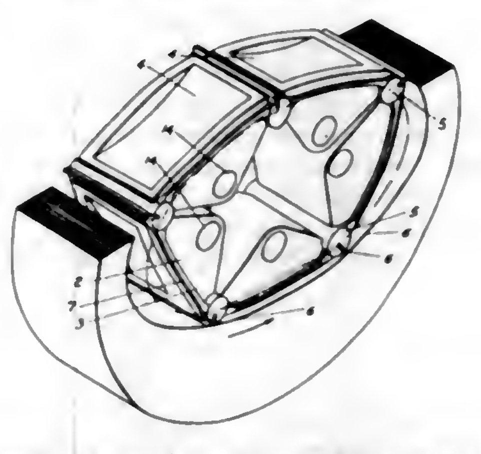
COMBUSTION ENGINE WITH REVOLUTING PISTONS FORMING A CLOSED KINEMATIC CHAIN

Leon Niemand, Warsaw, Poland, assignor to Politechnika Warszawska, Warsaw, Poland

Filed June 8, 1966, Ser. No. 556,028

Claims priority, application Poland, June 9, 1965, P 109,449

2 Claims. (Cl. 123—8)



An improved rotary-piston internal combustion engine in which five rotary pistons form a closed kinematic chain and circulate within a static, oval cylinder. The movement of the pistons is controlled by means of two lateral rotors, which also consist of five segments articulated to one another by means of bolts. On the bolts, which function as the common axis of the segment articulations and of the articulations of said pistons, there are affixed the rollers which roll over the races equidistant to the outline of the cylinder. The two rotors take over all the forces originating from the gas pressure and from the inertia of the pistons. The engine is provided with flywheel and the lubricating and the cooling systems.

3,387,597

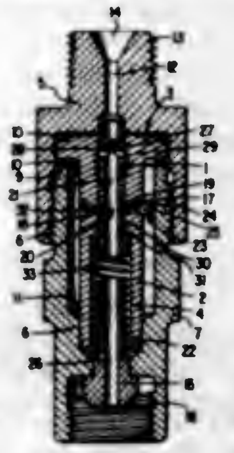
INJECTION ENGINE WITH CONTROLLED PRE-INJECTION

Robert J. Wirsching, Korntal, Wurttemberg, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany

Filed Mar. 21, 1966, Ser. No. 535,954

Claims priority, application Germany, Mar. 25, 1965, D 46,894

21 Claims. (Cl. 123—32)



A device for controlling the pre-injection of fuel in internal combustion engines, especially Diesel engines, wherein a piston control valve is interconnected in the fuel line between the injection pump and the injection nozzle for controlling the pre-injection of fuel by means of an intermediate relief discharge effected by a connection of the outlet work space of the piston control valve with a closed fuel storage space concentrically arranged with respect to the piston.

3,387,598

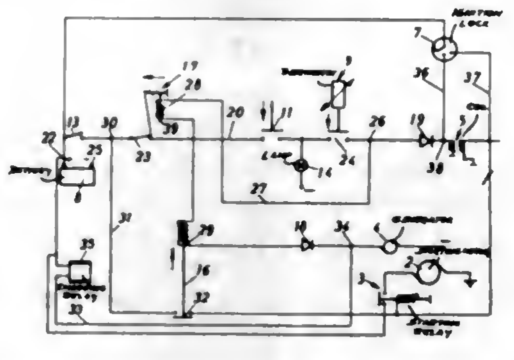
AUTOMATIC INTERNAL COMBUSTION ENGINE STARTING APPARATUS

Bo Lennart Almenfors, Boras, and Karl-Gustav Simon Johansson, Molndal, Sweden, assignors, by mesne assignments, to Aktiebolaget Gylling & Co., Stockholm, Sweden

Filed Feb. 7, 1966, Ser. No. 525,403

Claims priority, application Sweden, Feb. 9, 1965, 1,608/65; July 29, 1965, 9,956/65

8 Claims. (Cl. 123—41.15)



A device for the automatic starting of an engine having a charging generator and a starting relay. An ignition support is provided wherein said starting relay is connected in parallel. Also a thermostat is provided in the ignition support to close the ignition circuit at a predetermined temperature of the engine and to break said circuit at a higher predetermined temperature. A coupling relay is connected in the circuit between the thermostat and the generator for closing the circuit to the starting relay.

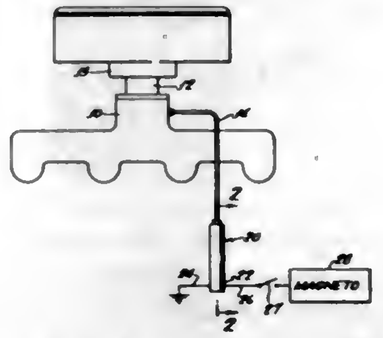
3,387,599

VACUUM INDICATING DEVICE

Joe Taylor Cruse, Bellflower, Calif., assignor to Atlantic Richfield Company, Philadelphia, Pa., a corporation of Pennsylvania

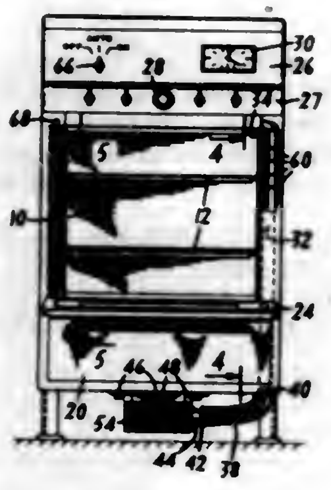
Filed Aug. 9, 1966, Ser. No. 571,326

10 Claims. (Cl. 123—146.5)



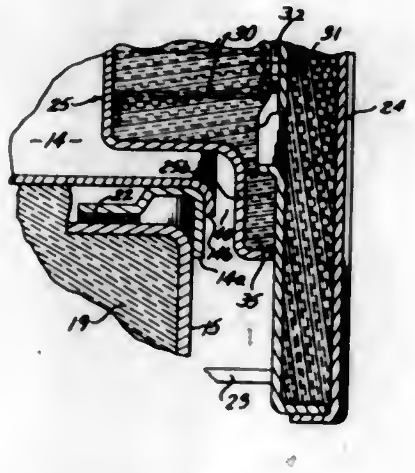
A manifold vacuum sensing engine cutoff device having a reciprocable piston biased downwardly by gravity in a cylinder, the cylinder communicating with the engine manifold for supporting the piston in an upward position and having a vent opening the cylinder to atmosphere upon loss of vacuum, which includes contacts forming a switch which is closed upon loss of vacuum is exemplary of this disclosure.

3,387,600
OVEN WITH AUTOMATIC AIR CURTAIN MEANS
Berj A. Terzian, 3 Skerratt Lane,
Ossining, N.Y. 10562
Filed Apr. 13, 1966, Ser. No. 542,354
4 Claims. (Cl. 126—21)



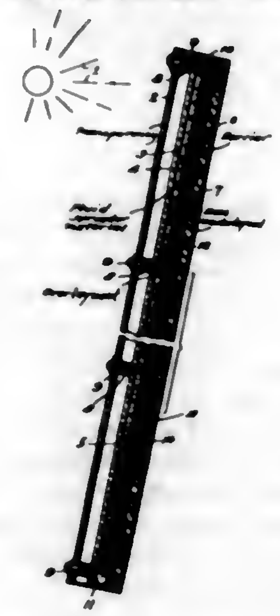
A home appliance cooking oven is equipped with means for generating and sweeping an air curtain across its door opening when the oven door is opened, to prevent heat blast upon the person who desires access to the oven interior. After the air curtain has traversed the door opening, it is intercepted and deflected away from the oven interior directly back into the ambient air adjacent the front of the oven.

3,387,601
SELF-CLEANING OVEN
Christian E. Buerki, Fullerton, and Kenneth E. Rawald, Anaheim, Calif., assignors to Norris-Thermador Corporation, Los Angeles, Calif., a corporation of California
Filed June 3, 1966, Ser. No. 555,078
7 Claims. (Cl. 126—21)



1. In a self cleaning oven including a housing, an oven can member supported on said housing and an oven door hingedly supported on said housing for providing a closure for said can member, the improvement comprising
- means for rigidly supporting the rearward portions of said can member on said housing with the remaining portions of said can member being left floating with respect to said housing,
- means for thermally insulating said can member from said housing,
- said can member having sealing means running around the forward edges thereof,
- a door plug member attached to the inner portions of said oven door, and
- means for thermally insulating said plug member from said door,
- said plug member having a sealing surface which mates with said can member sealing means to form a seal therewith when the oven is at self cleaning temperature,
- said can member being adapted to move forwardly relative to said housing as the oven temperature is increased to provide an air intake gap between the door and the can at normal cooking temperatures and a substantial seal between the door and the can at self cleaning temperatures, the sealing means of said can member separating from said housing as said can member moves forwardly.

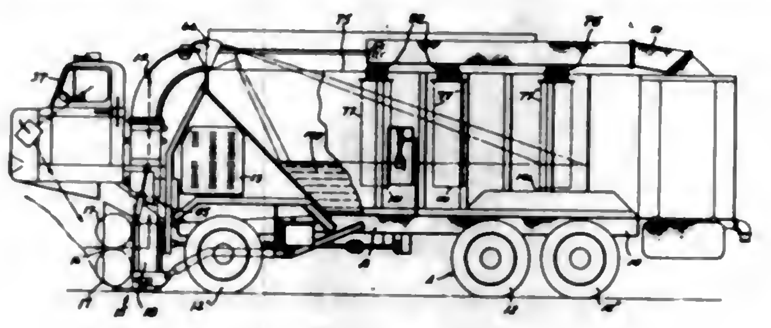
3,387,602
SOLAR HEATER
Harry E. Thomason, District Heights, Md. (6802 Walker Mill Road SE., Washington, D.C. 20027)
Continuation-in-part of application Ser. No. 46,213, July 29, 1960, which is a continuation-in-part of application Ser. No. 151,320, Nov. 9, 1961. This application Oct. 22, 1965, Ser. No. 501,964
16 Claims. (Cl. 126—271)



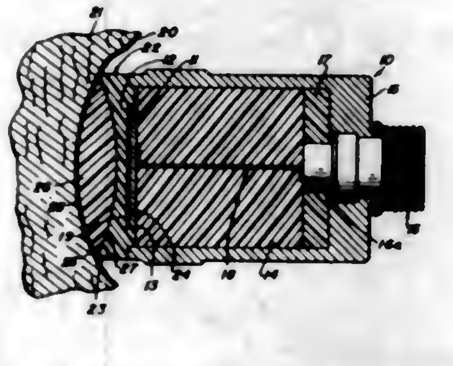
1. Solar heat collecting apparatus comprising: an insulting base underlayment; an overlayment of solar heat collecting material having an upper solar heat collecting surface, said overlayment comprising a relatively stable material containing a fluid, a portion of which oxidizes or volatilizes when exposed to heat or atmospheric conditions or both; a substantially transparent, substantially liquid-tight and substantially vapor-tight covering material closely adjacent to said overlayment to admit solar energy and to minimize oxidation and volatilization from the upper surface of said overlayment; means to introduce a heat transfer fluid to be heated to the space between said overlayment and said covering material; means between said overlayment and said covering material to spread said heat transfer fluid as it flows through said collector; and means to collect the heated fluid after it has passed through said collector for return to a point of use or storage.

3,387,603
BURNER CONTROLS
Alexander Ashton Marks, Philadelphia, and John A. Fritz, Ridley Park, Pa.; said Fritz assignor to McKee & McHale, Inc., Darby, Pa., a corporation of Pennsylvania
Filed Oct. 22, 1965, Ser. No. 501,301
23 Claims. (Cl. 126—343.5)

A burner control assembly comprising a burner having a main fuel valve, a main fuel outlet, a pilot fuel valve, a pilot fuel outlet, an electrically operated ignitor disposed in the vicinity of the pilot fuel outlet, and a flame monitor adapted to indicate electrically whether a flame is present in the vicinity of the pilot fuel outlet. Relay coils are connected to and energized by a source of current for controlling the operation of the main fuel and pilot valves. When the flame monitor indicates the presence of a flame in the vicinity of the pilot fuel outlet, and when relay control is closed then full speed operation of air blower and full fuel flow is established, and when relay control is open reduced speed of air blower operation and reduced fuel flow is effected. The application of the burner control to an engine depending upon electrical current for its operation and adapted to the operation of a snow melter is described and illustrated.



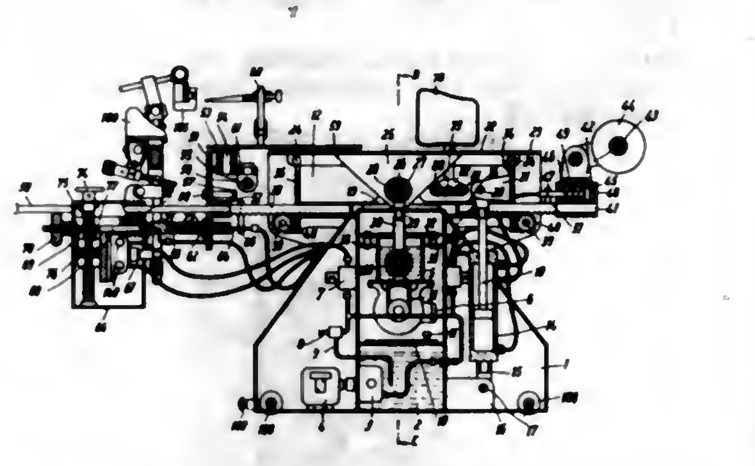
3,387,604
FOCUSED CONTACT TRANSDUCER
Kenneth R. Erikson, Chicago, Ill., assignor to Magnaflux Corporation, Chicago, Ill., a corporation of Delaware
Filed Feb. 23, 1965, Ser. No. 434,313
8 Claims. (Cl. 128—24)



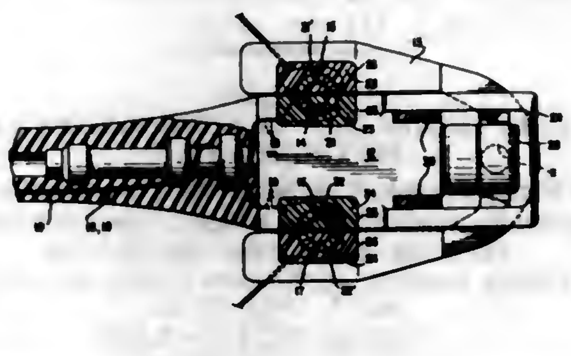
Apparatus for transmission of ultrasonic waves into the interior of a body in which a lens member has one face acoustically coupled to a transducer and an opposite convex face acoustically coupled to the body, the material of the lens member being such that the velocity of transmission is less than the velocity of transmission in the body, a silastic resin material being preferably used. Preferably, the convex face may be in rolling contact with a body for scanning. A second lens member may be provided having a higher velocity of transmission, having a planar face in contact with a planar face of the transducer, and having an opposite concave face in contact with a convex face of the focusing lens member.

3,387,605
DEVICE FOR THE MECHANICAL TREATMENT OF THE VERTEBRAL COLUMN AND ITS BONE CONNECTION ORGANS
Heinz Schmidt, 431 Dachauer Str., Munich 54, Germany
Continuation-in-part of application Ser. No. 93,596, Mar. 6, 1961. This application July 22, 1966, Ser. No. 567,191
17 Claims. (Cl. 128—71)

Device for the mechanical extension treatment of the vertebral column and its bone connection organs which includes the main casing, together with mechanism to support the patient to be treated on a swinging part, together with mechanism to operate the swinging movement and holders for the shoulders, head and legs of the patient.



3,387,606
INDUCTIVE SIGNAL TRANSFER DEVICE, USEFUL FOR AVIATORS' HELMETS
Cecil A. Crafts, Santa Ana, Maynard D. McFarlane, Tustin, and John E. Mitchell, Costa Mesa, Calif., assignors to Robertshaw Controls Company, Richmond, Va., a corporation of Delaware
Filed Mar. 12, 1962, Ser. No. 178,980
9 Claims. (Cl. 128—141)



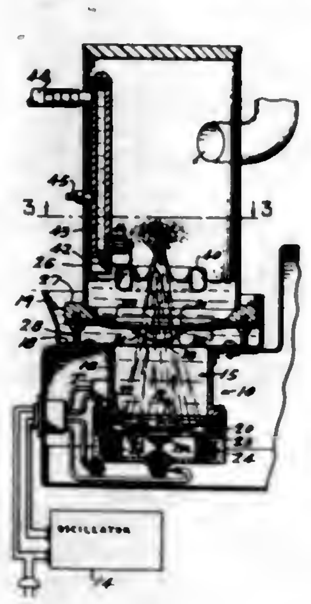
1. A signal transfer device for quick disconnect service interconnecting a plurality of separated circuits,
- a first transformer having a secondary core member and winding entirely imbedded within a plastic receptacle wall,
- a primary core and winding entirely imbedded in a plastic plug unit adapted to be fitted within said receptacle,
- said plug and receptacle units being keyed for engagement in predetermined alignment,
- said core members being substantially of C-form and of size and disposition within said plug and receptacle units, when aligned, to substantially complete a high permeability magnetic path through said primary and secondary core members,
- a second transformer having primary and secondary core members each with a winding thereon entirely imbedded within receptacle and plug units, respectively, said core members being oriented at least 90° from the core members of the first transformers for reduction of magnetic intercoupling therebetween, and
- signal transmit-receive means connected to said windings of said first and second transformers for the conveying of separate signals therethrough in a plurality of circuits.

3,387,607
APPARATUS FOR INHALATION THERAPY

William D. Gauthier, Sylvania Township, Lucas County, and Robert J. Della Flora, Toledo, Ohio, assignors to The De Vilbiss Company, Toledo, Ohio, a corporation of Ohio

Continuation-in-part of application Ser. No. 343,617, Feb. 10, 1964. This application Mar. 27, 1967, Ser. No. 626,319

14 Claims. (Cl. 128—173)



Ultrasonic apparatus for the production of an aerosol for human inhalation therapy. The aerosol is characterized by a relatively narrow range of particle size. The sonic energy is directed to produce a zone of disturbance at the surface of the liquid to be nebulized for maximum aerosol emission.

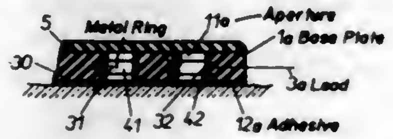
3,387,608
ELECTRODE FOR ELECTROMEDICAL MEASUREMENT

Štěpán Figar, Prague, Czechoslovakia, assignor to Ceskoslovenska akademie ved, Prague, Czechoslovakia

Filed Jan. 4, 1965, Ser. No. 423,030

Claims priority, application Czechoslovakia, Jan. 7, 1964, 92/64

5 Claims. (Cl. 128—2.06)



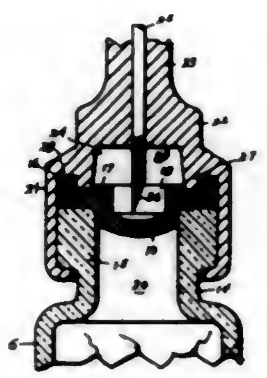
In an electrode which is to provide electrical connection between animals or humans and an electrical readout apparatus there is a relatively thin plate of a resilient nonconducting material. The front face of the plate contacts the skin of the wearer, the opposite face of the plate being referred to as the reverse face. The plate has at least a single aperture extending throughout the plate, and in one embodiment of the present electrode at least a portion of a conductive element is held within said aperture in a spaced relationship with respect to both said front and said reverse face, and a conductive medium fills the well and establishes electrical connection between the skin and the conductive element. According to another embodiment, a conductive element is held on the reverse face, while the conductive medium fills the aperture fully. In the latter case lead means establish electrical connection between the conductive medium and the conductive element.

3,387,609
CLOSURE CAP FOR DISPOSABLE HYPODERMIC SYRINGES

Walter A. Shields, 38—09 24th St., Jamaica, N.Y. 11101

Filed Jan. 19, 1966, Ser. No. 523,839

3 Claims. (Cl. 128—218)



A disposable hypodermic syringe comprising a vial having a beaded mouth and lip and a closure consisting of a diaphragm including a peripheral flange, a flat intermediate portion extending inward and contacting said lip and outer portion engaged in the filler opening.

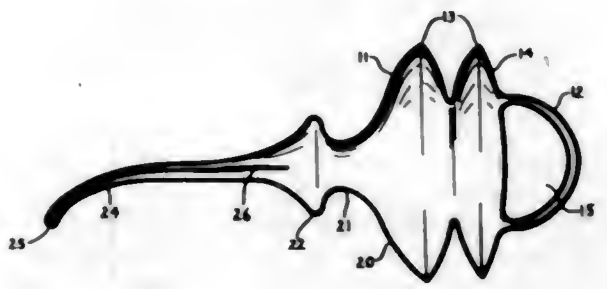
The diaphragm is retained by a closure cap having a depending skirt crimped to said beaded mouth and has an inner annular crown with surfaces abutting the flange and intermediate portion against the mouth of the vial.

3,387,610
NEWBORN ASPIRATOR

Stanley M. Richmond, 331 Medical Center, Eugene, Oreg.

Filed Aug. 6, 1965, Ser. No. 477,780

3 Claims. (Cl. 128—278)



A bulb type aspirator having a thumb loop on one end of the bulb and a neck on the other end to receive the operator's fingers for either squeezing or extending the bulb. The aspirator has a longitudinally curved nozzle portion with a transversely flat tongue depressor surface on its under side and an exterior air vent groove extending along one edge of the nozzle.

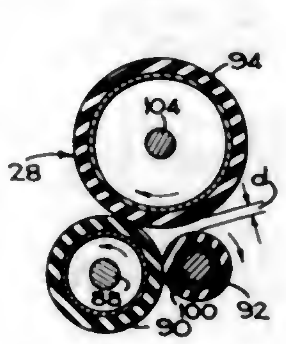
3,387,611
VINE CROP HARVESTER

Olin L. Looker, Milford, Ill., assignor to FMC Corporation, San Jose, Calif., a corporation of Delaware

Filed Mar. 25, 1966, Ser. No. 537,334

4 Claims. (Cl. 130—30)

A harvester for removing cucumbers or the like from green vines wherein, the vines and cucumbers are picked up by upper and lower undulating belts having loose projections that sweep the ground. The cucumbers are snapped off by rearward and forward snapper rolls and the vines are additionally pulled between the rearward snapper roller and a pressure roller. There is a gap of one thousandth to ⅜ inches between the pressure roller and the forward snapper roll.

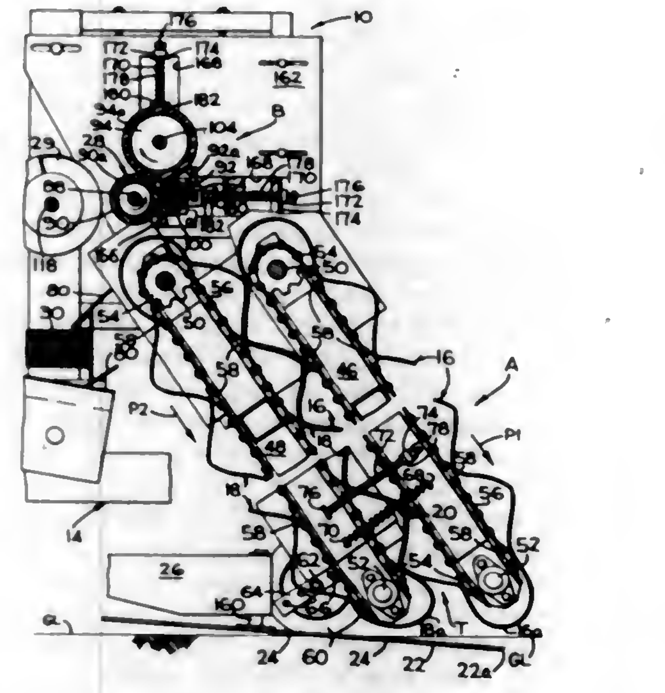


3,387,612
VINE CROP HARVESTER

Glen R. Tillotson, Hoopeston, Ill., assignor to FMC Corporation, San Jose Calif., a corporation of Delaware

Filed Apr. 4, 1966, Ser. No. 540,002

3 Claims. (Cl. 130—30)



Cucumbers are snapped off of green vines which are pulled by rubber covered snapping rolls having a Shore durometer hardness of scale A of 65–70. A pressure roll engages one snapping roll and has a rubber cover with a Shore durometer hardness of 30–50 on scale A.

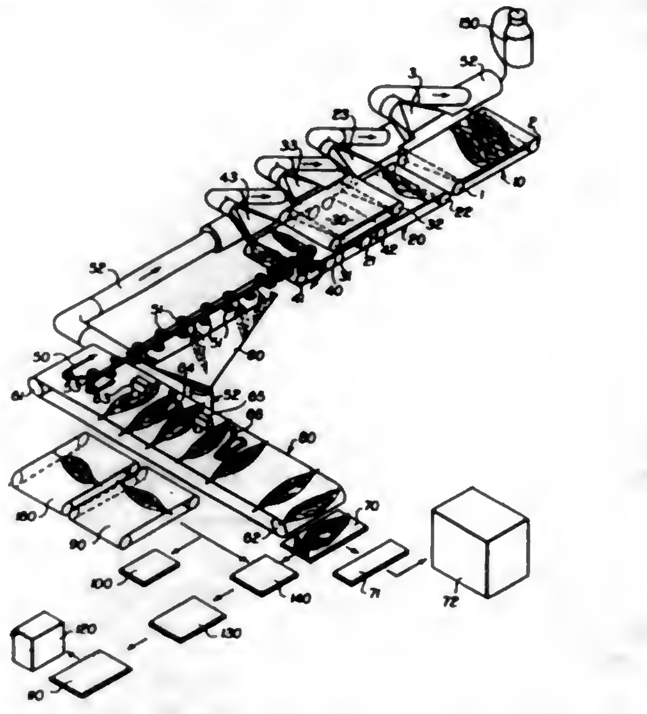
3,387,613
PROCESS AND APPARATUS FOR CLEANING PLANT LEAVES

Carl M. McHugh, Clemson, S.C., assignor to Research Corporation, New York, N.Y., a non-profit corporation of New York

Filed Aug. 25, 1966, Ser. No. 575,013

16 Claims. (Cl. 131—138)

1. Process for the removal of deleterious particles from plant leaves which comprises positioning said leaves in a horizontal position with the stems extending in the same direction in an initial stage and subjecting the same to agitation and vacuum conditions between superimposed belt type conveyors in said initial stage for dislodging and removing said particles from the leaves, thereafter substantially vertically positioning the leaves, stem up, in a secondary stage, subjecting the leaves to agitation and vacuum in said secondary stage and completely removing remaining particles therefrom.

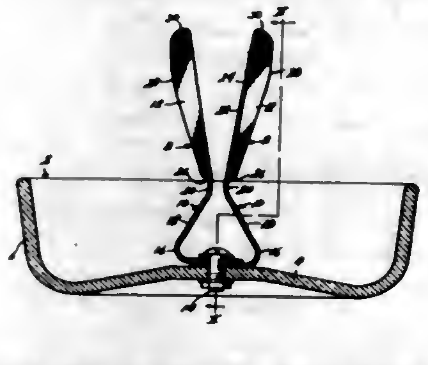


3,387,614
PIPE CLEANER, CIGARETTE HOLDER, AND ASH TRAY COMBINATION

William B. Beuscher, 5244 Mohawk Drive, Shawnee Mission, Kans. 66205

Filed Oct. 20, 1966, Ser. No. 588,210

5 Claims. (Cl. 131—232)



1. A smoking pipe cleaning device comprising:

(a) a pair of elongated resilient fingers secured together at one end and extending from their point of connection in normally divergent relationship, the divergent portions of said fingers having a minimum normal spacing therebetween that is less than the diameter of a cigarette, whereby a cigarette may be inserted and resiliently gripped therebetween, and

(b) a blade affixed to the extended portion of each of said fingers, the distal edges of said blades, and the edges thereof at the outer ends thereof, forming the cutting edges thereof adapted to engage the surface of the bowl cavity of a conventional smoking pipe, the outer ends of said blades being normally spaced apart a distance greater than the diameter of said bowl cavity.

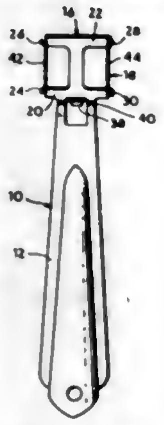
3,387,615
DENTAL FLOSS HOLDER

James MacKew, 5005 Industrial Drive, Fort Wayne, Ind. 46805

Filed Mar. 25, 1965, Ser. No. 442,720

1 Claim. (Cl. 132—91)

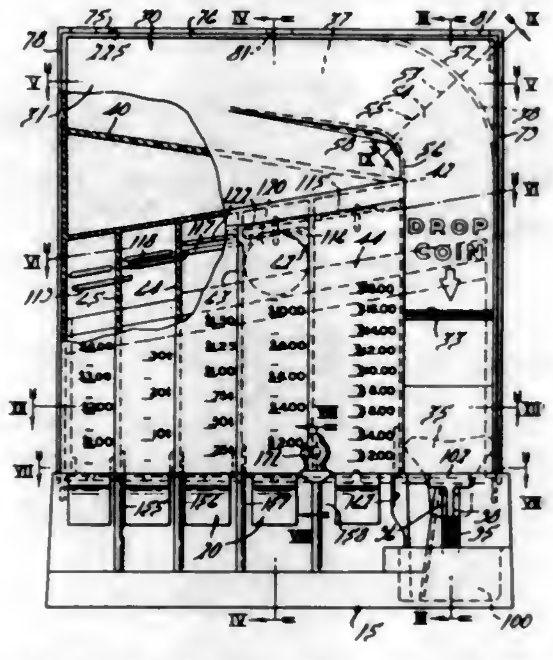
A dental floss holder which has an I-shaped frame having arms with hooks disposed at each end thereof for supporting two separate sections of dental floss, and



a clip formed in the handle of the holder for providing an anchor for each end of the dental floss.

3,387,616
COIN SORTING AND DISPENSING DEVICE

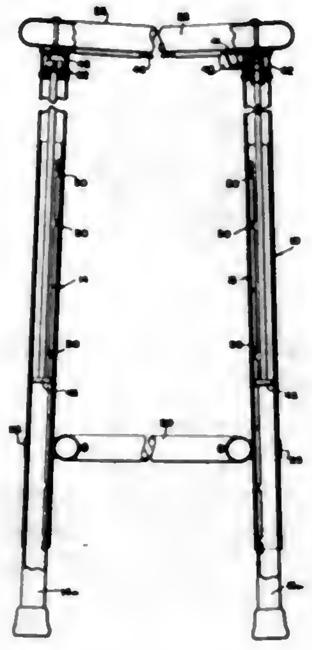
Harold E. Bortz, Englewood, N.J., and James E. Thomson, Munith, Mich., assignors to Western Stamping Corporation, Jackson, Mich., a corporation of Michigan
Filed Apr. 10, 1967, Ser. No. 629,762
11 Claims. (Cl. 133—3)



A toy bank having a lockable coin release mechanism is incorporated in a casing construction having three principal parts, a base of hollow construction contains a coin dispensing apparatus, a flipper for tossing coins upwardly into visible rampways, and an open cup for discharged coins. The base supports an upstanding relatively flat structure formed of the other two casing parts. The two upper sections define a series of compartments within which coins of different denominations are stacked and also define rampways and coin sorting means through which coins travel visibly as in a bagatelle game. The coins are diverted into their proper compartments to stack in accordance with denomination by stationary cams molded on the back wall and which selectively tilt rolling coins of predetermined diameters forwardly toward their compartments, the forward rolling of each tilted coin being arrested by the farther sidewall of its compartment. The coin releasing means is operated by key levers on the front of the machine for selectively releasing the coins into a coin discharge pocket. The key levers can be locked against operation to prevent removal of the coins. All parts are assemblable by pushing them into positions in which they interlock and are held against separation and misalignment by inherent contouring.

3,387,617
ADJUSTABLE LEG INVALID WALKER

Edward W. Reiber, 3540 SW. 5th St., Miami, Fla. 33135
Filed Nov. 18, 1966, Ser. No. 595,411
9 Claims. (Cl. 135—45)

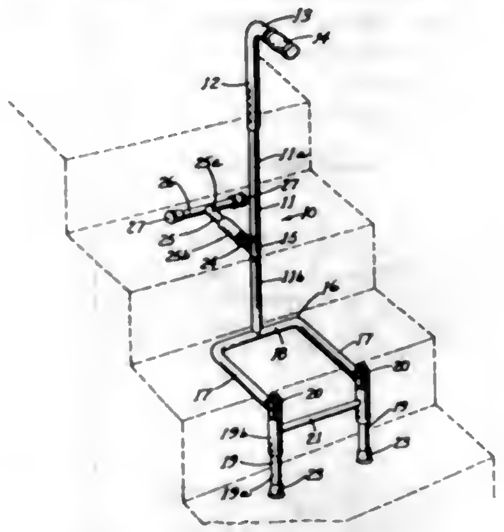


1. An invalid walking-aid device to be used as an aid for walking on flat surfaces and ascending and descending stairways, curbings and the like, comprising a rigid frame having three closed sides and one open side, a pair of rear vertical supporting legs of fixed length, defining the open side; a pair of lengthwise adjustable vertical front legs, each of which is composed of two telescopically relatively slidable portions; said pair of front legs being adjustable lengthwise to an extended or contracted position and manually operable locking mechanism adapted to fix the length of said front pair of legs in any one of a variety of optional lengths, a substantially horizontal pair of sidewise disposed gripping members arranged at approximately the waist height of the user; a pair of vertical tubular rear supporting legs of fixed length defining the open side of the frame; a pair of vertical tubular front legs each of which comprises an upper portion and a lower portion slidably telescoped in relation one to the other to permit extendable and contractable overall lengthwise adjustment, manually operable locking means adapted to fix the overall length of said pair of front legs in different lengths; said locking means including a disc shaped element, a radial outwardly extending vertical slot formed therein, a series of inwardly projecting latch members adapted to pass through said radially outwardly extending vertical slots of said disc shaped elements to permit relative slidable movement between the telescopically arranged upper and lower portions of front legs when the radial slot of the disc shaped element is manually arranged in alignment with the inwardly projecting latch members, and to prevent passage of the inwardly projecting latch members when said radial slot of the disc shaped member is manually arranged out of alignment with said inwardly projecting latch members.

3,387,618
WALKING AID APPLIANCES

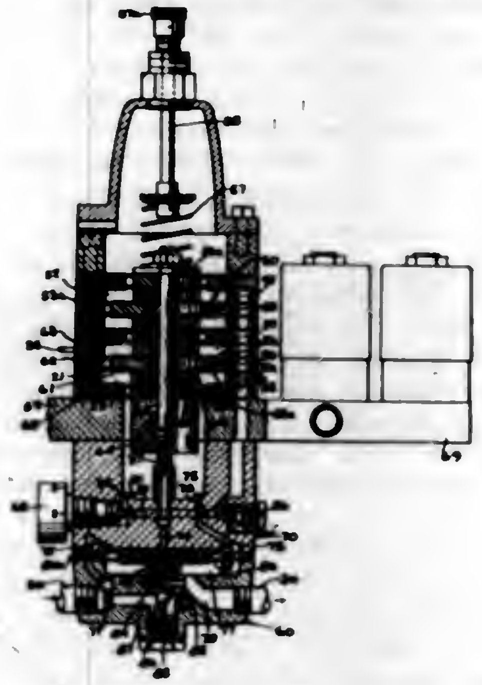
David T. Swann, 16309 Harvard Ave., Cleveland, Ohio 44128
Filed Apr. 27, 1967, Ser. No. 634,379
7 Claims. (Cl. 135—45)

There is disclosed herein a walking aid appliance for use by the disabled in walking on either flat surfaces or stairways. The appliance disclosed has an upright portion for grasping by the user and means for contacting three adjacent stairs treads simultaneously when ascending and descending stairs, said means being adjustable to a position for contacting a flat surface only.



3,387,619
PNEUMATIC AMPLIFIER

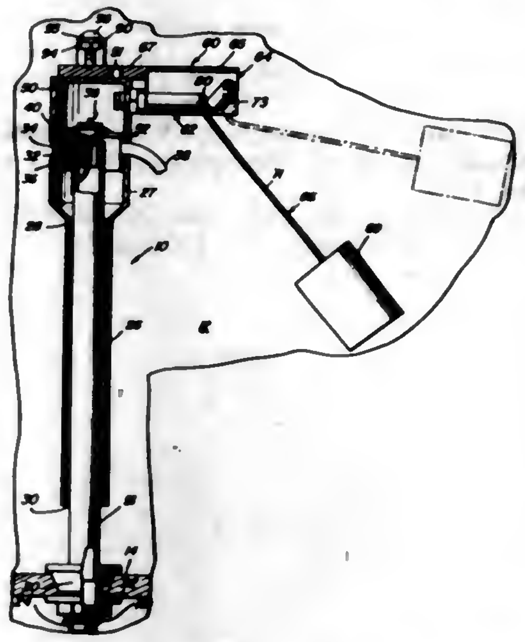
Leo J. Berger, Jr., Farmington, and Robert W. Clayton, Pinkney, Mich., assignors to Scans Associates, Inc., Livonia, Mich., a corporation of Michigan
Continuation of application Ser. No. 349,268, Mar. 4, 1964, which is a division of application Ser. No. 212,244, July 25, 1962, now Patent No. 3,248,931. This application Feb. 6, 1967, Ser. No. 614,360
3 Claims. (Cl. 137—86)



This application discloses an improved pneumatic amplifying device operable to respond to two pressure signals to sense the difference therebetween and to produce a modified pressure signal amplified in a predetermined degree in proportion to such sensed difference for the purpose of rendering said difference, which may be so small as not to be capable of causing by itself any comprehensive response of measuring instruments, sufficiently strong to be evaluated by measuring such amplified signal. Amplification is attained by pneumatic means and degree of amplification can be controlled by manually adjustable means. Strict proportionality of amplification is attained by sensing first the difference between two unmodified original pressure signals and thereupon amplifying such difference, rather than by amplifying pressure signals first and thereupon attempting to produce some response to determine the difference between separately amplified original signals. Applicant's system greatly reduces the effect of various parasitic influences and errors and produces more reliable results.

3,387,620
BALL COCK VALVE ASSEMBLY

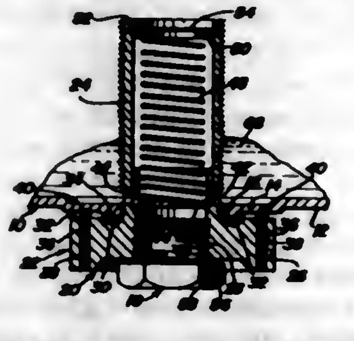
William R. Walters, 1300 Sunset, Pawhuska, Okla. 74056
Filed June 16, 1965, Ser. No. 464,376
7 Claims. (Cl. 137—244)



A float controlled fluid pressure actuated filling valve assembly adapted to maintain a predetermined liquid level in a receptacle which valve assembly includes a supply conduit associated valve port, a diaphragm valve element mounted for movement toward and away from the valve port to control the flow of liquid through the port, a small diameter through aperture in the valve element which communicates the supply conduit with a chamber within which pressure built up by the supply liquid acts to move the diaphragm into sealing relation to the valve port, a float actuated spring biased normally closed valve associated with the chamber to vent the chamber in response to a liquid level in the receptacle below that desired so as to permit flow of supply liquid through the valve port and a valve element aperture cleanout rod fixed to the supply conduit to preclude total blockage of the valve element aperture.

3,387,621
OIL PAN DRAIN PLUG ASSEMBLY

Peter J. Schaff, Benson, Ariz.
(St. David, Ariz. 85630)
Filed July 21, 1965, Ser. No. 473,781
1 Claim. (Cl. 137—322)



An oil pan drain assembly including an inverted upright headed tubular drain plug screwed into the bottom wall of an oil pan. The tubular plug wall contains a slotted portion in an area immediately above the oil pan bottom wall thereby allowing drainage through the tubular plug. A cylindrical and slidable valve is disposed within the tubular plug and is normally positioned over the interior aperture of the slotted portion, for occluding drainage from the oil pan. At such time when draining of the pan is desired, a tubular tool is screwed into the tubular plug which engages the cylindrical valve and slides the valve from the slotted portion of the tubular drain plug thereby exposing the slot opening to the oil contained in the pan. As a result, the oil exits from the pan and passes through the tubular drain plug and tubular tool to a collecting receptacle below. Removal of the tool returns the valve to its initially closed position to prevent further drainage.

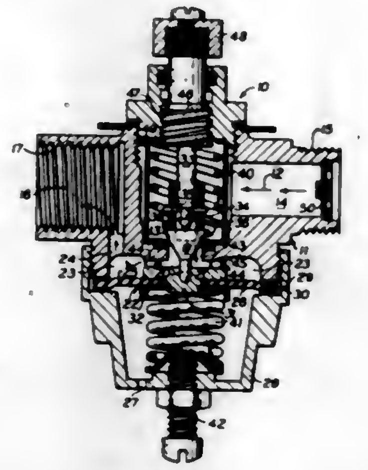
3,387,622

VALVE

Richard Weinstein, Huntington, N.Y., assignor to Flair Manufacturing Corp., Hauppauge, N.Y., a corporation of New York

Filed Sept. 22, 1965, Ser. No. 489,124

8 Claims. (Cl. 137—495)



1. A gate valve comprising a body including a fluid passage therethrough, a valve seat disposed in said body to divide said fluid passage into an inlet portion and an outlet portion, a valve gate member disposed within said body for movement relative to the valve seat and for operative engagement therewith to cut off fluid flow from said inlet to said outlet portion, and positioning means responsive to fluid pressure at said outlet portion and disposed in operative engagement with said valve gate member for positioning same into and out of operative engagement with the valve seat in response to the fluid pressure at said outlet portion whereby whenever the fluid pressure at said outlet portion excess a predetermined value, the valve gate member is positioned to cut off fluid flow from the inlet portion to the outlet portion, said positioning means includes a first spring member disposed in operative engagement with said valve gate member to urge same toward a position of operative engagement with the valve seat for cutting off fluid flow between said inlet and outlet portions, a diaphragm means disposed in operative engagement with said valve gate member to position same relative to the valve seat, and a second spring member disposed in operative engagement with said diaphragm means, said diaphragm means being movable relative to said valve seat in response to fluid pressure at said outlet portion, said second spring member having a deflection-force characteristic selected in relation to that of the first spring member whereby when the fluid pressure at the outlet portion exceeds a predetermined value, said diaphragm is moved away from said valve seat and against the influence of said second spring member by a distance sufficient to permit the valve gate member with the aid of said first spring member to operatively engage said valve seat and thereby cut off fluid flow, and including a spindle disposed in operative engagement with said valve body for movement relative to the valve seat, said spindle being operatively connected to said valve gate member with limited free movement therebetween for selectively positioning said valve gate member to cut off and to permit fluid flow independently of said diaphragm means and said first and second spring members.

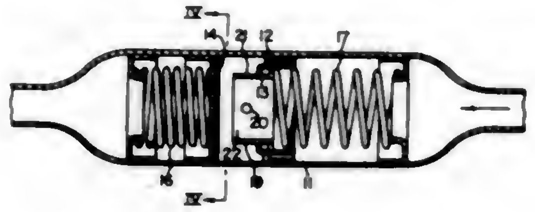
3,387,623

TWO STAGE CHECK VALVE

Robert A. Essig, Elyria, Ohio, assignor to Luxaire, Inc., Elyria, Ohio, a corporation of Delaware

Filed Mar. 31, 1966, Ser. No. 539,119

4 Claims. (Cl. 137—512.1)



1. A two stage pressure differential check valve comprising, a valve body, a fixed valve seat having an opening therethrough and positioned transversely within said body, a movable tubular valve seat extending through said fixed valve seat opening and having a main tubular opening together with one or more bypass openings through the tubular wall thereof, means normally urging said tubular seat to a first position with the plane of its seat spaced from the plane of the fixed valve seat and its tubular wall openings between both valve seat planes on one side of said fixed valve seat, said tubular valve seat being movable to a second position with the plane of its valve seat in alignment with the plane of the fixed valve seat and its tubular wall openings on the other side of said fixed valve seat, a diaphragm valve member having a central imperforate diaphragm portion and a peripheral portion having a plurality of openings therethrough, said valve member being positioned transversely within said valve body opposite said valve seats to be movable from a position for open valve condition which is out of engagement with both of said valve seats while said tubular valve seat is in its first position in response to fluid flow of any appreciable pressure in one direction against one side of said diaphragm member, said valve member being movable to a position with its central diaphragm portion engaging said tubular valve seat to close the main tubular opening thereof while said tubular valve seat is in its first position to provide a partly closed valve condition for fluid flow through the tubular wall bypass openings in response to fluid flow of relatively low pressure in the other direction against the other side of said diaphragm member, and said valve member together with said tubular seat being movable to positions with the central diaphragm portion of the valve member engaging both of said valve seats while the tubular member is in its second position to provide a fully closed check valve condition in response to fluid flow of relatively high pressure in the other direction against the other side of said diaphragm member.

3,387,624

AUTOMATIC VALVULAR CLOSURE

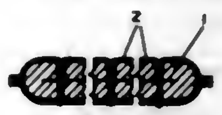
Wilfred Roland Soucy, Loudonville, N.Y.
(P.O. Box 1002, Troy, N.Y. 12181)

Continuation-in-part of application Ser. No. 855,488, Nov. 16, 1959. This application June 20, 1962, Ser. No. 206,118

3 Claims. (Cl. 137—525.1)

1. An automatic valvular closure comprising at least: a flexible tubular body collapsed to a closed condition at

its egress end; and at least one elastically elongatable filament adapted to yieldably maintain the mated sides of said egress end united throughout their effective width, said filament passing through the mated sides united thereby and having the respective ends thereof anchored to opposite sides of said egress end; whereby said egress end opens and said filament elongatingly yields, when pressure is exerted against the interior surface of said body by the contents therewithin, to give egress to said contents and said end is closed again by at least said filament when said pressure is reduced.



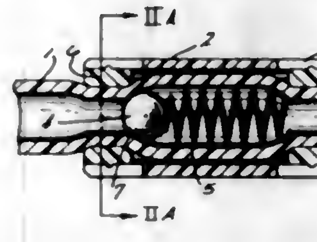
3,387,625

CHECK VALVE

George R. Laure, Kalamazoo, Mich., assignor to The W-L Molding Company, Kalamazoo, Mich., a corporation of Michigan

Filed June 24, 1965, Ser. No. 466,692

7 Claims. (Cl. 137—543.19)



A check valve construction having a ball check valve located between a pair of spaced apart annular constricting rings embracing a deformable tubular member forming deformations on the interior thereof, one of said deformations forming a valve seat for the ball valve member. The deformations are capable of being removed from the tubing and moved axially of the tubing.

3,387,626

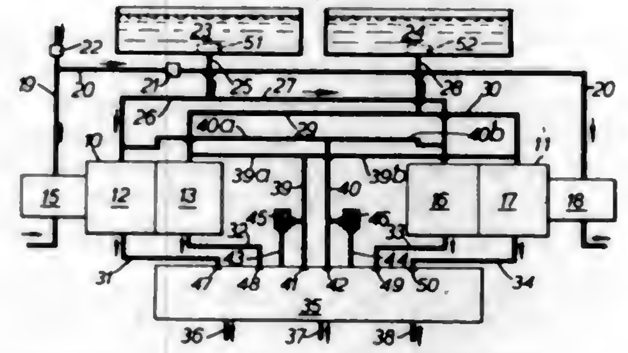
LIQUID SUPPLY SYSTEM

Edward H. Morris and Humphrey C. E. Nightingale, Gloucester, England, assignors to Dowty Rotol Limited, Gloucester, England, a British company

Filed July 11, 1966, Ser. No. 564,053

Claims priority, application Great Britain, July 22, 1965, 31,286

6 Claims. (Cl. 137—563)



An improvement is disclosed for a liquid supply system of the type comprising a pair of conjointly rotatable, motor-driven metering devices each having a source of liquid connected to the inlet thereof, and means for delivering the discharge from each device to a point of usage. The improvement assures that neither metering device in the system can run dry, when the supply of liquid to it is discontinued for some reason, while the devices are in operation. According to the invention, this result is achieved by passing a valve-controlled conduit around the devices that interconnects the inlet of one of the devices with a point in the delivery means downstream of the other metering device; and employing means in conjunction therewith that are responsive to a normal range of pressures at the aforesaid point, to close the valve when both devices are delivering liquid, but responsive to a pressure above this range at the aforesaid point, to open the valve, so that liquid is fed back to the inlet of the one metering device, when only the other device is delivering liquid.

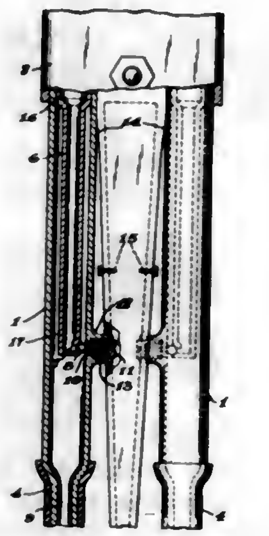
3,387,627

AUTOMATIC SHUTOFF VALVE

Wilbur A. Marshall, Midland, Mich.
(Rte. 1, Box 332–C, Aurora, Mo. 65605)

Filed Feb. 14, 1966, Ser. No. 527,179

6 Claims. (Cl. 137—594)



This invention relates to an automatic shut off valve for hand welding torches whereby the flow of gas is automatically stopped when the torch is set aside or is dropped.

3,387,628

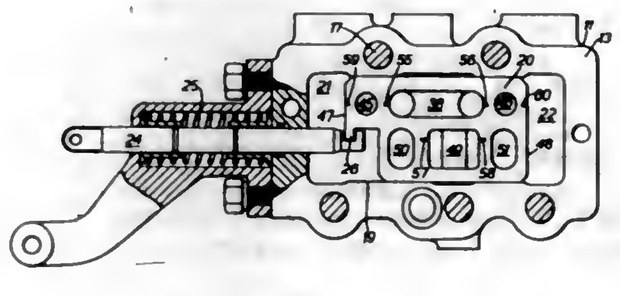
SLIDE VALVES

John C. E. Flint, Chalford, and Peter Spence, Cheltenham, England, assignors, by mesne assignments, to Dowty Hydraulic Units Limited, Cheltenham, England

Filed Nov. 19, 1965, Ser. No. 508,795

Claims priority, application Great Britain, Mar. 3, 1965, 9,075/65; Apr. 23, 1965, 17,163/65, 17,164/65

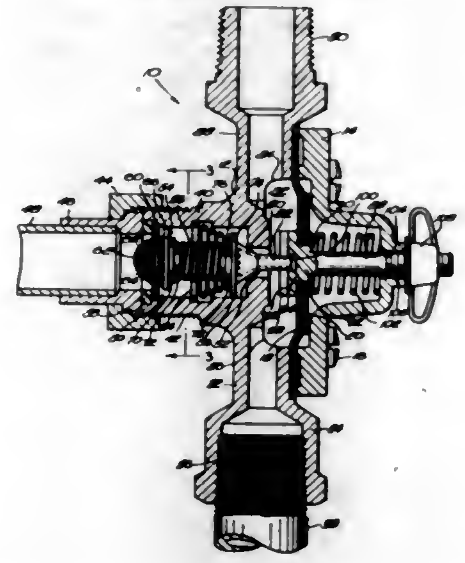
19 Claims. (Cl. 137—596.12)



A slide valve assembly is disclosed which includes a casing and a slider of rectangular cross section. The straight end edges of the slider are disclosed as being cooperable with service ports in an arrangement which permits the length of the slider in the zone of the unloader porting to be shorter than the length thereof in the zone of the main porting. Thus the slider can be formed with a step, or to be undercut, in the lower portion thereof. Specific details of additional embodiments of the slider are disclosed.

3,387,629
HOT WATER HEATING SYSTEM AND REGULATING VALVE THEREFOR

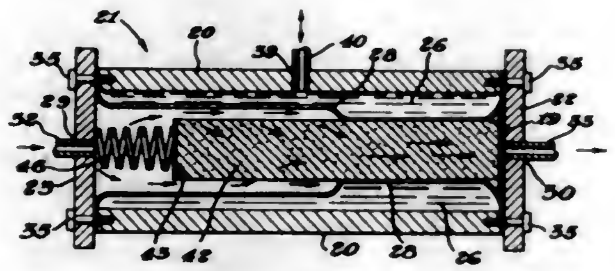
Charles A. Ellis, Marion, Mass., assignor to General Fittings Co., Warwick, R.I., a corporation of Rhode Island
Filed Aug. 30, 1965, Ser. No. 483,624
1 Claim. (Cl. 137—614.19)



A regulating valve for forced hot water heating systems and the like comprising means for automatically shutting off the water supply whenever pressure in the system reaches a predetermined level and which automatically opens whenever pressure in the system falls below the predetermined level, said value also having manual means for permitting opening and closing of the valve regardless of what pressure exists in the system and check valve means associated therewith for preventing backflow of hot water into the supply line.

3,387,630
ADJUSTABLE PRESSURE REDUCING DEVICE

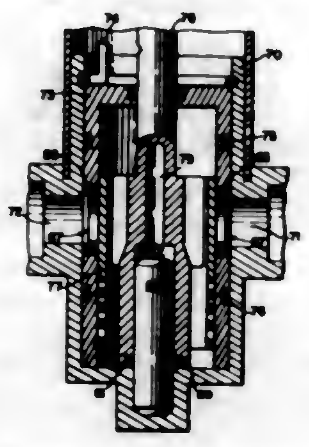
Willis G. Routson, Walnut Creek, Calif., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed Apr. 22, 1965, Ser. No. 450,150
6 Claims. (Cl. 137—625.3)



Adjustable valves are provided for achieving a controlled, variable reduction in pressure on flowing fluids without excessive shearing of the fluid. These valves comprise a housing which defines a fluid flow path in which there is a porous bed. Adjacent the bed is a flexible diaphragm actuated by the introduction and removal of a fluid from a diaphragm chamber. The invention is based in part upon the discovery that as fluid flows through the valve housing the diaphragm will conform to a downstream portion of the porous bed. The length of the bed contacted, and thus the pressure drop across the valve, depends upon the amount of control fluid present in the diaphragm chamber. Various shapes and types of the porous beds are described, each giving the valve a unique operating characteristic.

3,387,631
PUSH-PULL VALVE

John G. Pecis, Wilmington, Del., assignor to Speakman Company
Continuation-in-part of application Ser. No. 433,161, Jan. 27, 1965. This application Nov. 5, 1965, Ser. No. 506,503
6 Claims. (Cl. 137—625.17)



1. In a mixing valve assembly, including in combination:

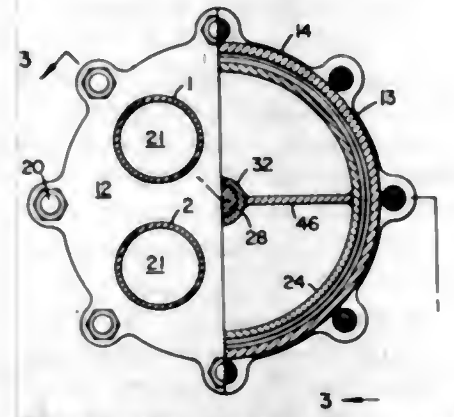
(a) a cylindrical valve housing with a main elongated axial bore having a discharge outlet near the bottom thereof and two opposed water inlets, one for cold and one for hot water, above said discharge outlet, said bore having a vertical stud permanently mounted in the bottom wall thereof,

(b) a sealing means retaining shell having an open lower end and a closed upper end, said upper end having a central opening with a sealing means therein, said shell having two opposed inlet ports to register with said water inlets in said housing, each of said water inlet ports having a sealing means therein, an inlet seal sleeve within each inlet port comprising a flattened face portion and a skirt portion raised therefrom to retain the sealing means within the inlet ports, said flattened portion contacting an inner sealing ring, a groove above said inlet ports having a sealing means on the exterior surface of said shell, a groove on the exterior surface of said shell below said inlet ports having a sealing means therein, an outlet slot below said second sealing means registering with the outlet in said housing, all of the sealing means on the exterior surface of said sealing means retaining shell contacting the inner surface of the bore of said housing, the sealing means in the ports being retained in firm contact therewith,

(c) a sealing ring within said shell, being retained in water-tight engagement therewith, said ring having a series of openings therein on the lower portion thereof, said sealing ring being mounted on a stem by means of a spider, said stem being mounted in the central opening in the upper end of said shell, said stem having an enlarged lower portion and having the same external diameter at the upper portion of said stem as said stud mounted in the bottom of said housing, said stem having a central bore therethrough and having a vent near the top thereof, said enlarged portion of said stem having an axial bore therein to receive said stud and having a sealing means mounted in the lower portion thereof to maintain said bore in watertight engagement with said stud, said sealing ring and said stem being capable of rotation and longitudinal movement within said shell, and whereby the upper portion of said ring will seal both of said inlet ports and the lower portion having said openings therein which may be brought into engagement with either or both of said ports to admit hot water or cold water or both in a constant volume.

3,387,632
METER PROVER AND DIVERTER VALVE THEREFOR

Marvin H. Grove, Piedmont, Calif., assignor to M & J Valve Company, Houston, Tex., a corporation of Delaware
Filed Apr. 8, 1966, Ser. No. 541,269
5 Claims. (Cl. 137—625.43)

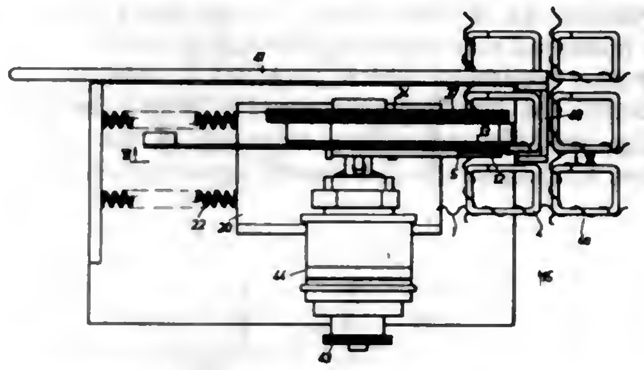


1. In a multiport valve construction, a valve body comprising parallel first and second substantially flat end walls and a substantially cylindrical part interposed between and sealed with respect to the end walls, at least four circumferentially spaced openings in the first end wall of the body for making connection with associated piping, a valve member rotatably disposed within the valve body, said valve member comprising parallel flat first and second circular end walls and a cylindrical part secured at its ends to the peripheral edges of the end walls, the diameter of the cylindrical part of the valve member being less than the internal diameter of the cylindrical part of the body, the exterior surfaces of the first and second end walls of the valve member being in spaced juxtaposition with the interior faces of the first and second end walls of the body, at least four circumferentially spaced port openings in the first wall of the valve member and adapted to register with the openings in the first end wall of the valve body, shaft means serving to rotatably mount the valve member within the valve body for rotation about the central axis of the valve member, sealing means disposed to surround each of the openings in the first end wall of the valve body, each of said sealing means serving to establish sealing relation between the valve body and the adjacent first end wall of the valve member, and barrier means fixed within the valve member and extending across the interior of the same, said barrier forming two separate flow paths, each path being in communication with two adjacent ones of the ports in the valve member.

3,387,633
METHOD OF AND DEVICE FOR MAKING SPRING CORES FOR SPRING CORE MATTRESSES

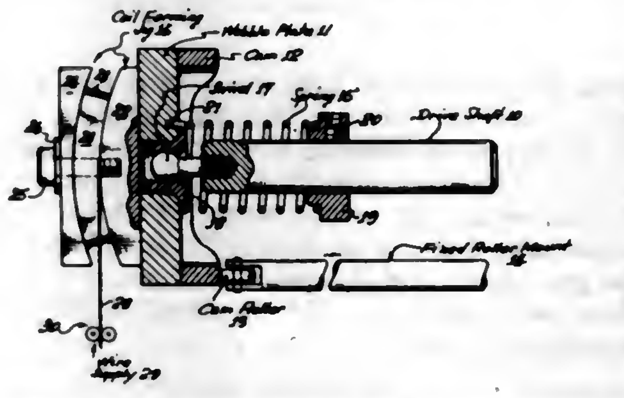
Walter Lehmann, Pfleidelsheim, Germany, assignor to Gottlob Gussmann, Suddeutsche Bettpolsterfabrik, Pfleidelsheim, Germany
Filed Nov. 24, 1965, Ser. No. 509,594
15 Claims. (Cl. 140—3)

Method and apparatus for winding the ends of fine wires interconnecting adjacent springs of a spring core about the legs of the springs at the edges of the core in which a rotary tool having a radially opening V-shaped notch is engaged with the spring leg and rotated to wrap the fine wire about the spring leg.



3,387,634
COIL-FORMING DEVICE

Hubert E. Hilsenberg, Apple Valley, Calif., assignor to General Dynamics Corporation, a corporation of Delaware
Filed Sept. 23, 1966, Ser. No. 581,573
6 Claims. (Cl. 140—92.2)

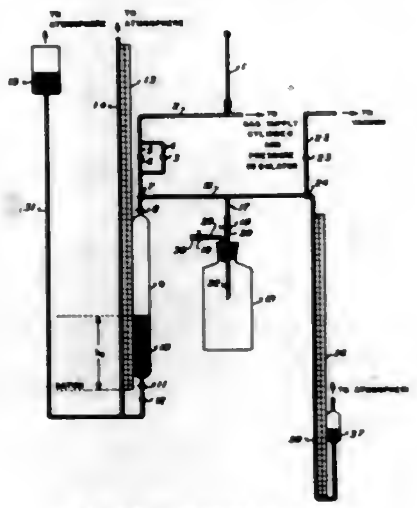


1. A device for forming articles in a born-to-shape condition from stranded material or the like comprising: drive shaft means, wobble plate means pivotally mounted on said drive shaft means, means for drivingly interconnecting said drive shaft means and said wobble plate means, cam means operatively connected with and positioned on one side of said wobble plate means, cam roller means fixedly secured with respect to said cam means, means for maintaining said cam means in continuous contact with said cam roller means, and jig means operatively mounted on said wobble plate means at the side thereof opposite said cam means, said jig means being configured so as to have substantially the same general configuration as the cam surface of said cam means, whereby rotation of said wobble plate means causes associated stranded material to be wound on said jig means so as to produce a born-to-shape end article.

3,387,635
FLUID METERING AND DISPENSING APPARATUS

Robert I. Papendick, Florence, and James F. Parr, Jr., Killen, Ala., assignors to Tennessee Valley Authority, a corporation
Filed Apr. 28, 1965, Ser. No. 451,672
1 Claim. (Cl. 141—37)

Apparatus for rapidly and accurately metering and dispensing predetermined quantities of compressed gases or pressure solutions into closed receiving systems with good precision based on a positive displacement principle in which a compressed gas, such as ammonia from a supply cylinder, displaces the retaining liquid, in this case metallic mercury, contained in one of a number of interchangeable gas burettes. The mercury is displaced into a reservoir by the incoming gas and is also simultaneously displaced into a manometer arm connected in parallel with the reservoir. As the mercury level in the gas burette approaches the desired setting, the incoming gas is subjected to increased pneumatic impedance by forcing it through a by-pass assembly which provides a sensitive means to control the flow rate and thereby attain the desired setting. Suitable valves are arranged in the glass conduit lines leading to the gas burette so as to subsequently dispense the gas sample from the burette into a closed system or reaction chamber. The gas sample is forced from the burette by the pressure exerted by the adjacent mercury column. The exact quantity of gas that is metered may be determined in one of two ways: (1) from an empirical relationship between the height of the mercury column in the gas burette and the quantity of gas as determined by chemical analysis, or (2) by direct application of the equation of state.

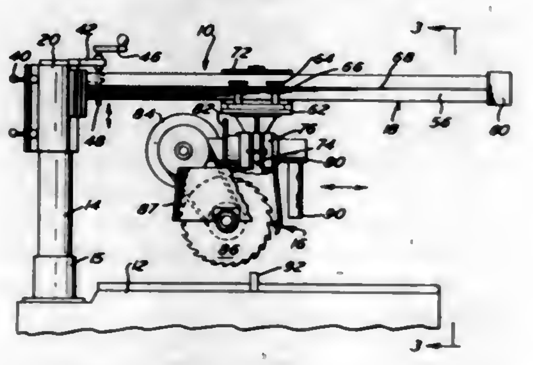


FLUID METERING AND DISPENSING APPARATUS

3,387,636

RADIAL ARM SAW SUPPORT STRUCTURE

Henry M. Pollak, 1235 Queen St., and Robert S. Pollak, 1007 N. Warren St., both of Pottstown, Pa. 19464
Filed Jan. 18, 1966, Ser. No. 521,388
3 Claims. (Cl. 143—6)

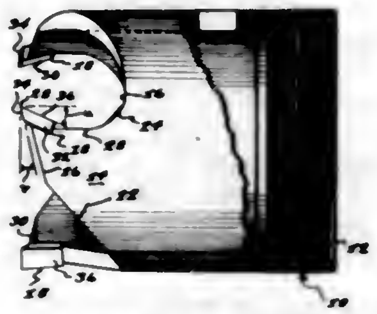


A radial arm saw is supported from a column by a clamp in the form of a substantially closed loop. The clamp is made from a ductile material and is split so as to have an opening defined between arms. The body portion of the clamp has a height substantially greater than the diameter of the column. The clamp includes a key portion which is on the opposite side from the arms. The arms are connected to the key portion by segments of uniform width which in turn are narrower than the key portion. The clamp is structurally interrelated in a manner so that it may be extruded. Any out-of-round surfaces on the tubing will not interfere with the clamping action and will be accommodated by deflection of the segments of the clamp.

3,387,637

TUBULAR SAW HEAD

Richard Ferguson and Charles V. Hinton, Charlotte, N.C., assignors, by mesne assignments, to Terleco, Inc., Charlotte, N.C., a corporation of North Carolina
Filed May 12, 1966, Ser. No. 549,514
6 Claims. (Cl. 143—85)

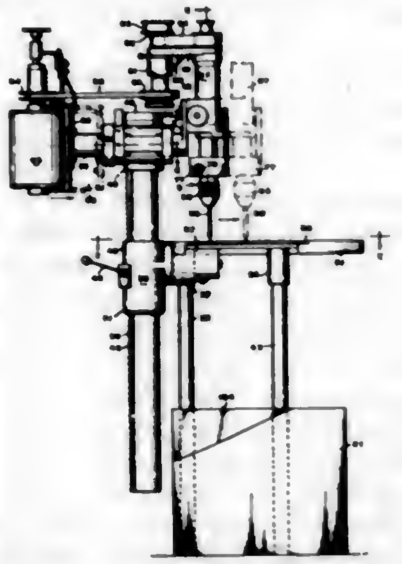


A tubular saw capable of increased operating speeds, feed rates and boring depths, in which regularly spaced teeth are formed with deep intervening gullets in an annular head, the gullets exceeding the tooth profile in area, the cutting edges being angled to reduce the spreading force on the teeth adjacent the deep gullets, and the cutting tip being tapered uniquely to form a clearance kerf while making it possible to sharpen the teeth without disturbing the taper.

3,387,638

MULTIPURPOSE SHOP TOOL

John B. West, Grasty Road, Pikesville, Md. 21208
Filed May 20, 1966, Ser. No. 551,715
10 Claims. (Cl. 144—1)



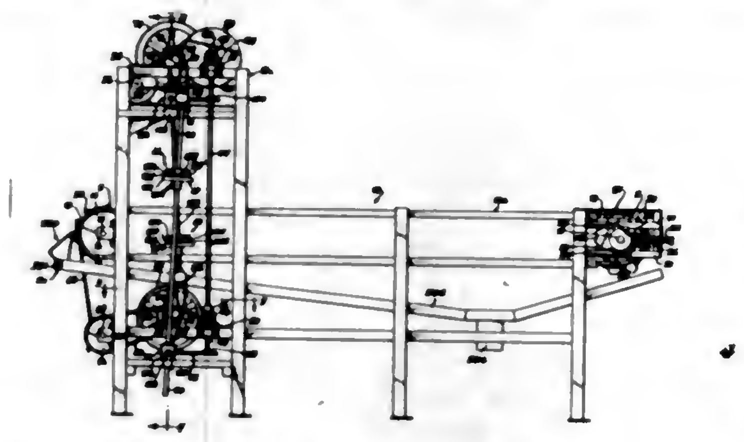
1. A multipurpose shop tool comprising a table adapted to support a piece of material to be worked on by different shop tools, an elongated member mounted for pivotal and translative adjustment relative to the table, means for holding the member in selected positions of adjustment, a second member mounted on the elongated member for pivotal and translative adjustment relative thereto, means for holding the second member in selected positions of adjustment relative to the elongated member, a tool drive assembly carried by the second member, said assembly comprising a tool head having an arbor spindle and power means for driving the spindle.

3,387,639

TOMATO CORING MACHINE

George A. Carter, 328 S. Independence St., Tipton, Ind. 46072
Filed July 21, 1965, Ser. No. 473,731
7 Claims. (Cl. 146—52)

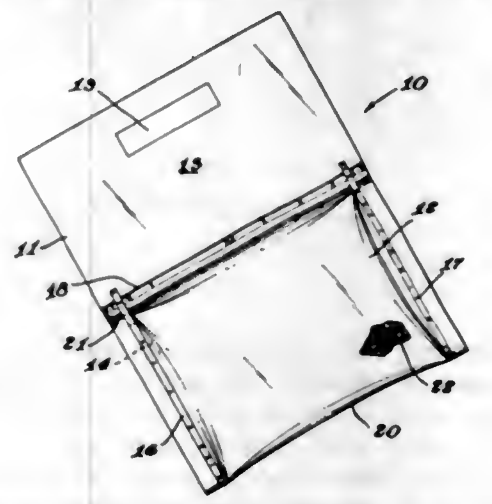
A succession of transverse rows of tomatoes are advanced with their cores vertical, past a holder for a transverse row of rotating vertical spindles carrying coring knives and spaced to core the tomatoes of each row. To move the knives, while operative, along with the advancing rows of tomatoes, the holder is actuated by a cross shaft having end crank pins on which the ends of a pair of upright rods are journalled and which carry the opposite ends of the holder. The opposite ends of this pair of rods is shown as having a sliding and swinging connection with the frame and the cross shaft and its crank pins are synchronized with the advancing rows to enter, move along with, and withdraw from the core of each tomato. The use of a cross shaft with its end crank pins insures identity in movement of opposite ends of the holder, which identity is difficult to obtain through separate trains of gearing.



3,387,640

TOBACCO POUCH

Russell L. Butler, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed Aug. 2, 1965, Ser. No. 476,484
5 Claims. (Cl. 150—7)



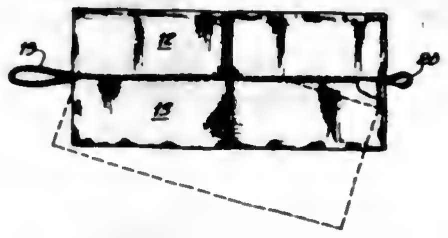
An improved tobacco pouch being generally of conventional construction but having a tear strip and prepared from a composite thermoplastic resinous film, the film having at least five layers, two outer layers of a heat sealable polyolefin such as polyethylene, and an inner layer comprising a synthetic barrier resin which is a barrier for water vapor and oxygen.

3,387,641

PAPER CURRENCY HOLDER

Betty Osborne, 5701 N. Sheridan Road, Chicago, Ill. 60626
Filed May 12, 1967, Ser. No. 637,972
1 Claim. (Cl. 150—38)

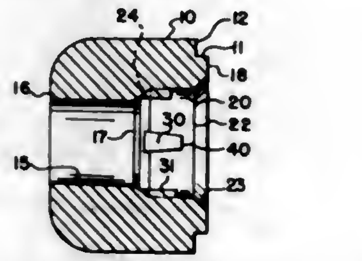
A flexible holder for paper currency made in the form of a rectangular envelope approximately the size of the currency and having a longitudinal slit on one side removed from both side edges through which the currency is inserted. The envelope with the currency is folded transversely of the slit and the two ends are interlocked by a loop on one end passing through an opening in the adjacent end, the loop then passing around a clasp affixed to the person.



3,387,642

SELF-THREADING NUT WITH THREAD-ENGAGING RIBS

Alan James Bennett, St. Leonards, England, assignor to Tinnerman Products, Inc., Cleveland, Ohio, a corporation of Ohio
Filed Dec. 6, 1966, Ser. No. 599,423
Claims priority, application Great Britain, Dec. 10, 1965, 52,522/65
13 Claims. (Cl. 151—7)

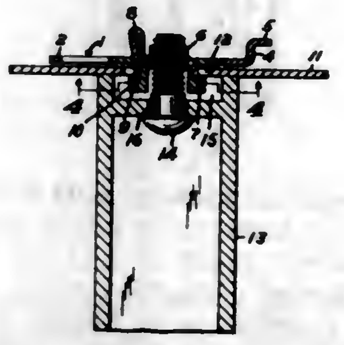


A self-threading, nut-like fastener for self-threading engagement with a threaded member. The fastener includes a body with two axially aligned bores extending through it, one of the bores being of larger diameter. Both bores communicates at a juncture between the ends of the body. A plurality of spaced, radially inwardly and axially extending thread-engaging ribs of deformable material are disposed in the enlarged bore with their innermost ends terminating adjacent the juncture.

3,387,643

NUT WITH INTEGRAL SUPPORT ENGAGING ARMS

Henry W. Patterson, Jr., Stow, Mass., assignor to United-Carr Incorporated, Boston, Mass., a corporation of Delaware
Filed Dec. 15, 1965, Ser. No. 513,922
1 Claim. (Cl. 151—41.72)

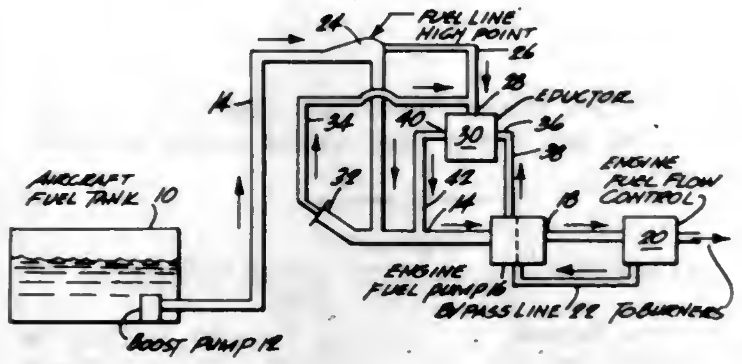


A one-piece nut having integral attaching arms for securing same to an apertured support and means for sealing the opening in said nut and the aperture in said support.

3,387,644
FUEL VAPOR AND AIR EDUCTOR SYSTEM

Albert Heinecke and Walter B. King, Los Angeles, and Henry F. Winchester, Rolling Hills Estates, Calif., assignors, by mesne assignments, to McDonnell Douglas Corporation, Santa Monica, Calif., a corporation of Maryland

Filed Sept. 15, 1966, Ser. No. 579,649
10 Claims. (Cl. 103—5)

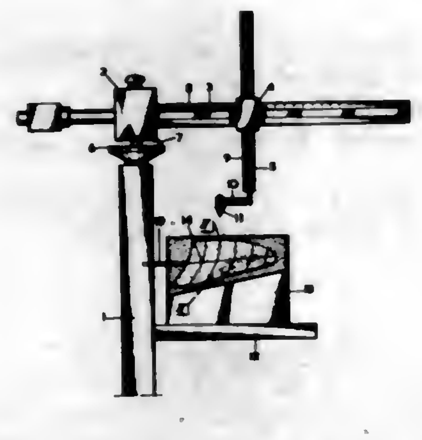


A chamber shaped to produce quiescent and non-turbulent flow therethrough is derived from a portion of a fuel line at the high point thereof to collect any fuel vapor and air evolved from fuel passing through the fuel line to a fuel pump. The chamber communicates with an eductor which is driven by circulated excess fuel obtained from the fuel pump. Any collected fuel vapor and air drawn into the eductor is mixed with the excess fuel circulated through it to form a fine emulsion which is safely returned to the fuel line at a selected point before the fuel pump.

3,387,645
SHAPING METHOD INCLUDING FIXING THE POSITION OF PREDETERMINED POINTS IN PARTICULATE MOLD MATERIAL

Josephus Antonius van Beckhoven, Nieuwkuyk, Netherlands, assignor to Lips N.V., Drunen, Netherlands, a corporation of Dutch law

Filed Aug. 26, 1965, Ser. No. 482,698
Claims priority, application Great Britain, Sept. 10, 1964, 37,119/64
7 Claims. (Cl. 164—17)

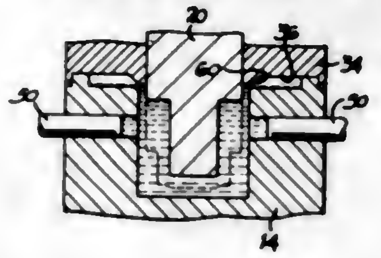


A three-dimensional foundry mold is made from sand by pressing a pin downwardly into a body of sand in a number of different places so that the bottoms of the holes that are formed define the contour to be produced. A small ball is deposited in the bottom of each hole, and then the sand is scraped away down to the balls, which thus provide easily found indicia for establishing the desired contour. The pin is adjustable along graduated coordinates so as accurately to position its lower end in the sand.

3,387,646
METHOD AND APPARATUS FOR HIGH-PRESSURE PERMANENT MOLDING

Corliss Lauth, East Detroit, Mich., assignor to Multifastener Corporation, doing business as Cast Forge Company, Livonia, Mich., a corporation of Michigan

Filed Sept. 18, 1963, Ser. No. 309,692
The portion of the term of the patent subsequent to Feb. 4, 1981, has been disclaimed
8 Claims. (Cl. 164—120)

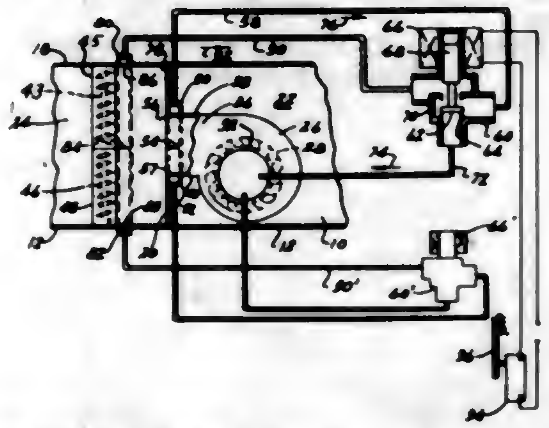


Method and apparatus for the production of castings by means of which internal voids or porosity due to solidification shrinkage is eliminated and an improved grain structure is obtained by mechanically feeding excess molten metal under pressure into a closed die cavity during solidification of molten metal in the cavity. The feeding of excess metal is directed to those regions of the casting which normally would be the last to solidify.

3,387,647
AIR TREATING MEANS INCLUDING AN AIR FLOW DIRECTING SYSTEM

Gunnar Heskestad, 34 Seymour Terrace, Piscataway, N.J. 08854, and Daniel Gordon Gallie, 6757 Cortland, Allen Park, Mich. 48101

Filed Aug. 15, 1966, Ser. No. 572,384
10 Claims. (Cl. 165—32)



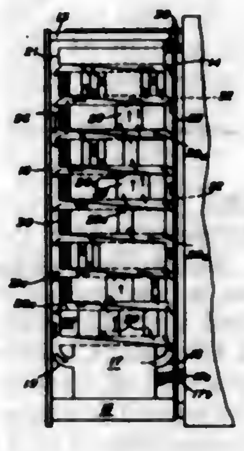
An air treating means comprising two heat exchange coils arranged in parallel flow relation (side-by-side in the air duct). Air is admitted to the coil faces through a small inlet duct, and is directed to one or the other coil by boundary layer control devices. Each control device comprises an air extraction mechanism arranged to withdraw a minor amount of air from the main stream boundary layer as it passes from the small inlet duct into the larger duct containing the heat exchange coils. By controlling the amount of air withdrawn from the respective portions of the boundary layer we expect to control or direct the main stream.

3,387,648
CABINET ENCLOSED RECIRCULATION COOLING SYSTEM CARRIED ON EXTENSIBLE CHASSIS MOUNTING ELECTRONIC MODULES

Clyde L. Ward, Jr., La Mesa, and Arthur A. Arnold, San Diego, Calif., assignors to the United States of America as represented by the Secretary of the Navy

Filed Feb. 23, 1967, Ser. No. 619,126
6 Claims. (Cl. 165—47)

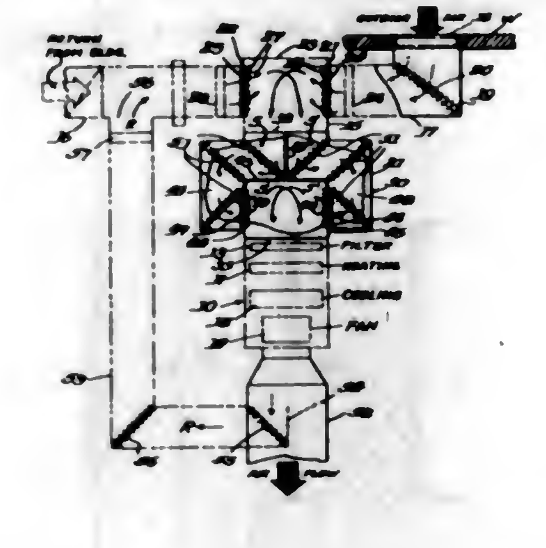
The present invention relates to a cabinet enclosed cooling system. A cabinet of heavy duty integral or a prefabricated construction encloses an extensible drawer having several transversely extending racks which support any number of electronic modules. Due to the highly sophisticated nature of the electronic circuitry contained within the electronic modules, precise temperature and humidity control within the cabinet is maintained by providing a cooling unit mounted on an extensible drawer connected to a system of ducts included in the extensible chassis and transversely extending rack sections. Thus, cool, humidity-controlled air may be directed to the electronic modules to insure the proper ambient conditions for optimum operation. The present invention provides such ambient control whether or not the drawer-chassis is within the cabinet or extended to the cabinet exterior while being inspected or repaired.



3,387,649
AIR STRATIFICATION ELIMINATOR

George E. Mullins, Champaign, and Charles I. Goodwin, Urbana, Ill., assignors to Brown, Manthei, Davis & Mullins, Inc., Champaign, Ill., a corporation of Delaware

Filed Dec. 27, 1965, Ser. No. 516,479
8 Claims. (Cl. 165—59)

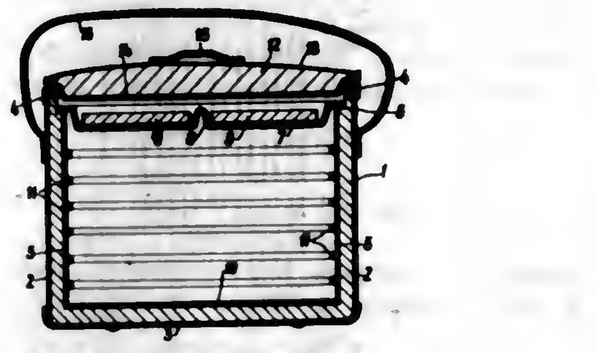


A stratification eliminator unit is provided for use in combination with a building heating system having heating coil means subject to freeze-up. The stratification eliminator is in the form of a box for insertion in a duct delivering varying proportions of warm return air and cold outside air to a central heating coil unit, which may also contain cooling coil means subject to freeze-ups. The unit discharges uniformly mixed, non-stratified air to the heating and cooling coils, thereby protecting them from stratified portions of outside air below 32° F.

3,387,650
RECEPTACLE FOR KEEPING THE CONTENTS EITHER HOT OR COLD

Horst Hoffmann, Munich, and Arnold Maushake, Augsburg, Germany, assignors to IBA-Maushake & Co., Augsburg, Germany

Filed Oct. 18, 1966, Ser. No. 587,499
Claims priority, application Germany, Oct. 20, 1965, J 29,212
3 Claims. (Cl. 165—75)

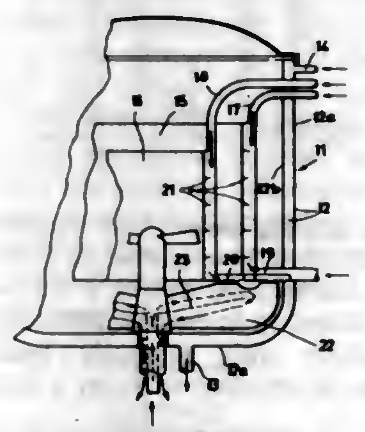


Receptacle for keeping its contents hot or cold, which receptacle is made up of sidewalls, a bottom and a cover, which sidewalls are insulating material having some sort of wear-resistant outer coating and a conductive foil on the inside thereof. The bottom is made of insulating material having a relatively heavy wear-resistant coating on the outside and may additionally have conductive material on the inside surface abutting and making good thermal contact with the conducting coating on the inside of the sidewalls. A tray is provided beneath the cover inside this receptacle, which is adapted to contain either heat imparting or heat extracting material, which tray rests on shoulders in the sidewalls and, at the shoulders, makes good thermal contact with the conductive inside linings of the sidewalls.

3,387651
HEATING AND COOLING ARRANGEMENT FOR MIXERS

Karl-August Berker, Heidenoldendorf, Germany, assignor to Gunther Papenmeier KG., Pivitsheide Vogtel Lage, Germany

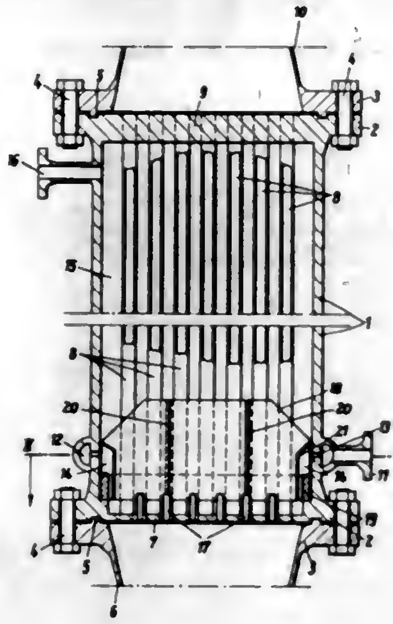
Filed Apr. 25, 1966, Ser. No. 545,085
Claims priority, application Germany, Apr. 23, 1965, P 36,607
8 Claims. (Cl. 165—109)



A mixing arrangement for plastic materials having means for heating or cooling the material to be mixed. At least one and possibly several double-walled rings are provided which are parallel to the container. At least one mixing implement is provided below the rings to provide for such circulation that there will be efficient heating or cooling of the material being mixed.

3,387,652
HEAT EXCHANGER REINFORCING MEANS

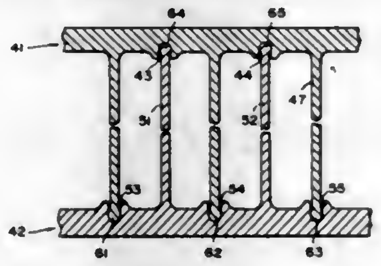
Witold Drobka, Berlin, Germany, assignor to Borsig Aktiengesellschaft, Berlin, Germany
Filed July 6, 1966, Ser. No. 563,288
5 Claims. (Cl. 165—162)



A heat exchanger with a thin bottom wall which is reinforced by two groups of plate means arranged on edge and anchored to the bottom for reinforcing the latter while being supported by the lower portion of the tubular member forming the outer mantle of the heat exchanger while one group of said plate means extends in a direction transverse to the plate means of the other group, and while the lower edge of said plate means is spaced from said bottom so as to define therewith a chamber communicating with inlet means passing through said mantle.

3,387,653
HEAT TRANSFER APPARATUS

Thomas D. Coe, Winchester, Mass., assignor to Wakefield Engineering, Inc., Wakefield, Mass., a corporation of Massachusetts
Filed Jan. 26, 1967, Ser. No. 611,948
2 Claims. (Cl. 165—165)



A heating or cooling element of circular cross section, such as a tube, locked in a groove of generally U-shaped cross section. Like sections having a number of generally parallel fins terminating in ends of generally circular cross section alternating with generally parallel U-shaped grooves may be interlocked to form a cooler.

3,387,654
METHOD FOR DETERMINING OXYGEN REQUIREMENTS FOR IN-SITU COMBUSTION

John C. Todd, Tulsa, Okla., assignor to Sinclair Research, Inc., New York, N.Y., a corporation of Delaware
No Drawing. Filed Oct. 27, 1966, Ser. No. 589,843
3 Claims. (Cl. 166—4)

1. A method for determining the amount of oxygen-containing gas required to propagate a thermal wave in a hydrocarbon bearing reservoir having an input well which includes establishing a combustion zone in the reservoir, injecting an oxygen-containing gas into said reservoir in sufficient quantity to move the combustion zone through said reservoir, injecting with said oxygen-containing gas and in constant ratio thereto a gaseous substance reactive with a material generated within the combustion zone by said combustion with the consequent formation of a precipitate, said precipitate being deposited in the formation in a volume in proportion to the air required to burn the fuel from said formation volume, and determining the amount of precipitate produced per unit volume of the reservoir.

3,387,655
OIL RECOVERY PROCESS USING SURFACTANTS FORMED IN-SITU

Billy G. Hurd, Dallas, Tex., assignor to Mobil Oil Corporation, a corporation of New York
No Drawing. Filed Dec. 22, 1966, Ser. No. 605,143
12 Claims. (Cl. 166—9)

1. In the production of oil from a subterranean oil reservoir penetrated by spaced injection and production systems defining a recovery zone of said reservoir, the method comprising:

(a) introducing an oxygen-containing gas into the recovery zone of said reservoir to form hydroperoxides of saturated aliphatic constituents of said oil,

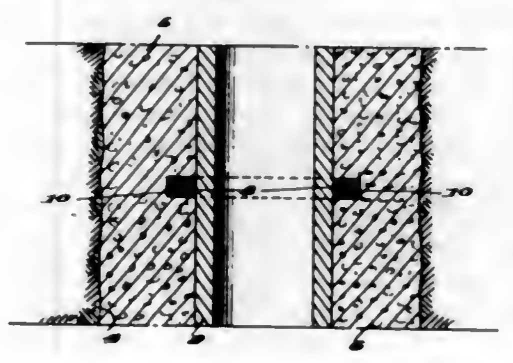
(b) thereafter introducing an aqueous solution of a bisulfite selected from the class consisting of the alkali metal bisulfites and ammonium bisulfite into said recovery zone and into contact with said hydroperoxides to convert said hydroperoxides to surface active sulfoxy acids,

(c) thereafter introducing into said recovery zone via said injection system an aqueous flooding medium to displace oil to said production system, and

(d) recovering oil from said production system.

3,387,656
WELL CASING SEALS

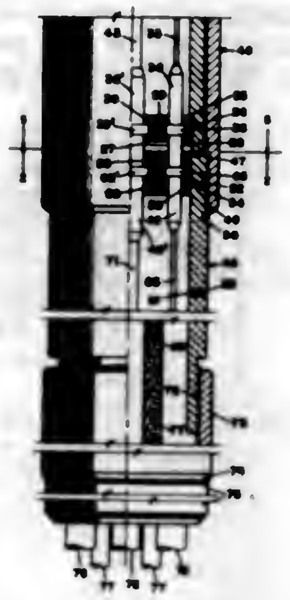
John Guest and John A. Knox, Duncan, Okla., assignors to Halliburton Company, Duncan, Okla., a corporation of Delaware
Filed Jan. 11, 1966, Ser. No. 519,905
11 Claims. (Cl. 166—25)



Method and apparatus for establishing a seal along the external surface of a well casing to prevent fluid flow axially along the external casing surface. The seal includes a ring that is formed at least partially of a heat shrinkable plastic material. The ring is positioned coaxially on the exterior of the casing and heated until the ring shrinks tightly against the exterior of the casing. When the casing is subsequently cemented in a bore hole, the seal ring prevents fluid flow along the surface of the casing.

3,387,657
DOWNHOLE IGNITOR

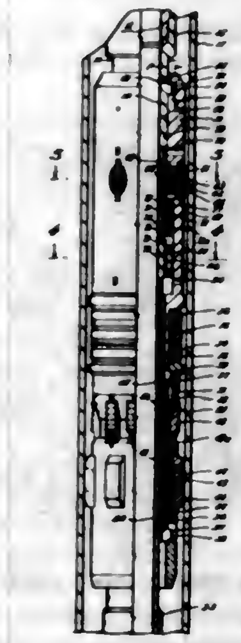
William C. Hardy, Richardson, Tex., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey
Filed July 28, 1965, Ser. No. 475,423
8 Claims. (Cl. 166—60)



For igniting subsurface formations, an elongated downhole tool, having an electrical heater secured to its lower end, is used. The heater is energized from the surface by means of an electrical cable, which is connected to the heater through a separable electrical connector located within the tool. A gas-tight housing is provided in the tool, around this electrical connector, and before the tool is lowered down the hole on a wire line (which is separate from the electrical cable), a suitable inert gas is fed into the housing, to provide an inert gas atmosphere therein.

3,387,658
WELL PACKER APPARATUS

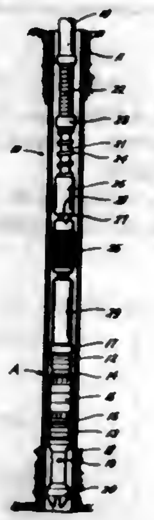
Maurice P. Lebourg, Houston, Tex., assignor to Schlumberger Technology Corporation, Houston, Tex., a corporation of Texas
Filed Aug. 3, 1966, Ser. No. 570,079
7 Claims. (Cl. 166—120)



1. Apparatus for use in a well comprising: inner and outer tubular members telescopically movable between spaced longitudinal positions, said inner member being adapted for connection to a tubular string extending to the earth's surface; hydraulically operable means for anchoring said outer member in a well conduit; a first passageway between said members through which well fluids can bypass; a second passageway in said members communicating with said hydraulically operable means; valve means between said members operable when said members are in one of said positions to prevent bypass of fluids through said first passageway; means communicating said first and second passageways whereby fluid pressure can act through said passageways and communicating means to operate said hydraulically operable means; and movable barrier means in said second passageway.

3,387,659
VALVED WELL PACKER AND SETTING TOOL THEREFOR

James H. Current, Houston, Tex., assignor to Schlumberger Well Surveying Corporation, Houston, Tex., a corporation of Texas
Filed Feb. 23, 1966, Ser. No. 529,539
13 Claims. (Cl. 166—125)

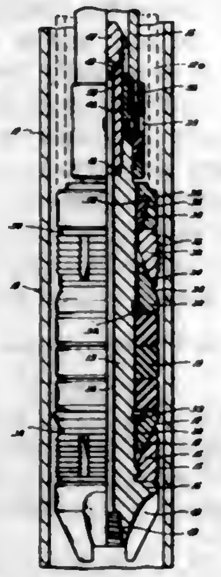


A cement retainer packer and setting tool including a body member having a flow passage and valve means for opening and closing the flow passage, anchors and packing for providing an anchored pack-off in a well conduit, a valve actuator extending through said flow passage to a location above said body member, operating means releasably coupled to said actuator and sealingly engaging said body member, and means on said operating means including a structure releasably connected to said body member for applying oppositely directed setting force to expand said anchors and packing, whereupon vertical motion of the operating means can be utilized to effect corresponding motion of said valve means to open and close said flow passage as well as eventual release of said structure from the body member.

3,387,660
CEMENT-RETAINING WELL PACKER

William O. Berryman, Houston, Tex., assignor to Schlumberger Technology Corporation, Houston, Tex., a corporation of Texas
Filed July 7, 1966, Ser. No. 563,406
12 Claims. (Cl. 166—133)

The particular embodiment described herein to illustrate one form which the present invention can take includes a body member having a flow passage and anchors and packing for providing an anchored pack-off in a well bore. A selectively operable, pressure balanced valve sleeve is slidable on an upper end portion of said body member between an upper position



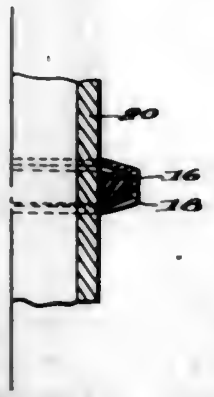
closing off said flow passage and a lower position where said flow passage is open above said valve sleeve.

3,387,661
WELL CASING SEALS

George W. Evans, and Lloyd G. Carter, Duncan, Okla., assignors to Halliburton Company, Duncan, Okla., a corporation of Delaware

Filed Jan. 11, 1966, Ser. No. 519,917

10 Claims. (Cl. 166—243)



Seals for preventing fluid communication along the exterior of well casing when the casing is cemented in a bore hole. A resilient ring is applied coaxially on the exterior of the casing and means is provided for radially compressing the ring into tight engagement with the casing surface. In one embodiment, the compression means is a rigid ring that encircles the resilient ring. The resilient ring may have an annular groove adjacent the casing surface to allow deflection of the ring when subjected to fluid pressure differentials.

3,387,662
FIRE EXTINGUISHING APPARATUS

Frank A. Molgano, Jr., 10 Bailey Ave.,
Darien, Conn. 06820

Filed Aug. 31, 1966, Ser. No. 576,367

10 Claims. (Cl. 169—26)

1. A fire extinguishing system for protecting a defined area, comprising in combination:

(A) a pressurized container of fire extinguishing agent with a puncturable seal at its securable end,

(B) a release valve assembly comprising

  (1) a puncturing pin disposed above said container seal,

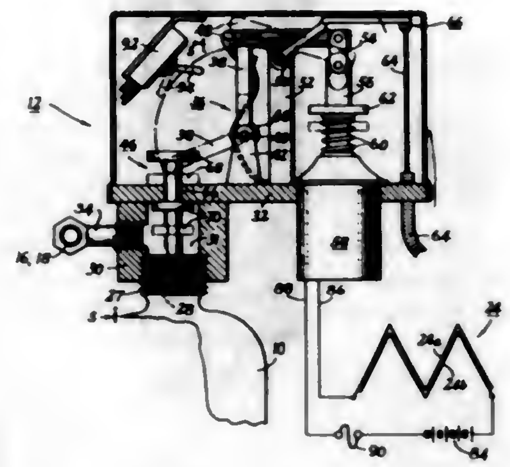
    (a) said puncturing pin having means limiting its travel through said seal,

    (b) and having means forming an opening from the lower interior of said pin to the pin exterior at a point outside said container when said pin is at its limit of travel into said container seal,

  (2) a pivotally mounted striker

    (a) having spring means urging said striker toward the top of said puncturing pin,

  (3) a latch for holding said striker in a raised position,



  (4) a latch release solenoid

    (a) having a link connected to said latch for releasing said latch upon energization,

(C) means forming a plenum chamber around the lower portion of said puncture pin and securable to said container adjacent said container seal,

(D) at least one fire extinguishing nozzle in the fire protected area and connected in fluid communication with said planum chamber, and

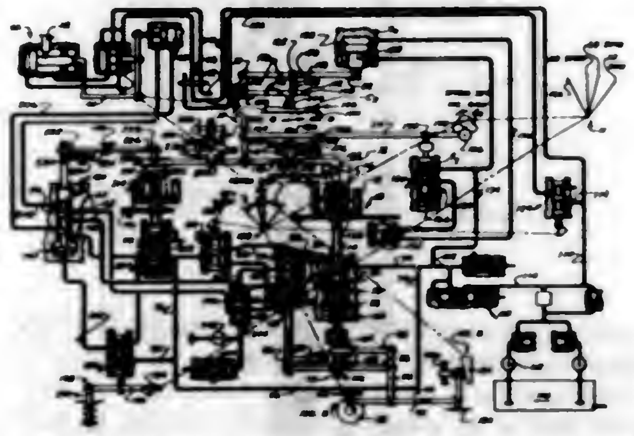
(E) a fire detector in the fire protected area connected between said source of electrical power and said latch release solenoid for energizing said solenoid for release of said striker when a fire occurs in the protected area.

3,387,663
CONTROL MECHANISM

Philip E. Barnes, North Granby, and Fred D. Laun, Granby, Conn., assignors to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

Filed Sept. 14, 1966, Ser. No. 579,366

26 Claims. (Cl. 170—160.2)



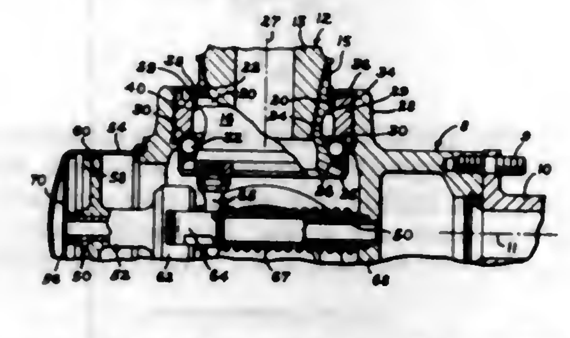
1. In a control for a controllable pitch propeller having blades and a blade pitch changing motor, control means including a speed responsive governor having an adjustable speed setting and providing a motor controlling signal, means supplying speed setting input signal to said control means including a feed back from the position of said propeller blades, said control means including means transforming said input signal into a governor speed setting output signal including means temporarily resetting the governor speed setting to reduce a difference between the speed of the controlled propeller and the governor speed setting, means incorporating a time lag in said transforming means, means adjusting the amount of said lag and means, independent of said lag adjusting means, adjusting the gain of the said transforming means.

3,387,664
VARIABLE PITCH PROPELLER

Dale K. Cummings, Middletown, Ohio, assignor to The Cessna Aircraft Company, Wichita, Kans., a corporation of Kansas

Filed Jan. 10, 1966, Ser. No. 519,657

4 Claims. (Cl. 170—160.23)



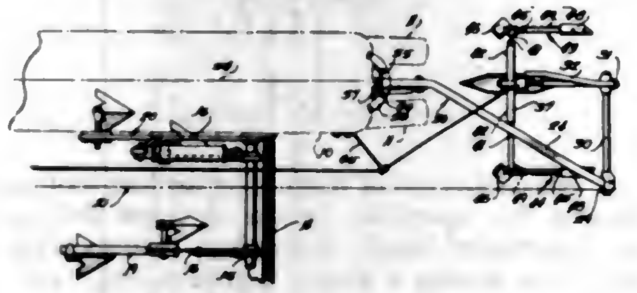
Each blade of a variable pitch aircraft propeller is supported by a ferrule having an external cylindrical surface which is closely surrounded by an internal cylindrical surface formed on a retaining nut. A groove is formed on the internal cylindrical surface and has a tapered radially outer wall surface, and a resilient O-ring is retained within the groove slightly stretched over the external cylindrical surface so that centrifugal forces acting on each O-ring produce an effective seal for retaining lubricating fluid with minimum frictional resistance to rotation of the blade.

3,387,665
AUTOMATIC STEERING APPARATUS FOR IMPLEMENTS

Raymond C. Fischer, Hinsdale, Franklin L. Randolph, Clarendon Hills, and Raymond F. Roberson, Plainfield, Ill., assignors to International Harvester Company, a corporation of Delaware

Filed Jan. 22, 1965, Ser. No. 427,278

10 Claims. (Cl. 172—6)



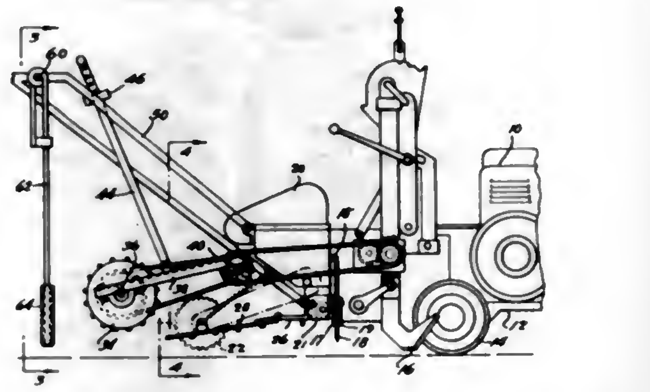
A tractor carrying an earthworking implement and having steerable front wheels provided with sensing means sensitive to veering of the steerable wheels from a selected guide line such as a growing crop. The sensing means is in the form of a photoelectric cell energized by a light beam when the latter intersects a crop row as a result of the steerable wheels turning to one side or the other. Actuation of the cell causes the wheels to return toward a centered position and an auxiliary switch on the steering wheel spindle is actuated by the rotation of the spindle to prevent oversteering.

3,387,666
FREEING, SEVERING AND ROLLING UP SOD

Glen R. Hadfield, 1598 W. Auburn Road,
Rochester, Mich. 48063

Filed Jan. 17, 1967, Ser. No. 609,838

4 Claims. (Cl. 172—20)



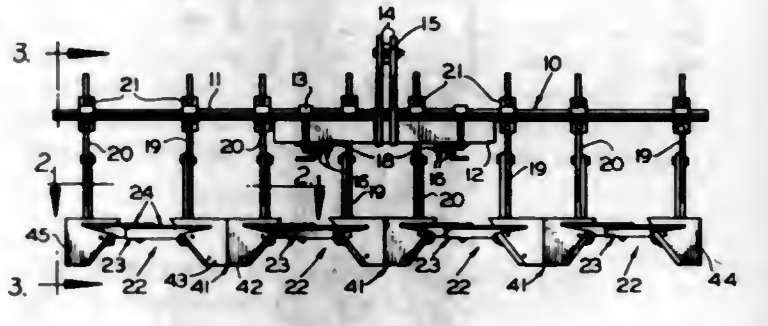
A combination sod cutter and sod roll former in which the cutter operates continuously to sever a strip of sod of indefinite extent; a transverse knife operates at predetermined intervals to cut the sod strip into predetermined lengths, said knife also acting to initiate rolling up the sod length and means to complete the rolling up of consecutive lengths.

3,387,667
AGRICULTURAL BED-SHAPING IMPLEMENT

Russell E. Rice, Stockton, Calif., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey

Filed Dec. 20, 1965, Ser. No. 515,065

2 Claims. (Cl. 172—701)



An agricultural implement to form raised beds having a flat top and outwardly and downwardly sloping sides terminating in furrows between adjacent beds, wherein the top of the implement or shaper comprises relative adjustable plate members for regulating the width of bed, and the sides are vertically adjustable relative to the top to regulate the height of the bed, the sides being shaped with the forward edge inclined forwardly, downwardly and outwardly.

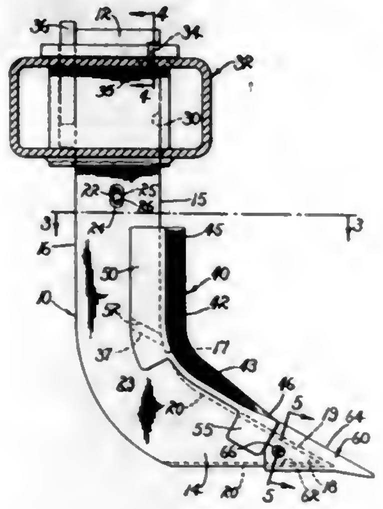
3,387,668
EARTH-WORKING TOOL

Charles T. Mathers, Los Angeles, Calif., assignor to Orendorff Manufacturing Company, a corporation of California

Filed Jan. 7, 1966, Ser. No. 519,311

4 Claims. (Cl. 172—719)

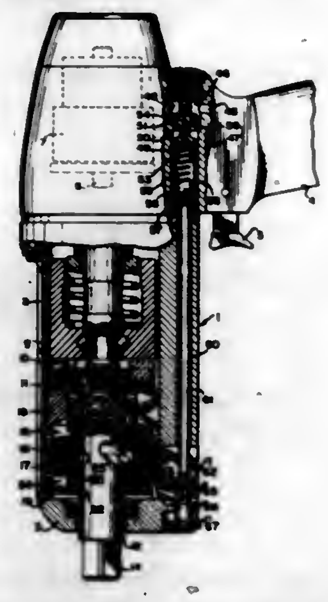
An earth-working tool for rippers and the like having an elongated shank providing an earth penetrating end obtusely angularly forwardly extended therefrom including a tooth of a predetermined length mounted on said earth penetrating end and an elongated guard mounted on the shank and having spaced flanges defining a channel to receive the shank in complementarily fitted relation, said shank and said flanges of the guard including cooperative formations in meshing relation with the tooth abutting the guard to constrain the same upon the shank.



3,387,669
IMPACT WRENCH TORQUE-MEASURING DEVICE

Walter R. Wise, Jr., Millington, Morton P. Nashman, Somerset, Lloyd P. Walker, Jr., Belle Mead, and Roger T. Bergquist, Califon, N.J., assignors to Ingersoll-Rand Company, New York, N.Y., a corporation of New Jersey

Filed Jan. 20, 1966, Ser. No. 521,969
16 Claims. (Cl. 173—12)

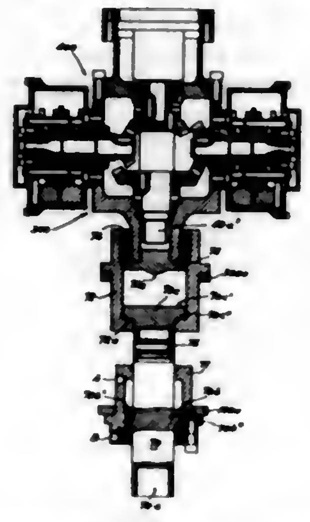


An impact tool including a rigid anvil carrying a rotatively mounted ring and a spring restricting the ring from moving in the normal direction of rotation relative to the anvil in order to measure deceleration forces acting on the anvil. The ring is mounted on the anvil by a cam means which causes it to move axially as it rotates relative to the anvil and the tool is provided with a mechanism to sense the axial movement of the anvil and, in response thereto, to shut off the tool or to create a signal for the operator.

3,387,670
APPARATUS FOR DRILLING AND CONSTRUCTION

Louis D. Menard, 35 Rue de l'Arbalete, Paris, France
Filed Nov. 12, 1965, Ser. No. 508,001
Claims priority, application France, Nov. 12, 1964, 994,616
17 Claims. (Cl. 173—49)

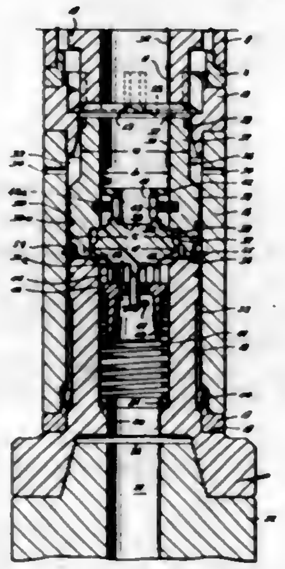
This invention relates to an apparatus for driving in, extracting and rotating a workpiece beneath a surface which comprises in cooperation: a supporting member; means to mount a workpiece on said supporting member; a mobile unit comprising a motor, and adjustable means for oscillating said mobile unit including a plurality of secondary shafts carrying eccentric wheels driven in rotation by said motor, movable means to mount said mobile unit on said supporting member; abutment means for contacting said mobile unit as said unit oscillates; a main shaft driven from said motor; and means connecting said main shaft to the workpiece for rotating the workpiece.



3,387,671
PERCUSSION TOOL

Samuel L. Collier, Houston, Tex., assignor to Mission Manufacturing Company, Houston, Tex., a corporation of Texas

Filed Oct. 15, 1965, Ser. No. 496,373
25 Claims. (Cl. 173—73)



A downhole type of percussion drilling tool particularly adapted for operation by the pumped drilling mud or other pressured liquid, including a reciprocating differential piston having a single, double-seating valve between the downstream face of the piston and the abutting anvil face.

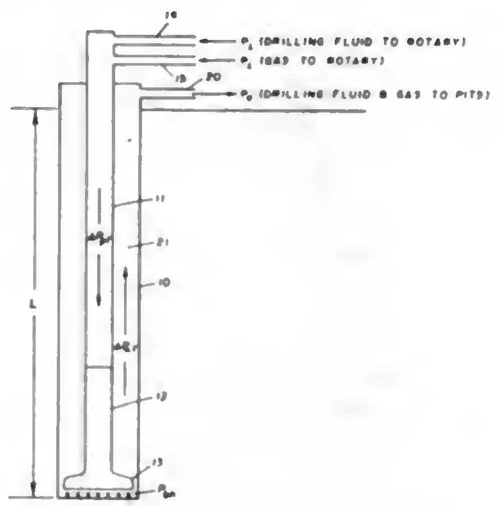
3,387,672
CAVITATIONAL METHOD FOR DRILLING WELLS

Evin L. Cook, Dallas, Tex., assignor to Mobil Oil Corporation, a corporation of New York
Filed June 26, 1964, Ser. No. 378,137
8 Claims. (Cl. 175—69)

1. In a method of drilling a borehole wherein a drilling fluid is circulated to the bottom of said borehole through a drill string and returned to the surface through the annular space around the drill string and a drilling tool supported at the lower end of the drill string is actuated to induce a state of cavitation in said drilling fluid in the vicinity of the bottom of said borehole, the improvement which comprises the steps of:

(a) introducing into said drilling fluid a gas in sufficient quantity to substantially saturate said drilling fluid at bottomhole temperature and at a pressure equal to the pressure within said drilling fluid at the bottom of said borehole reduced by the acoustical pressure developed by said drilling tool; and

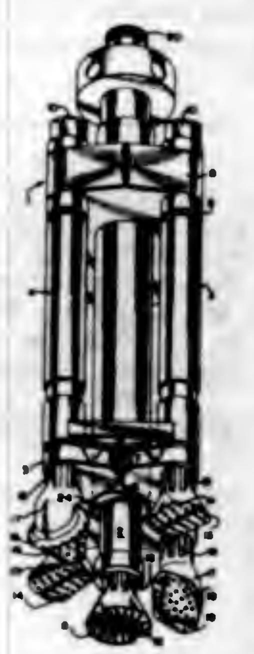
(b) actuating said drilling tool to alternately reduce the pressure within said drilling fluid at the bottom of said borehole to a value below the saturation pressure for the drilling fluid and gas mixture at the bottom of said borehole whereby said gas is caused to come out of solution to effect a condition of cavitation.


16
P_i (DRILLING FLUID TO ROTARY)
P_i (GAS TO ROTARY)
19
20
P_o (DRILLING FLUID & GAS TO PITS)
11
21
10
L
12
13

3,387,673
ROTARY PERCUSSION GANG DRILL

Robert L. Thompson, Easton, Pa., assignor to Ingersoll-Rand Company, New York, N.Y., a corporation of New Jersey

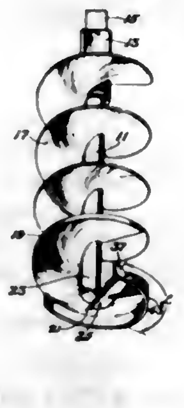
Filed Mar. 15, 1966, Ser. No. 534,306
8 Claims. (Cl. 175—96)



A gang drill for drilling large holes which includes a plurality of down-the-hole drills mounted on a body. A central down-the-hole drill having a percussive button bit mounted thereon drills a pilot hole. The remainder of the drills are provided with either a roller bit or a percussive bit. Each bit is hammered independently by its associated down-the-hole drill. The roller bits carry most of the weight of apparatus while the percussive button bits do most of the drilling.

3,387,674
SINGLE FLIGHT AUGERS

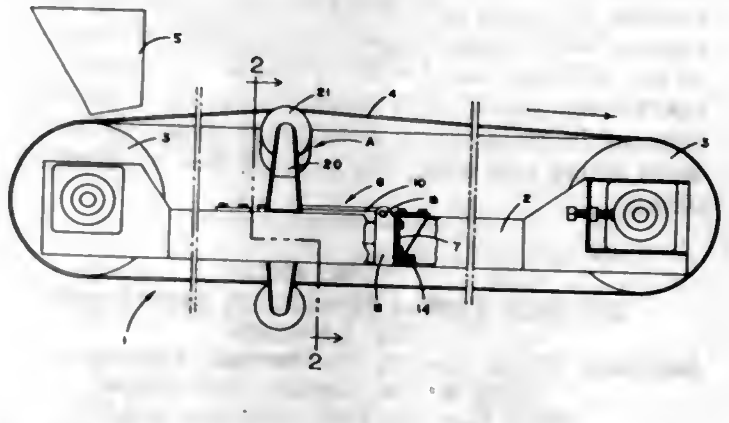
John V. Watson, 3904 Claridge Court, Fort Worth, Tex. 76109
Filed Nov. 2, 1966, Ser. No. 591,608
4 Claims. (Cl. 175—394)



1. An auger type cutting apparatus comprising: a central shaft; a single edge cutter extending substantially radially from an inner region of the normally lower end of said shaft; a single flight spiral conveyor secured to said shaft to extend from said cutter toward the normally upper end of said shaft; a skirt having the form of a truncated cylinder segment depending from said single flight spiral conveyor along its outermost edge and terminating in a lower edge having a substantially horizontal region spaced a selected distance above said cutter to define the maximum advance angle of the apparatus and an oblique region which extends upward along the periphery of said spiral conveyor; and a substantially vertical ear extending upward from the outermost edge of said cutter to clean the wall of the bore hole as formed.

3,387,675
AUTOMATIC WEIGHING MACHINE

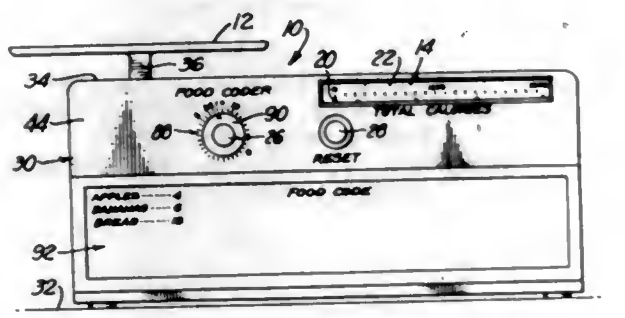
John L. Macfarlane, 1105 W. Roseburg Ave., Modesto, Calif. 95350
Filed Nov. 17, 1966, Ser. No. 595,105
9 Claims. (Cl. 177—16)



A weighing machine including a load-receiving platform, a torque rod immovably mounted at its ends and rigidly connected to the platform, the rod being torsioned by a load on and the resulting movement of the platform, and a load-registering unit actuated by such movement of the platform.

3,387,676
CALORIE COMPUTING WEIGHER

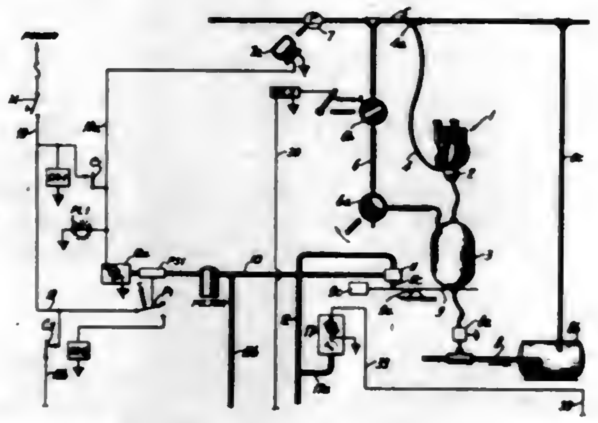
Irwin C. Porter, Quinter, Kans. 67752
Filed Jan. 6, 1967, Ser. No. 607,782
4 Claims. (Cl. 177—17)



Apparatus for computing the number of calories in food items having presettable means enabling the apparatus to compute the number of calories in different foods and accumulative indicator means for indicating the total number of calories in a series of food items.

3,387,677
AUTOMATED MILKER

Douglas J. Norton, Red Hook, N.Y., assignor to The De Laval Seperator Company, Poughkeepsie, N.Y., a corporation of New Jersey
Filed Dec. 21, 1966, Ser. No. 603,553
20 Claims. (Cl. 177—68)

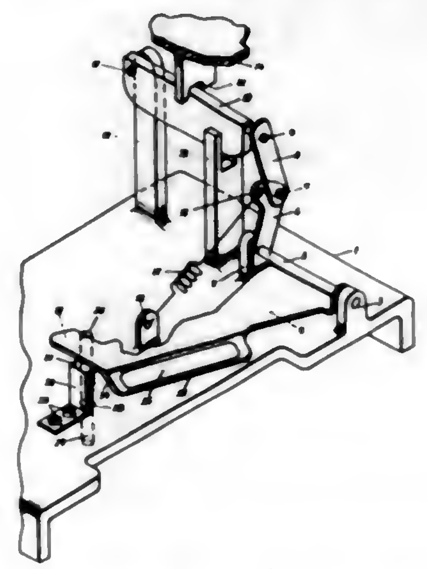


The milk receiver of an automatic milking unit is supported on a balance beam which tilts forward as the receiver fills with milk from the teat cups. An indicating element such as a switch is to be actuated upon completion of the milking; and for this purpose the balance beam is operatively connected to means for actuating the indicating element in response to substantial cessation of the forward tilting and while the beam is free to continue such tilting.

3,387,678
DEVICE FOR ARRESTING MOVEMENT OF LEVERS

Johannes Wirth, Zurich, Switzerland, assignor to Wirth, Gallo & Co., Zurich, Switzerland
Filed Dec. 20, 1966, Ser. No. 602,753
Claims priority, application Switzerland, Jan. 20, 1966, 726/66
1 Claim. (Cl. 177—124)

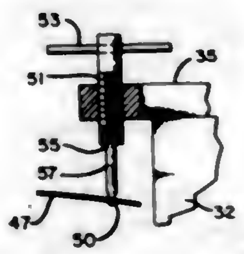
A device for arresting movable parts of an apparatus, such as a weighing machine, when the apparatus is lifted off its support for transportation comprising means to sense contact with the support and lever means responsive to the sensing means to automatically arrest, through toggle means, the movable parts when contact is broken.



The lever is so arranged that it must be manually reset to release the movable parts.

3,387,679
SCALE PRELOADING MECHANISM

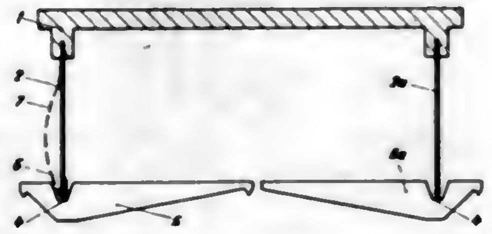
Joe D. Giulie, Sunnyvale, and Leslie N. Wilder, San Jose, Calif., assignors to Icore Industries, a corporation of California
Filed Dec. 2, 1966, Ser. No. 598,683
4 Claims. (Cl. 177—164)



A high speed scale mechanism embodying a preloading mechanism said preloading mechanism including a leaf spring connected by means of a connecting member through an adjusting member mounted on the frame of the scale wherein a connecting member is free to pivot at both ends thereof.

3,387,680
OVERLOAD PROTECTING DEVICE FOR MEASURING INSTRUMENTS, PARTICULARLY WEIGHING MACHINES

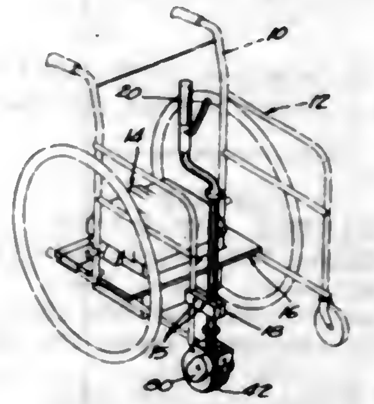
Johannes Wirth, Zurich, Switzerland, assignor to Wirth, Gallo & Co., Zurich, Switzerland
Filed Dec. 21, 1966, Ser. No. 603,473
Claims priority, application Switzerland, Jan. 20, 1966, 727/66
2 Claims. (Cl. 177—189)



A weighing machine comprising a load platform, load compensating and indicating means, and load transmitting elements operatively coupled from the load platform to said last-mentioned means, the improvement comprising at least one of the load transmitting elements being a buckling spring.

3,387,681
POWER OPERATED WHEEL CHAIR

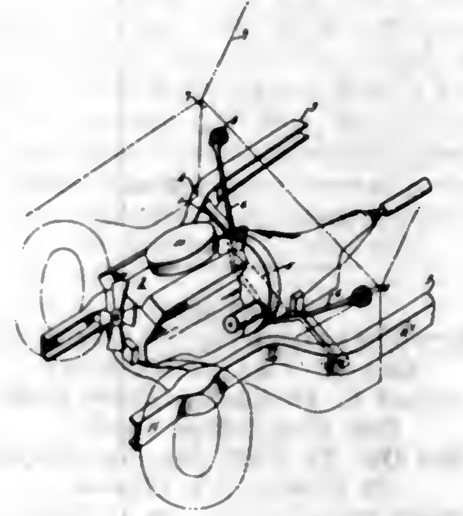
Rodney R. Rabjohn, 9850 Stanwin Ave., Pacoima, Calif. 91331
Filed Feb. 14, 1966, Ser. No. 527,029
13 Claims. (Cl. 180—13)



The invention provides a compact, steerable motor drive and control assembly which can be quickly mounted to conventional wheel chairs including the foldable type to convert them from manual to powered operation. A battery driven motor delivers power to a traction wheel which rotates about the motor and can be steered in any direction by a tiller type control assembly having an operable handle for speed control purposes. The frame may be used for the grounded return path to the battery to provide fail safe operation. An unobstructed passageway for seating, etc. is assured by the rotatable feature of the control assembly.

3,387,682
AUTOMOBILE ENGINE SUSPENSION

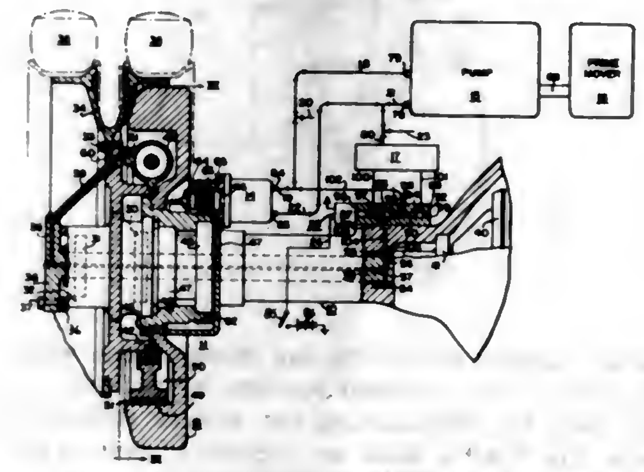
Frank T. Jaskowiak, Milwaukee, Wis., assignor to A. O. Smith Corporation, Milwaukee, Wis., a corporation of New York
Filed Oct. 24, 1965, Ser. No. 504,653
2 Claims. (Cl. 180—64)



An automobile suspension which includes a pair of side frame members extending longitudinally of a vehicle body. The engine is supported at the forward end by a substantial cross frame. The rear end of the engine is supported by a relatively light cross bar which includes a metal saddle section which dips beneatth the engine and which is interconnected at its ends to the respective longitudinal frame members. A pair of strut rods are secured to the light cross bar immediately adjacent each side of the engine. Each strut rod extends diagonally upwardly and outwardly from the cross bar and has its outer end secured to the fire wall of the vehicle body through a rubber isolator member.

3,387,683
ENERGY STORING MECHANISM FOR POWER DRIVE

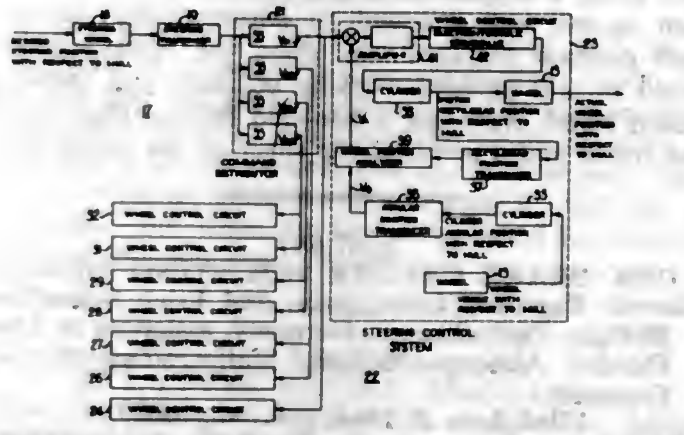
Tadeusz Budzich, 80 Murwood Drive, Moreland Hills, Ohio
Filed Oct. 21, 1965, Ser. No. 500,048
23 Claims. (Cl. 180—66)



An energy storing mechanism for a power driven ground vehicle wherein a fluid pressure energy translating system extracts energy from the prime mover and stores it in a flywheel. An auxiliary independent intermittent drive system is provided between the flywheels and the ground engaging wheels which is disposed to selectively drivingly engage the flywheel with the ground engaging wheel to intermittently supply additional torque to the ground engaging wheels during the peak demands of a duty cycle. The independent driving mechanism includes frictional shoes, carried by the ground engaging wheels disposed to frictionally engage the flywheel to extract the energy therefrom.

3,387,684
ELECTRONIC STEERING CIRCUIT FOR LARGE VEHICLES

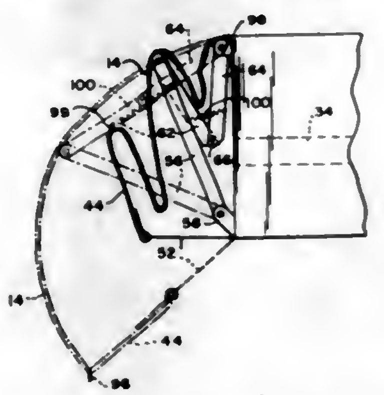
William H. Belke, Peoria, and William E. Streight, East Peoria, Ill., assignors to Caterpillar Tractor Co., Peoria, Ill., a corporation of California
Filed Mar. 13, 1967, Ser. No. 622,654
6 Claims. (Cl. 180—79.2)



Apparatus providing accurate tracking in a large vehicle having multiple wheel assemblies independently suspended from the vehicle hull. Steering means operable to select a direction of vehicle travel and generate electrical signals corresponding to the selected direction of travel. Control means responsive to steering means signals to properly position each wheel for tracking.

3,387,685
EXPANDABLE AIR CUSHION VEHICLE

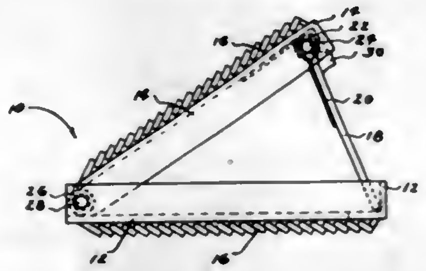
John Norman Fresh, Montgomery County, Md., and Harvey R. Chaplin, Jr., Arlington County, Va., assignors to the United States of America as represented by the Secretary of the Navy
Filed Mar. 31, 1966, Ser. No. 540,155
6 Claims. (Cl. 180—119)



An air cushion vehicle having flexible sides which are maintained in an expanded position by the same source of air used for maintaining the vehicle supporting air cushion. The flexible sides are capable of being expanded for supporting the vehicle on a cushion of air and capable of being folded to reduce the vehicle's overall size.

3,387,686
WHEEL CHOCK

Frank H. Little, San Joaquin County, Calif. (1646 W. Sonoma, Stockton, Calif. 95204)
Filed Dec. 12, 1966, Ser. No. 601,227
5 Claims. (Cl. 188—32)

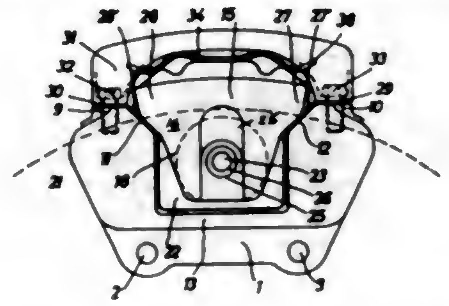


A collapsible wheel chock comprised of a base frame and an upper frame hinged together at one end for movement of the upper frame from a position nested in the base frame to an upwardly inclined working position; there being a support plate disposed between the frames when nested and arranged to automatically assume a stand position therebetween when the upper frame is moved to said inclined working position, and raised expanded metal providing a non-skid bottom sheet on the base frame and a non-skid top sheet on the upper frame.

3,387,687
DISC BRAKE CALIPER MOUNTING MEANS

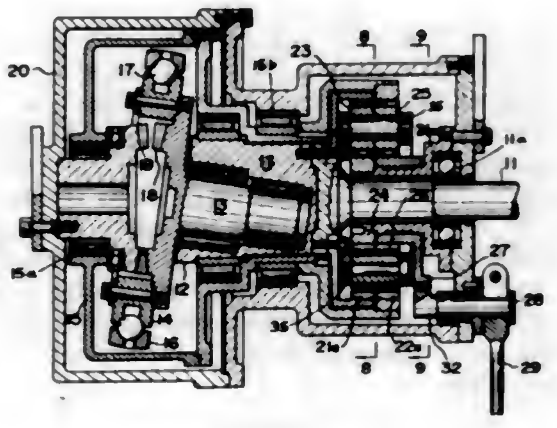
Giorgio Eggstein, Turin, Italy, and Erich Schaeftner, Stuttgart-Zuffenhausen, Germany, assignors to Ernst Heinkel Aktiengesellschaft, Stuttgart-Zuffenhausen, Germany
Filed June 3, 1966, Ser. No. 555,939
Claims priority, application Germany, June 4, 1965, H 56,227
9 Claims. (Cl. 188—73)

A U-shaped carrier has a divided yoke, and arms guiding the supporting means of a pair of brake members located on opposite sides of a brake disc which projects through the gap of the divided yoke into the space between the carrier arms and between the brake members.



3,387,688
BRAKING APPARATUS

Haruo Yoshihara, 948 Totsuka-cho 3-chome, Shinjuku-ku, Tokyo, Japan
Filed Dec. 16, 1966, Ser. No. 602,325
Claims priority, application Japan, Dec. 25, 1965, 40/79,671
7 Claims. (Cl. 188—134)

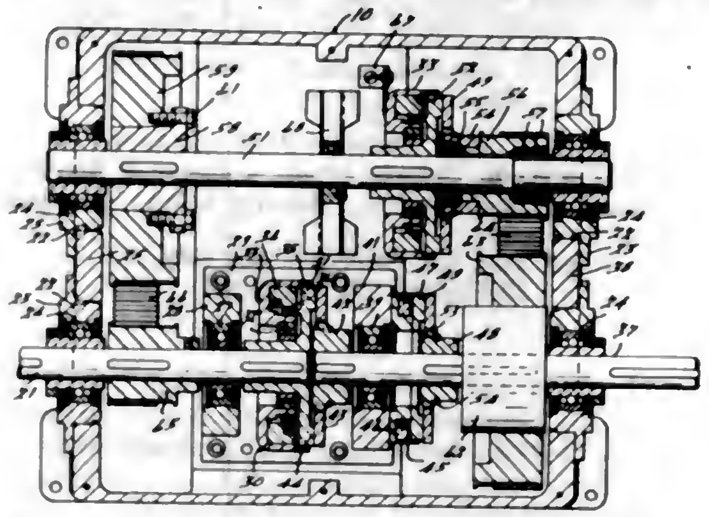


1. A rotating member and means for applying a reverse torque thereto comprising a shaft journaled in said rotating member on an axis intersecting the axis of said rotating member, means restraining said shaft against rotation while permitting conical movement thereof, a ring member coaxial with said shaft and rotatable thereon, said ring member being normally free to wobble with said shaft upon rotation of said rotating member, gear means acting between said rotating member and said ring member normally rotating the latter synchronously with said rotating member, and means for selectively applying a torque force to said gear means tending to vary the synchronous rotation of said ring member and thus vary the synchronous wobbling thereof with said shaft and thereby apply a reverse torque to said rotating member by way of said obliquely journaled shaft.

3,387,689
ELECTROMAGNETIC CLUTCH AND BRAKE TRANSMISSIONS

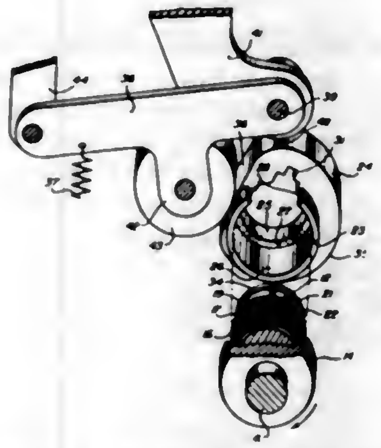
Herbert C. Ovshinsky, 15200 Leslie, Oak Park, Mich. 48237
Filed Oct. 21, 1965, Ser. No. 499,459
10 Claims. (Cl. 192—4)

The invention embodies the use of magnetic clutches for selectively activating drive means between the shafts in a manner to produce one or a plurality of speeds to a driven shaft and for stopping and reversing the driven shaft with or without applying a braking force thereto. The clutches and brakes are electrically operated to simplify the construction and the drive means between the shafts has one element fixed in driving relation to one thereof. This provides simplicity of construction, rapid reversal of rotation of the drive shaft and rapid changes in speed or direction of rotation to reduce the machining time.



3,387,690
POSITIVE ACTION SPRING CLUTCH

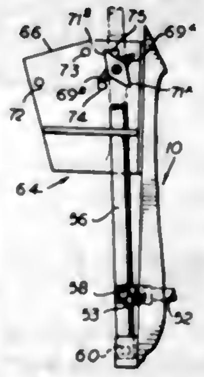
Lloyd E. Hare, West Hartford, Conn., assignor to Litton Business Systems, Inc., a corporation of New York
Filed Sept. 29, 1966, Ser. No. 582,976
3 Claims. (Cl. 192—26)



A positive action wrap spring clutch having a primary spring operative to clutch a driving shaft to an output cam and a secondary spring acting as a governor to prevent the cam from over-running the driving shaft.

3,387,691
CLUTCH CONTROL MECHANISM FOR ALTERNATE RELEASE AND ENGAGEMENT

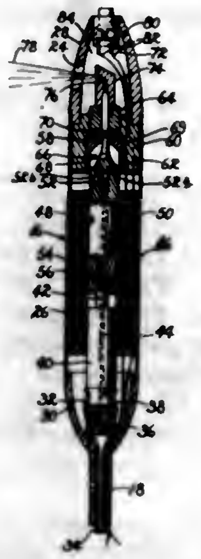
Peter Sammarco, Bellwood, and Arnold Zimmerman, Downers Grove, Ill., assignors to International Harvester Company, Chicago, Ill., a corporation of Delaware
Filed Oct. 27, 1966, Ser. No. 590,034
11 Claims. (Cl. 192—92)



A clutch operator mounted on a towed implement consisting of a pivoted lever on which is rotatably fixed a star wheel; wherein, the star wheel, interacting with stop means, causes alternate engagement and release of a jaw clutch upon successive movement of the lever in the same direction.

3,387,692
CONTROL ASSEMBLY FOR A LIQUID DISPENSER

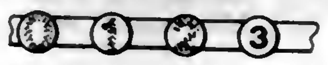
Richard N. Levake, Phoenix, Ariz., assignor to Levake Industries, a corporation of Arizona
Filed Sept. 6, 1966, Ser. No. 577,343
5 Claims. (Cl. 194—6)



A liquid dispensing device providing a dispensing nozzle connected to a source of fluid and including an electrical control circuit connected to the nozzle having an aggregate time measuring device actuated by a coin and adapted to release the coin upon the expiration of a predetermined aggregate time, and a manually controlled switch electrically connected in series arrangement with the aggregate time measuring device to permit actuation of the nozzle in selected increments of operation until said increments equal the predetermined aggregate time afforded by the measuring device.

3,387,693
KEYBOARD WITH KEYS OF TRANSPARENT MATERIAL

Johannes Wirth, Zurich, Switzerland, assignor to Wirth, Gallo & Co., Zurich, Switzerland
Filed Dec. 20, 1966, Ser. No. 603,308
Claims priority, application Switzerland, Jan. 31, 1966, 1,407/66
7 Claims. (Cl. 197—98)

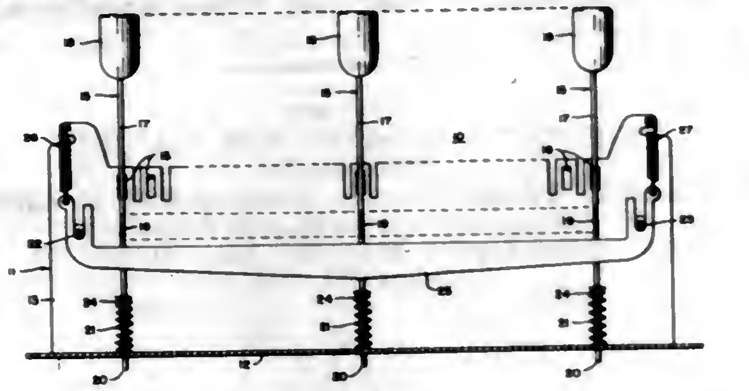


A key formed of transparent material and use together with a keyboard to form an optical system. The keys are disposed above a mounting plate in spaced relation therefrom at a distance substantially equal to the focal length of the optical system. In a normal condition, a reference character image seen through the key is indistinct but when the key is depressed the reference character image is clear and sharp.

3,387,694
KEY LEVER RETURN MECHANISM

Arthur A. Hagstrom, Roselle, Ill., assignor to Teletype Corporation, Skokie, Ill., a corporation of Delaware
Filed Dec. 21, 1966, Ser. No. 603,638
4 Claims. (Cl. 197—98)

A key lever return mechanism including a bar extending the width of a keyboard, a pair of pivots positioned at opposite ends of the bar and a pair of springs attached to opposite ends of the bar for yieldably urging the bar into engagement with the pivots.

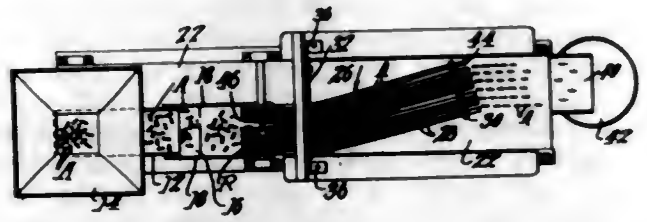


3,387,695
INSPECTION OF MOVING DISCRETE PARTICLES

Ralph Hendrickson, Gardner, Mass., assignor to The Lakso Company Incorporated, Fitchburg, Mass., a corporation of Massachusetts

Filed Jan. 10, 1967, Ser. No. 608,452

1 Claim. (Cl. 198—33)



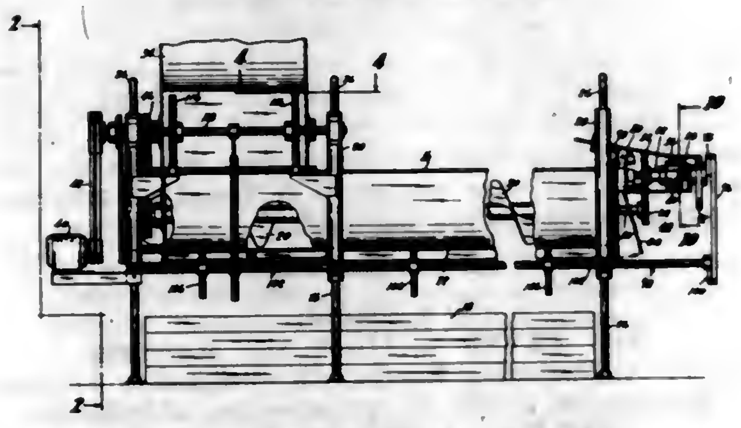
An inspection apparatus or table for discrete articles such as capsules which have generally circular sections but are elongated, the inspection apparatus comprising a conveyor belt which is used to move the articles in one direction, together with a series of parallel bars or the like spaced apart sufficiently to accept the articles so that the belt will travel the articles between the bars, the bars being close enough to carry the articles in an oriented direction, i.e., in a direction according to their longitudinal axes, the bars having portions thereof at an incline with respect to the articles about their longitudinal axes due to the frictional impact of the articles on the bars because of the relative inclination of the bars and belt travel.

3,387,696
FEED DISTRIBUTOR

George D. Prentice, Milwaukee, Wis., assignor to A. F. Klinzing Co. Inc., Milwaukee, Wis., a corporation of Wisconsin

Filed Jan. 4, 1966, Ser. No. 518,712

10 Claims. (Cl. 198—64)



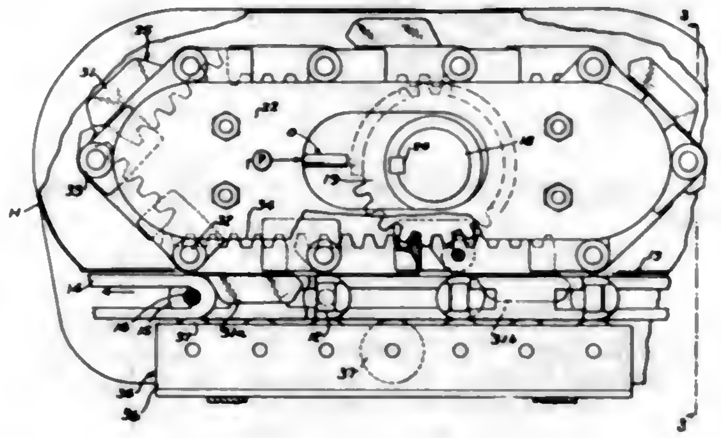
A feed distributor for supplying material to an elongated bunker for simultaneous consumption by a group of animals and having an auger type feeder provided with means for even and uniform distribution of material along the entire length of the bunker from the portion adjacent the supply hopper to the end remote therefrom.

3,387,697
DRIVE FOR CONVEYOR CHAIN

Homer S. Harrison, Detroit, Mich., assignor to Mechanical Handling Systems, Inc., Warren, Mich., a corporation of Michigan

Filed Apr. 26, 1966, Ser. No. 545,457

22 Claims. (Cl. 198—203)



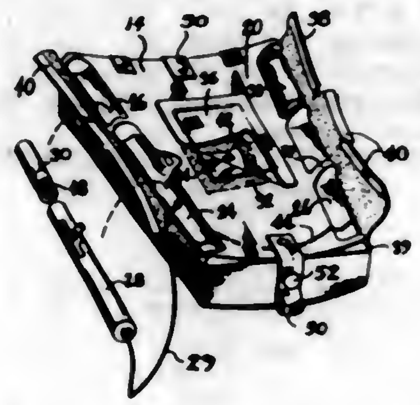
The drive for conveyor chain disclosed herein comprises an endless drive member which is made up of a plurality of pivotally interconnected segments, each of which has a plurality of longitudinally spaced teeth thereon engaging a gear. At least some of the segments have interengaging means thereon for engaging a chain. A guide forms an endless track which is engaged by contact means on segments. At least a portion of the guide extends parallel to the chain and backup means extend along said parallel portion for holding the chain in engagement with the segments.

3,387,698
SURVIVAL KIT PACKAGING

Klaas Hendricks, Granada Hills, and John T. Soja, Sherman Oaks, Calif., assignors to Rocket Jet Engineering Corporation, Glendale, Calif., a corporation of Delaware

Filed May 16, 1966, Ser. No. 550,226

4 Claims. (Cl. 206—1)



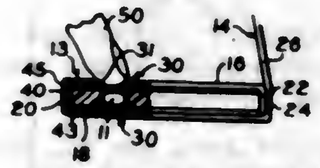
A survival kit is described in the present specification, which is intended to be worn, for example, by airmen, by soldiers, explorers and the like. The kit is one having external compartments which are intended to contain signal flares and a flare gun, these items being readily and quickly accessible, without the need to open the housing of the kit.

3,387,699
DISPENSING CONTAINERS

Joel Heller, New York, N.Y., assignor to Packaging Components, Inc., Roslyn Heights, N.Y., a corporation of New York

Filed Mar. 10, 1966, Ser. No. 533,207

9 Claims. (Cl. 206—42)



A dispensing container for tablet like articles in which the container is formed with an apertured body member of compressible material sandwiched between a base sheet of frangible material and a top cover sheet of pliable material such that the contents of the apertured body may be ejected by manual pressure without damage to fingernails or the contents and without requiring the use of tools.

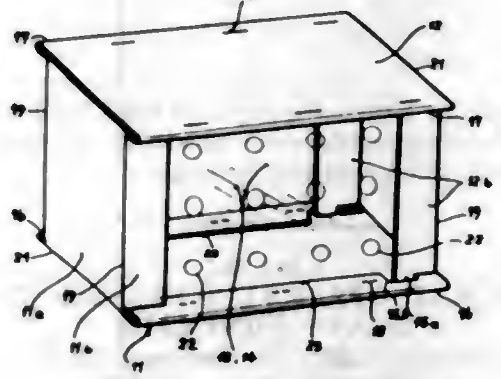
3,387,700
FOLDING PACKAGES

Wolfgang Grauff, 22 Erasmusweg, Bretten, Baden, Germany

Filed Sept. 21, 1966, Ser. No. 581,063

Claims priority, application Germany, Nov. 9, 1965, G 45,138

15 Claims. (Cl. 206—45.34)



1. A folding erectable package for particulate goods such as hard and soft fruit, comprising; two oppositely placed rigid first side members; oppositely placed flexible side members, the flexible side members being fixed to adjacent side edges of the first rigid side members; and oppositely placed second rigid side members, each second side member being connected at one margin with an adjacent side of one of the first side members so that each second side member can be pivoted about its connected margin and after pivoting through 90° its opposite free margin can be applied to a corresponding margin of that first side member which is opposite the first side member to which the folded side member is connected.

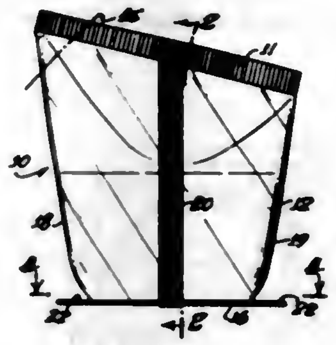
3,387,701
DISPENSING CONTAINER

William S. Schneider, Glendale, and Arthur P. Corella, North Hollywood, Calif., assignors of eleven and one-fourth percent to Wayne V. Rodgers, South Pasadena, and ten percent to Carl Schneider, Palos Verdes Peninsula, Calif.

Continuation of application Ser. No. 391,130, Aug. 21, 1964. This application Aug. 29, 1967, Ser. No. 664,213

6 Claims. (Cl. 206—46)

A filled package formed from thin flexible film or web, has a base on which it can stand upright, like a rigid container, to avoid leakage of contents after opening. The base is formed by flattening the end of a tube prior to filling and stabilizing the shape by heating and then cooling the base to impart a self-sustaining stiffness to it.

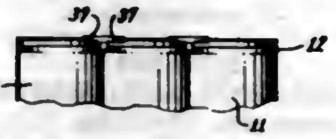


3,387,702
PACKAGE CONSTRUCTION AND METHOD OF MAKING THE SAME OR THE LIKE

David P. Reynolds, Henrico County, and Edward G. Maeder, Chesterfield County, Va., assignors to Reynolds Metals Company, Richmond, Va., a corporation of Delaware

Filed Mar. 15, 1965, Ser. No. 439,598

2 Claims. (Cl. 206—65)



This disclosure relates to a package construction having a plurality of substantially cylindrical receptacles each having an unrimmed closed end and an opposed closed rimmed end with the rimmed end thereof being inwardly necked within the circumference of the outer cylindrical side wall means of the respective receptacle, such receptacles being arranged in rows and encased in a tubular heat-shrunk, film-like member to compact such containers together to form the package construction whereby the rimmed ends of the receptacles will not engage adjacent receptacles so that a chime riding problem is eliminated. If desired, suitable spacer means can be provided between adjacent rows of the encased receptacles for spacing purposes and for hand carrying purposes as desired.

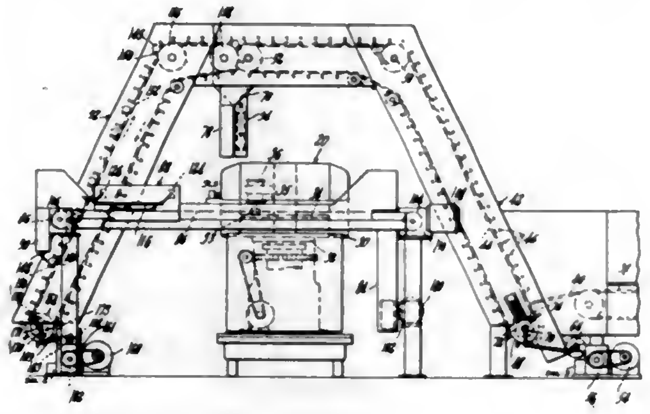
3,387,703
MECHANISM FOR HANDLING AND SORTING BOBBINS

Jackie Travis Foster, Greenville, S.C., assignor to Maremont Corporation, Chicago, Ill., a corporation of Illinois

Filed Sept. 8, 1965, Ser. No. 485,752

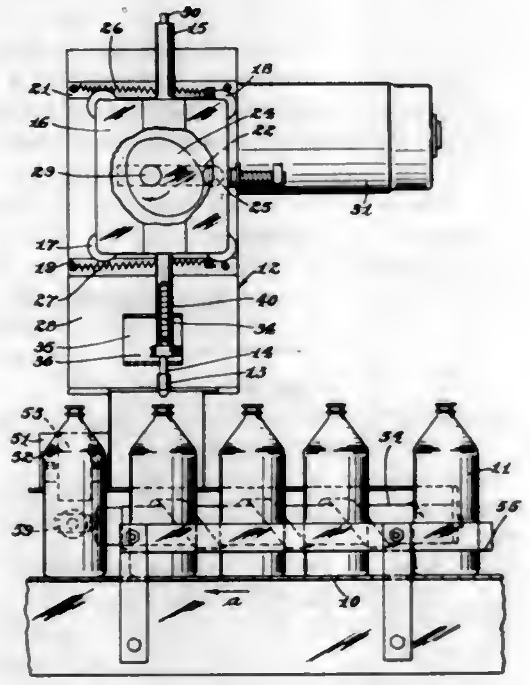
10 Claims. (Cl. 209—73)

A cop feed mechanism for a multiple unit travelling winder of the type having a bobbin supply station and a piece bobbin discharge station. The cop feed mechanism comprises a bobbin magazine having a plurality of bobbin magazine holders arranged for movement to a piece bobbin and a full bobbin loading station and thereafter to the bobbin supply station, a full bobbin supply conveyer including means for discharging full bobbins into successive bobbin magazine holders presented at the bobbin loading station and a piece bobbin supply system including means for discharging piece bobbins into successive bobbin magazine holders presented at the bobbin loading station. A conveyor is provided for conveying piece bobbins discharged from the winder at its piece bobbin discharge station and piece bobbin sorting means are provided for sensing a below minimum mass of thread wound on a piece bobbin and ejecting such a below minimum mass bobbin from the conveyor. Sensing means responsive to the presence of a piece bobbin adjacent the bobbin loading station are provided to arrest the discharge of a full bobbin at the bobbin loading station for discharge of the piece bobbin to the loading station so that piece bobbins discharged from the travelling winder are automatically sorted and the usable ones fed back to it.



3,387,704
APERTURE GAUGING AND SORTING DEVICE

Whitney S. Powers, Jr., Pine City, N.Y., assignor to Powers Manufacturing, Incorporated, Elmira, N.Y., a corporation of New York
Filed Jan. 11, 1966, Ser. No. 519,991
6 Claims. (Cl. 209—73)

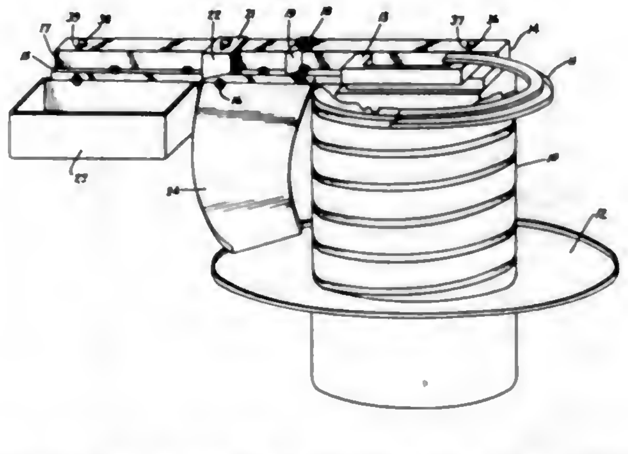


The articles to be gauged are brought to the gauging area by a linear conveyor, and then moved through that area at a constant speed by means of a screw conveyor. The gauge is mounted above the conveyor in a horizontally reciprocable carriage which, during the gauging operation, is traversed by a cam actuator in precisely timed relation to the screw conveyor to maintain vertical alignment of the gauge and container as the gauge is projected into and withdrawn from the container. Resistance to the entry of the gauge of a defective container causes ejection of the container after it leaves the gauging area.

3,387,705
COMPONENT SIZING GATES

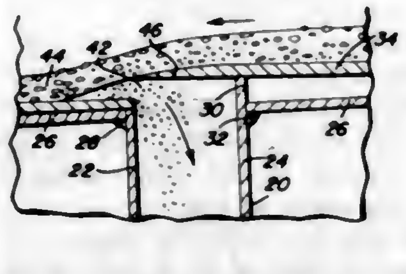
Donald J. Buck, Minneapolis, Minn., assignor to Fabri-Tek Incorporated, Minneapolis, Minn., a corporation of Wisconsin
Filed Nov. 17, 1965, Ser. No. 508,205
8 Claims. (Cl. 209—75)

Magnetic core vibratory sorting apparatus having a tapered track with a wall on one side and an adjustable vertical wall on the other side to form a width gate. The adjustable vertical wall having an inclined lower edge which extends from a point above the tapered track at an upstream side to below the tapered track at downstream side for removing components propelled along the track from the track when they are too wide.



3,387,706
METHOD AND APPARATUS FOR SEPARATING HEAVY MINERALS

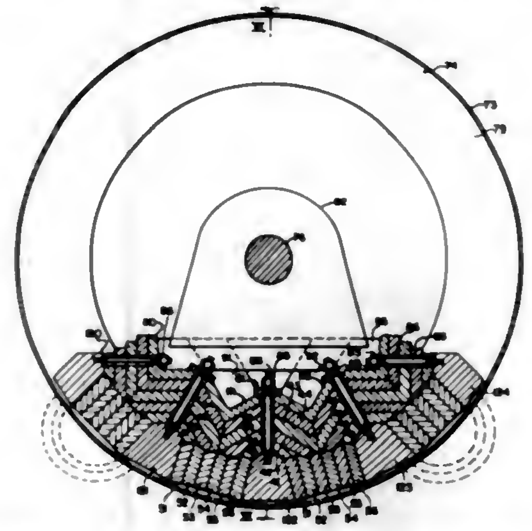
Drury J. Bailey, 99 Rainbow Drive, Bricktown, N.J. 08723
Filed Jan. 6, 1965, Ser. No. 423,738
11 Claims. (Cl. 209—155)



A method for separating relatively heavy particles of small size from a slurry containing solid particles of varying size and weight by exposing the underside surface of the slurry to a partial vacuum as the slurry is subjected to intervals of free fall. The apparatus utilized in this method includes an inclined trough comprising a longitudinal row of plates disposed in side by side relation wherein adjacently positioned plates have their corresponding edges oriented vertically from one another thereby forming a slitted, sheltered opening. A receiver channel is located beneath each slitted opening so that the opening forms an inlet to the receiver channel which receives retrieved particles. The bottom portion of each channel includes a particle discharge aperture that is exposed to atmospheric pressure.

3,387,707
PERMANENT MAGNET ASSEMBLY

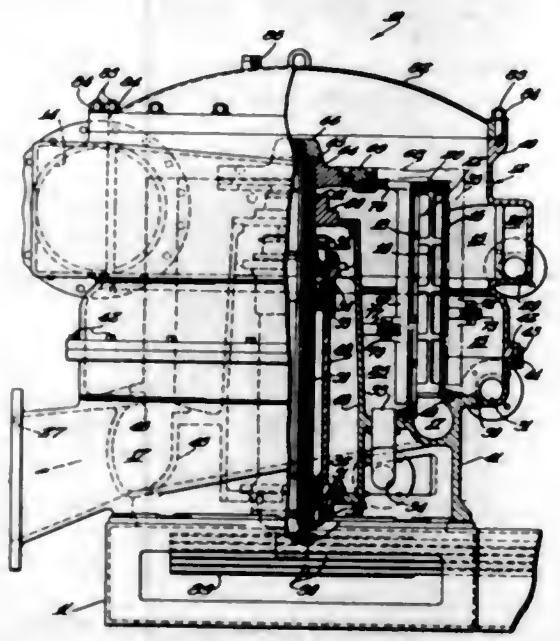
William C. Smith, Blairsville, Pa., assignor to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed June 14, 1965, Ser. No. 463,706
10 Claims. (Cl. 209—223)



A magnetic unit having a pair of poles at a working face, the polarities thereof conferred by a first magnet body, with a pair of magnet bodies remote from the working face connected in series by a soft magnetic member and operating in parallel with said first magnet body.

3,387,708
PAPER MACHINE SCREEN

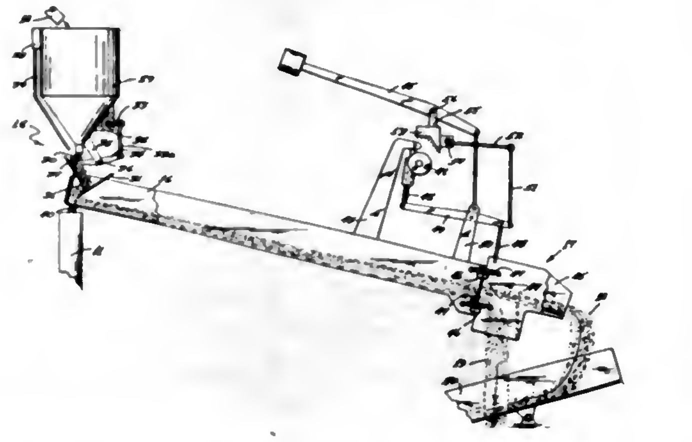
Salomon M. Salomon, Madison, and Robert W. Schroeder, Beloit, Wis., assignors to Beloit Corporation, Beloit, Wis., a corporation of Wisconsin
Filed Jan. 24, 1966, Ser. No. 522,638
7 Claims. (Cl. 209—273)



A screening apparatus for screening fibrous material in liquid suspension which includes a housing having an inlet and a plurality of outlets. A cylindrical screen which is constructed of inner and outer screen members spaced radially apart from one another is positioned substantially centrally within the housing. The space between the inner and outer screens forms a liquid chamber. Two groups of foils are provided, one group radially outwardly of the outward screen and the other group radially inward of the inner screen for causing the desired constituent of material to pass through the inner and outer screens into the liquid chamber. The liquid chamber between the screens is in fluid communication with an involute-shaped outlet port.

3,387,709
MATERIAL CLEANING APPARATUS

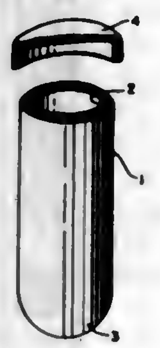
Theodore F. Garland, 1226 N. 1st, Fargo, N. Dak. 58102
Filed Aug. 8, 1966, Ser. No. 570,900
4 Claims. (Cl. 209—458)



Apparatus for cleaning gravel and the like, comprising a support frame having a plurality of elongate similar channel shaped inclined, tapered flumes, each mounted on the frame for pivotal movement adjacent its upper end about a transverse axis. Said flumes being arranged in a series so that material being cleaned is conveyed from one flume to another. Splitter means for each flume located adjacent the discharge end thereof and comprising a housing having a skimmer plate therein. A linkage means connecting each housing to its associated flume to permit relative vertical movement between the flume and the housing between an upper operative position and a lowered inoperative position. The skimmer plate causing the flowing particulate material to be discharged from the flume in a substantially single stream when the flume and housing are in the inoperative lowered position. The skimmer plate being positioned above the bottom wall of the flume when the flume and housing are in the operative position to cause the stratified flowing particulate material to be discharged from the flume into an upper and lower stream whereby said streams of material may be collected. Means for producing control shifting movement between the flume and the housing.

3,387,710
ARTICLE FOR USE IN CHROMATOGRAPHIC AND ELECTROPHORETIC ANALYSIS, SEPARATION, AND THE LIKE

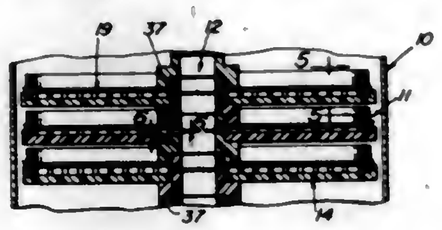
Peter Paul Pogacar, Philosophenweg 1a, Heidelberg, Germany
Filed Aug. 16, 1965, Ser. No. 479,898
Claims priority, application Germany, Feb. 27, 1965, P 24,846
6 Claims. (Cl. 210—94)

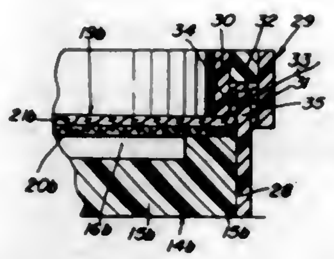


The article of this invention includes a tubular carrier made of transparent material having a coating on its interior surface of an activated adsorbent. The tubular carrier is sealed to prevent deactivation of the adsorbent by moisture and the like. The air-tight seal at one end may be removable and replaceable to reseal the carrier. The sealed tubular carrier may be evacuated or filled with an inert gas.

3,387,711
HORIZONTAL, MULTIPLE PLATE FILTER ASSEMBLY

Sherwood A. Rickert, 2559 N. Monitor Ave.,
Chicago, Ill. 60638
Continuation-in-part of application Ser. No. 474,702, July 28, 1965. This application Sept. 13, 1967, Ser. No. 667,509
4 Claims. (Cl. 210—344)

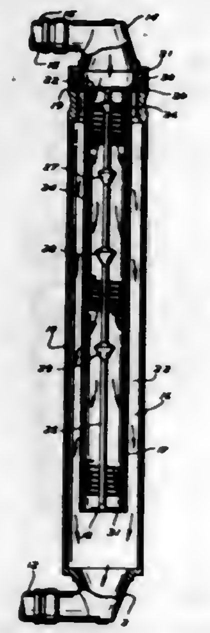




A filter assembly having stacked plates, each plate in one embodiment having a clamping ring attached to its outer periphery and projecting upwardly therefrom and having a U-shaped, annular clamping unit secured over the ring to secure a filter element therebetween; each plate in the other embodiment having an annular groove in one face thereof adjacent the outer periphery, the groove having an outer portion of a filter element secured therein by an annular cylindrical clamping member, the clamping member also holding filter aid material securely on the filter element.

3,387,712
FILTER BACKWASH DIFFUSER

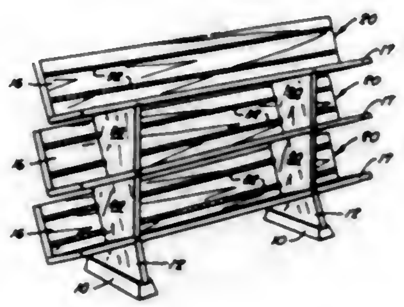
George H. Schrink, Kalamazoo, Mich., assignor to Ronningen-Petter Company, Kalamazoo, Mich., a corporation of Michigan
Filed Nov. 14, 1966, Ser. No. 594,053
4 Claims. (Cl. 210—411)



A device for diffusing backwash water flowing axially through a tubular perforate walled filter comprising a shaft mounted axially within the filter and having a plurality of lugs mounted in spaced relation therealong with the lugs having generally frusto-conical annular surfaces facing the flow to deflect the water in radial directions against the filter wall.

3,387,713
KNOCK-DOWN SHELVING ASSEMBLY

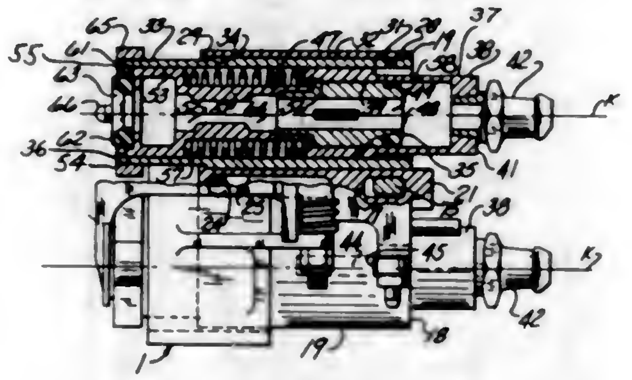
Doyle K. Brooks, 413 W. 19th St.,
Hays, Kans. 67601
Filed Oct. 1, 1965, Ser. No. 492,240
6 Claims. (Cl. 211—148)



A dismountable bookcase comprising an elongated trough having a plurality of transverse grooves in the surface of the trough. A support means is formed to hold the troughs horizontally but in an inclined manner, and is adapted to fit into the grooves in the troughs. The support means when thus formed, will permit stacking of one trough on top of another.

3,387,714
RETRACTABLE TRAINLINE CONNECTOR DEVICE

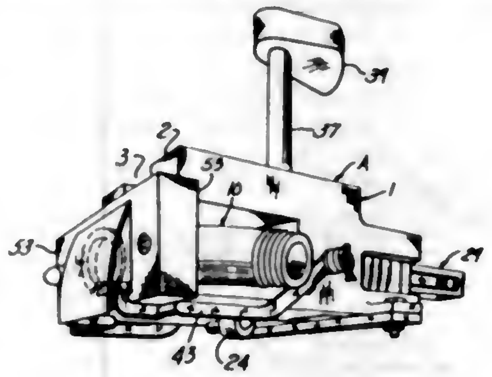
Dennis E. Dawson, Highland Heights, Ohio, assignor to Midland-Ross Corporation, Cleveland, Ohio, a corporation of Ohio
Filed Mar. 14, 1966, Ser. No. 534,005
14 Claims. (Cl. 213—1.3)



A trainline connector to be carried on a railway vehicle coupler, comprising movable body means adapted to be held in retracted position relative to the carrying coupler until such coupler moves into coupling engagement with another coupler, after which the body means moves forward into connecting relation, the body means movably supporting trainline terminal means for movement between advanced and retracted positions relative to the body means, the trainline terminal means being biased toward its advanced position; there may be more than one trainline terminal means carried by the body means; and there may be a cover that covers each unconnected trainline terminal means but which automatically opens when the body means moves to its extended connecting position.

3,387,715
RETRACTABLE TRAINLINE CONNECTOR APPARATUS

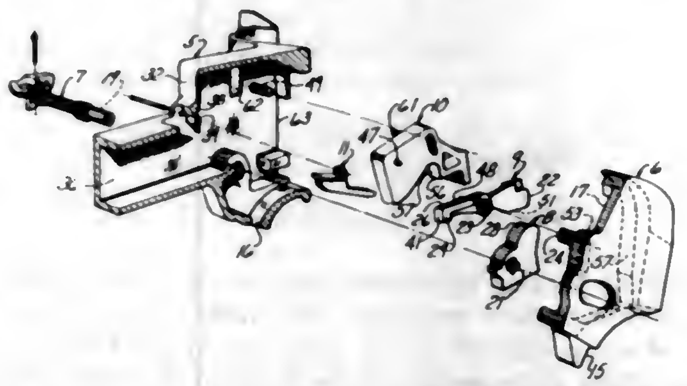
Kenneth L. De Penti, Maple Heights, Ohio, assignor to Midland-Ross Corporation, Cleveland, Ohio, a corporation of Ohio
Filed Mar. 14, 1966, Ser. No. 534,100
14 Claims. (Cl. 213—1.3)



A trainline connector, to be carried by a railway vehicle coupler, having a movable body, carrying trainline terminal means, that is capable of being advanced or retracted relative to the carrying coupler and is normally held in retracted position, preferably with its trainline terminal means covered by a cover, until the carrying coupler moves into coupling engagement with a coupler to which it is to be coupled, after which the body means carrying the trainline terminal means moves forward into connecting means and the cover if present exposes the trainline terminal means.

3,387,716
CAR COUPLER ANTI-CREEP MECHANISM

Kenneth L. De Penti, Mayfield Heights, Ohio, assignor to Midland-Ross Corporation, Cleveland, Ohio, a corporation of Ohio
Filed Feb. 28, 1966, Ser. No. 530,281
5 Claims. (Cl. 213—100)

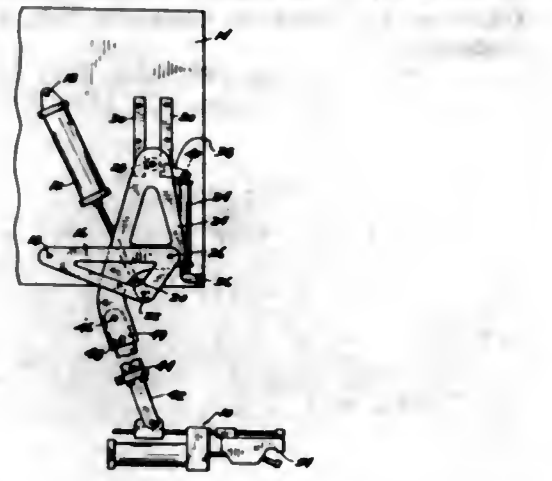


An improvement within a fixed jaw coupler in the construction of an anti-creep element pivotally mounted on the lock of the coupler and an abutment in the rear of the coupler head to achieve more positive prevention of unintentional unlocking of the lock.

3,387,717
FLAT PATH EXTRACTOR

Edward H. Rofe, 2781 Acorn Road,
Bloomfield Hills, Mich. 48013
Filed Oct. 11, 1965, Ser. No. 494,740
3 Claims. (Cl. 214—1)

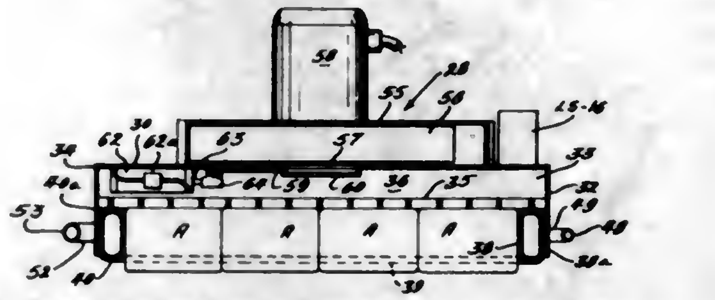
1. A work-handling device comprising a frame; a first link pivoted on said frame for rocking movements in a vertical plane about a first axis; actuating means connected to said first link for rocking the latter about said axis; vertically extending guide means on said frame; a second link; means pivoting said second link to said first link for vertical movement and for simultaneous rocking movements with said first link but in an opposite direction in response to rocking of said first link by said actuating means; follower means on said second link near the upper end thereof, above said means pivoting said second link to said first link, in guiding relation with said guide means for guiding said second link vertically, said follower means forming a second axis about which said second link



may rock in a vertical plane; and work-gripping means carried by said second link for movements with the latter, the pivotal connections of said links to one another and the pivotal connection of said actuating means to said first link being such that said simultaneous rocking of said links effects movement of said work-gripping means along a path having an initial substantially vertical component and a secondary substantially horizontal component.

3,387,718
PALLET LOADING AND UNLOADING APPARATUS

Ernest E. Roth, Arnold, and Henry E. Tanner, Affton, Mo., assignors to Alvey Conveyor Manufacturing Company, St. Louis, Mo., a corporation of Missouri
Filed Mar. 10, 1966, Ser. No. 533,571
10 Claims. (Cl. 214—1)



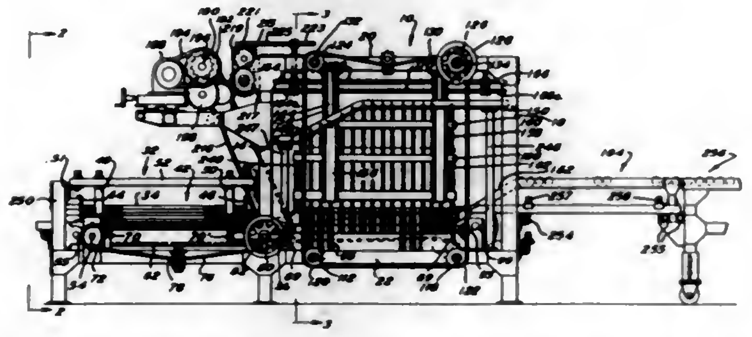
1. In article loading and unloading apparatus the combination: of means to support a layer of articles in a predetermined pattern at a first station; other means to receive the layer of articles at a second station; and a lifting and conveying unit operable to compact and transport the layer of articles from said first station to said second station, said unit comprising a rigid top wall, depending fixed side walls adapted to at least partially surround the layer of articles in spaced relation about the periphery of the article layer, blower means on said top wall having an inlet communicating with the space enclosed by said side walls, an outlet remote from said enclosed space, said blower means producing a reduction of atmospheric pressure in said enclosed space above the layer of articles, resilient means operably carried by said side walls and movable to first positions engaging a substantial portion of the periphery of the layer of articles to form a substantial seal about the periphery of and concurrently compact the articles in said layer, said resilient means being movable to second positions releasing engagement with the periphery of the layer of articles, and fluid pressure supply

means operably connected to said resilient means to cause movement thereof between said first and second positions.

3,387,719
COUNTER AND BUNDLE EJECTOR

William H. Moore, Oreland, Pa., assignor, by mesne assignments, to The Langston Company, a corporation of New Jersey, a wholly owned subsidiary of Harris-Intertype Corporation, Camden, N.J., a corporation of Delaware

Filed Apr. 5, 1965, Ser. No. 445,393
22 Claims. (Cl. 214—6)

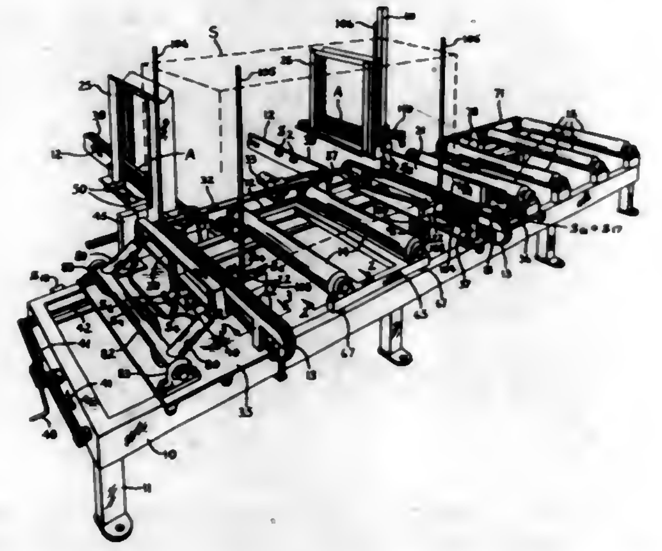


Sheet material is transferred from the bottom of a top feed hopper to the bottom of a bottom feed hopper wherein the blanks are accumulated into stacks of a predetermined number and then removed from the bottom feed hopper.

3,387,720
STACKING MACHINE

George Raymond Wilkin, 8235 N. Kerby Ave., Portland, Oreg. 97217

Filed June 14, 1965, Ser. No. 463,524
27 Claims. (Cl. 214—6)



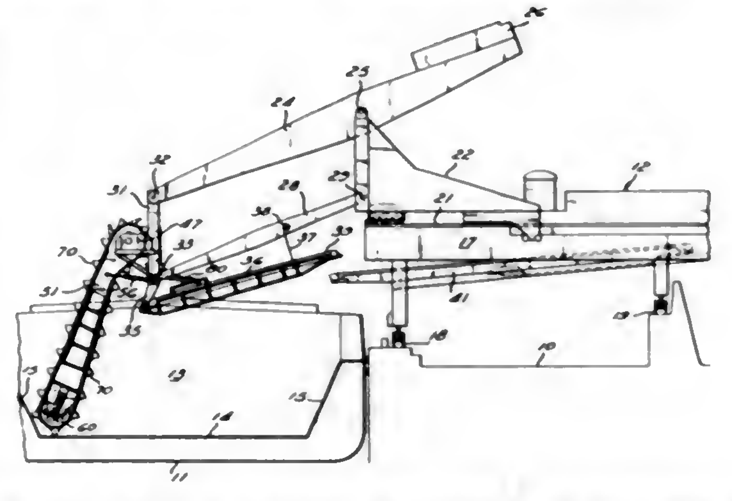
An entirely automated stacking machine for lumber and other articles having means for building a stack from the bottom on an infeed conveyor, means for measuring the height of the stack and a transverse off-bearing conveyor for removing the completed stack.

3,387,721
BUCKET CHAIN CONVEYOR

Carl Ludwig, Cleveland, Ohio, assignor to McDowell-Wellman Engineering Co., Cleveland, Ohio, a corporation of Ohio

Filed Feb. 4, 1966, Ser. No. 525,260
10 Claims. (Cl. 214—14)

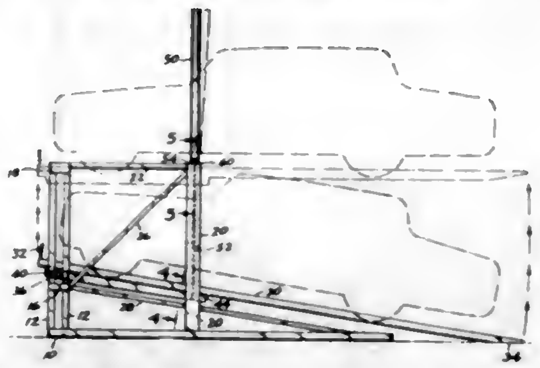
A bucket elevator unloader for bulk cargo vessels is disclosed. Lateral and transverse mobility with respect to the vessel are achieved by both dock and vessel mounted trolley embodiments. An endless chain bucket elevator is journalled on a pivoting digging ladder having rigid guides and rollers to maintain the motion of the chain with buckets oriented to facilitate side ladder digging. Upper sprocket mounted buckets are provided to direct the load discharge to a conveyor system for uninterrupted unloading. The dock mounted embodiment incorporates a parallelogram linkage for positioning of the digging ladder. The bucket chain elevator may also be vessel mounted.



3,387,722
APPARATUS FOR PARKING VEHICLES IN VERTICALLY ARRANGED PAIRS

James O. Fisher, Sr., Raymond O. Whitley, and Charles E. Biddle, Sr., Portland, Oreg., assignors, by direct and mesne assignments, to James O. Fisher, Jr., W. R. Shadoff, Dan Harmon, Robert F. Mest, and George V. Dugan

Continuation-in-part of application Ser. No. 553,766, May 31, 1966. This application May 3, 1967, Ser. No. 635,898
15 Claims. (Cl. 214—16.1)



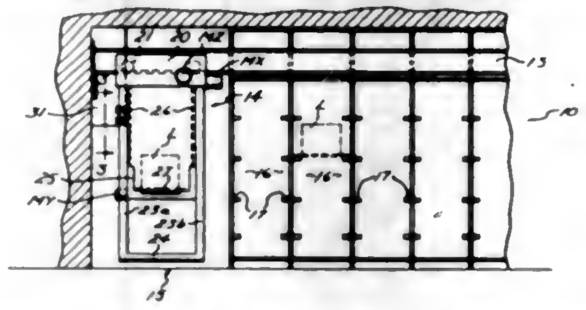
Vehicle parking apparatus comprises a frame enclosing a platform support receiving a first vehicle. Vertical guide means are positioned at the front end of the frame and cooperating slide means on the front of the vehicle support. Reversible lift means are connected to the support intermediate its ends for elevating the support and the first vehicle to an elevation permitting driving a second vehicle beneath the elevated support.

3,387,723
REMOTE CARRIER CONTROL APPARATUS FOR A WAREHOUSE SYSTEM

Jerome H. Lemelson, Metuchen, N.J., assignor to The Triax Company, Cleveland, Ohio, a corporation of Ohio

Application Dec. 30, 1964, Ser. No. 422,356, now Patent No. 3,285,437, dated Nov. 15, 1966, which is a continuation-in-part of application Ser. No. 152,702, Oct. 17, 1961. Divided and this application Feb. 23, 1966, Ser. No. 529,558
4 Claims. (Cl. 214—16.4)

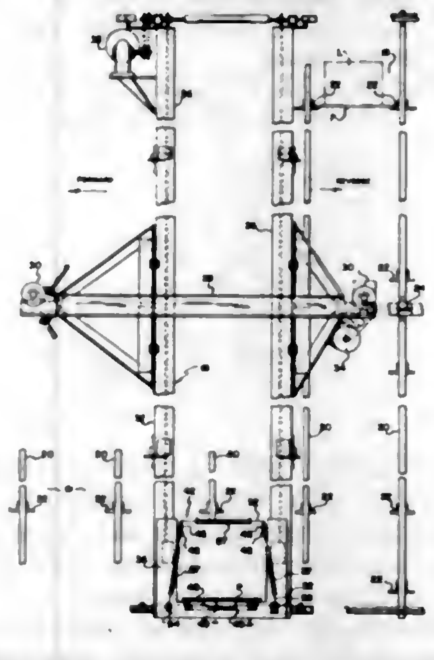
1. An automatic warehousing system having a load handling carrier for delivering and picking up loads at a plurality of load storage locations, means defining a home position from which said carrier starts and to which said carrier returns, power means for actuating said carrier, control means mounted on said carrier and connected to said power means and including means for receiving and storing command messages and subsequently determining movements of said carrier through actuation of said power means, command initiating means, a plurality of independent coupling means for coupling said command initiating means and said control means, each said coupling means comprising a first light wave beam transmitting means mounted adjacent to said home position and a light wave beam receiving means mounted to said carrier, each said transmitting means connected to said command initiating means and each said receiving means connected to said control means, each associated transmitting and receiving means being aligned with each other in the direction of carrier movement and wherein each said transmitting means comprises at least one light source and each said receiving means comprises at least one photoelectric cell axially aligned with the respective light source to receive a beam of light therefrom, each said photoelectric cell connected to a separate of said control means and having means for delivering command messages to the respective of said control means, and said transmitting means comprising a plurality of separate contact means for separately energizing the respective light source.



3,387,724
DETECTING DEVICE FOR AN AUTOMATIC WAREHOUSING SYSTEM

Raymond Q. Armington, Willoughby, Ohio, assignor to The Triax Company, Cleveland, Ohio, a corporation of Ohio

Filed May 26, 1966, Ser. No. 553,229
20 Claims. (Cl. 214—16.4)

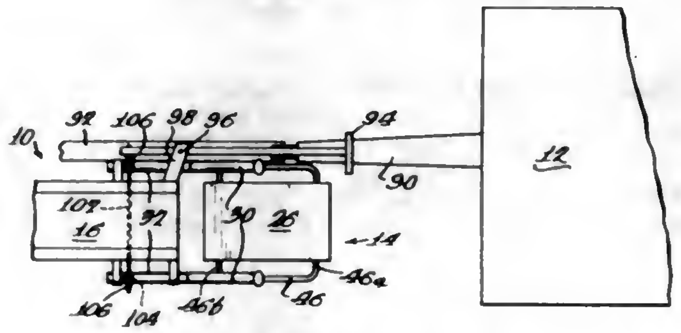


15. A load detecting device for use with a warehousing system of the type comprising a storage frame and a load carrier movable in a travel zone alongside said storage frame for delivering a load to or returning a load from said storage frame, with there being a running clearance between said load carrier and said storage frame, and with there being power means for actuating said load carrier, said detecting device comprising flexible sensing means adapted for mounting on said load carrier in said running clearance for detecting improperly positioned loads projecting into said running clearance between said storage frame and said load carrier, other sensing means coacting with said flexible sensing means for partially rigidifying said detecting device, and control means operatively coupled to said sensing means and adapted for coupling to said power means for deenergizing the latter when said detecting device engages a load extending improperly into said running clearance.

3,387,725
HYDRAULIC RAM SLIDE BALE THROWER

Patrick L. May and John R. Majkrzak, Memphis, Tenn., assignors to International Harvester Company, Chicago, Ill., a corporation of Delaware

Filed Oct. 25, 1966, Ser. No. 589,435
11 Claims. (Cl. 214—42)



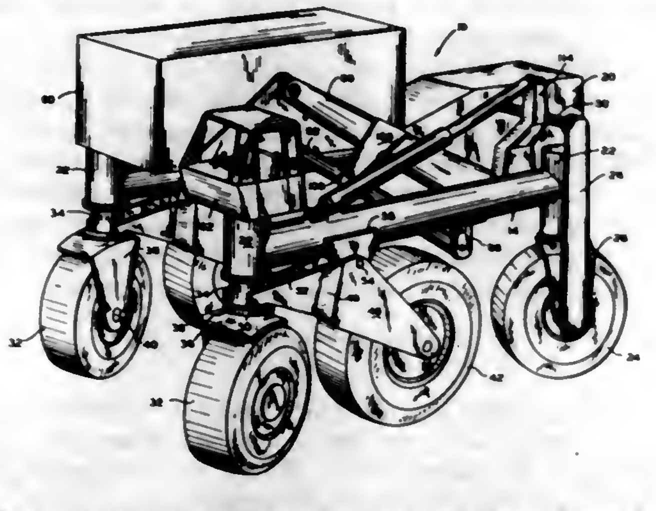
1. For use with a hay baler wherein hay is compressed and tied into bales and processionally advanced out of the rear thereof, a bale throwing mechanism, comprising: guide means at the rear of the baler extending upwardly in a generally rearwardly facing orientation; means mounting said guides to said baler for movement in an upright plane to change the vertical deflection thereof with respect to the baler; a bale receiving platform mounted on said guides for movement between a first bale receiving position wherein the platform is positioned adjacent the baler for receiving bales processionally fed out of the rear thereof, and a second bale launching position displaced from said first position wherein said bale is launched into a trapectory responsive to abrupt termination of movement of said platform; means on said guides for moving said platform; and a member connected to the guide means for vertically deflecting said guide means responsive to movement of the member to change the direction of flight of a bale launched by said platform, said member being constructed and arranged for operational connection to the hitch of a towed vehicle which may be hitched to the rear of the baler by means for moving said member responsive to misalignment of the towed vehicle relative to the baler so that movement of the towed vehicle relative to the baler will cause deflection of the guide means and change the direction of flight of a bale launched by said platform.

3,387,726
HIGH LIFT STRADDLE CARRIER

Dale W. McKee and William A. Williamson, Battle Creek, Mich., assignors to Clark Equipment Company, a corporation of Michigan

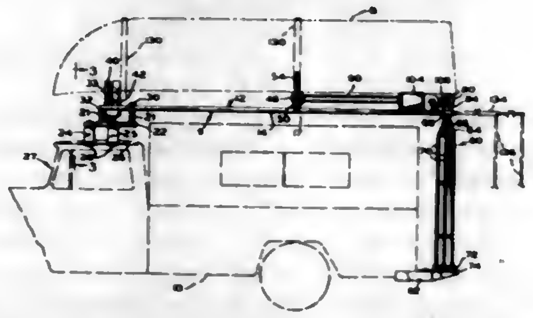
Filed Dec. 22, 1965, Ser. No. 515,581
9 Claims. (Cl. 214—390)

A self-propelled straddle carrier machine for handling large containers having a forwardly opening, vertically unobstructed U-shaped chassis with three wheels supporting each side of the chassis, a load proportioning bogie connection between the front and center wheels, longitudinally extending cantilever load hooks supported from the closed end of the chassis for engaging and elevating containers within the vertical bay thereof, and actuating means at each side of the chassis for elevating the load hooks.



3,387,727
BOAT LOADER AND CARRYING MECHANISM FOR VEHICLES

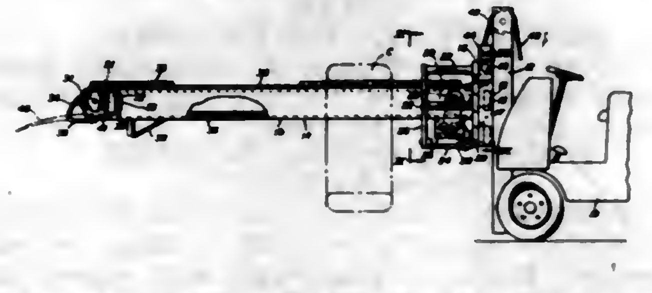
Carl J. Michael, 2108 SE. 156th Ave., Portland, Oreg. 97233
Filed July 26, 1966, Ser. No. 567,875
5 Claims. (Cl. 214—450)



A boat loader and carrying mechanism for campers and like vehicles having easily damaged tops, having a rectangular frame adapted to be mounted horizontally above the top of the vehicle and supported at its front by the cab and at its rear by the rear bumper of the vehicle. A lifting frame is pivotally supported on the rear bumper for placement under the bow of a boat when the same is in an inverted position behind the vehicle, the lifting frame being adapted to be rotated from a generally horizontal position to a generally vertical position to lift the bow to a position adjacent the rear of the horizontal frame. A winch and cable attached to the frame draw the boat up and onto the horizontal frame.

3,387,728
RAM ATTACHMENT FOR TRACTORS

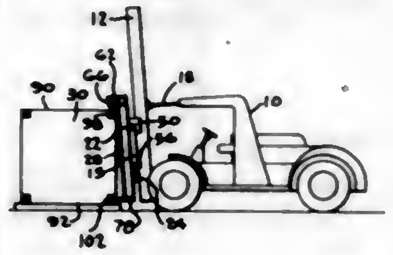
Edward H. Bick and Wallace J. Klein, Joliet, Ill., assignors to United States Steel Corporation, a corporation of Delaware
Filed Oct. 27, 1965, Ser. No. 505,365
8 Claims. (Cl. 214—620)



An attachment installed on the front of a tractor for picking up and transporting annular bundles. The attachment is an elongated ram which supports an endless chain conveyor and a motor for driving the conveyor. The conveyor moves bundles back along the ram to enable the tractor to transport them, and later discharges them from the end of the ram.

3,387,729
CONTAINER LIFTING FRAME FOR USE WITH FORKLIFT TRUCK

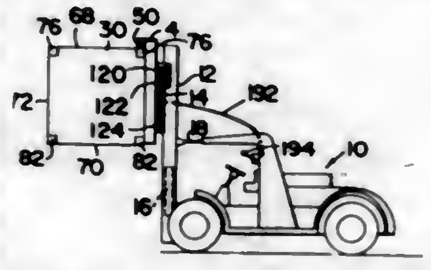
Eugene Hindin and Louis A. Kandle, Philadelphia, and Semond Levitt, Huntingdon Valley, Pa., assignors to Strick Corporation, Fairless Hills, Pa., a corporation of Pennsylvania
Filed July 25, 1966, Ser. No. 567,699
10 Claims. (Cl. 214—621)



1. In combination with a substantially rectangular container having upper and lower corner members, the upper corner members each including a horizontal wall with an opening therethrough, the lower corner members each including a vertical wall with an opening therethrough and a lift truck including a vertical boom, a sub-frame mounted thereon and means to move said sub-frame vertically along said boom; means to lift said container comprising a substantially rectangular frame substantially as long and as high as said container, means to mount said frame on said sub-frame, lower horizontal pins carried by said frame adjacent its lower corners and adapted to enter said lower container corner members via said openings through their vertical walls, and upper vertical pins carried by said frame adjacent its upper corners and adapted to enter said upper container corner members via said openings through their horizontal walls.

3,387,730
CONTAINER LIFTING FRAME WITH MEANS TO SHIFT SAME LATERALLY ON A FORKLIFT TRUCK

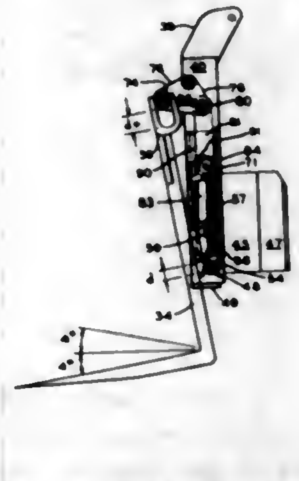
Semond Levitt, Huntingdon Valley, Pa., assignor to Strick Corporation, Fairless Hills, Pa., a corporation of Pennsylvania
Filed Dec. 23, 1966, Ser. No. 604,248
8 Claims. (Cl. 214—621)



1. In combination with a substantially rectangular container having upper corner members with horizontal walls and openings therethrough and lower corner members with vertical walls and openings therethrough, and a lift truck including a vertical boom and a subframe mounted thereon for movement vertically along said boom; means to lift said container comprising a frame substantially coextensive with said container, horizontal pins extending from the front of said frame adjacent its lower corners and adapted to enter said lower container corner members via their openings, vertical pins extending downwardly from said frame at its front adjacent its upper corners and adapted to enter said upper container corner members via their openings, means at the rear of said frame slidably mounting said frame on said subframe including bearing members pivotally mounted between opposed portions of said frame and said subframe, and power means to effect sliding movement of said frame relative to said subframe.

3,387,731
FORK TRUCK

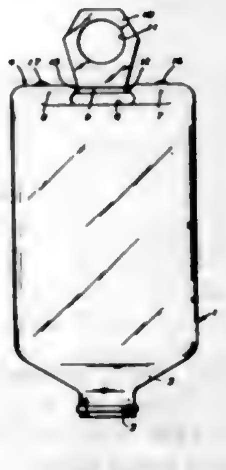
Christian D. Gibson and Stanford B. Jones, Greene, N.Y., assignors to The Raymond Corporation, Greene, N.Y., a corporation of New York
Filed Jan. 4, 1967, Ser. No. 607,315
5 Claims. (Cl. 214—700)



An arrangement for making power-tilted load forks easily removable and replaceable, in which each fork includes a downwardly facing yoke to rotatably support the fork on a first shaft and an upwardly facing yoke engaging a second shaft so that translation of the second shaft tilts the fork about the axis of the first shaft.

3,387,732
HANGER CONSTRUCTION FOR PARENTERAL LIQUID CONTAINER

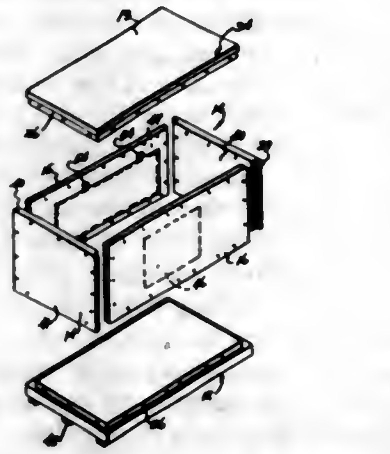
David A. Jellies, Glendale, Calif., assignor, by mesne assignments, to American Hospital Supply Corporation, a corporation of Delaware
Filed Mar. 13, 1967, Ser. No. 622,520
9 Claims. (Cl. 215—100)



A plastic intravenous solution bottle with a hinged hanger integrally connected to the container at an indented recess in the container's bottom wall. This hanger has edges which snap into retention pockets in protuberant base sections of the container bottom, thus keeping the hanger tucked into the recess when the plastic bottle sits on a flat surface.

3,387,733
CONVERTIBLE SHIPPING BOX

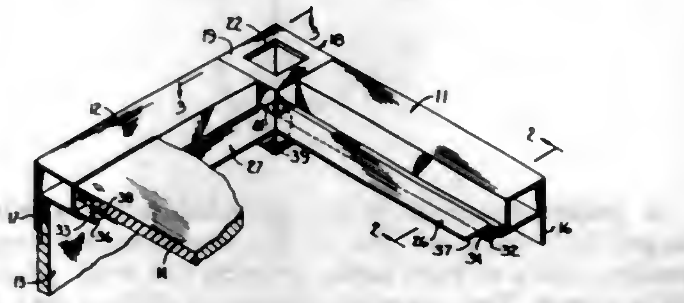
William L. Field, P.O. Box 571, Royal Oak, Mich. 48073
Filed Jan. 19, 1967, Ser. No. 610,430
4 Claims. (Cl. 217—12)



The present invention relates to a shipping box which on disassembly may be converted into a building structure. The present invention relates to a shipping box which includes assembled bottom, top and side panels and ends, a plurality of said boxes on disassembly being adapted for conversion into a building having floor, roof, and wall sections and wherein the corresponding bottom, top and side panels respectively cooperate to form said sections.

3,387,734
CARGO CONTAINER WITH DRAIN CONSTRUCTION

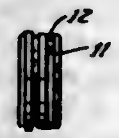
Russell L. Turpen, North Richmond, Calif., assignor to Compass Container Company, Inc., Richmond, Calif., a corporation of California
Filed Aug. 22, 1966, Ser. No. 574,128
5 Claims. (Cl. 220—1)



1. A cargo container comprising a frame including upper longitudinal and transverse rails, a roof panel peripherally secured to said rails, and a drain construction including gutters disposed adjacent the joints between the periphery of said panel and said rails to receive water leaking therethrough, said gutters having exterior outlets.

3,387,735
METAL INSERT FOR WALL OPENINGS AND METHOD OF COMBINING THE SAME THEREWITH

Robert F. De Marco, Mentor, Ohio, assignor to Fluid Controls, Inc., Mentor, Ohio, a corporation of Ohio
Filed Aug. 31, 1966, Ser. No. 576,260
10 Claims. (Cl. 220—24)

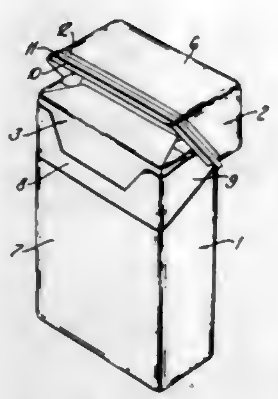


1. An insert adapted to be secured in tight fitting relation in an opening in a metal wall and comprising a rigid

body having a guide portion and a broach portion spaced endwise of the body from the guide portion, the broach portion having an annular cutting edge which is continuous peripherally and faces endwise of the body toward the guide portion, the peripheral outlines of the cutting edge and of the guide portion, respectively, when projected on a plane normal to the axis of the cutting edge, being so related that the outline of the guide portion is disposed wholly within and spaced inwardly from the outline of the cutting edge, the spacing of the cutting edge outwardly from the guide portion being relatively small so that the cutting edge can broach off and convert to chips a radially thin stratum of the metal defining the original wall opening into which the guide portion can fit in guiding relation, and thereby broach the opening to a precise shape and size, and said body having a peripherally continuous groove adjacent the cutting edge and opening radially outwardly and operative to receive and accommodate the chips formed by the cutting edge as they are cut loose from the wall of the opening by pressing the body, guide portion foremost, into the wall opening.

3,387,736
PACKETS

David Theodore Nelson Williamson, Deptford, London, England, assignor to Molins Machine Company Limited, London, England, a corporation of Great Britain
Filed June 2, 1966, Ser. No. 554,877
Claims priority, application Great Britain, June 9, 1965, 24,338/65
8 Claims. (Cl. 220—31)

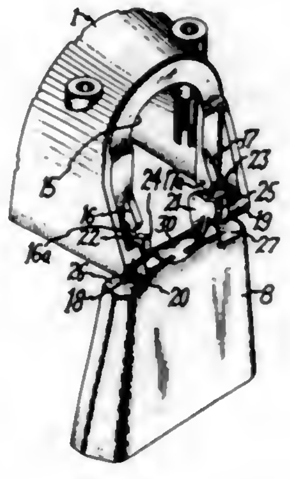


A packet made of plastic material with an integral hinged lid is disclosed. The lid is provided with a marginal portion which at least partly overlies the body when the lid is closed. This marginal portion is divided into three longitudinal bands. The central band is thicker than the two adjacent bands and the adjacent band which includes the edge of the lid is capable of being secured to the body. Thus when opening the packet the central thick band serves as a tear strip and the adjacent thinner bands are ruptured when the tear strip is removed.

3,387,737
HINGE DEVICE

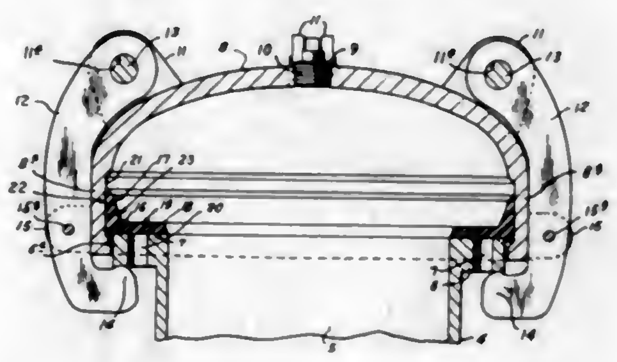
Samuel L. Baldwin, Flat Rock, and John Stuart Franklin, Hendersonville, N.C., assignors to General Electric Company, a corporation of New York
Filed Aug. 5, 1966, Ser. No. 570,545
9 Claims. (Cl. 220—31)

1. A hinge device comprising, in combination, a first member having a substantially U-shaped bearing means, and retaining means projecting therefrom above the top of said U-shaped bearing means and offset from the plane of the latter, said retaining means and the top of said U-shaped bearing means defining an opening therebetween, and a second member hingedly and separably connected to said first member, said second member having ridge means extending in a plane in substantial alignment with said projecting retaining means, said ridge means having hinge pin means projecting transversely from said plane thereof and received in said U-shaped bearing means, whereby said second member is pivotally supported by said first member and swingable relative thereto, said second member being formed with a surface portion adjacent said hinge pin means and defining therewith a space of predetermined distance in which the bottom portion of said U-shaped bearing means is received during swinging movement of said second member, said surface portion serving to prevent removal of said hinge pin means through said opening by abutting the bottom of said bearing means, said second member being swingable to a predetermined position relative to said first member wherein said surface portion is clear of the bottom of said bearing means to allow passing of said hinge pin means through said opening, and whereby said second member may be separated from said first member.



3,387,738
CLOSURE SEAL

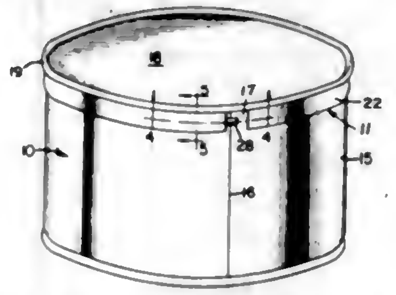
Norman H. Kemp, 1232 E. Farnham Court, Irving, Tex. 75060
Filed Oct. 8, 1965, Ser. No. 494,061
12 Claims. (Cl. 220—46)



1. Means for sealing about a passage comprising, a seal ring receptacle, including an annular skirt portion, a seal ring disposed within the skirt, said seal ring comprised of an outer lip having an outer surface conformable to the inner surface of the skirt, and an inwardly extending flange having a lower surface conformable with the surface about the passage, said seal ring being free of attachment to the skirt and the surface about the passage and being freely movable with respect to the skirt after the receptacle is attached about the passage; and means to attach the receptacle about the passage with the lower surface of the seal in contact with the surface about the passage.

3,387,739
CONTAINER WITH DUAL TAPE OPENING DEVICE

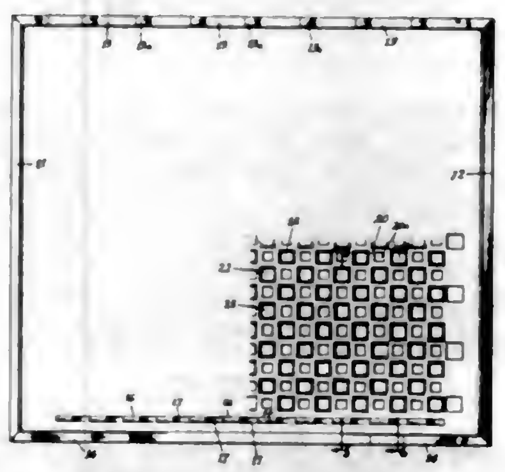
Stanley Edward Rohowetz, Barrington, Ill., assignor to American Can Company, New York, N.Y., a corporation of New Jersey
Filed Mar. 28, 1966, Ser. No. 538,021
6 Claims. (Cl. 220—53)



A can which is easily openable without the use of opening tools and which may withstand the pressure developed when the can is used to heat process comestibles. The can has a body which is slit about the major portion of its periphery, the slit terminating adjacent to, and on either side of the side seam, an inner tape which completely covers the slit and which itself is covered by a wider tape except for a grasping tab on the inner tape projecting beyond one end of the outer tape so that when the tab is pulled, the inner tape will tear through the outer tape to permit the end of the can to be moved upwardly with respect to the can body.

3,387,740
REINFORCED PLASTIC BAKERY TRAY AND THE LIKE

Kenneth R. Bockenstette, Cincinnati, Ohio, assignor to MS Industries, Inc., Cincinnati, Ohio, a corporation of Ohio
Filed June 22, 1967, Ser. No. 648,003
4 Claims. (Cl. 220—71)

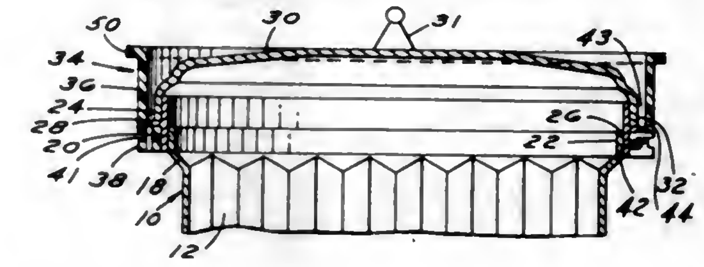


A bakery tray of plastic and like materials having at least one low side wall such that reinforcement is required because of the absence of a beam structure. A series of semi-circular moldings are provided in the bottom adjacent the low wall, the semi-circular moldings being alternately upwardly open and downwardly open and all being disposed about a common axis with a metallic rod seated in the seat formed by said moldings.

3,387,741
RECEPTACLE RIM GUARD OR ACCESSORY

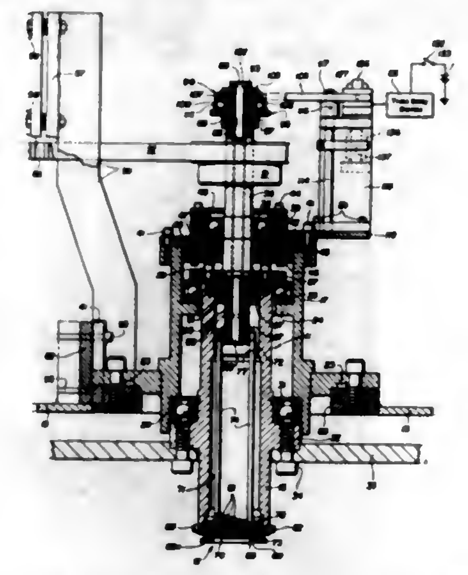
Edward S. Kulaszewski, 8696 Knodell, Detroit, Mich. 48213
Continuation-in-part of application Ser. No. 348,437, Mar. 2, 1964. This application Sept. 13, 1966, Ser. No. 579,073
8 Claims. (Cl. 220—73)

A container and a protective rim guard therefor are disclosed, the container having a generally continuous rim extending around a top opening thereof upon which a cover is adapted to be mounted to close the opening. The rim guard is of resilient or flexible material, and includes a generally outwardly extending collar surrounding and laterally spaced from the rim, and of greater height than the latter, thus to provide an annular drained clearance space in which an edge portion of the container cover, is received, the guard providing a flexible protective shield to prevent the rim from becoming bent or damaged. The collar of the rim guard provides a resilient, laterally extending bumper flange.



3,387,742
CHIP CHANGING APPARATUS

Nils H. Bergfelt and Vernon C. Spellman, Santa Rosa, Calif., assignors to Optical Coating Laboratory, Inc., Santa Rosa, Calif., a corporation of California
Filed Jan. 24, 1966, Ser. No. 522,697
14 Claims. (Cl. 221—67)

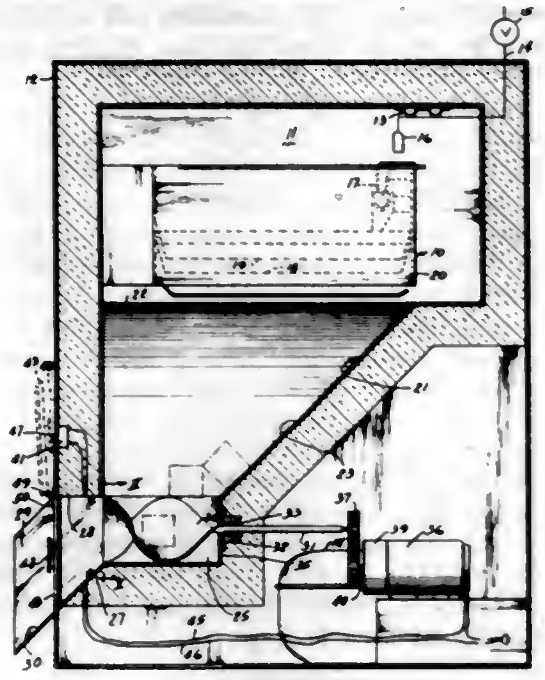


Chip changing apparatus which rotates having a cage and a cage ring and means for causing relative movement between the cage and the cage ring to dispense a chip.

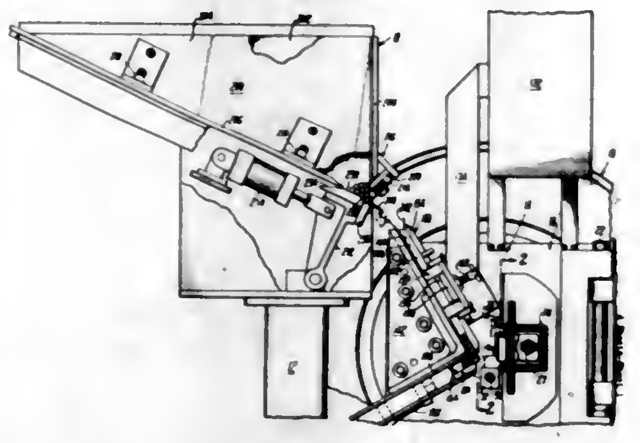
3,387,743
ICE CUBE DISPENSER WITH SCREW FEED

Joseph M. Algino, Niles, Ill., assignor to The Dole Valve Company, Morton Grove, Ill., a corporation of Illinois
Filed Nov. 25, 1966, Ser. No. 596,982
3 Claims. (Cl. 221—75)

A dispenser for the ice cubes frozen in ice cube molds in the freezing compartment of a refrigerator cabinet, and arranged to collect and retain water to be frozen and to eject the frozen ice cubes from the machine for use. Freezing is attained by a conventional compressor condenser unit in the cabinet and an evaporator unit in the freezing compartment of the cabinet. The molds are operated to eject ice into a hopper having sloping side walls converging to a restricted trough-like bottom, having a conveyor extending therealong. The conveyor is operable to feed selected quantities of ice cubes into a container and thereby prevent contaminating the ice stored in the hopper, by the hands or conventional scoops.



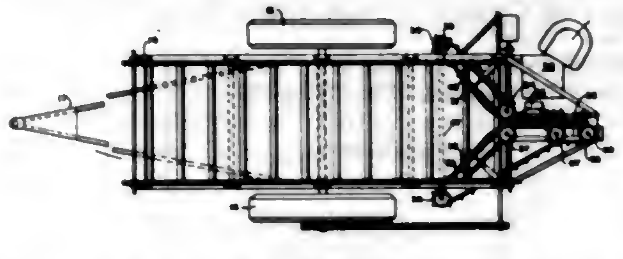
3,387,744
SWAGING MACHINE FEEDING APPARATUS
Edgar C. Lundeberg, % Lundeberg Engineering Co., 302 Murphy Road, Hartford, Conn. 06114
Filed Mar. 2, 1967, Ser. No. 620,146
15 Claims. (Cl. 221—150)



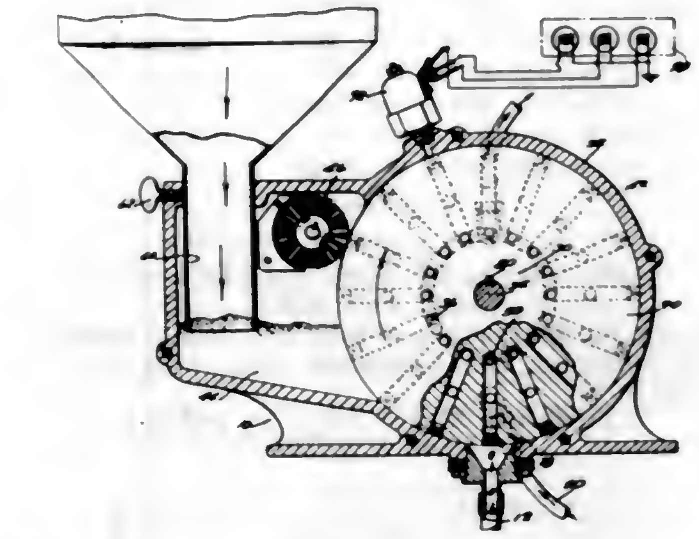
Apparatus for automatically feeding rod stock from a storage bin, one piece at a time, to a swaging machine. An oscillating rocker arm provides for delivering the stock from a bin to the upper end of an inclined magazine, and a reciprocable shuttle provides for delivering the stock from the lower end of the magazine to the gripping jaws of a ram which is reciprocably mounted to drive the stock into the swaging machine.

3,387,745
SUGAR CANE PLANTING MACHINE
Denis A. Thibodeaux, Rte. 2, Box 31, Murphy P. Richard, Rte. 2, Box 19, and Wesley J. Monson, Rte. 2, Box 10, all of Napoleonville, La. 70390
Filed Dec. 27, 1966, Ser. No. 604,893
12 Claims. (Cl. 221—185)

The invention involves a vehicle on to which sugar cane stalks are loaded, the vehicle being constructed to support the canes in at least a partially upright position and having mass cane advancing means to a restricted throat where the cane is fed by a cane feeding means to a reserve locus in the throat where canes may be held in reserve for the timed action of a metering mechanism by which the canes are delivered to the furrow or for the purpose of controlled planting of said cane in a metered pattern to result in a thick healthy crop.

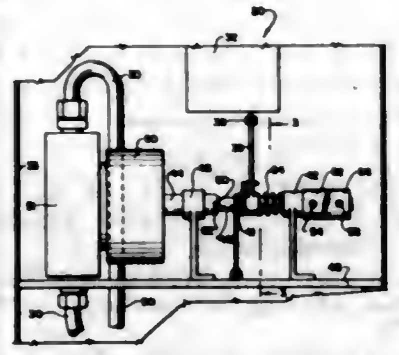


3,387,746
SELECTIVE SEED PLANTER
Harry W. Whipple, Harlingen, Tex., assignor of one-third to Robert F. Ashley, La Feria, and one-third to Othal E. Brand, McAllen, Tex.
Filed Nov. 28, 1966, Ser. No. 597,469
1 Claim. (Cl. 221—211)



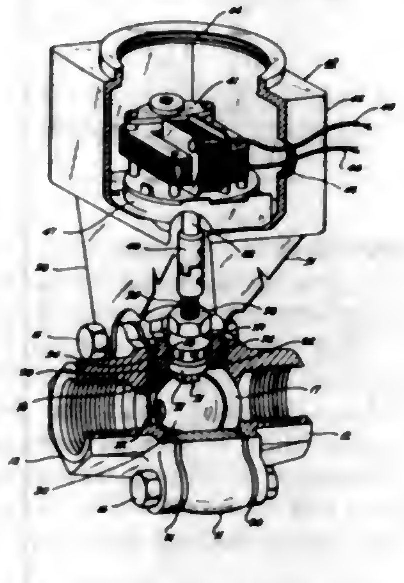
A selective seed planter in which a rotor wheel provides for dispensing of seeds for picking up seeds or grain and removes additional grains picked up by the brush for achieving single delivery of seed and grain so that the process of thinning out plants is eliminated, in which apparatus provides for a vacuum and compression line for enabling seeds to be released and blown into a hopper to achieve single delivery of seed and grain.

3,387,747
COIN-OPERATED GAS TIMER AND BURNER FOR USE THEREWITH
Loran L. Laughlin, 2541 Maywood Drive, Salt Lake City, Utah 84109
Filed May 24, 1967, Ser. No. 640,914
10 Claims. (Cl. 222—2)



A coin-actuated timing valve mechanism which permits the supply of a gas through a valve for a predetermined interval of time for utilization. When the timing mechanism, released by a coin, is rotated, the gas valve is opened allowing gas to flow for a preset time interval to the burners of a device utilizing the gas after which time interval the valve is closed until another coin is deposited.

3,387,748
MOTOR DRIVEN METERING VALVE
George R. Brenchley, 14740 E. Broadway, Whittier, Calif. 90604
Filed Sept. 9, 1966, Ser. No. 578,273
17 Claims. (Cl. 222—70)



1. A device for controlling the volume of fluid flowing within a conduit, which comprises:

a body defining an enclosed internal chamber and having a fluid inlet and a fluid outlet in communication with said internal chamber;

a spherical ball rotatably mounted within said internal chamber and adapted to rotate around an axis normal to said body, said ball having a diametral port extending therethrough normal to the axis of rotation of the ball;

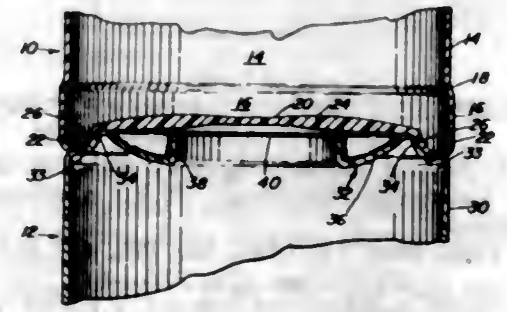
a piston reciprocally mounted within said port;

a pair of annular sealing rings adapted for mounting in said body on either side of said ball, said sealing rings having a concave inner surface adapted to frictionally engage said spherical ball over a substantial portion of its surface;

drive means for rotatably driving said ball; and

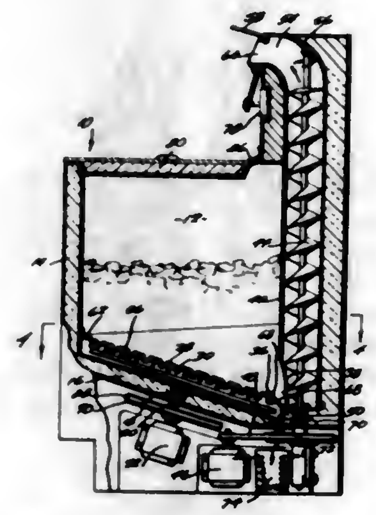
means for supporting said drive means from said body.

3,387,749
PLASTIC CONTAINERS
Alva J. Godshalk, Ozona, Fla., Ronald B. Shankland, Sr., Manteno, Ill., and George Yates, Jr., Glendale, Calif., assignors to Bennett Industries, Inc., Peotone, Ill., a corporation of Delaware
Filed Oct. 6, 1966, Ser. No. 584,891
6 Claims. (Cl. 222—143)



An improved container is formed of a synthetic plastic resin material and comprises a generally cylindrical side wall structure and integrally formed bottom wall and top wall structures. The bottom wall structure is joined, adjacent its outer edge, to the bottom edge of the side wall structure to form an annular bearing surface adjacent the periphery of the side wall. A center portion of the bottom wall structure is concave upwardly and is adapted to accommodate various members located on a top wall structure of an adjoining container when the containers are in a stacked relationship. The bottom wall also includes an integrally formed annular inclined surface arranged between the bearing surface and center portion of the bottom wall structure at an angle displaced from a vertical plane. The top wall structure includes an upwardly extending, generally annular bead adjacent a shoulder portion thereof, and a center portion which is concave downwardly from the top edge of the bead. The bearing and inclined surfaces of the bottom wall structure are complementary with the shoulder and annular bead portions of the top wall structure. As a result, when a first container is vertically stacked on top of a second such container, the bead and shoulder portions of the lower container comate with the inclined and bearing surfaces, respectively, of the top container. When the containers are stacked in the manner described, the placement of the comated bead portion and inclined surface resist lateral movement of the containers, and the weight of the top container is placed directly over the side wall structure of the lower container.

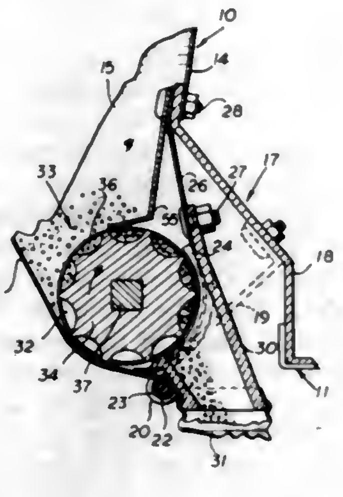
3,387,750
AUTOMATIC ICE DISPENSER
Leslie C. Stencil, 2205 Clearview Drive, Reno, Nev. 89502
Filed Nov. 17, 1966, Ser. No. 595,216
2 Claims. (Cl. 222—236)



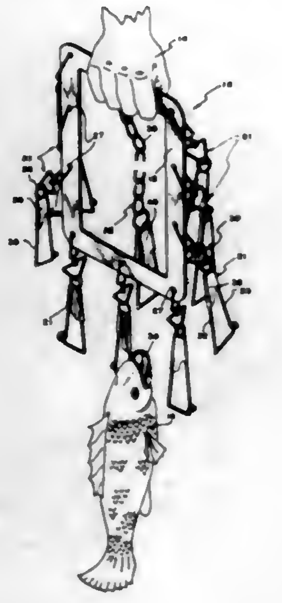
A combination of an agitator and feeding worm or auger laterally disposed to an agitator wheel for dispensing ice cubes from the top of an ice cabinet so that it rotates in an inclined plane while ice cubes are fed by gravity to a vertically disposed auger tube.

3,387,751
FLUTED FEED MATERIAL DISTRIBUTOR
Nils O. Olsson, Ancaster, Ontario, Canada, assignor to International Harvester Company, Chicago, Ill., a corporation of Delaware
Filed Nov. 22, 1966, Ser. No. 596,239
5 Claims. (Cl. 222—267)

A fluted feed fertilizer metering device consisting of an elongated cylindrical member having smooth surfaced sections alternating with fluted sections forming pockets and rotatable within the fertilizer in a hopper. The fluted sections pick up fertilizer and discharge it by gravity, and the amount discharged is determined by the extent of exposure of the fluted sections to the outlets and this is regulated by axially shifting the entire cylindrical member.

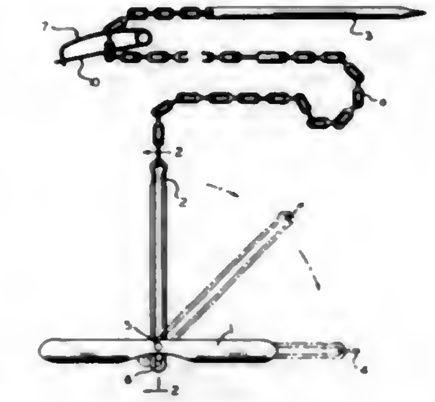


3,387,752
FISH STRINGER AND CONVEYING DEVICE
Edward J. Martin, 3839 W. 11th St., and Ernest L. Malone, 621 W. Central, both of Wichita, Kans. 67203
Filed Feb. 6, 1967, Ser. No. 614,275
3 Claims. (Cl. 224—7)



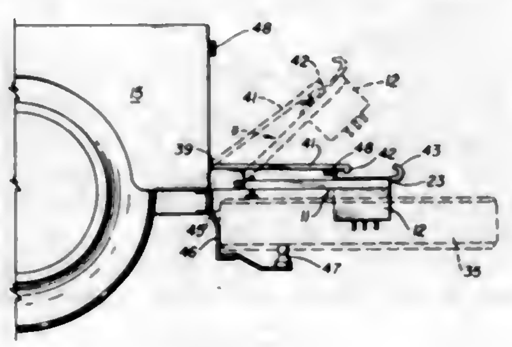
This invention relates to a fish stringer and conveying device usable to connect fish members thereto and having means providing for the ready conveyance thereof and, more particularly, the invention relates to a fish stringer and conveying structure including a support frame having a grip section secured to a downwardly depending support section, means for anchoring the same to a boat or the like, and a plurality of hook assemblies secured in a spaced relationship about the support section providing means for positively spacing and securing fish members making the same easy and comfortable for conveyance. More specifically, this invention relates to a fish stringer and conveyance device having a rigid support frame with a grip portion whereupon the structure is operable to be conveyed in a substantially vertical position for ease in carrying a plurality of fish members.

3,387,753
FISH STRINGERS
Scisco Bowman, 6632 14th Ave., Kenosha, Wis. 53140
Filed Feb. 23, 1967, Ser No. 617,880
2 Claims. (Cl. 224—7)



An elongated flexible member having a rigid point attached at one end a bar mounted on and extending laterally from the opposite end. The bar consists of two spaced sides between which is pivotally mounted an elongated link for attachment to said flexible member. The bar prevents fish from escaping from the flexible member when the elongated link is pivoted perpendicular to the spaced sides. Removal of fish is accomplished by pivoting the elongated link into longitudinal alignment with the spaced sides and advancing said link longitudinally within said sides.

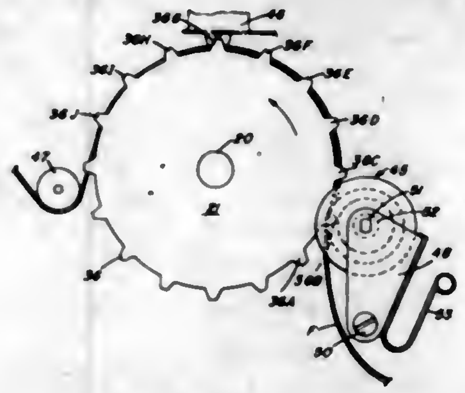
3,387,754
SPARE TIRE AND WHEEL CARRIER
Barry L. Sinkey, 825 Dahlia St., Apt. 802, Denver, Colo. 80220, and Robert L. Clifford, 4060 Buckner Lane, Paducah, Ky. 42001
Filed June 21, 1967, Ser. No. 647,711
8 Claims. (Cl. 224—42.21)



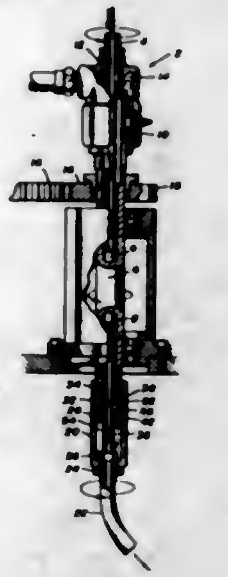
A spare tire and wheel carrier adapted for attachment to the rear frame and tail gate of "Jeep" type vehicles for supporting a spare tire in an accessible and protected position. A pivotal mount to the frame is provided together with adjustable hook elements for engaging the tail gate where the tail gate and carrier may be moved cooperatively and without interference to raised and lowered positions.

3,387,755
SPROCKET SOUND REPRODUCTION APPARATUS AND METHOD
William A. Martin, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed Mar. 19, 1965, Ser. No. 441,011
13 Claims. (Cl. 226—6)

A film strip is advanced toward a sound transducer head by rotation of a sprocket and a roller. The transducer is spring biased toward the sprocket and into engagement with a sound reproducing track on the film strip. The force exerted on the strip by the head opposes movement of the strip past the head, thereby causing the strip to become bowed with respect to the sprocket surface just before the strip is engaged by the transducer head.



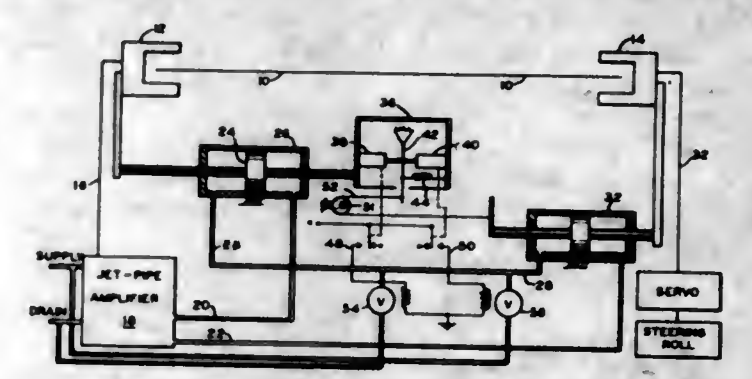
3,387,756
PNEUMATIC JET TOW PIDDLER
Homer W. Goodner, Decatur, Ala., assignor to Monsanto Company, St. Louis, Mo., a corporation of Delaware
Filed Nov. 2, 1966, Ser. No. 591,557
4 Claims. (Cl. 226—97)



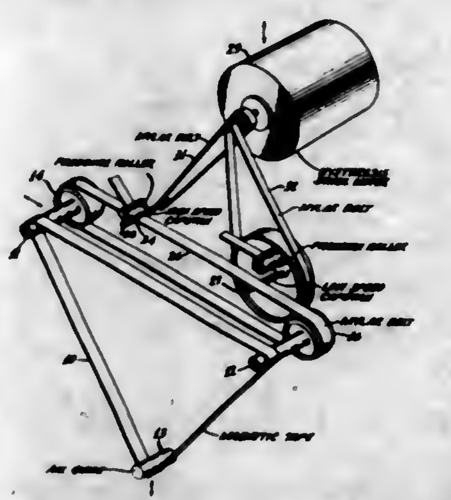
1. A pneumatic jet piddler comprising, in combination: concentrically arranged inner and outer tubes providing an annular space therebetween,
coupling means for rotationally mounting one end of each of said tubes and for defining a fluid chamber open to a source of air under pressure and to said annular space between said tubes,
said one end of said inner tube being open for the introduction of a tow thereto,
means defining a venturi at the opposite end of said inner tube, fluted means connecting said inner tube to said outer tube and permitting flow of air under pressure from said space between said tubes to said venturi means,
nozzle means for piddling the tow delivered thereto from said inner tube by said venturi means,
means for driving said outer tube.

3,387,757
WEB GUIDE APPARATUS
Thomas F. Graffy and Louis Zaka, Chicago, Ill., assignors to GPE Controls, Inc., Morton Grove, Ill., a corporation of Illinois
Filed Feb. 7, 1966, Ser. No. 525,543
6 Claims. (Cl. 226—22)

In a hydraulic system, means for insuring synchronous operation of a pair of series connected hydraulic cylinders, despite possible differences in the amount of fluid leakage past the pistons, by comparing the motions of said piston and varying the volume of hydraulic fluid as required whenever the difference between the magnitudes of the motions of the pistons exceeds a predetermined amount.

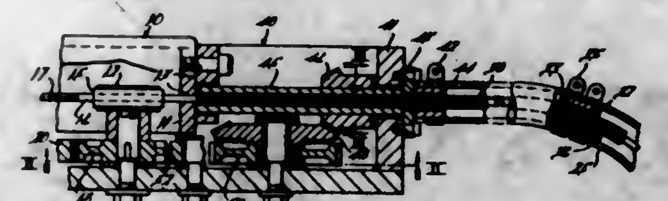


3,387,758
LOW JITTER WEB AND TAPE DRIVE
James F. Delany, Burlington, and Carl Lauxen, Haddonfield, N.J., assignors to Radio Corporation of America, a corporation of Delaware
Filed Nov. 12, 1965, Ser. No. 507,319
10 Claims. (Cl. 226—108)



There is disclosed a tape driving apparatus in which a tape to be driven is passed over two spaced drive rollers; each being driven at the same peripheral speed. Each drive roller has a pulley on it, and a belt passes over and around the two pulleys. The belt, and, therefore, the drive rollers and tape, is driven by a capstan around which the belt is partially wrapped by a pressure roller that presses against the belt without pinching the belt against the capstan.

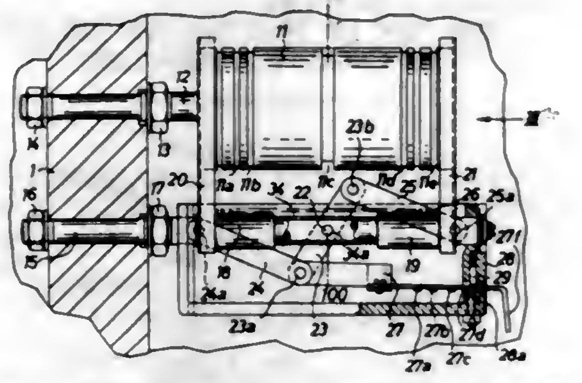
3,387,759
WIRE FEEDING MEANS
Ferdinand C. Stedman, 24605 Blackmar Drive, Warren, Mich. 48091
Continuation-in-part of application Ser. No. 579,879, Sept. 16, 1966. This application Feb. 24, 1967, Ser. No. 632,128
12 Claims. (Cl. 226—108)



In order to enable pushing a flexible wire through a bendable conduit with reduced friction and binding, the conduit includes a Bowden sheath which is rotated about its longitudinal axis in the conduit as the wire is fed therethrough. The helix angle of the wrapping of the Bowden sheath assists in feeding the wire. The power for rotating the sheath is derived from the same source which drives the feed rollers which exert pushing force on the wire. The disclosure also shows feed rolls for exerting a pulling force on the wire at the remote end of the sheath, such pulling rolls being either used to supplement the push-action feed rollers, and powered by the rotation of the sheath, or employed as the sole actuating agency, and powered by a conventional rotary cable drive.

3,387,760
APPARATUS FOR CENTERING BANDS OF LIGHT-SENSITIVE MATERIAL OR THE LIKE

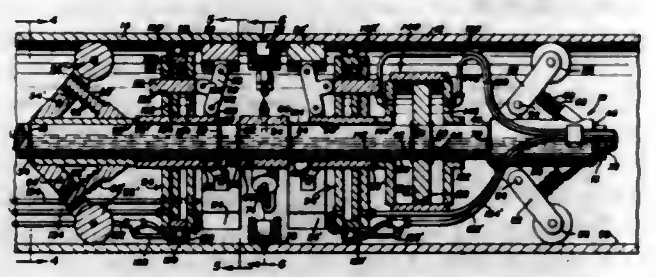
Roland Koehler and Wilhelm Baasner, Munich, Erich Nagel, Anzing, and Guenter Engelage, Unterhaching, Munich, Germany, assignors to Agfa-Gevaert Aktiengesellschaft, Leverkusen, Germany
Filed Dec. 15, 1966, Ser. No. 602,017
Claims priority, application Germany, Dec. 24, 1965,
A 51,176
27 Claims. (Cl. 226—198)



1. Apparatus for centering bands having different widths, particularly for centering bands of light-sensitive paper in photographic copying machines, comprising a pivot member; a two-armed lever turnably mounted on said pivot member; guide means extending at right angles to the axis of said pivot member; and a pair of band-engaging flanges disposed at the opposite sides of said pivot member and each articulately connected to one arm of said lever at the same distance from said pivot member, said flanges being movable along said guide means away from and toward each other to be placed into engagement with the respective edges of a band which is conveyed therebetween whereby the central longitudinal symmetry plane of the band includes the axis of said pivot member when the flanges engage the respective edges of the band.

3,387,761
INTERNAL ALIGNMENT CLAMP

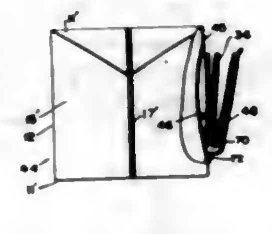
Kenneth L. Pickard, Bakersfield, Calif. (4930 Hazeltine Ave., Apt. 6, Sherman Oaks, Calif. 91403)
Filed Feb. 10, 1966, Ser. No. 526,453
15 Claims. (Cl. 228—42)



1. An internal alignment clamp adapted to be utilized in "pressure welding" a pair of generally end aligned and adjacent pipe sections together, said clamp comprising an elongated assembly defining a longitudinal center axis and adapted to be disposed within and overlap the adjacent ends of said sections, opposite end portions of said assembly including gripping means expandable generally radially outwardly of said center axis and adapted to frictionally grip the internal surfaces of said sections and axially align the said adjacent ends, said assembly also including roller means, spaced intermediate said gripping means journalled for rotation about an axis generally paralleling said center axis and mounted for swinging movement concentrically about said center axis so as to be adapted to rollingly engage the inner surfaces of said pipe sections in said adjacent ends thereof after the latter have been shifted into end abutted relation.

3,387,762
DISPENSING CONTAINER

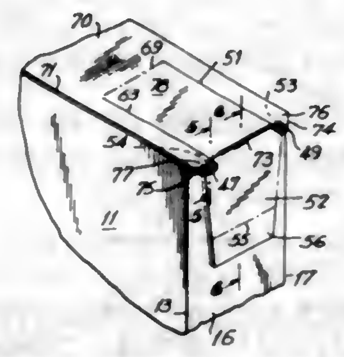
Francis J. Zupon, 7724 Louis Court, Garden City, Mich. 48135
Filed Oct. 21, 1965, Ser. No. 499,663
9 Claims. (Cl. 229—15)



An insert-receiving container for milk, cereals, soup or the like is disclosed which comprises a tubular container body having a top closure panel and a bottom closure panel on opposite ends thereof. The container body includes a side wall or panel in which is located a recess or pocket for receiving a text or pictorial-bearing unit. The side pocket is defined by said side wall or panel and an associated cover panel which overlies the side wall and is secured thereto to hold the insert in the pocket. When the container is opened for use, the side pocket may also be opened without destroying the container body to permit the text or pictorial-bearing unit to be withdrawn from the container body.

3,387,763
RECLOSABLE DISPENSING CONTAINER WITH SNAP LOCKING TOP TAB

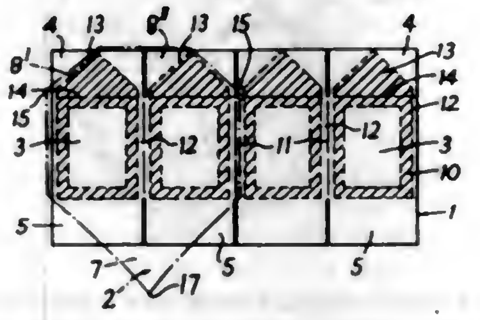
Stanley R. Koolnis, New York, N.Y., assignor to Lee Dreschler, Palisades, and Fred Zandell, New York, N.Y.
Continuation-in-part of application Ser. No. 516,058, Dec. 23, 1965. This application Oct. 23, 1967, Ser. No. 677,350
5 Claims. (Cl. 229—17)



This invention relates essentially to a reclosable container including a top wall comprising an inner and outer panel adhesively secured at select locations, a pair of spaced retainers projecting from said top wall and a tab extending from the outer panel of said top wall, whereby the container may be reclosed after initial opening by the positioning of the said tab between said pair of spaced retainers.

3,387,764
PACKAGING CONTAINER

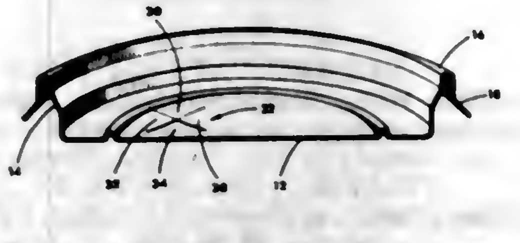
Gerald V. Forrest, Thurlaston Holt, Thurlaston, England
Filed Apr. 14, 1967, Ser. No. 630,975
4 Claims. (Cl. 229—37)



A packaging container comprising an outer carton with an inner lining bag, the latter being shaped at one end and being gummed to end flaps of the carton so that the material is positively guided and folded when the carton is closed, and the bag being shaped at the other end so that it can be positively folded down and disposed and stowed at the bottom of the container when end flaps of the carton are closed at this bottom. The bag is gummed to the side walls of the carton so that it can be collapsed and erected with the latter.

3,387,765
VENT OPENING

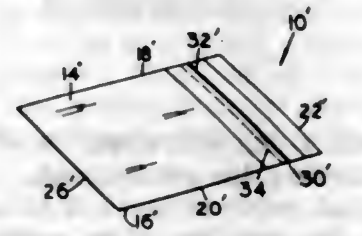
Paul Davis, Swampscott, Mass., assignor to Sweetheart Plastics, Wilmington, Mass., a corporation of Massachusetts
Filed Mar. 23, 1967, Ser. No. 625,455
4 Claims. (Cl. 229—43)



A self-sealing vent in a disposable plastic cover, which is defined by at least two intersecting cuts that define a tab displaced from the wall of the cover in which it is formed.

3,387,766
PLASTIC BAGS

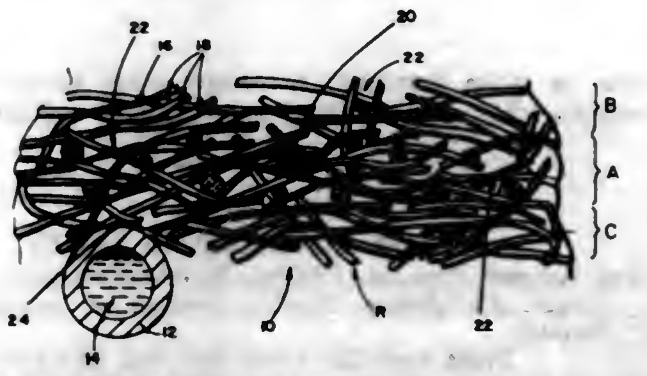
Emanuel Kugler, 124 Richmond Place, Lawrence, N.Y. 11559
Filed Sept. 2, 1966, Ser. No. 577,005
1 Claim. (Cl. 229—62)



A plastic bag having a product completely sealed therein and a gripping member so attached to a bag wall that the user holding the bag against movement with one hand and, with the other hand, manipulating the gripping member through movement ruptures the bag wall in a prescribed area to thereby provide an access opening into the bag. In a preferred embodiment a line of perforations is provided in the prescribed area so that the access opening occurs along the line of perforations.

3,387,767
HIGH VACUUM PUMP WITH CRYOSORPTION PUMPING ELEMENT

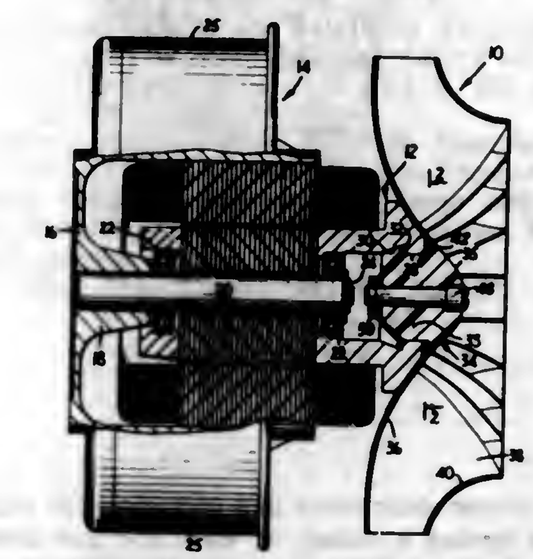
Richard Hecht, Waltham, Mass., assignor to National Research Corporation, Newton Highlands, Mass., a corporation of Massachusetts
Filed Dec. 7, 1966, Ser. No. 599,907
5 Claims. (Cl. 230—69)



A cryosorption vacuum pump element with a porous mass of sintered fibers forming tunnels and dispersed sorbent powders in the tunnels.

3,387,768
FASTENER

Gunther Zochfeld, West Hurley, N.Y., assignor to Rotron Manufacturing Company, Inc., Woodstock, N.Y., a corporation of New York
Filed Apr. 8, 1966, Ser. No. 541,328
8 Claims. (Cl. 230—117)

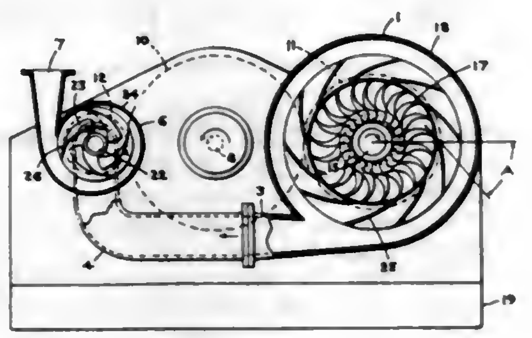


This improvement in fasteners provides means for removably attaching one member in a blind hole in a second member with a predetermined force through the utilization of a conical spring clip, the legs of which are cammed outward into a rearwardly facing shoulder portion of the first member.

3,387,769
MULTISTAGE TURBOMACHINE

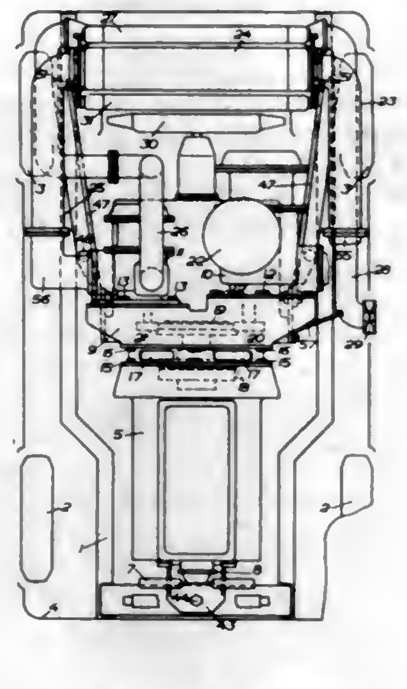
Hunt Davis, Williamsville, N.Y., assignor to Worthington Corporation, Harrison, N.J., a corporation of Delaware
Filed Oct. 3, 1966, Ser. No. 583,743
1 Claim. (Cl. 230—130)

A centrifugal multistage rotary fluid handling device which produces an overall pressure vs. flow characteristic of the normally desired negative slope, wherein a low speed impeller of low inlet fluid energy requirements, but of head capability increasing with flow, is combined with one or more dominant successive stage elements which require this type of head capability as an inlet boost.



3,387,770
MOTOR COMPRESSOR UNITS

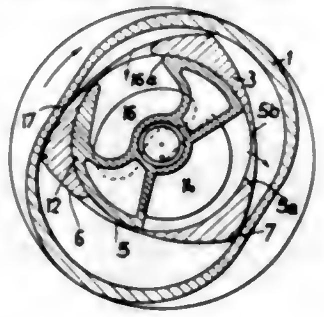
Jan Edvard Persson, Ektorp, Sweden, assignor to Atlas Copco Aktiebolag, Nacka, Sweden, a corporation of Sweden
Filed June 23, 1966, Ser. No. 564,476
8 Claims. (Cl. 230—139)



1. A motor compressor unit comprising in combination a motor having a casing, at least first and second compressors having casings, a power transmission casing between said motor casing and said compressor casings; means for flanging and rigidly securing said power transmission casing to said motor casing, means for flanging and rigidly securing said compressor casings to the transmission casing, a fluid cooling apparatus, fluid conduits extending between said casings and said cooling apparatus, a main frame, a first resilient supporting means on said frame for supporting a portion of the motor casing remote from the transmission casing on said first supporting means, a pair of second resilient supporting means on the main frame, and a pair of elongated members flexibly supported between their ends one on each of said pair of second supporting means, one end of said elongated members being pivotally connected to the transmission casing and the other end being flexibly connected to said cooling apparatus to support the cooling apparatus.

3,387,771
ROTARY PISTON COMPRESSOR

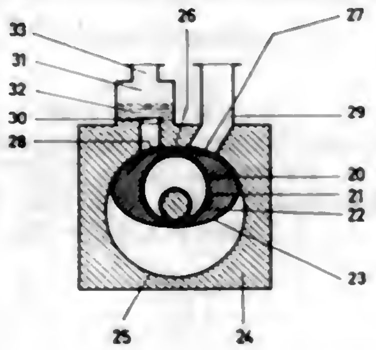
Friedrich Lück, Berlin, Germany, assignor to Borsig Aktiengesellschaft, Berlin, and Wankel GmbH., Lindau (Bodensee), Germany
Filed July 5, 1966, Ser. No. 562,797
Claims priority, application Germany, July 8, 1965, B 82,730
5 Claims. (Cl. 230—141)



1. A rotary piston compressor, which includes: an outer rotary piston having its inner wall surface shaped in conformity with a trochoid, an inner rotary piston rotatably arranged in and eccentrically located relative to said outer rotary piston and having its outer peripheral surface shaped in conformity with the contour of enveloping curves so as to form a plurality of surface sections with each two adjacent surface sections intersecting each other along a line so as to form a ridge, the said surface sections together with the respective adjacent inner wall surface portions of said outer rotary piston defining portions of working chambers, the peripheral wall of said inner rotary piston being provided with a plurality of passage means respectively located between said ridges and when looking in the direction of rotation of said inner rotary piston being located closer to that ridge which is in front of the respective passage means than that ridge which is behind the respective passage means, and stationary insert means provided with fluid inlet and outlet means and operable successively to communicate with said passage means.

3,387,772
ROTARY VACUUM PUMP

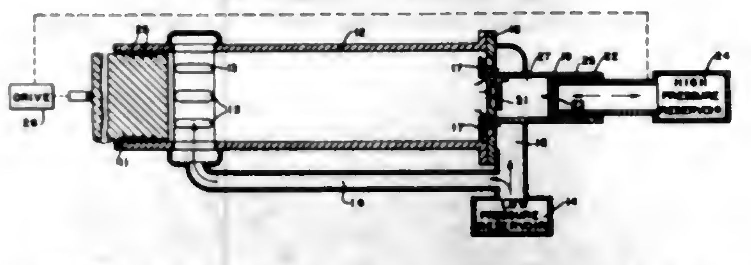
Maximilian Wutz, Bruchkoebel, near Hanau am Main, Germany, assignor, by mesne assignments, to Leybold-Heraeus GmbH & Co., Cologne, Germany
Filed Feb. 1, 1966, Ser. No. 524,310
Claims priority, application Germany, Feb. 4, 1965, H 55,056
5 Claims. (Cl. 230—145)



In a vacuum pump with a rotor revolving about a fixed point in a housing, the outer contour of the rotor being a hypotrochoid and the inner wall of the housing having the contour of an envelope of the revolving rotor contour. The housing wall contour has a fixed point contacting a point of the revolving rotor at all times, with an oil seal between the rotor surface and the fixed housing wall point separating the inlet from the outlet port.

3,387,773
THERMODYNAMIC PROCESS AND APPARATUS

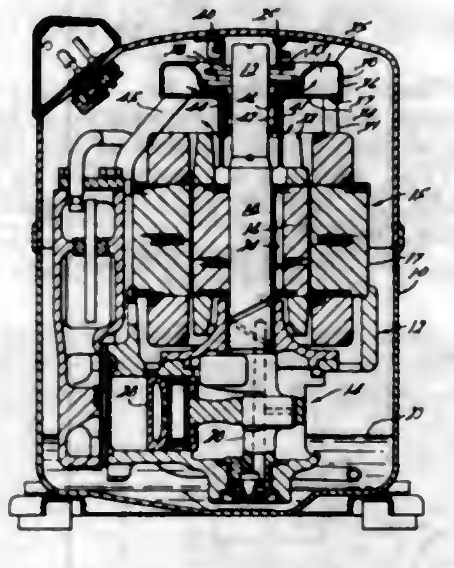
Henry de Beaumont, Nazelles, France, assignor to Societe pour l'Utilisation Rationnelle des Fluides
Filed June 28, 1966, Ser. No. 561,209
Claims priority, application France, July 8, 1965, 23,869
42 Claims. (Cl. 230—172)



Disclosed is a method of compressing gases at a velocity in excess of the thermic wave front velocity of the gas. Compression is attained by selectively feeding low pressure gas into a cylinder having a piston driven with the velocity greater than the thermic wave velocity of the gas. One embodiment includes a pair of reciprocally driven pistons in separate cylinders, while another embodiment includes a single piston and cylinder. The compressor is disclosed as functioning in conjunction with a motor drive means and a refrigeration system.

3,387,774
MEANS FOR INHIBITING NOISE AND SLUGGING IN REFRIGERANT COMPRESSORS

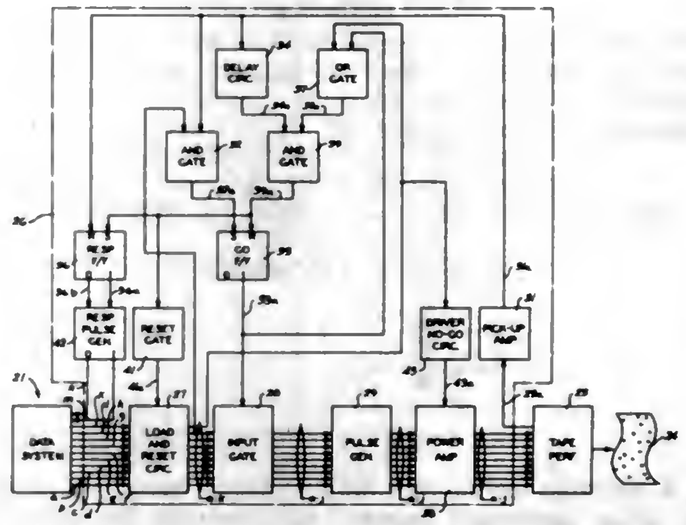
Edwin L. Gannaway, Sidney, and Doyle K. Iiams, Fort Loramie, Ohio, assignors to Copeland Refrigeration Corporation, Sidney, Ohio, a corporation of Michigan
Filed Nov. 21, 1966, Ser. No. 595,762
12 Claims. (Cl. 230—232)



A combined noise muffling and slug rejecting assembly is disclosed herein, installed in a gas compressor of the type which is direct-driven by an electric motor. Said assembly consists of a stationary housing of hollow annular form surrounding and radially outspaced from an extension shaft portion of the motor. The annular muffling chamber has an outlet connected to the inlet of the compressor, and has an annular inlet directed toward the armature and located in an area where a vortex is created by the rotating armature. Said inlet also includes elongated passage means leading into the annular muffling chamber. The principal path of access of gas to such inlet is via the space between the shaft extension and the muffler, whereby entrained nongaseous components are thrown into the vortex and away from the inlet, but the major gas flow is not required to flow through rotary parts. Both the inlet and the outlet of the chamber are so located and directed as to reduce transmission of noise to the exterior.

3,387,775
CONVERTER FOR TAPE PERFORATOR

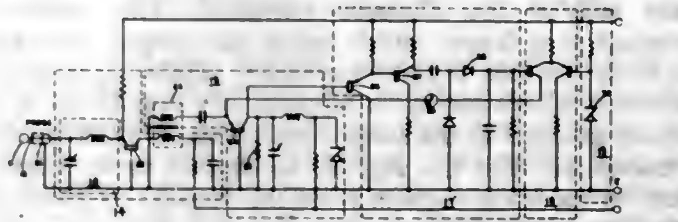
David L. Wiggins, Franklin County, Ohio, assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed July 7, 1965, Ser. No. 470,112
35 Claims. (Cl. 234—20)



An interface electrical circuit is connected between a data processing system and a tape perforator for holding potential levels, appearing on output terminals of the data processing unit in the form of coded intelligence, for a period sufficient to permit the tape perforator to reach an intelligence receptive mood and to punch a tape in accordance with the coded intelligence while passing through this mood. The interface circuit also includes release facilities for releasing the held potential levels after the punching operation and to indicate to the data processing system that the tape perforator is available for the reception of additional coded intelligence for the next punching operation.

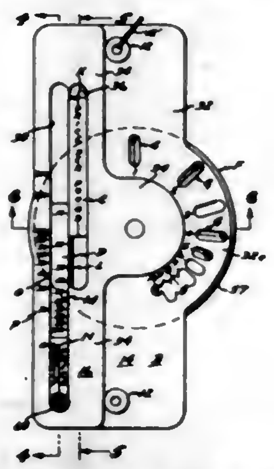
3,387,776
GAUGING DEVICE INCLUDING FEEDBACK MEANS APPLYING A SIGNAL COMPARISON MEANS TO CONTROL THE LEVEL OF A DETECTED SIGNAL

Peter Frederic Thomas Cryer Stillwell, Aldershot, John Denzil Barr, Leicester, and Thomas Charles Reeve, Worthing, England, assignors, by mesne assignments, to The Rank Organisation Limited, London, England, a British company
Filed Aug. 7, 1964, Ser. No. 388,197
11 Claims. (Cl. 324—61)



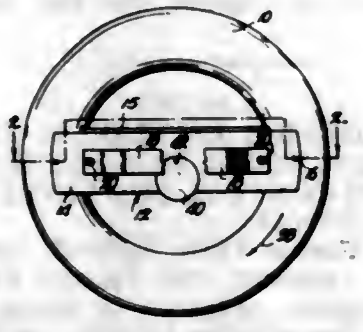
This invention is an apparatus for measuring the surface irregularities of a workpiece. An oscillator is connected to the workpiece and a signal from the oscillator is detected by a probe mounted adjacent to the workpiece. The probe signal is applied through appropriate amplifiers and detectors to a comparator. A reference generator applies a second signal to the comparator and the output of the comparator is fed back through an output display to control the amplification of a variable amplifier connected between the probe and the detector. The feedback signal is directly related to the surface irregularities of the workpiece. Alternate embodiments of the invention include connecting the variable amplifier between the oscillator and the workpiece and connecting the output display to the workpiece rather than the feedback circuit.

3,387,777
TRUE PRICE INDICATOR
Burdette G. Winn, Los Angeles, Calif. (Box 362, 3270 Firestone Blvd., South Gate, Calif. 90280)
Filed Apr. 21, 1967, Ser. No. 632,683
6 Claims. (Cl. 235—70)



A portable device that may be easily used by a shopper or other interested person, to compute the price per pound of merchandise when the merchandise is offered for sale in single or multiple units of known weight, and also used by a retailer to determine the shelf price of units to yield a predetermined price per pound when sold.

3,387,778
ROLLING HOOP TOY
Edgar C. Althaus, Kansas City, Mo. (2809 Pennsylvania NE., Albuquerque, N. Mex. 87110)
Filed Oct. 21, 1965, Ser. No. 502,778
12 Claims. (Cl. 235—95)



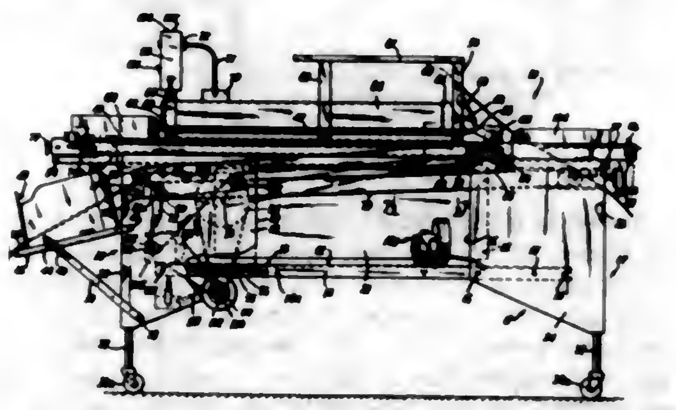
A rolling hoop toy has a counting register which will automatically and accurately count and register the number of revolutions (and fractions of a revolution) of the hoop and/or the distance travelled. The register is mounted in a frame which spans the central opening of the hoop and has a gravity-oriented pendulum associated therewith which serves to advance the register in a continuous manner as the hoop rolls along. A locking means is associated with the register to disable same when the plane of the hoop departs from the vertical by more than a predetermined amount.

ERRATUM

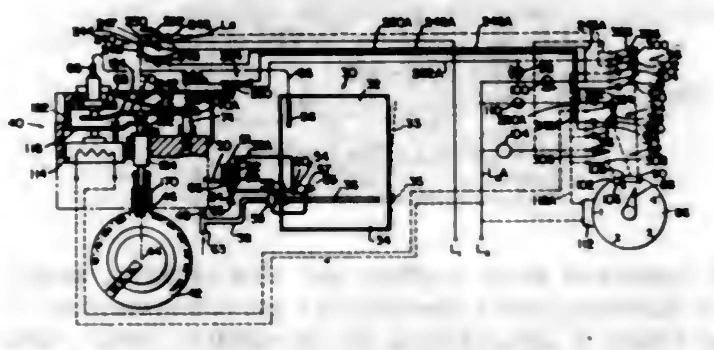
For Class 235—100 see:
Patent No. 3,388,238

3,387,779
PAPER-HANDLING MACHINES
Robert N. Steffens, Essex Fells, N.J., assignor to The Cronite Co., Inc., North Bergen, N.J., a corporation of New York
Filed Oct. 20, 1965, Ser. No. 498,848
16 Claims. (Cl. 263—6)

1. In combination, a support, means on said support to convey articles from one location in one direction to a second location, means on said support to convey articles received from said conveying means at said second location, in an opposite direction back to a place near said first location and means at said place to receive said articles from said second mentioned conveying means, means to transfer said articles from said first mentioned conveying means to said second mentioned conveying means at said second location, and means to transfer said articles from said second mentioned conveying means to said receiving means, said first mentioned conveying means being superimposed over said second mentioned conveying means in longitudinal alignment therewith, said first and second mentioned conveying means each comprising a single conveyor belt, drive means to move said belt of the first mentioned conveying means only in one direction and the belt of the second mentioned conveying means only in an opposite direction, the delivery end of the belt of said first mentioned conveying means terminating short of the receiving end of the belt of the second conveying means.

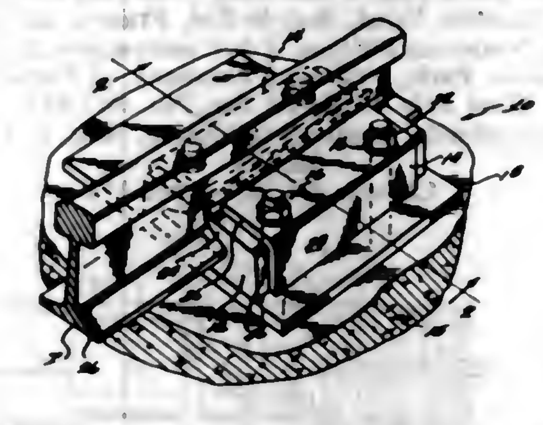


3,387,780
CLEARING TIMER SYSTEM FOR OVEN CONTROLS
James R. Willson, Greensburg, Pa., assignor to Robertshaw Controls Company, a corporation of Delaware
Continuation of abandoned application Ser. No. 416,184, Nov. 23, 1964, which is a continuation of application Ser. No. 125,138, July 19, 1961. This application Apr. 10, 1967, Ser. No. 629,829
29 Claims. (Cl. 236—46)



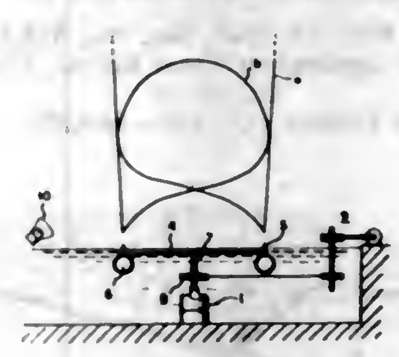
This disclosure relates to a control means that can be manually set to tend to maintain the temperature effect of a heating means at a selected temperature effect until a heat motor of the control device is activated whereby the activated heat motor will automatically adjust the control device to tend to maintain a second temperature effect of the heating means until the manual manipulator means of the control device is moved to its off position, the manual manipulator means of the control device is moved to its off position, the manual manipulator means of the control device is moved to its off position, the manual manipulator means of the control device being adapted to set the control device in its off position to stop the operation of the heating means before and after the heat motor has adjusted the control device to the different temperature setting thereof.

3,387,781
RAIL ANCHOR AND RAIL SEAT CONSTRUCTION
Nelson K. Moses, Ashtabula, Ohio, and Robert A. McClung, West Palm Beach, Fla., assignors to Railroad Rubber Products, Inc., Ashtabula, Ohio, a corporation of Florida
Filed Nov. 23, 1966, Ser. No. 596,659
10 Claims. (Cl. 238—283)



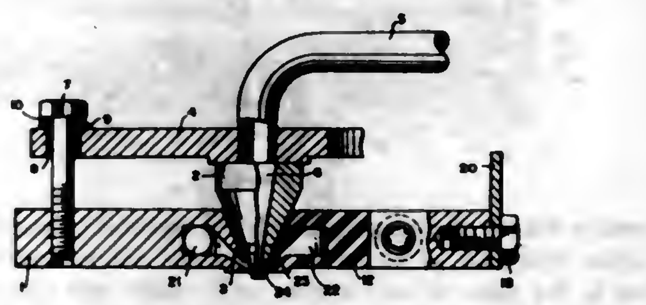
An improved rail anchor and seat construction is described wherein a preformed resilient rail seat receives and supports the base flanges of a traction rail on a supporting structure, and the resilient rail seat and traction rail are secured to the supporting structure by a combination of bolt means and angle-shaped plates which confine the marginal edges of the resilient rail seat so that there is no cold flow or displacement of the resilient rail seat outwardly from the traction rail when the bolt means are drawn down tightly for anchoring the resilient rail seat and the traction rail relative to the supporting structure. The angle-shaped plates each have a first leg arranged to overlie a marginal lip portion of the resilient rail seat, and a second leg overlies substantially all of a longitudinally extending side wall portion of the resilient rail seat.

3,387,782
APPARATUS FOR PRODUCING A FOUNTAIN INCLUDING A STROBOSCOPIC LIGHT
Shozo Mizuno, Tokyo, Japan, assignor to Kurita Industrial Co., Ltd., Osaka-shi, Japan, a corporation of Japan
Continuation of abandoned application Ser. No. 414,783, Nov. 30, 1964. This application Mar. 8, 1967, Ser. No. 621,709
Claims priority, application Japan, Dec. 6, 1963, 38/65,292; Feb. 29, 1964, 39/11,004
15 Claims. (Cl. 239—20)



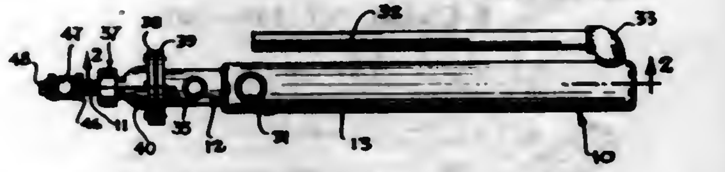
An apparatus for producing a fountain, comprising a liquid containing open topped tank, a jetting nozzle having at least one jet nozzle thereon, a liquid immersible pump at the bottom of said tank and on which said jetting nozzle member is mounted at a level above the level of the surface of the liquid in the tank, said pump having a pumping capacity sufficient for pumping a stream of liquid from the bottom of the tank through said jet nozzle to a height high enough to form a liquid curtain, means acting on said jetting nozzle member to give to said stream a periodic motion, whereby a curtain of liquid is formed, and a stroboscopic light positioned laterally of the jetting nozzle a distance sufficient to enable it to be directed toward the curtain of liquid to shine on the outside surface of the configuration of the curtain of liquid, said light being directed toward and illuminating said liquid curtain after it has left the jet nozzle.

3,387,783
APPARATUS FOR ATOMIZING MOLTEN SOLIDS
Rolf Schellenberg, Mannheim, and Karl-Heinz Nitzschke, Ludwigshafen (Rhine), Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Rheinland-Pfalz, Germany
Filed Nov. 15, 1965, Ser. No. 507,837
Claims priority, application Germany, Nov. 18, 1964, B 79,395
2 Claims. (Cl. 239—81)



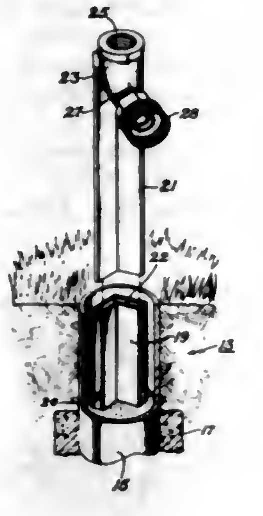
Apparatus for atomizing a liquid such as a molten salt or metal by means of compressed gas, consisting of a disk-shaped nozzle casing and a nozzle member pressed onto the casing by means of a support. Spacer ring insulates the nozzle casing from the nozzle member. Nozzle casing is provided with a radial slit and constructed as an induction coil. Electric high-frequency current is supplied to the nozzle casing to heat the nozzle member by induction.

3,387,784
BURNER FOR FLUID FUELS
Bert G. Ward, Jr., Niles, Ill., assignor to Chemetron Corporation, Chicago, Ill., a corporation of Delaware
Continuation of application Ser. No. 240,095, Nov. 26, 1962. This application Oct. 27, 1966, Ser. No. 590,096
7 Claims. (Cl. 239—132.3)



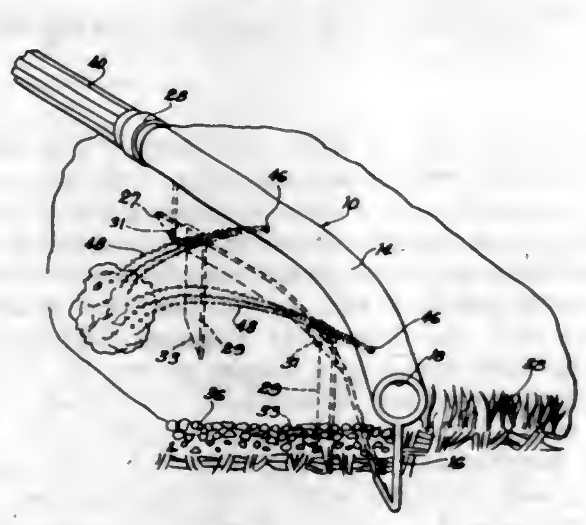
1. A burner for burning combustible fluid fuels in large volumes with minimum noise comprising a first central chamber and a second chamber adjacent and concentric with said first chamber, combustible fluid fuel and oxidizing gas inlet means independently communicating with said first and second chambers at one end of each said chambers, said chambers opening away from said inlet means in a nozzle portion for delivering a fluid fuel stream and an oxidizing gas stream, a plurality of tubular members disposed in said second chamber in longitudinal alignment with said chamber and forming with the outer wall of said first chamber a first concentric row of a plurality of triangular spaces between said tubular members and said wall in the nozzle portion as well as a second concentric row of triangular spaces defined between outer surfaces of said tubular members spaced from said first row triangular spaces, said tubular members constructed and arranged in said second chamber to permit passage of one of said streams through said tubular members and all of said triangular spaces and cooling means associated with said chambers to cool said nozzle portion.

3,387,785
LAWN SPRINKLING APPARATUS AND SYSTEMS
Clifford Jaggers, 3959 Angus Drive,
Fort Worth, Tex. 76116
Filed June 29, 1966, Ser. No. 561,439
4 Claims. (Cl. 239—200)



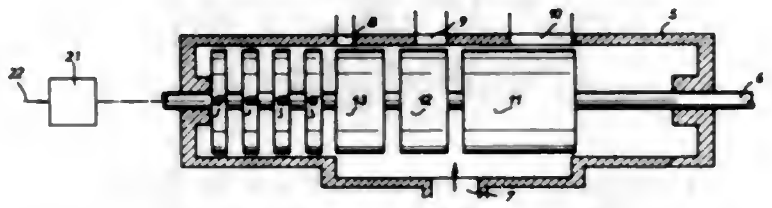
Following is disclosed apparatus for irrigation consisting of a tubular housing which encloses a slotted sprinkler pedestal receiver that receives a sprinkler pedestal to position a sprinkler head. The geometric relationship between sprinkler pedestal and the pedestal receiver prevents unintentional movement of the pedestal. Onto an upper portion of the pedestal is secured a connection means having a threaded collar to receive a conduit such as a garden hose and a threaded portion to receive the sprinkler head.

3,387,786
DIVIDER AND SPRINKLER COMBINATION
Robert W. Rynberk, 4347 W. 109th St.,
Oak Lawn, Ill. 60453
Continuation-in-part of application Ser. No. 450,663, Apr. 26, 1965. This application Jan. 17, 1967, Ser. No. 609,818
8 Claims. (Cl. 239—201



A divider for landscaping including a water conducting upper section with openings for sprinkling water on the ground, and including means for connecting several sections together. A downwardly extending flange is formed along the length of the upper section and projecting means may be associated with the lower edge of the flange to facilitate securing of the divider in the ground. The flange serves as a barrier to the growth of grass roots and the like beyond the divider.

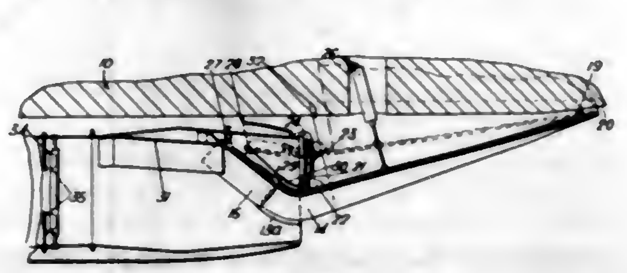
3,387,787
ARRANGEMENT FOR CONTROLLING THE DEFLECTION OF A JET STREAM EMITTED BY A NOZZLE
Don Pierre Louis Jean Colonbani, Versailles, and Adolphe Otton Gontier Ernst, Bois-le-Roi, France, assignors to Societe Nationale d'Étude et de Construction de Moteurs d'Aviation, Paris, France, a company of France
Filed July 25, 1966, Ser. No. 567,619
Claims priority, application France, Aug. 2, 1965, 26,953
6 Claims. (Cl. 239—265.17)



1. In combination with a main nozzle for ejecting a fluid jet stream, a device for deflecting the said jet stream by the transverse injection of pressurized liquid, such device including:

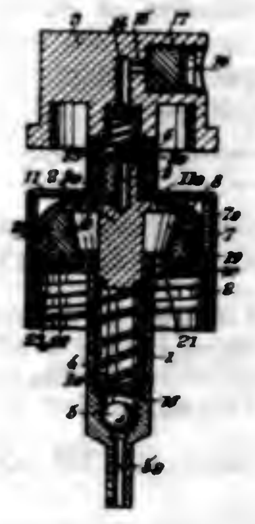
a source of pressurized liquid,
a plurality of manifold means,
means connecting said manifold means in parallel and to said source,
an "on-off" type valve means in the connecting means between each of said manifold means and the said source,
and nozzle means arranged on said manifold means and having port in the said main nozzle in a direction which is transverse in relation to the axis of this main nozzle, these nozzle means being distributed over the said manifold means in such a manner that the sections of injection of the respective manifold means are arranged according to successive powers of two.

3,387,788
EXHAUST NOZZLES
David Morris Brown, Allestree, Derby, England, assignor to Rolls-Royce Limited, Derby, England, a British company
Filed Feb. 17, 1966, Ser. No. 528,136
Claims priority, application Great Britain, Mar. 15, 1965, 10,964/65
4 Claims. (Cl. 239—265.37)



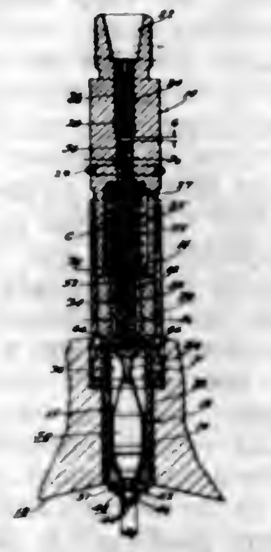
A gas turbine jet propulsion engine exhaust nozzle, the exhaust gas expansion control surface comprising at least one flap having a portion extending externally of the nozzle outlet area into one side thereof, the protruding flap having its surface facing away from the axis of the nozzle unexposed to ambient air, the flap being movable in conjunction with another axially overlapping flap positioned internally of the nozzle so as to vary the nozzle outlet area and define a variable throat thereat.

3,387,789
ATOMIZER PUMP ASSEMBLIES
René G. Fedit and Marcel Janodet, Paris, France, assignors to Les Vaporisateurs Marcel Franck, Paris, France
Filed Mar. 17, 1965, Ser. No. 440,484
Claims priority, application France, Mar. 19, 1964, 967,992
5 Claims. (Cl. 239—333)



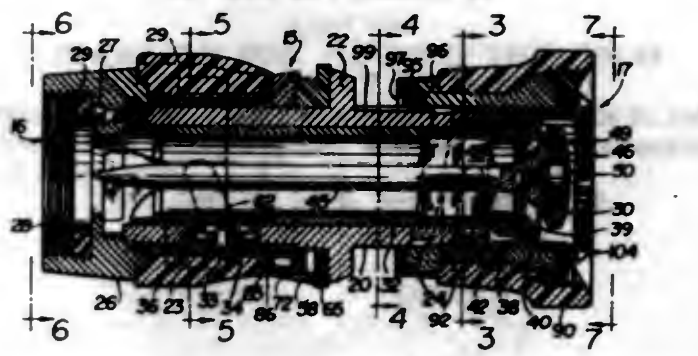
An atomizer pump to be mounted on a container of liquid to be atomized and having a plunger slidable in a cylinder. Said plunger has a liquid passage extending therethrough with a check valve at its outlet end. Said passage has its inlet end opening into the side wall of said plunger under the inner edge of a flexible fluid tight annular membrane which acts as a valve between the inside of the container and the passage.

3,387,790
FUEL INJECTION NOZZLE
Frank De Luca, Thompsonville, Conn., assignor to American Bosch Arms Corporation, Springfield, Mass., a corporation of New York
Continuation-in-part of abandoned application Ser. No. 561,489, June 29, 1966. This application Apr. 11, 1967, Ser. No. 633,666
11 Claims. (Cl. 239—453)



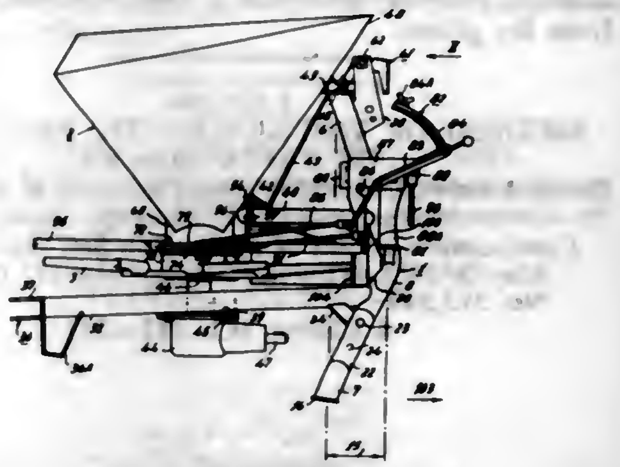
A fuel injection nozzle assembly comprising a holder, a nozzle mounted at one axial end of the holder having a bore defining a fuel chamber and a valve member mounted for axial movement in the bore of the nozzle. The assembly further includes a plug threadedly mounted in the holder and a stem spaced from the plug to adjust valve lift and spring biasing means in the holder for normally seating the valve in a closed position. The stem and valve have axially extending bores therein so that fuel from the inlet in the holder passes through to the fuel chamber surrounding the valve at the lower end of the nozzle. The tail section of the valve has a pair of angled fuel passageways which connect with the fuel chamber and the axial bore in the tail section of the valve.

3,387,791
NOZZLE
George G. Allenbaugh, Jr., Rittman, Ohio, assignor to Akron Brass Company
Filed Oct. 14, 1965, Ser. No. 495,968
16 Claims. (Cl. 239—458)



A constant gallonage fire-fighting nozzle in which either the gallonage or the stream pattern can be adjusted without changing the other. The nozzle can be shut off at its outlet, and can be flushed without shutdown. In a fog adjustment a freely rotating annular turbine at the outlet disperses water.

3,387,792
IMPLEMENT FOR SPREADING POWDERY OR GRANULAR MATERIAL
Cornelis van der Lely, 7 Bruschenrain, Zug, Switzerland, and Ary van der Lely, 10 Weverskade, Maasland, Netherlands
Continuation-in-part of application Ser. No. 318,968, Oct. 25, 1963. This application July 21, 1966, Ser. No. 566,933
5 Claims. (Cl. 239—688)



1. An implement for spreading powdery or granular material comprising a frame, a hopper for said material mounted on the frame, a rotary spreading member on the frame below said hopper, said hopper having a discharge opening communicating with said spreading member, said frame comprising a substantially V-shaped frame portion, arranged underneath said spreading member, linkage means on said frame for coupling the implement to the hydraulic lifting device of a tractor, said V-shaped frame portion having frame beams diverging into the intended direction of travel of the implement, the frame being supported when not coupled to the lifting device of the tractor, on three supports arranged below said frame, two foremost supports being arranged at or near the foremost end of said V-shaped frame portion, each of said foremost supports having a foot which is in top view at least partly outside of said V-shaped

frame portion, so as to obtain a stable support for said implement.

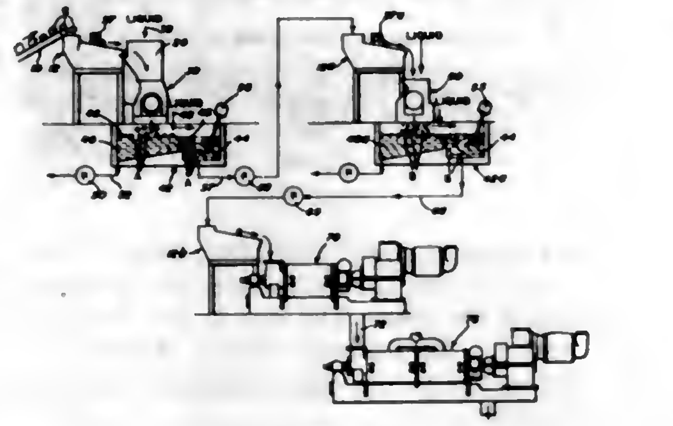
3,387,793

PROCESS AND SYSTEM FOR TREATING RUBBER

Andre H. Burner, deceased, late of Piqua, Ohio, by Jean M. Burner, executrix, Piqua, Ohio, assignor to The French Oil Mill Machinery Company, Piqua, Ohio, a corporation of Ohio

Filed Nov. 4, 1965, Ser. No. 506,623

13 Claims. (Cl. 241—20)



Coagulated chunks of rubber are shredded into smaller pieces to release embedded foreign objects, the pieces are collected within a chamber containing sufficient liquid to enable the foreign objects to settle and the pieces to float off in the form of a slurry into a second chamber where the slurry is agitated to remove foreign particles from the surface of the pieces, the liquid is drained from the slurry, and the pieces are pressed with progressively increasing pressure to remove a high percentage of liquid from the pieces.

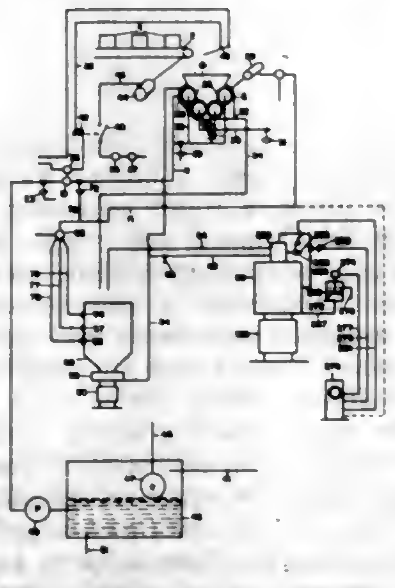
3,387,794

METHOD OF THE AUTOMATIC PROCESSING OF PAPER STOCKS

Howard Bidwell, Granby, Mass., assignor of fifty percent to Rachel Bidwell, Granby, Mass.

Continuation-in-part of application Ser. No. 118,756, May 5, 1961. This application Oct. 11, 1963, Ser. No. 315,589

4 Claims. (Cl. 241—21)



4. An automated method of preparing paper stock in a preconditioning phase comprising the steps,

controlling the input flow of predetermined-quantity charges of unrefined bulk fibrous material and the simultaneous input flow of predetermined-quantity charges of liquid by the metering of the flow of the latter for effecting a flow variance of the former to realize and maintain a predetermined fiber-to-liquid ratio,

and reducing the so-proportioned fiber-to-liquid mass to a continuously-flowing stock slurry of a selected density value reflective of the intial fiber-to-liquid ratio metering and at a rate responsive to the demand of the system to which the so-reduced stock slurry is to be delivered.

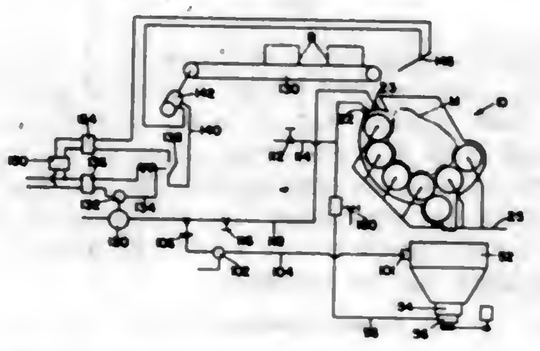
3,387,795

APPARATUS FOR THE PROCESSING OF FIBROUS AND OTHER MATERIALS INCLUDING PAPER STOCKS

Howard Bidwell, 56 Aldrich St., Granby, Mass. 01033

Continuation-in-part of application Ser. No. 118,756, May 5, 1961. This application Oct. 5, 1965, Ser. No. 493,009

9 Claims. (Cl. 241—34)



Bulk fibrous material preparing apparatus including primary and secondary components, the primary component having a bundle-receiving vessel with a make-up liquid inlet and a slurry recirculating inlet and a blended fiber slurry outlet, the vessel containing in journalled relationship therein a plurality of arcuately-arranged tandem-aligned parallel-disposed porous granular-bodied material loosening and moistening rolls augmented with a fiber dispersion roll, all rolls being companionably matched with pyramidally-shaped working-surface projections circumferentially arranged for the close-clearance counter-directional nip offset intermeshing of the rolls at substantially different rotative speeds of each adjacent roll for supplying the secondary component with a dispersed fiber slurry flow, the secondary component having a receiving vessel provided with porous granular-bodied type companionably matched stator and rotor surface configured flow influencing fiber-individualizing and moisture-saturating elements, the rotor element being of a non-fixed free-floating self-adjusting type positionally responsive to unbalanced hydraulic side thrust pressure conditions caused by slurry discharge back pressures during normal operation for variably pressurizing fibers caused to flow between the opposed stator and rotor working surfaces according to the effective hydraulic head the so-processed fiber slurry discharged in the normal delivery of the slurry to an elevated point for diverting a portion thereof for refining purposes as required and for returning the remaining portion to the primary component for recirculating and mixing with new liquid and new fibrous material for continued adequate moistening of the bulk material as loosened by the intermeshing rolls and for blending the so-moistened and so-separated fibers within the circulating slurry in a uniform dispersed condition for supplying the secondary component and maintaining a substantially constant slurry level within the vessel of the secondary component.

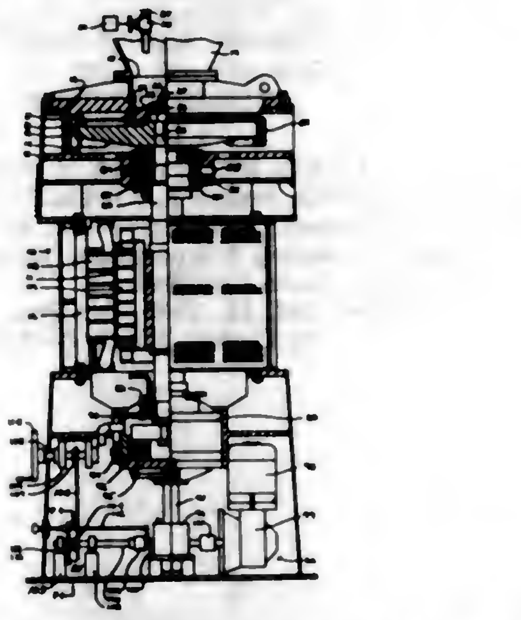
3,387,796

DEFIBRATING DEVICE

Alexander D. Cormack and Martin O. Saltarelli, Pittsfield, James Blair Scott, Lenox, and Cho Yee Young, Lanesboro, Mass., assignors to Jones Division, Beloit Corporation, Pittsfield, Mass., a corporation of Wisconsin

Filed Feb. 4, 1965, Ser. No. 430,437

6 Claims. (Cl. 241—43)



A mechanical pulping and defibrating device comprising a generally cylindrical housing having means associated therewith for introducing a defibrating fluid. Also mounted within the housing is a pair of horizontally arranged upper and lower defibrating discs spaced from one another in such a manner as to define a prebreaking zone, an intermediate defibrating zone and a final material defibrating and refining zone. The inlet of the defibrating apparatus is vented to atmosphere to allow steam pressure, which may be generated between the defibrating discs, to escape through the inlet thereby allowing the stock delivered to the inlet to flow freely therethrough to the defibrating discs. The rotatable defibrating disc is connected directly to the output shaft of a motor which is mounted within the main body of the defibrating apparatus. The motor stater is fixed in position while the motor rotor, as well as the shaft and the rotatable disc, is actually shiftable to adjust the position of the rotatable defibrating disc relative to the stationary defibrating disc.

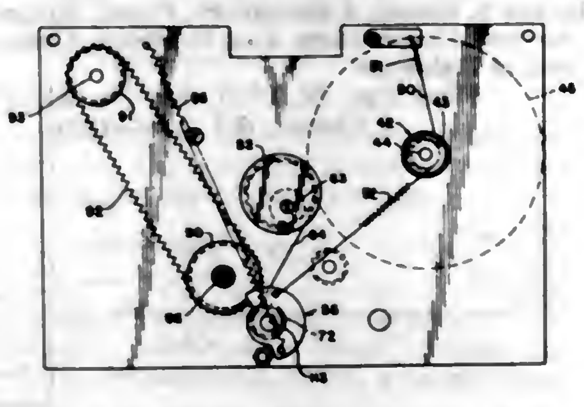
3,387,797

TAPE RECORDER

Henry A. Rahmel, Evanston, and William L. Grube, Northbrook, Ill., assignors to A. C. Nielsen Company, Evanston, Ill., a corporation of Delaware

Filed Oct. 22, 1965, Ser. No. 501,360

22 Claims. (Cl. 242—55.11)



A wave signal receiver monitor is provided with means for recording the indicia on a tape reel. A constant torque clutch for the tape reel is provided to pretension the tape and obtain uniformly accurate spacings of the recorded characters. A step by step advance of the tape is accomplished through an eccentric and ratchet wheel arrangement. A takeup spindle for the tape cartridge is slightly overdriven. Moreover a tension release mechanism for the tape recorder is provided during the cutting and removal of the recorded tape and suitable means are provided for cutting the tape and winding the recorded tape on a tape cartridge. To facilitate the changing of the tape cartridges, a self-feeding cartridge is provided.

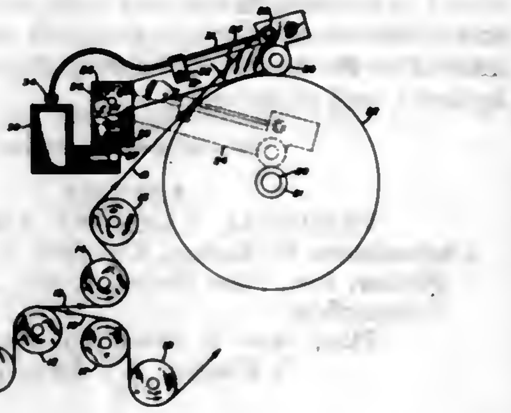
3,387,798

APPARATUS FOR WINDING THIN FILM INTO A ROLL AT HIGH SPEED

Roger W. Young, Upper Montclair, N.J., assignor to John Dusenbery Company, Inc., Clifton, N.J., a corporation of New Jersey

Filed Jan. 19, 1966, Ser. No. 521,663

11 Claims. (Cl. 242—67.1)



A pivotally-mounted arm carries a contact roller which engages a strip of film as the film is wound onto a rotating core. The arm also carries a hollow, tubular, air-permeable member connected to a source of air under pressure, the strip of film passing over the tubular member as it moves to the core.

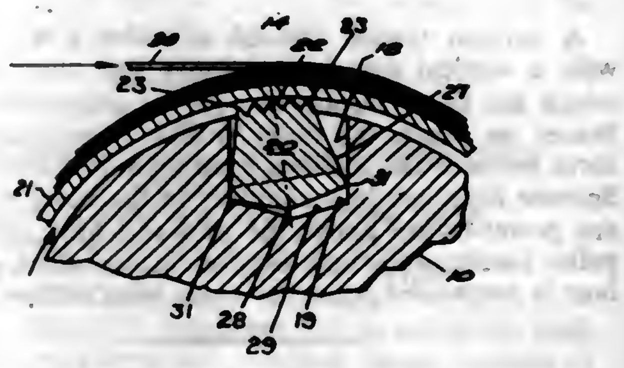
3,387,799

MANDREL FOR WINDING CORES

John L. Wilson, Cohasset, Mass., assignor to Union Associates, Inc., Fitchburg, Mass., a corporation of Massachusetts

Filed Jan. 3, 1967, Ser. No. 606,644

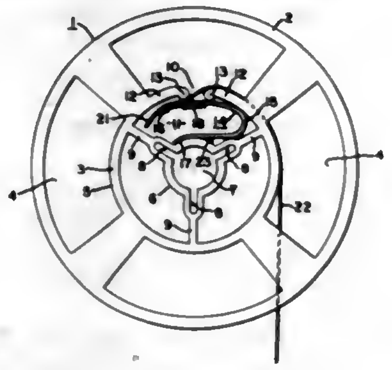
11 Claims. (Cl. 242—72)



A mandrel for cores used in winding sheet materials has circumferentially-spaced slots receiving sprags. Shoulders on the sprags are received in concave roots in the slots, acting as fulcrums for tilting of the sprags in either angular direction from a rest position. A core is centered by equal tilting of all the sprags, when the mandrel is rotated in either direction.

3,387,800
TAPE-RETAINING DEVICE FOR REELS

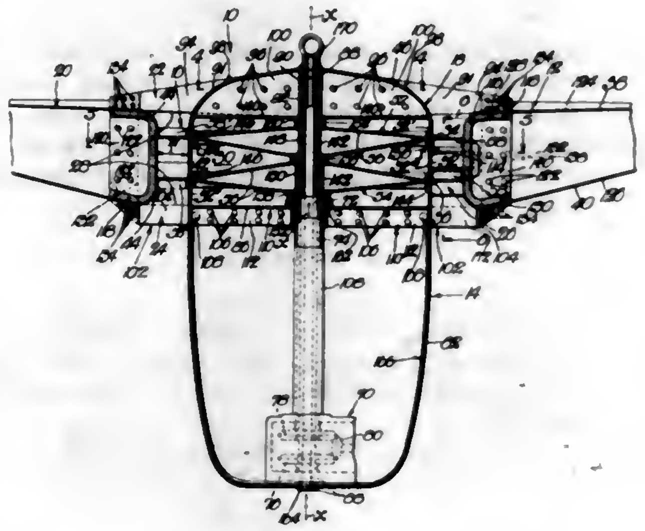
Yates Maxwell Hoag, Utica, N.Y., assignor to General Electric Company, a corporation of New York
Filed Dec. 29, 1966, Ser. No. 605,772
3 Claims. (Cl. 242—74.2)



A tape reel including a compressed spring device positioned in a recess in the reel hub. An end of a tape roll enters the recess through a slot in the hub rim and is secured to the hub by the spring device which pinches it against a wall of the recess.

3,387,801
VERTICAL TAKEOFF AIRCRAFT

Cadwallader W. Kelsey, Guilford, Conn., assignor to Skycar, Inc., New Haven, Conn., a corporation of Connecticut
Filed Mar. 8, 1966, Ser. No. 532,681
8 Claims. (Cl. 244—23)

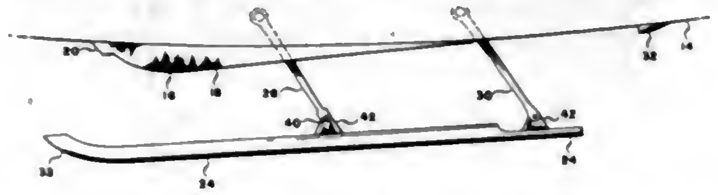


A vertical takeoff aircraft provides a wing structure with a vertical axis having inner and outer sections of which the inner section has spaced outwardly extending braces on which the outer section is mounted so as to form between the sections a through-duct about the axis. Spinner members in a chamber in the inner wing section are power-driven about the axis and have outer air impeller blades projecting into the through-duct, and a fuselage is suspended from the inner wing section.

3,387,802
AIRCRAFT LANDING GEAR

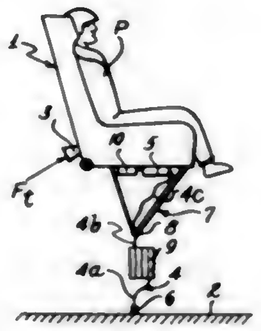
Edward S. Cruz, Van Nuys, Calif., assignor to Lockheed Aircraft Corporation, Burbank, Calif.
Filed July 5, 1966, Ser. No. 562,661
8 Claims. (Cl. 244—102)

A retractable landing gear for an aircraft including a pair of struts, one end of each being pivotally connected to the aircraft fuselage with the other end being connected to a landing skid. A portion of the landing skid cooperates with the fuselage to present an aerodynamically clean surface when the landing gear is in its retracted position.



3,387,803
LOAD RECOVERY SYSTEMS

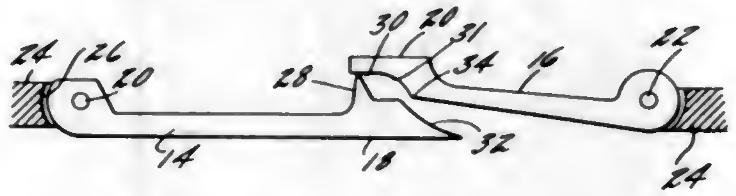
Todd S. Bradfield, Joseph L. Michal, Walter R. Peck, and Fred B. Stencel, Asheville, N.C., assignors to Stencel Aero Engineering Corporation, Arden, N.C., a corporation of North Carolina
Filed Oct. 21, 1965, Ser. No. 499,867
11 Claims. (Cl. 244—122)



An arrangement for stabilizing a load, such as an ejection seat, projected from an aircraft and propelled by a rocket attached to the load. A brake line is connected between the load and the aircraft. The brake line runs through a brake, and, when taut, prevents end over end rotation of the load which can occur if the line of action of the thrust of the rocket is offset even slightly from the center of gravity of the load. The slip line has a slack portion of such length that the line does not become taut and exert a rotation preventing moment of force until a predetermined time after the reaction motor exerts thrust. The slack allows a sufficient amount of rotation of the load to assure that the moment arm from the line of action of the slip line to the center of gravity of the load has significant length when the restoring force of the brake line is first applied. The long moment arm not only provides stabilization but also provides better trajectory of the projected load. In addition, the brake line acts during a time interval not greater than 50% of the thrust generating period of the rocket.

3,387,804
VALVE CONSTRUCTION

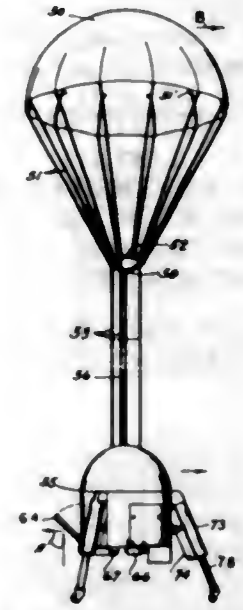
Thomas B. Rhines, Glastonbury, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Apr. 24, 1967, Ser. No. 633,139
4 Claims. (Cl. 244—129)



A pair of valve elements hingedly supported so that the outer edges overlap and overlie each other are positioned relative to each for varying the area of an orifice for a cabin pressurization system wherein the ends of the valve element are contoured to change the direction of flow of the fluid passing therebetween for reducing the opening torque required.

3,387,805
PARACHUTE SUSPENSION SOFT LANDING MEANS

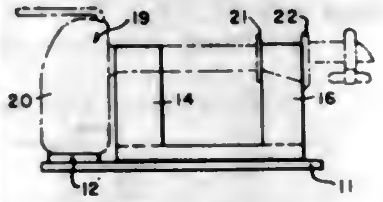
Forest H. Barnett, 625 S. Trafton, Tacoma, Wash. 98405, and James W. Barnett and Henry J. Barnett, both of 7702 N. 10th St., Tacoma, Wash. 98407
Filed July 13, 1966, Ser. No. 565,002
11 Claims. (Cl. 244—138)



A load carrying housing is suspended from a parachute canopy by highly elastic tubular shroud lines which cushion the shock on the housing in launching and landing. Gas or air under pressure can be delivered through the shroud lines from the housing into the canopy to insure full opening in launching and full spread in landing. Take-up means which will pull the housing upwardly toward the canopy at the time of landing and reduce shock connects the housing and canopy. Ground sensing means hanging below the housing starts operation of the take-up means. Shock absorbing landing legs protrude downwardly from the housing to cushion landings.

3,387,806
OUTBOARD MOTOR SUPPORT

Charles S. Eubanks, 812 Fairhaven Drive, Hamilton, Ohio 45013
Filed May 13, 1966, Ser. No. 549,996
1 Claim. (Cl. 248—4)

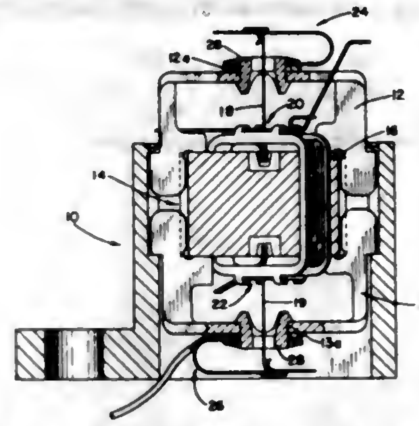


A storage support for an outboard motor which will support a motor in a horizontal position preventing movement of the motor during such storage.

3,387,807
TAUT BAND ANCHOR ARRANGEMENT

Richard S. Mueller, Minnetonka, Minn., assignor to Honeywell Inc., Minneapolis, Minn., a corporation of Delaware
Filed Mar. 14, 1966, Ser. No. 534,094
4 Claims. (Cl. 248—17)

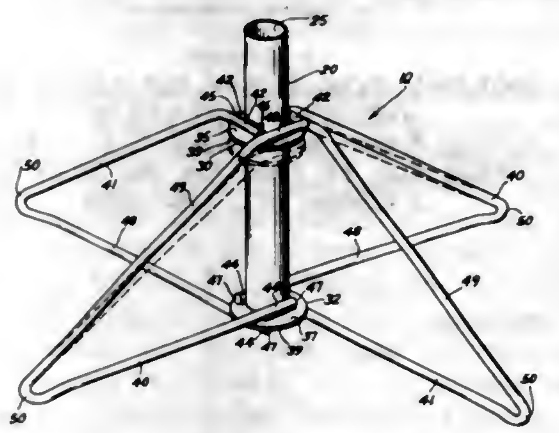
A fastening arrangement for a taut band utilized in a taut band suspension type electrical measuring instrument wherein the taut band is held in place at least at one of



its extremities between a taut band anchor and a plate which are spotwelded together.

3,387,808
COLLAPSIBLE SUPPORT STRUCTURE

Derek N. G. Metcalf, La Grange Park, Ill., assignor to Athena Industries, Inc., La Grange, Ill., a corporation of Illinois
Filed Nov. 29, 1966, Ser. No. 597,726
10 Claims. (Cl. 248—46)

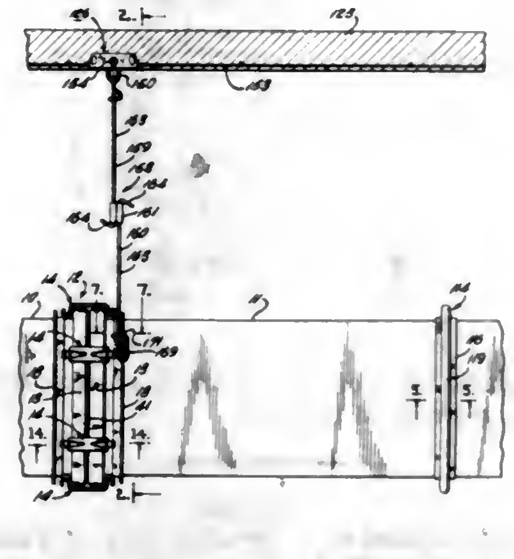


1. A collapsible standard, comprising: a tubular holder; means thereon for connection to said holder, said means being movable axially and rotationally with respect thereto; and a plurality of legs extending outward from said holder, some of said legs having inner portions affixed to said means, the remainder of said legs having inner portions affixed directly to said holder, said means in engagement against said inner portions of all said legs when spread in a support disposition to abut and thereby interlock said inner portions, one against another, yet said means movable axially out of said engagement to unlock said disposition and thereby enable said standard to be collapsed by rotation together of said legs.

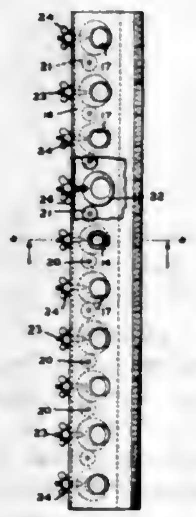
3,387,809
ENCLOSURE SYSTEM AND COMPONENTS THEREOF

Seymour J. Zwerling, 1142 Lefferts Road, Hewlett Bay Park, N.Y. 11557
Filed Oct. 24, 1965, Ser. No. 504,496
21 Claims. (Cl. 248—58)

An air duct structure comprises end to end ducts each provided with peripheral end coupling flanges formed of sheet metal and including a longitudinal panel having at its front end a transverse panel which joins an inwardly rearwardly extending panel having recesses formed therein. Spring clips join adjacent flanges and include opposite resilient arms joined by a cross web the ends of the arms being provided with inwardly directed legs engaging the flange recesses and outwardly directed arms terminating in upwardly projecting legs for the reception of a double lever clip spreading tool. The flanges, or other duct flanges, are provided with apertures for engaging a hooked end of a linear hanger having an opposite hooked end for engaging an overhead support such as another conduit or a ceiling support member advantageously in the form of an open bottomed ceiling recessed shell having opposite openings and a tubular member extending between the openings.



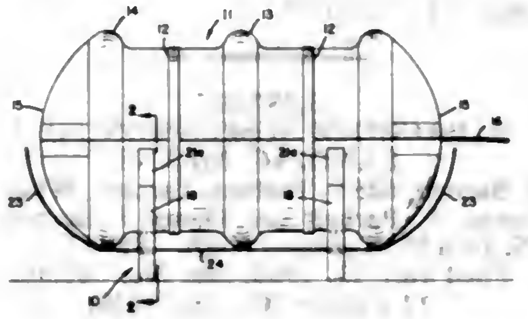
3,387,810
HOLDER FOR TUBES OF PAINT OR OTHER SUBSTANCE
George Sakier, Sagaponack, N.Y. 11962
Filed Aug. 24, 1966, Ser. No. 574,670
3 Claims. (Cl. 248—108)



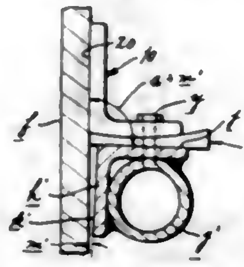
Article holding apparatus having a fixed member with a series of openings therein and a plurality of independently adjustable fastening members having openings of substantially the same size as the openings of the support member and movable into and out of registration therewith for clamping articles of the same or different sizes.

3,387,811
LIFERAFT CRADLE
Leland D. Adams, Jr., 48 Encino Road,
Atherton, Calif. 94025
Filed July 11, 1966, Ser. No. 564,183
7 Claims. (Cl. 248—146)

A stand to support inflatable life rafts of the type that are packed in a drum-like container, at least two pairs of upright members adapted to be secured to the supporting deck, arcuate members attached to the upper ends of the upright members, the regions of attachment being spaced from the free ends of the arcuate members to provide end portions that have spring action to engage the side walls of the container and members loosely engaging the end portions of the container to thereby permit the container to float free from the cradle.

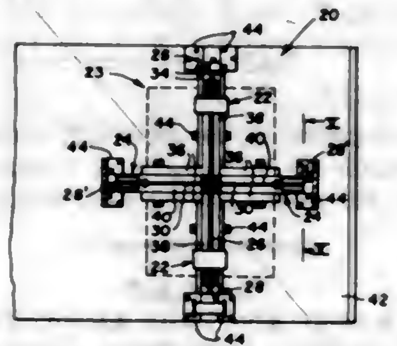


3,387,812
BRACKET AND REVERSIBLE BASE MEMBER ASSEMBLY FOR FIXTURE CONSTRUCTION
Jule Wayne Thoms, Florissant, Mo., assignor to Carr Lane Manufacturing Company, St. Louis, Mo., a corporation
Filed Oct. 19, 1966, Ser. No. 587,813
4 Claims. (Cl. 248—274)



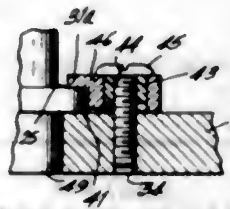
An angle bracket and base member assembly are useful for taking up angular misalignment of welded manufacturing fixtures. The bottom arcuate flange of the angle bracket seats upon the upper, complementary arcuate surface of the base member, which is low along one edge. When this edge is positioned adjacent to a part to be supported, the resulting clearance permits take-up of some angular misalignment tolerance merely by positioning relatively sideward. For greater misalignment, the base member is reversed so that its higher edge is adjacent to the work; and any interfering material along this edge is trimmed off.

3,387,813
HOLD-DOWN DEVICE
Anthony J. Carino, Box 277N, R.D. 1,
Leechburg, Pa. 15656
Filed July 20, 1966, Ser. No. 566,565
5 Claims. (Cl. 248—361)



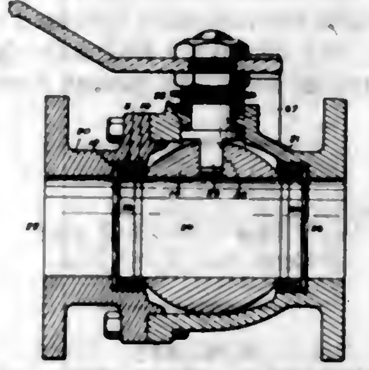
Coils of sheet steel or the like are held to the bed of a vehicle by means of a device having clamping members moved simultaneously toward and away from the cargo, using right- and left-hand screw means operated through an intermediate drive means, to permit ready accessibility and make possible convenient use of an extrinsic tool, such as a pneumatic torque applying device. In a preferred embodiment, there is also provided a second clamping means, similarly having right- and left-hand screw drive means operated through an intermediate drive means, but running transversely of the first clamping means. Pivoted pads for engaging the cargo and strap means for holding down cargo engaged by the clamping means are also shown.

3,387,814
COMPONENT MOUNTING CLAMP
Wilbur E. Fischer, 199 N. Main St.,
Freeport, N.Y. 11520
Filed Oct. 27, 1966, Ser. No. 589,870
4 Claims. (Cl. 248—361)



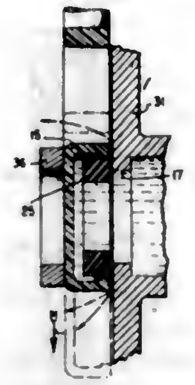
A clamp for securing components having a flanged base to a support having internally threaded bores said clamp having a non-circular cam shaped body portion and an outwardly extending lip at the top thereof for engaging the upper surface of the flange. A central bore in the body portion carries a plastic insert through which a screw member is threaded. Rotation of the clamp as the screw member is threaded into the support bore brings the lobe of the cam into lateral contact with the flange of the base bringing the lip into clamping orientation. The bottom of the body portion is skewed to improve clamp life and holding performance.

3,387,815
SEAT FOR BALL-VALVE AND BALL-VALVE USING THIS SEAT
Cecil Graham Francis Richards, Brisbane, Queensland, Australia, assignor to B. C. Richards & Co. Pty. Ltd., Brisbane, Queensland, Australia
Filed Sept. 23, 1965, Ser. No. 489,544
Claims priority, application Australia, May 21, 1965, 59,179/65
4 Claims. (Cl. 251—174)



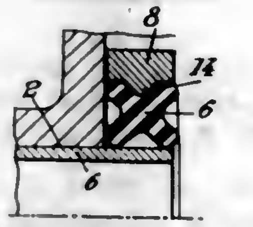
To enable a slow-recovery deformable sealing ring for a ball valve to retain sealing contact with the ball and peripherally with the casing on slight movements of the ball under fluid pressure, a sealing assembly includes said sealing ring, its rear face undercut in tapered form, a rigid backing ring with forward face fitting said undercut face, and a spring bearing on the rear face of the backing ring and urging the backing and sealing rings towards the ball.

3,387,816
DIVERTER SPOUT
Frank R. Holycross, Marysville, Ohio, assignor to Wallace-Murray Corporation, Pittsburgh, Pa., a corporation of Delaware
Filed Nov. 19, 1965, Ser. No. 508,671
8 Claims. (Cl. 251—175)



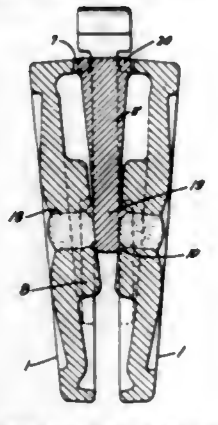
1. A diverter valve comprising
- a valve body member having a fluid port therein,
- a movable closure member for controlling the passage of fluid through said port,
- a recess formed in said closure member which surrounds said port when said valve is in closed position,
- an inwardly protruding shoulder extending around the periphery of said recess adjacent the front thereof,
- and a sealing ring slidably disposed within said recess having a ridge extending around its outer periphery engageable with said shoulder to retain said ring in said recess, flow of line pressure through said port when said valve is in said closed position acting to urge said ridge of said ring into engagement with said shoulder and deforming said ring into sealing and retaining engagement with the portion of said valve body member surrounding said port.

3,387,817
PACKING DEVICES FOR VALVES
Gabriel Jean Seguenot, Paris, France, assignor to S.E.R.T.E.C. Societe d'Etudes et de Recherches Techniques, Paris, France
Filed Apr. 6, 1965, Ser. No. 445,880
Claims priority, application France, Apr. 9, 1964, 970,402
5 Claims. (Cl. 251—317)



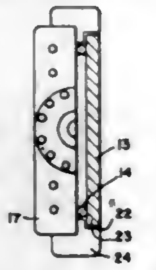
A valve system having a cylindrical valve piece in the body of the valve and packing rings interposed between the end of a cylindrical tube projecting from a conduit controlled by the valve system and an annular member disposed about said tube end, the annular member being machined along the curve of intersection between the two cylindrical surfaces intersecting each other, whereas the packing ring, initially located in a plane, is deformed in a press to conform with the shape of said curve of intersection, a groove being provided in the ring to keep the annular packing member in position.

3,387,818
WEDGE MEANS FOR GATE VALVES
Walter Siepmann, Belecke (Mohne), Germany, assignor to Stahl-Armaturen Persta G.m.b.H. KG., Belecke (Mohne), Germany
Filed Mar. 28, 1966, Ser. No. 538,063
Claims priority, application Germany, Mar. 31, 1965, St 23,601
6 Claims. (Cl. 251—327)



An elastic wedge means for gate valves adapted to be guided on guide ribs of a valve housing and composed of a pair of identical wedge shaped plates of substantially circular contour arranged spaced from each other, each of the plates having at the sides thereof facing away from the other plate an annular seat portion with an end face inclined with respect to a plane of symmetry located between the plates, a substantially central connecting portion projecting from the other side of each plate, and a pair of guide wings projecting laterally in opposite direction from each plate; and connecting means located between the plates and connected to the connecting portions for holding the plates either releasably or permanently in firm position relative to each other. The wedge shaped plates including the connecting portion and guide wings are shaped so as to be best suited for forming the plates by die forging.

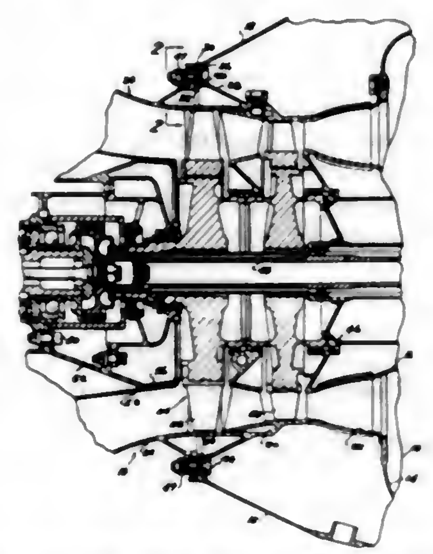
3,387,819
GATE VALVE BODY CONSTRUCTION INCLUDING REINFORCING MEMBERS
Marvin H. Grove, Piedmont, Calif., and Kee W. Kim, Houston, Tex., assignors, by mesne assignments, to M & J Valve Company, Houston, Tex., a corporation of Delaware
Continuation-in-part of application Ser. No. 453,377, May 5, 1965. This application Aug. 23, 1965, Ser. No. 481,661
4 Claims. (Cl. 251—329)



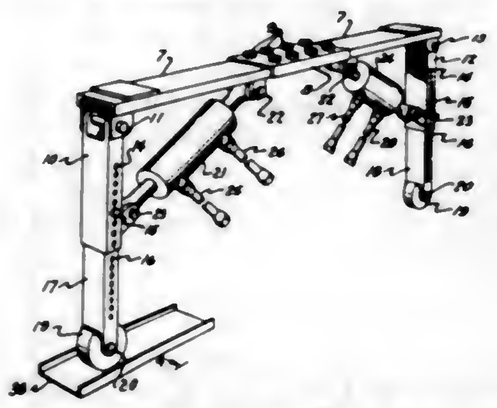
A gate valve body of the fabricated type having side welded-on ribs which reinforce the end walls against outward deflection, wherein the welded-on ribs have a portion extending between the margins of the end walls.

3,387,820
TURBINE ENGINE CONSTRUCTION
Raymond Smith, Detroit, Mich., assignor to Continental Aviation & Engineering Corporation, Detroit, Mich., a corporation of Michigan
Filed May 24, 1965, Ser. No. 458,121
4 Claims. (Cl. 253—39)

A means for maintaining concentricity between two axially flanged annnular members such as a shroud and a housing of a turbine engine including a plurality of washer members having arcuately formed surfaces which are adapted to be disposed between the axial flanges of the annular members.



3,387,821
HYDRAULIC TRAILER JACK
Frederick R. Saddler, 12625 SE. 87th Ave., Portland, Oreg. 97266
Filed Mar. 28, 1967, Ser. No. 627,256
5 Claims. (Cl. 254—86)



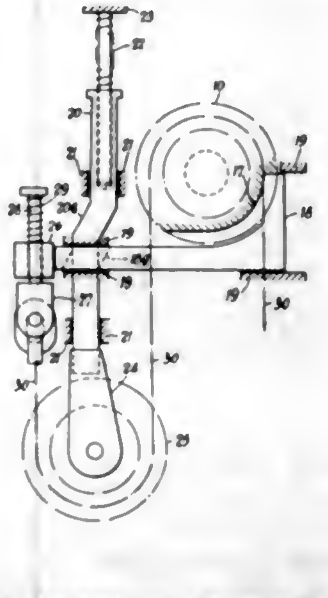
A hydraulic trailer jack including two diametrically opposed vertically adjustable legs that are hingedly mounted on the underside of the forward portion of a trailer; one leg being on each side of the trailer. Each leg has a caster mounted on the lower end thereof. The two legs are hydraulically activated by means of a hydraulic cylinder that has one end connected to a leg and the other end secured to one of the lateral channels that are part of this invention. Hydraulic but manually operated control valves, an oil reservoir, and necessary hydraulic feed lines connected to a source of hydraulic power form part of this invention.

ERRATUM

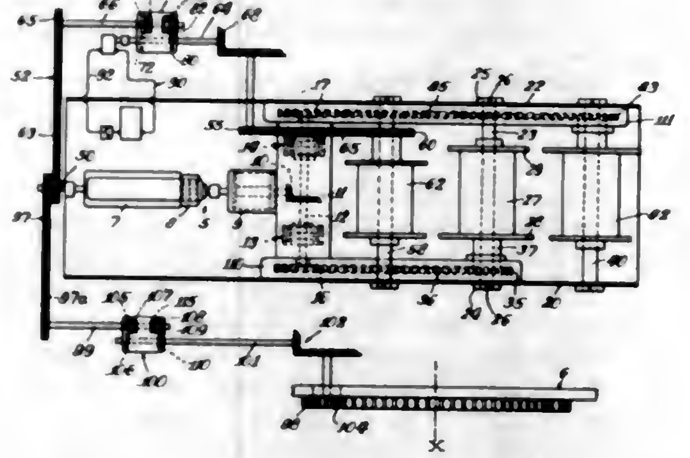
For Class 254—172 see:
Patent No. 3,388,070

3,387,822
ELECTRICALLY OPERATED HOISTS OR PULLEY BLOCKS
Arthur Thomas Charles Burrows, Hertfordshire, England, assignor to Geo. W. King Limited, Stevenage, Hertfordshire, England, a British company
Filed Feb. 9, 1967, Ser. No. 614,978
Claims priority, application Great Britain, Feb. 11, 1966, 6,247/66
3 Claims. (Cl. 254—174)

In an electrically operated hoist or pulley block incorporating a slipping clutch between the motor and the sprocket or winding drum the provision of at least one latch or pawl device capable of movement into and out of an operative position wherein it will positively lock the sprocket or drum against rotation. Means are provided for controlling the latch or pawl device so that while during a normal lifting or lowering movement it will be retained inoperative, approach to the limit of travel of the hoist chain or cable in one direction or the other will result in movement of said latch or pawl device into its operative position. Resilient means are provided for minimizing the shock on the hoist chain or cable as a result of locking of the sprocket or drum.

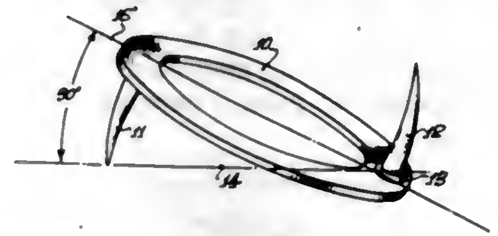


3,387,823
DRIVE SYSTEMS FOR WINCH MECHANISMS
Roche Van De-Hey, 801 E. 3rd Ave., Sutherlin, Oreg. 97479, and Frederik R. Waleson, Roseburg, Oreg. 97470
Filed Jan. 3, 1967, Ser. No. 606,790
6 Claims. (Cl. 254—185)



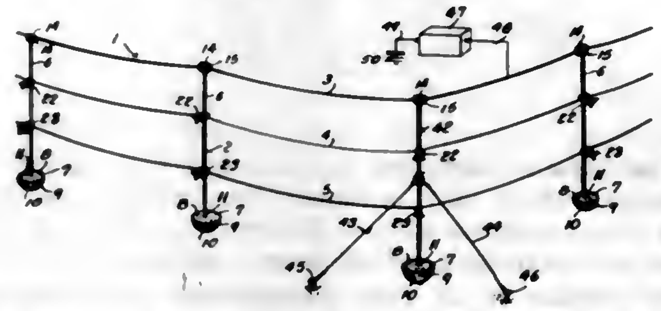
Winch drive system embodying a pime mover for effecting selective rotation of an output shaft through transmission means associated with one end of the prime mover and together with clutch means associated with the output shaft and cable winding drums for effecting rotation of the cable winding drums in the same direction of rotation as the output shaft. A winch drive system having a clutch controlled cable winding drum together with auxiliary drive means driven from the other end of the prime mover to effect rotation of another cable winding drum and/or the selective rotation of a platform upon which several cable winding drums are mounted.

3,387,824
INTERDICTION DEVICE
Julius Jonas, Claremont, and Frank X. Pfenneberger, Pomona, Calif., assignors to General Dynamics Corporation, a corporation of Delaware
Filed Mar. 3, 1967, Ser. No. 620,477
1 Claim. (Cl. 256—1)



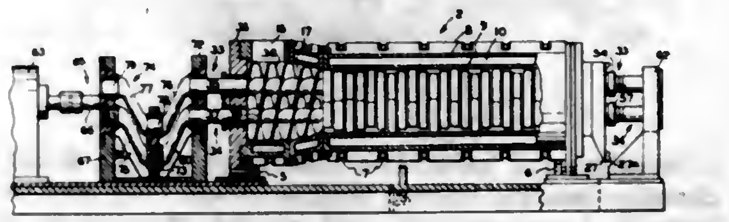
This disclosure is directed to an air-droppable, caltrop-type or interdiction device which comprises a flat ring member having two prongs secured at diametrically opposed points on the opposite sides of said ring and extending perpendicularly to the plane thereof.

3,387,825
PORTABLE FENCE
Fred L. Kreeger, Rte. 313 and 5th St., M.R. 1, Perkasie, Pa. 18944
Filed June 2, 1966, Ser. No. 554,752
7 Claims. (Cl. 256—10)



A portable fence comprising a series of upright posts having weighted bottoms adapted to bear on the top surface of the ground. Electrically-conductive wires are strung loosely between the posts so that the posts are free to tilt or rock without upsetting the remainder of the posts. In one embodiment, the weighted bottom of the post is rounded so as to be free to rock and return to its normal upright position. In another embodiment, a spring is interposed between the main portion of the post and its bottom to permit rocking movement of the portion but normally returning the portion to its upright position.

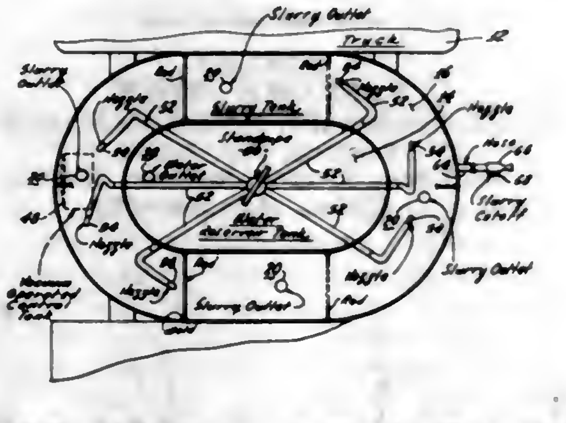
3,387,826
MIXER APPARATUS
Bernard A. Loomans, Saginaw, Mich., assignor to Baker Perkins Inc., Saginaw, Mich., a corporation of New York
Filed Oct. 23, 1965, Ser. No. 503,872
23 Claims. (Cl. 259—6)



Mixer apparatus of the type employing a plurality of spaced apart substantially parallel mixer or reactor shafts mounted for rotation in a chamber about their own axes and driven by a drive crank arm coupled to nesting crank arms connected with the mixer shafts. Disk members mounted on the mixer shafts between radially interacting mixer paddles which also conform to and wipe the walls of a chamber formed of intersecting cylindrical chamber walls cause the material to take a sinuous longitudinal path through the chamber. At the discharge end of the mixer apparatus discharge plate means is provided which has at least one opening through which at least one of the shafts generally concentrically extends and in which a nonintegral ring plug is mounted for rotation with the shaft, with the ring plug being of smaller diameter than the opening to form a passage to pass material out the opening.

3,387,827
AGRICULTURAL APPARATUS

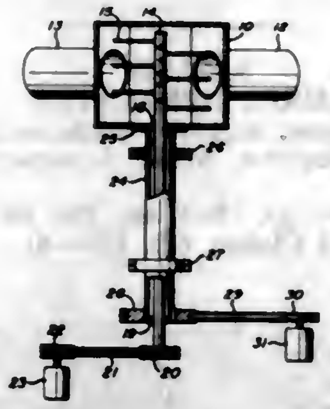
Richard A. Carlyon, Jr., Hidden Hills, Calif., assignor to Sta-Soil Corporation, North Hollywood, Calif., a corporation of California
Filed May 8, 1967, Ser. No. 636,825
10 Claims. (Cl. 259—36)



The present disclosure is concerned with agricultural apparatus which may be mounted on a truck, and which may be used on-site to mulch, fertilize and seed an area, such as a lawn or slope, all in one operation. The apparatus consists of an outer mixing tank having an inner tank mounted therein for receiving water. Pump means having a valve with automatic control means is provided for pumping and mixing the materials within the tanks and for discharging the mixed materials.

3,387,828
MIXER FOR PARTICULATE MATERIAL

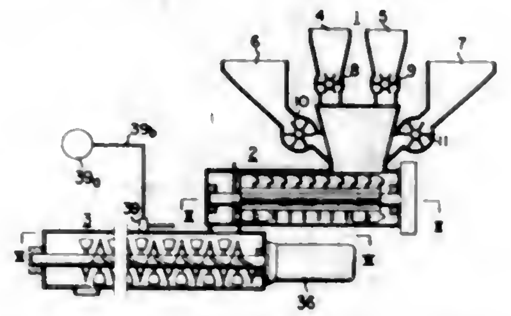
Gene R. Bosché, Kalamazoo, Mich., assignor to Dayco Corporation, Dayton, Ohio, a corporation of Delaware
Filed Mar. 22, 1967, Ser. No. 625,205
2 Claims. (Cl. 259—85)



A mixer for particulate material including a mixing chamber rotating about a horizontal axis, with removable material containers mounted on the chamber at right angles to the direction of rotation. The containers reach successive vertical positions above the chamber with an opening downward to drop their materials and intermix them in the chamber. A shaft with mixing members extends into the chamber and rotates to further promote mixing.

3,387,829
MIXER FOR PRODUCING SELF-HARDENING MOULDING SANDS

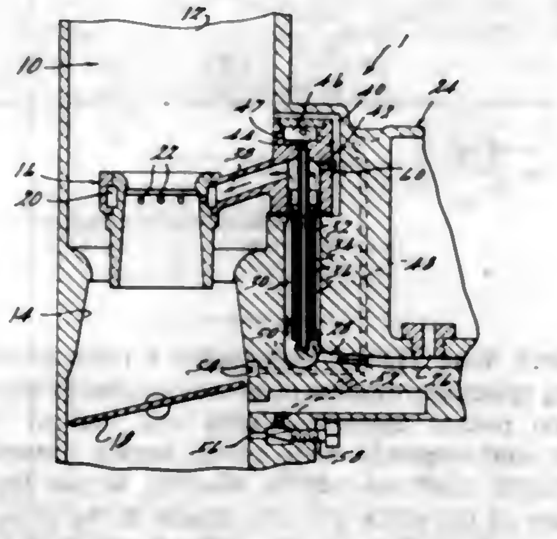
Tadao Nangoh, 115 1-chome, Sunahara-cho, Katsushika-ku, and Isamu Yamazaki, 13–1–405 3-chome, Towa Adachi-ku, both of Tokyo-to, Japan
Filed Oct. 6, 1965, Ser. No. 493,442
Claims priority, application Japan, Nov. 19, 1964, 39/65,063
5 Claims. (Cl. 259—161)



1. A mixer for producing self-hardening moulding sands comprising: a supply device for supplying moulding sand materials in particle form, said device having a plurality of hoppers for separately supplying respectively different moulding sand materials in particle form; a first mixer for forced mixing of said moulding sand materials, said first mixer having a plurality of agitator blades mounted around a rotating shaft, means to control the resistance to outflow of mixed sand, and means to control the rotational speed of the agitator blades; a second mixer for agitating mixed sand discharged from the first mixer together with a liquid binder, said second mixer having at its inlet end an inlet opening for receiving said mixed sand from the first mixer, a nozzle for adding said binder to said mixed sand, and a plurality of agitator blades mounted around a rotating shaft; and power means to drive the first and second mixers, said mixed sand discharged from the first mixer being mixed with the binder in the second mixer to cause self-hardening reaction.

3,387,830
CARBURETOR AIR BLEED

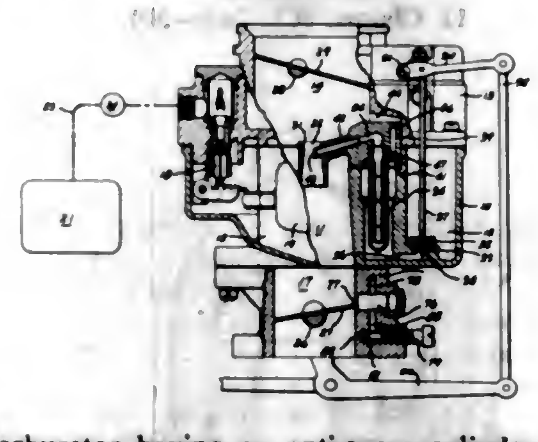
Robert McIlroy, Dearborn, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Dec. 30, 1966, Ser. No. 606,301
4 Claims. (Cl. 261—39)



A carburetor air bleed passage containing an orificed plug of a thermally sensitive material that varies the size of the orifice, and, therefore, the air flow, as a function of the change in air density, to thereby maintain an essentially constant air/fuel ratio.

3,387,831
CARBURETOR ANTI-SURGE DEVICE

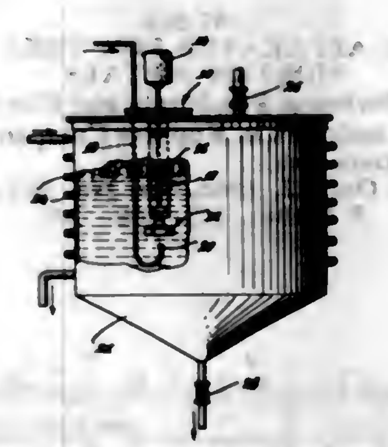
Morris C. Brown and Charles L. Martin, St. Louis, Mo., assignors to ACF Industries, Incorporated, New York, N.Y., a corporation of New Jersey
Filed Oct. 23, 1965, Ser. No. 503,449
7 Claims. (Cl. 261—51)



A carburetor having an anti-surge cylinder including a first tubular member and a thin walled second tubular member surrounding and spaced from the first tubular member to form an annular anti-surge chamber. Ports provided in the tubular members are in communication with air and fuel. A linkage connects the throttle to a metering rod which controls the flow of fuel to the anti-surge cylinder.

3,387,832
APPARATUS FOR DISPERSING A GAS IN A LIQUID

Earl W. Nelson, Lynchburg, Va., assignor to American Cyanamid Company, Stamford, Conn., a corporation of Maine
Filed May 2, 1967, Ser. No. 635,613
4 Claims. (Cl. 261—93)

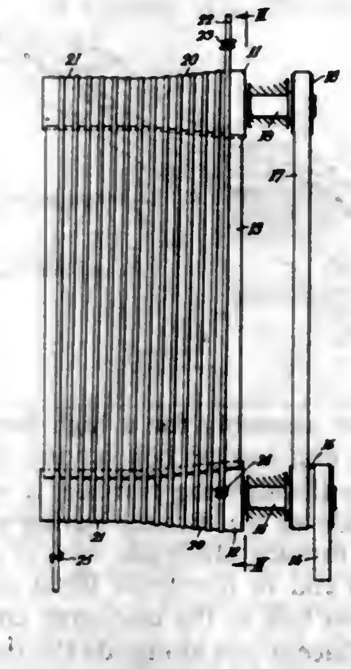


The apparatus comprises a rotary impeller submerged in a liquid in which a gas is to be dispersed. The impeller has a horizontal top plate and a plurality of curved vanes extending along the underside of the top plate from adjacent its center to its periphery. A J-shaped tube extends into the liquid and introduces the gas from an upwardly facing exit end at a point spaced directly below the center of the impeller. Rotation of the impeller breaks the gas into finely divided bubbles for dispersion in the liquid.

3,387,833
HEAT TREATMENT OF FILAMENTS

Harold Whittaker, Alkrington, Middleton, and Anthony James Booth, Helmshore, Rossendale, England, assignors to T.M.M. (Research) Limited, Oldham, Lancashire, England, a British company
Filed Sept. 2, 1966, Ser. No. 576,913
9 Claims. (Cl. 263—3)

Apparatus for heat treating crimped yarn or filament. The apparatus includes a pair of rollers around which the yarn or filament is guided in a series of loops with these rollers having a feed end for receiving the first filament loop and a delivery end from which the last loop is delivered. Between their feed and delivery ends the rollers are at least in part of a tapered configuration so that the crimped yarn can progressively relax without any substantial reduction in the amount of crimp while the yarn is on the tapered roller portions. The heat treatment is derived from a heating means mounted between the rollers and within the series of filament loops with this heating means having opposed heating surfaces situated in the path of movement of the filament loops so that the series of loops will first engage one heating surface on one side of the heating means and will then engage the second heating surface on the other side of the heating means.

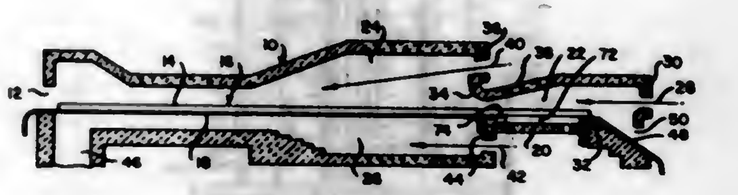


ERRATUM

For Class 263—6 see:
Patent No. 3,387,779

3,387,834
HEARTH FIRING APPARATUS

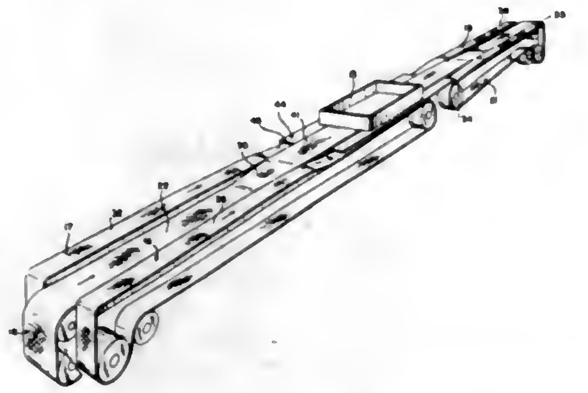
Frances H. Bricmont, Mount Lebanon Township, Allegheny County, and Franklin H. Miller, Levittown, Pa., assignors to Bloom Engineering Company, Inc., Pittsburgh, Pa., a corporation of Pennsylvania
Filed Mar. 21, 1966, Ser. No. 535,763
16 Claims. (Cl. 263—6)



Hearth firing apparatus is disclosed for eliminating "downtailing" if a steel slab or the like is passed through a hot rolling mill system. The invention also is directed to removing the end rolling effects associated with the end portions of the workpiece At the same time the colder skid marked areas imparted to the workpiece by cooled skid rolls are removed by direct firing in the firing troughs, which are provided with cleaning means and temperature controlling means.

3,387,835
HIGH TEMPERATURE FURNACE CONVEYOR

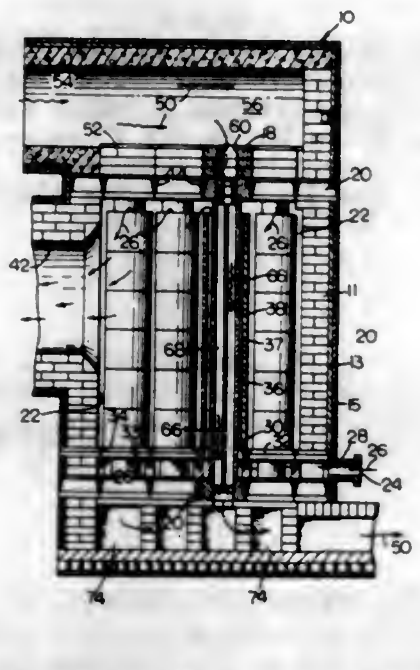
James A. Murphy, Glen Ridge, N.J., assignor to C M Manufacturing & Machine Company, Bloomfield, N.J., a corporation of New Jersey
Filed Mar. 22, 1966, Ser. No. 536,368
7 Claims. (Cl. 263—8)



A conveyor belt assembly for a high temperature furnace comprises a first endless belt having an upper flight extending entirely through the furnace, a second endless belt at the inlet side of the furnace having a top flight extending into the furnace alongside and at a higher level than the adjacent end of the upper flight of the first belt and a third endless belt at the discharge end of said furnace extending adjacent and alongside the other end of the first belt, there being a first article transfer point wherein the upper flights of the inlet and through belts interchange levels and a second article transfer point wherein the upper flights of the discharge and through belts interchange levels, and all belts being independently driven at selected relative speeds.

3,387,836
HEAT EXCHANGE APPARATUS

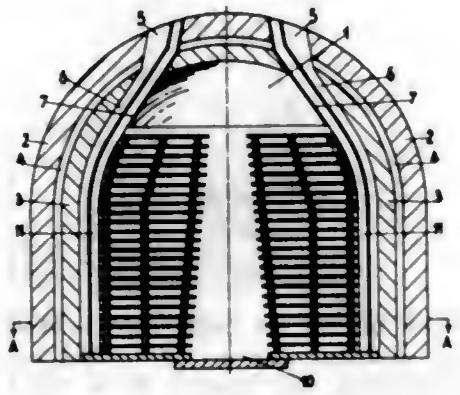
Kenneth W. Stookey, Markle, Ind. 46770
Continuation-in-part of application Ser. No. 489,193, Sept. 22, 1965. This application Sept. 18, 1967, Ser. No. 668,347
8 Claims. (Cl. 263—20)



An internally packed flexible joint disposed between the terminal wall blocks and tubes of a heat exchanger which is constructed of a sleeve having an outwardly annulus and packed with flexible and heat resisting fibers with spaced hangers for positioning the flexible joint between the top terminal wall blocks and tubes.

3,387,837
PROCESS AND DEVICE FOR MELTING ON MELTING SHELVES

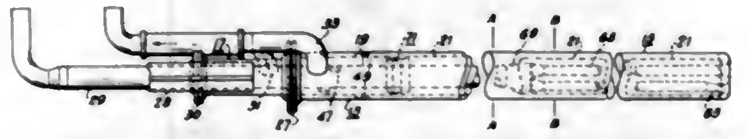
Ludwig Canal, 9 Christian-Plattner-Strasse, 6460 Imst, Tyrol, Austria
Filed May 9, 1966, Ser. No. 548,785
Claims priority, application Austria, May 11, 1965, A 4,258/65
11 Claims. (Cl. 263—30)



A process and device for continuously melting a free flowing material in which horizontally inclined shelves of a material unaffected by changes of temperature are arranged in spaced relation, and the material to be melted is fed to the shelves to cover the same to a depth related to their angle of slope. The shelves are heated, for example by hot gases which are passed between the latter, and the material is melted and simultaneously advances on the slightly inclined melting shelves and pass therefrom and is collected.

3,387,838
LANCE APPARATUS FOR TREATING MOLTEN METALS

Alexander T. Dortenzo, Pittsburgh, and Floyd F. Standley, Beaver, Pa., assignors to Koppers Company, Inc., a corporation of Delaware
Filed Oct. 22, 1965, Ser. No. 501,597
5 Claims. (Cl. 266—34)

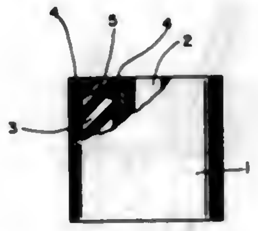


A lance for treating molten metal comprises an outer envelope having at one end a lance tip closure with nozzles therein. An inner concentric conduit is connected to a frusto-conical transitional flow conduit having a perforated closure at the larger end. A plurality of parallel conduits connect the nozzles to the perforations in the closure of the transitional flow conduit.

3,387,839
ADHESIVE BONDED BUSHING AND METHOD OF MAKING SAME

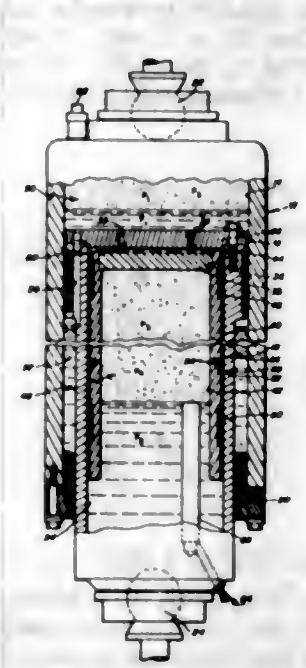
Harvey E. Miller, Logansport, and Arthur Mundy, Lucerne, Ind., assignors to The General Tire & Rubber Company, a corporation of Ohio
Filed Dec. 11, 1964, Ser. No. 417,542
11 Claims. (Cl. 267—57.1)

Resilient bushings composed of an elastomeric insert radially compressed between a pair of annular sleeves are improved by bonding the insert to the sleeve utilizing a two-layer adhesive. The first layer, in contact with each sleeve, contains a halogenated, preferably a chlorinated, rubber compound and the second layer, in contact with the elastomeric insert, contains an organic diisocyanate and a halogenated nitrile rubber such as chlorinated acrylonitrile.



3,387,840
SUSPENSION UNIT

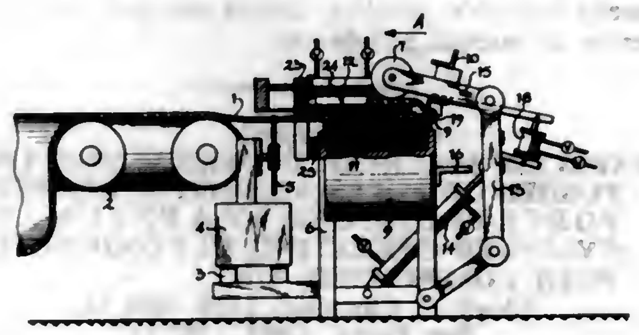
William H. Bechman, Morton, and Jack O. Winsor, Peoria, Ill., assignors to Westinghouse Air Brake Company, a corporation of Pennsylvania
Filed Oct. 7, 1966, Ser. No. 585,124
11 Claims. (Cl. 267—64)



1. A suspension unit for a vehicle comprising:
a cylinder assembly;
a piston assembly having a rod portion reciprocally retained within said cylinder assembly and defining therewith a head chamber and a rod chamber;
a floating piston reciprocally retained in one of said assemblies and defining therewith a third chamber;
seal means on said floating piston interposed between said head chamber and said third chamber and providing a fluid seal therebetween;
said rod chamber containing an incompressible fluid;
said head chamber containing an incompressible fluid and a compressible fluid under pressure, said incompressible fluid contacting said seal means;
conduit means for permitting flow of said compressible fluid between said head and rod chambers;
said third chamber containing a volume of incompressible fluid and a volume of compressible fluid under pressure; said volume of incompressible fluid contacting said seal means thereby providing with said incompressible fluid in said head chamber, a barrier of incompressible fluid on both operational sides of said seal means.

3,387,841
METHOD OF AND APPARATUS FOR CUTTING TO LENGTH AND FOLDING WEBS, ESPECIALLY RUBBERIZED CORD FABRIC WEBS FOR THE MANUFACTURE OF TIRES

Hans Menell, Ahlem, Hannover, and Heinrich Nädler, Hagen, near Nienburg, Germany, assignors to Continental Gummi-Werke Aktiengesellschaft, Hannover, Germany
Filed Oct. 7, 1965, Ser. No. 493,701
Claims priority, application Germany, Oct. 8, 1964, C 34,051
5 Claims. (Cl. 270—61)

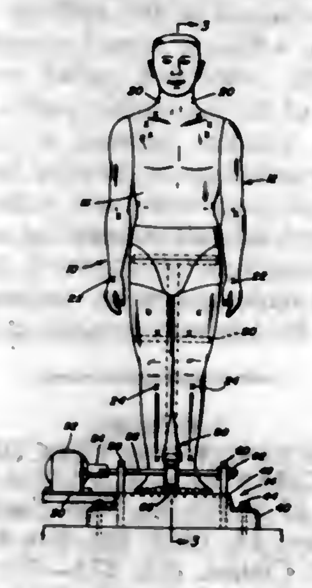


The present invention relates to an apparatus for cutting to length and folding webs, especially rubberized cord fabric webs for the manufacture of tires.

The apparatus according to the invention is characterized primarily in that it comprises clamping means movable over a first portion of a web section received and supported by table means and clamped thereagainst, while a second portion of said web portion protrudes beyond said clamped-in first portion, a folding line defining member being movable over said clamping means and having an edge movable beyond said clamping means and thereby beyond said clamped-in web portion. The apparatus according to the invention is furthermore characterized by folding means adjacent said table means and operable to engage from below said second web portion and to fold the same over the edge of said folding line defining member in the direction toward said first web portion.

3,387,842
SELF-DEFENSE MANIKIN PRACTICE DEVICE

Leonard D. Edgar, 2440 Portsmouth Ave., Toledo, Ohio 43613
Filed Dec. 14, 1965, Ser. No. 513,775
2 Claims. (Cl. 272—76)

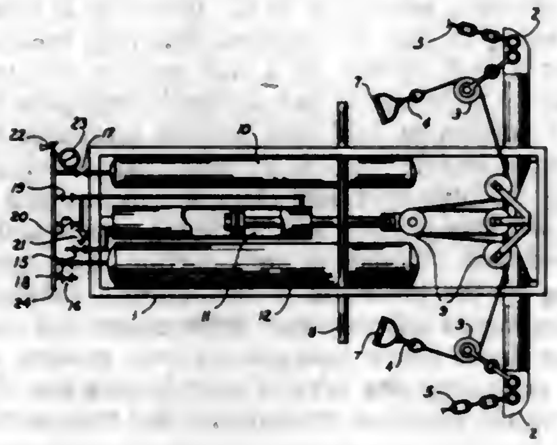


1. A self-defense practice device comprising a base, a stationary upright support on said base, sleeve means slidably received on said upright support and vertically

movable with respect to said base, a practice dummy in the form of a human-like manikin in upright posture, means on said sleeve means supporting said manikin thereon and maintaining said manikin in upright posture, power means on said base, shaft means rotatably mounted on said base and rotatably driven by said power means, cam means on said shaft means, and a cam follower means on said sleeve means in constant contact with said cam means whereby rotation of said shaft means will inpart vertical oscillating movement to said sleeve means and hence to said practice dummy, and means on said manikin indicating the various nerve centers and pressure points normally occurring in a human body, whereby movable practice centers are provided for the practice of manual self-defense.

3,387,843
EXERCISE MACHINE IN WHICH THE USER PUSHES OR PULLS AGAINST A RESISTING FORCE PRODUCED BY A PNEUMATIC CYLINDER OPERATING IN CONJUNCTION WITH COMPRESSED AIR

Lloyd E. Chandler, 1430 36th St.,
San Pedro, Calif. 90731
Filed Aug. 19, 1964, Ser. No. 390,678
1 Claim. (Cl. 272—79)

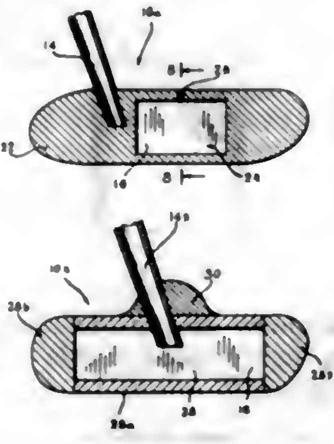


1. An exercise machine comprising a platform, an outrigger positioned at the forward end of the platform and extending outwardly therefrom, a pulley system connected at each end of the outrigger to the forward end of the platform, a pneumatic piston and cylinder mounted on said platform, fluid contained in the cylinder on the forward side of said piston, a flexible strand means having its ends reeved through the respective pulley systems and connected to the end of the pneumatic piston for moving said piston forwardly, handles secured at each end of the strand, means for resisting the forward movement of said piston including at least one tank with a compressible fluid therein, a fluid conduit connecting said cylinder and said tank so that said piston forward movement moves fluid toward said tank, and valve means for controlling the movement of fluid in said conduit, cylinder, and tank.

3,387,844
GOLF CLUB WITH PERCUSSION CHAMBER PLENUM

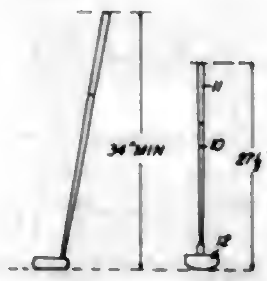
Winsor Shippee, 30 E. 9th St., New York, N.Y. 10003
Filed Nov. 18, 1964, Ser. No. 412,091
2 Claims. (Cl. 273—77)

There is disclosed herein a golf club having a hermetic percussion chamber plenum in the club head and an impact face for stroking a golf ball, which impact face forms a wall of the chamber so that the force of impact with a ball is partially absorbed within the chamber and re-exerted through the impact face against the ball, and vibration of the impact face is minimized to provide greater control of the stroking of the ball by sensibility of the impact and by sound emanating from the club head.



3,387,845
GOLF PUTTER

Clifford G. Raub, 611 Twelve Acres Drive,
Los Altos, Calif. 94022
Filed Oct. 5, 1965, Ser. No. 493,023
4 Claims. (Cl. 273—77)

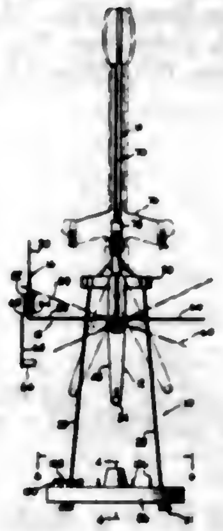


1. A golf putter having a shaft and a ball striking head presenting a flat face lying in a plane generally parallel to the length of said shaft, said shaft having a length corresponding to the length of a pendulum having a time of oscillation approximately but not in excess of 0.84 second, the ball striking head having a weight of from 24 oz. to 48 oz., whereby the club, in use, swinging as a free pendulum about the golfer's wrist as a fixed pivot will propel a standard golf ball a distance of at least 18 feet, over a flat green in good condition when swung from a position with the ball striking head raised to a height of 12 inches from the surface of the green.

3,387,846
WHEELED TOY AND TARGET RINGS

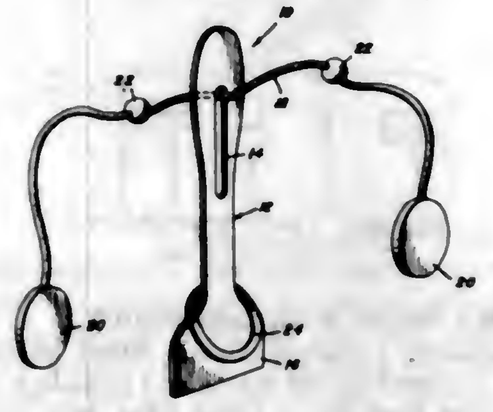
Marvin I. Glass and Gordon A. Barlow, Chicago, Ill., assignors to Marvin Glass & Associates, Chicago, Ill., a partnership
Filed Feb. 28, 1966, Ser. No. 530,624
2 Claims. (Cl. 273—110)

A game apparatus comprising a supporting base frame structure, a platform supported on the base in elevated relation thereto, a swingable frame pivotally mounted on the platform for movement relative to a horizontal position, and a wire loop fixed on the swingable frame and providing a continuous track. A carrier member including a wheel adapted to be supported on the wire loop includes an elongated element at its upper part and a weighted portion below the wheel. The elevated platform includes a receptacle having a plurality of ring-like pieces which are adapted to be dispensed in sequence with the lowermost ring being held adjacent the path of movement of the carrier.



3,387,847
PUZZLE

Robert R. Boombower, 308 Arabian Road,
Palm Beach, Fla. 33480
Filed May 18, 1966, Ser. No. 550,992
4 Claims. (Cl. 273—159)

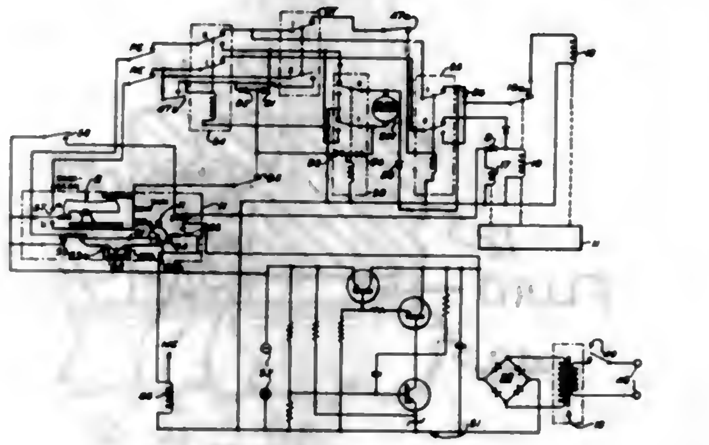


4. A puzzle comprising an elongated rigid base member, a laterally enlarged head on one end of said member, an elongated slot through said member toward the second end thereof, an elongated flexible member extending freely through said slot, a first enlarged element fixed to the flexible member on each side of the base member, each element being incapable of passage through said slot, a second element fixed to each end of the flexible member, each second element being movable through said slot, and a ring-like member positionable about said base member between the enlarged head thereon and the flexible member through said slot, said ring-like member being passable over and off of the second end of the base member, through the slot, and over the first flexible member mounted elements, said second elements and said enlarged head being incapable of passage through said ring-like member.

3,387,848
HANDPIECE CONTROLS FOR DICTATING MACHINES

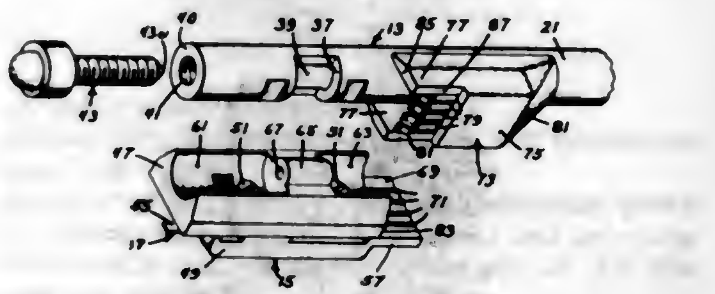
Richard K. Walker, Convent, N.J., assignor to McGraw-Edison Company, Elgin, Ill., a corporation of Delaware
Filed Mar. 3, 1966, Ser. No. 531,419
7 Claims. (Cl. 274—1)

1. In a dictating machine: the combination of a dictator's handpiece having an elongate housing including a head portion with an extending handle, said head portion being adapted to receive a transducer usable as a microphone during recording and as a speaker during reproducing, a rocker button on the front side of the handpiece along a central portion of said handle, said rocker button being pivotally mounted at a mid-point thereof to enable it to be depressed at either end, means responsive to pressing said rocker button at one end for starting the dictating machine running in record condition and for stopping the machine when the button is released, means responsive to depressing said button at the other end for back-scanning the dictating machine and upon release for starting the dictating machine running in reproduce condition, a projecting control knob at the upper end of said handle pivoted for movement lengthwise of the handle from a "run" position to a forward "stop" position, and means responsive to pressing said control knob to "stop" position when said machine is running in reproduce condition for stopping the machine.



3,387,849
TONE ARM AND CARTRIDGE COMBINATION

Roy Dally, Warrensburg, Ill., assignor to General Electric Company, a corporation of New York
Filed Jan. 4, 1965, Ser. No. 423,189
6 Claims. (Cl. 274—24)



A tone arm and cartridge combination wherein these two audio components are readily secured together by means of a threaded stud which effectively cooperates with the free end of a tubular tone arm. An automatic means is also provided for electrically coupling the cartridge to wires carried by the tone arm.

3,387,850
METHOD OF MANUFACTURING A SEAL

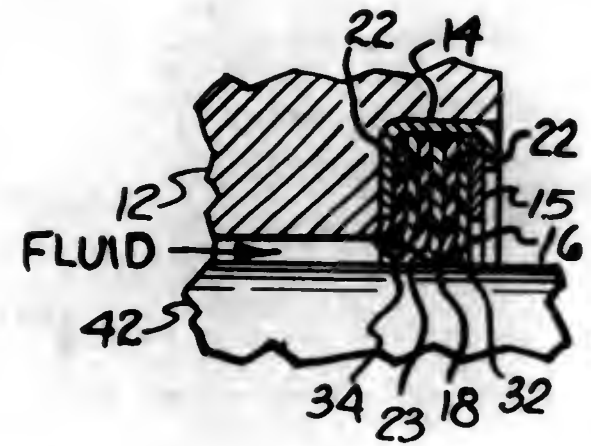
Alex A. Mastrobattista, Dunellen, N.J., and William J. Fordon, New York, N.Y., assignors to Johns-Manville Corporation, New York, N.Y., a corporation of New York
Original application Dec. 21, 1962, Ser. No. 246,549, now Patent No. 3,275,331, dated Sept. 27, 1966. Divided and this application Oct. 8, 1965, Ser. No. 521,234
7 Claims. (Cl. 277—1)

1. The method of forming a seal, which comprises: forming a plurality of laminate annuli,

each of the laminates being comprised of a lamina of a low friction inert synthetic resinous material having a thickness in the range of .006–.25 inch and a lamina of elastomeric material;

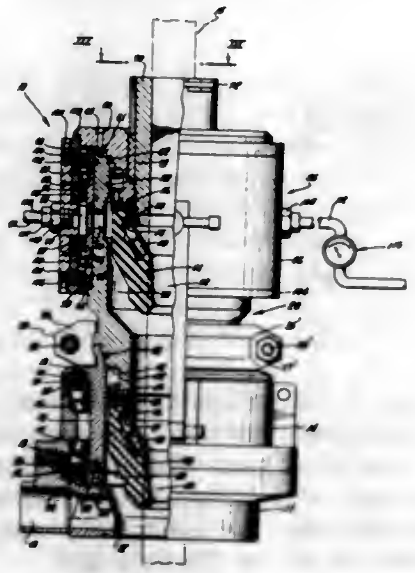
coaxially positioning a plurality of said laminate annuli in a casing; and

axially compressing the plurality of laminate annuli and securing the laminate annuli, within the casing, in their compressed relation.



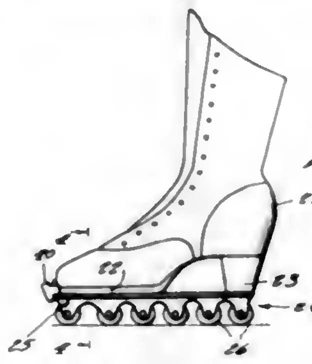
2. The method as described in claim 1, which further comprises: installing said unit between relatively movable parts with a resinous face of one of the laminates being in contact with the fluid being sealed.

3,387,851
TANDEM STRIPPER SEALING APPARATUS
Edward Thomas Cugini, Brea, Calif., assignor to Shaffer Tool Works, Brea, Calif., a corporation of California
Filed Jan. 12, 1966, Ser. No. 520,214
3 Claims. (Cl. 277—2)



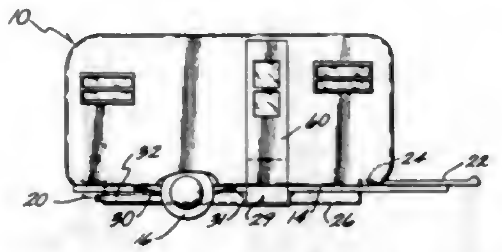
A tandem stripper sealing apparatus for use in oil drilling operations to effect a continuous double seal about a rotating, ascending or descending well tool by providing a pair of vertically spaced stripper means, the lower stripper means being sealed by the well pressure and the upper stripper means being normally sealed by an external source of pressure applied to a chamber formed between the vertically spaced strippers. There is also disclosed means for sensing a change in pressure in such chamber so as to indicate leakage in one of the stripper means.

3,387,852
DETACHABLE AND REMOVABLE ROLLER SKATES
Emma De Sarro, 620 Palmetto St.,
West Palm Beach, Fla. 33405
Filed July 25, 1966, Ser. No. 567,664
5 Claims. (Cl. 280—11.2)



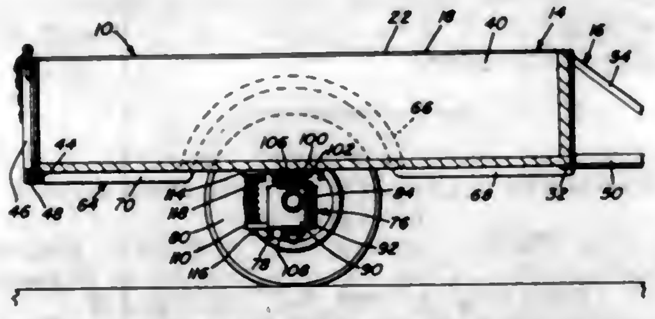
Roller skates which have a single longitudinal line of wheels mounted on special frames permitting convenient removal of the wheels from the shoe and adjustment of the frames to fit shoes of different dimensions.

3,387,853
TRAILER
Herbert M. Sueoka, 1130 S. 112th St.,
Greenfield, Wis. 53214
Filed Aug. 26, 1965, Ser. No. 482,706
4 Claims. (Cl. 296—23)



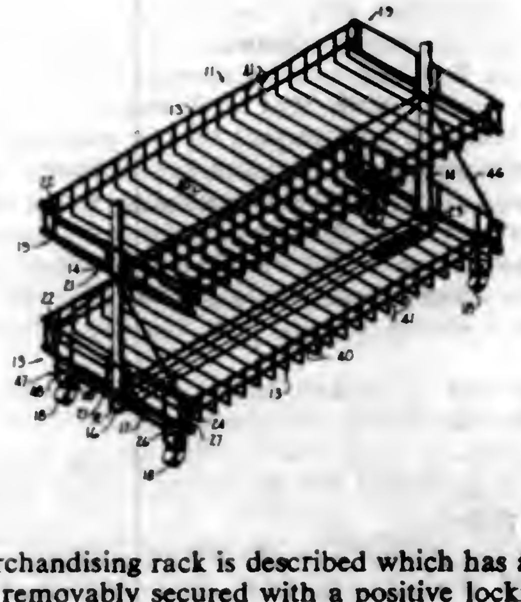
Disclosed herein is the combination in a trailer of a frame including a pair of coaxial wheel spindles, a vehicle body mounted on the frame and including a floor havinb an upper level and a lower level, each of said levels extending forward and rearwardly of the axis of the spindles, together with means connecting the spindles to afford extension of the lower level between the spindles and a step movably connected to the frame and selectively positionable to afford entrance to the trailer at the level of said lower level.

3,387,854
TWO-WHEEL TRAILER
William L. Pierce, P.O. Box 398,
Belle Glade, Fla. 33430
Filed May 9, 1966, Ser. No. 548,496
7 Claims. (Cl. 280—69)



A trailer provided with an axle suspension system including telescopingly engaged guide members secured at remote ends to the chassis and axle of the trailer and abutments mounted to one side of the axle, carried by the guide members and having spring means disposed therebetween yieldingly urging said abutments apart so as to tend to roll the axle about its center axis and thereby cause the telescoped guide members to be canted slightly relative to each other and to bind slightly on each other in a shock dampening manner, the trailer further including a transverse front wall defining opposite side upper and lower corner portions and a forwardly projecting tongue assembly including upper and lower pairs of opposite side forwardly converging bracing bars secured at their rear ends to corresponding corner portions of the front wall and to each other at their forward ends.

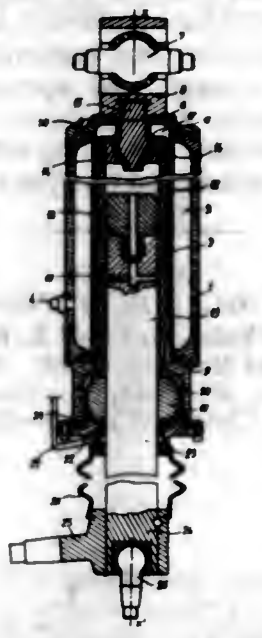
3,387,855
RACK FOR MERCHANDISING AND THE LIKE
Earl J. Oliver, Fremont, Calif.
(555 W. 135th Ave., San Leandro, Calif. 94577)
Filed Apr. 8, 1966, Ser. No. 541,304
7 Claims. (Cl. 280—79.3)



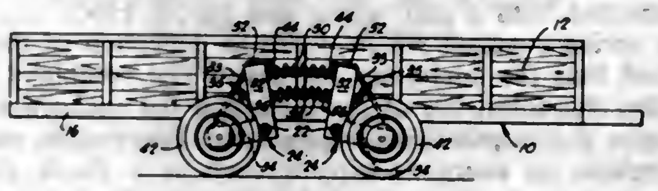
A merchandising rack is described which has a plurality of trays removably secured with a positive locking action in tiered relationship to a frame. The rack comprises a support frame having two vertical posts between which are secured the trays in spaced vertical relationship by tray securing means. The tray securing means includes in opposed positions on each of the posts resilient arms which project transversely outward from opposite sides of the posts. Each of the arms includes at its free end inwardly turned reentrant flanges. The ends of each tray have downwardly turned tab portions adapted to engage within the slot defined between the reentrant flanges and the arms of each securing means. These tabs are spaced in the direction longitudinally of the trays by a distance which is slightly less than the longitudinal distance between the flanges of the corresponding pairs of the opposed tray securing means, so that the resilient arms are flexed inwardly when the tabs engage said flanges to provide a tight, frictional lock between the trays and the frame.

3,387,856
HYDRO-PNEUMATIC SUSPENSION SYSTEMS
Louis Guilhamat and Francois Mounier-Poulat, Lyon, France, assignors to Automobiles M. Berliet, Lyon, France, a corporation of France
Filed Sept. 9, 1965, Ser. No. 486,089
Claims priority, application France, Sept. 24, 1964, 989,208, Patent 1,418,898
6 Claims. (Cl. 280—96.2)

A hydro-pneumatic shock absorber suspension device for interconnecting sprung and unsprung portions of vehicles, the device including an outer cylinder having a cylindrical diaphragm disposed therein and defining therewith a first chamber. A cylindrical liner is disposed within the diaphragm, forms a working cylinder, and defines with the diaphragm a second chamber. Compressed gas is put in the first chamber and oil in the second, and throttling means are provided which connect the interior of the working cylinder with the second chamber. A piston is guided in the working cylinder and has a curved peripheral portion coacting with the inner surface of said liner.



3,387,857
TANDEM WHEEL SUPPORT FOR TRAILERS AND SIMILAR VEHICLES
Elmer Lee Roberts, 1137 W. Eufaula,
Norman, Okla. 73069
Filed Oct. 17, 1966, Ser. No. 587,278
4 Claims. (Cl. 280—104.5)



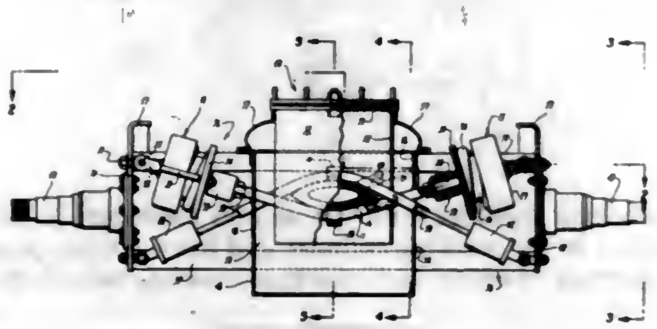
1. A trailer vehicle comprising:
a substantially horizontally extending bed having opposed side edges;
a first pair of horizontally spaced, substantially parallel axle portions secured to said bed and extending horizontally and outwardly from one of the side edges of said bed;
a second pair of horizontally spaced, substantially parallel axle portions secured to said bed and extending horizontally and outwardly from a side edge of said bed opposite said one side edge, said second pair of horizontally spaced axle portions extending substantially parallel to said first pair of horizontally spaced axle portions;
a wheel supporting frame mounted on an end of each of said axle portions for pivotation about a substantially horizontal axis and spaced horizontally from said bed, each of said wheel supporting frames including an upstanding leg and a generally horizontally extending leg, said legs intersecting adjacent the point of connection of one of said axles to the respective frame, and said generally horizontally extending leg having a plurality of spaced stub axle receiving apertures formed therethrough;
a stub axle detachably secured in one of the apertures in the horizontally extending leg of each of said wheel supporting frames;

a wheel mounted on each of said stub axles;

at least one coil spring positioned between the upstanding legs of the two wheel supporting frames mounted on the two axle portions in each of said first and second pairs of horizontally spaced, substantially parallel axle portions; and

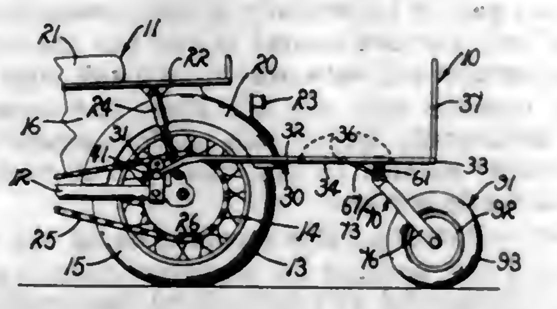
means for adjustably and removably retaining said coil springs between said upstanding legs in any one of a plurality of preselected positions to selectively accommodate the spring action to the loading of the trailer vehicle and the type of terrain traversed.

3,387,858
VEHICLE SUSPENSION
Henry C. Harbers, Jr., 17747 E. Railroad Ave.,
City of Industry, Calif. 91744
Filed Dec. 27, 1965, Ser. No. 516,583
11 Claims. (Cl. 280—124)



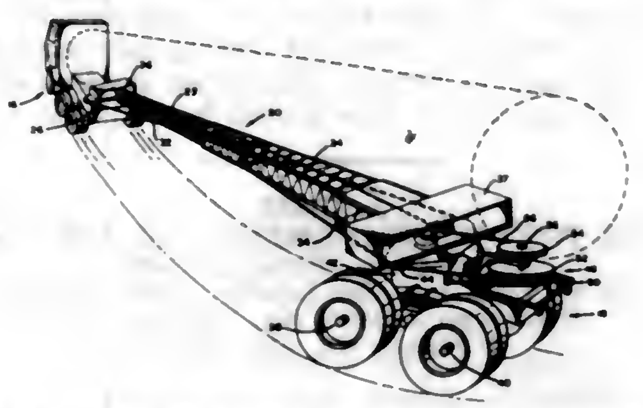
A vehicle suspension system which is adaptable to support of the vehicle frame relative to the axle and for support of a fifth wheel structure is disclosed. The system is constructed by anchoring a laterally flexible member, such as a cable or flat strip or band of material, for operation in tension upon loading medially thereof. The anchorage is resiliently yieldable and preferably constructed with a coil spring and rubber block to provide a spring constant which varies as deflection of the cable and thus the anchorage increases. The combined deflection characteristics of the cable and the anchorage determine the suspension characteristics. The system may also include an energy dissipator such as a shock absorber or a second cable mounted to oppose the first cable.

3,387,859
TRAILER FOR MOTOR BIKES
Leslie L. McClellan, Tulare, Calif., assignor of forty-nine percent to Leonard D. Friday, Tulare, Calif.
Filed Mar. 28, 1966, Ser. No. 537,930
4 Claims. (Cl. 280—204)



A trailer for a two wheeled vehicle having a single swivel mounted ground engaging wheel disposed in angular depending relation from the trailer so that during movement of the vehicle the wheel is disposed in precisely aligned tracking relation thereto and including bracket means on the vehicle having a plurality of connector openings and connector means on the trailer extendible through said openings for releasably connecting the trailer to the vehicle.

3,387,860
STEERING DEVICE FOR CONNECTED TRACTOR AND DOLLY VEHICLES
William A. Whitmire, Castro Valley, and Jack S. Webber, Walnut Creek, Calif., assignors to Henry W. Bigge
Filed Sept. 9, 1966, Ser. No. 578,258
6 Claims. (Cl. 280—404)

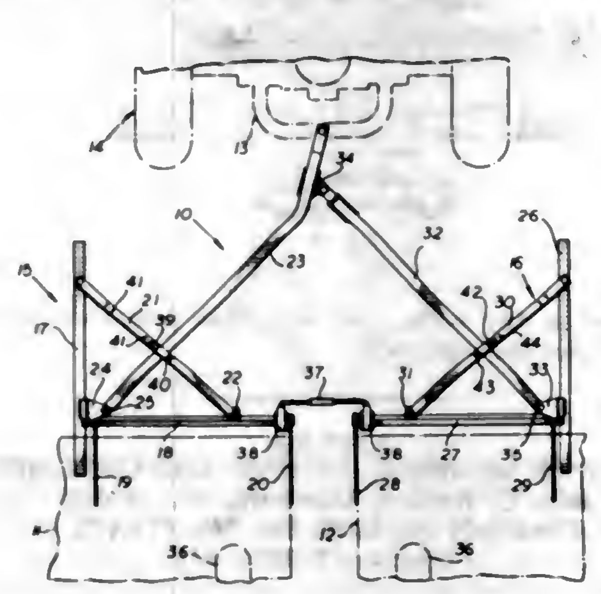


1. In combination with a tractor-dolly vehicle wherein first and second vehicle elements have first and second frames with first and second steering bars fixed to the respective frames with first and second load carriers pivotally mounted with respect to said steering bars and with a telescoping reach extending between the load carriers, said telescoping reach including a first reach element connected to the first load carrier and a second reach element connected to the second load carrier and with a pair of crossed steering cables connecting the ends of the first and second steering bars, the improvement comprising:

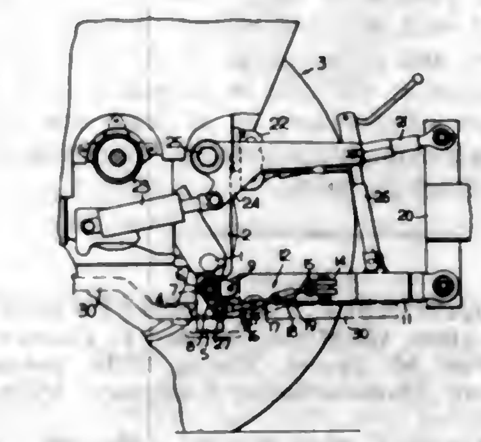
(a) one end of each of said steering cables connected to the ends of the first steering bar,
(b) pulleys at each end of the second steering bar with each of said steering cables passing over one of said pulleys,
(c) a shaft mounted on the second frame,
(d) said shaft having three reels thereon, said reels being joined for rotation together,
(e) said steering cables being fastened to two of said reels whereby rotation in one direction causes both of said cables to be wound up on their respective reels,
(f) a control cable, said control cable being fastened to the third reel and being wound in the opposite direction from the steering cables,
(g) a direction reversing pulley near the end of the second reach element,
(h) said control cable passing along the second reach element, over said direction reversing pulley and being fastened to the first reach element and
(i) means for locking said reels with respect to the frame.

3,387,861
IMPLEMENT DUPLEX HITCH
Jack L. Bauman, Naperville, Ill., assignor to International Harvester Company, Chicago, Ill., a corporation of Delaware
Filed Nov. 10, 1966, Ser. No. 593,473
6 Claims. (Cl. 280—412)

1. In a tractor drawn duplex implement having transversely spaced units, hitch means for connecting the implement to the tractor in draft-receiving relation for independent vertical movement of said units and for optionally shifting one unit to a tandem relation with the other unit to facilitate transporting the implement comprising, drawbar means extending forwardly from each of said units including an inwardly extending part, a draft member pivotally connected to each of said units and extending forwardly in sliding relation to the respective of said drawbar means for lateral swinging between positions in forwardly converging relation for pivotal connection to the tractor for operation of the implement and positions substantially parallel to the line of travel of said units, means for releasably locking said draft members to said drawbar means to prevent said lateral swinging in either of said positions, one of said draft members being disconnectable from the tractor for disposition of one said unit rearwardly of the other unit, and means for connecting the draft member of said one of said units to said other unit to be drawn therebehind.

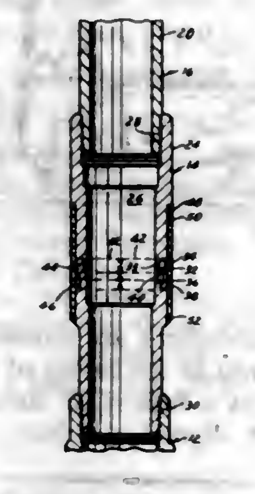


3,387,862
TRACTOR HITCH WITH SWAY LIMITING MECHANISM
John R. Plate, Milwaukee, and Donald E. Peterson, Wauwatosa, Wis., assignors to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed Dec. 1, 1966, Ser. No. 598,343
8 Claims. (Cl. 280—461)



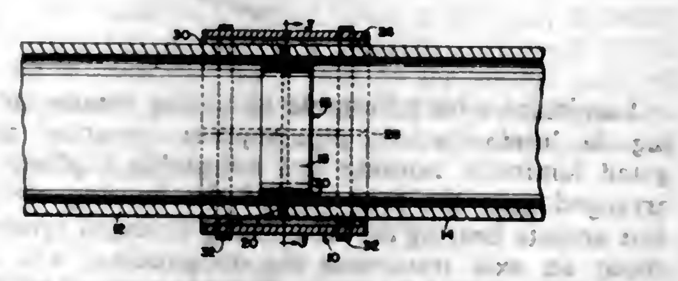
1. A tractor hitch device comprising, a pair of draft arms, means universally rotatably supporting the forward end of the said draft arms on a common horizontal axis of rotation, a pair of tension members singularly connected to the intermediate portion of said draft arms, pivotal means pivotally supported for limited pivotal movement on substantially the same horizontal axis of rotation and severally connecting said tension members for pivotal movement about another axis of rotation, lift means including links connected to said draft arms to pivotally raise said hitch device and causing said draft arms to pivot about said common horizontal axis and said tension members to pivot about said other axis of rotation and thereby cause a tensioning of said tension members and eliminate lateral sway when said hitch device is in the raised position.

3,387,863
SAFETY JOINT
Roy Treese, Dallas, Tex., assignor to Dresser Industries, Inc., Dallas, Tex., a corporation of Delaware
Filed Sept. 12, 1966, Ser. No. 578,565
6 Claims. (Cl. 285—2)



A safety joint for releaseably connecting adjacent pipe sections including a unitary member having a substantially smooth inner bore and an annular recess formed in the exterior thereof with a support member disposed in the recess. The recess forms a portion of reduced diameter in the unitary member whereby the safety joint parts in the reduced portion when a tensile force is exerted on the safety joint. A sleeve encircles the exterior of the safety joint retaining the support member in the exterior recess.

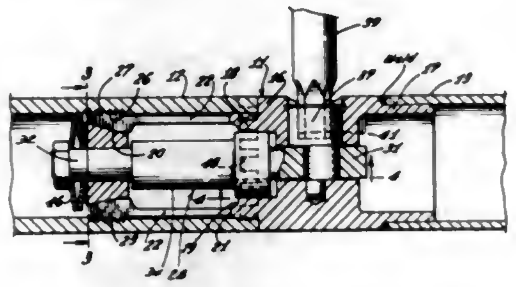
3,387,864
PIPE COUPLING
Joseph M. Walters, Allentown, Pa., assignor, by mesne assignments, to Amercoat Corp., Brea, Calif., a corporation of California
Filed July 19, 1965, Ser. No. 473,078
1 Claim. (Cl. 285—23)



A pipe coupling which includes a coupling member having a wall portion which fits into the abutted ends of the pipes and a radial flange portion extending from the surface of the wall portion and adapted to be engaged between the abutted ends, and which also includes a sleeve surrounding the area adjacent the abutted ends and cement interposed between all opposing surfaces of the coupling members, sleeve, and abutted ends.

3,387,865
DRILL STRING CONCEPT
Donald E. Ross, Huntsville, Ala., assignor to Northrop Corporation, Beverly Hills, Calif., a corporation of California
Filed Aug. 29, 1966, Ser. No. 575,646
5 Claims. (Cl. 285—39)

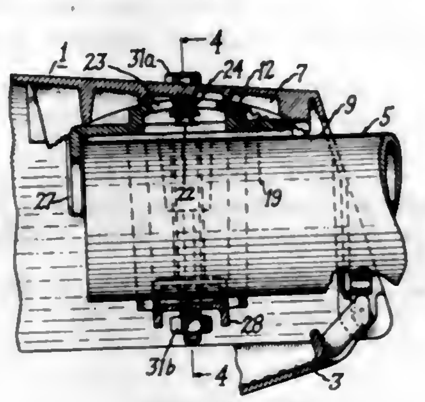
Coupling means adapted to provide a firm-rigid connection between a pair of aligned elongated members. Adjacent ends of the members having cavities formed therein of cylindrical configurations. The ends of the coupling means, also of cylindrical configuration, are received in the cavities formed in the members. The coupling means is welded in one of the members while the other end thereof includes a plurality of circular oriented finger members. The coupling means also includes cam means adapted to expand the finger members when actuated.



In turn the finger members are expanded and caused to contact the inside wall of the cavity of the member associated therewith. Thus a firm-rigid connection is provided between the pair of aligned members.

3,387,866
LUMINAIRE

Samuel L. Baldwin, Flat Rock, N.C., assignor to General Electric Company, a corporation of New York
Filed Feb. 16, 1966, Ser. No. 527,695
10 Claims. (Cl. 285—184)

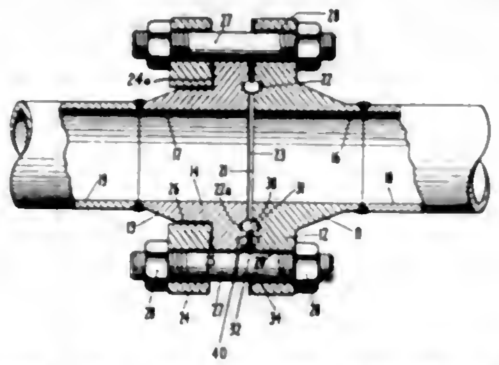


Luminaire with adjustable mounting means for securing the luminaire to a pipe support comprises an elongated luminaire housing and adjustable slipfitter means arranged near the rear end of the housing comprising first arcuate bearing on the housing arranged symmetrical about an axis transverse the longitudinal axis of the housing, a second bearing adjustably secured to the first bearing for movement relative thereto to selected positioned along an arcuate path about the transverse axis, the second bearing having an upper surface portion engaging the first arcuate bearing and lower surface portion engageable with one side of the pipe support, and clamping means adjustably secured to the housing independent of the second bearing and engageable with the opposite side of the pipe support for clamping the housing to the pipe support, the clamping means being operable from either inside or outside the housing.

3,387,867
JOINT CONSTRUCTION

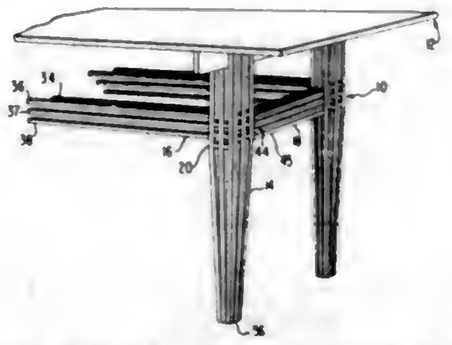
Oliver C. Rogers, 1815 Glaise St., Marrero, La. 70072
Continuation of application Ser. No. 528,653, Feb. 18, 1966. This application Feb. 2, 1967, Ser. No. 622,860
2 Claims. (Cl. 285—336)

A high pressure pipe joint construction wherein a sealing ring is disposed in facing seal seats in the flanges of pipe sections. The ring carries a disc with alignment holes radially beyond the ring that align with holes on the flange of one pipe section and the holes in a collar to position the ring in the seats. A bead on the collar aligned in an axial direction with the ring pulls the pipe sections together when the bolts and nuts that pass through the aligned holes are tightened.



3,387,868
MULTIPLE MEMBER JOINING ARRANGEMENT

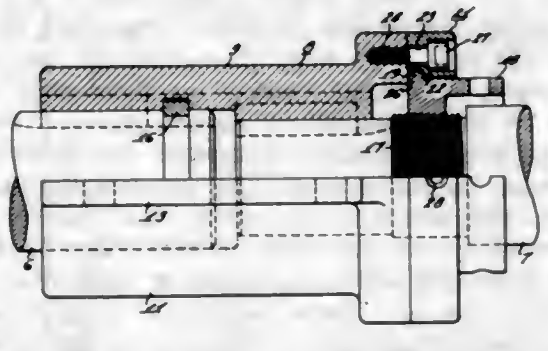
John C. Borden, Marlboro, Vt. 05344
Filed July 30, 1965, Ser. No. 476,122
1 Claim. (Cl. 287—51)



A joint for furniture or other structure is formed from at least three subdivided members extending from different angles. Each member includes at least three sets of submembers with at least two submembers in each set, both the sets and submembers being spaced from each other and parallel to each other at the joint. The submembers of each member extend through the space between the sets and submembers of the other members in physical contact at the joint to provide a large gluing surface. All the submembers of at least one member are secured together in physical contact with each other at a point remote from the joint.

3,387,869
AXIALLY ADJUSTABLE RIGID SHAFT COUPLING

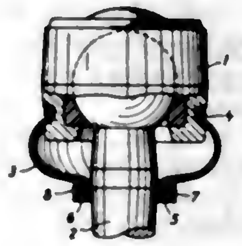
Charles Alvin Allen, Hamilton, Edward F. Cooney, Norwood, and Paul M. Freeze, Mason, Ohio, assignors to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed Apr. 1, 1966, Ser. No. 539,438
2 Claims. (Cl. 287—62)



A rotary shaft coupling for connecting two axially aligned shafts having a connection between the shafts and the coupling to permit relative axial adjustment of the shafts.

3,387,870
ELASTIC BELLOWS PACKINGS FOR UNIVERSALLY MOVABLE JOINTS AND MORE PARTICULARLY FOR BALL JOINTS

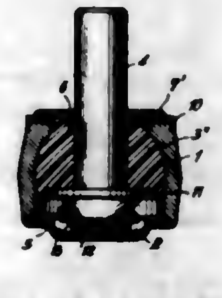
Rudolf Gottschald, Osterath, and Jakob Vogt, Osterath-Bovert, Germany, assignors to Messrs. A. Ehrenreich & Cie., Dusseldorf-Oberkassel, Germany
Filed Nov. 15, 1966, Ser. No. 594,618
Claims priority, application Germany, Nov. 20, 1965, E 30,498
7 Claims. (Cl. 287—87)



An elastic bellows sealing device for universal ball joints including a housing with a joint pin extending outwardly therefrom, the bellows connected to the housing opening and joint pin. A ring-shaped member cooperating with a portion of the bellows to secure the bellows to the joint pin and still maintain the proper movements.

3,387,871
BALL AND SOCKET JOINTS

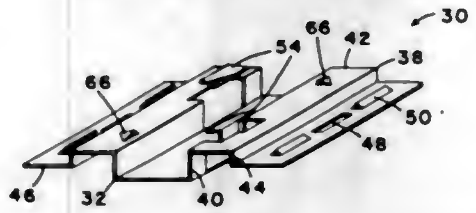
Rudolf Gottschald, Osterath, Germany, assignor to A. Ehrenreich & Cie, Dusseldorf-Oberkassel, Germany, a German body corporate
Original application July 12, 1963, Ser. No. 294,694, now Patent No. 3,290,073, dated Dec. 6, 1966. Divided and this application Sept. 7, 1966, Ser. No. 597,187
5 Claims. (Cl. 287—87)



A ball and socket joint having a ball part with a bore extending therethrough, sealing means around the bore and a sealing extension which is at least a coating on the ball part.

3,387,872
IMITATION CEILING BEAM ATTACHMENT CLIP

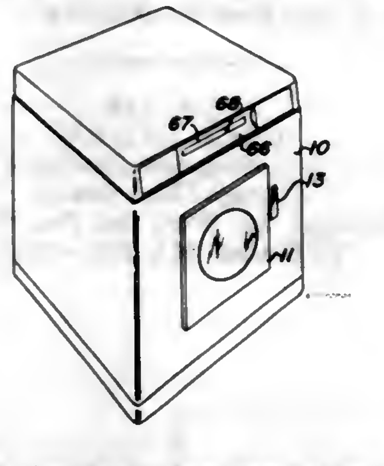
Patrick R. Lovullo, Kenmore, and Gerard T. Sowinski, Lancaster, N.Y., assignors to National Gypsum Company, Buffalo, N.Y., a corporation of Delaware
Filed July 19, 1966, Ser. No. 566,438
10 Claims. (Cl. 287—189.35)



A clip for attaching hollow imitation beams to either a plaster ceiling or by inverting, to an acoustical ceiling having an exposed grid system, formed from a substantially square sheet of metal folded to include portions in each of three parallel planes, the two opposite outermost, side flanges being in a plane between the other two planes and spaced from the other two planes a distance equal to the wall thickness of said hollow imitation beam; the portion between said two side flanges being partially in one of said other planes which part comprises a generally flat surface for affixation to a plaster ceiling and partially in the second of said other planes which part comprises means for affixation to an exposed grid system.

3,387,873
DOOR INTERLOCK FOR WASHING APPARATUS

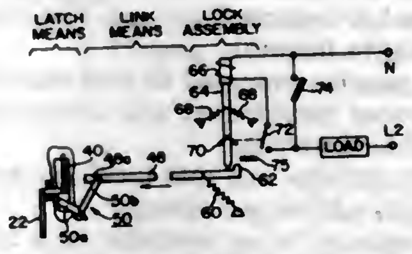
Eric Stuart Prosser, Merthyr Tydfil, and William Grayham Hall, Caerphilly, Glamorgan, South Wales, assignors to The Hoover Company, North Canton, Ohio, a corporation of Delaware
Filed Mar. 29, 1967, Ser. No. 626,819
Claims priority, application Great Britain, Mar. 31, 1966, 14,342/66
10 Claims. (Cl. 292—175)



A mechanical interlock for the loading door of a washing apparatus having a reciprocally mounted member arranged for movement between locking and release positions by which the door latch is permitted to move to allow opening the door, the reciprocally mounted member extending from a lever operated by a handle for the door latch to a region where a pivotally mounted part is arranged normally to prevent reciprocal movement but is controlled by a cam on the washer program timer to permit opening of the door. The pivotally mounted part controlled by the timer cam also operates a washing program indicator.

3,387,874
HEAT-CLEANING OVEN LATCH AND LOCK MECHANISM

Calvin J. Holtkamp, Mansfield, Ohio, assignor to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Apr. 28, 1966, Ser. No. 545,894
6 Claims. (Cl. 292—201)



1. In an oven of the type adapted to undergo heat-cleaning, and including latching means adjacent the front of the oven structure, lock effecting means adjacent the rear of the oven structure, and movable link means extending between said latching means and said lock effecting means to relate the operation thereof in accordance with existing conditions;

frame means carrying the operational elements of said lock effecting means in generally fixed relation to each other;

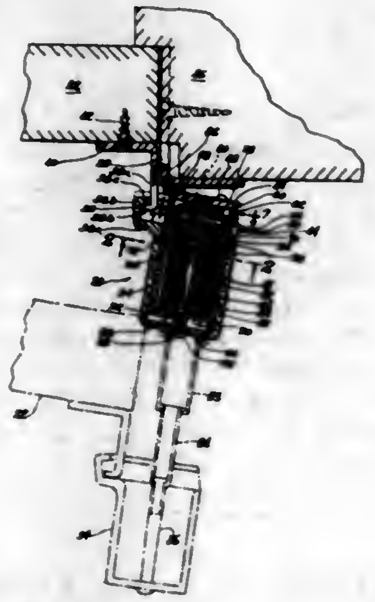
means mounting said frame means to said oven structure for limited movement of said frame means as a whole;

means connecting the rear end of said link means to said operational elements so that movement of said link means influences the operation of said operational elements, the forward end of said link means being disposed relative to said latching means under high oven temperature conditions to prevent operation of said latching means to an unlatched position; and

means for moving said frame means, in accordance with changes in spacing between said lock effecting means and said latch means arising from thermal expansion and contraction of said range body, to maintain substantially the same relationship between said latch means and the forward end of said link means to prevent the occurrence of an unlocked condition with high oven temperatures.

3,387,875
DOOR GUARD

Clemens White, 400 Deming Place,
Chicago, Ill. 60614
Filed Sept. 26, 1966, Ser. No. 582,118
10 Claims. (Cl. 292—262)



1. In a door guard,

the combination comprising a bracket adapted to be mounted on a door jamb adjacent the door to be controlled,

a first member mounted on said bracket,

a second member mounted on said first member for rotation relative thereto,

an extensible member mounted on said second member,

a locking member mounted on said extensible member and extensible therewith,

said extensible member and said locking member being rotatable with said second member,

said locking member being rotatable to a fully locked position, a partially locked position and an open position,

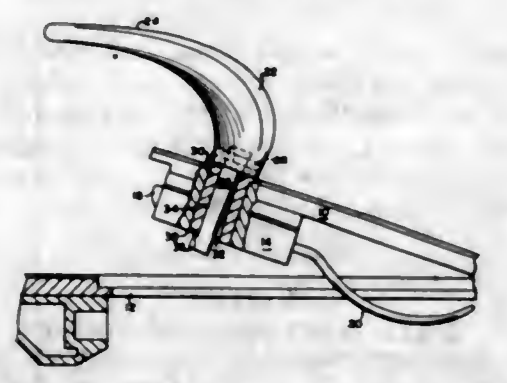
means on said locking member cooperating with means on the jamb and door for holding the door when said locking member is in said fully locked position and said partially locked position while providing for opening movement of the door when said locking member is in said open position,

and means cooperating with means on the jamb for preventing extension of said extensible member when said locking member is in said fully locked position to hold the door in a fully closed position,

and means cooperating with means on the door and effective to provide for extension of said extensible member and said locking member when said locking member is in said partially locked position to provide for partial opening movement of the door.

3,387,876
COMBINATION REMOVABLE HANDLE AND LATCH OPERATING KEY FOR FLUSH DOORS

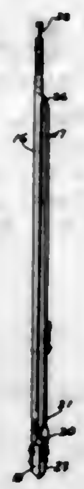
George W. Lyons, Jr., 2 McKinley Ave.,
New Haven, Conn. 06515
Filed Jan. 17, 1967, Ser. No. 609,844
3 Claims. (Cl. 292—348)



The invention relates to a removable combination handle and latch operator for doors, particularly for horizontally hinged doors for sidewalk, ceiling or roof accessways. The handle, when in operative position in the latch of the door, automatically engages in a positive manner some part of the latch mechanism when a lifting or door-opening pull is applied to the handle, allowing the operator to pull the door open by means of the handle. However the handle may be easily removed to provide a flush exterior on the door simply by maintaining axial alignment of the shank of the handle and its socket in the latch member while withdrawing the shank from the socket.

3,387,877
RETRIEVING TOOL

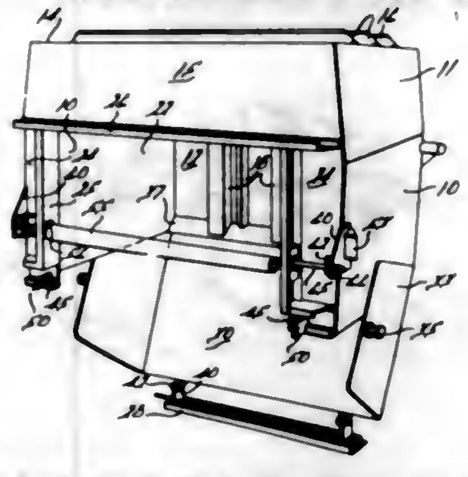
Constantinos Christodolu, 5808 Audubon,
Detroit, Mich. 48224
Filed May 15, 1967, Ser. No. 638,375
3 Claims. (Cl. 294—50.9)



This application discloses a tool for retrieving articles inadvertently dropped into the trap of a sanitary sewer or drain pipe. The device embodying the invention consists of a pair of elongated handles, with jaws thereon. One of the handles is fixed, and the other handle is pivotally mounted, at one end to linkage secured to the fixed handle, and to one jaw, and is slidably mounted, at the opposite end to said fixed handle. There being means for remotely adjusting the non-fixed jaw with reference to the fixed jaw, and means for locking said jaws in predetermined positions.

3,387,878
DROP BOTTOM CONTAINER FOR COMPACTED LOADS

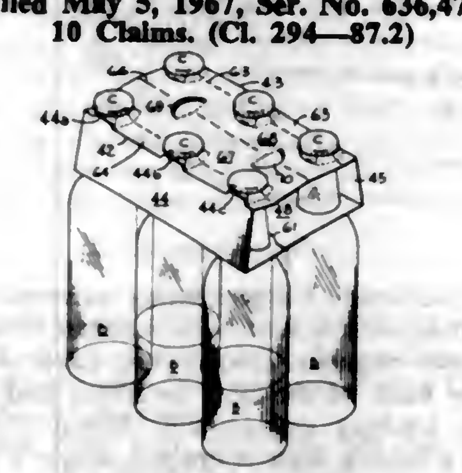
Robert J. Pioch, P.O. Box 260,
Jackson, Mich. 49204
Filed Aug. 29, 1966, Ser. No. 575,719
6 Claims. (Cl. 294—69)



The preferred drop bottom container construction disclosed is intended to be filled with waste material, compacted and pressurized therein by means of stationary compaction-type loading apparatus. The container has a loading port in its front wall. The loading port is unobstructedly connected with the open bottom when the bottom is dropped, and the sides and top of the port are bounded by stiff frame portions rigidly carried by the fixed front wall of the container. A displaceable still portion is movably attached to the drop bottom of the container and frames the bottom of the port when the drop bottom is closed. The drop bottom is hinged along the lower rear wall and the displaceable sill is hinged to the front edge of the drop bottom in such manner that when the bottom is closed the sill is aligned with the remainder of the frame structure of the loading port. Securing means for the sill releasably holds it in the closed, framing position and acts as a tiebar restraining separation of the sidewalls and other attached parts, including the side jambs of the frame structure, and such securing means also releasably holds the drop bottom closed.

3,387,879
CARRIER FOR FLANGED ARTICLE

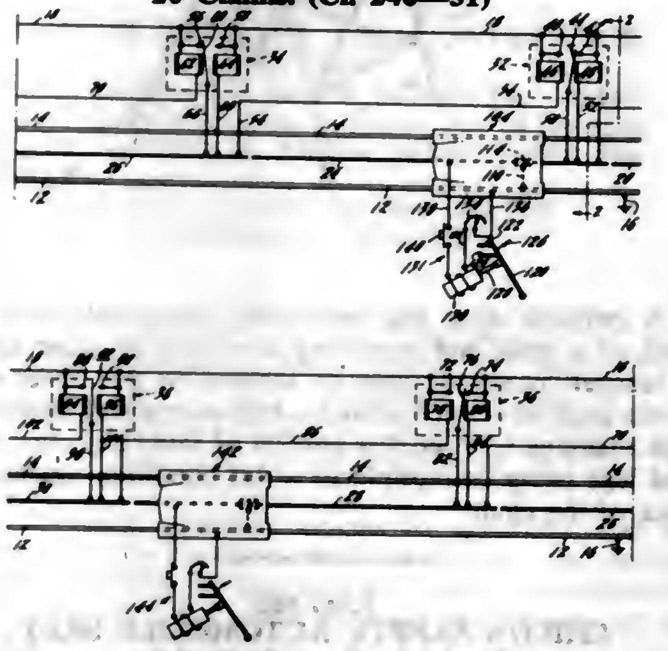
Prentice J. Wood, Jonesboro, Ga., assignor to The Mead Corporation, a corporation of Ohio
Filed May 5, 1967, Ser. No. 636,471
10 Claims. (Cl. 294—87.2)



The carrier as disclosed herein is for the purpose of tightly gripping an article such as a capped bottle underneath its cap and comprises a tubular structure having top, bottom and side walls and wherein a medial fold line is formed in the top wall together with a plurality of support tabs foldably joined to the top wall and biased inwardly against the neck of an adjacent bottle so that the weight of the bottle is taken by the ends of the support tabs, the bottom of the carrier being apertured to receive the necks of the bottles and the side walls being constructed of different heights so as to provide secure gripping action. The medial fold line in the top wall defines the bottom of a trough-like structure by which added strength and rigidity are achieved. According to a modification, the carrier is arranged with two aligned rows of apertures in both the top and bottom panels so as to accommodate two rows of packaged articles having flanges at their upper ends.

3,387,880
RAIL TRANSPORTATION CONTROL SYSTEM

Charles P. de Biasi, 74 Braman Road,
Waterford, Conn. 06385
Filed Oct. 22, 1965, Ser. No. 501,852
20 Claims. (Cl. 246—31)



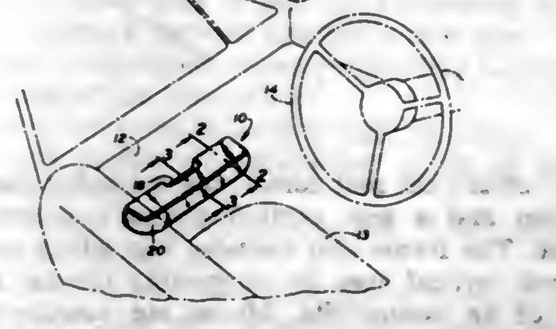
A system for controlling the speed and spacing of vehicles which travel on rails. A plurality of longitudinally aligned control rails are spaced apart and suitable controls are provided to prevent any two vehicles from approaching each other closer than a distance equal to the length of two of the control rails.

ERRATUM

For Class 296—23 see:
Patent No. 3,387,853

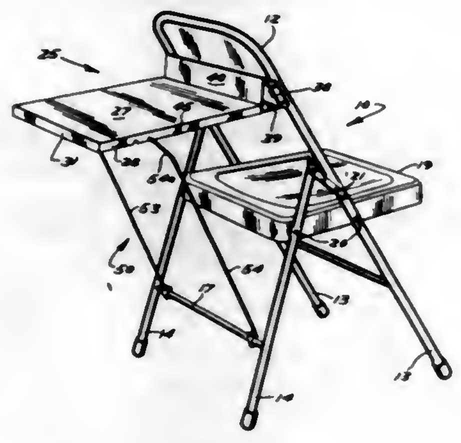
3,387,881
COLLAPSIBLE ARM REST

George R. Stepanek and William H. Terrell, Akron, Ohio, assignors to Sun Corporation, Barberton, Ohio, a corporation of Ohio
Filed Sept. 6, 1966, Ser. No. 577,457
6 Claims. (Cl. 296—153)



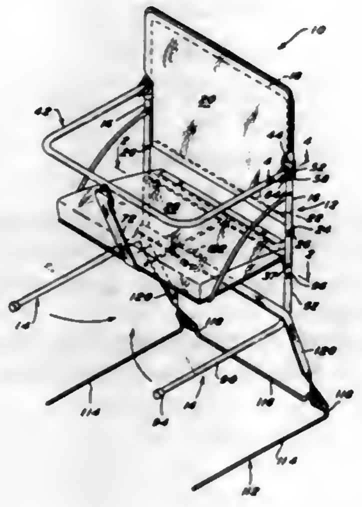
A padded arm rest for automobiles and vehicles having a side attaching plate and a substantially flat top supporting surface, there being a foldable semi-rigid insert connected to said attaching plate and adapted to collapse when a lateral force is applied toward said attaching plate.

3,387,882
COLLAPSIBLE DESK STRUCTURE
Gordon E. Mycue, 1054 Blair Ave.,
St. Paul, Minn. 55104
Filed Oct. 28, 1966, Ser. No. 590,365
2 Claims. (Cl. 297—163)



A portable desk top removably mountable onto the back of a chair and consisting of a plate member having a bracket to engage and be secured to the upper back frame portion of a chair and a bail comprising depending legs engaging a lower rear portion of said chair, said plate and legs being collapsible to a flat condition against the back of the chair.

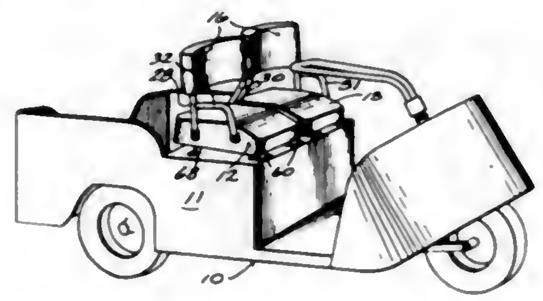
3,387,883
CHILD'S SAFETY AUTOMOBILE SEAT
Daniel Berlin, 4424 Paul St.,
Philadelphia, Pa. 19124
Continuation of application Ser. No. 311,114, Sept. 24, 1963. This application Jan. 6, 1966, Ser. No. 519,053
2 Claims. (Cl. 297—253)



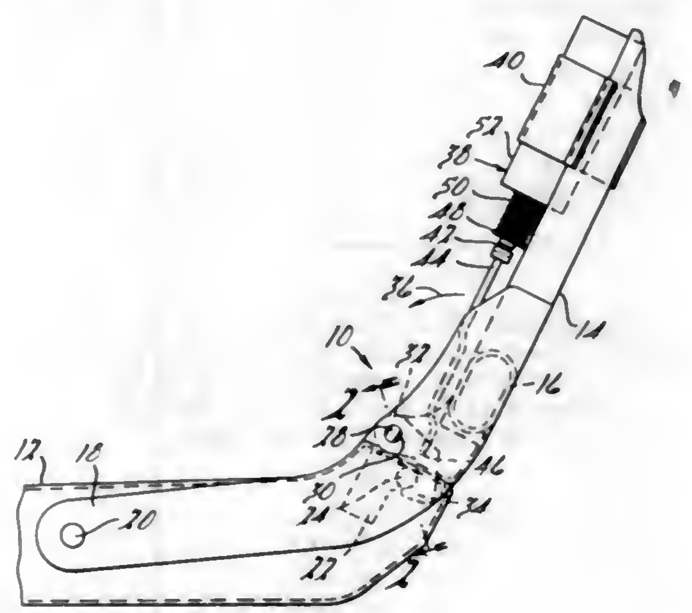
A child's car seat comprising a tubular frame, a back portion and a seat portion pivotally mounted on the frame. The frame also includes legs which are pivotable around vertical axes for supporting the car seat on the seat of an automobile. Means are associated with the frame for securing the car seat in place on the automobile seat.

3,387,884
VEHICLE SEAT
Sterling F. Mutz, Jr., Lincoln, Nebr., assignor to Outboard Marine Corporation, Waukegan, Ill., a corporation of Delaware
Filed July 15, 1966, Ser. No. 565,474
13 Claims. (Cl. 297—302)

Disclosed herein is the combination of a vehicle body, a seat comprising a frame having a forward member and a rearward member and a back rest rigidly supported by said frame and extending upwardly from adjacent the rear of said frame, means pivotally mounting said forward member of the frame on the vehicle body for rocking movement about a horizontal transverse axis, and means yieldably mounting the rear member of the frame to yieldably afford rocking movement of the frame about a transverse horizontal axis.

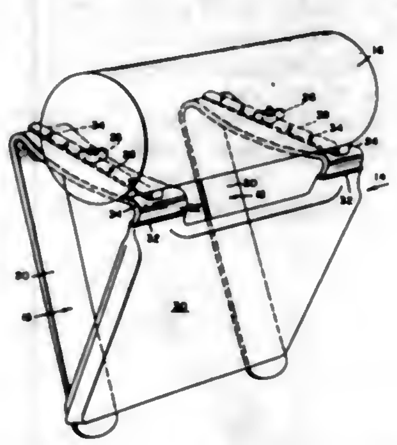


3,387,885
SEAT BACK LATCH MECHANISM
John A. Boschen, Royal Oak, and Albert R. Close, Oak Park, Mich., assignors to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Apr. 20, 1967, Ser. No. 632,419
9 Claims. (Cl. 297—379)



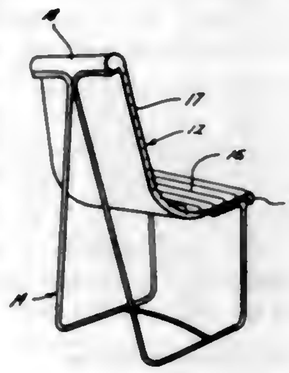
A latch mechanism for preventing movement of a pivotally mounted vehicle seat back member relative to the horizontal seat member. Cooperating latch elements are mounted on each of the seat members and are spring biased into latching engagement. Motor means, energized when a vehicle door is opened, exerts a force overcoming the spring bias and unlatching the latch elements. The electrical circuitry allows the use of an intermittent duty solenoid as the motor means for holding the latch elements open for extended periods of time.

3,387,886
AUTOMOBILE HEADREST
Paul P. Longo and Allen Parmet, Camden, N.J., assignors to Broadway Manufacturing Company, Camden, N.J., a corporation of New Jersey
Filed Nov. 23, 1966, Ser. No. 596,594
1 Claim. (Cl. 297—397)



An automobile headrest comprising a pair of spaced, spring steel, V-shaped brackets, each including an arcuate web and depending front and rear legs wherein the bias of the spring steel brackets is increased by straightening the said arcuate web.

3,387,887
CHAIR
Robert E. Kjer Jakobsen, Los Angeles, Calif., assignor to Schlumberger Limited (Schlumberger N.V.), Houston, Tex., a corporation of the Netherlands Antilles
Filed June 9, 1966, Ser. No. 556,352
9 Claims. (Cl. 297—445)



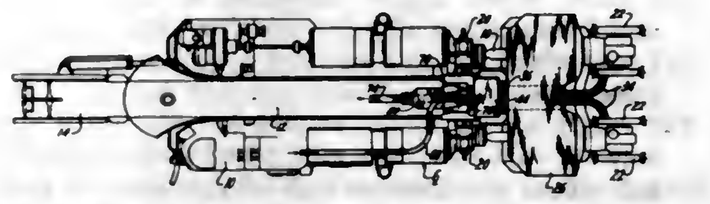
A chair assembly including a supporting frame and a unitary seat and backrest member. The frame has mirror-image frame members which form base portions, forward portions and rearward portions, the rearward portions having parts inclining upwardly and rearwardly to a convergent point. A resilient bowed part extends transversely to connect the base portions of the frame members. The seat and backrest includes a frame member preformed for the desired longitudinal curvature, and a sheet material body support member attached at peripheral portions to this frame member.

3,387,888
FRACTURING METHOD IN SOLUTION MINING
D'Arcy A. Shock and J G. Davis II, Ponca City, Okla., assignors to Continental Oil Company, Ponca City, Okla., a corporation of Delaware
No Drawing. Filed Nov. 16, 1966, Ser. No. 594,677
8 Claims. (Cl. 299—4)

1. In creating flow channel between bore holes in a subterranean soluble formation, the improvement comprising:

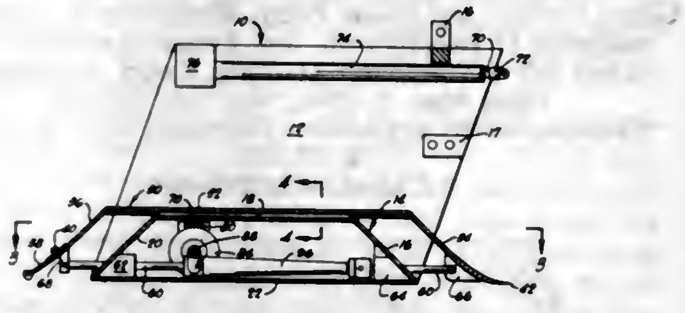
(a) Initiating a horizontal fracture from one of said bore holes, the injection bore hole, in the direction of the remaining bore holes, the target bore holes, by means of injecting a fracturing fluid into the injection bore hole;
(b) Introducing a propping agent into said fracturing fluid after initial break-through and prior to the extension of the initiated fracture reaching the target bore holes;
(c) Introducing solvent for said soluble formation into the target bore holes where said fracture reaches said target bore holes while continuing to inject fracturing fluid into injection bore hole;
(d) Ceasing injection of fracturing fluid and reducing pressure on said injection bore hole while continuing to inject solvent from said target bore holes; and
(e) Lowering the pressure of solvent injection to below the fracturing pressure and recovering solvent from said injection bore hole until flow channel is created.

3,387,889
COAL DUST REMOVAL AND CONVEYANCE SYSTEM
Stanley C. Ziemba, P.O. Box 44, Isabella, Pa. 15447, and Anthony J. Ziemba, deceased, late of Isabella, Pa., by Josephine A. Ziemba, administratrix, Isabella, Pa.
Filed Nov. 3, 1966, Ser. No. 591,928
10 Claims. (Cl. 299—12)



This invention generally relates to apparatus and a method for reducing atmospheric pollution, and more particularly pertains to a systematic means for removal of air-borne coal dust particles from the vicinity of a mine face.

3,387,890
EARTH EXCAVATING DEVICE
Louis E. Haynes, 302 S. 6th St.,
Union City, Tenn. 38261
Filed Aug. 2, 1965, Ser. No. 476,235
18 Claims. (Cl. 299—37)

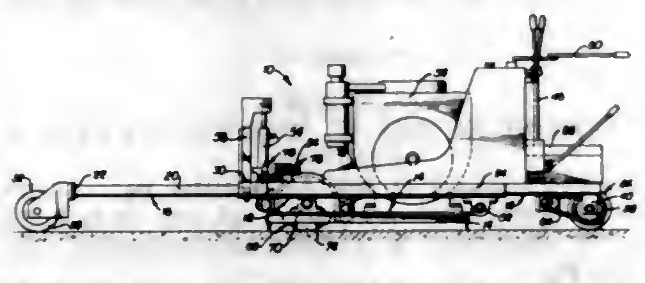


1. Earth excavating apparatus comprising:
(a) a framework having a pair of upstanding side walls and having a forward side and a rear side;
(b) a closed transmission housing extending between the side walls of the framework;
(c) a plurality of blade structures each including
  a forward cutting side positioned ahead of said transmission housing;
  a trailing side positioned to the rear of said transmission housing; and
  a top extending over said transmission housing and interconnecting said forward and trailing sides of said blade structure;

(d) power transmission means in said transmission housing;
(e) bearing means in said transmission housing;
(f) rod means interconnecting said power transmission means with said blade structures and extending through said bearing means in said transmission housing; and
(g) means on said framework for drivingly connecting said power transmission means to the power takeoff of a tractor.

3,387,891
PAVEMENT CUTTING MACHINE WITH TELESCOPING FRAME

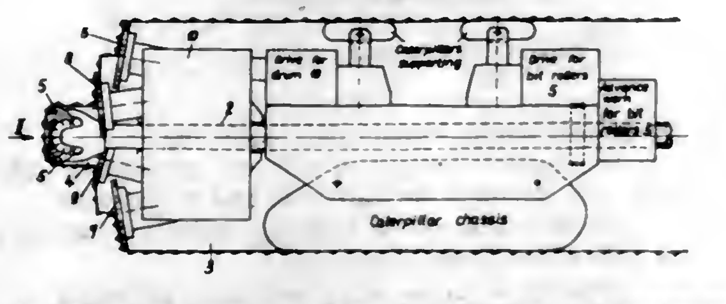
Glen E. Simms, Glendora, and David E. Cook, El Monte, Calif., assignors to Concut, Inc., El Monte, Calif., a corporation of California
Filed Oct. 24, 1966, Ser. No. 589,046
8 Claims. (Cl. 299—39)



1. In a pavement cutting machine, the combination of:
(a) frame means having longitudinally spaced front and rear ends;
(b) front wheel means connected to and supporting said frame means adjacent said front end thereof;
(c) rear wheel means connected to and supporting said frame means adjacent said rear end thereof;
(d) rotary cutting means carried by said frame means between said front and rear wheel means, and rotatable about a transverse axis of rotation, for cutting pavement over which the machine runs;
(e) means connected to said rotary cutting means and at least one of said wheel means for driving said rotary cutting means and for propelling the machine; and
(f) means for varying the longitudinal spacing of said front and rear wheel means.

3,387,892
GALLERY DRIVING MACHINE WITH ROLLER PILOT DRILL AND RELATIVELY ROTATED OUTER DRILLS

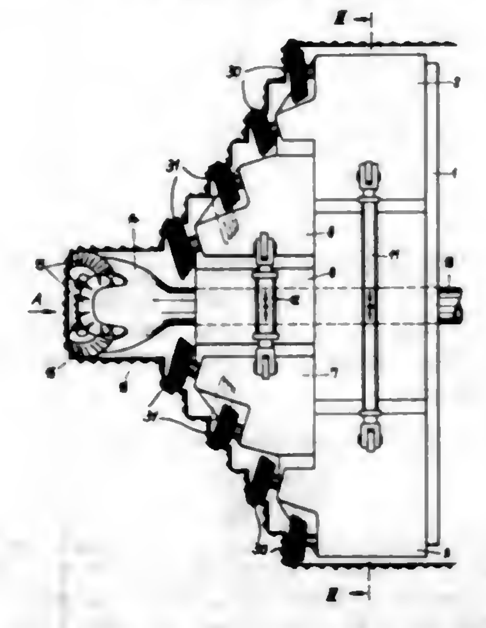
Georg Fischer and Heinz Petry, Rheinhausen, Germany, assignors to Beteiligungs- und Patentverwaltungsgesellschaft mit beschrankter Haftung, Essen, Germany
Filed Mar. 7, 1966, Ser. No. 532,251
Claims priority, application Germany, Mar. 8, 1965, B 80,871
3 Claims. (Cl. 299—60)



A gallery driving machine for driving subterranean galleries, tunnels, mine shafts and the like, which includes a central roller drill for drilling an axial bore of a diameter considerably less than the diameter of the excavation to be driven, and also includes rotatable drum means arranged substantially coaxially with regard to said roller drill and supporting rotatable cutter means having their axes of rotation radially spaced from the axis of rotation of said roller drill, said drum means being fed axially in a direction toward the front of said roller drill by track laying means exclusively.

3,387,893
GALLERY DRIVING MACHINE WITH RADIALLY MOVABLE ROLLER DRILLS

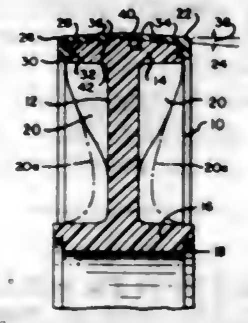
Paul Hoever, Krefeld, Germany, assignor to Beteiligungs- und Patentverwaltungsgesellschaft mit beschrankter Haftung, Essen, Germany
Filed Mar. 24, 1966, Ser. No. 537,133
Claims priority, application Germany, Mar. 27, 1965, B 81,196
3 Claims. (Cl. 299—60)



1. An excavation driving machine, especially for driving galleries, tunnels, and mine shafts, which includes rotatable shaft means, advance borehole drilling means rotatably connected to said shaft means for drilling an advance borehole, rotatable supporting means extending around said shaft means in substantially coaxial relationship thereto and adapted rotatably to support roller drills for enlarging by movement in radial direction the advance borehole drilled by said advance borehole drilling means, and means operatively connected to said supporting means and operable to displace said supporting means and roller drills supported thereby in radial direction with regard to the longitudinal axis of said shaft means.

3,387,894
WHEEL STRUCTURES

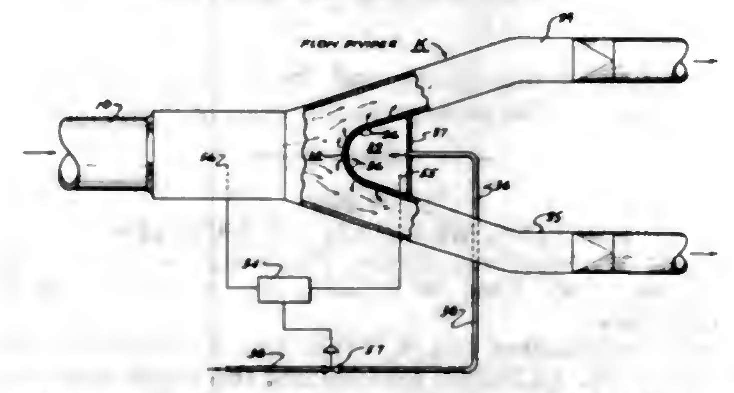
Leonard Louik, % Care Plastic Sales, Inc., 201 Penn Center Blvd., Pittsburgh, Pa. 15235
Filed June 13, 1966, Ser. No. 557,136
8 Claims. (Cl. 301—63)



A wheel structure is disclosed suitable for various types of carts and vehicles. The wheel structure utilizes a minimum of component parts, which can be molded from plastic or other structural material. Novel means are disclosed for securing a tire to the wheel rim and for protecting the lateral surfaces of the tire. In one embodiment of the invention, the wheel hub is formed with an inward stepped configuration to accommodate differing sizes of bearings and/or hub caps.

3,387,895
NON-CLOGGING SPLITTER UNIT FOR DIVIDING THE FLOW OF FLUID-CONVEYED MATERIAL

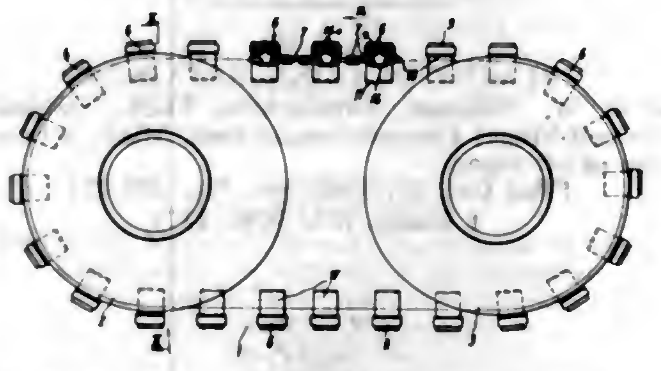
Frank W. Hochmuth, West Simsbury, and Joseph F. Mullen, West Hartford, Conn., assignors to Combustion Engineering, Inc., Windsor, Conn., a corporation of Delaware
Filed Dec. 29, 1966, Ser. No. 605,766
2 Claims. (Cl. 302—64)



In a Y-type flow divider for splitting a main stream of fluid-conveyed material flow into branch streams, the flow-splitting member at the apex juncture of the two branch conduits being made of plate stock which has small openings in large number distributed thereover. Such splitting member is shaped with a frontal portion that faces into the flow of the incoming main stream; it has first and second side portions that extend downstream from the frontal portion into flow-guiding relation with the branch conduits; and it is provided with means for establishing through the openings a generally upstream flow of compressed medium in the form of jets which create along the plate front and sides a boundary layer whose effect is to prevent the material in the incoming main stream from building up on the flow-splitter plate.

3,387,896
ANTISKID AND TIRE PROTECTIVE CHAIN

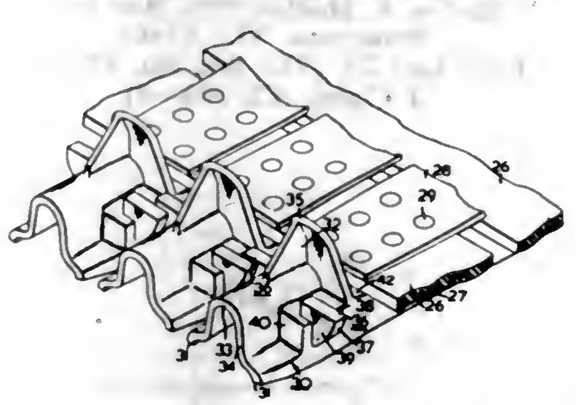
Herbert Sobota, Aalen, Germany, assignor to Eisen- und Drahtwerk Erlau AG, Aalen, Wurttemberg, Germany
Filed Feb. 9, 1966, Ser. No. 526,099
Claims priority, application Germany, Feb. 11, 1965, E 28,676
8 Claims. (Cl. 305—35)



1. Antiskid chain for two motor vehicle wheel means arranged in tandem and equipped with tires which comprises; spaced individual gripper links, each link comprising a generally rectangular rigid box-like supporting frame extending transversely to the respective tire, elastic means carried by said frame and including an outer road engaging portion and an inner tire tread engaging portion, said frame comprising a substantially flat base member on the tread side with end walls and side members upstanding from said base member, said road engaging portion resting on said base member and projecting above the upper edges of said end walls and side members, said tire tread engaging portion resting on said base plate and projecting inwardly therefrom, removable connecting means connecting said elastic means to said frame, elements dependent inwardly beyond said tire tread engaging portions from said frame at the lateral sides thereof, and flexible means inerconnecting each said element on each frame with the said elements on the corresponding end of the next adjacent frames.

3,387,897
TRACK SHOE

Kevin William Reid, Greenfield Park, Quebec, Canada, assignor of one-third each to Canadian International Paper Company, Montreal, Quebec, and North Shore Paper Company, Montreal, Quebec, Canada, and Abitibi St. Anne Paper Ltd., all corporations of Quebec
Filed Apr. 12, 1965, Ser. No. 464,254
Claims priority, application Canada, Apr. 14, 1964, 900,326
16 Claims. (Cl. 305—41)

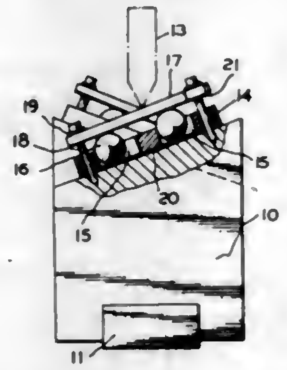


1. A track shoe comprising:
(a) a ground engaging side portion;
(b) a relatively flat central portion on a side thereof opposite the ground engaging side in an assembled track; a pair of opposed relatively smooth side surfaces interconnecting the ground engaging portion and said flat central portion;
(c) an arch portion, on each side of said central flat portion, extending in a direction away from the ground engaging side portion and being provided for engagement with a drive sprocket;
(d) an upstanding horn, adjacent each end of said central flat portion, at a position intermediate said arch portions and the central flat portion, said horns extending in the same direction as said arches and providing a guide for wheels in an assembled track vehicle, said arch portions and said upstanding horns being disposed in spaced relation with respect to a longitudinal axis of said shoe;
(e) a lug on each side of said longitudinal axis projecting outwardly from respective ones of said pair of opposite smooth side surfaces and adjacent each of said guide horns, each of said lugs projecting beyond said track shoe in a direction transverse to said longitudinal axis to thereby overlap an adjacent shoe in an assembled track, the lug on one side of the track shoe longitudinal axis at one end thereof being offset from the lug on the opposite side at the same end of the track shoe by a distance at least slightly more than the thickness of said other lug, and the lugs at the other end being similarly arranged each of said lugs having an arcuate surface on the portion which faces and overlaps a similar shoe adjacent thereto when in an assembled track and positioned for engagement therewith when in an assembled track to limit relative vertical displacement relative to the ground, adjacent shoes in a ground engaging portion of the track and also provide rolling contact of adjacent shoes where-

by they are adapted to pivot relative to one another, each of said lugs having a flat bearing surface disposed in a plane normal to said longitudinal axis, the bearing surface of the respective lugs on opposite sides of the longitudinal axis at each of the opposite ends thereof being disposed in opposite directions facing one another whereby when assembled in a track, the bearing faces of the lugs on adjacent shoes are engageable to limit relative horizontal displacement of adjacent shoes in such track; and

(f) a bearing surface on said track shoe adjacent each said lug and facing in a direction opposite to that of the arcuate outer surface of said lug, the bearing surface on one side of the longitudinal axis of the track shoe being in alignment with the lug on the opposite side thereof.

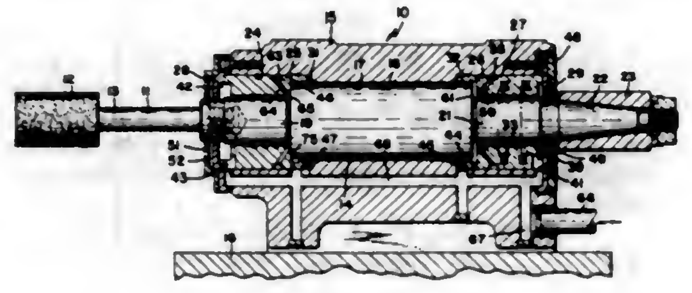
3,387,898
WEIGHING SCALE BEARING STRUCTURE
Harlan A. Hadley, P.O. Box 147,
Burlington, Vt. 05401
Filed June 23, 1964, Ser. No. 377,255
1 Claim. (Cl. 308—2)



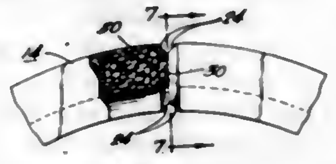
1. A knife-edge bearing for weighing scales comprising a fulcrum stand, a plurality of independently supported self-aligning bearings arranged in spaced pairs, the bearing of each pair being oppositely inclined and cooperating to form a V-bearing, and a holder for each bearing, said holders each including a retaining plate provided with oblong holes and balls positioned within said holes, said bearings being seated on the balls and operatively secured to the retaining plate by means of headed pins provided with washers, said pins passing through apertures in the bearing and retainer plate, and the said retaining plate and balls maintaining the inclined bearing above said fulcrum stand, said apertures in the bearing plate being of a larger diameter than that of the pins passing therethrough, thereby providing self-alignment of the bearing relative to the knife edge.

3,387,899
BEARING
Robert S. Hahn, Northboro, and David H. Youden, Worcester, Mass., assignors to The Heald Machine Company, Worcester, Mass., a corporation of Delaware
Filed Aug. 17, 1966, Ser. No. 573,025
8 Claims. (Cl. 308—77)

1. A bearing for high-speed operation, comprising
(a) a spindle having two spaced cylindrical portions,
(b) a bearing block associated with each portion,
(c) a passage through the block in which the said portion of the spindle lies, the passage being formed as first and second non-coextensive portions, the first portion having an undulating surface facing the cylindrical portion of the spindle, the second portion having a cylindrical surface which is concentric with and lies relatively close to the cylindrical portion of the spindle,
(d) and means providing fluid under pressure to flow seriatim through the gap between the cylindrical portion of the spindle and the first and the second portion of the passage in the bearing block.

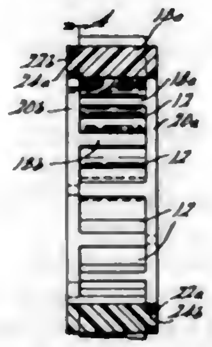


3,387,900
ROLLING BEARING ASSEMBLIES
Thomas W. Morrison, Rydal, Pa., assignor to SKF Industries, Inc., King of Prussia, Pa., a corporation of Delaware
Original application Oct. 6, 1964, Ser. No. 401,896, now Patent No. 3,229,353. Divided and this application Oct. 4, 1965, Ser. No. 492,758
1 Claim. (Cl. 308—177)



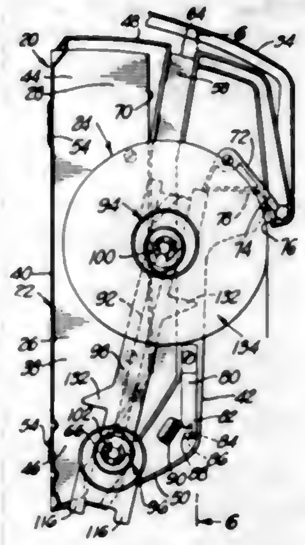
A rolling bearing assembly comprising a pair of rings spaced apart to define an annular space therebetween, a plurality of balls in the annular space between the rings. At least one of the rings is formed from a flat piece of bar stock bent to a circular shape, one face of the ring having an arcuate groove defining a raceway for the balls. The edges of the abutting ends of the ring are chamfered and the abutting ends are joined by means of a weld at the juncture of said chamfered abutting ends of said one ring. The grain structure throughout said one face of said one ring is uniform and elongated in the rolling direction of the balls and the raceway material of the ring is substantially devoid of impurities since it is remote from the center of the bar material from which the ring was formed.

3,387,901
PLASTIC BEARING RETAINER
Charles W. Williams, Birmingham, Mich., assignor to Federal-Mogul Corporation, Detroit, Mich., a corporation of Michigan
Filed Oct. 20, 1965, Ser. No. 498,721
1 Claim. (Cl. 308—217)



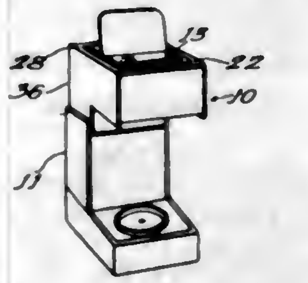
A plastic bearing retainer made from a moldable material having good lubricity characteristics and constructed from two pieces.

3,387,902
DISPENSER FOR SEQUENTIALLY DISPENSING ROLLS OF TISSUE AND THE LIKE
Jack L. Perrin, Los Angeles, and Council A. Tucker, Glendale, Calif., assignors to Towlsaver, Inc., Los Angeles, Calif., a corporation of California
Filed Jan. 3, 1967, Ser. No. 606,840
24 Claims. (Cl. 312—39)



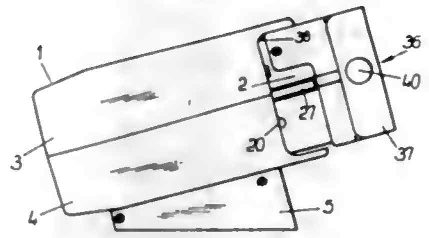
15. In a dispenser for sequentially dispensing a plurality of rolls of tissue and the like, the combination of: a support; a first roll holder adapted for mounting a roll of tissue and the like, said roll having a core maintained assembled by said tissue and separable upon the consumption of said tissue; a second roll holder adapted for mounting a roll of tissue and the like; mounting means locating said first roll holder on said support with said roll in a dispensing position and slidable to a roll consumed position, said mounting means locating said second roll holder on said support with said roll in a nondispensing position and slidable to place said roll in a dispensing position; latch means normally retaining said first roll holder in said roll dispensing position and said second roll holder in said roll nondispensing position, said latch means being releasable for slidable movement of said first roll holder to said roll consumed position and said second roll holder to said roll dispensing position; and detecting means operably associated with said first roll holder for detecting consumption of said roll and separating said core thereof, said detecting means upon said core separation releasing said latch means for slidable movement of said first roll holder to said roll consumed position and slidable movement of said second roll holder to said drill dispensing position.

3,387,903
LIQUID HEATER
Harvey R. Karlen, Chicago, Ill., assignor to Cory Corporation, a corporation of Delaware
Filed Apr. 4, 1967, Ser. No. 628,337
12 Claims. (Cl. 312—228)



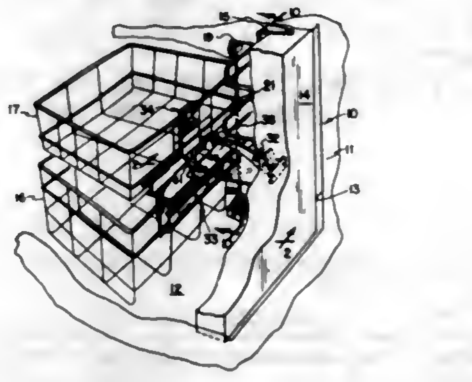
A liquid heater of the pour-through type wherein water is poured into a basin to effect a delivery of hot water such as to an associated brewing device. The basin is disposed within a housing of the apparatus and includes an upper portion projecting upwardly through the housing for facilitated pouring of water thereinto. Removable means are provided for joining the upper end of the basin to the top of the housing. The basin is provided further with a hinged cover for selectively closing the same.

3,387,904
HOUSING FOR CIGARETTE DISPENSER
Walter Beha, Frankfurt am Main, Germany, assignor to Schoeller & Co. Elektrotechnische Fabrik, Frankfurt am Main, Germany
Filed Apr. 11, 1967, Ser. No. 630,014
Claims priority, application Germany, Apr. 21, 1966, Sch 38,856
10 Claims. (Cl. 312—245)



A housing for a cigarette dispenser, more particularly for installing in automotive vehicles, having two hingeably mounted housing sections, of which one has a U-shaped metal frame with guide bars and stop devices to receive a cigarette dispenser insert, shanks of the section projecting into the other housing section, and catches for locking both sections in a closed state.

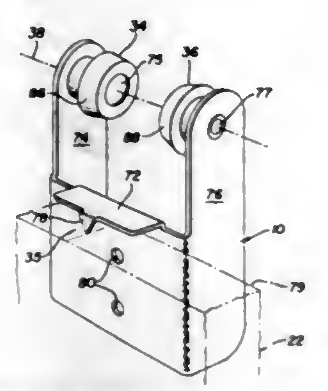
3,387,905
CABINET WITH MEANS FOR MAKING RECEPTACLE THEREIN ACCESSIBLE
Robert E. Lindenschmidt and Carlen R. Gant, Evansville, Ind., assignors to Whirlpool Corporation, a corporation of Delaware
Filed Sept. 15, 1966, Ser. No. 579,582
16 Claims. (Cl. 312—274)



1. Structure comprising:
cabinet means defining a storage space and having an access opening;
means defining a closure;
means for swingably mounting said closure means on said cabinet means for selectively closing said opening;
a receptacle;
means for movably mounting said receptacle in said space adjacent said opening; and

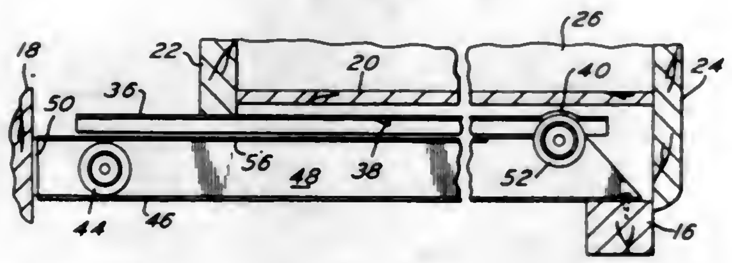
means releasably connecting said closure to said receptacle for movement of said receptacle from a retracted position substantially fully within said space outwardly through said opening when said closure is swung from a closed position to a partially open position and for release of said receptacle as a result of said closure being swung further from said closed position beyond said partially open position.

3,387,906
ROLLER DRAWER SUPPORT APPARATUS AND SYSTEM
Philip Edwards, Alameda, Calif., assignor of one-half to Thomas F. Cortese
Filed July 29, 1966, Ser. No. 568,885
9 Claims. (Cl. 312—342)



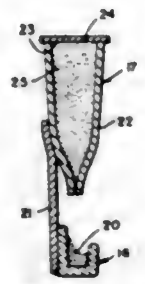
A roller support for suspending a drawer from an overhead rail having a pair of spaced parallel tracks for reciprocal displacement of the drawer into and out of a housing, wherein such support includes a bracket mounted on the rear panel of the drawer, at least one roller rotatably carried by the bracket and located so as to position the entire roller support, such roller being able to move reciprocally back and forth on the track as the drawer is moved into and out of the housing, and a tab carried by the bracket for drivable attachment to the rear panel of the drawer when the bracket is mounted thereagainst.

3,387,907
DRAWER CONSTRUCTION
Charles G. Wall, Bala Cynwyd, Pa., assignor to Wood-Metal Industries, Inc., Kreamer, Pa., a corporation of Pennsylvania
Filed Nov. 21, 1966, Ser. No. 595,753
3 Claims. (Cl. 312—348)



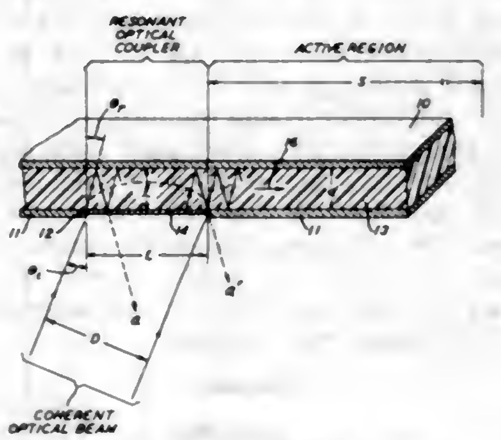
A slidable drawer is provided with tracks on its bottom surface for cooperation with stationary tracks therebelow. Each track has only one wheel in rolling contact with a mating track. The wheels on the drawer track have rolling contact with upper and lower surfaces on the stationary track depending on the position of the drawer. The drawer tracks have a cavity receiving the wheels on the stationary tracks when the drawer is closed. Partially struck-out portions on the tracks cooperate with the wheels to form limit stops.

3,387,908
ELECTRON VACUUM TUBE GETTER AND METHOD OF USING THE SAME
Mark Fogelson, Skokie, Ill., assignor to National Video Corporation, Chicago, Ill., a corporation of Illinois
Filed Aug. 17, 1966, Ser. No. 572,993
7 Claims. (Cl. 316—25)



The sequential use of barium and lithium during the manufacture of television picture tubes to remove residual gas after the tube has been sealed.

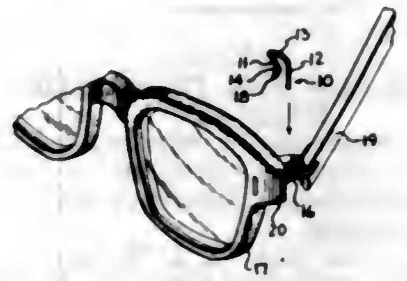
3,387,909
APERTURE-LIMITED OPTICAL WAVE COUPLER
Lawrence K. Anderson, Plainfield, and Mauro Di Domenico, Jr., Basking Ridge, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Aug. 7, 1963, Ser. No. 300,513
3 Claims. (Cl. 350—96)



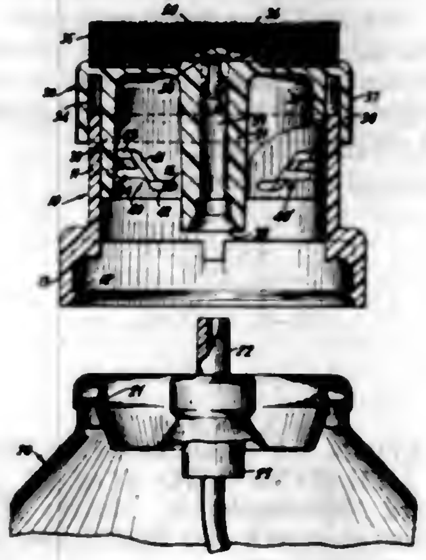
This application describes an optical wave coupler for entrapping a beam of optical wave energy between a pair of spaced mirrors. Coupling is through an aperture in one of the mirrors. It is shown that for a fixed angle of incidence, the separation between mirrors, and the reflectivity at the aperture, can be chosen so that substantially all of the incident wave energy is trapped between the mirrors.

3,387,910
TENSIONING DEVICE FOR SPECTACLE FRAMES
Orlando T. Giraldi, 5338 W. North Ave., Chicago, Ill. 60639
Filed June 18, 1964, Ser. No. 376,057
2 Claims. (Cl. 351—113)

A tensioning device in the form of a wire clip with a rubbery coating which may be readily adapted to the hinge portion of a spectacle frame for exerting a tension on the temples which extend along the sides of the head of the wearer for maintaining the spectacles in proper position on the face of the wearer.

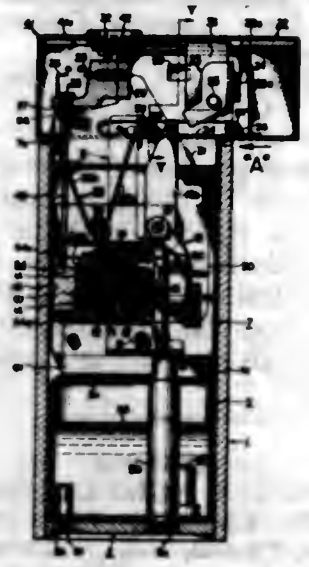


3,387,911
BRUSH DISPENSER
John Richard Focht, Yonkers, N.Y., assignor to Precision Valve Corporation, Yonkers, N.Y., a corporation of New York
Filed Oct. 10, 1966, Ser. No. 585,482
4 Claims. (Cl. 401—190)



An applicator cap for a pressurized dispenser is comprised of two relatively movable parts such that relative rotation of the parts will actuate the container valve thereby conveying product to the applicator member.

3,387,912
IGNITION MECHANISM OF LIQUEFIED GAS FUELED LIGHTER
Kenjiro Goto, Tokyo, Japan, assignor to Mansei Kogyo Kabushiki Kaisha, Saitama-ken, Japan, a corporation of Japan
Filed Nov. 25, 1966, Ser. No. 596,926
Claims priority, application Japan, Nov. 26, 1965, 72,558/65; Feb. 1, 1966, 8,633/66
6 Claims. (Cl. 431—130)



1. Ignition mechanism of liquefied gas fueled lighter comprising a liquefied gas fuel reservoir tank, fuel valve assembly for on-off control of delivery of the gasified fuel from said tank, valve-operating means serving for said fuel control, stationary piezoelectric means contained in said lighter, nozzle means fluidically connected with said fuel valve assembly, hammer means adapted for cooperation with said piezoelectric means for suppyling the latter a sudden shock pressure, manual manipulator means for operating said hammer means, and a pair of spark electrodes connected electrically with said piezoelectric means and postioned in close proximity of said nozzle means for igniting the gas jet delivered therefrom when said fuel valve assembly is operated in its open position, said mechanism is characterized by the provision of an energy-accumulating means formed into a spring acting upon said hammer means formed into a pivotable assembly comprising a lever and a hammering mass having a larger and a shorter lever arm from its pivot, of a release means formed into a spring-loaded cam piece adapted for releasing the accumulated energy in said accumulator spring, said energy accumulation and release being carried into effect during the course of an effective stroke of said manipulator means.

CHEMICAL

3,387,913
METHOD FOR COLORING FIBERS WITH THIOSULFURIC ACID DERIVATIVES OF SULFUR DYES
Leon Tigler, Charles D. Weston, and Gordon A. Geselbracht, Charlotte, and Laszlo A. Meszaros, Mount Holly, N.C., and Raphael E. Rupp, deceased, late of Charlotte, N.C., by North Carolina National Bank, executor, Charlotte, N.C., assignors to Martin-Marietta Corporation, a corporation of Maryland
No Drawing. Filed May 22, 1964, Ser. No. 370,401
4 Claims. (Cl. 8—37)

There is disclosed herein a method for producing dyeings and prints on cellulosic, polyester or polyamide fibers comprising the steps of applying to said fibers a composition comprising water, thiosulfuric acid derivative of sulfur dye, and a fixing agent selected from the group consisting of thiourea, ammonium thiocyanate, urea, acetyl thioureas, hexamethylenetetramine, 2-mercapto-benzothiazole, formic acid, and trisodium thiocyanurate; and fixing the dyestuff at an elevated temperature.

3,387,914
PROCESS FOR DYEING OR PRINTING MATERIALS OF FIBROUS STRUCTURE CONTAINING HYDROXYL GROUPS
Erwin Bohnert, Klaus Berner, Fritz Meininger, and Ernst Hoyer, Frankfurt am Main, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning, Frankfurt am Main, Germany, a corporation of Germany
No Drawing. Filed July 14, 1964, Ser. No. 382,627
Claims priority, application Germany, July 17, 1963, F 40,257
10 Claims. (Cl. 8—54.2)

A process has been provided for dyeing and printing fibrous materials containing hydroxyl groups by fixing dyestuffs having at least one β-thiosulfato ethylsulfonyl group in the molecule with the aid of an alkaline agent. This process yields very strong dyeings and prints which are very stable to washing and to the action of light.

3,387,915
COMPOSITIONS AND METHODS FOR PRODUCTION OF COLORED GLASS FIBERS

Nathaniel Willis, Chicago, Ill., assignor, by mesne assignments, to Dow Corning Corporation, Midland, Mich., a corporation of Michigan

No Drawing. Filed Oct. 1, 1962, Ser. No. 227,554

3 Claims. (Cl. 8—55)

1. A process of coloring glass fabric which comprises applying the reaction product of ammonia and a mixture of from about 20 to 80 molar percent of a halosilane having the formula R_2SiHal_2 and the balance of said mixture being a halosilane having the formula $RSiHal_3$ in which formulae Hal is a member of the halogen group and R is selected from the group consisting of hydrogen, lower alkyl, lower alkenyl and aryl, and a dye to glass fabric.

3,387,916
HETEROPOLY ACID COLORATION MEDIUM AND PROCESS

Ray Allen Clarke, Pitman, N.J., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed June 23, 1964, Ser. No. 377,398

6 Claims. (Cl. 8—55)

The invention herein is a basic dye complex of a heteropoly acid such as phosphotungstic, phosphomolybdic, phosphotungstomolybdic, silicotungstic, silicomolybdic and silicotungstomolybdic acids mixed with .4 to 10 parts, per part of basic dye, of a long chain quaternary ammonium compound. The complexes may be mixed with urea and an aqueous thickener composition. The basic dye complex is applied to acidic fibers, such as fibers of polyesters and polyacrylonitriles with pendant acid groups.

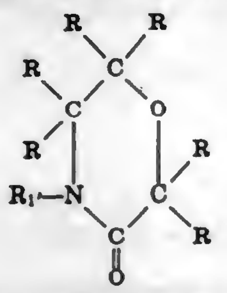
3,387,917
METHOD OF REMOVING ACIDIC CONTAMINANTS FROM GASES

Wilhelm E. Walles and James J. Davies, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Oct. 30, 1964, Ser. No. 407,891

12 Claims. (Cl. 23—2)

A new composition comprising an alkanolamine of 2–12 C atoms and a compound of the formula:



where R and R_1' is a group of the formula $(C_kC_{2k})H$ in which *k* is an integer of from 0 to 5, and a method of extracting acidic gases from a gaseous feed stream by contacting the stream with the composition.

3,387,918
TREATMENT OF METALLIC FERRITES

Marvin D. Moore, Homewood, and Robert K. Birks, Elmhurst, Ill., assignors to Chicago Copper & Chemical Company, Blue Island, Ill., a corporation of Illinois

No Drawing. Filed Nov. 13, 1964, Ser. No. 411,106

5 Claims. (Cl. 23—51)

1. A method of increasing the residual magnetic induction of a metallic ferrite of the formula $MO.6Fe_2O_3$ wherein M represents barium, strontium or lead which comprises treating said metallic ferrite with an aqueous acid solution having a pH not greater than 5 at a temperature in the range from 20° to 110° C.

3,387,919
PROCESS FOR THE PRODUCTION OF HYDRAZINE

Hans-Joachim Abendroth, Leverkusen, and Günter Henrich, Opladen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Mar. 12, 1959, Ser. No. 798,843

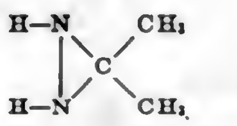
Claims priority, application Germany, Mar. 17, 1958, F 25,263

10 Claims. (Cl. 23—190)

1. A process which comprises reacting in the gas phase a carbonyl compound selected from the group consisting of acetone, methylethylketone, diethylketone, methylisopropylketone, ethylpropylketone, methylbutylketone, cyclohexanone, acetaldehyde, propionaldehyde, butyraldehyde and benzaldehyde with gaseous chlorine and an excess of gaseous ammonia and recovering the isohydrazone formed.

8. A process which comprises reacting in the gas phase a carbonyl compound selected from the group consisting of acetone, methylethylketone, diethylketone, methylisopropylketone, ethylpropylketone, methylbutylketone, cyclohexanone, acetaldehyde, propionaldehyde, butyraldehyde, and benzaldehyde with gaseous chlorine and an excess of gaseous ammonia, thereafter hydrolyzing an aqueous solution of the recovered isohydrazone and recovering the hydrazine formed.

10. A compound of the formula

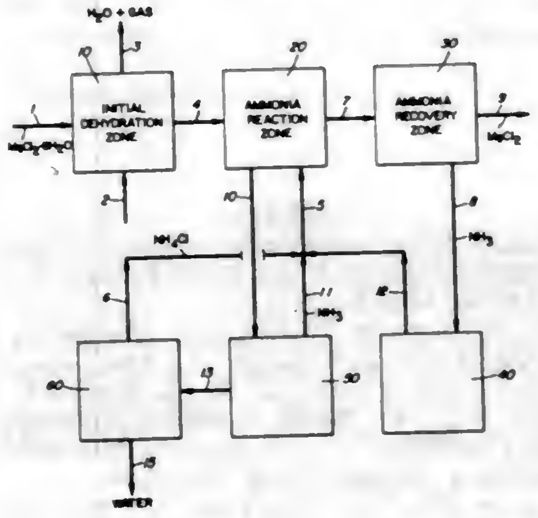


3,387,920
DEHYDRATION OF MAGNESIUM CHLORIDE UTILIZING TWO STAGES

Eugene Richard Nightingale, Jr., Murray Hill, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware

Filed July 14, 1965, Ser. No. 471,977

8 Claims. (Cl. 23—91)



The present invention is concerned with an improved process for the dehydration of hydrous magnesium chloride containing about 6 molecules of water by utitlizing a staged process, wherein in a first stage about 2–4 molecules of water are removed. By operating in this manner, the amount of magnesium oxide in the final product is drastically reduced.

3,387,921
PROCESS FOR THE SELECTIVE RECOVERY OF ALUMINA FROM ORES

Carl K. Amano and Melvin L. Taylor, Denver, Colo., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York

No Drawing. Filed Jan. 29, 1964, Ser. No. 341,109

6 Claims. (Cl. 23—102)

A process for the selective recovery of alumina from an aluminous or which includes a contacting of the ore with nitrogen peroxide and water at a temperature of at least 130° C. and at elevated pressure. For each mole of alumina in the ore there is present 4–21 moles NO_2 and 6–21 moles H_2O. Aluminum nitrate hydrate is recovered and calcined to produce alumina. The excess nitrogen oxides and the gaseous nitrogen-containing by-products of the process are recovered.

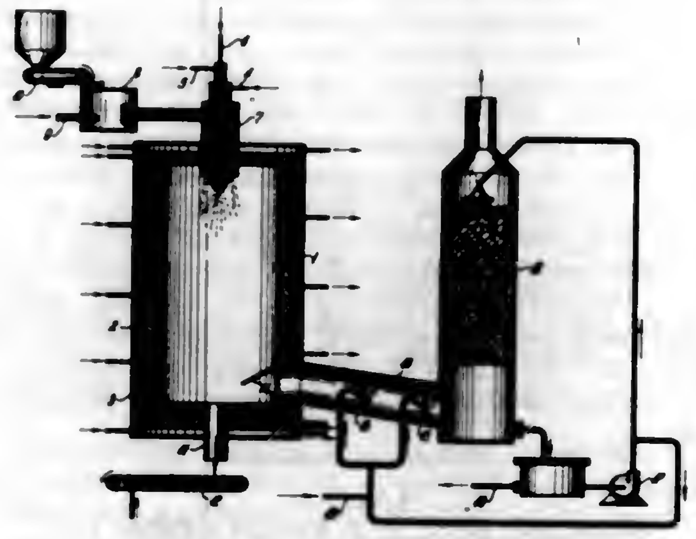
3,387,922
METHOD AND APPARATUS FOR PRODUCING ALKALI METAL AND/OR ALKALI EARTH METAL PHOSPHATES

Klaus Beltz, Knapsack, near Cologne, Germany; Kurt Willi Harri Kribbe, deceased, late of Knapsack, near Cologne, Germany, by Gertrud Katharina Kribbe, née Hanhardt, heir, Knapsack, near Cologne, and Heinrich Kribbe and Edith Kribbe, née Kuhrt, heirs, Brakel, near Hoxter, Germany; Joseph Cremer, Hermulheim, near Cologne, and Heinz Harnisch, Lovenich, near Cologne, Germany, assignors to Knapsack Aktiengesellschaft, a corporation of Germany

Filed Jan. 28, 1964, Ser. No. 341,169

Claims priority, application Germany, Feb. 2, 1963, K 48,838

8 Claims. (Cl. 23—106)



A method of producing a member selected from the group consisting of phosphates of alkali metals and alkaline earth metals comprising the steps of providing a reaction vessel having graphite walls, reacting within the vessel molten phosphorus and a gas containing molecular oxygen to thereby obtain phosphorus pentoxide containing hot gases, introducing salts of metals into the phosphorus pentoxide containing hot gases, withdrawing from the reaction vessel phosphates in the form of a melt, maintaining the temperature of the graphite walls of the reaction vessel at a temperature 20 to 50° C. above the temperature at which the phosphate melt begins to flow, and flowing a thinly liquid phosphate melt produced in the reaction vessel over the graphite walls before the reaction is started.

3,387,923
AGGLOMERATED TRIPOLYPHOSPHATE

Chung Yu Shen, St. Louis, Mo., assignor to Monsanto Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Dec. 30, 1964, Ser. No. 422,394

14 Claims. (Cl. 23—106)

A process for agglomerating finely divided particles of alkali metal tripolyphosphates which comprises heating the particles in an atmosphere having a temperature sufficient to render the surfaces of the particles to a partially liquid state but below the transition temperature at which all of the alkali metal tripolyphosphate at the surfaces of the particles is converted to alkali metal pyrophosphate, agitating the particles to thereby produce agglomerated particles of alkali metal tripolyphosphates and cooling the agglomerated particles to a temperature at which the surfaces are solidified before the nuclei of the particles become partially liquefied.

3,387,924
PROCESS FOR THE MANUFACTURE OF SODIUM TRIPOLYPHOSPHATE WITH A HIGH CONTENT OF PHASE-I-MATERIAL (HIGH TEMPERATURE MODIFICATION)

Gero Heymer, Knapsack, near Cologne, Gerhard Hartlapp, Hermulheim, near Cologne, and Karl Traulsen, Knapsack, near Cologne, Germany, assignors to Knapsack Aktiengesellschaft, Knapsack, near Cologne, Germany, a corporation of Germany

No Drawing. Filed May 19, 1966, Ser. No. 551,195

Claims priority, application Germany, June 18, 1965, K 56,410

7 Claims. (Cl. 23—107)

Sodium tripolyphosphate prepared by spraying an orthophosphate feed solution containing P_2O_5 and Na_2O in a molar ratio of about 3:5 from a spray tower, rapidly dehydrating and effecting intermolecular condensation of the material, venting off gas from the spray tower at a temperature of about 400–520° C. and thereafter cooling the product down to about 280° C. under a partial steam pressure not exceeding about 300 mm. mercury in the gas phase surrounding said product.

3,387,925
POLYMER SUSPENSION STABILIZER

Reginald E. Vanstrom, Dobbs Ferry, N.Y., and Fred McCollough, Jr., Jacksonville, Ill., assignors to Stauffer Chemical Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Mar. 16, 1966, Ser. No. 534,679

7 Claims. (Cl. 23—109)

1. A process for preparing tricalcium phosphate having a particle size sufficient for suspension polymerization comprising rapidly adding dilute aqueous orthophosphoric acid to a vigorously agitated hydrated lime slurry for a period of time of between about 20 and about 66 minutes, in an amount sufficient to adjust the final pH of the reaction mixture to between about 6.7 and 8.5, while maintaining the temperature of the reaction mixture between about 20° C. and 50° C., and recovering the precipitated wet filter cake.

3,387,926
PREPARATION OF SODIUM METASILICATE PENTAHYDRATE

Bob R. Harrell, deceased, late of Lake Jackson, Tex., by Shirley S. Harrell, legal representative, Austin, Tex., Robert D. Goodenough, Midland, Mich., and Richard L. Gregory, Columbus, Ohio; said Goodenough and said Gregory assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Oct. 1, 1964, Ser. No. 435,391

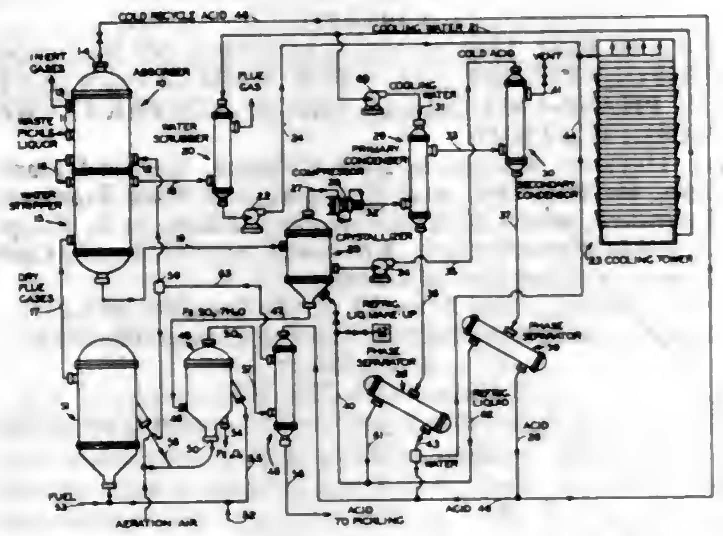
5 Claims. (Cl. 23—110)

The present invention concerns a method of preparing sodium metasilicate pentahydrate from an aqueous solution of sodium silicate and sodium chloride containing at least 0.25 weight percent of said silicate and a weight ratio of Na_2O to SiO_2 of from 2 to 1, comprising: mixing said solution with substantially anhydrous ammonia in an amount by weight of from 8 to 30 percent of the final resulting ammoniacal solution while maintaining a maximum reaction temperature of about 100° C., and separating sodium metasilicate pentahydrate therefrom.

3,387,927

METHOD OF REGENERATING WASTE PICKLE LIQUORS

William M. Goldberger, Columbus, Ohio, assignor, by mesne assignments, to The Battelle Development Corporation, Columbus, Ohio, a corporation of Delaware
Filed Dec. 3, 1963, Ser. No. 327,653
4 Claims. (Cl. 23—126)



A process for regenerating used aqueous sulphuric acid pickle liquor which consists of contacting the used liquor with sulphur dioxide and a source of oxygen so as to enrich the liquor in sulphuric acid content and lower the solubility of the contained iron-sulphur salts and then rapidly cooling the liquor to a temperature of solution instability disposed to cause the iron-sulphur salts to crystallize and precipitate out. The iron-sulphur salts are then preferably decomposed to supply sulphur dioxide for contact with more used pickle liquor with an oxygen source.

3,387,928

RECOVERY OF TELLURIUM AND/OR SELENIUM FROM AQUEOUS SOLUTIONS

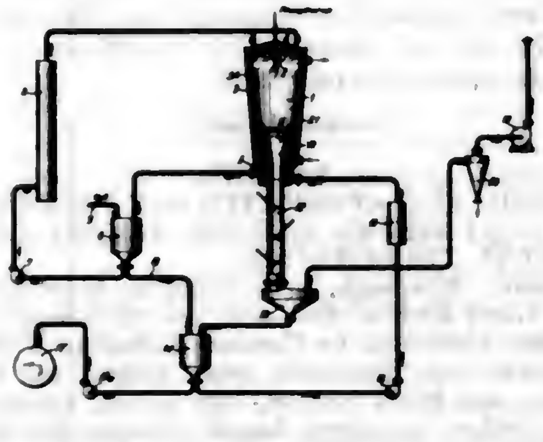
Arthur C. Doumas, Lake Jackson, Tex., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed Apr. 8, 1965, Ser. No. 446,735
9 Claims. (Cl. 23—139)

1. The method of recovering metal values selected from the class consisting of tellurium-containing material, selenium-containing material, and mixtures thereof which comprises preparing an acidic solution of said material by dissolving it in an aqueous acid selected from the class consisting of hydrochloric, phosphoric, and mixtures thereof to make an aqueous acidic solution of said material having a pH value of 6 or less; admixing with the solution so made a 2-hydroxyethyl-n-alkyl ether, having from 5 to about 10 carbon atoms in the alkyl, in an amount sufficient to provide proportions by volume of between from about 10 to 1 of the metal-containing acidic solution and from about 1 to 10 of the 2-hydroxyethyl-n-alkyl ether; allowing the resulting solution to stand to effectuate a separation into an upper organic phase containing a preponderance of the tellurium and selenium values and a lower aqueous phase; and separating the two phases.

3,387,929

METHOD AND APPARATUS FOR PRODUCING POLYPHOSPHORIC ACID

Klaus Beltz, Knapsack, near Cologne, Joseph Cremer, Hermulheim, near Cologne, Günther Müller-Schiedmayer, Knapsack, near Cologne, and Friedrich Thomas, Hermulheim, near Cologne, Germany, assignors to Knapsack-Griesheim Aktiengesellschaft, Knapsack, near Cologne, Germany, a corporation of Germany
Filed July 25, 1962, Ser. No. 212,773
Claims priority, application Germany, Aug. 5, 1961, K 44,440
12 Claims. (Cl. 23—165)



1. In a process for producing polyphosphoric acid by combusting elementary phosphorus in a reactor in the presence of oxygen and absorbing P_2O_5 combustion product in an absorbent the improvement comprising initially transferring and absorbing the heat of reaction and the combustion product in two separate circuits a major amount of the heat of reaction and part of the P_2O_5 combustion product being absorbed in a first circuit consisting essentially of a separately recycled cooled coolant distributed over the inside walls of said reactor, said coolant being maintained at volume and a concentration of about 105–107% H_3PO_4 by the outside addition of water or phosphoric acid, essentially separately absorbing the rest of the P_2O_5 combustion product and transferring a minor amount of heat of reaction in a second circuit comprising a separately recycled cooled liquid absorbent consisting essentially of polyphosphoric acid having a higher concentration of H_3PO_4 than said coolant, withdrawing resulting enriched polyphosphoric acid absorbent as a final product, maintaining volume and concentration of absorbent by adding water and phosphoric acid.

3,387,930

PROCESS FOR THE PRODUCTION OF PHOSPHORIC ACID

John Schertzer and John A. Schols, Sarnia, Ontario, Canada, assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed June 16, 1965, Ser. No. 464,576
6 Claims. (Cl. 23—165)

This invention relates to a process improvement in the art of producing phosphoric acid from phosphate rock which contains silica. After the phosphate rock has been digested in acid, extracted into a water-immiscible organic extractant and stripped from the organic extractant with water, the substantially acid-depleted extractant is washed with a 1–10 weight percent aqueous solution of $CaCl_2$ to remove the remaining phosphoric acid therefrom. Use of a $CaCl_2$ solution rather than water in the final washing step produces good phase separation and reduces solvent loss to the aqueous phase.

3,387,931

MECHANICAL MODIFICATION OF WET SILICA PIGMENT FOR REDUCTION OF FREE WATER RETENTIVITY THEREOF

Oliver W. Burke, Jr., 1510 SW. 13th Court, Fort Lauderdale, Fla. 33312
No Drawing. Continuation-in-part of application Ser. No. 458,379, May 24, 1965. This application Jan. 24, 1967, Ser. No. 611,295
7 Claims. (Cl. 23—182)

Precursor wet silica pigment of relatively high free water retentivity precipitated by acidulation of aqueous alkali metal silicate is subjected to mechanical pressing between opposed surfaces which is shown to not only express aqueous liquid from the wet pigment but to also rearrange its structure. The new structure of the pressed pigment is characterized by its formation of polygonal aggregates in the pressed wet cake, and by the fact that its ability to retain free water, which term includes water and watery solutions, is materially reduced. The reduction of free water retentivity is of economic value as it materially reduces the cost of recovering dry pigment.

3,387,932

PREPARATION OF TRIMERIC RUTHENIUM TETRACARBONYL

Piero Pino, Pisa, and Guiseppe Braca, S. Frediano a Settino, Pisa, Italy, assignors to Lonza Ltd., Basel, Switzerland
No Drawing. Continuation-in-part of application Ser. No. 341,132, Jan. 29, 1964. This application July 29, 1965, Ser. No. 475,840
Claims priority, application Switzerland, Feb. 1, 1963, 1,292/63; Aug. 5, 1964, 10,200/64
3 Claims. (Cl. 23—203)

The preparation of trimeric ruthenium tetracarbonyl is directly effected by reacting a basic ruthenium salt of a carboxylic acid or ruthenium acetylacetonate with carbon monoxide at elevated temperature and pressure, in the presence of a methyl ketone or a lower aliphatic monohydric alcohol which is a solvent for the reactants and contains a reactive hydrogen atom under the reaction conditions.

3,387,933

PREPARATION OF METAL HYDRIDES

John C. Snyder, Darling, Pa., assignor to Hercules Incorporated, a corporation of Delaware
No Drawing. Original application Nov. 30, 1962, Ser. No. 183,766. Divided and this application Sept. 1, 1964, Ser. No. 393,773
9 Claims. (Cl. 23—204)

Alkali metal hydrides are prepared from the metal and hydrogen by contacting at elevated temperature and pressure with a transition metal or halide or hydride thereof, such as titanium, in the presence of an inert organic diluent.

3,387,934

MANUFACTURE OF PHOSPHINE

Alfred O. Minklei, Kenmore, N.Y., assignor to Hooker Chemical Corporation, Niagara Falls, N.Y., a corporation of New York
No Drawing. Filed Oct. 12, 1964, Ser. No. 403,341
9 Claims. (Cl. 23—204)

1. A process comprising reacting elemental phosphorus with an alkali metal amalgam at a temperature from 0 degrees centigrade in the absence of a hydrolyzing agent to 600 degrees centigrade, said reacting being sufficient to form an alkali metal phosphide, and thereafter adding a hydrolyzing agent to said alkali metal phosphide in an amount sufficient to hydrolyze said phosphide and thereby producing phosphine.

3,387,935

PREPARATION OF PHOSPHORUS TRI-FLUORIDE

Albert W. Jache, North Haven, and Santad Kongpricha, Hamden, Conn., assignors to Olin Mathieson Chemical Corporation
No Drawing. Filed Feb. 3, 1966, Ser. No. 524,815
3 Claims. (Cl. 23—205)

Phosphorus trifluoride is prepared by the reaction of elemental phosphorus with liquid, anhydrous hydrogen fluoride under autogenous pressure at 180 to 220° C.

3,387,936

PROCESS FOR THE MANUFACTURE OF TETRAPHOSPHORUS DISULFIDE

Armin Schneider and Rüdiger Förthmann, Clausthal-Zellerfeld, Germany, assignors to Knapsack Aktiengesellschaft, Knapsack, near Cologne, Germany, a corporation of Germany
Filed Apr. 21, 1966, Ser. No. 544,149
Claims priority, application Germany, May 28, 1965, K 56,245
12 Claims. (Cl. 23—206)

A phosphorous-sulfur compound of the formula P_4S_2 and a melting point of $47° \pm 2°$ C. and a process for producing the same by melting yellow phosphorus with one of sulfur or a phosphorus-sulfur compound, in amounts corresponding approximately to the stoichiometric composition of P_4S_2, at a temperature of 47°–300° C. in the absence of air and moisture and thereafter cooling and quenching the resulting melt to obtain a crystalline product.

3,387,937

PROCESS FOR THE MANUFACTURE OF IRON-FREE PHOSPHORUS PENTASULFIDE

Hermann Niermann, Bruhl, near Cologne, Helmuth Klee and Wilhelm Forst, Knapsack, near Cologne, and Joseph Cremer, Hermulheim, near Cologne, Germany, assignors to Knapsack Aktiengesellschaft, Knapsack, near Cologne, Germany, a corporation of Germany
No Drawing. Filed Nov. 19, 1965, Ser. No. 508,853
Claims priority, application Germany, Dec. 5, 1964, K 54,714
5 Claims. (Cl. 23—206)

A process for preparing substantially iron-free phosphorus pentasulfide by contacting phosphorus with a continuous stoichiometric excess of sulfur in the reaction mixture at reduced temperature up to about 380° C.

3,387,938

PROCESS FOR OR RELATING TO THE PRODUCTION OF HYDROGEN PEROXIDE

John Philip Leaver, Harpenden, England, assignor to Laporte Chemicals Limited, Kingsway, Luton, England, a British company
No Drawing. Filed June 20, 1966, Ser. No. 558,591
Claims priority, application Great Britain, June 21, 1965, 26,112/65
24 Claims. (Cl. 23—207)

Hydrogen peroxide solutions may be purified from contaminants by passage through an ion exchange material which does not enter into substantial ion exchange with the ions of the contaminants, but which absorbs hydrogen peroxide, and elution from the ion exchange materials. Strong acid cation exchangers are preferable.

3,387,939

STANNATE STABILIZER COMPOSITIONS CONTAINING AN ALKYLIDENE DIPHOSPHONIC ACID, THEIR PREPARATION AND HYDROGEN PEROXIDE SOLUTIONS STABILIZED THEREWITH

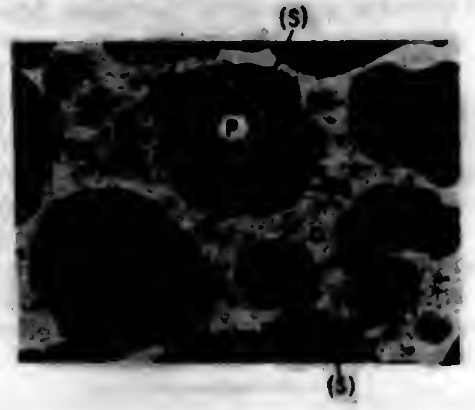
Victor J. Reilly, Memphis, Tenn., and Neil J. Stalter, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed July 6, 1966, Ser. No. 563,023
11 Claims. (Cl. 23—207.5)

Stannate stabilizer compositions containing an alkylidene diphosphonic acid, a method for their preparation and hydrogen peroxide solutions stabilized therewith. The stabilized hydrogen peroxide solutions are highly stable against decomposition and resistant towards precipitation of the stannate stabilizer by polyvalent cations such as Ca^{++}, Mg^{++}, and Al^{+++}.

3,387,940

HIGH-STRENGTH CARBON FOAM

Edgar R. McHenry, Lawrenceburg, Tenn., and Ervin L. Piper, Fostoria, Ohio, assignors to Union Carbide Corporation, a corporation of New York
Filed Aug. 29, 1963, Ser. No. 305,495
11 Claims. (Cl. 23—209.2)



1. Method for producing a relatively high strength carbon foam which comprises incorporating into a rigid polyester-type polyurethane foam during its manufacture a finely-divided carbonaceous filler; maintaining the resulting foam for a predetermined time period sufficient to increase the degree of cross-linking of the polymers therein at an elevated temperature up to about 200° C. and in an oxygen-containing atmosphere; thereafter maintaining said resulting foam in an oxygen-containing atmosphere at a temperature in the range from about 200° C. to about 255° C. until said resulting foam sustains a weight loss of at least about 3.5 percent; and maintaining the resulting foam at a temperature in the range from about 500° C. to about 1000° C. and in an oxygen-free atmosphere for a sufficient time period to produce a carbon foam.

11. A high-strength, polyurethane-derived carbon foam produced in accordance with the method of claim 1.

3,387,941

PROCESS FOR DESULFURIZING CARBONACEOUS MATERIALS

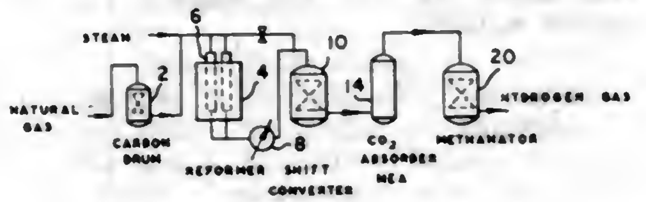
Richard M. Murphy, Darien, Conn., and Henry C. Messman, Larchmont, N.Y., assignors to The Carbon Company, Mamaroneck, N.Y., a limited partnership of New York
No Drawing. Filed Mar. 23, 1965, Ser. No. 442,184
6 Claims. (Cl. 23—209.9)

A method for desulfurizing carbonaceous material by treating with steam an intimate mixture containing such material and an alkali metal hydroxide, oxide, carbide, carbonate, or hydride at a temperature of about 500–850° C. and at which the hydroxide of said alkali metal is a liquid, while removing the sulfur impurities volatilized during the treatment.

3,387,942

PRODUCTION OF HYDROGEN

Robert H. Habermehl, Louisville, Ky., and Kenton A. Atwood, New Albany, Ind., assignors to Catalysts & Chemicals Inc., Louisville, Ky., a corporation of Delaware
Filed May 10, 1965, Ser. No. 454,346
3 Claims. (Cl. 23—213)



In the production of hydrogen a gaseous hydrocarbon is reacted with steam in a reforming stage. The reformed gases are then treated with additional steam using a different catalyst to convert the carbon monoxide to carbon dioxide and still more hydrogen. Prior art processes have always been concerned with maximum reforming and maximum carbon monoxide or shift conversion. The shift conversion and reforming parameters are differently related herein.

3,387,943

METHOD FOR DISTINGUISHING BETWEEN NYLON POLYMER HAVING DIFFERENT DYE DEPTHS

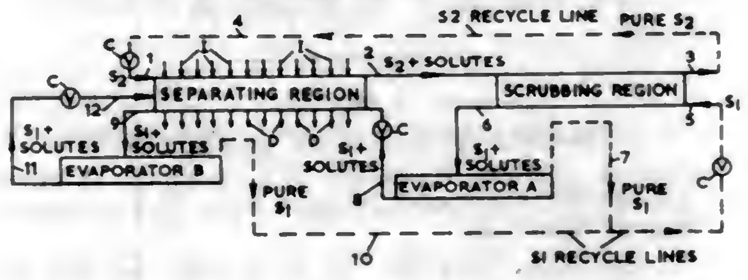
Tom D. Griffin, Pensacola, and James B. McKoy, Jr., Cottage Hill, Fla., and Leonard L. Millar, Westport, Conn., assignors to Monsanto Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed July 13, 1965, Ser. No. 471,726
10 Claims. (Cl. 23—230)

1. A method for distinguishing between deeper-dyeing nylon polymer containing at least one N-substituted aminoalkyl piperazine and nylon polymer containing substantially no N-substituted aminoalkyl piperazine comprising applying methyl red to both of said polymers whereby the methyl red applied to said deeper dyeing polymer undergoes a substantial color change while the methyl red applied to said polymer containing substantially no N-substituted aminoalkyl piperazine remains substantially unchanged in color.

3,387,944

BATCH SEPARATION OF COMPONENTS OF A MIXTURE BY TOTAL SOLUTE REFLUX

Leonard George Sherrington and William Palmer Kemp, Vicars Cross, Chester, England, assignors to Thorium Limited, London, England, a British company
Continuation-in-part of application Ser. No. 466,744, June 24, 1965, which is a continuation-in-part of application Ser. No. 223,395, Sept. 13, 1962. This application Apr. 18, 1967, Ser. No. 631,748
6 Claims. (Cl. 23—310)

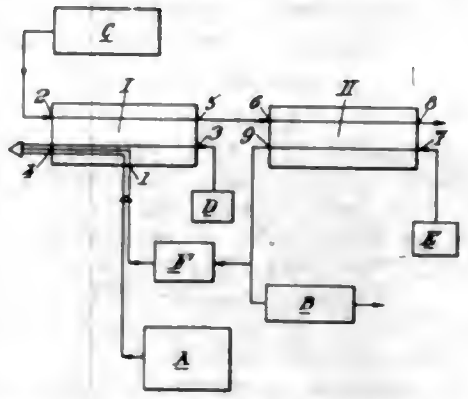


A liquid-liquid extraction process for separating a mixture of at least two solutes with different solubilities in two immiscible solvents of different specific gravities involving the flow of the two solvents-containing-solutes in counter-current relation to one another in a multi-stage separating system with the total reflux of solutes at both ends of the separating region until the desired separation has been achieved, stopping the counter-current flow when the desired separation of the solutes has been achieved, followed by the removal of the desired components from the appropriate stages of the multi-stage system.

3,387,945

PROCESSES FOR SIMULTANEOUSLY PURIFYING AND CONCENTRATING PLUTONIUM SOLUTIONS

Jean Claude Boudry, Massy, Marcel Chambon, Cherbourg, Pierre Faugeras, Paris, Colette Lheureux, Neuilly-sur-Seine, and Xavier L. R. Talmont, Antony, France, assignors to Commissariat à l'Energie Atomique, Paris, France
Filed May 11, 1965, Ser. No. 454,785
Claims priority, application France, June 19, 1964, 978,831
4 Claims. (Cl. 23—341)



1. A continuous process for simultaneously purifying and concentrating a mother liquor of plutonium said mother liquor containing a maximum concentration in sulfate ions of 0.2 M which comprises subjecting in a first step, said mother liquor to a counter-current extraction with a flow of an organic phase containing tributylphosphate, contacting said organic phase subsequently with a counter-current flow of a reductor solution of uranous nitrate for reducing the plutonium contained in the organic phase to the 3 valence state, stripping the organic phase with a counter-current flow of a solution of hydrazine in nitric acid, to obtain a concentrated aqueous raffinate of plutonium, treating a portion of said raffinate with an oxydizing agent to bring the plutonium contained therein in a higher valence state and back cycling said portion to the extraction first step together with said plutonium mother liquor.

3,387,946

PROCESS FOR PREPARING IMINOBIS(SULFURYL HALIDE)

Rolf Appel, Bonn, Germany, assignor to Olin Mathieson Chemical Corporation, a corporation of Virginia
No Drawing. Filed Jan. 28, 1964, Ser. No. 340,788
Claims priority, application Germany, Oct. 29, 1963, O 9,750
4 Claims. (Cl. 23—357)

Iminobis(sulfuryl halides), known compounds of known utility, are prepared by reacting sulfuryl diisocyanate with a halosulfonic acid.

3,387,947

PROCESS FOR PREPARING LITHIUM ALUMINUM HYDRIDE

Gottfried J. Brendel, Baton Rouge, La., assignor to Ethyl Corporation, New York, N.Y., a corporation of Virginia
No Drawing. Filed Nov. 29, 1961, Ser. No. 155,853
2 Claims. (Cl. 23—365)

1. A process for making lithium aluminum hydride comprising feeding together lithium chloride and surface active sodium aluminum hydride in approximately equimolal proportions, a minor amount of preformed lithium aluminum hydride as a reaction initiator and a reaction medium essentially consisting of diethyl ether and from about 5 to 20 volume percent of an inert high boiling liquid hydrocarbon, the sodium aluminum hydride being in the proportions of 2.5 to 5 gram moles per liter of ether, and reacting at a temperature of 0 to 80° C. for a reaction period of one-half to five hours.

2. A cyclic process of making lithium aluminum hydride comprising feeding together surface active sodium aluminum hydride with toluene, lithium chloride, and lithium aluminum hydride, and a reaction medium consisting essentially of diethyl ether having from about 5 to about 20 volume percent toluene therein and being a recycle stream as hereafter defined, the sodium aluminum hydride being in the proportions of from 2.5 to 5 gram moles per liter of the ether, the lithium chloride being in the proportions of 0.95 to 1.05 moles per mole of the sodium aluminum hydride, and the lithium aluminum hydride being in the proportions of about 0.1 to 1.0 mole percent of the sodium aluminum hydride, and reacting for a period of up to about 3 hours, at a temperature of about 20 to 35° C., thereby forming a solution of lithium aluminum hydride and solids including sodium chloride, and separating the solids and the liquid, then adding additional toluene to the liquid phase, and vaporizing sufficient of the liquid phase so-formed to crystallize lithium aluminum hydride, separating the so-formed lithium hydride, and recovering the vaporized liquid for use as the reaction medium in a succeeding cycle.

3,387,948

PREPARATION OF ALKALINE EARTH METAL ALUMINUM HYDRIDES

John C. Snyder, Darling, Pa., assignor to Hercules Incorporated, a corporation of Delaware
No Drawing. Filed Mar. 30, 1962, Ser. No. 183,765
5 Claims. (Cl. 23—365)

1. The process of preparing an alkaline earth metal aluminum hydride which comprises contacting a mixture of aluminum and an alkaline earth metal with hydrogen under a pressure of about 1000 p.s.i. to about 5000 p.s.i. and at a temperature of from about 100° C. to about 200° C. in the presence of an inert, liquid, organic diluent while subjecting the reaction mixture to comminution by ball-milling during the reaction.

3,387,949

PREPARATION OF METAL HYDRIDES

John C. Snyder, Darling, Pa., assignor to Hercules Incorporated, a corporation of Delaware
No Drawing. Filed Mar. 30, 1962, Ser. No. 183,766
4 Claims. (Cl. 23—365)

A process for preparing sodium or lithium aluminum hydride by the reaction of sodium, aluminum, and hydrogen in the presence of a catalyst.

3,387,950

PREPARATION OF PHOSPHORUS THIOFLUORIDE FROM PHOSPHORUS PENTASULFIDE AND HYDROGEN FLUORIDE

Herbert W. Roesky, Gottingen, Germany, assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed June 17, 1966, Ser. No. 558,279
3 Claims. (Cl. 23—368)

Described and claimed are the preparation of the known compound phosphorus thiofluoride, PSF_3, by the reaction of phosphorus pentasulfide with hydrogen fluoride at 100–250° C., especially in HF/P_2S_5 mole ratios of 6:1 to 10:1.

3,387,951

COMPOSITES OF BERYLLIUM-COPPER-MANGANESE

Earl I. Larsen, Indianapolis, Ind., and Richard H. Krock, Peabody, and Clintford R. Jones, Arlington, Mass., assignors to P. R. Mallory & Co. Inc., Indianapolis, Ind., a corporation of Delaware

Filed May 15, 1967, Ser. No. 638,307

4 Claims. (Cl. 29—182.1)

A two phase composite material whose microstructure consists of beryllium dispersed in a copper-manganese-beryllium solid solution alloy matrix was produced by liquid phase sintering pressed powder mixtures of beryllium, copper and manganese or powder mixtures of beryllium and pre-alloyed copper-manganese.

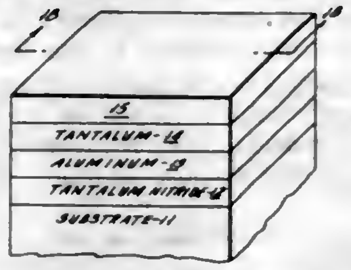
3,387,952

MULTILAYER THIN-FILM COATED SUBSTRATE WITH METALLIC PARTING LAYER TO PERMIT SELECTIVE SEQUENTIAL ETCHING

Edward A. La Chapelle, Raritan Township, Hunterdon County, N.J., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York

Filed Nov. 9, 1964, Ser. No. 409,890

10 Claims. (Cl. 29—183.5)



A nonconductive substrate is first coated with a resistive layer, a parting layer of highly conductive and anodizable material, and then a layer of metal such as tantalum. The entire structure is selectively, sequentially etched to form one or more resistors from the resistor layer and to form from the parting and metal layers areas which will ultimately serve as one or more capacitor electrodes and capacitor dielectrics, respectively.

After such etching, the metal layer is anodized to produce a capacitor dielectric. Anodization is possible because the underlying parting layer (which is included in an anodizing circuit due either to penetration into the metal layer or to anodization across the edges of all of the layers) is anodizable. The unanodized portion of the parting layer, being highly conductive, serves as an electrode of a high-Q capacitor. Unanodized portions of the resistor are trim anodized to value.

3,387,953

RUST-INHIBITED HYDROCARBON FUELS

Roland A. Bouffard, Union, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed May 5, 1966, Ser. No. 547,731

6 Claims. (Cl. 44—63)

Organo-substituted nitrogen oxides, particularly amine oxides, have been found to be very effective inhibitors against rusting when they are added to a gasoline. The amine oxides are also effective as anti-icing agents in the gasoline. The preferred amine oxide is one that contains, in addition to the amine oxide group, at least one polar group from the class consisting of hydroxy, amine, thiol, ester, heterocyclic nitrogen, and heterocyclic oxygen groups. Particularly effective amine oxides include bis(2-hydroxyethyl) cocoamine oxide and bis(2-hydroxyethyl) tallowamine oxide. The amine oxides used in the invention can be added to a gasoline composition in a concentration within the range of about 0.2 to about 100 pounds of amine oxide per one thousand barrels of gasoline.

3,387,954

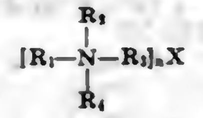
LIQUID HYDROCARBON FUELS CONTAINING A QUATERNARY AMMONIUM COMPOUND

Julius Capowski and Harry J. Andress, Jr., Gloucester, N.J., assignors to Mobil Oil Corporation, a corporation of New York

No Drawing. Filed Aug. 31, 1964, Ser. No. 393,351

7 Claims. (Cl. 44—72)

1. A liquid hydrocarbon fuel containing a small amount of an alkylamine salt having the formula:



$$[R_1-\overset{\displaystyle R_2}{\underset{\displaystyle R_4}{\overset{|}{\underset{|}{N}}}}-R_3]_nX$$

where:

R$_1$, R$_2$, R$_3$ and R$_4$ are alkyl groups having from 1 to about 22 carbon atoms, X is an acid radical of phosphoric acids having from 2 to 8 phosphorus atoms per molecule and in which *n* is a whole number from 1 to 5, the maximum value of *n* being limited by the number of replaceable hydrogen atoms in the acid molecule of which X is an acid radical.

3,387,955

ABRASIVE COATED PRODUCTS

Halsey W. Buell, Niagara Falls, and Robert E. Blair, Williamsville, N.Y., assignors to The Carborundum Company, Niagara Falls, N.Y., a corporation of Delaware

No Drawing. Filed July 12, 1965, Ser. No. 471,452

7 Claims. (Cl. 51—295)

An abrasive coated article comprising a flexible backing and abrasive granules secured to said backing by an adhesive. The adhesive comprises a maker coat and a grain size coat containing a thermoset resin and finely divided substantially water-insoluble organic fillers.

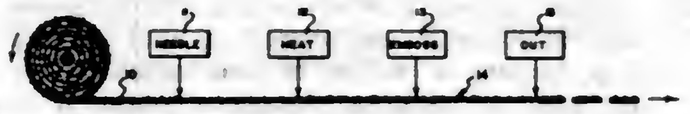
3,387,956

ABRASIVE SCOURING MATERIALS

Sidney D. Blue, New York, N.Y., assignor to Reeves Brothers, Inc., a corporation of New York

Filed June 16, 1965, Ser. No. 464,489

10 Claims. (Cl. 51—297)



Abrasive scouring materials are produced by (a) compacting axially drawn, staple fibers of a normally solid, thermoplastic polymer into a batting, the broad faces of which batting are defined in part by the free ends of those fibers which extend therefrom and in part by fibers substantially crossing each other, (b) heating at least one of the broad faces of the batting to a temperature above the melting point of the thermoplastic polymer for a period of time just sufficient to melt the thermoplastic polymer at the free ends and points of contact of those fibers which are exposed to such heating, and (c) cooling the heated face to a temperature below that of the melting point of the thermoplastic polymer, thereby transforming the heated face into an abrasive surface which results from globules of resolidified polymer at the free ends of some of the fibers which extend therefrom and from agglomerations of resolidified polymer at several points at which the fibers cross each other, both the globules and agglomerations having an irregular size larger than the diameter of the thermoplastic fibers from which they are respectively derived. Abrasive scouring materials made by such process are characterized by having their working or abrasive surfaces formed entirely from the compacted thermoplastic batting material itself without the addition of abrasive additives.

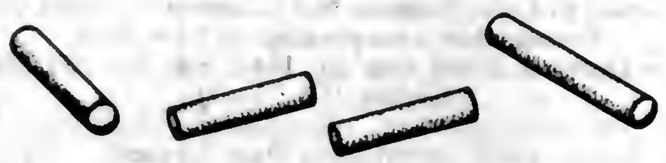
3,387,957

MICROCRYSTALLINE SINTERED BAUXITE ABRASIVE GRAIN

Elmer E. Howard, Eggertsville, N.Y., assignor to The Carborundum Company, Niagara Falls, N.Y., a corporation of Delaware

Continuation-in-part of application Ser. No. 214,895, Aug. 6, 1962. This application Apr. 4, 1966, Ser. No. 554,606

17 Claims. (Cl. 51—298)



13. An abrasive wheel comprising microcrystalline, sintered bauxite abrasive grain of controlled grit size having a longitudinal to transverse dimensional ratio substantially greater than 1:1 and a uniform cross section normal to the length thereof, and a bond therefor.

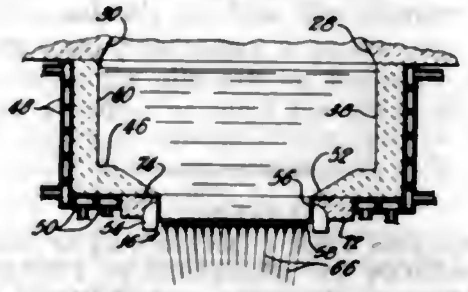
3,387,958

APPARATUS FOR PRODUCING FIBERS FROM HIGH TEMPERATURE FUSIBLE MATERIAL

Frank Day, Granville, and Raymond C. Womeldorph, Newark, Ohio, assignors to Owens-Corning Fiberglas Corporation, a corporation of Delaware

Filed Mar. 18, 1965, Ser. No. 440,678

8 Claims. (Cl. 65—1)



The invention provides apparatus for producing fibers from high temperature materials. This is accomplished in a relatively small melter, walls of which are cooled by water passages at the external surfaces thereof to maintain the walls at a reasonable temperature. In a preferred form, the walls are made of a slip-cast, seamless, fused silica. The batch material is supplied at one end of the melter and is drawn into fibers through an elongate, transverse opening at the other end. Heat is supplied by burners in the sidewalls which are directed toward one another to produce turbulence, with the sidewalls slanted inwardly to effectively heat the batch material by radiation. A flue is located at the same end of the melter as the outlet opening. The overall design enables high temperature, e.g., exceeding 2800° F., to be obtained in a small melter.

3,387,959

METHOD FOR FORMING IMAGE-TRANSFER DEVICES EMBODYING LIGHT-CONDUCTING FIBERS AND LIGHT-ABSORBING FILAMENTS

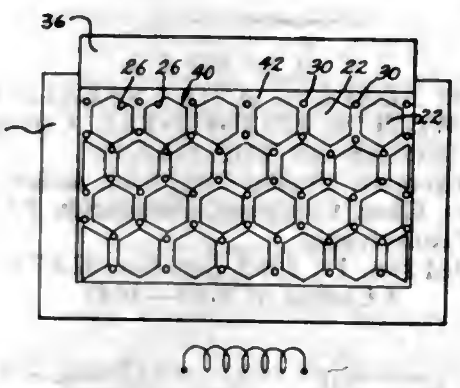
Henry B. Cole, East Woodstock, Conn., assignor, by mesne assignments, to American Optical Company, Southbridge, Mass., a corporation of Delaware

Filed Nov. 19, 1962, Ser. No. 238,372

5 Claims. (Cl. 65—4)

1. A method for forming a fiber optical image-transfer device comprising the steps of

placing a plurality of filaments of light-absorbing material within a bundle of light-conducting optical fibers in spaced relation to each other between portions of said fibers and arranging said fibers, each embodying a light-transmitting core of selected refractive index having a fusible light-transmitting cladding of relatively lower refractive index which is of selected thickness at one portion extending along the length of said core and of approximately one-half said selected thickness around the remainder of said core, with the fiber cladding portions of said selected thickness contacting said filaments and with other portions of said fiber claddings contacting adjacent fiber claddings in said bundle,



and fusing said fiber claddings directly to each other and to said filaments to form an image-transfer device having a plurality of light-conducting fiber cores held in substantially equally spaced relation to each other and to said light-absorbing element cores by said light-transmitting cladding material of lower refractive index.

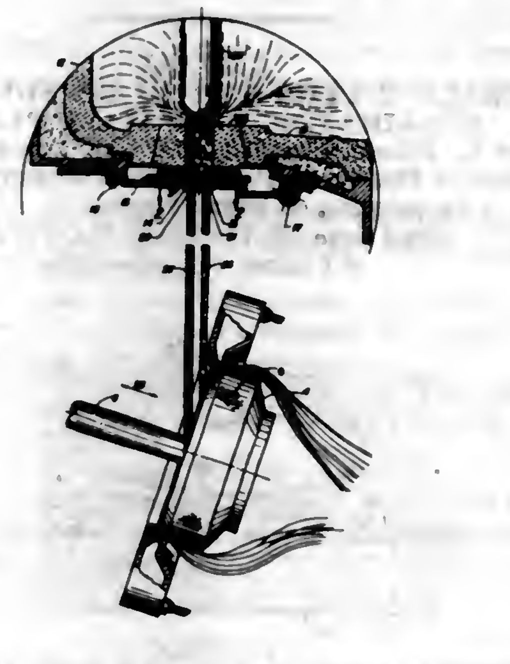
3,387,960

APPARATUS FOR DISTRIBUTING MELT AND FORMING FIBERS THEREFROM

Peter Erdenberger, Wabash, Ind., assignor to United States Gypsum Company, a corporation of Delaware

Filed June 16, 1965, Ser. No. 464,274

9 Claims. (Cl. 65—15)



A plate subjacent the outlet port of a forehearth is provided with two or more openings therethrough to discharge melt as a plurality of discrete spaced freely falling stream segments directly to the upwardly exposed inner surface of an annular orifice area in the side wall of a rotor which is disposed at an angle beneath the outlet port of the forehearth. The number, size and arrangement of the openings is selected to obtain the desired distribution of the melt across the width of the orifice area of the rotor wall.

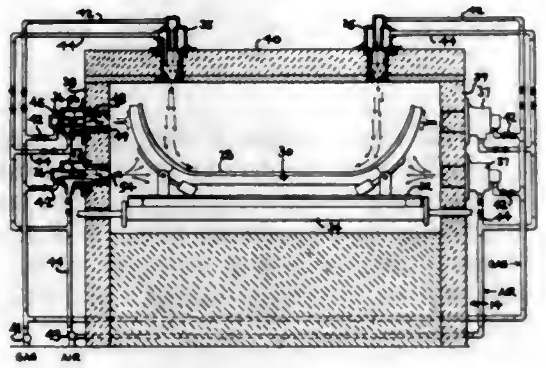
3,387,961
METHOD OF REDUCING REBOIL IN MOLTEN GLASS

Walter M. Buehl and James H. Cowan, Jr., Corning, N.Y., assignors to Corning Glass Works, Corning, N.Y., a corporation of New York
No Drawing. Filed Jan. 25, 1965, Ser. No. 427,934
10 Claims. (Cl. 65—32)

A method of eliminating the formation of gaseous bubbles in a glass melt caused by the development of a galvanic cell in the molten glass which previously appeared plain.

3,387,962
METHOD OF BENDING AND ANNEALING GLASS SHEETS WITH SUPPLEMENTAL COOLING OF HOTTER AREAS OF THE GLASS

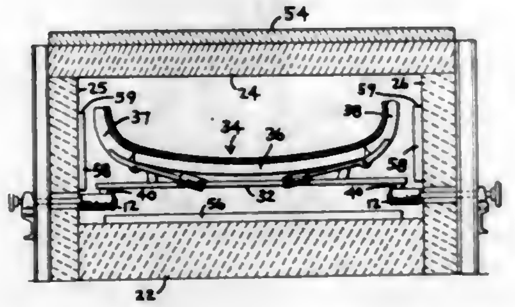
Le Roy S. Whitmire, Crystal City, Mo., assignor to Pittsburgh Plate Glass Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Jan. 11, 1965, Ser. No. 424,778
4 Claims. (Cl. 65—104)



Annealing bent glass sheets that have been heated more intensely in one portion than in another portion to produce a non-uniform bend characterized by cooling the bent glass sheets at a non-uniform rate to cool each bent sheet to approximately the top of the annealing range at a more nearly uniform glass temperature followed by controllably cooling the bent glass sheet through the annealing range to below the strain point.

3,387,963
ANNEALING LEHR FOR GLASS SHEETS WITH RERADIATING SIDE WALL PLATES

Robert L. Tilton, Wexford, Marshall Township, Pa., assignor to Pittsburgh Plate Glass Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed June 25, 1964, Ser. No. 377,839
4 Claims. (Cl. 65—350)



Annealing glass sheets supported immediately inside their marginal edges on outline supports by passing supported glass sheets through a controlled temperature zone where the exposed under surface of the glass sheets inward of the supports are directly exposed to auxiliary radiant heat sources to minimize the temperature difference between the bottom surface portion exposed to the auxiliary radiant heat sources and the portion thereof in contact with the support, which latter support reacts more slowly than the glass sheet to an environmental change in temperature. The auxiliary heat also reduces the temperature difference between the exposed portion of the bottom surface and the top surface of the supported glass sheet as the glass sheet cools through the annealing range while so supported.

3,387,964
METHOD OF FIXING NITROGEN UTILIZING *AZOTOBACTER AROMATICUM*

Vernon F. Coty, Trenton, N.J., assignor to Mobil Oil Corporation, a corporation of New York
No Drawing. Filed Aug. 21, 1964, Ser. No. 391,290
7 Claims. (Cl. 71—7)

A new microorganism, *Azotobacter aromaticum*, has been found which surprisingly fixes elemental nitrogen while using cyclic hydrocarbons as an energy source.

3,387,965
SOIL STABILIZER COMPOSITION AND METHOD OF MAKING FROM SPENT SULFITE LIQUORS

Shigeo Kiyooka and Jiro Okabe, Iwakuni-shi, Japan, assignors to Sanyo Pulp Company, Limited, Tokyo, Japan, a corporation of Japan
No Drawing. Filed Apr. 21, 1965, Ser. No. 449,860
Claims priority, application Japan, May 12, 1964, 39/26,559
5 Claims. (Cl. 71—25)

A soil stabilizer consisting of a modified sulfite pulp waste liquor containing a chlorinated lignosulfonic acid, a hexavalent chromium compound, and a water-soluble metallic salt selected from the group consisting of divalent or trivalent metallic salts of iron, aluminum, copper and manganese, and having a remarkably shortened gelling time and an increased gel strength, when compared with a soil stabilizer obtained from an ordinary sulfite waste liquor.

3,387,966
DRY PROCESS FOR CONTROLLED SURFACE OXIDATION OF BERYLLIUM POWDERS

Simon J. Morana, Hazleton, and Walter J. Koshuba, Conyngham, Pa., assignors to The Beryllium Corporation, Reading, Pa., a corporation of Delaware
No Drawing. Filed Aug. 13, 1964, Ser. No. 389,828
7 Claims. (Cl. 75—.5)

1. A process for producing sub-sieve beryllium metal powders containing a predetermined amount, up to about 5 percent beryllium oxide, comprising heating said powders in the presence of an oxygen containing gas at temperatures of from 140° to 400° C., said amount of beryllium oxide being directly proportional to the increase in temperature.

3,387,967
HIGH PURITY STEELS AND PRODUCTION THEREOF

Thomas E. Perry, North Canton, Ohio, Robert H. Henke, Richmond, Va., and John E. Fogarty and John A. Rinebolt, Canton, Roderick J. Place, Massillon, and Sidney W. Poole, Cleveland, Ohio, assignors to Republic Steel Corporation, Cleveland, Ohio, a corporation of New Jersey
Continuation-in-part of applications Ser. No. 203,091, June 18, 1962, and Ser. No. 332,218, Dec. 20, 1963. This application Feb. 8, 1965, Ser. No. 431,053
6 Claims. (Cl. 75—12)

1. The method of producing a high purity steel substantially free from solid contaminating inclusions and having low levels of gaseous constituents, which comprises: melting at atmospheric pressure, a charge consisting principally of iron and any alloying additions required in the final analysis which have a substantially lesser affinity for oxygen than does carbon, oxygenating said molten charge to reduce phosphorus, sulfur and manganese within preselected upper limits, and to reduce any metallic elements present which have an affinity for oxygen higher than or substantially equal to that of carbon, adjusting the carbon content of the molten bath to a value sufficiently in excess of that required in the final analysis, to combine with the oxygen present in said molten bath, carbon deoxidizing the molten metal by subjecting to vacuum degasification until the vacuum is reduced to about 100 microns (Hg), thereupon adding to the molten bath while still under said vacuum, any metallic elements required in the final analysis which have an affinity for oxygen higher than or substantially equal to that of carbon, thereupon casting the molten metal into ingots, and electric arc remelting said ingots as consumable electrodes under vacuum of about 10 microns and into a liquid-cooled metal crucible.

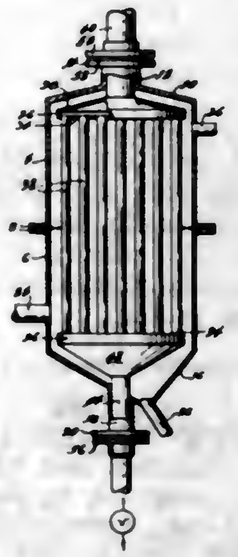
3,387,968
FREE-CUTTING STEELS

Eugene J. Paliwoda, Bethel Park, and James C. McManus, Oakdale, Pa., assignors to Jones & Laughlin Steel Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed May 4, 1966, Ser. No. 547,483
5 Claims. (Cl. 75—49)

4. The process of making free-cutting steel comprising preparing under oxidizing conditions a melt of steel containing about .03 to .05% carbon, about .08 to .60% manganese, about .05 to .15% phosphorus, sulfur exceeding .4%, silicon not exceeding about .01%, the balance being iron and incidental impurities, vacuum degassing the melt until the product of its carbon and oxygen contents is less than 10×10^{-4}, and teeming the steel into ingot molds.

3,387,969
OXYGEN SCAVENGING METHOD

Stanley B. Skladzien, Elmhurst, Ill., assignor to the United States of America as represented by the Chairman of the United States Atomic Energy Commission
Filed Aug. 2, 1965, Ser. No. 476,767
3 Claims. (Cl. 75—66)



1. A method of removing oxide from alkali metal comprising flowing said alkali metal past a membrane of zirconium or zirconium alloy maintained at an elevated temperature, meanwhile flowing a calcium-containing alloy on the other side of said membrane.

3,387,970
ALUMINUM BASE ALLOYS

Eugene Wainer, Shaker Heights, Ohio, assignor to Horizons Incorporated, a corporation of New Jersey
No Drawing. Filed Sept. 7, 1965, Ser. No. 485,631
5 Claims. (Cl. 75—138)

1. An aluminum base alloy consisting essentially of between about 1% and about 4% of at least one refractory metal selected from the group consisting of Nb, Ta, Ti, Th and Zr and between about 0.01% and about 0.1% of at least one precious metal selected from the group consisting of Ag, Au, Pd and Pt, balance substantially all Al except for incidental impurities.

3,387,971
MASTER ALLOY CONSISTING ESSENTIALLY OF MOLYBDENUM-VANADIUM-ALUMINUM

John R. Vogt, Avon Lake, Ohio, and Louis R. Matricardi, Tonawanda, N.Y., assignors to Union Carbide Corporation, a corporation of New York
No Drawing. Filed Feb. 21, 1966, Ser. No. 528,774
2 Claims. (Cl. 75—138)

1. Master alloy for use in making titanium base alloys consisting essentially of about 20 to 25% molybdenum, about 20 to 25% vanadium, balance aluminum.

3,387,972
METHOD OF AND APPARATUS FOR BONDING TOGETHER METALLIC BODIES

Kiyoshi Inoue, 182 3-chome, Tamagawayoga-machi, Setagaya-ku, Tokyo, Japan
Original application Jan. 27, 1964, Ser. No. 340,211. Divided and this application Mar. 8, 1967, Ser. No. 642,261
Claims priority, application, Japan, Feb. 18, 1963, 38/8,232; Apr. 5, 1963, 38/18,360
6 Claims. (Cl. 75—226)

A method of bonding a mass of particles together by passing an electric current through the mass, wherein a magnetic field is applied generally perpendicularly to the direction of flow of the current to control this flow. The particles are cascaded into a form through a corona discharge.

3,387,973
PHOTOCONDUCTIVE SUBSTANCES HAVING TRIPHENYLAMINE MOIETIES FOR ELECTROPHOTOGRAPHY

Charles J. Fox and Arthur L. Johnson, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
No Drawing. Original application Dec. 29, 1961, Ser. No. 163,092. Divided and this application Mar. 16, 1965, Ser. No. 447,937
7 Claims. (Cl. 96—1.5)

Certain polymeric and non-polymeric substances having triphenylamine moieties are useful as photoconductors in electrophotographic processes.

3,387,974
COATINGS FOR REGULATING TRANSFER IN PHOTOSENSITIVE TRANSFER ELEMENTS

William J. Dulmage and William A. Light, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
No Drawing. Continuation-in-part of application Ser. No. 552,720, May 25, 1966, which is a continuation-in-part of application Ser. No. 211,927, June 27, 1962. This application Feb. 8, 1967, Ser. No. 614,571
10 Claims. (Cl. 96—28)

The photosensitive transfer material in a photographic transfer element is protected and its flow is regulated by a porous overcoat permeable to the photosensitive material in its transferable state.

3,387,975
METHOD OF MAKING COLOR SCREEN OF A CATHODE RAY TUBE

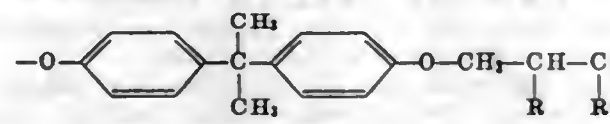
Michio Tamura, Fujisawa-shi, Japan, assignor to Sony Corporation, Tokyo, Japan, a corporation of Japan
Filed Mar. 10, 1965, Ser. No. 438,558
11 Claims. (Cl. 96—36.1)

Method of forming color phosphor patterns on the inner face of a cathode ray tube screen wherein preselected areas of the screen are coated with a phosphor slurry containing a radiation hardenable composition and an initially light transparent inhibitor, exposing the thus coated areas to radiation through the outer face of the screen to thereby harden said composition and render said inhibitor opaque, and removing the excess unhardened slurry from the inner face of the tube.

3,387,976
PHOTOPOLYMER AND LITHOGRAPHIC PLATES

Jack L. Sorkin, Cleveland Heights, Ohio, assignor to Harris-Intertype Corporation, Cleveland, Ohio, a corporation of Delaware
No Drawing. Filed July 22, 1964, Ser. No. 384,533
18 Claims. (Cl. 96—86)

A photopolymer for use in photolithography and photomechanical processes comprising a high molecular weight phenoxy-cinnamate polymer containing the following recurring structure:

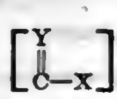


in which R and R′ are hydrogen or cinnamate substituents. To provide the necessary light sensitivity, either R or R′ will be a cinnamate substituent. This photopolymer is made by reacting a high molecular weight phenoxy resin with cannamoylating agent, such as cinnamoyl chloride, in the presence of a solvent and subsequently precipitating the phenoxy-cinnamate from the solvent.

3,387,977
DIAZOTYPE LAYER CONTAINING ACETO-ACETAMIDO COUPLING COMPONENTS

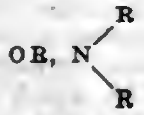
David P. Habib, West Springfield, and George R. Hodgins, South Hadley, Mass., assignors to Tecnifax Corporation, Holyoke, Mass., a corporation of Massachusetts
No Drawing. Filed Mar. 31, 1964, Ser. No. 356,024
6 Claims. (Cl. 96—91)

Diazotype sensitized material having a light sensitive layer comprising a light sensitive diazonium salt and an acetoacetamide derivative of an aliphatic amine containing the group:



$$\left[\overset{\displaystyle Y}{\overset{\|}{C}}-X\right]_n$$

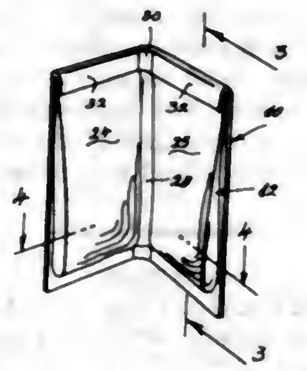
wherein Y is oxygen or sulfur, X is selected from the group consisting of



and a nitrogen bearing heterocyclic saturated ring containing not more than 7 atoms, and *n* is any integer from 1 to 3.

3,387,978
INFUSION PACKAGE

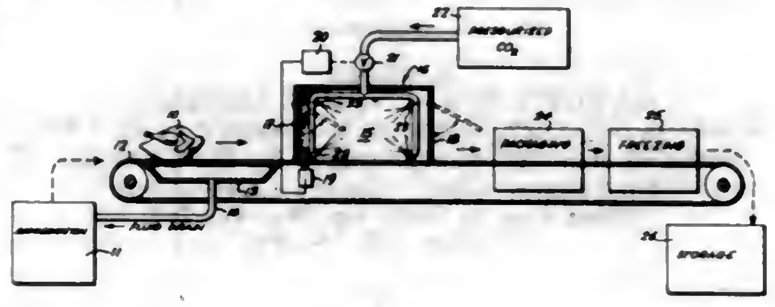
Colette J. Major, New York, N.Y., assignor to Emery Major, New York, N.Y.
Filed Oct. 22, 1964, Ser. No. 405,701
1 Claim. (Cl. 99—77.1)



A package for tea, coffee or other substances comprising a rectangular shaped flexible porous bag containing a beverage infusion commodity, a sheet of water-resistant cardboard material placed around the bag, one end of the sheet being attached to the bag, the bag adapted to be folded down a median line, the sheet adapted to be folded along the same line whereby upon squeezing the sheet, the excess liquid contents of the bag will be discharged.

3,387,979
METHOD FOR FLAVORING UNCOOKED POULTRY

Chick M. Farha, 2600 Warwick Drive, Oklahoma City, Okla. 73116
Continuation-in-part of application Ser. No. 420,067, Dec. 21, 1964. This application May 19, 1965, Ser. No. 457,001
3 Claims. (Cl. 99—194)



A method for flavoring food products, such as meat, poultry and the like, consisting of the steps of impregnating the food product with a flavoring solution, surface freezing the food product to prevent unwanted draining of the flavoring solution, placing the food product in a plastic bag, substantially evacuating the bag, and quick freezing said bagged product.

3,387,980
HEAT RESISTANT INORGANIC BODIES

James T. Trainor, Stamford, and Edward R. Kaufman, Stratford, Conn., assignors to Raybestos-Manhattan, Inc., Bridgeport, Conn., a corporation of New Jersey
No Drawing. Filed Apr. 7, 1965, Ser. No. 446,404
7 Claims. (Cl. 106—15)

Production of a heat resistant inorganic reaction product comprising chrysotile asbestos and phosphoryl triamide.

3,387,981
BITUMEN COMPOSITION OF IMPROVED TEMPERATURE SUSCEPTIBILITY

Laurence F. King, Lambton County, Ontario, Canada, assignor to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Filed May 21, 1964, Ser. No. 369,309
6 Claims. (Cl. 106—279)

1. A bitumen composition consisting essentially of about 25 to 40 wt. percent of a vacuum reduced aromatic petroleum residuum having a softening point within the range between about 225° F. and 350° F. and about 60 to 75 wt. percent of an oxidized solvent extract derived from a lube oil distillate of a naphthenic base; said oxidized solvent extract having a softening point within the range between about 50° F. and 150° F.

3,387,982
PROCESS FOR MANUFACTURING A HARD BITUMINOUS COMPOSITION WITH A CURING AGENT

Dilworth T. Rogers, Summit, and John C. Munday, Cranford, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
Continuation-in-part of application Ser. No. 256,666, Feb. 6, 1963. This application Mar. 7, 1963, Ser. No. 263,444
5 Claims. (Cl. 106—281)

1. A process for the manufacture of a hard bituminous solid composition which comprises mixing from about 8 to 30 wt. percent of a bituminous binder, 0.5 to 5 wt. percent of a curing agent selected from the group consisting of nitrobenzene, dinitrobenzene, gallic acid, pyrogallol and furfural with finely divided solid, by weight percents based on the solid, compressing the mixture to 80 to 98% of its theoretical density and curing the compressed mixture at a temperature in the range from about 30° to 500° F. for a time period in a range from about 4 to 80 hours.

3,387,983
ORGANIC COLOR LAKES

Gustav Edward Rast, Hamburg, N.Y., assignor to Allied Chemical Corporation, New York, N.Y., a corporation of New York
No Drawing. Filed June 11, 1964, Ser. No. 374,248
8 Claims. (Cl. 106—289)

1. A substantially anhydrous color lake composition consisting essentially of

a water-insoluble aluminum lake of a water-soluble, edible, non-toxic dyestuff, and

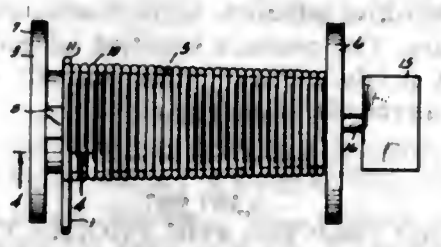
a water-insoluble, lipophilic, nonionic, surface-active, hexitol anhydride partial ester of a long chain monocarboxylic fatty acid having 12–22 carbon atoms in a small but sufficient amount to inhibit absorption of water and dusting of said lake when in the dry, pulverulent form, said amount not exceeding 2% of the weight of the aluminum lake,

whereby said composition can be incorporated into a polymeric resin and subjected to forming temperatures of 100°–250° C. without causing haziness of the colored resin.

3,387,984
PROCESS OF PREPARING A REEL OF OIL IMPREGNATED CABLE

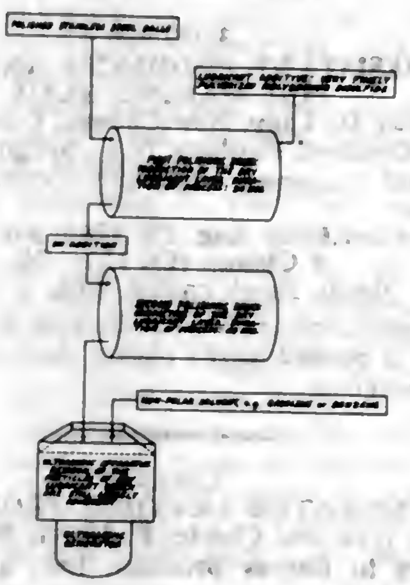
Frank H. Gooding, Pompton Plains, N.J., assignor to The Okonite Company, Passaic, N.J., a corporation of Delaware
Original application Apr. 1, 1965, Ser. No. 444,745, now Patent No. 3,330,499. Divided and this application Mar. 10, 1967, Ser. No. 622,220
2 Claims. (Cl. 117—7)

A process for preparing a reel of oil impregnated cable is disclosed. A cable is wound helically under constant tension around a drum rotating about a horizontal axis in several layers. The drum varies uniformly in diameter from one end to the other. The cable is wound with the ends spaced from the larger end of the drum. The reel of cable is impregnated with oil with the axis of the drum vertical and the larger end positioned lowermost.



3,387,985
METHOD OF PRODUCING PERMANENTLY LUBRICATED BEARINGS

August Huber, Lucerne, Switzerland, assignor to Landis & Gyr, A.G., Zug, Switzerland, a corporation of Switzerland
Continuation of application Ser. No. 50,054, Aug. 17, 1960. This application Sept. 10, 1963, Ser. No. 307,773
8 Claims. (Cl. 117—19)



1. The method of producing permanently lubricated, oil-free double-jewel electric meter thrust bearings comprising the steps of rolling stainless steel polished balls in a polishing drum with the addition of a finely pulverized lubricant for a period of time *t* until a firmly adhering layer of the lubricant is developed on their surface, compacting said layer by lengthy rolling of the balls in another polishing drum without the addition of lubricant for a period of time at least equal to 2*t* and removing still loosely adhering parts of the lubricant by ultrasonic treatment in a solvent.

3,387,986
TRANSFER MEDIUM FOR TYPING ON NON-RECEPTIVE SURFACES

Donald L. Elbert and William H. Horne, Lexington, Ky., assignors to International Business Machines Corporation, Armonk, N.Y., a corporation of New York
No Drawing. Filed Apr. 1, 1965, Ser. No. 444,810
10 Claims. (Cl. 117—36.1)

A transfer medium is suitable for typing on smooth surfaces which have substantially no minute voids or openings, such as translucent or transparent plastics. The transfer medium includes a substrate coated with a transfer layer which layer is pressure sensitive and comprises a major portion of a pigment material, such as carbon black and minor proportions of wax and resin which resin is a pressure sensitive adhesive, such as solid, normally tacky silicone resins. The pressure sensitive adhesive causes the material to firmly adhere to the smooth surface upon transfer by a type die.

3,387,987
BATH AND PROCESS FOR PRODUCING PLATINUM METAL IMMERSION DEPOSITS

Ronald William Johnson, Harrow, Middlesex, England, assignor to The International Nickel Company, Inc., New York, N.Y., a corporation of Delaware
No Drawing. Filed Apr. 28, 1965, Ser. No. 451,643
Claims priority, application Great Britain, Apr. 28, 1964, 17,579/64
11 Claims. (Cl. 117—71)

Directed to a process for producing an immersion deposit of a metal from the group consisting of palladium, platinum, rhodium and ruthenium upon a metal substrate wherein the plating bath contains about 1 to about 10 grams per liter of one of the aforementioned platinum group metals, about 64 to about 96 grams per liter of hydrochloric acid, about 0.1 to about 2.5 grams per liter of copper, and up to about 5 grams per liter of ferrous iron. The resulting deposits are particularly useful in producing solderable coatings.

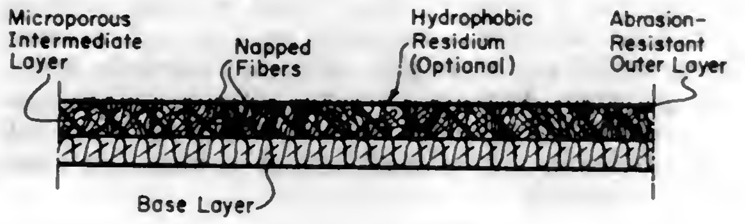
3,387,988
MAR RESISTANT PRODUCTS AND PROCESS FOR MAKING SAME

Darwin Fiske De Lapp, New Canaan, Conn., and William George Deichert, Flushing, N.Y., assignors to American Cyanamid Company, Stamford, Conn., a corporation of Maine
No Drawing. Filed Aug. 17, 1964, Ser. No. 390,185
9 Claims. (Cl. 117—76)

A rigid plastic sheet coated with a cross-linked unsaturated polyester resin wherein said unsaturated polyester resin is bonded to the plastic sheet by a polymer of allyl methacrylate.

3,387,989
SIMULATED LEATHER PRODUCTS

George C. West and Charles E. Mater, Buena Vista, Va., assignors to Reeves Brothers, Inc., a corporation of New York
Continuation-in-part of application Ser. No. 331,951, Dec. 19, 1963. This application Sept. 20, 1965, Ser. No. 488,750
5 Claims. (Cl. 117—76)


Microporous Intermediate Layer
Napped Fibers
Hydrophobic Residium (Optional)
Abrasion-Resistant Outer Layer
Base Layer

1. A simulated leather product capable of being washed or dry cleaned without marring its appearance and having the break and feel of natural leather, consisting essentially of (a) a base layer composed of a trimmed, napped fabric in which the fibers forming the nap have been trimmed to a substantially uniform length, (b) a microporous, intermediate layer composed of from about ¾ to about 2 ounces per yard based on the area of the base layer, of a substantially continuous film of a normally solid, microporous polyurethane system having a poromeric structure bonded to the napped surface of the base layer over substantially its entire face in such manner that at least part of the napped fibers extend into and through the microporous intermediate layer, and (c) an abrasion-resistant, outer layer composed of from about ¼ to about ¾ ounce per yard, based on the area of the base layer, of a substantially impervious film of a normally solid polyurethane system bonded to the intermediate layer over substantially its entire face in such manner that at least part of the napped fibers which extend through the intermediate layer also extend into and through the outer layer, the simulated leather product being characterized by a water vapor transmission value (as measured by ASTM E96–53T–B) not greater than about 30 grams per hour per square meter.

3,387,990
STRUCTURES FORMED OF GLASS FIBER-ELASTOMER SYSTEMS

Alfred Marzocchi, Cumberland, and Nicholas S. Janetos, Providence, R.I., assignors to Owens-Corning Fiberglas Corporation, a corporation of Delaware
Continuation of application Ser. No. 750,253, July 22, 1958. This application July 8, 1965, Ser. No. 470,407
4 Claims. (Cl. 117—77)

1. A glass fiber reinforced elastomeric product comprising a continuous phase of a vulcanized elastomeric material, glass fibers embedded as a fibrous phase within the vulcanized elastomeric material for reinforcement and a coating on the glass fiber surfaces prior to their combination with the elastomeric material strongly to bond the vulcanized elastomeric material to the glass fiber surfaces wherein the coating consists essentially of a vulcanization accelerator and an organo-silicon compound formed of an unsaturated silane having the general formula R_nSiX_{4-n} in which n is a number between 1 and 3. R is an organic group, and in which at least one of the R groups contains an unsaturated aliphatic group and X is a highly hydrolyzable group and in which the materials present in the coating enter into the vulcanization reaction with the sulphur and rubber to tie in the glass fiber surfaces with the vulcanized elastomeric material.

3,387,991
GLOW DISCHARGE POLYMERIZATION COATING OF POLYOLEFIN SURFACES TO RENDER THEM RECEPTIVE TO ADHESIVES, INKS, AND THE LIKE

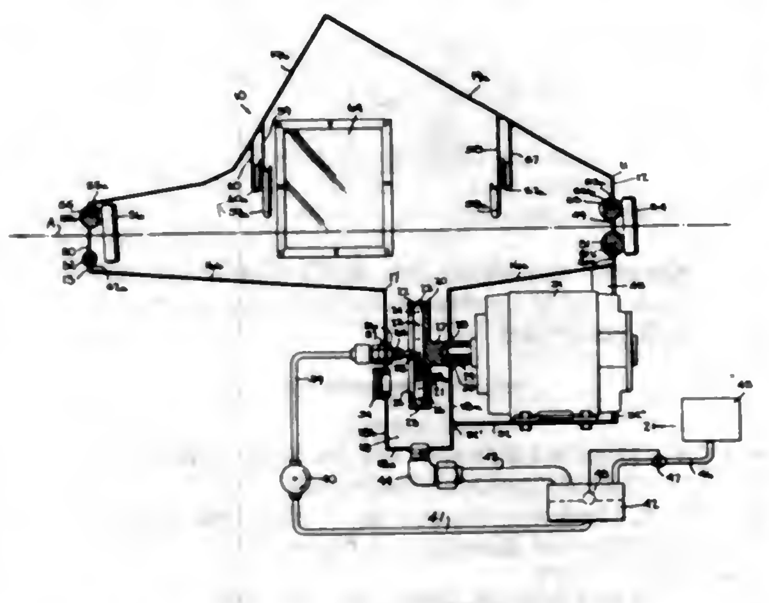
Michael Erchak, Jr., Ridgewood, N.J., assignor to Rexall Drug and Chemical Company, Los Angeles, Calif., a corporation of Delaware
No Drawing. Filed Oct. 13, 1964, Ser. No. 403,647
1 Claim. (Cl. 117—93.1)

A process for treating polyolefin surfaces to render the surface receptive to adhesives, inks and other decorative matter by glow discharge polymerization of gaseous material to form a polar-constituent-containing film on the surface and then applying to the film the desired adhesive, ink or other decorative matter.

3,387,992
PROCESS AND APPARATUS FOR DISTRIBUTING LIQUIDS

James B. Arthur, Charlotte, N.C., and Neil E. Lloyd, Rock Hill, S.C., assignors to Celanese Corporation, a corporation of Delaware
Continuation of application Ser. No. 216,894, Aug. 14, 1962. This application June 2, 1966, Ser. No. 555,647
15 Claims. (Cl. 117—105.3)

Process and apparatus for the application of liquid material such as plasticizer to a filamentary web preferably adapted for the preparation of cigarette filter rods, wherein centrifugal spray means providing "sheets" of droplets are employed, in a housing permitting liquid recycle, the operation being characterized by a projection of at least some of the liquid droplets through the tow whereby uniform application of the liquid addenda is readily and continuously achieved.



3,387,993
MAGNETIC TAPE WITH A LUBRICANT CONTAINING MINERAL OIL AND FATTY ACID AMIDE IN THE MAGNETIC COATING

Dervin L. Flowers, Redwood City, Calif., assignor to Ampex Corporation, Redwood City, Calif., a corporation of California
No Drawing. Filed Oct. 16, 1964, Ser. No. 404,495
3 Claims. (Cl. 117—121)

A magnetic recording medium of the type wherein magnetic particles are dispersed in a resin and coated on a suitable base wherein the coating contains a lubricant consisting essentially of from 0.2 to 3% of a mineral lubricating oil and from 1 to 5% of a higher fatty acid amide.

3,387,994
PROCESS FOR RENDERING GLASS SCRATCH RESISTANT BY DECOMPOSITION OF A TITANIUM ESTER CHELATE

Guthrie Raynor Dunton III, and Larry Quentin Green, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Apr. 9, 1965, Ser. No. 447,072
6 Claims. (Cl. 117—124)

Process for rendering glass scratch resistant by spraying a heated glass surface with an inert, non-aqueous, organic solvent solution of a titanium ester complex and then cooling.

3,387,995
PRODUCTION OF MAGNETIC RECORDING MEDIA USING COPOLYAMIDE BENDER FOR FERROMAGNETIC POWDER

Werner Senkpiel, Karl Dachs, Hans Wilhelm, and Herbert Wagner, Ludwigshafen (Rhine), Guenter Becht, Speyer, and Gerhard Werst, Neustadt, Weinstrasse, Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany
No Drawing. Filed Mar. 17, 1964, Ser. No. 352,632
Claims priority, application Germany, Mar. 23, 1963, B 71,276
3 Claims. (Cl. 117—138.8)

Manufacture of magnetic recording media in which a ferromagnetic powder is applied to a film in admixture with a linear polyamide binder composed of 50 to 100% by weight (with reference to the total weight of the binder) of monomeric units which are salts of (A) omega, omega'- octane- or omega,omega'-nonane-dicarboxylic acids bearing an aliphatic hydrocarbon substituent of 8 or 9 carbon atoms in a continuous chain and (B) diamines of 8 to 20 carbon atoms. An example of the essential polyamide-forming component is the salt of heptadecane dicarboxylic acid and p,p'-diaminocyclohexylmethane.

3,387,996
PREPARATION OF POLYESTER YARNS HAVING IMPROVED HEAT CHARACTERISTICS

James W. Tolliver, Kinston, N.C., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Aug. 19, 1964, Ser. No. 390,743
2 Claims. (Cl. 117—138.8)

An improved polyester yarn is prepared by applying to the yarn a liquid composition of about 0.8 to 1.5 weight percent based on the weight of the yarn, of a liquid coating composition consisting of about 1 to 5 weight percent of certain bisphenols such as 4,4'-thiobis-(3-methyl-6-tert-butylphenol) and the remainder (95 to 99%) a diester of the formula

$$R—(O—CH_2—CH_2)_n—O—R$$

where R is 2-ethylhexoyl and n is an integer from 3 to 7.

3,387,997
VINYLIDENE CHLORIDE - ACRYLATE - ACRYLIC ACID COPOLYMER, WAX-CONTAINING COATING COMPOSITION, COATED POLYOLEFIN, AND METHOD OF COATING

John Damian Sculley, Circleville, Ohio, assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Mar. 23, 1965, Ser. No. 442,165
8 Claims. (Cl. 117—138.8)

1. A polyolefin base film having, coated thereon, a composition consisting essentially of (A) an interpolymer consisting essentially of (1) 20–55 parts by weight methyl acrylate, (2) 5–35 parts by weight of an alkyl acrylate having two to eight carbon atoms in the alkyl group, (3) 35–50 parts by weight vinylidene chloride, and (4) 1–10 weight percent acrylic acid based on the total weight of (1), (2), and (3), and (B) a naturally occuring wax having a melting point above 75° C. and wherein the wax (B) is present in an amount from 2–7.5 weight percent of (A).

8. A composition of matter comprising: (A) an interpolymer consisting essentially of (1) 20–55 parts by weight methyl acrylate, (2) 5–35 parts by weight of an alkyl acrylate having two to eight carbon atoms in the alkyl group, and (3) 35–50 parts by weight vinylidene chloride, and (4) 1–10 weight percent acrylic acid based on the total weight of (1), (2), and (3), and (B) a naturally occurring wax having a melting point above 75° C. and wherein the wax (B) is present in an amount from 2–7.5 weight percent of (A).

3,387,998
SURFACE-SIZING OF PAPER WITH CYANOETHYL ACID HYDROLYZED STARCH

Robert M. Powers, Decatur, Ill., assignor to A. E. Staley Manufacturing Company, Decatur, Ill., a corporation of Delaware
No Drawing. Filed Apr. 27, 1964, Ser. No. 362,991
4 Claims. (Cl. 117—156)

A cyanoethyl ether starch acid-hydrolyzed to a fluidity of about 75 to 97 cc. having a cyanoethyl D.S. of 0.01 to 0.09 for surface sizing paper webs.

3,387,999
CAPACITOR HAVING DYSPROSIUM OXIDE DIELECTRIC

Michael Hacskaylo and Richard Charles Smith, Falls Church, Va., assignors to Melpar, Inc., Falls Church, Va., a corporation of Delaware

Filed June 23, 1965, Ser. No. 466,249

16 Claims. (Cl. 117—201)

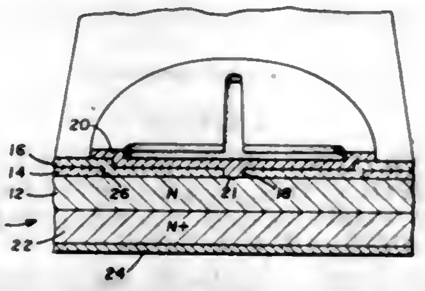
A thin film capacitor, electrically and mechanically stable at high temperatures, is produced by depositing successive layers of metal, dielectric, and metal on an insulative substrate. The dielectric is deposited in the form of a thin film by evaporation of a mixture of oxides of dysprosium, boron, and silicon in a weight ratio of 80:10:10 (±2%), respectively, at temperatures ranging upwardly of 1650° C.

3,388,000
METHOD OF FORMING A METAL CONTACT ON A SEMICONDUCTOR DEVICE

Warren P. Waters, Dallas, and Byron K. Lovelace, Georgetown, Tex., assignors to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware

Filed Sept. 18, 1964, Ser. No. 397,413

8 Claims. (Cl. 117—212)



Disclosed is a method of forming a planar Schottky barrier having a very small area metal contact to a surface of a semiconductor substrate by overlapping openings, one opening being formed in each of two insulating layers, the second insulating layer being formed on the first insulating layer, and by depositing a metal film on the portion of the substrate exposed by the two openings.

3,388,001
METHOD OF MAKING PIEZOELECTRIC LAYERS BY FLAME SPRAYING

Seymour Blum, Glencoe, Adi Mountvala, Chicago, and Robert McKinley, Broadview, Ill., assignors to IIT Research Institute, Chicago, Ill., a nonprofit corporation of Illinois

No Drawing. Filed June 30, 1965, Ser. No. 468,609

4 Claims. (Cl. 117—213)

1. The method of making a layer of piezoelectric material upon a substrate which comprises the steps of: flame spraying an oxygen containing material of perovskite structure onto a heated substrate while maintaining said substrate at a temperature whereby said material is not chilled in a non-piezoelectric crystal phase and permitting the resulting layer to cool.

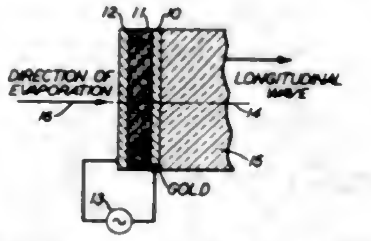
3,388,002
METHOD OF FORMING A PIEZOELECTRIC ULTRASONIC TRANSDUCER

Norman F. Foster, Mendham, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Continuation-in-part of application Ser. No. 320,379, Oct. 31, 1963. This application Aug. 6, 1964, Ser. No. 387,837

8 Claims. (Cl. 117—217)

A piezoelectric ultrasonic transducer is formed by evaporating a semiconductive material, such as cadmium sulfide, having latent piezoelectric properties onto a heated substrate where it recrystallizes into piezoelectrically aligned crystals. The resistivity of the layer is raised so it can support a piezoelectric field. Choice of substrate and direction of evaporation controls the primary ultrasonic mode generated.

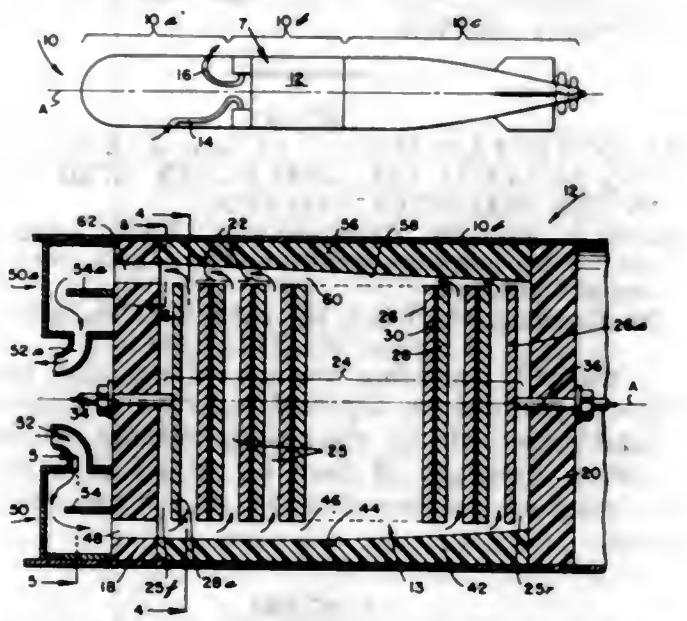


3,388,003
SEAWATER BATTERY WITH ELECTRODES IN DECREASING PASSAGE AREAS

Donald N. Jackley, Monrovia, Calif., assignor to the United States of America as represented by the Secretary of the Navy

Filed July 28, 1966, Ser. No. 569,008

2 Claims. (Cl. 136—100)



1. In a seawater battery for torpedo propulsion of the type including:

(i) a row of vertically extending parallel spaced electrode plate units, said units each comprising integrally joined positive and negative flat plate elements with a conductor sheet therebetween, the positive and negative elements of all the units of the row being uniformly disposed in the direction of one and the other, respectively, of opposite ends of the row so that opposite polarities of plate elements confront each other across the spaces between the units,

(ii) a seawater inlet manifold cavity extending along the lower edges of the row of electrode plate units for introducing a flow of seawater to the lower ends of the spaces between adjacent units, said inlet manifold cavity adapted for connection to a seawater supply line at a predetermined one of the opposite ends of the row, and

(iii) a seawater outlet manifold cavity extending along the upper edges of the row of electrode plate units, said outlet manifold cavity forming an outlet zone for receiving the flow of seawater from the upper ends of the spaces between adjacent units, said outlet passage cavity adapted for connection to a seawater exhaust line,

the improvements in combination, comprising:

(a) said inlet manifold cavity and said outlet manifold cavity each having monatonically decreasing passage areas in the linear direction of the row of electrode plate units away from their respective supply connection and exhaust connection ends, to tend to promote a uniform pressure differential across all the spaces between electrode units along the length of the row.

3,388,004
METHOD OF MAKING ELECTRODES USING HYDROPHOBIC POLYMER

Solomon Rosenblatt, Montclair, N.J., assignor, by mesne assignments, to Leesona Corporation, Cranston, R.I., a corporation of Massachusetts

No Drawing. Filed Sept. 30, 1965, Ser. No. 491,873

8 Claims. (Cl. 136—120)

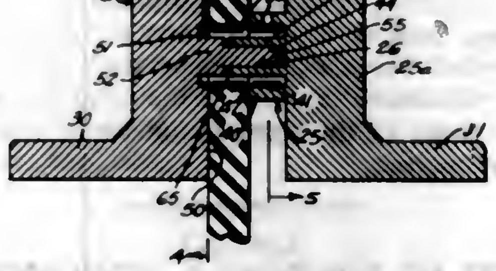
1. The method of constructing a lightweight electrode comprising the steps of forming a uniform gel-like admixture of a catalytically active metal, a hydrophobic polymer and a gel-forming cohesion-adhesion surface active agent, applying the admixture to a porous metal support, and heating the resultant structure at a temperature elevated sufficiently to bond the hydrophobic polymer to said support and to consume the surface active agent.

3,388,005
INTERNAL INTER-LUG CONNECTING MEANS FOR STORAGE BATTERIES

Laurence W. Hahn and John F. Kossow, Tampa, Fla., assignors to Contract Battery Manufacturing Company, Tampa, Fla., a corporation of Florida

Filed Aug. 20, 1964, Ser. No. 390,884

9 Claims. (Cl. 136—134)



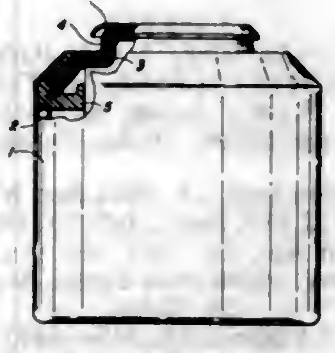
An internal inter-lug connecting construction for storage batteries in which the cell element lugs are disposed completely internally in the battery casing at opposite sides of an insulation partition wall between cells and which lugs have interfitting male and female parts which are welded together in an opening of the partition wall and surrounded by a sealant which fills the opening in the partition wall.

3,388,006
ALKALINE BATTERY PROVIDED WITH A TERMINAL PROTECTION PLATE

Guilford E. Kindig and Harold L. Malone, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

Filed Sept. 21, 1966, Ser. No. 580,960

2 Claims. (Cl. 136—163)



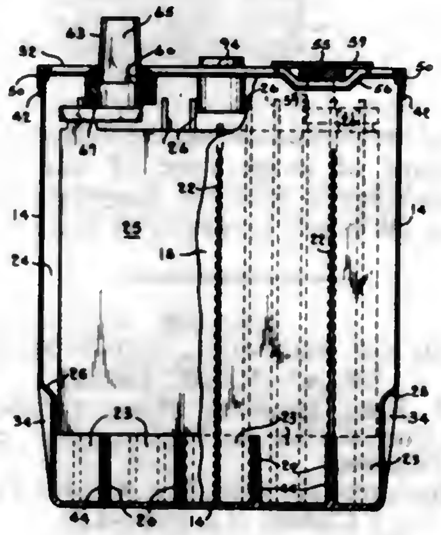
1. In an alkaline battery of the type having an outer can and a top disk wherein said outer can and top disk are insulated from each other by a seal, the improvement comprising a sheet of conductive material conductively attached to said top disk, said sheet of conductive material extending beyond the edges of the uppermost surface of said top disk to provide an air space between said conductive sheet and said top disk.

3,388,007
THIN WALL POLYPROPYLENE BATTERY CASE

Ronald M. Fiandt, Menomonee Falls, Wis., assignor to Globe-Union Inc., Milwaukee, Wis., a corporation of Delaware

Continuation-in-part of application Ser. No. 428,890, Jan. 7, 1965. This application Oct. 21, 1966, Ser. No. 607,087

15 Claims. (Cl. 136—166)



This disclosure relates to a battery case and cover made of polypropylene and wherein the case will, including the cell partitions, have a thickness not in excess of 0.100 inch. Also, the thickness of the cover does not exceed 0.100 inch. The case walls and partitions have a substantially uniform thickness throughout their respective planar extensions. Where a taper, or draft, is provided in the partitions the average thickness of the partitions equals the thickness of the walls they engage. Reinforcing ribs are provided on the partitions and, when used, have the same taper and thickness as the partitions.

In its more specific aspects, the cover is provided with transverse grooves for receiving the partitions and the grooves project above and below the main cover panel; extensions are provided at the grooves to guide the partitions into the grooves. An offset is provided in a pair of opposed case walls and adjacent the bottom of the case. The offset serves to reinforce the case and also to properly locate the cell element assemblies. Also, a specific vent cap is provided. The cap fits into the battery fill opening but is spaced from the opening walls and provides limited access from the battery to the area between it and fill opening walls. A vent opening in the cap communicates with the battery interior only through the area between the cap and the fill opening walls. The vent cap is connected to the fill opening by a hinge connection.

3,388,008
THERMOELECTRIC GENERATOR

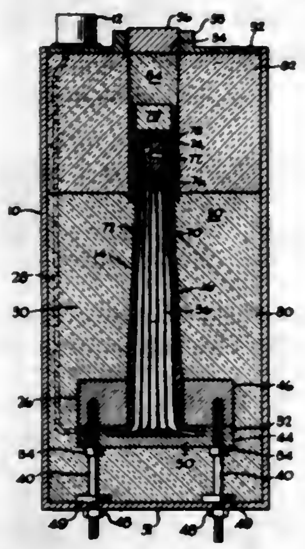
Robert J. Campana, Solana Beach, Joseph C. Melcher, El Cajon, and Peter S. Merrill and Walter E. Sargent, San Diego, Calif., assignors, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission

Filed Apr. 27, 1965, Ser. No. 451,367

10 Claims. (Cl. 136—205)

1. A thermoelectric generator comprising an elongated thermopile formed of a plurality of interlaced thermo-

electric elements adapted to generate electricity when opposite ends thereof are subjected to different temperatures, means maintaining said opposite ends at different temperatures, and means minimizing the difference in the time rates of change of temperature of said ends of said thermopile incident to ambient temperature changes so as to stabilize the power produced by the generator.

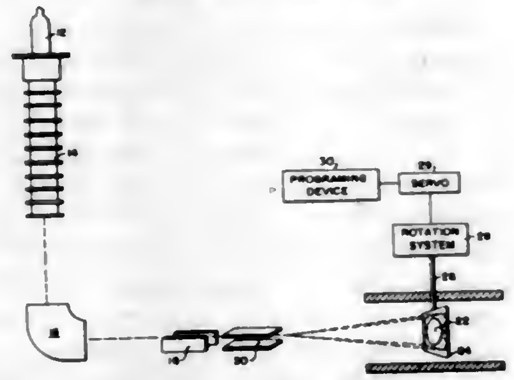


3,388,009
METHOD OF FORMING A P-N JUNCTION BY AN IONIC BEAM

William J. King, Reading, Mass., assignor to Ion Physics Corporation, Burlington, Mass., a corporation of Delaware

Filed June 23, 1965, Ser. No. 466,218

7 Claims. (Cl. 148—1.5)



This invention describes a novel process for producing semiconductor devices which comprises the forming of an insulating, and preferably passivating, layer on the surface of a semiconductor body and irradiating the insulated surface with ions of an energy sufficient to penetrate the layer and enter the underlying body and thereby modify the underlying conductivity of the body below the layer.

3,388,010
DISPERSION-HARDENED METAL SHEET AND PROCESS FOR MAKING SAME

Robert E. Stuart, Christiana Hundred, Del., and Roger E. Wilson, Baltimore, Md., assignors, by mesne assignments, to Fansteel Metallurgical Corporation, a corporation of New York

No Drawing. Filed July 29, 1965, Ser. No. 475,869

10 Claims. (Cl. 148—11.5)

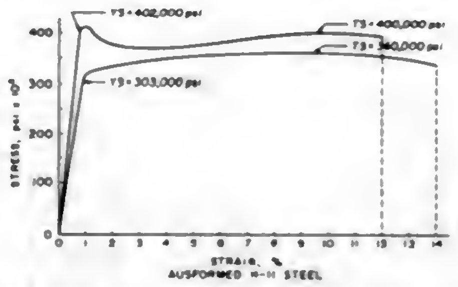
1. In a process for producing a dispersion-hardened metal sheet having high room temperature ductility and excellent elevated temperature strength and oxidation resistance, in which a powder comprising nickel and from 10 to 30% chromium by weight, said metals having pervasively dispersed therein particles of a refractory metal oxide having a free energy of formation at 1000° C. greater than 100 kilocalories per gram atom of oxygen, said particles having an average size less than about 80 millimicrons and being present in the proportion of 0.1 to 6% by volume in the metals, is consolidated to plate form at a temperature below about 2200° F., the steps comprising (1) rolling said plate predominantly in one direction at a temperature of about from 800° F. to 100° F. below its recrystallization temperature, said rolling being sufficient to effect at least a 50% reduction in the thickness of the plate, and (2) thereafter heating said rolled product to a temperature and for a time sufficient to totally recrystallize the metal therein.

3,388,011
PROCESS FOR THE PRODUCTION OF HIGH STRENGTH STEELS

Victor F. Zackay, Berkeley, and Earl R. Parker, Orinda, Calif., assignors to the United States of America as represented by the United States Atomic Energy Commission

Filed Oct. 8, 1965, Ser. No. 494,284

1 Claim. (Cl. 148—12.3)



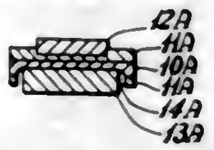
To produce high strength alloy steel with high ductility, the steel is processed by a series of steps comprised of tempering, applying stress at an elevated temperature, cooling and post-tempering. The steel is strained at a temperature in the range from 150° F. to 900° F., cooled and then post-tempered. The elevated temperature strain aging results in a substantial increase in the yield strength, and a favorable shape of the stress-strain curve for good mechanical properties.

3,388,012
METHOD OF FORMING A SEMICONDUCTOR DEVICE BY DIFFUSING AND ALLOYING

Arthur Dennis Fallon, Long Branch, N.J., assignor to The Bendix Corporation, Eatontown, N.J., a corporation of Delaware

Filed Sept. 15, 1964, Ser. No. 396,591

3 Claims. (Cl. 148—177)



A method of fabricating semiconductor devices in which diffusion is made on both sides and the collector is alloyed in beyond the diffused region and the diffused region adjacent to the periphery of the collector is removed.

3,388,013
METHOD OF FORMING A P-N JUNCTION IN A POLYCRYSTALLINE MATERIAL

Eishun Kimura, Kyoto, Japan, assignor to Matsushita Electronics Corporation, Osaka, Japan, a corporation of Japan

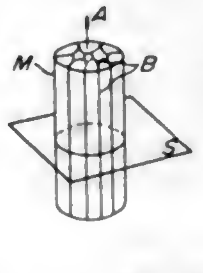
Original application Sept. 18, 1964, Ser. No. 397,486, now Patent No. 3,332,810, dated, July 25, 1967. Divided and this application Apr. 24, 1967, Ser. No. 633,076

Claims priority, application Japan, Sept. 28, 1963, 38/52,841

7 Claims. (Cl. 148—186)

A semiconductor device formed from a slice from an aligned polycrystalline rod cut in a direction which is

substantially perpendicular to the direction of crystal growth and diffusing at least one impurity, having a conductivity type opposite to that of the rod material, on at least one surface of the slice to form a p-n junction.



3,388,014
AMMONIUM NITRATE EXPLOSIVE AND PROCESS FOR PRODUCING SAME

Vincent J. Russo, Cincinnati, Ohio, assignor to The Chemical and Industrial Corp., Cincinnati, Ohio, a corporation of Ohio

No Drawing. Filed May 27, 1966, Ser. No. 553,323

16 Claims. (Cl. 149—17)

A process of producing explosive grade ammonium nitrate prills, comprising heating ammonium nitrate above its melting point, reducing the moisture content to not over about 1.0% by weight, mixing uniformly therewith at least 0.2% by weight of a nucleating agent, prilling the molten mixture in a low prill tower, and subjecting the solidified prills to a plurality of heating and cooling cycles through the 32.1° C. phase transition temperature. Preferably at least 0.1% by weight of an inorganic salt soluble in molten ammonium nitrate is also mixed uniformly with the molten mixture before prilling. The low density prills have a crystalline form and oil retention capacity suitable for use as an explosive.

3,388,015
NITRONIUM PERCHLORATE PROPELLANTS CONTAINING PERHALOHYDROCARBON MODIFIER

Lawrence Spenadel, Fanwood, and Herman Bieber, Kenilworth, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed June 9, 1961, Ser. No. 118,226

4 Claims. (Cl. 149—19)

3. A high impulse, modified burning rate solid propellant composition consisting essentially of nitronium perchlorate intimately mixed with about 3 to 36 wt. percent of a compatible, non-volatile, saturated hydrocarbonaceous fuel substance containing a long chain of polymethylene groups and 0.1 to 5 wt. percent of a non-volatile perhalo alkane, the perhalo alkane being less than one-third the amount of the saturated hydrocarbonaceous substance.

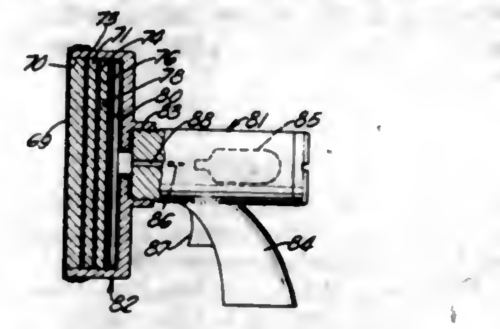
3,388,016
METHOD AND APPARATUS FOR PATCHING ARTICLES

Leslie D. Murray, 1347 N. Arrowhead, and Douglas Q. McMasters, 2594 2nd Ave., both of San Bernardino, Calif. 92405

Filed Aug. 31, 1964, Ser. No. 393,436

16 Claims. (Cl. 156—94)

1. A method of patching articles comprising the steps of impregnating a fabric patching material while in contact with a sheet of backing material with a resin which is capable of setting to a hard condition, placing the impregnated fabric patching material over the area to be patched with the backing sheet outermost, applying force to the fabric patching material through the backing material over the said area, allowing the resinous material to set and harden in the fabric to complete the patch, and then removing the backing material.

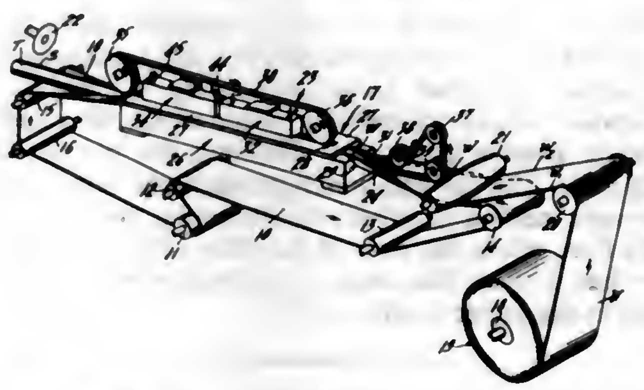


3,388,017
TUBE MAKING METHOD AND APPARATUS

Arvid Kjellsen Grimsley, Rockaway, and Christian Theodore Scheindel, Glen Gardner, N.J., assignors to American Can Company, New York, N.Y., a corporation of New Jersey

Filed Dec. 18, 1963, Ser. No. 331,408

11 Claims. (Cl. 156—203)



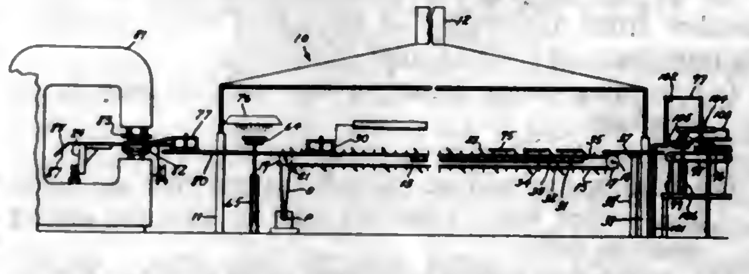
1. A method of forming a tube continuously from a web of heat fusible material, comprising the steps of continuously advancing said web in the direction of its longitudinal axis, progressively bringing the side edges of said web toward each other to form said web into tubular configuration with the marginal edge portions of said web disposed in contiguous relationship, gripping the contiguous marginal edge portions of said tubular web, passing said gripped marginal edge portions through a heating zone to fuse said marginal edge portions together, and then passing said fused marginal edge portions through a cooling zone to solidify said marginal edge portions into a permanent seam, and maintaining continuous pressure on substantial lengths of said marginal edge portions in said heating and cooling zones.

3,388,018
PROCESS FOR MANUFACTURING MOLDED ARTICLES

William H. Squier, Charlotte, N.C., and Jerry A. Wall, Greenville, S.C., assignors to J. P. Stevens & Co., Inc., New York, N.Y., a corporation of Delaware

Filed Nov. 3, 1965, Ser. No. 506,199

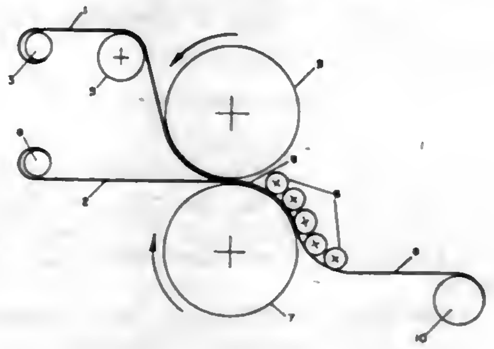
13 Claims. (Cl. 156—242)



Process for manufacturing a molded article composed of substrate and vinyl material by first heating the lower surface of the vinyl material until it is molten and then withdrawing the heat from the lower surface, heating the upper surface until it is molten and applying the substrate to the molten upper surface after gelation has begun in the lower surface.

3,388,019
LAMINATION OF ORIENTED FILM TO PAPER

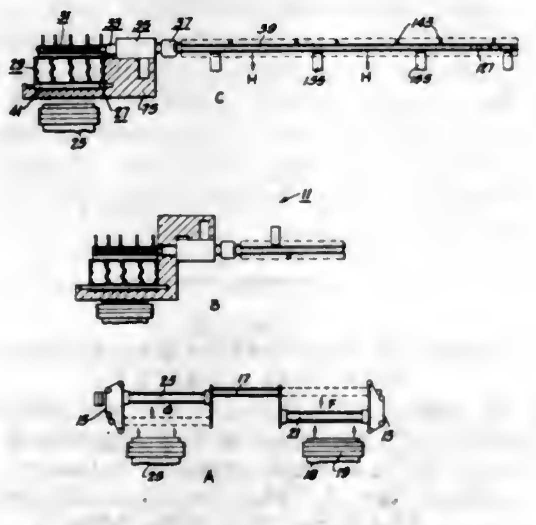
Jonathan I. Thigpen, Wilmington, Del., assignor to Hercules Incorporated, a corporation of Delaware
Filed Aug. 19, 1964, Ser. No. 390,578
5 Claims. (Cl. 156—282)



Laminates of uni- or bi-axially oriented thermoplastic film with paper are prepared without the assistance of an intermediate adhesive layer by heating the paper to a temperature above the melting point of the film and immediately passing paper and film into the nip of a pair of nip rolls. The nip roll which contacts the film is cooled to prevent melting or otherwise disturbing the orientation of the film, while the side of the film which contacts the paper has a very thin section softened whereby the adhesion to the paper is effected.

3,388,020
METHOD AND APPARATUS FOR FINGER-JOINING LUMBER

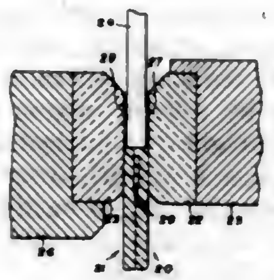
Richard L. Gates, Pittsburgh, Pa., assignor to Koppers Company, Inc., a corporation of Delaware
Filed June 10, 1966, Ser. No. 556,623
10 Claims. (Cl. 156—266)



10. In the method for producing an elongate wood member from a plurality of individual wood members, the improvement cycle of steps comprising:
- (a) forming finger joints in the ends of said wood members;
- (b) applying adhesive to each said finger joint end;
- (c) feeding first and second indexed and matched finger joint ended wood members into an adhesive curing machine while
- (d) supporting a third individual wood member in position for indexing and matching with the trailing end of said second wood member;
- (e) halting said first and second wood members in said curing machine while the adhesive in the joint therebetween is cured;
- (f) advancing the joined together first and second wood members away from said adhesive curing machine;
- (g) releasing said supported third wood member from the support and
- (h) advancing the same into indexing and matching relation with the trailing finger jointed end of said elongate wood member before the joined together wood members enter said adhesive curing machine; and
- (i) repeating the cycle of steps including halting, curing, indexing and matching of ends to produce an elongate wood member of desired length.

3,388,021
METHOD AND APPARATUS FOR HEAT SEALING

Harry J. Johnson, West Paterson, N.J., assignor to William E. Young, Stamford, Conn.
Filed Feb. 3, 1964, Ser. No. 342,302
8 Claims. (Cl. 156—306)



An apparatus and method for sealing a pair of thermoplastic members to one another in the portion adjacent an edge of each when the edges extend substantially adjacent one another with the portions adjacent the edges in facing and substantially contiguous relationship including supporting means having spaced-apart portions adapted to receive the portions of the members therebetween, one portion of the supporting means being movable to expose at least some of the portions of the members to melting by direct contact with a heating element which acts also with the supporting means to confine at least some of the material being melted and urge at least some of the melted material between the portions of the members adjacent the edges so that the members after solidification of the melted material are sealed to one another adjacent the edges.

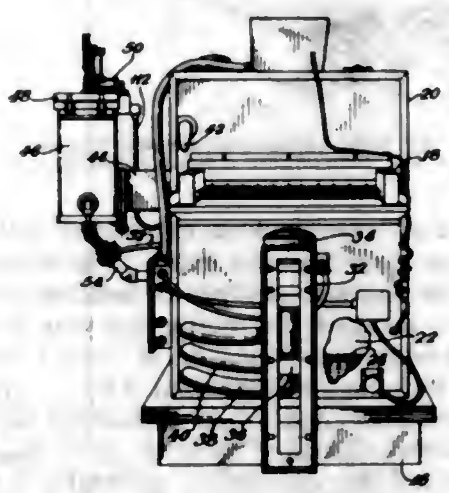
3,388,022
METHOD OF BONDING TOGETHER BUILDING PANELS AND TWO-COMPONENT ADHESIVE COMPOSITION USED THEREFOR

Martin S. Bloom and Michael Roy Sharpe, Norton-on-Tees, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain
No Drawing. Filed Feb. 19, 1965, Ser. No. 434,136
Claims priority, application Great Britain, Feb. 24, 1964, 7,577/64
14 Claims. (Cl. 156—326)

Bonding together building panels or the like, which comprises the steps of forming a mixture of plaster and water in the presence of sufficient alkali to obtain substantial retardation of the setting time of the mixture, and subsequently applying the alkaline mixture to the surfaces to be bonded in the presence of sufficient acid to accelerate the set. The acid may be added to the mixture, or it may be applied to the surfaces to be bonded, immediately before application of the adhesive, or it may already be contained in the material of the panels themselves.

3,388,023
CONTINUOUS ETCHING MACHINE HAVING A CONTROLLED CONVEYOR SPEED

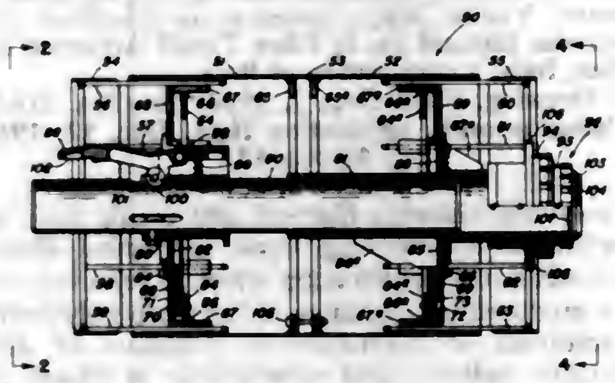
Robert C. Benton, State College, and Blair W, Heffner, Petersburg, Pa., assignors to Chemcut Corporation, State College, Pa., a corporation of Pennsylvania
Filed Oct. 11, 1966, Ser. No. 585,932
13 Claims. (Cl. 156—345)



Continuous etching machine having variable speed conveying means for feeding articles therethrough, and having a speed control including a test cell for controlling conveying speed. The test cell is provided with feeding means for introducing a substrate-mounted control element thereinto, spraying means including an oscillating nozzle for etching the control element to metal breakthrough, drive means for steadily operating the feeding means at a speed proportionate to the speed for the conveying means, and etch rate sensing, speed adjustment mechanism for detecting the breakthrough so as to change the conveyor speed to compensate for failure to timely cause breakthrough or to compensate for premature breakthrough.

3,388,024
TIRE CARCASS BUILDING DRUM

Sheppard A. Black, Wayne, and John D. Heide, Ramsey, N.J., assignors to Uniroyal, Inc., a corporation of New Jersey
Original application Jan. 17, 1964, Ser. No. 338,326, now Patent No. 3,355,346, dated Nov. 28, 1967. Divided and this application June 15, 1967, Ser. No. 646,248
4 Claims. (Cl. 156—415)

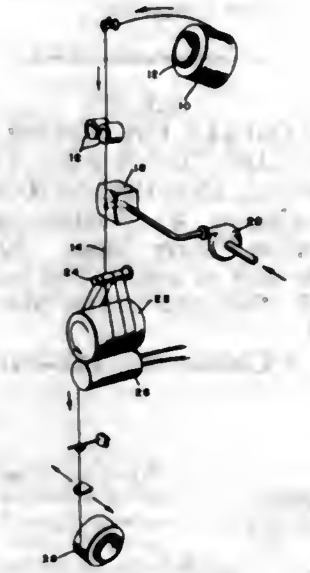


A tire building drum having axially spaced end portions separated by a spacer element which is replaceable in order to vary the length of the drum, each drum end portion being provided with a central, hollow shaft member which telescopes with the shaft member of the other to compensate for changes in length of the drum.

The foregoing abstract is neither intended to define the invention disclosed in this specification, nor is it intended to be limiting as to the scope of the invention in any way.

3,388,025
APPARATUS FOR FORMING A FLAT NARROW STRIP OF PARALLEL BONDED FILAMENTS

Oswald A. Drica-Minieris, Pensacola, Fla., and Robert L. Gardner, Decatur, Ala., assignors to Monsanto Company, a corporation of Delaware
Filed Jan. 16, 1963, Ser. No. 251,879
1 Claim. (Cl. 156—441)

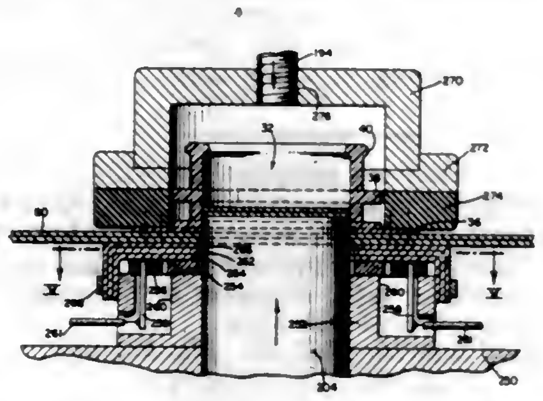


1. Apparatus comprising in combination:
- (a) first and second forwarding rolls having their axes at a slight angle to one another,
- (b) a supply mechanism for feeding to said forwarding rolls a bundle comprising a plurality of parallel drawn filaments, said bundle passing a plurality of times around said first and said second forwarding rolls,
- (c) a pinch roll mounted adjacent and in contact with said first forwarding roll for squeezing said bundle against said first forwarding roll,
- (d) means heating at least one of said first forwarding rolls and said pinch roll to a temperature between 50° and 200° C.,
- (e) and a metering mechanism for applying a bonding agent to said bundle, said metering mechanism being mounted between said supply mechanism and said forwarding rolls.

3,388,026
HEAT SEALING MACHINE

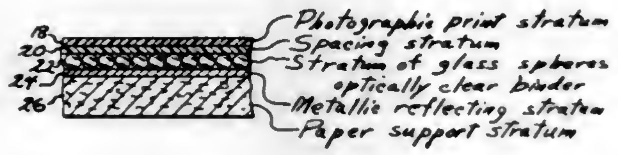
Claude N. Campbell, Jr., "Deepwell," Warren St., Edgewater Park, N.J. 07020
Original application Dec. 16, 1963, Ser. No. 330,904, now Patent No. 3,283,671, dated Nov. 8, 1966. Divided and this application July 19, 1966, Ser. No. 578,914
2 Claims. (Cl. 156—513)

An asbestos pad, a heating element, and a sheet of aluminum foil clad with Teflon coated Fiberglas cover a male die. A female die is adapted to bear on the flange of a thermoplastic nipple and press it down on a sheet of thermoplastic material overlying the aluminum foil clad with Teflon coated Fiberglas. The heating element is electrically heated, and the heat therefrom passes through the overlying areas of the thermoplastic sheet material and the flange of the thermoplastic nipple, fusing them together. A punch extends upwardly through the male die, asbestos pad, heating element and aluminum foil and into the nipple, being adapted for punching a hole in the thermoplastic sheet material.



3,388,027
GRAPHIC MATERIALS INCORPORATING MICROSPHERE DISTRIBUTIONS FOR THE PRESENTATION OF VISUAL INFORMATION

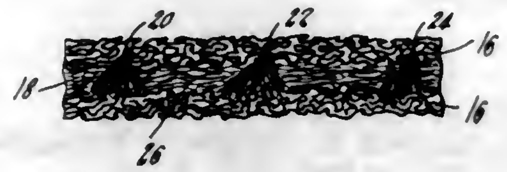
Gerald Altman, 41 Westminster Road,
Newton Center, Mass. 02159
Continuation-in-part of application Ser. No. 249,351, Jan. 4, 1963. This application Mar. 2, 1966, Ser. No. 531,298
8 Claims. (Cl. 161—4)


18
20
22
24
26
Photographic print stratum
Spacing stratum
Stratum of glass spheres in optically clear binder
Metallic reflecting stratum
Paper support stratum

Visual products for the display of images are provided with strata of microspheres of selected optically operative characteristics. The distribution of the microspheres, by virtue of their small size, area concentration, refractive index and optically clear bond to their support, operates to control diffused and concentrated light for projection and observation.

3,388,028
MULTI-LAYERED NONWOVEN FABRICS

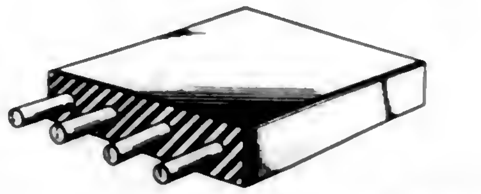
Robert R. Alexander, Sudbury, Mass., assignor to The Kendall Company, Boston, Mass., a corporation of Massachusetts
Filed Mar. 6, 1964, Ser. No. 350,027
3 Claims. (Cl. 161—156)



A layer of low wet-strength fibrous sheet material of non-textile length fibers, such as cellulose wadding, is plied between two unspun and unwoven fibrous webs. After saturation with a liquid binder, the assembly is squeezed under pressure, causing the inner layer of short fibers to aggregate into a sheet marked by broken, disconnected fibrous ridges, in which the ridges, having a higher concentration of fibers than the rest of the sheet, carry a higher concentration of binder. Drying the assembly results in the outer plies being intermittently bonded to the inner ply, resulting in a soft, flexible product.

3,388,029
DIMENSIONALLY STABILIZED POLYAMIDE YARNS AND RUBBER PRODUCTS REINFORCED THEREWITH

Edmond P. Brignac, Pensacola, Fla., assignor to Monsanto Company, St. Louis, Mo., a corporation of Delaware
Filed Jan. 19, 1965, Ser. No. 426,593
17 Claims. (Cl. 161—170)



NYLON YARN CONTAINING CERTAIN POLYHYDRIC ALCOHOLS AND REINFORCING A RUBBER ARTICLE.

7. An article of manufacture reinforced with a melt-spun continuous multi-filament nylon yarn whose dimensional changes in response to repeated heating and cooling are substantially reduced, the reinforcing yarn being characterized by having a tenacity of at least 6 grams per denier, a boil shrinkage of less than 9.5%, a dry retraction of less than 2.0% and a high molecular weight indicated by a relative viscosity of at least 35 and particularly characterized by containing internally when melt spun a small but dimensional stabilizing amount of noncyclic polar polyhydric alcohol having 2 to 6 hydroxyl radicals and 2 to 12 carbon atoms and exhibiting a vapor pressure not greater than 100 mm. of Hg at 130° C., and wherein the polyhydric alcohol is present in a quantity in the range of 0.25–5% by weight.

3,388,030
TWISTLESS SYNTHETIC MULTIFILAMENT YARNS AND PROCESS FOR MAKING THE SAME

Robert T. Estes, Cary, and George C. Stow, Jr., Chapel Hill, N.C., assignors to Monsanto Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed Mar. 26, 1965, Ser. No. 443,062
11 Claims. (Cl. 161—172)

1. A synthetic, thermoplastic, multifilament yarn having essentially no twist wherein the individual filaments have an essentially uniform surface area, are disposed in a generally parallel relationship and are fused to one another at random fusion points along the filament lengths, said random fusion points occupying from about 1 to about 15 percent of the entire filament length.

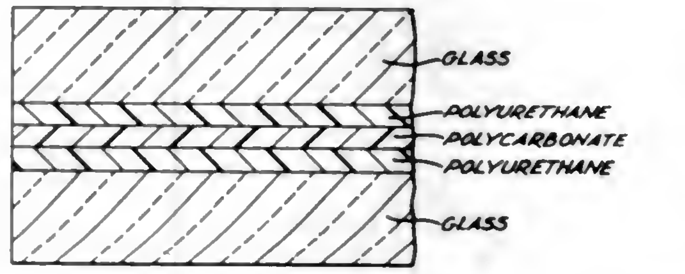
3,388,031
CRIMPED AND CRIMPABLE VINYLIC FILAMENTS AND FIBERS

Corrado Mazzolini, Francesco Denti, and Romano Curti, Mestre, Venice, Italy, assignors to Chatillon Societá Anonima Italiana per le Fibre Tessili Artificiali S.p.A., Milan, Italy, a corporation of Italy
No Drawing. Filed Dec. 7, 1964, Ser. No. 416,591
Claims priority, application Italy, Dec. 12, 1963, 25,490/63
15 Claims. (Cl. 161—173)

A polyvinyl chloride filament and textile fiber having characteristics approaching those of natural fibers and three-dimensional deformation which is relatively permanent is produced by extruding at least two polyvinyl chloride solutions of vinyl-chloride polymers of different syndiotactic indices, both substantially in excess of 1.6, through a common orifice to produce a continuous filament any cross-section of which consists at least in part of each of said polymers, stretching said filament, and heating said filament to differentially shrink the polymers constituting same and thereby produce said three-dimensional deformation.

3,388,032
LAMINATED SAFETY GLASS

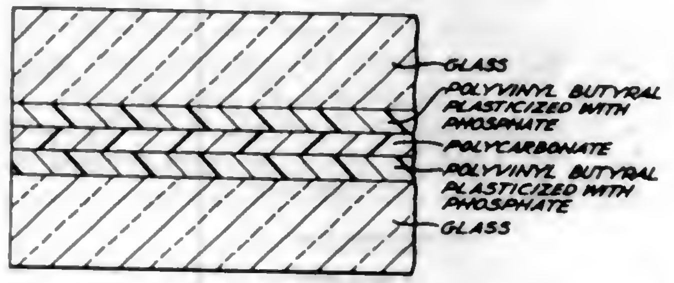
James H. Saunders, Bridgeville, Pa., assignor to Mobay Chemical Company, Pittsburgh, Pa., a corporation of Delaware
Filed Jan. 13, 1965, Ser. No. 425,295
11 Claims. (Cl. 161—183)



Laminates of polyaryl carbonate and polyurethane including laminated articles wherein the polycarbonate is bonded to glass with a polyurethane interlayer.

3,388,033
LAMINATED SAFETY GLASS

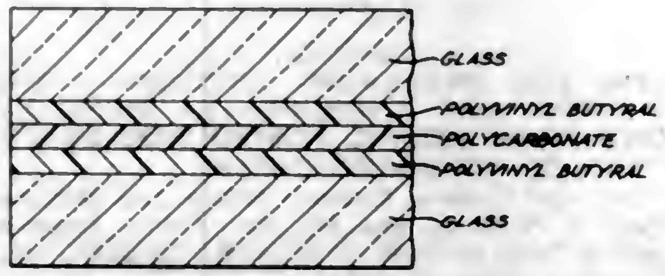
Francis T. Buckley, Hampden, Mass., Garry R. Mason, Coraopolis, Pa., and Raymond F. Riek, Ludlow, Mass., assignors to Monsanto Company, St. Louis, Mo., and Mobay Chemical Company, Pittsburgh, Pa., both corporations of Delaware
Filed Jan. 13, 1965, Ser. No. 425,296
16 Claims. (Cl. 161—183)


GLASS
POLYVINYL BUTYRAL PLASTICIZED WITH PHOSPHATE
POLYCARBONATE
POLYVINYL BUTYRAL PLASTICIZED WITH PHOSPHATE
GLASS

Laminates of polyaryl carbonate and polyvinyl acetal which have been plasticized with a phosphate. The initial laminate may be sandwiched between sheets of transparent panel such as glass.

3,388,034
LAMINATED SAFETY GLASS

Robert L. McCombie, Pittsburgh, Pa., assignor to Mobay Chemical Company, Pittsburgh, Pa., a corporation of Delaware
Filed Jan. 13, 1965, Ser. No. 425,297
6 Claims. (Cl. 161—183)



Laminated articles including safety glass where a sheet of polyaryl carbonate is bonded to a sheet of polyvinyl acetal in face to face contact. The initial laminate may be again sandwiched between layers of glass.

3,388,035
TRANSPARENT LAMINATES AND METHOD FOR PRODUCING SAME

Paul T. Mattimoe and John J. Hofmann, Toledo, Ohio, assignors to Libbey-Owens-Ford Glass Company, Toledo, Ohio, a corporation of Ohio
No Drawing. Continuation-in-part of application Ser. No. 265,038, Mar. 14, 1963, now Patent No. 3,310,458. This application Mar. 20, 1967, Ser. No. 624,192
17 Claims. (Cl. 161—183)

Producing transparent laminates including at least one sheet of a stretched acrylic resin and a silicone interlayer by employing as an adhesive between such stretched acrylic sheet and the transport silicone interlayer a solution consisting essentially of 50 percent to 80 percent by weight of a hydrolyzable ester of ortho titanic acid and 50 percent to 20 percent by weight of a hydrolyzable silicate ester.

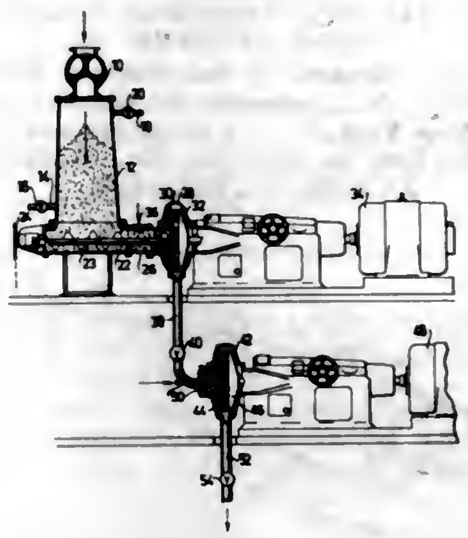
3,388,036
METAL-COATED PLASTIC LAMINATE

Daniel A. Alampi, Coshocton, Ohio, assignor to General Electric Company, a corporation of New York
No Drawing. Filed July 12, 1965, Ser. No. 471,411
8 Claims. (Cl. 161—185)

4. A metal coated plastic laminate characterized by superior bond strength of the metal coating to the laminate, said laminate comprising a resin-impregnated core stock and a surface layer comprising glass fiber paper impregnated with a resinous solution comprising, by weight, 70 parts of phenolic-modified epoxy resin, up to 50 parts of thermoplastic condensation reaction product of an epihalohydrin and a material selected from the group consisting of polyhydric alcohols and polyhydric phenols and from about 0.1 part to 3 parts tertiary amine, said metal being deposited on said surface layer.

3,388,037
METHOD IN THE MANUFACTURE OF WOOD PULP FROM CHIPS IN GRINDING APPARATUS IN TWO STAGES

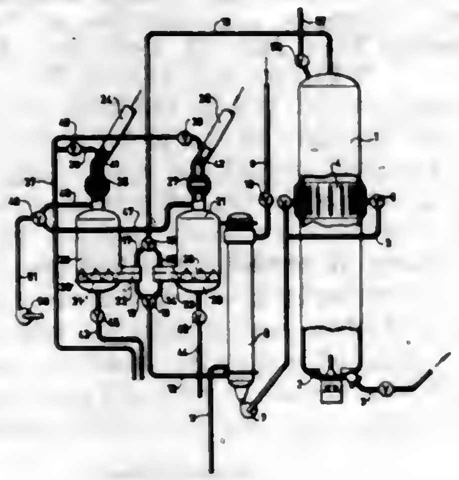
Arne Johan Arthur Asplund, Lidingo, and Karl Nicolaus Cederquist, Nasbypark, Sweden, assignors to Defibrator Aktiebolag, Stockholm, Sweden, a corporation of Sweden
Filed May 28, 1964, Ser. No. 370,959
Claims priority, application Sweden, May 31, 1963, 6,080/63
4 Claims. (Cl. 162—23)



A method of manufacturing wood pulp for paper production which consists in heating wood chips under steam pressure at high temperature exceeding 100° C. to minimize or to avoid discoloration of the chips; carrying out defibration in two steps between grinding members, such as first in a defibrator and then in a refiner. The defibration in the first step is effected under high pressure and high temperature and in the second step under high pressure and lower temperature. Chemicals in solution or suspension are continously applied to the chips during the first or during both steps prior to the passage of the chips between the grinding members without noticeable loss of organic substance and the chemicals have a bleaching effect during defibration, and then the pulp suspension is cooled by a rapid reduction of the pressure.

3,388,038
APPARATUS FOR CHARGING A CONTINUOUS DIGESTER

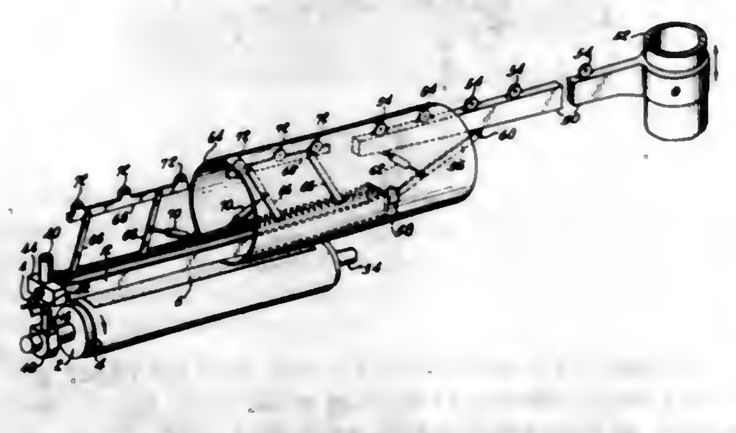
Nils Ilander, Linkoping, Sweden, assignor to Aktiebolaget Nordiska Armaturfabrikerna, Linkoping, Sweden, a limited company of Sweden
Filed Dec. 7, 1964, Ser. No. 416,398
Claims priority, application Sweden, Dec. 6, 1963, 13,558/63
1 Claim. (Cl. 162—246)



A system for charging cellulosic material to a continuously operating digester wherein a charging container has a screw feeder horizontally positioned in the bottom of the charging container with an outlet for the screw feeder connected to a digester liquid recirculation conduit so that the impregnated cellulosic material is admixed with the digesting liquid in the conduit without substantial admixture of the impregnating liquid in the charging container and the digesting liquid.

3,388,039
APPARATUS FOR FORMING ASBESTOS CEMENT PIPES

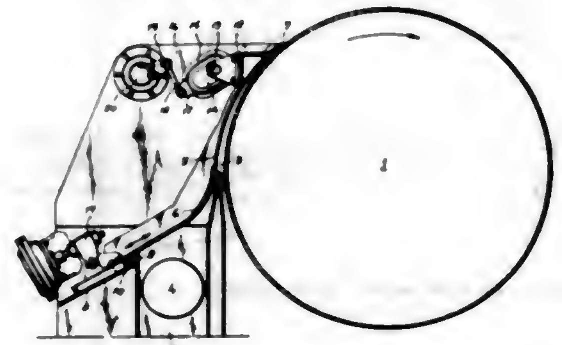
Robert P. Gillis, Somerville, and Stephen Mark Quint, Basking Ridge, N.J., assignors to Johns-Manville Corporation, New York, N.Y., a corporation of New York
Filed Dec. 30, 1964, Ser. No. 422,263
2 Claims. (Cl. 162—284)



A system for manufacturing asbestos-cement pipe by laminating asbestos-cement material on an elastic mandrel while applying the pipe forming pressure to the inner surface of the material.

3,388,040
DEVICE IN PAPER AND CARDBOARD FORMING MACHINES OF THE SUCTION FORMING CYLINDER TYPE

Allan Olavi Litma, 10A Koivistontie, 12 Tampere, Finland
Filed Sept. 10, 1965, Ser. No. 486,416
6 Claims. (Cl. 162—329)



This invention relates to the flow channels of paper and cardboard forming machines of the suction forming cylinder type, through which channel the fiber suspension flows and is directed to the surface of the cylinder surface. In such machines in accordance with the invention, the front wall of the flow channel at the forming area comprises the surface of the suction cylinder while the rear wall comprises a movable plate-formed construction element, said rear wall being mounted movably along a guiding surface or surfaces parallel with a tangent of the suction cylinder passing through the outlet opening of the flow channel. The control element can consist of an automatically controlled device, such as a pneumatic element controlled by the variations of the flow rate as measured by pressure difference meters or the like situated in the pipework preceding the flow channel, so that the rear wall of the flow channel is moved to a position most suitable for the flow rate of suspension at each moment. This device is more particularly described in Finnish patent application No. 1,528/64 and in a corresponding U.S. patent application Ser. No. 486,450.

3,388,041
HIGH DOSAGE SUSTAINED RELEASE TABLET

Eugene H. Gans, Hastings-on-Hudson, and Henry M. Apelian, Mount Vernon, N.Y., assignors to Richardson-Merrell Inc., New York, N.Y., a corporation of Delaware
No Drawing. Filed Jan. 27, 1964, Ser. No. 340,496
4 Claims. (Cl. 167—82)

Pharmaceutical tablets which release medicament over a sustained period of time are prepared by granulating a drug having a water solubility of less than about 1 percent, for example aspirin, with an organic solvent solution of 0.25 to 2.0 parts of hydroxypropyl methylcellulose and 0.25 to 2.0 parts of ethylcellulose for each 100 parts by weight of the medicament and compressing the dried granulation into tablets.

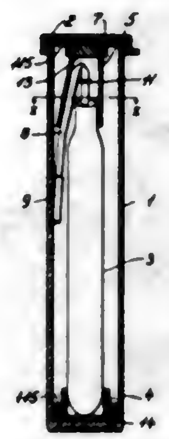
3,388,042
PROCESS FOR PREPARING ANDROST-4-ENE-3,17-DIONE AND ANDROSTA-1,4-DIENE-3,17-DIONE FROM STEROL COMPOUNDS BY THE ACTION OF MICROORGANISMS

Kei Arima and Gakuzo Tamura, Tokyo, and Michitaro Nagasawa, Noda-shi, and Mu Bae, Tokyo, Japan assignors to Noda Institute for Scientific Research, Noda-shi, Japan, a corporation of Japan
No Drawing. Filed Mar. 22, 1965, Ser. No. 441,893
Claims priority, application Japan, June 2, 1964, 39/30,915
24 Claims. (Cl. 195—51)

A process is provided in which a compound selected from the group consisting of (1) sterols, (2) Δ^4-ene-3-one sterol derivatives, and (3) $\Delta^{1,4}$-diene-3-one sterol derivatives is subjected to the microbial action of a microorganism having a sterol decomposing ability in the presence of a compound capable of forming a chelate with iron and/or copper.

3,388,043
BACTERIOLOGICAL SAMPLING SET

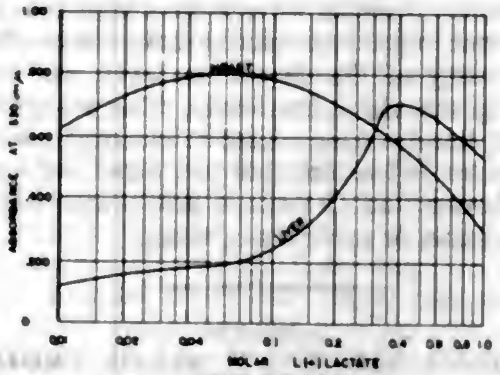
Helmuth Ingvorsen, Roskilde, Denmark, assignor to A/S Nunc, Roskilde, Denmark
Filed June 1, 1965, Ser. No. 460,285
11 Claims. (Cl. 195—139)



A bacteriological sampling set comprising an elongated open-ended enclosure with a cover closing the open end. A substrate tube containing gelatinous substrate material is secured within the elongated enclosure. A sampling stick located in the substrate tube extends from one end thereof, is folded upon itself outside the substrate tube at a weakened zone. A slidable sleeve is mounted on the stick to reinforce the stick when it is unfolded and extended for use. A cap is provided for the open portion of the substrate tube during transportation. The cap may have a groove for receiving the bent-over end of the stick.

3,388,044
PROCESS FOR DIFFERENTIATING THE ISO-ENZYMES OF LACTIC DEHYDROGENASE

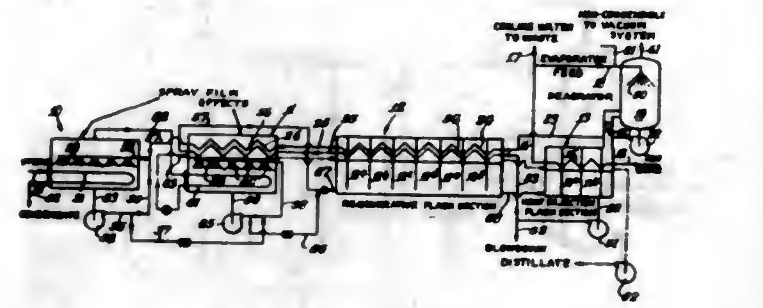
Arthur L. Babson, Morristown, N.J., assignor to Warner-Lambert Pharmaceutical Company, Morris Plains, N.J., a corporation of Delaware
Filed Dec. 7, 1965, Ser. No. 512,117
6 Claims. (Cl. 195—103.5)



1. Process for differentiating the tissue of origin of lactic dehydrogenase in a body fluid which comprises the steps of measuring the activity of said enzyme in a substrate containing about 0.5 molar to about 2 molar L(+) lactate and comparing the activity thus produced with that produced by said enzyme in a substrate containing about 0.05 molar to about 0.002 molar of L(+) lactate and about 0.5 molar to about 2 molar urea.

3,388,045
MULTISTAGE FLASH EVAPORATOR DISTILLATION APPARATUS AND METHOD AND CONDENSER WITH SPRAY FILM EFFECTS

Richard W. Goeldner, Brookfield, and Gordon F. Leitner, Milwaukee, Wis., assignors to Aqua-Chem, Inc., a corporation of Wisconsin
Filed Oct. 12, 1964, Ser. No. 402,988
3 Claims. (Cl. 202—173)

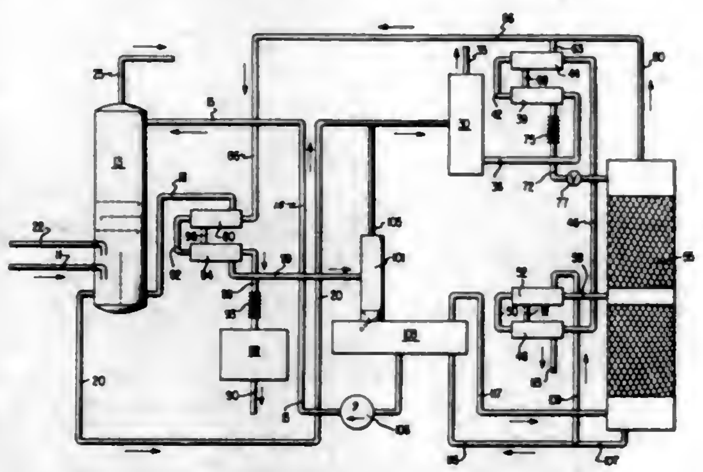


1. A distillation system comprising means forming a flash evaporator having a plurality of stages, dual condenser means and a flash chamber in each stage; means forming a first spray film evaporator having a fluid heated conduit therein, means for spraying water onto said conduit, dual condenser means in said first spray film evaporator; means forming a second spray film evaporator having a fluid heated conduit therein and means for spraying water onto said conduit in said second spray film evaporator; means for passing water to be evaporated sequentially through one of said condenser means in each of said stages, then into one of the condenser means in the first spray film evaporator and then into the spraying means in the second spray film evaporator, means for passing a heated fluid through the conduit in the second spray film evaporator to heat the same and cause a portion of the water sprayed thereon to evaporate to form a water vapor, means for passing said portion of the water vapor through the conduit in the first spray film evaporator to heat the same, means for passing water unevaporated in said second spray film evaporator into the spraying means of the first spray film evaporator, means for passing a portion of the water unevaporated in said first spray film evaporator sequentially through said flash chambers of the flash evaporator, means for passing to waste a portion of the water remaining unevaporated after passing through the flash chambers of the flash evaporator and for passing the remaining portion sequentially through the other condenser means in each stage of the flash evaporator and then through the other condenser means of the first spray film evaporator, and means for reintroducing the water sequentially through the flash chambers after it has passed through said other condenser means.

3,388,046
SEPARATION OF METHANOL, WATER AND GLYCOL BY PLURAL DISTILLATION UTILIZING HEAT RECOVERY

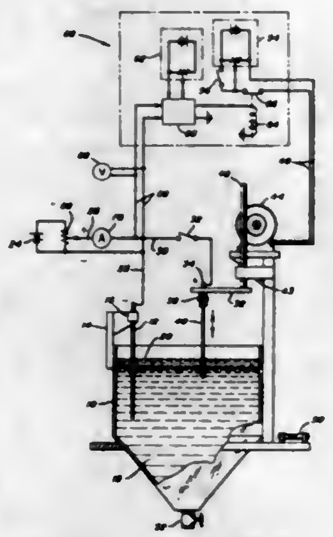
Lloyd T. Hendrix, Santa Ana, Calif., assignor to Atlantic Richfield Company, a corporation of Pennsylvania
Filed Feb. 17, 1965, Ser. No. 433,385
11 Claims. (Cl. 203—18)

This invention involves a method for separating a lower-boiling component such as methanol from a mixture of said component with an intermediate-boiling component such as water, and hydrocarbons by contacting the mixture with a higher-boiling absorbent liquid component such as glycol in an absorption contactor vessel, and subsequently fractionally distilling the mixture of the absorbent and the absorbed materials in a first fractionator. The liquid lower-boiling component and intermediate-boiling component from the absorption contactor vessel is then joined with the lower-boiling component and intermediate-boiling component vapors from the first fractionator and fractionally distilled in a second fractionator to recover the lower-boiling component as an overhead stream which is split into a products stream and a reflux stream. The products stream is used to preheat the mixture of the absorbent with the absorbed materials prior to the first fractionation, and the reflux stream is used to preheat the material fed to the second fractional distillation unit.



3,388,047
CONTROLLED ELECTROLYTIC TREATMENT OF MATERIALS

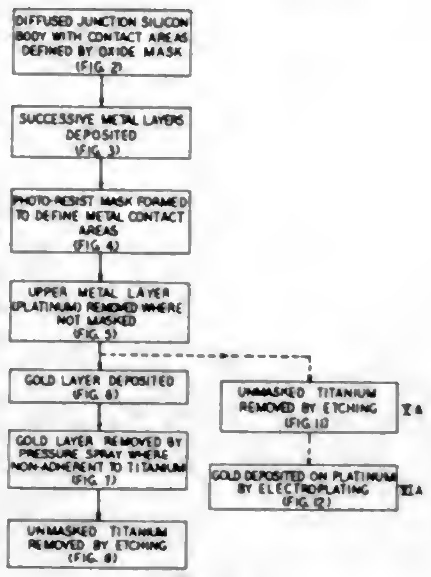
Ralph M. Higgins, Trenton, N.J., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed July 30, 1965, Ser. No. 476,003
16 Claims. (Cl. 204—15)



1. A method of treating electrolytically a workpiece comprising:
- floating a layer of an electrolyte on the surface of a nonconductive fluid to form a treatment bath,
- inserting the workpiece into the bath to expose a first selected portion thereof to the electrolyte layer,
- passing current through both the electrolyte layer and the workpiece to electrolytically treat the first selected portion, and then
- further inserting the workpiece into the bath to terminate the electrolytic treatment of the first selected portion.

3,388,048
FABRICATION OF BEAM LEAD SEMICONDUCTOR DEVICES

Joseph M. Szabo, Jr., Allentown, Pa., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 7, 1965, Ser. No. 512,045
7 Claims. (Cl. 204—15)


I
DIFFUSED JUNCTION SILICON BODY WITH CONTACT AREAS DEFINED BY OXIDE MASK (FIG. 2)
II
SUCCESSIVE METAL LAYERS DEPOSITED (FIG. 3)
III
PHOTO-RESIST MASK FORMED TO DEFINE METAL CONTACT AREAS (FIG. 4)
IV
UPPER METAL LAYER (PLATINUM) REMOVED WHERE NOT MASKED (FIG. 5)
V
GOLD LAYER DEPOSITED (FIG. 6)
VI
GOLD LAYER REMOVED BY PRESSURE SPRAY WHERE NON-ADHERENT TO TITANIUM (FIG. 7)
VII
UNMASKED TITANIUM REMOVED BY ETCHING (FIG. 8)
UNMASKED TITANIUM REMOVED BY ETCHING (FIG. 11)
Va
GOLD DEPOSITED ON PLATINUM BY ELECTROPLATING (FIG. 12)
VIA

1. In the fabrication of a beam lead semiconductor device which includes the steps of depositing a first layer of titanium and a second layer of platinum, the step of forming a mask on said platinum layer conforming to the desired contact and beam lead pattern, then treating the masked surface with an etchant to remove the unmasked platinum layer, and electroplating a layer of gold only on said platinum layer.

3,388,049
METHOD OF ELECTRODEPOSITING MICROCRACK CHROMIUM COATINGS

Gaëtan de Coye de Castelet, Billancourt, France, assignor to Regie Nationale des Usines Renault, Billancourt, Seine, France
No Drawing. Filed Mar. 15, 1965, Ser. No. 440,019
Claims priority, application France, Oct. 12, 1964, 991,133, Patent 1,447,970; Nov. 24, 1964, 996,104; Jan. 27, 1965, 3,489
14 Claims. (Cl. 204—29)

Chromium plating with increased resistance to corrosion and flaking is produced by first electrodepositing on the substrate a nickel layer with a high internal stress level, sufficient to produce micro-cracks therein during the electrodepositing of the chromium layer, and then electrodepositing the chromium layer. The electrolyte bath from which the cracking nickel is electrodeposited preferably includes (a) nickel chloride, nickel sulphamate or nickel fluoborate and (b) acetic acid ammonium acetate or nickel acetate, or mixtures of them.

3,388,050
ANODIZED ALUMINUM ALLOY PRODUCT

Eugene Wainer, Shaker Heights, Ohio, assignor to Horizons Incorporated, a corporation of New Jersey
No Drawing. Filed Sept. 7, 1965, Ser. No. 485,630
6 Claims. (Cl. 204—58)

1. Aluminum articles having at least one anodized surface formed of an alloy consisting essentially of between 1% and 4% of metal selected from the group consisting of Ti, Zr, Nb, Ta and Th; between 0.01 and 0.1% of a metal selected from the group consisting of Tg, Au, Pd, and Pt; and the balance substantially all Al.

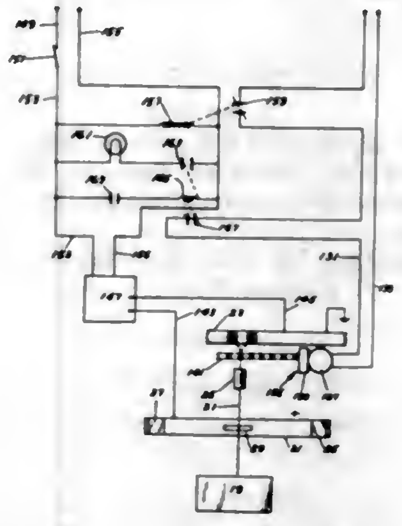
3,388,051
POLYETHYLENE GRAFT COPOLYMERS PRODUCED WITH HIGH ENERGY IONIZING RADIATION

William C. Rainer, Barrington, R.I., Edward M. Redding, Winnetka, Ill., Joseph J. Hitov, Leominster, Mass., Arthur W. Sloan, Washington, D.C., and William D. Stewart, Springfield, Va., assignors to W. R. Grace & Co., Cambridge, Mass., a corporation of Connecticut
Continuation-in-part of application Ser. No. 517,943, June 24, 1955. This application Mar. 2, 1960, Ser. No. 12,339
Claims priority, application Canada, Apr. 16, 1958, 749,695
9 Claims. (Cl. 204—159.17)

1. A graft polymer of irradiated polyethylene with a polymer of styrene, said styrene polymer being formed in the presence of said polyethylene, said irradiation being to an extent of at least 2×10^6 rep.

3,388,052
METHOD AND APPARATUS FOR AUTOMATICALLY CHECKING ELECTRICAL CONDITION OF WORKPIECES PRIOR TO ELECTROCOATING PROCESS

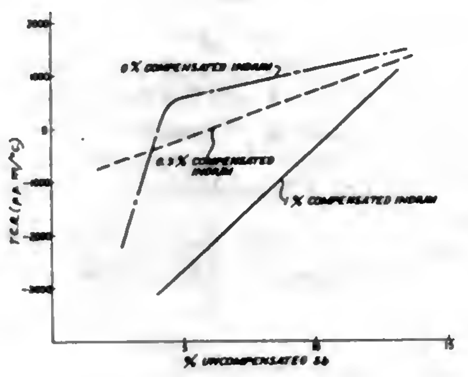
Raymond A. Igras, Dearborn Township, Wayne County, and Gordon G. Strosberg, Oak Park, Mich., assignors to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed July 1, 1963, Ser. No. 291,743
9 Claims. (Cl. 204—181)



1. In a method of coating wherein electrically conductive objects transported by and electrically insulated from a conveyor are successively passed through an aqueous bath having organic film-forming material dispersed therein and a first electrode in contact therewith, each of said objects while passing through said bath serving as a second electrode, and providing a unidirectional flow of electrical energy between said first electrode and said second electrode until a substantially water insoluble coating of said material is deposited upon said second electrode, the improvement which comprises causing each of said objects to pass prior to entry into contact with said bath through a resistance measuring zone wherein a difference of electric potential is provided between said object and said conveyor, measuring the resistance to the flow of electrical energy between said object and said conveyor from said difference of potential while said object is in movement through said zone, and utilizing said flow between object and conveyor when it exceeds a predetermined value to give warning of the approach of an improperly insulated object to said coating bath.

3,388,053
METHOD OF PREPARING A FILM RESISTOR BY SPUTTERING A TERNARY ALLOY OF TIN, ANTIMONY AND INDIUM IN THE PRESENCE OF OXYGEN

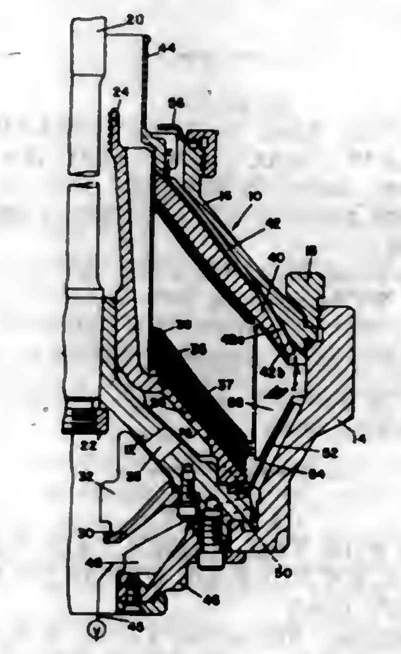
William R. Sinclair and Donald W. Stillinger, Summit, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed June 3, 1965, Ser. No. 460,994
5 Claims. (Cl. 204—192)



1. A method for the fabrication of a resistive oxide film which comprises the steps of reactively sputtering a ternary alloy having the general formula $Sn_xSb_yIn_z$ wherein x ranges from 96.6–84.0 atomic percent, y ranges from 3.3–15 atomic percent and z ranges from 0.1–1 atomic percent, upon a substrate in the presence of oxygen and heating the resultant assembly at a temperature within the range of 600–1000° C.

3,388,054
CENTRIFUGAL SEPARATION OF A SOLIDS-LIQUID MIXTURE

Frederick W. Keith, Jr., Gladwyne, Pa., assignor to Pennsalt Chemicals Corporation, a corporation of Pennsylvania
Filed July 9, 1962, Ser. No. 208,379
3 Claims. (Cl. 208—33)



1. The process of concentrating or compacting solids in a liquid-solids mixture and separating the solids from the mixture denuded of the liquid to the desired extent; including the steps of introducing the mixture to a centrifuging zone, feeding to said zone a supplemental liquid of greater density that said first liquid and solids, forming a layer of the solids inward of the supplemental liquid and a layer of the first liquid inward of the solids, with-

drawing the first liquid from a locus adjacent the axis of the zone, withdrawing together a portion of the supplemental liquid and the concentrated solids from adjacent the solids-supplemental liquid interface and leading the last mentioned portion inward through a discharge passage partly defined by a free annular zone and controlling the rate of feed of supplemental liquid to effect the desired reduced amount of first liquid in the solids withdrawn, the amount decreasing at higher rates of feed of supplemental liquid.

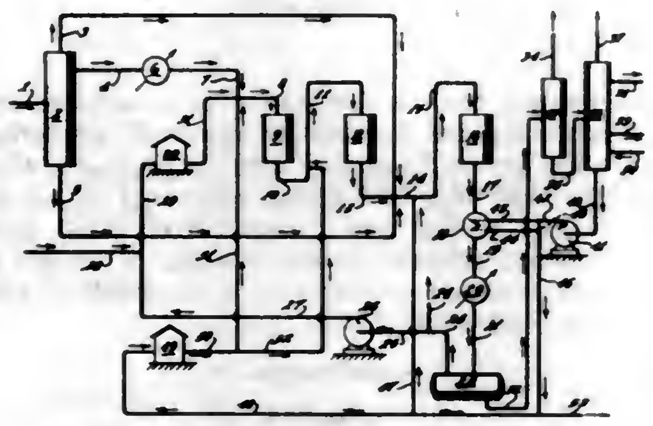
3,388,055

CATALYTIC HYDROGENATION OF UNSATURATED HYDROCARBONS

Robert G. Craig, Fairfax, Wilmington, Del., and Lee Friedman, Bala Cynwyd, Pa., assignors to Air Products and Chemicals, Inc., Philadelphia, Pa., a corporation of Delaware

Filed Apr. 15, 1966, Ser. No. 542,847

5 Claims. (Cl. 208—143)



An unsaturated hydrocarbon distillate is fractionally distilled into three fractions. The middle fraction is catalytically hydrogenated in two reactors. The effluent from the second reactor is mixed with the light fraction and heavy fraction. The mixture is then catalytically hydrogenated in a third reactor and a wash oil is added to at least one reactor.

3,388,056

PROCESS FOR THE HYDROGENATION OF STEAM CRACKED NAPHTHA

Emil H. Lewis, Baton Rouge, La., assignor to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Aug. 19, 1966, Ser. No. 573,458

8 Claims. (Cl. 208—143)

A process for hydrogenation of a steam cracked naphtha with a sulfided nickel-tungsten catalyst under critical conditions of temperature, pressure, space velocity and hydrogen to naphtha ratio.

3,388,057

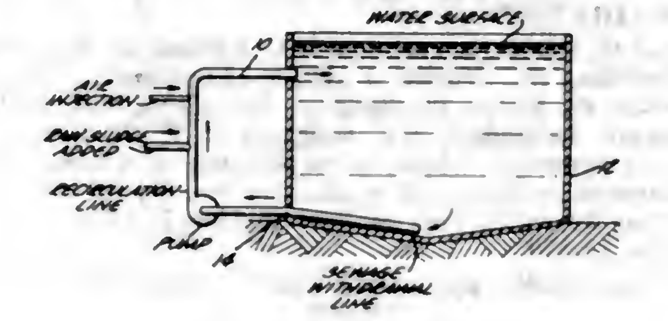
METHOD FOR THE REDUCTION OF THE HYDROGEN SULFIDE CONTENT OF DIGESTION GAS

George P. Callahan, Torrance, Calif., assignor of fifty percent to City of Los Angeles, a municipal corporation of California

Filed Oct. 10, 1966, Ser. No. 585,377

8 Claims. (Cl. 210—7)

This patent describes a method for the reduction of the hydrogen sulfide content of digestion gas from the biological decomposition of an aqueous sulfide-containing sewage sludge by injecting oxygen or air directly into the liquid sludge during the biological decomposition, the amount of oxygen added being equal to from about the stoichiometric amount required to convert all hydrogen sulfide to sulfur and water up to about four times the stoichiometric amount, and recovering an evolved fuel gas containing a reduced amount of hydrogen sulfide.



3,388,058

TREATMENT OF ACID MINE WATER WASTE

Louis F. Wirth, Jr., Western Springs, Ill., assignor to Nalco Chemical Company, Chicago, Ill., a corporation of Delaware

No Drawing. Filed Aug. 3, 1966, Ser. No. 569,840

9 Claims. (Cl. 210—32)

7. A method of purifying acidic mine discharge water which contains as impurities at least iron and sulfuric acid which comprises bringing said water into contact with an anion exchange resin in the sulfate form to reduce said sulfuric acid content, and with a cation resin in calcium form whereby said iron content in said water is reduced, regenerating said anion resin by contact with water, and regenerating said cation resin by contact with a water-soluble calcium salt.

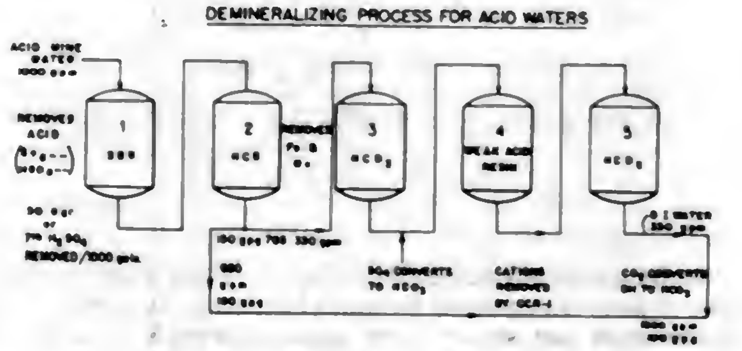
3,388,059

ACID WATER TREATING PROCESS

Louis F. Wirth, Jr., Western Springs, Ill., assignor to Nalco Chemical Company, Chicago, Ill., a corporation of Delaware

Filed Aug. 28, 1967, Ser. No. 663,769

2 Claims. (Cl. 210—32)



A method for purifying acidic waters and for efficiently converting the said waters into water of high quality. In the process, acidic waters such as acid mine waters are passed through a strong base anion exchange resin in the sulfate form to remove acid. The waters are then passed through a cation resin having on its exchange sites calcium ions which are exchanged for the iron and manganese ions in the waters. The waters which are now neutral are passed through a third column which contains a weakly basic anion exchange resin operated in the bicarbonate form where all sulfates, chlorides, and nitrates in the waters are converted to bicarbonate. The waters are then passed through a fourth column which is a weak acid cation exchange resin in the carboxylic acid form where hydrogen is exchanged for the cations that are present. Finally, the waters are passed through a fifth column which contains a weakly basic resin in the free base form where carbon dioxide is removed. In the process the acid which is originally present in the acid mine waters is sorbed in column 1 and when discharged is used to regenerate column number 4. This is the only source of acid required in the process. Column number 2 is regenerated with a calcium salt such as calcium chloride.

3,388,060

PROCESS AND COMPOSITION FOR PURIFICATION OF WATER SUPPLIES AND AQUEOUS WASTES

Joseph Ralph Clark, Lindcroft, N.J., assignor to Parsons, Brinckerhoff, Quade & Douglas, a partnership

No Drawing. Continuation-in-part of application Ser. No. 386,059, July 29, 1964. This application Aug. 28, 1967, Ser. No. 663,505

12 Claims. (Cl. 210—52)

This invention relates to a process for the purification of potable water, domestic sanitary sewage, aqueous industrial wastes and aqueous process streams which comprises the steps of adding to the water a primary water-soluble inorganic coagulant, at least one organic polyelectrolyte coagulant aid and acid-treated fly ash, agitating said mixture until a floc is formed, allowing said floc to settle and recovering purified water. The above process results in excellent removal of organics and phosphates from the treated water in the primary treatment step.

3,388,061

DRILLING MUD

Aaron E. Markham, Bellingham, Wash., assignor to Georgia-Pacific Corporation, Portland, Oreg., a corporation of Georgia

No Drawing. Original application Sept. 13, 1963, Ser. No. 308,641, now Patent No. 3,325,426, dated June 13, 1967. Divided and this application Mar. 28, 1967, Ser. No. 626,418

34 Claims. (Cl. 252—8.5)

A drilling fluid composition comprising a suspension of a clayey material in an aqueous medium, containing a water-soluble oxidized product of a sulfonated lignin-containing material interacted with an alkylolphenol and a process of drilling a well therewith.

3,388,062

CUTTING FLUIDS FOR MACHINING AND/OR WORKING OF TITANIUM AND ITS ALLOYS

Robert L. Vaughn, Granada Hills, Calif., assignor to Lockheed Aircraft Corporation, Burbank, Calif.

No Drawing. Continuation-in-part of application Ser. No. 394,319, Sept. 3, 1964. This application Jan. 27, 1967, Ser. No. 612,106

3 Claims. (Cl. 252—33.4)

A cutting fluid principally for machining titanium and its alloys which may be either oil base or an emulsion and utilizes as the active ingredient a metallic petroleum sulfonate selected from the group of barium, calcium, magnesium and aluminum sulfonates.

3,388,063

MAGNESIUM OVERBASED PHENATE

Nylen L. Allphin, Jr., Pinole, Calif., assignor to Chevron Research Company, San Francisco, Calif., a corporation of Delaware

No Drawing. Filed Aug. 10, 1966, Ser. No. 571,433

7 Claims. (Cl. 252—33.4)

Highly overbased magnesium phenate compositions are prepared by combining magnesium oxide with a mono- and dihydric alcohol at an elevated temperature in the presence of a sulfonate, removing at least part of the dihydric alcohol, followed by the addition of a sulfurized alkylphenol and carbon dioxide.

3,388,064

PETROLEUM BASED LUBRICANT CONTAINING A BIS-PHENOL STABILIZER

Byron A. Hunter, Woodbridge, and Francis X. O'Shea, Wolcott, Conn., assignors to Uniroyal, Inc., a corporation of New Jersey

No Drawing. Original application Oct. 10, 1963, Ser. No. 315,368, now Patent No. 3,318,961, dated May 9, 1967. Divided and this application Nov. 7, 1966, Ser. No. 618,554

2 Claims. (Cl. 252—42)

Our invention resides in the use of bis[2-hydroxy-3-(alpha-methylxylyl)-5-methylphenyl] methane as a stabilizer for lubricating oils and greases.

3,388,065

PROCESS FOR LITHIUM SOAP GREASES

Roland N. Haimbaugh, Munster, Ind., assignor, by mesne assignments, to Sinclair Research, Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Aug. 5, 1965, Ser. No. 477,609

3 Claims. (Cl. 252—42.1)

A process for making oil-based lithium soap grease by saponifying the glyceride of 12-hydroxy stearic acid with an aqueous lithium hydroxide in the presence of at least a portion of the total base oil to be used in the grease composition, dehydrating the mixture and adding any additional amount of base oil needed wherein water is added to the grease after dehydration, for example, in amounts of about 0.1 weight percent and sufficient to being the total water content up to about 0.2 to 0.5% by weight.

3,388,066

REACTION PRODUCTS OF DIHYDROCARBON DITHIOPHOSPHORIC ACID AND PHOSPHITE

Rosemary O'Halloran, Union, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 420,445, Dec. 22, 1964. This application July 26, 1966, Ser. No. 567,847

7 Claims. (Cl. 252—46.6)

The reaction product of dihydrocarbon dithiophosphate acid containing 4 to 40 carbon atoms with a phosphite containing 2 to 30 carbon atoms forms an additive for lubricating oil and gasoline.

3,388,067

OLEAGINOUS COMPOSITIONS OF IMPROVED VISCOSITIES CONTAINING DEGRADED ETHYLENE-ALPHA OLEFIN POLYMERS

Herbert Takashima, New York, N.Y., and Norman Jacobson, East Brunswick, and Darrell W. Brownawell, Scotch Plains, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

Filed Mar. 21, 1966, Ser. No. 535,817

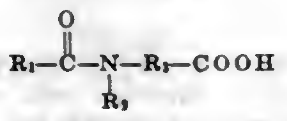
4 Claims. (Cl. 252—55)

1. A lubricant comprising a major proportion of a lubricating oil and a minor proportion, sufficient to improve the lubricating properties of the oil, of a hydroxylated degraded ethylene-alpha olefin polymer originally of a viscosity average molecular weight in excess of 50 and up to about 500,000 and containing hydrogen directly attached to tertiary carbon atoms, said degraded polymer being selected from the group consisting of copolymers of 20–85 wt. percent ethylene and 15–80 wt. percent C_3–C_{10} alpha olefin, terpolymers of 20–85 wt. percent ethylene, 15–80 wt. percent propylene and 0.5–20 wt. percent of a C_6–C_{18} alicyclic or aliphatic nonconjugated diolefin and combinations thereof and having a viscosity average molecular weight of between about 10,000 and 150,000 and at least 1 millimole of combined oxygen per 100 grams of polymer contained therein.

3,388,068
NONSQUAWKING AUTOMATIC TRANSMISSION FLUIDS

Thomas D. Newingham, Broomall, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey
No Drawing. Filed May 5, 1964, Ser. No. 365,162
5 Claims. (Cl. 252—75)

1. A non-squawking automatic transmission fluid consisting essentially of a major amount of oil selected from the group consisting of mineral lubricating oils and synthetic lubricating oils and .01–4%, sufficient to prevent squawking of the composition, of an alkali metal salt of a carboxylic acid having the formula



$$R_1-\overset{O}{\overset{\|}{C}}-\underset{R_2}{\underset{|}{N}}-R_3-COOH$$

wherein R_1 is selected from the group consisting of alkyl groups and alkenyl groups, each containing 8–30 carbon atoms, R_2 is selected from the group consisting of hydrogen and alkyl groups containing 1–6 carbon atoms, and R_3 is an alkylene group containing 1–6 carbon atoms.

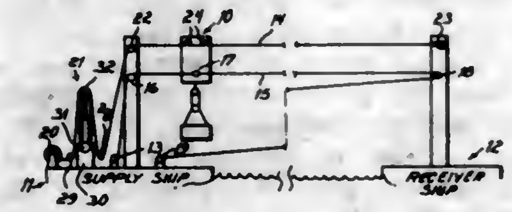
3,388,069
LIQUID ACTIVE OXYGEN DETERGENT BLEACHING CONCENTRATE

Kurt Lindner and Elfriede Eichler, Berlin-Lichterfelde, Germany, assignors to Henkel & Cie G.m.b.H., Dusseldorf, Germany, a corporation of Germany
No Drawing. Filed Dec. 21, 1964, Ser. No. 420,181
Claims priority, application Germany, Jan. 4, 1964, H 51,286
10 Claims. (Cl. 252—99)

1. A liquid storage-stable, active-oxygen containing detergent-bleaching concentrate consisting essentially of water, hydrogen peroxide in an amount of from 3 to 90 weight percent, and a water-soluble surface-active aminoxide having a total of 10 to 24 carbon atoms in its molecule containing a tertiary amine wherein the substituents attached to the N atom are each selected from the group consisting of alkyl and hydroxy alkyl, at least one substituent being of high molecular weight, in an amount of from 2 to 40 percent by weight, the quantity of aminoxide amounting to 10 to 200 weight percent referred to the hydrogen peroxide present, said concentrate having a pH of from 1 up to 10.0.

3,388,070
METHOD AND APPARATUS FOR HIGHLINE TENSION CONTROL

Ellis H. Born, Columbus, Peter B. Burnham, Worthington, and Paul B. Wolfe, Dublin, Ohio, assignors to Abex Corporation, New York, N.Y., a corporation of Delaware
Continuation-in-part of application Ser. No. 496,408, Oct. 15, 1965. This application Feb. 23, 1967, Ser. No. 618,084
11 Claims. (Cl. 254—172)



A method and apparatus for automatically and continuously maintaining a preset tension on the highline of a transfer system for transferring articles between two moving ships at sea.

3,388,071
LIQUID LASING SOLUTION FORMED WITH TRIFLUOROACETYLACETONATE

Richard B. Nehrich, Jr., and Erhard J. Schimitschek, San Diego, and John A. Trias, La Mesa, Calif., assignors to the United States of America as represented by the Secretary of the Navy
No Drawing. Filed Sept. 28, 1964, Ser. No. 399,946
3 Claims. (Cl. 252—301.2)

A liquid lasing composition is provided, the composition being a solution of an ammonia salt of the tetrakis europium trifluoroacetylacetonate (Eu(TFAA)$_4$HA). The chelate crystals are precipitated from a non-aqueous solution with anhydrous ammonia to produce the ligation between the europium, the four diketone groups and the ammonia. The liquid lasing solution is formed by dissolving the crystals in a balanced alcoholic solvent system.

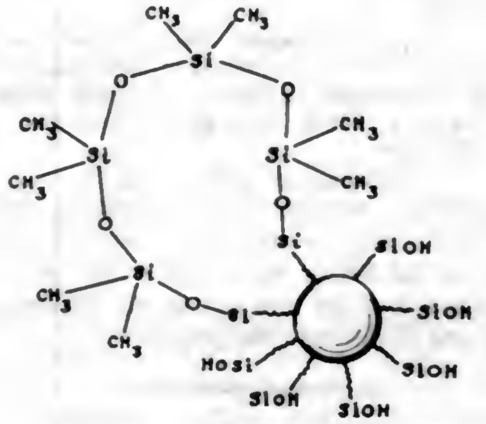
3,388,072
METHOD OF PREVENTING AND INHIBITING FOAM

Elemer Domba, Olympia Fields, Ill., assignor to Nalco Chemical Company, Chicago, Ill., a corporation of Delaware
No Drawing. Filed Dec. 23, 1964, Ser. No. 420,794
6 Claims. (Cl. 252—321)

This invention relates to a process of defoaming and inhibiting foam formation in such aqueous systems as latex systems and paper pulp systems by treating them with a defoaming amount of an ethylene copolymer.

3,388,073
PROCESS OF DEFOAMING AND INHIBITING FOAM FORMATION IN AQUEOUS SYSTEMS

Elemer Domba, Chicago, Ill., assignor to Nalco Chemical Company, Chicago, Ill., a corporation of Delaware
Filed Dec. 16, 1963, Ser. No. 330,948
4 Claims. (Cl. 252—321)



The invention relates to novel defoaming compositions which may be broadly described as dialkyl substituted cyclic siloxanes which are composed of 4–16 membered rings interrupted by at least one siloxane bonded, dense silica particle, having an ultimate particle diameter of 5–150 millimicrons and a plurality of surface silanol groups. The compositions of the invention are extremely useful in defoaming a variety of systems where foaming presents a problem.

3,388,074
TWO-STAGE STEAM REFORMING WITH RAPID WARM-UP IN FIRST STAGE BY MEANS OF A PROMOTED CATALYST

Ronald E. Reitmeier, Middletown, Ky., assignor to Catalysts and Chemicals, Inc., a corporation of Delaware
No Drawing. Filed Dec. 26, 1963, Ser. No. 333,718
4 Claims. (Cl. 252—373)

A steam-gas hydrocarbon reforming catalyst promoted with platinum or palladium supplies heat to the system concomitantly with reforming in a first stage of reforming process to which oxygen is added, combustion occurring in said stage ahead of subsequent reforming.

3,388,075
INDICATOR FOR NITROGEN OXIDE

Lothar W. Brauer, 12 Strassburger Strasse, 1 Berlin 20, Germany
No Drawing. Filed Nov. 5, 1965, Ser. No. 506,584
Claims priority, application Germany, Nov. 10, 1964, A 47,559
4 Claims. (Cl. 252—408)

An indicator of an inert granular solid carrying diphenylbenzidine-decasulfonic acid or an alkali metal salt thereof is responsive to oxidizing nitrogen oxides and acids by changing color from white to grey-blue.

3,388,076
PREPARATION OF TITANIUM CATALYST

Bayard T. Lamborn, Matawan, N.J., assignor to Hercules Incorporated, a corporation of Delaware
No Drawing. Filed July 23, 1965, Ser. No. 474,507
5 Claims. (Cl. 252—429)

1. A process for preparing a titanium trichloride catalyst for use in the polymerization of olefins which comprises reacting $TiCl_4$ with an organoaluminum compound in an inert organic liquid diluent in which both reactants are soluble in the presence of an oxidized rubbery hydrocarbon polymer, said polymer being dissolved in said diluent in the amount of about 0.01 to 1 part per part of $TiCl_4$ by weight.

3,388,077
CATALYST FOR TREATMENT OF COMBUSTIBLE WASTE PRODUCTS

James Hoekstra, Evergreen Park, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware
Filed Apr. 1, 1963, Ser. No. 269,327
3 Claims. (Cl. 252—466)

A catalyst suitable for oxidizing noxious gases comprising an alumina carrier particle having a calcium, strontium or barium component distributed therethrough and having an internal layer of a catalytic metal component spaced from the surface and from the center of the particle.

3,388,078
NOVEL EPOXY COMPOUNDS AND POLYMERS THEREFROM

Francis W. Evans and Morton H. Litt, Morristown, N.J., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York
No Drawing. Filed Dec. 13, 1965, Ser. No. 513,526
9 Claims. (Cl. 260—2)

This invention relates to fluorinated ethers terminated at one end by an epoxy ethyl group and to the polymerization of these compounds to form novel polymers. These polymers can be coated onto fabric, paper or other material by conventional means to provide water-repellent coatings.

3,388,079
HIGH MOLECULAR WEIGHT POLYETHERS CONTAINING SILANE GROUPINGS

Edwin J. Vandenberg, Wilmington, Del., assignor to Hercules Incorporated, a corporation of Delaware
No Drawing. Filed Apr. 26, 1966, Ser. No. 545,237
10 Claims. (Cl. 260—2)

1. A high molecular weight polyether comprising a copolymer of an epoxy silane of the formula $RSiZ_nY_{3-n}$, where R is a vicinal monoepoxy-substituted organic radical attached to silicon through a Si—C linkage; Z is any one of a member selected from the group consisting of —OR′, —OSiR″$_3$, halogen, hydrocarbon, and halohydrocarbon; Y is any one of a member selected from the group consisting of —OR′, —OSiR″$_3$, halogen, and hydrogen; and *n* is a whole number of 1 to 2 wherein R′ is a member selected from the group consisting of alkyl, aryl, cycloalkyl, aralkyl, alkoxyalkyl, haloalkyl, alkaryl, and haloaryl and R″ is a member selected from the group consisting of hydrogen, hydrocarbon, and halohydrocarbon radicals, and a comonomer selected from the group consisting of oxiranes different from the epoxy silane and oxetanes.

3,388,080
PROCESS FOR THE PRODUCTION OF PERMSELECTIVE MEMBRANES

Francis de Körosy, 8 Sokolov, and Jacob Shorr, 9 Bialik, both of Beersheba, Israel
No Drawing. Continuation-in-part of application Ser. No. 154,065, Nov. 21, 1961. This application Mar. 11, 1966, Ser. No. 533,429
Claims priority, application Israel, Dec. 1, 1960, 14,720
9 Claims. (Cl. 260—2.2)

1. A process for the production of permselective membranes for use in electrodialysis, which comprises sulfochlorinating a polyolefine sheet in heterogenous reaction so as to result in a substantially water-insoluble product, said polyolefine being selected from the group consisting of polyethylene and polypropylene and having a molecular weight above 5000; and introducing, in place of the chlorine atoms of the resulting product, groups selected from hydroxyl and basic groups, to produce thereby a cation-exchange or an anion-exchange membrane, respectively, said basic groups being selected from amines and quaternary ammonium derivatives.

3,388,081
HYDROPHILIC POLYURETHANE FOAM

Rudolf Merten, Leverkusen, and Günther Braun, Cologne, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany
No Drawing. Continuation-in-part of application Ser. No. 137,722, Sept. 13, 1961. This application June 10, 1966, Ser. No. 556,541
Claims priority, application Germany, Oct. 13, 1960, F 32,331
6 Claims. (Cl. 260—2.5)

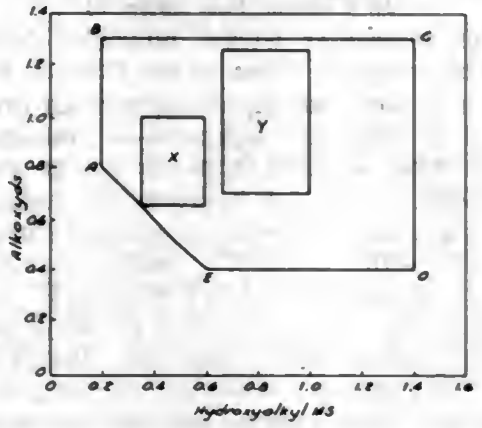
Making a polyurethane foam hydrophilic by incorporation in the foamable composition from which the polyurethane is produced a hydrolyzable ester derived from monohydric or polyhydric alcohols and the hydrated oxides of boron, aluminum, and silicon in which only one of the hydroxyl groups of the polyhydric alcohol is esterified.

3,388,082

NOVEL HYDROXYPROPYL METHYL CELLULOSE ETHERS, A PROCESS FOR PREPARING THE SAME, AND COMPOSITIONS UTILIZING SUCH ETHERS

Samuel M. Rodgers, Jr., Burton F. Wakeman, and Albert B. Savage, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Filed Nov. 1, 1965, Ser. No. 505,838
6 Claims. (Cl. 260—17)



5. An aqueous coating composition comprising the emulsion polymerizate of an ethylenically unsaturated monomer, a pigment and from 0.1 to 5.0 percent of water-soluble hydroxypropyl methyl cellulose ether characterized in having a methoxyl degree of substitution of from 0.4 to 1.3 and a hydroxypropyl molar substitution of from 0.2 to 1.4 and a total substitution of at least 1.0 combined degree of methoxyl substitution and degree of hydroxypropyl molar substitution.

6. The composition of claim 5 wherein said ethylenically unsaturated monomer is composed of at least one acrylate ester.

3,388,083

NOVEL RUBBER/FIBER COMPOSITIONS AND PROCESS FOR PREPARING SAME

Michael C. T. Kwok, Worcester, Mass., assignor, by mesne assignments, to Federal-Mogul Corporation, Detroit, Mich., a corporation of Michigan

No Drawing. Filed June 1, 1964, Ser. No. 371,797
12 Claims. (Cl. 260—17.4)

An improved rubber product comprising an elastomeric composition incorporating therein as essential constituents from about 20% to about 50% by weight of a curable rubber and from about 5% to about 30% by weight of fibers distributed substantially uniformly throughout and a method of making resilient articles of the foregoing composition in which the article is formed to the desired size and configuration and is thereafter cured at an elevated temperature while in an unrestrained condition without incurring any significant shrinkage or distortion thereof.

3,388,084

PREPARATION OF ISANO OIL:PHENOL PRODUCTS

Abraham Ravve and Chester W. Fitko, Chicago, Ill., assignors to Continental Can Company, Inc., New York, N.Y., a corporation of New York

Filed May 8, 1962, Ser. No. 193,179
5 Claims. (Cl. 260—19)

3. The method of preparing a phenol: aldehyde resole resin, which comprises heating isano oil with a phenol in the proportion of one to 2½ moles of said phenol per one mole of the acid components of said oil at a temperature of 140 to 200 degrees C. in the presence of zinc chloride in the amount of 2 to 30 percent by weight of the oil and phenol, for 2 to 8 hours, whereby to effect addition of phenol groups at the acetylenic bonds of the acid components of said oil, thereafter reacting the adduct compounds with a substance selected from the class consisting of hydrogen, halogens and hydrohalogens, thereafter mixing with formaldehyde and tertiary amine, and heating until a resole is formed with a gel time (Stroke, 150 degrees C.) of at least 75 seconds.

5. The method of preparing a phenol-aldehyde resole resin, which comprises heating isano oil with a phenol in the proportion of one to 2½ moles of said phenol per one mole of the acid components of said oil at a temperature of 140 to 200 degrees C., whereby to effect addition of phenol groups at the acetylenic bonds of the acid components of said oil, thereafter reacting the coupled compounds with a substance selected from the class consisting of hydrogen, halogens and hydrohalogens, thereafter mixing with formaldehyde and tertiary amine, and heating until a resole is formed with a gel time (Stroke, 150 degrees C.) of at least 75 seconds, said heating step of isano oil with phenol being conducted in the presence of at least one of the catalyst salts selected from the class consisting of zinc naphthenate, zine formate, zinc maleate, tin naphthenate, tin formate, tin maleate, cadmium naphthenate, cadmium formate and cadmium maleate.

3,388,085

FOOD COATING COMPOSITIONS COMPRISING ETHYLENE-VINYL ACETATE COPOLYMER AND ACETYLATED MONOGLYCERIDE

Henry Levkoff, New York, N.Y., and Joseph Phillips, Petrolia, Pa., assignors to Witco Chemical Company, Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Aug. 10, 1965, Ser. No. 478,743
18 Claims. (Cl. 260—23)

11. A coating composition adapted to be applied as a hot melt to articles to provide a transparent substantially odor-free, dry, flexible, strippable coating which comprises a mixture consisting essentially, in parts by weight, of from about 45 to 60 parts of an ethylene-vinyl acetate copolymer containing from about 22 to 35% of vinyl acetate, and from about 55 to 40 parts of a normally liquid substantially completely acetylated monoglyceride of predominately C_{14}–C_{22} fatty acids.

3,388,086

EPOXY RESINS FROM A HARDWOOD TAR AND AN EPIHALOHYDRIN

Herman P. Doerge, Verona, and Joseph F. Bosso, Lower Burrell, Pa., assignors to Pittsburgh Plate Glass Company, Pittsburgh, Pa., a corporation of Pennsylvania

No Drawing. Filed June 1, 1965, Ser. No. 460,481
5 Claims. (Cl. 260—28)

Thixotropic epoxy resins are obtained by reacting an epihalohydrin with a hardwood tar in an alkaline medium. The preferred embodiment comprises a glycidyl polyether prepared from the condensation reaction product of epichlorohydrin and hardwood tars having hydroxyl numbers of from about 40 to about 300. The thixotropic epoxy resins are cured by conventional epoxy curing agents and may be used as adhesives and coatings.

3,388,087

AQUEOUS DISPERSIONS OF QUATERNIZED POLYURETHANES

Dieter Dieterich and Otto Bayer, Leverkusen, and Julius Peter, Odenthal, Buchmuhle, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a German corporation

No Drawing. Filed Oct. 23, 1963, Ser. No. 318,197
Claims priority, application Germany, Oct. 26, 1962,
F 38,153
6 Claims. (Cl. 260—29.2)

Aqueous dispersions of quaternized polyurethane compositions are prepared by making an organic solvent solution of the quarternized polyurethane and then replacing the polyurethane with water to get the dispersion.

3,388,088

FLEXIBLE POLYMER FILM FORMING COMPOSITIONS

Paul R. Graham and August F. Ottinger, St. Louis, Mo., assignors to Monsanto Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Dec. 7, 1965, Ser. No. 512,214
6 Claims. (Cl. 260—32.6)

This invention relates to flexible polymer film forming compositions comprising (1) a polymer of polymerizable vinyl compounds and a polycarboxylic acid, (2) a deliquescent plasticizer and (3) a hydratable compound.

3,388,089

LEATHER TREATING COMPOSITION

Edgar D. Brown, Jr., Schenectady, N.Y., assignor to General Electric Company, a corporation of New York

No Drawing. Filed Sept. 28, 1964, Ser. No. 399,905
4 Claims. (Cl. 260—33.4)

1. A composition which consists essentially of (1) an organpolysiloxane free of volatiles boiling at tempertures up to 300° C. at 1 mm. of the formula,

$$[(R)_3SiO_{.5}]_y\ [R'SiO_{1.5}]_{y-2}$$

(2) an alkyl titanate ester of the formula,

$$\mathrm{TI(OR)_4}$$

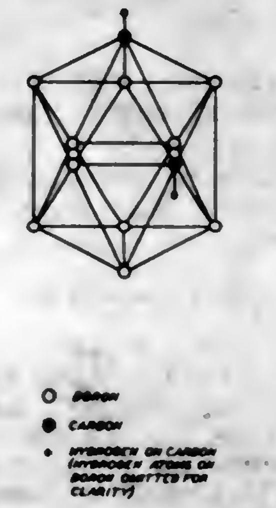
and (3) an organic solvent, where there is utilized in said composition by weight from 0.2 to 1 part of (2) per part of (1), and from 2 to 100 parts of (3) per part of (1), y is an integer having a value between 4 to 7, inclusive, R is a monovalent alkyl radical having from 1 to 8 carbon atoms, and R′ is a member selected from the class consisting of phenyl, chlorophenyl, dichlorophenyl, trichlorophenyl, tetrachlorophenyl, tolyl, xylyl, and chloronaphthyl.

3,388,090

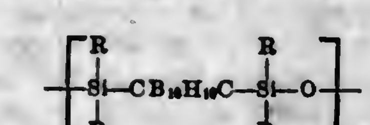
RESINS AND ELASTOMERS FROM SILOXY CARBORANYL POLYMERS

Theodore L. Heying, North Haven, Stelvio Papetti, Hamden, and Otto G. Schaffling, Cheshire, Conn., assignors to Olin Mathieson Chemical Corporation, a corporation of Virginia

Filed Apr. 21, 1964, Ser. No. 361,408
9 Claims. (Cl. 260—37)


○ BORON
● CARBON
• HYDROGEN ON CARBON (HYDROGEN ATOMS ON BORON OMITTED FOR CLARITY)

Polymers having recurring structural units of the formula:



$$\left[-\underset{R}{\overset{R}{\underset{|}{\overset{|}{Si}}}}-CB_{10}H_{10}C-\underset{R}{\overset{R}{\underset{|}{\overset{|}{Si}}}}-O-\right]$$

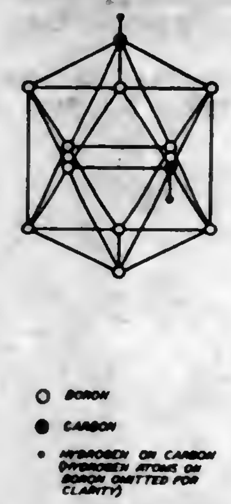
where R is alkyl of from 1 to 12 carbon atoms, are prepared by reacting a bis(alkoxydialkylsilyl) neocarborane with a bis(halodialkylsilyl) neocarborane in the presence of ferric chloride.

3,388,091

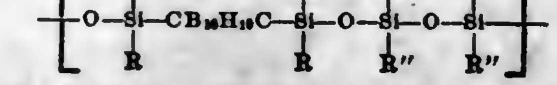
RESINS AND ELASTOMERS FROM SILOXY CARBORANYL POLYMERS

Theodore L. Heying, North Haven, Stevio Papetti, Hamden, and Otto G. Schaffling, Cheshire, Conn., assignors to Olin Mathieson Chemical Corporation, a corporation of Virginia

Filed July 21, 1964, Ser. No. 384,216
9 Claims. (Cl. 260—37)


○ BORON
● CARBON
• HYDROGEN ON CARBON (HYDROGEN ATOMS ON BORON OMITTED FOR CLARITY)

Polymers having recurring structural units of the formula:



$$\left[-O-\underset{R}{\overset{R}{\underset{|}{\overset{|}{Si}}}}-CB_{10}H_{10}C-\underset{R}{\overset{R}{\underset{|}{\overset{|}{Si}}}}-O-\underset{R''}{\overset{R''}{\underset{|}{\overset{|}{Si}}}}-O-\underset{R''}{\overset{R''}{\underset{|}{\overset{|}{Si}}}}-\right]$$

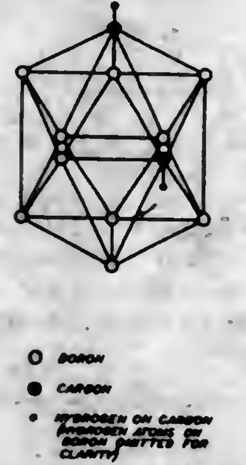
where each R and R″ substituent is independently selected alkyl of from 1 to 6 inclusive carbon atoms or aryl of not more than 8 carbon atoms, are prepared by reacting a bis(alkoxyldialkylsilyl) neocarborane with a halogen-containing disiloxane.

3,388,092

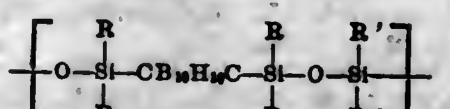
RESINS AND ELASTOMERS FROM SILOXY CARBORANYL POLYMERS

Theodore L. Heying, North Haven, Stelvio Papetti, Hamden, and Otto G. Schaffling, Cheshire, Conn., assignors to Olin Mathieson Chemical Corporation, a corporation of Virginia

Filed July 21, 1964, Ser. No. 384,217
19 Claims. (Cl. 260—37)


○ BORON
● CARBON
• HYDROGEN ON CARBON (HYDROGEN ATOMS ON BORON OMITTED FOR CLARITY)

Polymers having recurring structural units of the formula:



$$\left[-O-\underset{R}{\overset{R}{\underset{|}{\overset{|}{Si}}}}-CB_{10}H_{10}C-\underset{R}{\overset{R}{\underset{|}{\overset{|}{Si}}}}-O-\underset{R''}{\overset{R'}{\underset{|}{\overset{|}{Si}}}}-\right]$$

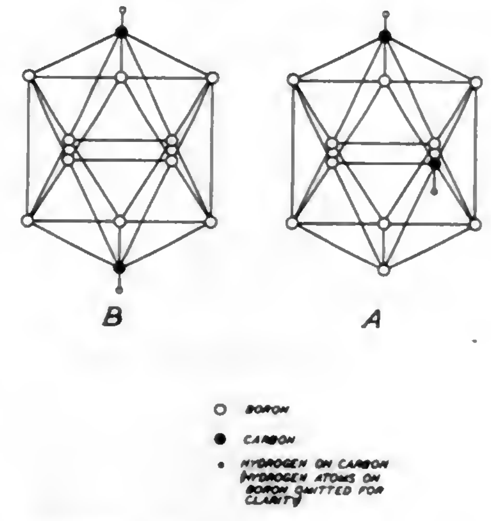
where each R and R″ substitutent is an independently selected alkyl groups of 1 to 6 carbon atoms or aryl group of not more than 8 carbon atoms, are prepared by reacting an alkoxy-substituted neocarborane with a halogen-containing silane in the presence of ferric chloride. Polymers especially suitable for cross-linking by curing can be prepared in the same manner as described above through the addition of a silane-type, cross-linking agent.

3,388,093
RESINS AND ELASTOMERS FROM SILOXY CARBORANYL POLYMERS

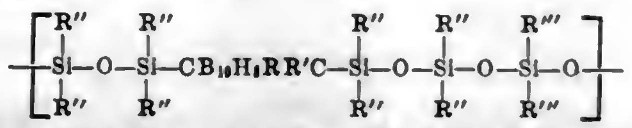
Theodore L. Heying, North Haven, Stelvio Papetti, Hamden, and Otto G. Schaffling, Cheshire, Conn., assignors to Olin Mathieson Chemical Corporation, a corporation of Virginia

Filed June 21, 1965, Ser. No. 465,437

13 Claims. (Cl. 260—37)



Polymers having recurring structural units of the formula:



$$-\left[\begin{matrix} R'' & & R'' & & R'' & & R'' & & R''' & \\ | & & | & & | & & | & & | & \\ Si & -O- & Si & -CB_{10}H_{10}RR'C- & Si & -O- & Si & -O- & Si & -O- \\ | & & | & & | & & | & & | & \\ R'' & & R'' & & R'' & & R'' & & R''' & \end{matrix}\right]-$$

where R and R′ are hydrogen or alkyl of from 1 to 5 carbon atoms and R″ and R‴ are independently selected alkyl of from 1 to 6 carbon atoms or aryl of not more than 8 carbon atoms are prepared by reacting a bis(halotetraorganosiloxanyl) m-carborane or p-carborane with a dialkoxy silane in the presence of a catalyst.

3,388,094
COLORED PLASTIC COMPOSITIONS AND COLORS THEREFOR

Chi K. Dien, Buffalo, N.Y., assignor to Allied Chemical Corporation, New York, N.Y., a corporation of New York

No Drawing. Filed Jan. 15, 1964, Ser. No. 337,749

4 Claims. (Cl. 260—41)

Colored synthetic resins containing 1,4-bis(biphenylamino)-anthraquinone which do not undergo shade alterations upon exposure to elevated temperatures, for example, up to about 700° F.

3,388,095
STABILIZED POLY(2,6-DIMETHYL-1,4-PHENYLENE)ETHER

Franciscus J. Huntjens, Arnhem, Netherlands, assignor to N.V. Polychemie AKU-GE, Arnhem, Netherlands, a corporation of the Netherlands

No Drawing. Filed Apr. 12, 1966, Ser. No. 541,959

Claims priority, application Netherlands, June 15, 1965, 6,507,599

2 Claims. (Cl. 260—45.8)

A poly(2,6 - dimethyl - 1,4 - phenylene)ether stabilized against oxidative attack with from 0.1 to 2.0% 2-mercaptobenzimidazole.

3,388,096
N-2-(4-HYDROXY-4-METHYLPENTYL)-N′-PHENYL-PARA-PHENYLENEDIAMINE

George E. P. Smith, Jr., Akron, Ohio, assignor to The Firestone Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

No Drawing. Filed Sept. 21, 1964, Ser. No. 398,084

3 Claims. (Cl. 260—45.9)

The invention relates to N-2-(4-hydroxy-4-methylpentyl)-N′-phenyl-para-phenylenediamine. It is an antiozonant, particularly effective in butadiene-styrene rubbers.

3,388,097
POLYESTERS FROM PERHALOALKYL BISPHENOLS AND SPECIFIED AROMATIC ACID HALIDES

Francis Bernard Cramer, Newark, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed May 15, 1964, Ser. No. 367,874

7 Claims. (Cl. 260—47)

Aromatic polyesters from perhaloalkyl bisphenols and specified aromatic acid halides can be employed for the production of light-stable shaped articles and particularly filamentary structures which exhibit a high degree of wash-set recoverability and resistance to soiling.

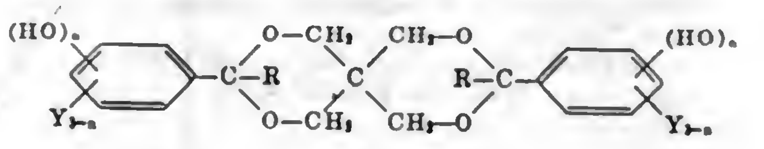
3,388,098
POLYMERS OF BISPHENOLS OF SPIROBI (META-DIOXAN)

James Harding, Green Brook Township, N.J., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Original application Apr. 16, 1964, Ser. No. 360,410, now Patent No. 3,347,871, dated Oct. 17, 1967. Divided and this application Feb. 20, 1967, Ser. No. 618,291

12 Claims. (Cl. 260—47)

Polycarbonates, polyurethanes and diglycidyl ethers have been prepared from bisphenols of spirobi(meta-dioxan) having the formula



n having values of 1 to 3, R being H or a lower hydrocarbon radical and Y being halogen, alkyl, alkaryl or aralkyl.

These polycarbonates, polyurethanes and cured diglycidyl ethers can be used as adhesives, coating and structural elements.

3,388,099
TERPOLYAMIDES

James S. Ridgway, Durham, N.C., assignor to Monsanto Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 455,960, May 14, 1965. This application June 7, 1965, Ser. No. 462,057

8 Claims. (Cl. 260—47)

The invention provides novel terpolyamides made by interpolymerizing hexamethylenediammonium adipate, hexamethylenediammonium terephthalate and hexamethylenediammonium m-phenylenedioxydiacetate or cyclohexanebis (methylammonium) m-phenylenedioxydiacetate. These terpolyamides are useful in the production of fibers which have a high boiling water shrinkage value.

3,388,100
POLYURETHANE POLYMERS CONTAINING AMIDE AND UREA GROUPS

Wilhelm Thoma, Cologne-Flittard, and Heinrich Rinke, Leverkusen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a German corporation

No Drawing. Filed July 22, 1964, Ser. No. 384,522

Claims priority, application Germany, July 24, 1963, F 40,330

8 Claims. (Cl. 260—75)

1. Film and fiber forming polyurethane polymers prepared by the process which comprises reacting in a highly polar solvent that will dissolve acrylonitrile, an organic diisocyanate with a substantially linear organic compound containing active hydrogen atoms which are reactive with NCO groups, said compound having a molecular weight of from about 500 to about 5,000 and a chain extending agent having a melting point of at least about 160° C. and a formula selected from the group consisting of

(I) $HO—R_1—CO—NH—R—NH—CO—R_1—OH$

(II) $HO—R_1—NH—CO—R—CO—NH—R_1—OH$

(III) $HO—R_1—NH—CO—NH$
$—NH—CO—NH—R_1—OH$

(IV) $HO—CH_2—CH_2—NH—CO$
$—CO—NH—CH_2—CH_2—OH$

(V) $HO—CH_2—CH_2—CH_2—HN—CO$
$—CO—NH—CH_2—CH_2—CH_2—OH$

wherein R is a divalent organic radical selected from the group consisting of aliphatic, hydroaromatic, arylaliphatic and aromatic, and R_1 is a divalent radical selected from the group consisting of aliphatic, hydroaromatic and araliphatic where the hydroxyl is attached to the aliphatic portion.

3,388,101
SILICON-CONTAINING POLYURETHANES

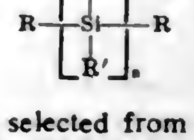
Marco Wismer, Gibsonia, Vernon G. Ammons, Glenshaw, and Gerald W. Miller, Pittsburgh, Pa., assignors to Pittsburgh Plate Glass Company, Pittsburgh, Pa., a corporation of Pennsylvania

No Drawing. Filed Oct. 23, 1964, Ser. No. 406,179

2 Claims. (Cl. 260—77.5)

1. A polyurethane produced by reacting an organic polyisocyanate with the reaction product of

(a) an organosilane of the formula



$$R-\left[\begin{matrix} R \\ | \\ Si \\ | \\ R' \end{matrix}\right]_n-R$$

where each R is selected from the group consisting of alkyl and alkoxy of 1 to 4 carbon atoms and aryl, R′ is selected from the group consisting of hydoxyl and alkoxy, and *n* is 1 to 3, and

(b) a polyol

the average number of active hydrogen atoms per molecule in said reaction product being greater than two.

3,388,102
HALOGENATED SILANE-STABILIZED COMPOSITIONS CONTAINING UNREACTED ISOCYANATE GROUPS AND THE USE THEREOF IN THE PREPARATION OF POLYURETHANE REACTION PRODUCTS

Bernardas Brizgys, Southgate, Mich., assignor to Wyandotte Chemicals Corporation, Wyandotte, Mich., a corporation of Michigan

No Drawing. Filed Feb. 25, 1966, Ser. No. 529,967

8 Claims. (Cl. 260—77.5)

Halogenated silanes have been found to be useful as stabilizing agents for compositions containing unreacted isocyanate groups. The stabilized compositions are particularly useful in the preparation of one- and two-component polyurethane coating compositions.

3,388,103
THERMOPLASTIC POLYUREAS PREPARED FROM ARALIPHATIC DIAMINES

Wolfgang Imöhl, Unna, and Peter Borner, Altlunen, Germany, assignors to Schering Aktiengesellschaft, Berlin, Germany

No Drawing. Filed July 19, 1966, Ser. No. 566,252

Claims priority, application Germany, July 28, 1965, Sch 37,452

2 Claims. (Cl. 260—77.5)

New thermoplastic copolyureas are prepared by simultaneous condensation of (1) an aryl aliphatic diamine, (2) an alkylene diamine and (3) a urea or derivative thereof, by heating a mixture of these reactant components to temperatures increasing up to 240° C. and subsequent vacuum. The araliphatic diamines have alkyl-substituents in the aromatic nucleus; the alkylene diamines having in the chain 4–18 carbon atoms and/or diamines branched in the carbon chain and having 9 to 19 carbon atoms, and/or diamines having 8–11 carbon atoms and being interrupted by oxygen atoms in the chain. The utility of said new copolyureas is based on their easy preparation and the favorable combination of their properties, including easy workability and favorable physical properties. In carrying out the invention instead of urea its derivatives, or CO_2 or $COCl_2$ can be used.

3,388,104
POLYCARBONAMIDES HAVING AN IMPROVED ANTISTATIC PROPERTY

Lawrence W. Crovatt, Jr., Raleigh, N.C., assignor to Monsanto Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 579,509, Sept. 15, 1966. This application Oct. 11, 1967, Ser. No. 674,662

7 Claims. (Cl. 260—78)

Polyamides, useful in the production of fibers which have greatly improved anti-static properties, are produced by incorporating into the polymer prior to filament formation from 0.1 to 20.0 weight percent of a polyalkyoxylated triglyceride of a saturated fatty acid having 10 to 30 carbon atoms.

3,388,105
HARDENABLE COMPOSITIONS OF HARDENABLE EPOXY COMPOUNDS, PROCESSES OF HARDENING AND HARDENED EPOXY RESINS

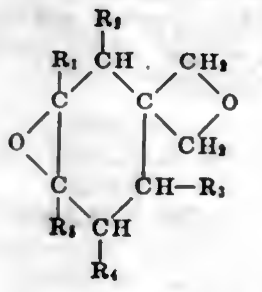
Miklos Danieliaz, Dusseldorf, and Manfred Dohr and Joachim Galinke, Dusseldorf-Holthausen, Germany, assignors to Lord Corporation, Erie, Pa., a corporation of Pennsylvania

No Drawing. Filed Sept. 30, 1965, Ser. No. 491,877

Claims priority, application Germany, Oct. 6, 1964, H 53,952

13 Claims. (Cl. 260—78.4)

This invention relates to a hardenable composition of matter capable of being hardened by heating to temperatures between about 80° C. and 200° C. which consists essentially of from about 25 parts to about 75 parts by weight of an epoxy compound having the formula



wherein R_1, R_2 and R_3 are members selected from the group consisting of hydrogen, halogen, lower alkyl and phenyl and R_3 and R_4 are members selected from the group consisting of hydrogen, halogen, lower alkyl, phenyl, and, when taken together, methylene, and the remainder to give 100 parts by weight of an organic acid compound selected from the group consisting of organic carboxylic acids having at least two carboxylic acid groups and carboxylic acid anhydrides thereof, as well as the hardened epoxy resins produced from the hardenable composition.

3,388,106

COPOLYMERS OF MALEIC COMPOUNDS AND MONOETHYLENICALLY UNSATURATED MONOMERS AND METHOD OF PREPARING

Irving E. Muskat, Miami, Fla., assignor, by mesne assignments, to Sinclair Research, Inc., a corporation of Delaware

No Drawing. Filed Aug. 8, 1961, Ser. No. 129,990

19 Claims. (Cl. 260—78.5)

1. A method of producing copolymers of maleic compound and monoethylenically unsaturated monomer having a strong tendency to heteropolymerize therewith, said copolymers containing at least 2.0 mols of said monoethylenically unsaturated monomer per mol of maleic compound and having a solution viscosity in 10% solution in acetone of up to 2.0 centistokes, comprising simultaneously adding said monoethylenically unsaturated monomer and said maleic compound in molar proportions of at least 2:1 and free-radical generating polymerization catalyst to an organic solvent maintained at a polymerization temperature of at least 120° C., said organic solvent being a solvent for said unsaturated monomer and said maleic compound and containing less than 3% by weight of total polymerizable monomer, whereby said unsaturated monomer and said maleic compound are caused to copolymerize at temperatures of at least 120° C.

3,388,107

AMINO TERMINATED POLYMERS

Albert J. Costanza, Akron, and Glen E. Meyer, Kent, Ohio, assignors to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

No Drawing. Continuation-in-part of application Ser. No. 329,227, Dec. 9, 1963. This application Sept. 9, 1966, Ser. No. 578,171

8 Claims. (Cl. 260—79)

This invention relates to a method of preparing diamino terminated compounds containing sulfur dispersed in the carbon-carbon chain thereof and to the composition. The diamines are prepared by cleavage of a sulfur-olefin polymer to yield mercaptan terminated composition and reacting this composition with an imine of propylene or ethylene.

3,388,108

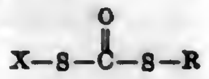
RUBBER VULCANIZATES AND THEIR PREPARATION

George E. P. Smith, Jr., Akron, Ohio, assignor to The Firestone Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

No Drawing. Filed Apr. 1, 1966, Ser. No. 539,324

14 Claims. (Cl. 260—79.5)

1. A vulcanizable composition comprising a sulfur vulcanizable diolefin rubber, sulfur and between 0.1 and 10 parts per 100 parts of the rubber of a thioformyl compound having the formula



$$X-S-\overset{O}{\overset{\|}{C}}-S-R$$

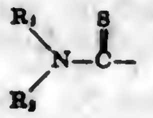
in which R is a radical from the class consisting of

(1) straight-chain and branched-chain and cyclic alkyl groups of 1 to 12 carbon atoms, and

(2) phenyl and naphthyl and lower straight-chain and branched-chain alkyl derivatives thereof in which the one or more alkyl groups each contain 1 to 4 carbon atoms;

and in which X is selected from the class consisting of

(a) thiocarbamyl radicals having the formula



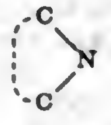
in which R_1 and R_2 are from the class consisting of

(1) straight-chain and branched-chain alkyl groups of 1 to 4 carbon atoms,

(2) cycloalkyl groups of 5 to 7 carbon atoms,

(3) phenyl and naphthyl and straight-chain and branched-chain alkyl derivatives thereof in which the alkyl group contains 1 to 4 carbon atoms, and

(4) R_1 and R_2 may form the cyclic group



containing 4 to 6 carbon atoms; and

(b) arylenethiazole radicals in which the arylene group is selected from the class consisting of benzo and naphtho groups, both unsubstituted and substituted derivatives thereof in which the one or more substituents are selected from the class consisting of phenyl and straight-chain and branched-chain alkyl groups of 1 to 8 carbon atoms.

3,388,109

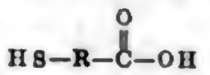
NOVEL POLYMERIZATION CATALYST BASED ON HYDROGEN PEROXIDE AND THIOGLYCOLIC ACID

James M. Hawkins and Donald J. Shields, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Continuation-in-part of application Ser. No. 328,118, Dec. 4, 1963. This application Nov. 16, 1966, Ser. No. 594,659

7 Claims. (Cl. 260—80)

A catalyst combination of hydrogen peroxide and at least one compound represented by the formula



$$HS-R-\overset{O}{\overset{\|}{C}}-OH$$

wherein R is an alkyl radical containing from 1 to 18 carbon atoms, has been found to form good yields of polymer having an inherent viscosity above 0.5 at temperatures less than 50° C. The preferred catalyst combination is hydrogen peroxide and at least one member selected from the group consisting of thioglycolic acid, α-mercaptoproprionic acid and β-mercaptoproprionic acid.

3,388,110

TELOMERS AND PROCESS FOR PREPARING THEM

Alfred Kühlkamp and Gerhard Werner, Hofheim, Taunus, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning, Frankfurt am Main, Germany, a corporation of Germany

No Drawing. Filed June 21, 1965, Ser. No. 465,783

Claims priority, application Germany, June 27, 1964, F 43,282

6 Claims. (Cl. 260—85.7)

Non cross-linked polymers having a molecular weight of from 500 to 5,000 prepared from acetoacetic acid allyl ester and at least one comonomer containing an olefinic double bond; also a process of making such polymers.

3,388,111

METHOD OF ALKYLATING POLYSTYRENE

Robert H. Allen and Larry D. Yats, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 350,126, Mar. 6, 1964. This application Feb. 9, 1967, Ser. No. 614,804

4 Claims. (Cl. 260—93.5)

A process for alkylating polystyrene which comprises contacting polystyrene dissolved in an inert solvent with an alkyl ester of p-toluene sulfonic acid and BF_3 at temperatures between 25° and 75° C.

3,388,112

ACTH ACTIVE PEPTIDES MODIFIED AT THE N-TERMINAL POSITION

Rudolf Geiger and Karl Sturm, Frankfurt am Main, and Walter Siedel, Bad Soden, Taunus, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning, Frankfurt am Main, Germany, a corporation of Germany

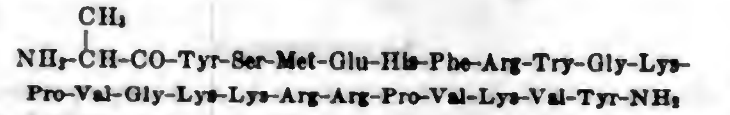
No Drawing. Filed Aug. 11, 1964, Ser. No. 388,920

Claims priority, application Germany, Aug. 16, 1963, F 40,498

2 Claims. (Cl. 260—112.5)

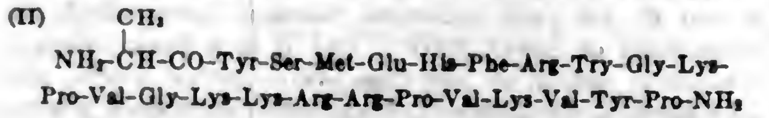
The compounds:

(I)



$$\overset{CH_3}{\overset{|}{NH_2-CH}}\text{-CO-Tyr-Ser-Met-Glu-His-Phe-Arg-Try-Gly-Lys-Pro-Val-Gly-Lys-Lys-Arg-Arg-Pro-Val-Lys-Val-Tyr-}NH_2$$

(II)



$$\overset{CH_3}{\overset{|}{NH_2-CH}}\text{-CO-Tyr-Ser-Met-Glu-His-Phe-Arg-Try-Gly-Lys-Pro-Val-Gly-Lys-Lys-Arg-Arg-Pro-Val-Lys-Val-Tyr-Pro-}NH_2$$

3,388,113

PROTECTION OF THE GUANIDINO GROUP OF ARGININE DURING PEPTIDE SYNTHESIS BY THE p-NITROCARBOBENZOXY GROUP

Stephan Guttmann, Allschwil, Roger Boissonnas, Bottmingen, and Janos Pless, Basel, Switzerland, assignors to Sandoz Ltd. (also known as Sandoz A.G.), Basel, Switzerland

No Drawing. Filed Aug. 27, 1964, Ser. No. 392,624

Claims priority, application Switzerland, Aug. 30, 1963, 10,776/63

2 Claims. (Cl. 260—112.5)

The guanidino group of arginine, arginine-containing peptides and their derivatives may be protected by reaction with p-nitrocarbobenzoxy chloride. The advantage is that the radical p-nitrobenzyloxycarbonyl on the guanidino group is stable under the conditions used to remove protecting groups from the α-amino group and the carboxyl group during the synthesis of peptides and may be removed at the end of all the condensations by hydrogenolysis. Examples of the synthesis of the peptides are given such as L-phenylalanyl-L-arginyl-L-proline and L-arginyl-L-arginyl-L-proline.

3,388,114

AZO DYES DERIVED FROM 4 - AMINO BENZOTHIAZOLE- OR BENZOTHIADIAZOLE GROUPS

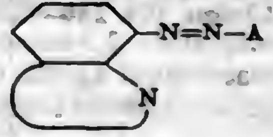
Shinya Ito, Kyoto, Katsuo Kanno, Ohtsu-shi, and Ryoichi Nakagawa, Fuse-shi, Osaka-fu, Japan, assignors to Daito Chemical Industry Co., Ltd., Osaka, Japan

No Drawing. Filed July 15, 1965, Ser. No. 472,339

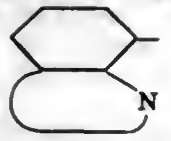
Claims priority, application Japan, July 20, 1964, 39/40,374, 39/40,375

6 Claims. (Cl. 260—157)

Water-insoluble monoazo dyestuffs of the formula



wherein



is a member selected from the group consisting of the residues of benzothiazol, 1,2,3-benzothiadiazole and 2,1,3-benzothiadiazole, said residues being substitutable with halogen, alkyl, alkoxy, acyl, alkylamino, dialkylamino, acylamino and mercapto; and A is a member selected from the class consisting of aromatic rings, heterocyclic, cycloaliphatic and aliphatic groups, a hydroxyl group being attached thereto at one of the ortho positions with respect to the position of attachment of said A to the —N=N— group and the other positions of said A being substitutable with hydrogen, halogen, hydroxy, alkoxy, alkylamino, dialkylamino, arylamino, phenyl, substituted phenyl, carboxylic esters, carboxylic amides and heterocyclic group are used with particular effectiveness in the dyeing of metal compound-containing polyolefinic shaped articles.

3,388,115

BISULFITE ADDITION COMPOUNDS OF CARBOHYDRATE PERIODATE OXIDATION PRODUCTS

Harvey E. Alburn, West Chester, and William Dvonch, Radnor, Pa., assignors to American Home Products Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Jan. 8, 1965, Ser. No. 424,178

25 Claims. (Cl. 260—210)

Novel bisulfite addition compounds of periodate oxidation products of carbohydrates, such as lactose, maltose, sucrose, adenosine, levoglucosan, substituted pyranosides, uridine, salicin and the like, are provided. The new compounds are water-soluble and are active against tumors in warm-blooded lower animal subjects.

3,388,116

PROCESS FOR THE PREPARATION OF RIBOFLAVIN PHOSPHORIC ACID

Ctirad Podesva, Montreal, Quebec, Canada, assignor to Delmar Chemicals Limited, Montreal, Quebec, Canada

No Drawing. Filed Sept. 16, 1966, Ser. No. 579,848

12 Claims. (Cl. 260—211.3)

A process is provided for the phosphorylation of riboflavin in a reaction medium comprising tetramethylene sulfone. Any of the known phosphorylating agents can be used. Preferred are phosphorus oxychloride, chlorophosphoric acid and a mixture of phosphorus oxychloride and ortho-phosphoric acid. The phosphorylated riboflavin is recovered by any convenient method, and can be transformed into a pharmaceutically acceptable salt, e.g., Na.

3,388,117

FILAMENTS OF REGENERATED CELLULOSE

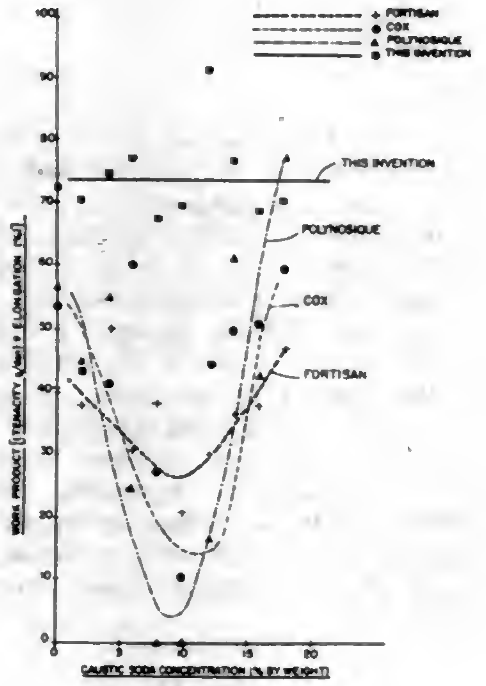
Ronald Roberts, Mobile, Robert T. Martin, Citronelle, and William C. Richardson, Mobile, Ala., assignors to Courtaulds North America Inc., New York, N.Y., a corporation of Alabama

Filed Mar. 26, 1964, Ser. No. 354,975

Claims priority, application Great Britain, Mar. 28, 1963, 12,261/63

14 Claims. (Cl. 260—212)

Regenerated cellulose filaments having conditioned tenacities over 9.5 grams per denier are disclosed together with a modification of the viscose process by means of which such filaments may be made. The process requires spinning viscose having a relatively high gamma number, a viscosity of at least 120 poise and an NaOH/cellulose ratio of at least 1, into a coagulating bath containing formaldehyde, followed by stretching by at least 500% prior to regeneration.



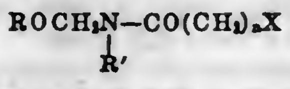
3,388,118
CHEMICAL MODIFICATION OF CELLULOSE AND PRODUCTS THEREOF

Giuliana C. Tesoro, Dobbs Ferry, N.Y., assignor to J. P. Stevens & Co., Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Apr. 23, 1965, Ser. No. 450,526

17 Claims. (Cl. 260—212)

A method of modifying cellulose with selective modifying reagents in the class of trialkyl phosphites, ammonia, hydrazine, diamines, halides, hydrophobic polyamines, bismercaptans, alkali metal sulfides, disulfides and polysulfides, thiourea, tertiary amines and hydrophobic mercaptans, comprising reacting such reagents at elevated temperatures with a cellulose polymer which has been previously modified so as to have the structure



$$ROCH_2\underset{\substack{|\\R'}}{N}-CO(CH_2)_nX$$

where R and R′ are selected from the group consisting of hydrogen, lower alkyl, alkoxymethyl, and hydroxymethyl, X is selected from the group consisting of chlorine, bromine and iodine, and *n* is an integer of from 1 to 5.

3,388,119
NON-FIBROUS PARTICULATE CELLULOSE AND METHOD OF MAKING SAME

Mamerto M. Cruz, Jr., Pennington, N.J., assignor to FMC Corporation, Philadelphia, Pa., a corporation of Delaware

No Drawing. Filed July 19, 1965, Ser. No. 473,185

7 Claims. (Cl. 260—212)

Particulate, non-fibrous cellulose product formed by subjecting cellulose to the action of a hydrolyzing mixture comprising a non-derivatizing acid, water and a water-miscible cellulose swelling inhibitor. The dry cellulose product is not hornified, when placed on the tongue produces a sensation of dissolving, is readily frangible and, upon attrition in an aqueous medium, forms a stable dispersion. The amount of dispersible particles and the viscosity of the dispersion increase as the period of attrition increases.

3,388,120
ACYLATED CYANOALKYLATED STARCH MATERIALS

James A. Lotzgesell and Roland W. Best, Decatur, Ill., assignors to A. E. Staley Manufacturing Company, Decatur, Ill., a corporation of Delaware

No Drawing. Filed Nov. 25, 1966, Ser. No. 596,746

9 Claims. (Cl. 260—233.3)

Acylated cyanoalkylated starches having an acyl M.S. of between 0.005 and 0.3 and a cyanoalkyl M.S. of 0.0001 and 0.1 are useful in sizing and coating.

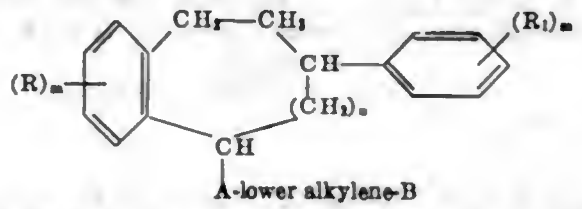
3,388,121
TETRAHYDROBENZOCYCLOHEXENE AND CYCLOHEPTENE ETHERS

Edward J. Pribyl, Metuchen, and Jack Bernstein, New Brunswick, N.J., assignors, by mesne assignments, to E. R. Squibb & Sons, Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Dec. 16, 1964, Ser. No. 418,877

10 Claims. (Cl. 260—239)

Compounds of the formula



wherein *m* is 1, 2 or 3, *n* is 0 or 1, A is oxy or amino, R and R_1 are each hydrogen, halogen, lower alkyl, trihalomethyl or lower alkoxy, and B is a basic nitrogen containing radical of less than twelve carbon atoms, and salts thereof, are prepared. These new compounds possess hypotensive activity.

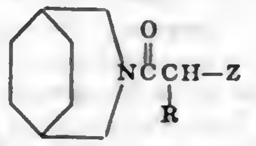
3,388,122
CERTAIN N-ACYL-3-AZABICYCLO-(3.2.2)NONANE COMPOUNDS

Don R. Baker, Pinole, Mervin E. Brokke, Richmond, and Duane R. Arneklev, Sunnyvale, Calif., assignors to Stauffer Chemical Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Oct. 8, 1965, Ser. No. 494,235

4 Claims. (Cl. 260—239)

Herbicidal azabicyclononanes having the general formula



wherein R is selected from the group consisting of hydrogen and lower alkyl and Z is a member selected from the group consisting of halogen, trihaloacetoxy, thiocyano, and lower alkyl sulfonato. Representative compounds are: 3 - (chloroacetyl) - 3 - azabicyclo(3.2.2) - nonane, 3(α-bromopropionyl)-3-azabicyclo(3.2.2) - nonane, 3-(2-trichloroacetyloxyacetyl)-3-azabicyclo(3.2.2)nonane, 3-(2-thiocyanoacetyl) - 3 - azabicyclo(3.2.2)nonane, and 3-2-methanesulfonoxyacetyl)-3-azabicyclo(3.2.2) nonane.

3,388,123
(OPTIONALLY 17-ALKYLATED) 2,3-IMINO-5α-ANDROSTAN 17β - OLS AND INTERMEDIATES THERETO

Paul D. Klimstra, Northbrook, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Filed Sept. 21, 1966, Ser. No. 580,888

10 Claims. (Cl. 260—239.5)

(Optionally 17-alkylated) 2,3-imino-5α-androstan-17β-ols useful as pharmacological agents, in particular as androgenic and estrogenic inhibitory compounds.

3,388,124
6β,19β-OXIDO-3,5-CYCLOSTEROID COMPOUNDS AND PROCESS FOR PREPARING THE SAME

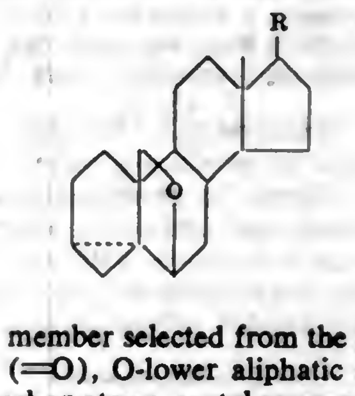
Katsumi Tanabe, Rinji Takasaki, Kiyoshi Sakai, Ryozo Hayashi, Yasuhiro Morisawa, and Teruo Hashimoto, Tokyo, Japan, assignors to Sankyo Company, Limited, Tokyo, Japan

No Drawing. Filed Jan. 23, 1963, Ser. No. 253,268

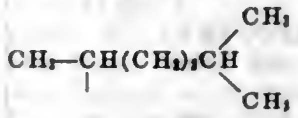
Claims priority, application Japan, Feb. 8, 1962, 37/3,939

6 Claims. (Cl. 260—239.55)

1. A compound having the general formula



wherein R is a member selected from the group consisting of keto group (═O), O-lower aliphatic acyl group containing 2 to 4 carbon atoms, acetyl group and



$$CH_3-\underset{|}{C}H(CH_2)_3CH\begin{matrix}\diagup CH_3\\ \diagdown CH_3\end{matrix}$$

group.

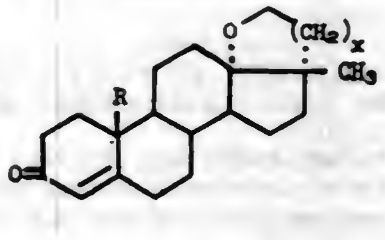
3,388,125
17α-ALKYL-17β-METHYL-3-OXO-13ξ-GONENE EPOXIDES AND INTERMEDIATES

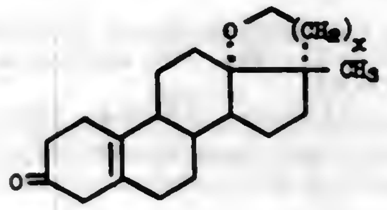
Edward A. Brown, Wilmette, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

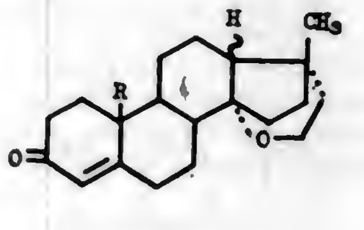
No Drawing. Filed Aug. 22, 1966, Ser. No. 573,810

11 Claims. (Cl. 260—239.55)

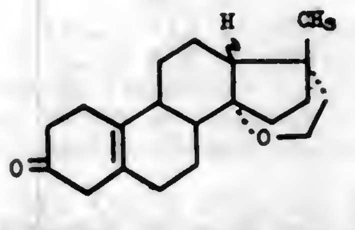
1. A compound selected from the group consisting of compounds of the formula







and



wherein R represents hydrogen or the methyl radical and *x* represents a positive integer less than 3.

3,388,126
SYNTHESIS OF SULFENAMIDES IN AQUEOUS-ORGANIC SOLVENT MIXTURES

Carl Arthur Harman, St. Albans, W. Va., assignor to Monsanto Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Oct. 27, 1965, Ser. No. 505,415

16 Claims. (Cl. 260—247.1)

1. In a method of making sulfenamides by reacting an organic primary or secondary amine, aqueous sodium hypochlorite, and a thiazole selected from the group consisting of 2-mercapto-benzothiazole, metal salts of 2-mercaptobenzothiazole, and benzothiazyl disulfide, the improvement which comprises forming the sulfenamide by stirring the reactants in a reaction medium of water and water immiscible organic solvent inert to the reactants, the organic solvent being present in a quantity sufficient to substantially dissolve the sulfenamide product at the reaction temperature.

3. In a method of making sulfenamides by reacting an organic primary or secondary amine, aqueous sodium hypochlorite, and a thiazole selected from the group consisting of 2-mercaptobenzothiazole, metal salts of 2-mercaptobenzothiazole, and benzothiazyl disulfide, the improvement which comprises forming the sulfenamide by stirring the reactants in a reaction medium of water and monochlorobenzene, the monochlorobenzene being present in a quantity sufficient to substantially dissolve the sulfenamide product at the reaction temperature.

5. The method of making sulfenamides as recited in claim 3, wherein the amine is 2,6-dimethyl morpholine.

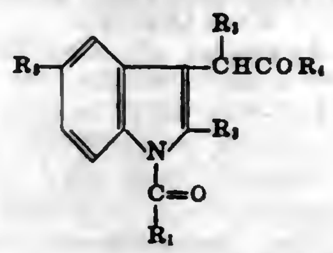
3,388,127
α-HALOMETHYL-1-PYRAZINE CARBONYL-3-INDOLYLACETIC ACIDS

Tsung-Ying Shen, Westfield, and Lewis H. Sarett, Princeton, N.J., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Continuation-in-part of application Ser. No. 222,222, Sept. 7, 1962. This application Apr. 29, 1965, Ser. No. 452,010

13 Claims. (Cl. 260—250)

1. A compound of the formula:



in which

- R_1 is selected from the group consisting of pyrazine and substituted pyrazine in which the substituent is selected from the group consisting of halogen, lower alkyl, lower alkoxy, lower alkanoylamino, benzoylamino, carbamyl and phenyl;
- R_2 is selected from the group consisting of hydrogen, lower alkyl, lower alkenyl, phenyl, tolyl and benzyl;
- R_3 is selected from the group consisting of monohalomethyl, dihalomethyl and trihalomethyl in which said halogen has an atomic number less than 53;
- R_4 is selected from the group consisting of hydroxy, lower alkoxy, benzyloxy, amino, lower alkylamino, di-loweralkylamino, phenylethylamino, lower alkoxy-lower alkylamino and OM, where M is selected from the group consisting of ammonium, lower alkylammonium, morpholinium, cholinium, glucosammonium, methyl cyclohexylammonium, triethylammonium, N-butylammonium, anilinium, 2,3-xylidinium, piperizinimum and an inorganic cation;
- R_5 is selected from the group consisting of hydrogen, lower alkyl, lower alkoxy, CF_3, CHF_2, nitro, cyano, aminomethyl, amino, hydroxy, benzylmercapto, lower

alkylthio, diphenylamino, benzylamino, β-phenylethylamino, chloro lower alkylamino, chloro phenylamino, chloro benzylamino, lower alkoxy-lower alkylamino, anisidino, lower alkylanilino and lower alkoxyanilino.

3,388,128
SUBSTITUTED 1,4-DIAZABICYCLO[4.4.0]DECANES

Allan R. Day, 503 N. Wynnewood Road, Narberth, Pa. 19072, and Alan D. Lourie, 1549 Willowbrook Lane, Villanova, Pa. 19085

No Drawing. Filed Sept. 3, 1965, Ser. No. 485,125

10 Claims. (Cl. 260—268)

9-methyl and 9-hydroxymethyldiazabicyclo[4.4.0]decanes substituted at the 4-position are prepared by a series of reactions from 6-methylpicolinic acid and pyridine-2,6-dicarboxylic acid, respectively. The compounds possess hypotensive, antihistaminic, and anticholinergic activity.

3,388,129
1-METHYL ERGOT ALKALOIDS

Albert Hofmann and Franz Troxler, Bottmingen, Basel-Land, Switzerland, assignors to Sandoz Ltd. (also known as Sandoz A.G.), Basel, Switzerland

No Drawing. Continuation-in-part of application Ser. No. 326,231, Nov. 26, 1963. This application Apr. 24, 1967, Ser. No. 632,911

Claims priority, application Switzerland, May 18, 1956, 33,377/56

The portion of the term of the patent subsequent to Nov. 16, 1982, has been disclaimed

2 Claims. (Cl. 260—285.5)

The compounds are of the class of lysergic acid compounds having an alkyl group at the indol-nitrogen atom, useful in the alleviation of allergic conditions.

3,388,130
1-HYDRAZINO OR 1-AMINO ISOQUINOLINES

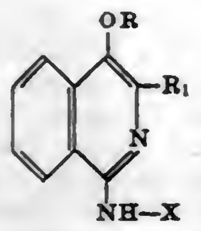
Marcel Pesson, Paris, France, assignor to Societe Anonyme dite: Laboratoire Roger Bellon, Neuilly-sur-Seine, France, a French company

No Drawing. Filed Aug. 11, 1964, Ser. No. 388,957

Claims priority, application Great Britain, Aug. 20, 1963, 32,992/63

15 Claims. (Cl. 260—286)

1-hydrazino or 1-amino isoquinoline compounds which are substituted in 4-position by an ether group such as a lower alkoxy, phenoxy, or benzyloxy group and which may carry in 3-position lower alkyl, phenyl, or benzyl, and their pharmaceutically acceptable, non-toxic acid addition salts. The compounds are represented by the following formula



wherein X is hydrogen or the amino group, R is lower alkyl, phenyl, or benzyl, and R_1 is hydrogen, lower alkyl, phenyl, or benzyl. Such compounds possess noteworthy coronary and peripheral vasodilator or vasoconstrictor activity and, due to their high activity and low toxicity, a high therapeutic index.

The 1-hydrazino compounds are preferably prepared by heating the corresponding 1-chloro compounds with a large excess of hydrazine in the absence of a solvent, while the 1-amino compounds are obtained by hydrogenolysis of the 1-hydrazino compounds at room temperature and atmospheric presure. The yield is surprisingly high.

3,388,131
METHOD OF PRODUCING ONIUM FLUORIDES SELECTED FROM THE GROUP CONSISTING OF NITROGEN, ANTIMONY, BORON AND ARSENIC

Gerd Urban, Erlangen, and Richard Dötzer, Nuremberg, Germany, assignors to Siemens Aktiengesellschaft, Munich, Germany, a corporation of Germany

No Drawing. Filed May 14, 1964, Ser. No. 367,578

Claims priority, application Germany, May 18, 1963, S 85,280

9 Claims. (Cl. 260—290)

1. The method of producing onium fluorides of an element selected from the group consisting of nitrogen, phosphorus, arsenic and antimony, which comprises reacting onium-base halogenides with water-free hydrogen fluoride and with metal alkoxide, and thermally dissociating the resulting alcohol solvate to the onium fluoride.

3,388,132
PRODUCTION OF IMIDAZOLES

Hugo Kroeper and Jakob Sand, Ludwigshafen (Rhine), Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

No Drawing. Filed Mar. 15, 1965, Ser. No. 439,977

Claims priority, application Germany, Mar. 18, 1964, B 75,951

3 Claims. (Cl. 260—309)

Production of imidazole which may be substituted in the 4- and 5-positions by alkyl groups by reacting appropriate N-monoformylalkylene diamines or N,N′-diformylalkylene diamines in the gas phase in the presence of zinc oxide. The products are useful for the manufacture of textile auxiliaries, pharmaceuticals and dyes.

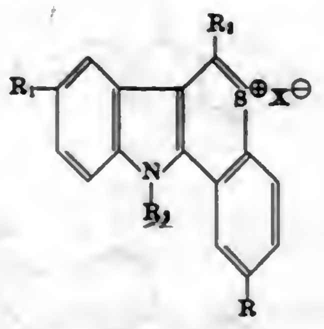
3,388,133
BENZ[b]INDOLO[2,3-d]THIOPYRYLIUM COMPOUNDS AND PROCESSES FOR THEIR PRODUCTION

Thomas E. Young, Bethlehem, Pa., and Peter H. Scott, Guilford, Conn., assignors to Warner-Lambert Pharmaceutical Company, Morris Plains, N.J., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 457,860, May 21, 1965. This application May 23, 1966, Ser. No. 551,931

14 Claims. (Cl. 260—326.9)

This invention relates to benz[b]indol[2,3-d]thiopyrilium compounds of the formula:



wherein R, R_1, and R_2 can be the same or different, and are selected from hydrogen, hydroxy, nitro, lower alkyl of 1 to 4 carbon atoms, lower alkoxy of 1 to 4 carbon atoms, and halogen; R_3 is hydrogen, lower alkyl of 1 to 4 carbon atoms or phenyl; and $X^{\ominus}$ is perchlorate or halide.

These compounds are useful as anti-bacterial and anti-fungal agents.

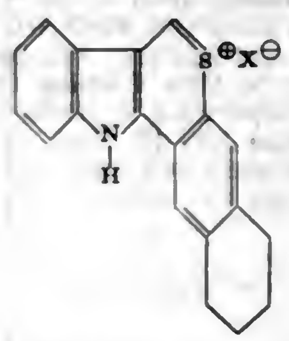
3,388,134
1,2,3,4-TETRAHYDRONAPHTH[2,3-b]INDOLO[2,3-d]THIOPYRYLIUM COMPOUNDS AND PROCESSES FOR THEIR PRODUCTION

Thomas E. Young, Bethlehem, Pa., and Peter H. Scott, Guilford, Conn., assignors to Warner-Lambert Pharmaceutical Company, Morris Plains, N.J., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 475,227, July 27, 1965. This application May 23, 1966, Ser. No. 551,957

7 Claims. (Cl. 260—326.9)

This invention relates to 1,2,3,4-tetrahydronaphth[2,3-b]indolo[2,3-d]thiopyrylium compounds of the formula.



wherein $X^{\ominus}$ is perchlorate or halide.

These compounds are useful as anti-bacterial and anti-fungal agents.

3,388,135
NOVEL 2-PHENYL-THIANAPHTHENE-DIAMIDINES

Otto Dann, Mellwaldstrasse 11, Erlangen-Bubenreuth, Germany

No Drawing. Continuation-in-part of application Ser. No. 431,697, Feb. 10, 1965. This application June 15, 1967, Ser. No. 646,207

Claims priority, application Germany, Feb. 19, 1964, D 43,670

6 Claims. (Cl. 260—330.5)

The compounds are di-amidino-substituted 2-phenylthianaphthenes useful as trypanocides in warm-blooded animals.

3,388,136
DIBENZO[b,d]PYRANS AND PROCESS

Edward C. Taylor, 288 Western Way, and Katherine Lenard, 120 Prospect Ave., both of Princeton, N.J. 08540

No Drawing. Filed Jan. 11, 1966, Ser. No. 519,954

15 Claims. (Cl. 260—345.3)

Tetrahydro - 1 - hydroxy - 6,6,9-trimethyl-6H-dibenzo[b,d]-pyrans are prepared by the acid-catalyzed condensation of citral with a resorcinol. The compounds possess analgesic and central nervous system depressant activity.

3,388,137
HALO-SUBSTITUTED CYCLOALKENYLACYL DERIVATIVES OF ARYL POLYCARBOXYLIC ACIDS OR ANHYDRIDES THEREOF

Louis Schmerling, Skokie, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Filed Oct. 1, 1964, Ser. No. 400,927

16 Claims. (Cl. 260—346.3)

Halo-substituted cycloalkenylacyl derivatives of aryl polycarboxylic acid or corresponding anhydride, exemplified by 4-[(1,4,5,6,7,7-hexachloro-5-norbornen-2-yl)acetyl]phthalic acid. The compounds are useful as flame retardants for plastics and textiles.

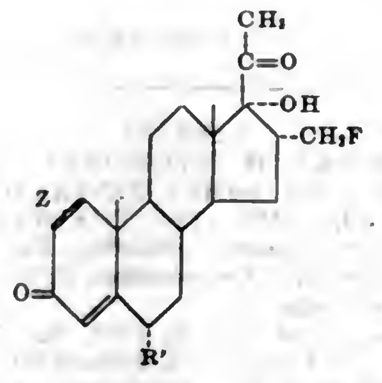
3,388,138
16α-FLUOROMETHYL-21-FLUORO AND 21-DESOXY COMPOUNDS OF THE PREGNANE SERIES

Philip F. Beal III, and John E. Pike, Kalamazoo, Mich., assignors to The Upjohn Company, Kalamazoo, Mich., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 1,454, Jan. 11, 1960. This application May 6, 1966, Ser. No. 548,056

8 Claims. (Cl. 260—397.4)

8. A compound of the following formula:



wherein R is selected from the group consisting of hydrogen and a hydrocarbon carboxylic acyl group containing less than 12 carbon atoms; R′ is selected from the group consisting of hydrogen, methyl, fluorine and chlorine and Z is selected from the group consisting of a double bond between C–1 and C–2 and a saturated linkage between C–1 and C–2.

3,388,139
3-ENOL ETHERS OF PROGESTERONE AND 6-METHYL DERIVATIVES THEREOF

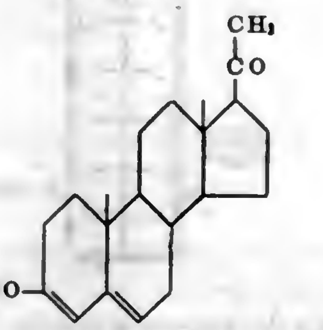
Alberto Ercoli, Milan, Italy, assignor, by mesne assignments, to Warner-Lambert Pharmaceutical Company, Morris Plains, N.J., a corporation of Delaware

No Drawing. Application Dec. 11, 1962, Ser. No. 243,743, now Patent No. 3,342,682, dated Sept. 9, 1967, which is a division of application Ser. No. 26,712, May 4, 1960, now Patent No. 3,240,671. Divided and this application Sept. 11, 1967, Ser. No. 666,978

Claims priority, application Italy, Feb. 6, 1960, 2,100/60

2 Claims. (Cl. 260—397.4)

1. A compound selected from the group consisting of a compound of the formula:

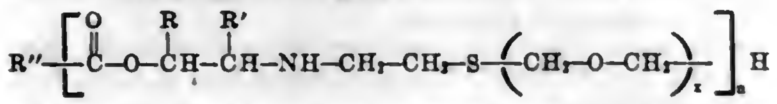


in which R is a member selected from the group consisting of cycloalkyl of four to six carbon atoms and cycloalkenyl of four to six carbon atoms and 6-methyl derivatives of said compound of said formula.

3,388,140
CARBOXYLIC ACID ESTERS DERIVED FROM AZIRIDINES

Morris B. Berenbaum, Levittown, Pa., and Louis Citarel, Trenton, N.J., assignors to Thiokol Chemical Corporation, Bristol, Pa., a corporation of Delaware
No Drawing. Continuation of application Ser. No. 269,787, Apr. 1, 1963. This application Aug. 25, 1967, Ser. No. 663,934
11 Claims. (Cl. 260—402.5)

1. A compound having the structure



$$R''-\left[\overset{O}{\overset{\|}{C}}-O-\overset{R}{\overset{|}{C}}H-\overset{R'}{\overset{|}{C}}H-NH-CH_2-CH_2-S-\left(CH_2-O-CH_2\right)_x\right]_n H$$

wherein R″ is the nucleus of a hydrocarbon carboxylic acid,
R and R′ are selected from the group consisting of H and CH_3,
x is 0 or 1, and
n is the numerical functionality of said carboxylic acid.

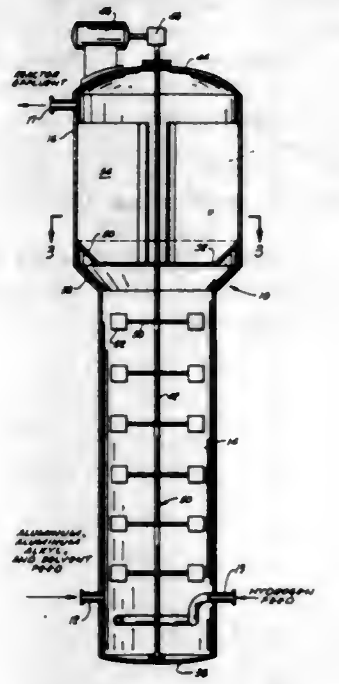
3,388,141
DI-SCHIFF BASES OF HYDROXYL SUBSTITUTED DIAMINES AND β-DIKETONES, DERIVATIVES, AND METAL CHELATES THEREOF

Morris B. Berenbaum, Levittown, Pa., assignor to Thiokol Chemical Corporation, Bristol, Pa., a corporation of Delaware
No Drawing. Filed Oct. 5, 1965, Ser. No. 493,216
13 Claims. (Cl. 260—439)

The di-Schiff base of a β-hydroxy-1,3-diamine and a 1,3-diketone are capable of chelating a large number of heavy metal ions. These metal chelates function as burning rate modifiers when incorporated in propellant compositions.

3,388,142
METHOD FOR PRODUCING DIALKYLALUMINUM HYDRIDE COMPOUNDS

Daniel F. Cameron and Malcolm M. Turner, Ponca City, Okla., assignors to Continental Oil Company, Ponca City, Okla., a corporation of Delaware
Filed July 12, 1963, Ser. No. 294,550
4 Claims. (Cl. 260—448)



Invention has the following aspects:

A method for preparing dialkylaluminum hydride by the reaction of trialkylaluminum, aluminum, and hydrogen wherein the reactants flow upward in a single-stage reaction zone and wherein the movement of the reactants is arrested in the upper portion of the reaction zone to settle out unreacted aluminum metal.

Apparatus, particularly suitable for preparing dialkylaluminum hydride, wherein an important feature is a solids settling section at the upper end of the reaction chamber.

3,388,143
GROWTH REACTION

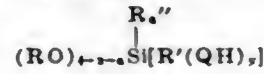
Russell G. Rose, Ponca City, Okla., assignor to Continental Oil Company, Ponca City, Okla., a corporation of Delaware
No Drawing. Filed Nov. 23, 1964, Ser. No. 413,337
4 Claims. (Cl. 260—448)

Formation of polymer during the growth reaction of ethylene onto a low molecular weight alkyl aluminum compound is inhibited by addition of a minor amount of vinyl halide, preferably vinyl chloride.

3,388,144
POLYMERCAPTOORGANO AND POLYHYDROXYORGANO SILANES AND SILOXANES

Martin C. Musolf and Edwin P. Plueddemann, Midland, Mich., assignors to Dow Corning Corporation, Midland, Mich., a corporation of Michigan
No Drawing. Filed July 15, 1965, Ser. No. 472,310
28 Claims. (Cl. 260—448.8)

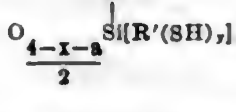
1. A silane having the general formula



$$(RO)_{4-x-a}\overset{R''_a}{\overset{|}{Si}}[R'(QH)_y]_x$$

wherein each
R is a hydrocarbon radical free of aliphatic unsaturation, each
R′ is selected from the group consisting of trivalent and tetravalent hydrocarbon, hydrocarbon ether, hydrocarbon thioether, hydrocarbon ester and hydrocarbon thioester radicals, R′ being attached to the silicon atom via a silicon-carbon bond, each
R″ is a monovalent hydrocarbon radical free of aliphatic unsaturation,
Q is selected from the group consisting of sulfur and oxygen atoms,
a is an integer from 0 to 2,
x is an integer from 1 to 2,
y is an integer from 2 to 3,
the sum of *x* and *a* being from 1 to 3.

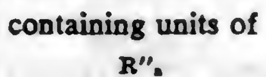
18. A siloxane containing units of the general formula



$$O_{\frac{4-x-a}{2}}\overset{R''_a}{\overset{|}{Si}}[R'(SH)_y]_x$$

wherein each
R′ is selected from the group consisting of trivalent and tetravalent hydrocarbon, hydrocarbon ether, hydrocarbon thioether, hydrocarbon ester and hydrocarbon thioester radicals, R′ being attached to the silicon atom via a silicon-carbon bond, each
R″ is a monovalent hydrocarbon radical free of aliphatic unsaturation,
a is an integer from 0 to 2,
x is an integer from 1 to 2,
y is an integer from 2 to 3,
the sum of *x* and *a* being from 1 to 3.

24. A siloxane containing units of the general formula



$$O_{\frac{4-x-a}{2}}\overset{R''_a}{\overset{|}{Si}}[R'(SH)_y]_x$$

wherein each
R′ is selected from the group consisting of trivalent and tetravalent hydrocarbon, hydrocarbon ether, hydrocarbon thioether, hydrocarbon ester and hydrocarbon thioester radicals, R′ being attached to the silicon atom via a silicon-carbon bond, each

R″ is a monovalent hydrocarbon radical free of aliphatic unsaturation,
a is an integer from 0 to 2,
x is an integer from 1 to 2,
y is an integer from 2 to 3,
the sum of *x* and *a* being from 1 to 3,
and siloxane units of the general formula

$$R'''_nSiO_{\frac{4-n}{2}}$$

wherein each R‴ is selected from the group consisting of monovalent hydrocarbon and monovalent halogenated hydrocarbon radicals free of aliphatic unsaturation, and
n is an integer from 0 to 3.

3,388,145
PRODUCTION OF LOWER ALKYL ISOCYANATES

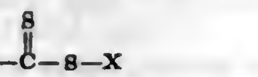
Walter Merz, Leverkusen, Germany, assignor to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a German corporation
Filed July 1, 1964, Ser. No. 379,540
Claims priority, application Germany, July 12, 1963, F 40,221
3 Claims. (Cl. 260—453)

Preparation of methyl, ethyl, n-propyl, isopropyl and allyl isocyanates by decomposition of the corresponding carbamyl chloride and separation of the HCl and isocyanate. The HCl and isocyanate are separated by cooling a portion of the mixture to a temperature below the boiling point of the isocyanate being prepared, removing the HCl from this portion, maintaining the resulting mixture at substantially the boiling point of the isocyanate until the balance of the HCl has recombined to form the corresponding carbamyl chloride and collecting the excess free isocyanate from the mixture.

3,388,146
CARBAZINATE DERIVATIVES

Adel F. Halasa, Akron, Ohio, assignor to The Firestone Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
No Drawing. Filed Oct. 24, 1965, Ser. No. 504,984
6 Claims. (Cl. 260—455)

1. A compound having the formula



$$R_2-N-\overset{H}{\overset{|}{N}}-\overset{S}{\overset{\|}{C}}-S-X$$

in which each R is a straight- or branched-chain alkyl group of 1 to 4 carbon atoms, and in which X is selected from the class consisting of:

(a) phenylthioformyl and
(b) phenyl, benzyl and benzoyl in which the benzene ring is substituted by one or more nitro groups in any one or more positions,

and in positions not substituted by a nitro group there is no substituent or one or more substituents from the class consisting of (a) chloro, (b) phenyl, (c) nitrile, (d) hydroxy, (e) $—NR_2$ in which each R is selected from the class consisting of hydrogen and straight- or branched-chain alkyl groups of 1 to 4 carbon atoms, and (f) straight- and branched-chain and cyclic alkyl groups of 1 to 6 carbon atoms.

3,388,147
2-FLUORO-2,2-DINITROETHYL CARBONATES AND PRODUCTION THEREOF

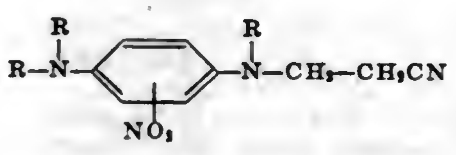
Mortimer J. Kamlet and Kathryn G. Shipp, Silver Spring, Md., and Marion E. Hill, Palo Alto, Calif., assignors to the United States of America as represented by the Secretary of the Navy
No Drawing. Filed Dec. 9, 1965, Ser. No. 514,763
7 Claims. (Cl. 260—463)

1. A compound selected from the group consisting of bis(2-fluoro-2,2-dinitroethyl) carbonate, tetrakis(2-fluoro-2,2-dinithoethyl) orthocarbonate and tris(2 - fluoro-2,2-dinitroethyl) orthoformate.

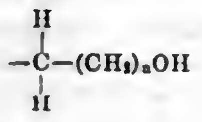
3,388,148
N-CYANOETHYL DERIVATIVES OF NITRO-p-PHENYLENEDIAMINE

Moses D. Altman, Morristown, N.J., assignor to Warner-Lambert Pharmaceutical Company, Morris Plains, N.J., a corporation of Delaware
No Drawing. Filed June 16, 1965, Ser. No. 464,544
5 Claims. (Cl. 260—465)

N-substituted derivatives of nitro-p-phenylenediamine of the formula:



wherein R may be hydrogen or



$$-\underset{H}{\underset{|}{\overset{H}{\overset{|}{C}}}}-(CH_2)_nOH$$

in which *n* is an integer of from 1 to 5. These compounds are useful as dyes for fabric, hair and the like.

3,388,149
OXIDATION OF 2,5-DIARYLAMINO-3,6-DIHYDROTEREPHTHALIC ESTERS

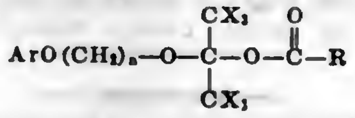
Chi Kang Dien, Buffalo, N.Y., assignor to Allied Chemical Corporation, New York, N.Y., a corporation of New York
No Drawing. Filed Jan. 30, 1964, Ser. No. 341,426
13 Claims. (Cl. 260—471)

1. A process for the oxidation of 2,5-diarylamino-3,6-dihydroterephthalic ester, to 2,5-diarylamino-3,6-terephthalic esters which comprises contacting the ester with an aromatic, water insoluble nitro compound having a melting point of at least 25° C. wherein said nitro compound is present in an amount to provide at least ⅔ molar equivalent of nitro group per mol of ester.

3,388,150
FLUOROKETONE HEMIKETAL ESTERS

Peter E. Newallis, Morris Plains, Roger L. Pierpont, Westfield, and Edmund J. Rumanowski, Dover, N.J., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York
No Drawing. Filed Aug. 27, 1964, Ser. No. 392,618
7 Claims. (Cl. 260—476)

Fluoroketone hemiketal esters, useful as herbicides, having the following formula:



$$ArO(CH_2)_n-O-\underset{CX_3}{\underset{|}{\overset{CX_3}{\overset{|}{C}}}}-O-\overset{O}{\overset{\|}{C}}-R$$

in which Ar is a member selected from the group consisting of phenyl, halogen substituted phenyl, lower alkyl substituted phenyl and halogen substituted lower alkyl substituted phenyl, *n* is an integer of 1 to 3, X is a member selected from the group consisting of Cl and F and R is a member selected from the group consisting of lower alkyl, halogen substituted lower alkyl, phenyl, halogen substituted phenyl, lower alkyl substituted phenyl and halogen substituted lower alkyl substituted phenyl.

3,388,151
3,5-DIMETHYL-4-DIMETHYLAMINOMETHYLPHENYL-N-METHYLCARBAMATE

Hendricus Bernardus Antonius Welle, Utrecht, and Jacques Meltzer, Van Houtenlaan, Weesp, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed July 15, 1965, Ser. No. 472,320
Claims priority, application Netherlands, July 17, 1964, 6,408,165
1 Claim. (Cl. 260—479)

1. 3,5 - dimethyl - 4 - dimethylaminomethylphenyl-N-methylcarbamate.

3,388,152
POLYENE GLYCOLS AND ACETOXY-POLYENE GLYCOLS BY PINACOLIC REDUCTION OF POLYENE ALDEHYDES

Albert J. Reedy, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Aug. 24, 1964, Ser. No. 391,743
11 Claims. (Cl. 260—488)

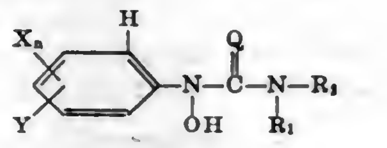
Polyene aldehydes, such as, for example, retinal or sorbaldehyde, are reduced to the corresponding pinacol by contact with activated zinc in a reaction medium of pyridine or an alkylpyridine. The polyene α-glycols resulting from the pinacolic reduction are useful as intermediates in the synthesis of carotenoids.

3,388,153
3-PHENYL-3-HYDROXYUREAS AND THIOUREAS

Rayner S. Johnson, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Original application Jan. 9, 1963, Ser. No. 250,734, now Patent No. 3,254,984, dated June 7, 1966. Divided and this application Nov. 24, 1965, Ser. No. 509,639
4 Claims. (Cl. 260—500.5)

Substituted ureas of the formula



wherein X is hydrogen, methyl or halogen; Y is hydrogen, halogen, nitro, alkyl of less than 5 carbon atoms, or alkoxy of less than 5 carbon atoms; *n* is 1 or 2; Q is oxygen or sulfur; R_1 is alkyl of less than 5 carbon atoms, preferably methyl; and R_2 is hydrogen, alkyl of less than 5 carbon atoms, or alkoxy of less than 5 carbon atoms; provided the sum of carbon atoms in R_1 and R_2 is less than 6; possess outstanding herbicidal activity and are most effective as foliar and pre-emergence herbicides. These ureas have high oil solubility and soil persistance not possessed by certain closely related prior art compounds.

3,388,154
METHOD OF PRODUCING GOOD COLOR EPOXIDE-TAURINE CONDENSATION PRODUCTS

Louie S. Bitar, Springfield, and Harold A. Sorgenti, Philadelphia, Pa., assignors to Atlantic Richfield Company, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed May 23, 1967, Ser. No. 640,471
4 Claims. (Cl. 260—513)

Production of substantially color-free condensation products of C_{10}–C_{18} 1,2-epoxides and a taurine salt by furfural solvent extracting the C_{10}–C_{18} alpha-olefins from which the epoxides are produced.

3,388,155
4,4-DIHALO-2-(4-BIPHENYLYL)-3-BUTENOIC ACIDS

Robert M. Novack, Mendham, N.J., assignor to Warner-Lambert Pharmaceutical Company, Morris Plains, N.J., a corporation of Delaware

No Drawing. Filed June 8, 1964, Ser. No. 373,520
2 Claims. (Cl. 260—515)

A novel process for the production of 4,4-dihalo-2-(4-biphenylyl)-3-butenoic acid by reacting 4,4,4-trihalo-crontonic acid with biphenyl in the presence of a Friedel-crafts catalyst.

3,388,156
METHOD OF RECOVERING CRUDE TEREPHTHALIC ACID

Ryoichi Sakurai and Shozaburo Nagano, Iwakuni-shi, Japan, assignors to Teijin Limited, Osaka, Japan, a corporation of Japan

No Drawing. Continuation-in-part of application Ser. No. 122,114, July 6, 1961. This application Feb. 24, 1966, Ser. No. 529,644
6 Claims. (Cl. 260—525)

1. A method of recovering substantially pure terephthalic acid which comprises the steps of heating dialkali metal terephthalate in solid form to a temperature of from 100–550° C., dissolving said solid heat-treated dialkali metal terephthalate in water and mixing an active carbon with said dissolved heat-treated dialkali metal terephthalate, removing said active carbon from said solution, reacting the dialkali metal terephthalate solution with an acid having a disassociation constant greater than carbonic acid thereby converting the dialkali metal terephthalate to terephthalic acid; and separating the purified terephthalic acid from solution.

3,388,157
PROCESS FOR THE PRODUCTION OF DICARBOXYLIC ACIDS

Narses Barona, Baton Rouge, La., assignor to Ethyl Corporation, New York, N.Y., a corporation of Virginia

Filed Feb. 10, 1965, Ser. No. 431,656
9 Claims. (Cl. 260—533)

Process is disclosed where hydrocarbons are partially oxidized, hydrogenated to convert the non-acid oxygenated molecules to paraffins, the product being then separated into light and heavy fractions. The light fraction is extracted with water and heavy paraffin to recover light acids. The heavy fraction is extracted with water to separate in a water phase the water soluble dicarboxylic acids and some intermediate monocarboxylic acids. The extracted acids are then separated into virtually individual acids in high yield.

3,388,158
1-(DICHLOROBENZYL)-3-METHYL (OR 3,3-DIMETHYL)UREAS

Alexander R. Surrey, Albany, N.Y., assignor to Sterling Drug Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Aug. 9, 1965, Ser. No. 478,436
5 Claims. (Cl. 260—553)

1-(dichlorobenzyl)-3-methyl (or 3,3-dimethyl)ureas, herbicidal agents, are prepared by reacting a dihalobenzyl isocyanate with methylamine or dimethylamine.

3,388,159
NOVEL SULFONYLCARBODIIMIDES AND PROCESS

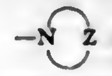
Adnan A. R. Sayigh, North Haven, and Henri Ulrich, Northford, Conn., and John B. Wright, Kalamazoo, Mich., assignors to The Upjohn Company, Kalamazoo, Mich., a corporation of Delaware

No Drawing. Filed Jan. 2, 1964, Ser. No. 335,414
5 Claims. (Cl. 260—556)

1. A compound of the formula

$$R^1—SO_2—N{=}C{=}N—R$$

wherein R^1 is selected from the group consisting of alkyl from 1 to 6 carbon atoms, R is selected from the group consisting of alkyl of one to six carbon atoms, inclusive, cycloalkyl of five to eight carbon atoms, inclusive, and



which is selected from the group consisting of unsubstituted mono- and polyalkyl substituted piperidino and hexamethyleneimino wherein each alkyl is of one to four carbon atoms, inclusive.

2. N-methylsulfonyl-N′-n-propylcarbodiimide.

3,388,160
N,N-DIFLUORAMIDES AND METHOD FOR PREPARING SAME

Jeremiah P. Freeman and Robert C. Petry, Huntsville, Ala., assignors to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

No Drawing. Filed Feb. 8, 1961, Ser. No. 87,968
10 Claims. (Cl. 260—558)

1. A process for the preparation of N,N-difluoramides of the general formula

$$RCONF_2$$

in which R is as hereinafter defined which comprises irradiating with ultraviolet light a mixture of tetrafluorohydrazine, N_2F_4, and a diketone of the formula

$$RCOCOR$$

in which R is a member of the group consisting of H, a C_1 to C_8 alkyl group, phenyl, benzyl, β-phenyl ethyl, β-p-tolyl ethyl, and β-naphthyl ethyl, and recovering the N,N-difluoramide from the reaction mixture.

7. A compound of the formula

$$RCONF_2$$

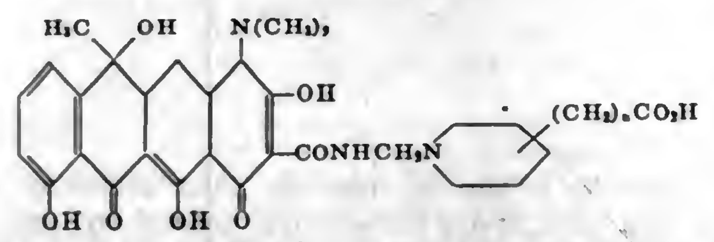
in which R is a group selected from the group consisting of hydrogen, a C_1 to C_8 alkyl group, phenyl, benzyl, β-phenyl ethyl, β-p-tolyl ethyl, and β-naphthyl ethyl.

3,388,161
AMINOMETHYL DERIVATIVES OF TETRACYCLINE

Giancarlo Lancini, Pavia, and Piero Sensi, Milan, Italy, assignors to Lepetit S.p.A., Milan, Italy

No Drawing. Filed Nov. 23, 1964, Ser. No. 413,343
Claims priority, application Great Britain, Dec. 6, 1963, 48,330/63
6 Claims. (Cl. 260—559)

3. Compounds of the formula



wherein *n* represents an integer from 0 to 3 inclusive.

3,388,162
7- AND/OR 9-NITRO OR AMINO TETRACYCLINES

Robert Winterbottom, New City, Panayota Bitha, New York, and Henry Marcel Kissman, Nanuet, N.Y., assignors to American Cyanamid Company, Stamford, Conn., a corporation of Maine

No Drawing. Continuation-in-part of application Ser. No. 533,781, Mar. 14, 1966. This application Dec. 1, 1966, Ser. No. 598,233
9 Claims. (Cl. 260—559)

This disclosure describes compounds of the class of 7- and/or 9-nitro- or -aminotetracyclines useful as intermediates for the preparation of the corresponding 7- and/or 9-mono(lower alkyl)amino- or -di(lower alkyl)-aminotetracyclines.

3,388,163
SUBSTITUTED 2′-CHLORO-4′-NITROSALICYLANILIDES

Jack D. Early, Bethesda, Md., and John P. Chupp, Kirkwood, Mo., assignors to Monsanto Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Original application Mar. 22, 1966, Ser. No. 536,256. Divided and this application July 13, 1967, Ser. No. 653,017
7 Claims. (Cl. 260—559)

Compounds characterized by a 2′-chloro - 4′ - nitrosalicylanilido nucleus useful as insecticides.

3,388,164
METHOD OF PREPARING 1-ADAMANTANAMINE

William Vincent Curran and Robert Bruce Angier, Pearl River, N.Y., assignors to American Cyanamid Company, Stamford, Conn., a corporation of Maine

No Drawing. Filed Jan. 4, 1966, Ser. No. 518,531
1 Claim. (Cl. 260—563)

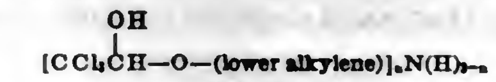
1. The method of preparing 1-adamantanamine which comprises reacting adamantane-1-carboxylic acid with sodium azide in a solvent system consisting essentially of a mixture of trifluoroacetic acid and trifluoroacetic anhydride to form 1-trifluoroacetamidoadamantane, and hydrolyzing said 1-trifluoroacetamidoadamantane to obtain 1-adamantanamine.

3,388,165
PRODUCTS OF THE REACTION OF CHLORAL WITH HYDROHALIDES WITH ALKANOLAMINES AND DIALKANOLAMINES

Andrew C. Hazy, New Haven, and Joseph V. Karabinos, Orange, Conn., assignors, by mesne assignments, to E. R. Squibb & Sons, Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Oct. 15, 1965, Ser. No. 496,650
5 Claims. (Cl. 260—584)

Hydrohalides of compounds of the formula



$$[CCl_3\overset{\overset{\large OH}{|}}{C}H—O—(\text{lower alkylene})]_nN(H)_{3-n}$$

wherein *n* is one or two, are prepared by reacting chloral with a hydrohalide of an alkanolamine or di-alkanolamine. The compounds are useful as hypnotic agents.

3,388,166
DINITRO-2-METHYL-2-PHENYLINDANONES

Herman A. Bruson, Woodbridge, and Howard L. Plant, Milford, Conn., assignors to Olin Mathieson Chemical Corporation, a corporation of Virginia

No Drawing. Filed Mar. 1, 1967, Ser. No. 619,616
3 Claims. (Cl. 260—590)

A series of dinitro-2-methyl-2-phenylindanones are prepared by the nitration of the corresponding 2-methyl-2-phenylindanones. The new compounds are useful as chemical intermediates in the preparation of dyestuffs and polyurethane foams.

3,388,167

β-BROMO-ETHYL ARYL THIO-ETHERS

Shuichi Ishida, Omiya, and Shigeki Kirihara and Shinichi Usukura, Tokyo, Japan, assignors to Nippon Kayaku Kabushiki Kaisha, Tokyo, Japan, a corporation of Japan

No Drawing. Continuation-in-part of application Ser. No. 383,901, July 20, 1964. This application Mar. 8, 1965, Ser. No. 438,031

Claims priority, application Japan, July 23, 1963, 38/37,186; May 15, 1964, 39/27,231; June 16, 1964, 39/33,736

9 Claims. (Cl. 260—609)

Ring-substituted β-bromo-ethyl aryl thio-ethers of the formula

$$R—S—CH_2—CH_2—Br$$

wherein R represents phenyl monosubstituted by alkoxy, alkoxycarbonyl, nitro, formyl or, in the o- or m-position relative to the $—S—CH_2—CH_2—Br$ group, by alkyl or a halogen atom; disubstituted phenyl substituted by two of the following: halogen, alkyl or alkoxy groups; α- or β-naphthyl which is unsubstituted or monosubstituted by a halogen atom, the nitro or formyl group or by alkyl, alkoxy or alkoxycarbonyl; or disubstituted α- or β-naphthyl having the two substituents selected from the following: halogen, alkyl or alkoxy radicals; are very effective in combatting noxious Acarinae, such as spider mites and the like and their stages of development and thus are well suited as acaricides. Methods of preparation and use of the acaricidal compounds are disclosed.

3,388,168

1 - (α - METHOXYCYCLOPENTOXY)METHYL-2 - METHYL - 3 - ETHYL - 4 - PHENYL - 4-CYCLOHEXENE

Alexander Mebane, New York, N.Y., assignor to Ortho Pharmaceutical Corporation, a corporation of New Jersey

No Drawing. Original application Mar. 8, 1966, Ser. No. 532,581, now Patent No. 3,344,147, dated Sept. 26, 1967. Divided and this application Jan. 31, 1967, Ser. No. 612,772

1 Claim. (Cl. 260—611)

1 - (α - methoxycyclopentoxy)methyl-2-methyl-3-ethyl-4-phenyl-4-cyclohexene is an agent for the reduction of fertility in female animals.

3,388,169

STABILIZATION OF POLYOXYALKYLENE COMPOUNDS

John E. Tyre, South Charleston, and Friso G. Willeboordse, St. Albans, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Nov. 29, 1963, Ser. No. 327,046

1 Claim. (Cl. 260—611.5)

An additive system consisting of 2,2′-methylene bis(4-methyl - 6 - tertiarybutylphenol) and 2,6 - ditertiary butyl paracresol for polyoxyalkylene compounds to render the polyol compound singularly resistant to oxidation.

3,388,170

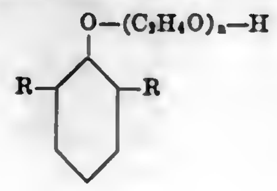
POLYOXYETHYLENE ADDUCT OF 2,6-DI-t-BUTYLPHENOL

Eugene Edward Magat, Wilmington, and Isaac Fletcher Walker, Hockessin, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 378,033, June 25, 1964. This application July 30, 1965, Ser. No. 476,181

1 Claim. (Cl. 260—613)

1. A compound of the formula



wherein the hexagon represents the benzene nucleus, R is tertiary butyl and *n* is a number from 50 to 200 inclusive.

3,388,171

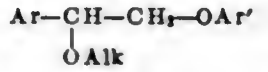
HERBICIDAL ETHER

Dolores V. Lopiekes, Bridgewater, Mass., assignor to Monsanto Research Corporation, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Aug. 19, 1965, Ser. No. 481,099

2 Claims. (Cl. 260—613)

1. A new class of compounds of the formula



$$Ar—\underset{OAlk}{\underset{|}{C}H}—CH_2—OAr'$$

in which Alk is a saturated aliphatic hydrocarbon chain, straight or branched, of from 1 to 6 carbon atoms, and each of Ar and Ar′ is an aromatic hydrocarbon radical of 6 to 12 carbon atoms.

3,388,172

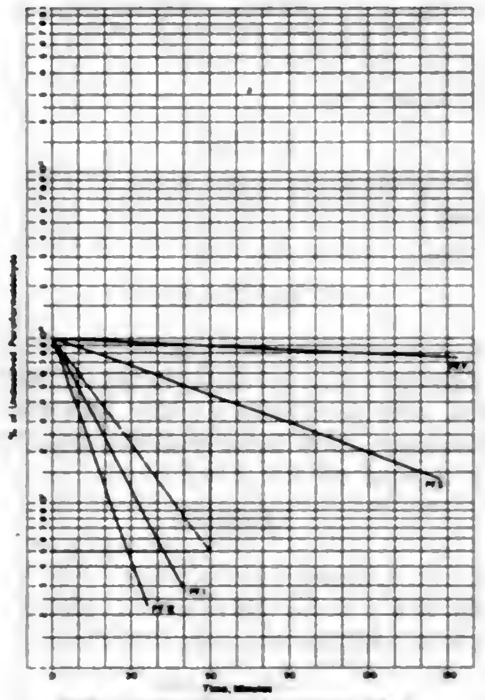
WATER-SOLUBLE PARAFORMALDEHYDE COMPOSITIONS

Ibrahim Dakli, Busto Arsizio, Varese, Nazareno Lupi, Castellanza, Varese, Valentino Zamboni, Busto Arsizio, Varese, and Avio D'Emilio, Milan, Italy, assignors to Montecatini Edison S.p.A., Milan, Italy

Continuation-in-part of application Ser. No. 295,304, July 16, 1963. This application Aug. 25, 1966, Ser. No. 584,291

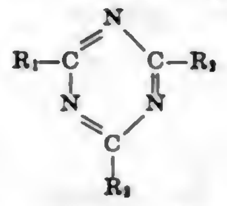
Claims priority, application Italy, July 17, 1962, 14,410/62, Patent 678,670

4 Claims. (Cl. 260—615.5)



Solubility of Paraformaldehyde in Deionized Water at 50°C

Paraformaldehyde composition having a formaldehyde content higher than 75%, a dry microcrystalline appearance free of pasty and aldolic products, a water solubility at 50° C. of about 95% in 30–40 minutes, polyoxymethylene chains having an average polymerization degree of between 15 and 70, containing 0.01 to 5% by weight of said composition of a stabilizer having the formula



in which R_1 is selected from the group consisting of hydrogen, alkyl, aryl, a partially hydrogenated aryl, cycloalkyl, alkylaryl, and alkenylamino radicals and R_2 and R_3 are each —NR′R″ radicals in which R′ and R″ are each selected from the group consisting of hydrogen, aryl, alkyl and hydroxyalkylene radicals.

3,388,173

PREPARATION OF NITROAROMATIC HYDROXIDES

Danford H. Olson and Phillip W. Storms, Littleton, Colo., assignors to Marathon Oil Company, Findlay, Ohio, a corporation of Ohio

No Drawing. Filed June 9, 1964, Ser. No. 373,864

7 Claims. (Cl. 260—622)

A method of producing nitrated arylhydroxides, particularly, mono- and polynitrophenols by direct nitration of the corresponding aromatic hydrocarbon hydroperoxides.

3,388,174

PROCESS FOR MAKING FLUOROCHLOROBENZENES AND HEXAFLUOROBENZENE

Harold Crosbie Fielding and Frank Nyman, Northwich, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Filed Sept. 10, 1964, Ser. No. 395,549

Claims priority, application Great Britain, Oct. 3, 1963, 38,976/63

6 Claims. (Cl. 260—650)

1. In a process for making fluorine compounds having the general formula $C_6F_nCl_{6-n}$, where *n* is an integer from 4 to 6, by fluorinating a fluorochlorobenzene having fewer fluorine atoms in a molecule by refluxing it at 150° C. to 250° C. with a dry alkali metal fluoride in a polar, non-proton-donating, liquid, organic reaction medium, selected from the group consisting of tetramethylene sulphone, dimethyl sulfoxide, dimethyl formamide, demethyl acetamide, and molten phthalic anhydride, the improvement characterized in that volatile products after leaving the reaction medium are continuously condensed and continuously returned thereto at a point below the surface of said liquid organic reaction medium.

3,388,175

PURIFICATION OF 2,2,2-TRIFLUORO-1-CHLORO-1-BROMOETHANE

David John Viney, Runcorn, England, assignor to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Filed Dec. 20, 1965, Ser. No. 515,248

Claims priority, application Great Britain, Jan. 1, 1965, 55/65

10 Claims. (Cl. 260—653)

There is provided a process for the purification of 2,2,2-trifluoro-1-chloro-1-bromoethane, commonly known as halothane, wherein impurities of the formulae

$$CF_3·CX=CYCF_3$$

and $CF_2=CClZ$ wherein X is hydrogen bromine or chlorine, Y is bromine or chlorine and Z is hydrogen, bromine, chlorine and fluorine are removed. The halothane while in the liquid state is purified by contacting the halothane with a solution of a metal permanganate which removes the said impurities.

3,388,176

PROCESS AND COMPOSITION FOR CHLORINATING ACETYLENE WITH AQUEOUS CUPRIC CHLORIDE SOLUTIONS TO PRODUCE TRICHLORETHYLENE AND PERCHLORETHYLENE

John Leo Sheard, Lewiston, N.Y., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del.

No Drawing. Filed May 13, 1966, Ser. No. 549,820

10 Claims. (Cl. 260—654)

Process and composition for chlorinating acetylene with aqueous copper chloride solutions in which the formation of trichlorethylene and/or perchlorethylene is promoted by maintaining at least 50% of the copper in the cupric form while using a compound such as pyridine hydrochloride to increase productivity, and while using a buffer phosphoric acid, acetic acid or one of certain salts thereof in order to maintain low acidity.

3,388,177

PROCESS AND COMPOSITION FOR CHLORINATING ACETYLENE WITH AQUEOUS CUPRIC CHLORIDE SOLUTIONS TO PRODUCE TRICHLORETHYLENE AND PERCHLORETHYLENE

Leslie J. Todd, Grand Island, N.Y., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed May 13, 1966, Ser. No. 549,821

9 Claims. (Cl. 260—654)

Process and composition for chlorinating acetylene with aqueous copper chloride solutions in which the formation of trichlorethylene and/or perchlorethylene is promoted by maintaining at least 50% of the copper in the cupric form while using as a buffer phosphoric acid, acetic acid or one of certain salts thereof in order to maintain low acidity.

3,388,178

PREPARATION OF SOLUTIONS OF LITHIUM-CONJUGATED POLYENE HYDROCARBON ADDUCTS

Conrad W. Kamienski, Arthur C. Diesing, and Robert C. B. Morrison, Gastonia, N.C., assignors to Lithium Corporation of America, Inc., New York, N.Y., a corporation of Minnesota

No drawing. Filed Dec. 27, 1963, Ser. No. 334,013

10 Claims. (Cl. 260—665)

Preparation of lithium-conjugated polyene hydrocarbon adducts by providing a mixture containing (a) a dispersion of finely divided lithium in an inert liquid, (b) a volatile liquid aromatic hydrocarbon, and (c) an inert liquid ether, gradually adding a conjugated polyene hydrocarbon while maintaining the reaction mixture at a low temperature, preferably below 0° C., said reaction being advantageously carried out in the presence of a catalyst in the form of a lithium-conjugated polyene hydrocarbon adduct added to the reaction mixture in the form of a solution in a volatile liquid aromatic hydrocarbon, passing an inert gas over the reaction product mixture to purge the same of the ether, then adding an additional quantity of a volatile liquid hydrocarbon and warming the reaction product mixture, and then filtering to remove unreacted lithium metal whereby to produce a clear solution of the lithium-conjugated polyene hydrocarbon adduct in said volatile liquid hydrocarbon.

3,388,179

ORGANOMAGNESIUM ADDITION COMPOUNDS, PROCESS THEREFOR, AND DERIVATIVES THEREOF

Hugh E. Ramsden, Scotch Plains, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 423,293, Jan. 4, 1965. This application Mar. 22, 1967, Ser. No. 625,023

24 Claims. (Cl. 260—665)

Organomagnesium compounds formed by the reaction of magnesium with aliphatic conjugated dienes are useful as new Grignard reagents, particularly for the preparation of terpene type compounds useful as odor chemicals and organotin compounds useful as pesticides.

3,388,180

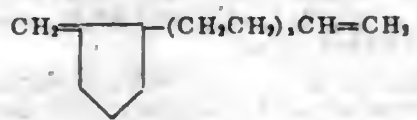
DI(ω-ALKENYL)CYCLOPENTANES

Erich Marcus, Charleston, and Donald L. MacPeek, South Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

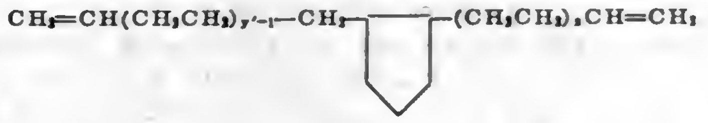
No Drawing. Original application Dec. 28, 1962, Ser. No. 247,828, now Patent No. 3,358,008, dated Dec. 12, 1967. Divided and this application Mar. 20, 1967, Ser. No. 624,234

9 Claims. (Cl. 260—666)

This invention relates to the production of di(ω-alkenyl)cyclopentanes of the formula:



and



where *y′* is a positive integer of from 1 to 8 and *z* is an integer from 0 to 8, by reacting 1,5-cyclooctadiene with an isoalkylaluminum, optionally growing the resulting polymer with ethylene, and reacting the resulting polymer with ethylene in the presence of an aluminum displacement catalyst to produce said di(ω-alkenyl)cyclopentanes.

3,388,181

PREPARATION OF ISOPROPENYL ACETYLENE

Harry D. Anspon, Kansas City, Mo., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Nov. 9, 1965, Ser. No. 507,036

8 Claims. (Cl. 260—678)

A process for preparing isopropenyl acetylene which comprises passing methyl butynol through a reaction zone containing a catalyst comprising phosphoric acid distributed on a solid, inert, non-porous carrier. The catalyst remains active for a plurality of successive passes of methyl butynol through the reaction zone and a black resinous polymeric coating produced on the carrier by the contact of methyl butynol with phosphoric acid appears to further catalyze the reaction of methyl butynol to isopropenyl acetylene.

3,388,182

PREPARATION OF 1,7-OCTADIENE

Samuel W. Tinsley and Edward A. Rick, South Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed May 12, 1961, Ser. No. 109,488.

6 Claims. (Cl. 260—680)

1. The process of preparing 1,7-octadiene which comprises pyrolyzing cyclooctene at a temperature of from 450–700° C. at a contact time of from 1 to 30 seconds.

3,388,183

OLEFIN PYROLYSIS PROCESS PROMOTED WITH MIXTURES OF BROMINE AND AROMATIC HYDROCARBONS

Kenneth J. Frech, Tallmadge, Ohio, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

No Drawing. Continuation-in-part of application Ser. No. 399,068, Sept. 24, 1964. This application Aug. 17, 1966, Ser. No. 572,905

10 Claims. (Cl. 260—680)

Olefins are cracked using as the cracking promotor a mixture of a bromine containing compound and benzene, toluene or xylene. Increased yields and efficiencies are shown for the preparation of isoprene from 3-methyl-2-pentene by the use of hydrogen bromide with benzene and toluene as the cracking promotor.

3,388,184

DEHYDROGENATION OF PARAFFIN HYDROCARBON OVER Pt CATALYST TREATED WITH ALUMINUM MONOFLUORIDE VAPOR

Norman A. Fishel, Lansing, Mich., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Filed Oct. 10, 1966, Ser. No. 585,237

10 Claims. (Cl. 260—683.3)

C_4–C_6 and cyclohexane were dehydrogenated over Pt-Al_2O_3 pellets upon which AlF had been volatilized at 650° C. from mixture of Al metal and AlF_3.

3,388,185

SOLID EPOXIDE COATING COMPOSITIONS CONTAINING A MIXTURE OF MONO AND POLYFUNCTIONAL ANHYDRIDES

Newton N. Goldberg and Irving N. Elbling, Pittsburgh, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

No Drawing. Filed Feb. 20, 1964, Ser. No. 346,080

9 Claims. (Cl. 260—830)

Coating compositions, suitable for use in a fluidized bed process, are formed from progenitors which have not been prereacted. The compositions cure rapidly to form hard, infusible, very flexible coatings. the compositions contain a major portion of at least one polyglycidyl ether of a dihydric phenol and minor portions of a mixture of anhydride curing agents which contribute to the flexibility of the cured coating. At least a portion of the anhydride curing agents are polyfunctional compounds.

3,388,186

CARBOXY TERMINATED GRAFT COPOLYMERS OF AMINO-CARBOXYLIC ACIDS OR LACTAMS ON ACRYLIC COPOLYMERS

Raymond J. Kray, Berkeley Heights, and Richard J. Bellet, Mountain Lakes, N.J., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York

No Drawing. Filed Mar. 2, 1965, Ser. No. 436,685

9 Claims. (Cl. 260—857)

This invention relates to graft polymers having a backbone chain containing recurring ethylenic units and side chains containing carboxy terminated polyamide groups.

3,388,187

DERIVATIVES OF CARBOXYLIC ACIDS AND THEIR USES

James Christopher Phillips Sly and David Pedrick Hansell, Tonbridge, and William Flavell, Chessington, England, assignors to Bridge Chemicals Limited, Mundells, Welwyn Garden City, England, a British company

No Drawing. Filed July 12, 1965, Ser. No. 471,414

8 Claims. (Cl. 260—872)

The synthesis of various esters of all cis 1,2,3,4-cyclopentanetetracarboxylic acid (CPTCA) having at least one unsaturated aliphatic ester moiety is accomplished by direct esterification or by use of anhydrides. The allyl esters are preferred. The unsaturated esters of CPTCA have utility as cross-linking plasticizers, cross-linking agents in dough moulding plastics and especially as bonding agents; for example, to assist bonding polyvinyl chloride to metal.

3,388,188

CROSS LINKED CHLOROPRENE POLYMERS AND BLENDS THEREOF WITH BENZENE SOLUBLE CHLOROPRENE POLYMERS

Alan Charles Sturt, Worcester Park, England, assignor to The Distillers Company Limited, Edinburgh, Scotland, a British company

No Drawing. Filed Dec. 7, 1965, Ser. No. 512,233

Claims priority, application Great Britain, Jan. 2, 1965, 201/65

4 Claims. (Cl. 260—890)

A method for making a crosslinked polymer and blends of this polymer with solid benzene soluble chloroprene polymers the blends having good processing properties. The crosslinked polymer is made by polymerizing chloroprene in aqueous emulsion at average tempteratures $\bar{T}$ in the range 70 to 85° C. at an average conversion of monomer to polymer $\bar{R}$ in the range 0.5 to less than 0.8.

3,388,189

COPOLYMERS FOR ACRYLIC FIBERS HAVING IMPROVED BASIC DYEING PROPERTIES COMPRISING ACRYLONITRILE, A CINNAMIC ACID AND VINYLACETATE OR VINYLIDENE CHLORIDE

Corrado Mazzolini and Sergio Lo Monaco, Mestre, Venezia, Italy, assignors to Monsanto Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 260,838, Feb. 25, 1963. This application Apr. 8, 1963, Ser. No. 271,467

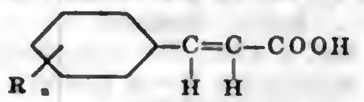
28 Claims. (Cl. 260—895)

1. A fiber-forming composition of matter of improved basic dyeability comprising a copolymer containing in polymerized form:

(a) at least 80 percent by weight of acrylonitrile,

(b) up to 19.95 percent by weight of at least one other copolymerizable mono-olefinic monomer selected from the group consisting of vinyl acetate and vinylidene chloride,

(c) and from 0.05 to 2.0 percent by weight of a carboxylic acid of the general formula



wherein R is selected from the group consisting of a lower alkyl radical and a halogen and *n* is an integer of from 0 to 3 inclusive.

3,388,190

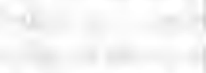
DYEABLE POLYPROPYLENE

George M. Bryant, South Charleston, and Nathan L. Zutty, Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Apr. 23, 1962, Ser. No. 189,303

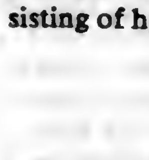
9 Claims. (Cl. 260—897)

1. A composition comprising a blend of (A) from about 20 to 99 percent by weight of a solid polypropylene and (B) from about 1 to 80 percent by weight of a copolymer of ethylene and a member selected from the group consisting of acrylyl compounds of the formula



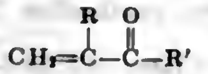
$$CH_2=\overset{R}{\overset{|}{C}}-\overset{O}{\overset{\|}{C}}-R'$$

wherein R is a member selected from the group consisting of hydrogen and methyl; R′ is



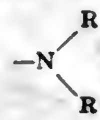
R″ is a member selected from the group consisting of hydrogen and alkyl; said R′ containing from 1 to 10 carbon atoms; said copolymer containing in the copolymer molecule from about 0.5 to about 50 percent by weight of said polymerizable acrylyl compound therein.

2. A composition comprising a blend of (A) from about 60 to 97.5 percent by weight of a solid polypropylene and (B) from about 2.5 to 40 percent by weight of a copolymer of ethylene and a member selected from the group consisting of acrylyl compounds of the formula



$$CH_2=\overset{R}{\overset{|}{C}}-\overset{O}{\overset{\|}{C}}-R'$$

wherein R is a member selected from the group consisting of hydrogen and methyl; R′ is



R″ is a member selected from the group consisting of hydrogen and alkyl; said R′ containing from 1 to 10 carbon atoms; said copolymer containing in the copolymer molecule from about 5 to about 40 percent by weight of said polymerizable compound therein.

3,388,191

PHOSPHATE SALT OF REACTION PRODUCT OF DICARBOXYLIC ACID, ANHYDRIDE OR ESTER AND ALKANOLAMINE

Henryk A. Cyba, Evanston, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Filed Apr. 5, 1965, Ser. No. 445,789

14 Claims. (Cl. 260—925)

Salt of a phosphorus compound selected from the group consisting of phosphate, phosphinate, phosphonate and thio derivatives thereof with the reaction product, formed at a temperature of 175°–500° F., of one mole proportion of a compound selected from the group consisting of polyhalopolyhydropolycyclicdicarboxylic acid, anhydride and ester thereof with from one to two mole proportions of an alkanolamine containing only one each of hydroxyl and amino groups. The compounds are useful as additives for lube oils and greases.

3,388,192

3-(FLUOROMETHYL)-3-BUTEN-1-OL PYROPHOSPHATE AND PROCESS FOR MAKING SAME

Hans Machleidt, Biberach an der Riss, Horst Lechner, Oberlar, Troisdorf, and Michael Klockow, Marbach, near Marburg, Germany, assignors, by mesne assignments, to E. R. Squibb & Sons, Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Apr. 13, 1965, Ser. No. 447,900

2 Claims. (Cl. 260—933)

3-(fluoromethyl)-3-buten-1-ol·pyrophosphate, which inhibits the biosynthesis of squalene and of cholesterol, and to the method for producing it from 3-fluoromethyl-3-butene-1-ol phosphoric acid morpholide by reaction with phosphoric acid.

3,388,193

PROCESS FOR THE MANUFACTURE OF TETRAETHYL METHYLENE BIS-DITHIOPHOSPHATE

Toshihiro Yamaguchi, Ichikawa-shi, Chiba-ken, and Yoyozo Yamamoto and Kennosuke Imamura, Tokyo, Japan, assignors to Nippon Chemical Industrial Co., Ltd., Tokyo, Japan, a corporation of Japan

No Drawing. Filed June 4, 1964, Ser. No. 372,717

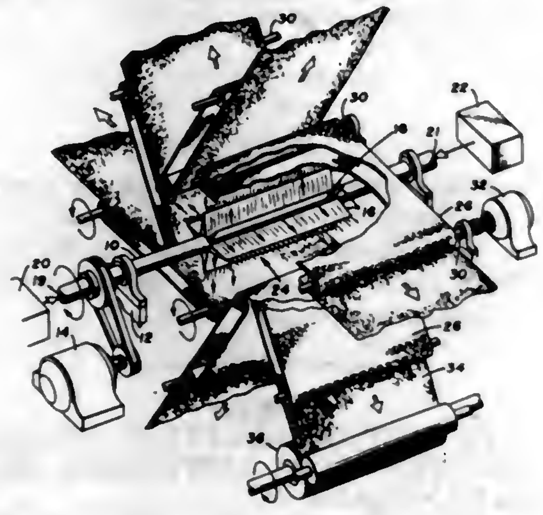
Claims priority, application Japan, June 8, 1963, 38/29,366

5 Claims. (Cl. 260—978)

A process for producing tetraethyl methylene bis-dithiophosphate comprising reacting diethyl diethyl dithiophosphoric acid or alkali metal or ammonium salts thereof with methylene sulfate, pre- or in situ formed. Tetraethyl methylene bisdithiophosphate has mitocidal activity.

3,388,194
METHOD OF FORMING MICRO-FIBERS

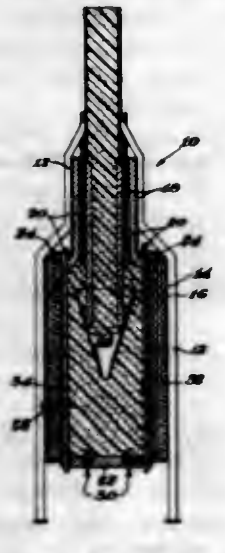
John Vinicki, Decatur, Ala., assignor to Monsanto Company, St. Louis, Mo., a corporation of Delaware
Original application Dec. 7, 1964, Ser. No. 416,499. Divided and this application Nov. 21, 1966, Ser. No. 595,972
1 Claim. (Cl. 264—6)



A method for producing a micro-fiber web composed of fibers having different characteristics wherein different fiber forming compositions are introduced into different chambers of a rotating common element wherein a rotating element centrifugally forces the compositions through orifices therein to attenuate the compositions into micro-fibers. The fibers are then collected to form a plurality of mats.

3,388,195
PLASTIC FOAM PROTECTING OF APPARATUS AND EQUIPMENT DURING MOVING THEREOF

Russell R. Christenson, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed Nov. 30, 1964, Ser. No. 414,724
7 Claims. (Cl. 264—45)



This invention concerns a method for supporting and protecting the internal sections or elements of apparatus and equipment subject to damage when moved or transported. The method involves placing in the interior of the apparatus or equipment to be moved an expandable resinous material, and then expanding the material to meet and support the internal confines of the apparatus or equipment. In this manner the often fragile or easily dislodged internal sections or elements of such devices can be protectively held in position and lent structural support by the snugly fitting expanded material.

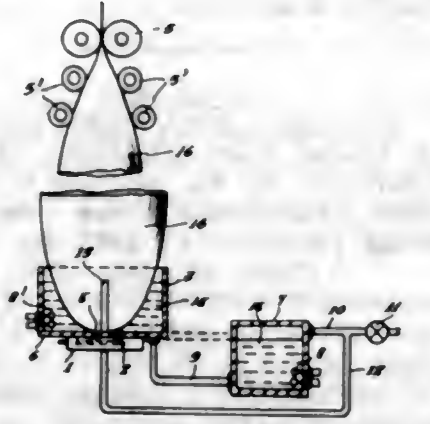
3,388,196
DECORATIVE PLASTIC

Thomas J. Farrell, Morris Plains, N.J., assignor to Allied Chemical Corporation, New York, N.Y., a corporation of New York
Filed Apr. 2, 1964, Ser. No. 356,810
7 Claims. (Cl. 264—75)

Rigid thermoplastic sheet products having random surface variegations resembling those of marble are produced by combining and extruding a mixture of thermoplastic resin components wherein the major components comprises at least 90% of the mixture under conditions wherein the minor component is dispersed throughout the major component in the form of separate and discrete entities.

3,388,197
STRETCHED TUBULAR FILM

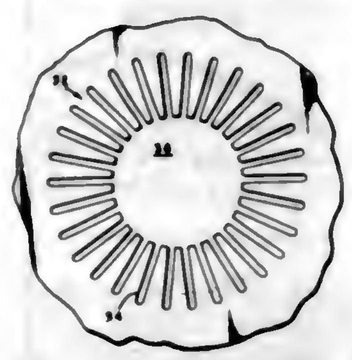
Bruce Samways, Cedar Point, Sea Walls Road, Bristol, England
Filed Apr. 1, 1965, Ser. No. 444,606
Claims priority, application Great Britain, Apr. 4, 1964, 13,989/64
16 Claims. (Cl. 264—89)



This invention relates to the production of a stretched oriented tubular film of an orientable polymeric material by extruding a film-forming composition capable of forming a film of the polymeric material on setting, through a tube-shaping die while in the unset condition into a bath of setting liquid to form a tube. The tube is drawn upwardly through the setting liquid by a drawing means and is set to a stretch-orientable state within the bath in a region disposed above the die. A gaseous medium is maintained under pressure within the tube passing through the bath at a pressure sufficient to inflate and stretch the tube while it is undergoing setting and to inflate and stretch the tube in the stretch-orientable state. The setting liquid in the bath is maintained at such a level that the effective inflating pressure, being the differential pressure between the internal pressure exerted within the tube by the gaseous medium and the external pressure exerted by the setting liquid, acting upon the tube in the freshly extruded unset state is insufficient to rupture the tube.

3,388,198
METHOD FOR PRODUCING IRIDESCENT FILAMENT

James G. Sims, Pensacola, Fla., assignor to Monsanto Company, St. Louis, Mo., a corporation of Delaware
Continuation-in-part of abandoned application Ser. No. 249,846, Jan. 7, 1963. This application Jan. 27, 1966, Ser. No. 523,311
5 Claims. (Cl. 264—177)



1. A method for producing an iridescent filament, comprising in combination:
   (a) extruding a crenulated filament formed of a molten fiber-forming polymer through a spinneret orifice, said spinneret orifice having a cross section including a plurality of substantially radial slots peripherally spaced about the centroid of said orifice, said slots being peripherally spaced no greater than 20° from one another with respect to said centroid,
   (b) solidifying said filament,
   (c) and taking up said filament at a rate such as to reduce the cross-sectional area of said filament while molten to less than 10% of the cross-sectional area of said orifice.

3,388,199
PREPARATION OF ACRYLONITRILE-VINYL ALCOHOL COPOLYMERS

David W. Chaney and William B. Black, Raleigh, N.C., assignors to Monsanto Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed Mar. 15, 1965, Ser. No. 439,955
16 Claims. (Cl. 264—182)

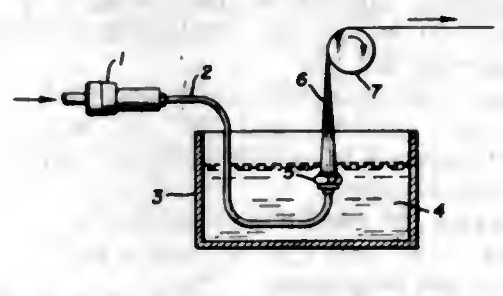
A process for the preparation of acrylonitrile-vinyl alcohol copolymers is conducted by weak base hydrolysis of acrylonitrile-vinyl trihaloacetate copolymers. With trihaloacetates a weak hydrolysis agent may be used resulting in less degradation of the acrylonitrile units and resulting product improvement.

This invention relates to the preparation of copolymers of acrylonitrile and vinyl alcohol. More particularly, the invention is concerned with improved acrylonitrile-vinyl alcohol copolymers which are prepared by hydrolysis of acrylonitrile-vinyl trihaloacetate copolymers.

3,388,200
PROCESS FOR WET SPINNING ELASTIC FIBERS

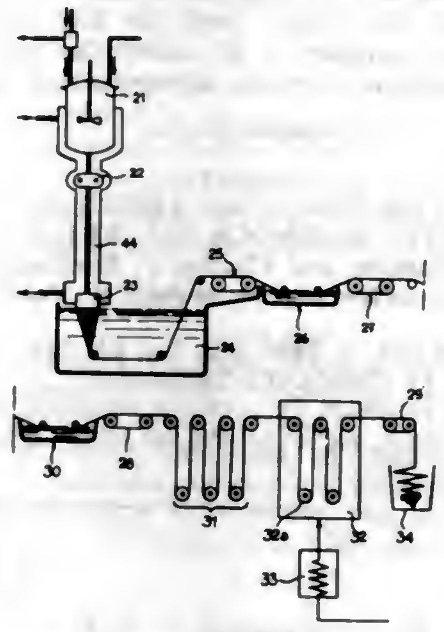
Charles E. Jackson, Durham, Lloyd T. Jenkins, Cary, and Philip E. Slade, Jr., Chapel Hill, N.C., assignors to Monsanto Company, St. Louis, Mo., a corporation of Delaware
Filed Dec. 21, 1964, Ser. No. 419,779
5 Claims. (Cl. 264—184)

The wet spinning of linear, fiber-forming, segmented polyurethane polymers is improved by positioning the spinneret so that the fiber rises vertically from the spinneret and remains in the coagulation bath for only about 0.2 seconds or less. The fiber has greater elongation than by prior wet spinning methods and retains good tenacity.



3,388,201
POLYVINYL CHLORIDE TEXTILE FIBRES AND METHOD OF MANUFACTURING

Corrado Mazzolini and Francesco Denti, Mestre, Venezia, Italy, assignors to Chatillon Società Anonima Italiana per le Fibre Tessili Artificiali S.p.A., Milan, Italy
Filed Apr. 1, 1963, Ser. No. 269,257
Claims priority, application Italy, Apr. 6, 1962, 6,928/62; Sept. 27, 1962, 19,069/62, 19,070/62; Nov. 14, 1962, 22,098/62, 22,399/62
10 Claims. (Cl. 264—184)



1. A textile fibre consisting of at least 85 percent by weight of uncrosslinked polyvinyl chloride having a mean molecular weight of from between 50,000 and 120,000, determined on the basis of intrinsic viscosity, a predominantly syndiotactic structure and a low degree of lateral branching and a D635 to D693 absorption ratio of from 1.8 to 3.0 as determined by infra-red absorption analysis and mechanical stability above its transition temperature; said textile fibre characterized by (a) non-flammability; (b) uniform cross-section and coloring; (c) a tensile strength of from 2.5 to about 4.3 grams per denier; (d) an elongation at break of from between 25 percent and 60 percent; (e) a shrinkage in boiling water of at maximum about 1 percent; (f) a shrinkage in trichloroethylene of less than 2 percent at 40° C.; and (g) flex-abrasion resistance in excess of 600 cycles with a weight corresponding to 0.05 gram per denier.

2. Method of manufacturing polyvinyl chloride textile fibres comprising:
   (a) dissolving in cyclohexanone at a temperature between 110° and 156° C. a high-DS vinyl chloride polymer of a mean molecular weight between 50,000 and 120,000 to obtain a gel-free spinning dope comprising between 15% and 20% by weight of said polymer;
   (b) wet-spinning the dope in the gel-free condition into a coagulating bath for said polymer comprising

cyclohexanone and water maintained at a temperature below 80° C. to obtain a filamentary product;

(c) stretching said filamentary product to a stretch value of at least 7 at a temperature between room temperature and 100° C.;

(d) conditioning the so stretched product at a temperature between 180° and 220° C., over a period of time between 0.1 and 10 seconds while maintaining said stretch value;

(e) relaxing the conditioned product at a temperature between 100° and 120° C. over a period of time between 1 and 60 minutes.

3,388,202
METHOD FOR MELTING ACRYLONITRILE POLYMERS AND COPOLYMERS

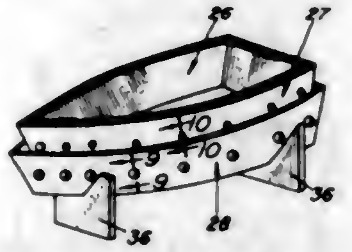
Robert E. Opferkuch, Jr., and John C. Ross, Decatur, Ala., assignors to Monsanto Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed Sept. 27, 1965, Ser. No. 490,722
12 Claims. (Cl. 264—211)

Shaped articles including film, filaments, tile articles and the like are formed by melting acrylonitrile polymers and copolymers in the presence of certain non-solvating organic liquids selected from the group of acetamide, ethylcyanoacetate and formamide which have high dielectric constants and which lower the melting point of the acrylonitrile sufficiently to allow the acrylonitrile to be melted without polymer decomposition occurring.

3,388,203
METHOD FOR MOLDING ARTICLES FROM PLASTIC RESINOUS MATERIALS

Edward H. Meininger and Charles F. Shellberg, Racine, Wis., assignors of five percent to John W. Foley, Racine, Wis.
Filed Feb. 9, 1965, Ser. No. 431,264
11 Claims. (Cl. 264—225)

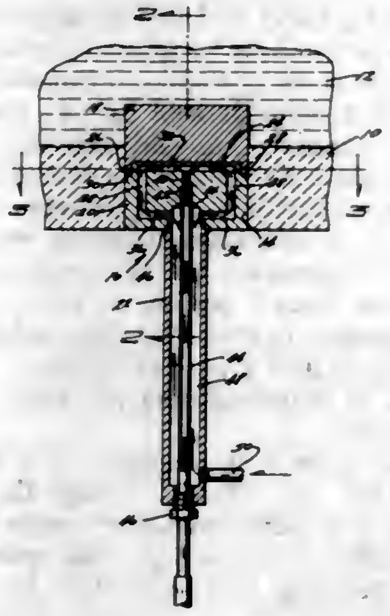
A method is provided for molding relatively large and heavy articles such, for example, as small boats, automobile bodies, and the like, from suitable molding materials, such as reinforced synthetic plastic resinous molding materials. The method overcomes a problem experienced in the prior art in attempting to mold such relatively heavy articles and which resides in the fact that in the prior art methods the vertical walls of the mold and of the article or object formed thereon tend to sag under their own weight during the molding operation, and as the weight on the flexible mold increases, with the result that the molded article or object, and particularly the vertical wall surfaces thereof, are improperly and imperfectly formed. In the practice of the new method flexible, resilient and compressible anchoring members are adhesively attached to the flexible mold and are compressed during the molding operation to form pockets in a rigid backing shell which is formed over the outer surface of the flexible mold. These pockets receive the flexible, resilient, compressible anchoring members and thereby firmly anchor the flexible mold and the rigid backing shell together during the molding operation and thus prevent sagging of the vertical and other wall areas of the flexible mold during the molding operation, so that the flexible mold retains the true form of the patterns on which it was made. After the molding operation has been completed the flexible mold and the flexible resilient, compressible anchoring members attached thereto, and the molded article or object, are withdrawn from the relatively rigid backing shell, whereupon the flexible, resilient compressible anchoring members are withdrawn from the recesses or pockets in the rigid backing shell and the molded article or object is separated from the flexible mold.



ELECTRICAL

3,388,204
GLASS FURNACE ELECTRODE

Robert W. Ellis, Vineland, N.J., assignor to Owens-Illinois, Inc., a corporation of Ohio
Filed July 19, 1967, Ser. No. 654,577
8 Claims. (Cl. 13—18)

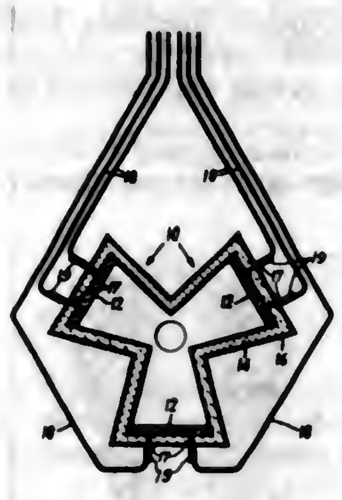


A water-cooled, glass-melting electrode snugly inserted within a glass furnace wall port, said electrode comprising: a transversely-cooled glass-contacting cap protected from the adverse oxidative effects of atmospheric air; an intermediate water distributor portion isolated from contact with the molten hot glass of said furnace and thereby having a substantially longer useful life than heretofore obtainable; and a stem portion having water inlet and outlet means communicating with the water distributor portion.

3,388,205
APPARATUS FOR PRODUCING ELECTRODE PASTE

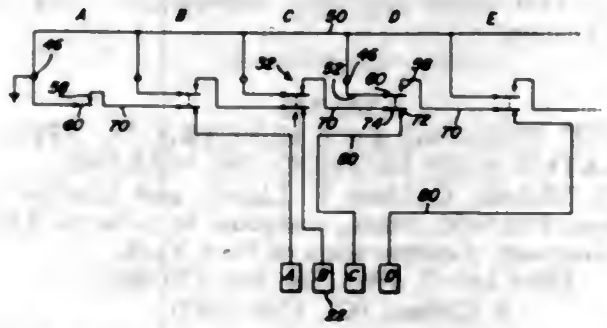
Niles Johan Haavik, Nordstrand, Oslo, and Gunnar Nyberg, Vagsbygd, near Kristiansand, Norway, assignors to Elektrokemisk A/S, Oslo, Norway, a corporation of Norway
Filed Mar. 4, 1966, Ser. No. 531,700
5 Claims. (Cl. 13—23)

Solid carbonaceous material is separately preheated before being mixed with liquid tar or pitch binder. The preheating is carried out in a furnace having a plurality of upright sidewalls interconnected to provide a horizontal furnace cross-section in the shape of at least two connected wings which extend radially out from the central vertical axis of the furnace and which increase in width from their connection points to each other out to their terminal ends. Said terminal ends are coincident with some of said upright sidewalls and at least two electrodes are positioned in direct contact with a substantial portion of the interior surface area of two of said terminal end-upright sidewalls. Substantially uniform current density is achieved in the furnace for more uniform preheating of the carbonaceous charge.



3,388,206
GUITAR WITH REMOTE CONTROL ORGAN PLAYING MEANS

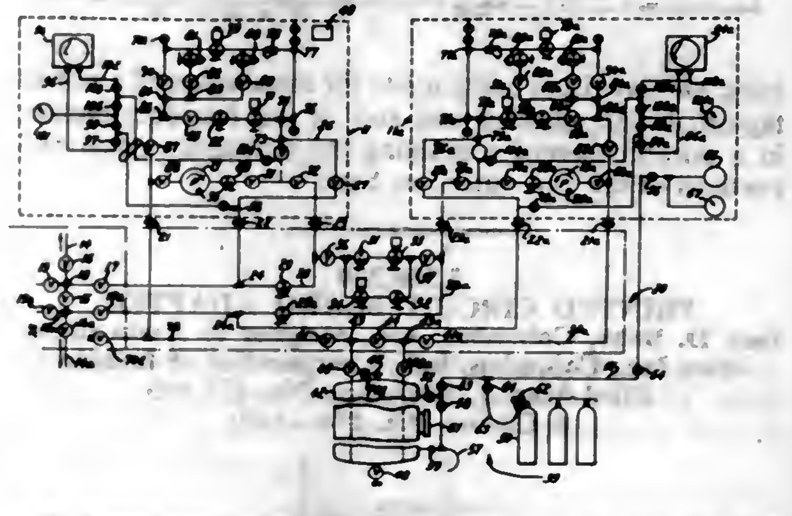
Thomas E. Sines, Sacramento, Calif., assignor of ten percent to Marvin Pope, Sacramento, Calif.
Filed May 21, 1965, Ser. No. 457,657
5 Claims. (Cl. 84—1.16)



5. In combination with a musical fingerboard having a plurality of longitudinally spaced frets mounted thereon, at least one string adapted to be depressed at selected locations causing displacement of selected frets and a tone generator adapted to emit a plurality of different tones, electrical means connecting said fingerboard to the tone generator for producing said different tones in response to displacement of the respective frets comprising, a plurality of switch devices mounted by the fingerboard in positions operatively engageable by said frets, a plurality of conductors electrically connecting said switch devices to the tone generator for completing selected energizing circuits producing said tones, grounding means connected to each of said switch devices and conductive means interconnecting said switch devices, each switch device including a fixedly mounted contact connected to one of the conductors, a flexible contact member connected to said conductive means, means mounted on the fingerboard for holding the flexible contact member in spaced relation to the grounding means, switch actuating means connected to said frets for displacing said grounding means into engagement with said flexible contact member to complete one of said energizing circuits, a contact element connected to said conductive means and engaged with said fixedly mounted contact for establishing another of said energizing circuits upon actuation of another switch device, and means non-conductively mounting said contact element on the grounding means for movement out of contact with the fixedly mounted contact in response to said engagement of the flexible contact member by the grounding means to prevent establishment of said other of the energizing circuits.

3,388,207
OIL PRESSURE CONTROLLER FOR PIPE-TYPE ELECTRIC CABLE

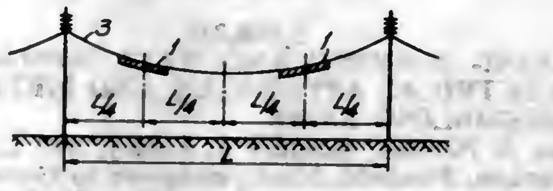
John L. Lansch, Nyack, N.Y., assignor to Anaconda Wire and Cable Company, a corporation of Delaware
Application Oct. 1, 1964, Ser. No. 414,042, now Patent No. 3,271,752, dated Sept. 13, 1966, which is a division of application Ser. No. 45,115, July 25, 1960, now Patent No. 3,155,765. Divided and this application Apr. 20, 1966, Ser. No. 563,312
10 Claims. (Cl. 174—11)



In a pipe-type cable with automatic pressure control of the insulating oil at either of two preselected pressures, an alarm is responsive to unusual duration of the pumping cycle. The cable can operate at either of two preselected pressures and a remote alarm for power interruptions is provided with a time delay. The circuitry, which includes a fail-safe feature, employs interchangeable plug-in relays.

3,388,208
OVERHEAD TRANSMISSION LINE WITH AERODYNAMIC DAMPER FOR SUPPRESSING GALLOPING

Alexei Yakovlevich Liberman, ul. Tsialkovskogo 4, kv. 14, Krasnogorsk, Moskovskoi Oblasti, U.S.S.R.
Filed May 5, 1966, Ser. No. 547,829
8 Claims. (Cl. 174—42)

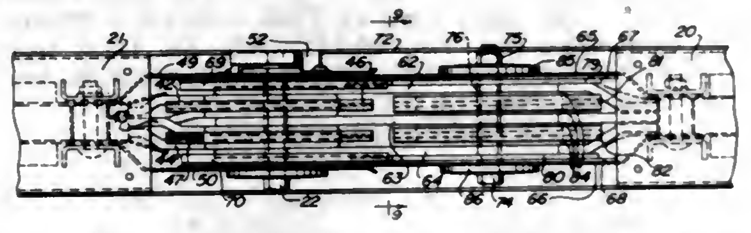


An overhead transmission line cable suspended in a span between supporting towers and a damper for suppressing galloping of the cable. The damper is an aerodynamic stabilizer in the form of a rigid elongated element immovably affixed to the cable in a restricted portion of the span length and located on one side of the cable in the vertical plane of cable sag so as to disturb symmetrical air flow around the cable and thus eliminate lift forces causing galloping. The damper can have various cross-sectional shapes. Dampers are preferably positioned in the middle of the span and each half-span.

3,388,209
FEEDER BUS DUCT HAVING PROVISION FOR POWER TAP-OFF DEVICE

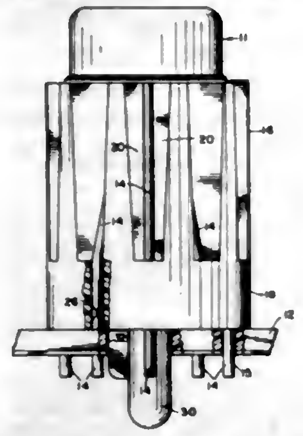
Robert E. King, Park Ridge, Ill., and Edwin N. Cobb and John E. Schmidt, Lexington, Ky., assignors to Square D Company, Park Ridge, Ill., a corporation of Michigan
Filed Dec. 8, 1966, Ser. No. 599,458
6 Claims. (Cl. 174—71)

A bus duct section of the feeder type having a plurality of flat bus bars of equal thickness disposed in flatwise parallel relationship to each other and spaced from each other less than the thickness of a bus bar, opposite end portions of at least the two outer bus bars being outwardly offset to accommodate interleaving with the bus bars of another bus duct section in the formation of a joint, and provision being made for installation of a power tap-off device adjacent one end of the bus duct section in a portion thereof containing the outwardly offset end portions of the two outer bus bars.



3,388,210
PRINTED CIRCUIT BOARD ADAPTER

Jack D. Babb, Columbus, Ind., assignor to Arvin Industries, Inc., Columbus, Ind., a corporation of Indiana
Filed Mar. 9, 1967, Ser. No. 621,995
6 Claims. (Cl. 174—138)



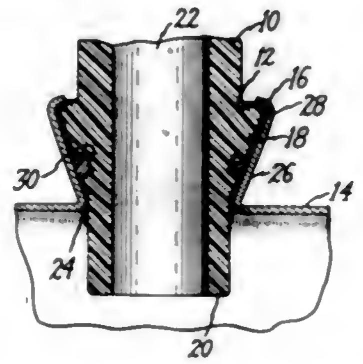
An adapter for use with a multi-lead electronic device and printed circuit board, said adapter having V-shaped notches for guiding said leads through openings in the adapter into aligned openings in the printed circuit board.

3,388,211
SEALING BUSHING AND WALL MEMBER FOR ELECTRICAL APPARATUS AND METHOD OF ASSEMBLING SAME

Frank S. Nichols, Goldner F. Lipsey, and Gordon C. Nonken, Pittsfield, Mass., assignors to General Electric Company, a corporation of New York
Filed July 7, 1965, Ser. No. 470,083
3 Claims. (Cl. 174—152)

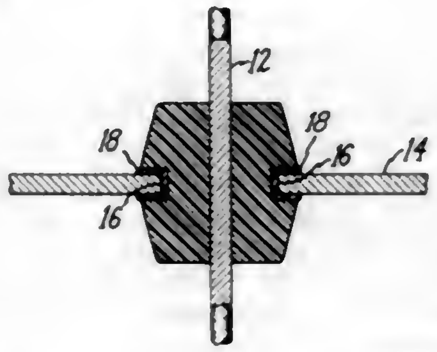
1. A method of attaching and sealing an insulated bushing for an electrical apparatus to a wall member comprising:
- (A) forming a portion of said bushing into a conical surface having an inturned shoulder formed at the largest diameter of the conical surface,
- (B) providing an opening in said wall member, the edge of said opening being formed into a conical shape complementary to said conical surface of said bushing,
  - (1) said conical edge being greater in length than said conical surface,
- (C) coating said conical surface with an uncured elastomer,
- (D) inserting said bushing into said opening with said conical surface and said conical edge mating and a portion of said conical edge extending beyond said shoulder,
- (E) spinning said extended portion of said conical edge over said shoulder forming a secure mechanical attachment,
- (F) and curing said elastomer to form a sealed, flexible bond to said conical surface and said conical edge.

3. A sealed electrically insulating bushing and wall member for electrical apparatus comprising:
- (A) an opening in said wall member having a conical edge,
- (B) a conical surface on said bushing having an inturned shoulder at its largest diameter,
  - (1) said conical surface being provided with a groove,
- (C) said conical edge and said conical surface being in mating engagement with a portion of said conical edge spun over said shoulder,
- (D) and a layer of cured elastomer between said mating conical surface and said conical edge bonded to said conical surface and said conical edge,
  - (1) said cured elastomer completely filling said groove.



3,388,212
PLASTIC BUSHING FOR ELECTRICAL APPARATUS AND METHOD OF MAKING

Frank S. Nichols, Goldner F. Lipsey, and Gordon C. Nonken, Pittsfield, Mass., assignors to General Electric Company, a corporation of New York
Filed July 7, 1965, Ser. No. 470,068
8 Claims. (Cl. 174—153)

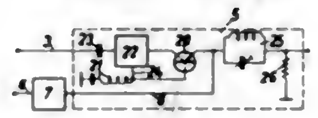


1. A method of molding a plastic bushing to a wall member of an electrical apparatus comprising:
- (A) providing an opening through said wall member,
- (B) coating said wall member surrounding said opening with a coating of elastomer and vulcanizing said elastomer,
- (C) molding a plastic bushing in said wall member and through said opening therein, and
- (D) curing said plastic bushing to bond said plastic bushing to said vulcanized elastomer.

4. A sealed plastic bushing for electrical apparatus comprising:
- (A) a wall member having an opening therethrough,
- (B) a plastic bushing molded in said wall member and extending through said opening, and
- (C) a coating of vulcanized elastomer surrounding said opening and securely bonded to said wall member and said plastic bushing.

3,388,213
SYNCHRONOUS DEMODULATOR CIRCUIT FOR COLOR TELEVISION RECEIVERS

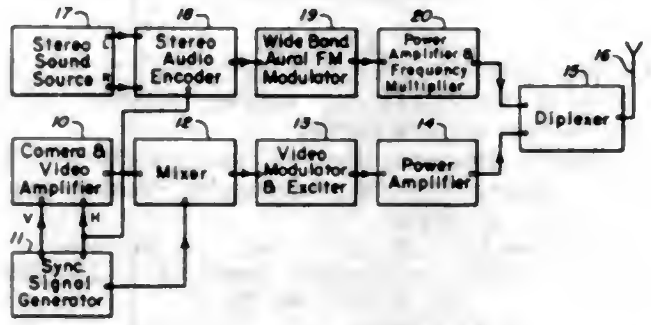
Albrecht Altmann, Hildesheim, Germany, assignor to Blaupunkt-Werke G.m.b.H., Hildesheim, Germany, a limited-liability company
Filed Nov. 24, 1965, Ser. No. 509,553
Claims priority, application Germany, Jan. 15, 1965, B 80,123
10 Claims. (Cl. 178—5.4)



Disclosed is a synchronous demodulator for color television receivers wherein a single transistor acts as an amplifier for the reference carrier signal and as an emitter follower stage for the demodulated color difference signal output of the demodulator, providing a low impedance output.

3,388,214
COMPATIBLE STEREO SOUND SYSTEM EMPLOYING TIME MODULATION TECHNIQUES

Carl G. Eilers, Oak Park, and Jouke N. Rypkema, Villa Park, Ill., assignors to Zenith Radio Corporation, Chicago, Ill., a corporation of Delaware
Filed Feb. 3, 1965, Ser. No. 430,076
15 Claims. (Cl. 178—5.6)

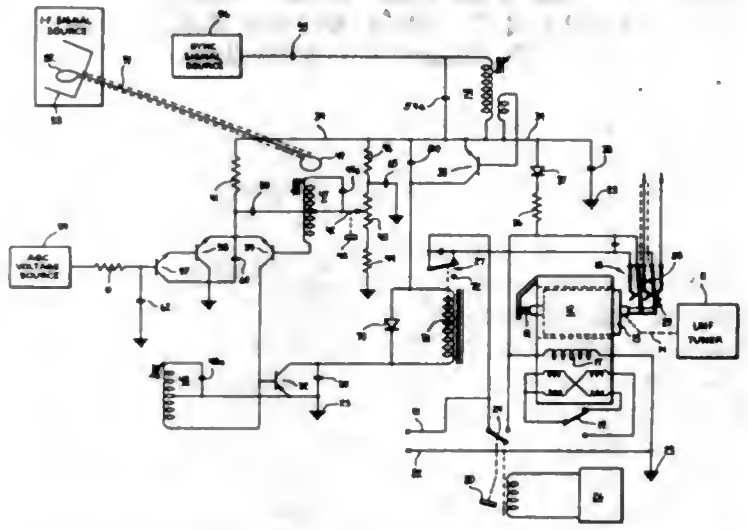


1. The method of transmitting a compatible stereophonic sound signal which comprises the steps of:
- developing a carrier of rectangular waveform having a repetition frequency high relative to the highest frequency of the audio spectrum to be transmitted;
- time modulating the leading edges of said carrier in proportion to the amplitude of one of a pair of stereophonically related audio signals;
- time modulating the trailing edges of said carrier in proportion to the amplitude of the other of said pair of audio signals and with a sense of modulation relative to the modulation of said leading edges to have the average value of the resulting pulse-width-modulated carrier equal to the sum of said pair of audio signals and to have like phase deviations of the leading and trailing edges of said pulse-width-modulated carrier related to the difference of said pair of audio signals;
- and transmitting said pulse-width-modulated carrier.

3,388,215
SEARCH TUNE SYSTEM FOR TELEVISION RECEIVERS

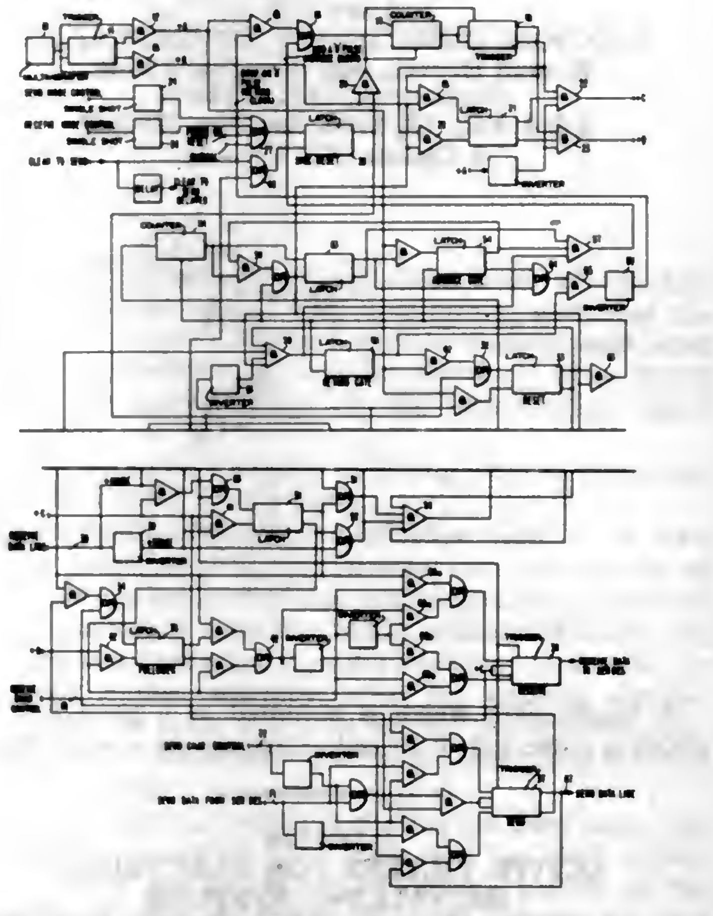
Louis F. Mayle, Fort Wayne, Ind., assignor to The Magnavox Company, Fort Wayne, Ind., a corporation of Delaware
Filed July 30, 1964, Ser. No. 386,207
15 Claims. (Cl. 178—5.8)

An undetented tuner motor holding circuit with an electrically operable normally-closed switch therein. A switch control circuit having a pair of transistors in series therein, both normally non-conducting, one being activated in response to the I-F carrier, and the other being activated in response to a horizontal sync signal, simultaneous activation of both serving to open the motor hold circuit. A third transistor responsive to AGC level for controlling the one transistor in accordance with a sensitivity setting.



3,388,216
START-STOP SYNCHRONOUS DATA TRANSMISSION SYSTEM

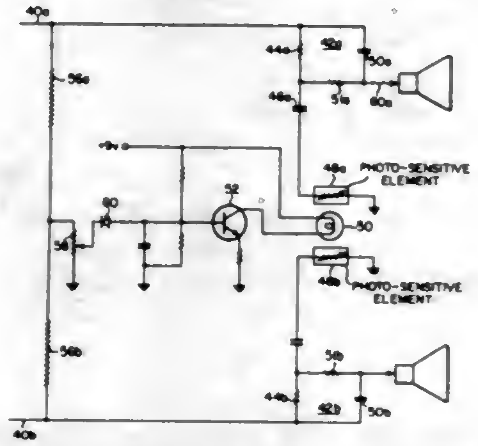
Alvin W. Brooke, Endicott, Harry C. Kuntzleman, Newark Valley, and Harold G. Markey, Endicott, N.Y., assignors to International Business Machines Corporation, Armonk, N.Y., a corporation of New York
Filed July 6, 1965, Ser. No. 469,491
8 Claims. (Cl. 178—53.1)



An electronic control means for maintaining a data receiving terminal in synchronism with a data transmitting terminal comprising a multivibrator in combination with a clock counter and a related trigger for producing timing pulses. A phase counter monitors the "received data" line and through appropriate circuitry a determination is made as to when to advance or retard the clock counter so as to keep it in step with the transmitting terminal.

3,388,217
STEREOPHONIC SOUND REPRODUCING ARRANGEMENT

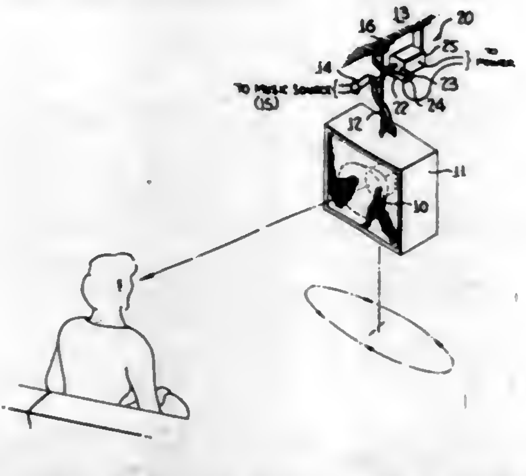
**William R. Aiken, 10410 Magdalena Ave.,
Los Altos Hills, Calif. 94022
Filed Oct. 22, 1964, Ser. No. 405,796
12 Claims. (Cl. 179—1)**



A stereophonic sound system comprising plural sound transmitting channels each having a volume expander circuit including means operative to provide different volume levels in response to control voltages, means for developing control voltages for said volume level changing means varying in proportion with the sum of the individual signal voltages transmitted through said channels, said control voltage developing means including individual resistors of relatively large size and a common resistor of relatively small size connected in series between said channels and ground, and means for applying said control voltages jointly to said volume level changing means in the volume expanding circuits of said channels.

3,388,218
RANDOM DIRECTIVITY LOUDSPEAKER

**Hyman Hurvitz, 326 Woodward Bldg.,
Washington, D.C. 20005
Filed Aug. 13, 1964, Ser. No. 389,430
6 Claims. (Cl. 179—1)**

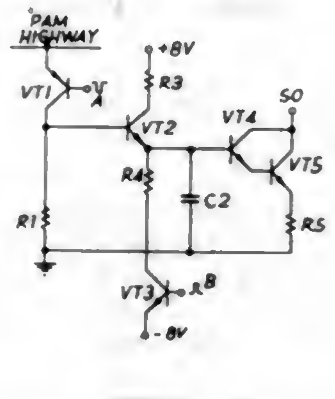


A loudspeaker which is mounted as a pendulum and which is subjected to forced vibrations as a pendulum.

3,388,219
ACTIVE FILTERS FOR ELECTRICAL SIGNALLING SYSTEMS

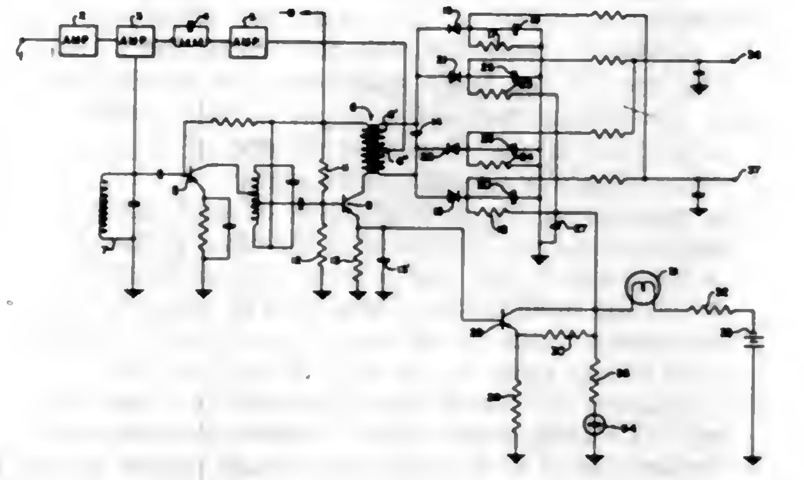
**John Christopher Hammond Davis, Taplow, England, assignor to British Telecommunications Research Limited, Taplow, England, a British company
Filed Apr. 7, 1964, Ser. No. 358,012
Claims priority, application Great Britain, Apr. 8, 1963, 13,921/63
7 Claims. (Cl. 179—15)**

In a pulse amplitude modulation time division multiplex signalling system, an active filter is used to suppress unwanted frequency components which occur round about multiples of the pulse recurrent frequency. A transistor gate which is opened by regularly occurring sampling pulses is so arranged that when open, it permits the signal to be applied to the base of a transistor so as to control current flowing in the emitter circuit of such transistor to effect a charging of a capacitor to a value corresponding to the value of the signal. The capacitor controls an output in accordance with its state of charge which is maintained until the next sampling pulse is received whereupon it is discharged if its state of charge exceeds that corresponding to the value of the signal when such next sampling pulse is received.



3,388,220
MONOPHONIC AND STEREO FM RECEIVER WITH AUTOMATIC MONOPHONIC AND STEREO SWITCHING

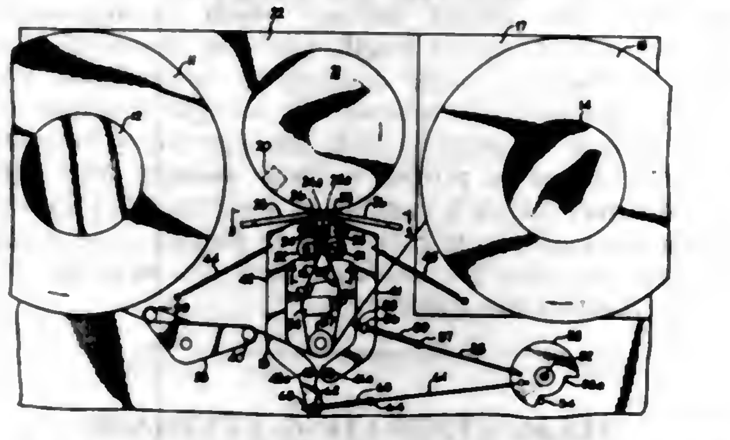
**Teruo Houshi, Ora-gun, Gunma, Japan, assignor to Sanyo Electric Company, Ltd., Moriguchi, Osaka, Japan, a corporation of Japan
Filed Mar. 30, 1966, Ser. No. 538,838
Claims priority, application Japan, Apr. 15, 1965, 40/29,962, 40/29,963
11 Claims. (Cl. 179—15)**



A receiver for monophonic and stereo FM signals having automatic switching means which responds to the presence of a pilot signal on the composite FM stereo signal to enable the receiver demodulator circuit by producing a signal which returns diodes of the demodulator to a point of reference potential. The switching means operates in the absence of the pilot signal to bias the demodulator diodes to effect a change in the resonant frequency of a circuit supplying signals to the demodulator so that spurious signals at the normal operating frequency of the demodulator in response to a composite stereo signal do not adversely affect the demodulator.

3,388,221
TRANSVERSE-SCAN MAGNETIC TAPE APPARATUS WITH SHIFTABLE GUIDE MEANS

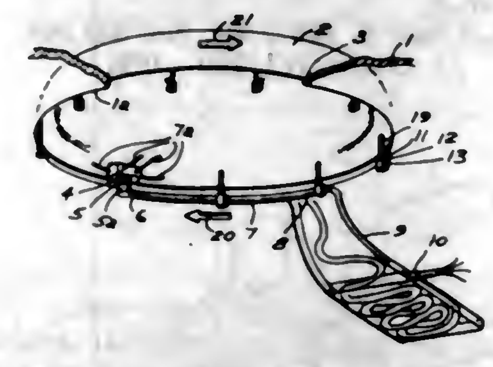
**Delmar Ronald Johnson, Des Plaines, and Richard Arthur Wolter, Wheaton, Ill., assignors to Ampex Corporation, Redwood City, Calif., a corporation of California
Filed June 23, 1965, Ser. No. 466,378
16 Claims. (Cl. 179—100.2)**



1. A tape transport for use in magnetic tape recording or reproducing apparatus, including in combination, a scanning assembly for recording information on magnetic tape or for reproducing information from magnetic tape, means for supplying magnetic tape to said scanning assembly and for taking up magnetic tape from said scanning assembly, an entry guide and an exit guide positionable adjacent each other and said scanning assembly in an operating position for guiding the tape about said scanning assembly in an Omega type wrap, a rotatable capstan positioned with respect to said guides and said scanning assembly to effect driving contact with the tape prior to entry upon and subsequent to exit from said scanning assembly with the tape passing in a loop about said scanning assembly and said capstan, and means for moving said entry and exit guides away from each other and said scanning assembly between the operating position and a thread position wherein each of said guides is disposed apart from each other and from said scanning assembly to facilitate threading of tape around said scanning assembly.

3,388,222
CABLE CONNECTOR FOR FIXED AND MOVABLE MEMBERS

**Nils Börge Eriksson and Bengt-Olof Nordin, Karlskoga, Sweden, assignors to Aktiebolaget Bofors, Bofors, Sweden, a corporation of Sweden
Filed Nov. 23, 1966, Ser. No. 596,482
Claims priority, application Sweden, Dec. 6, 1965, 15,724/65
6 Claims. (Cl. 191—12)**

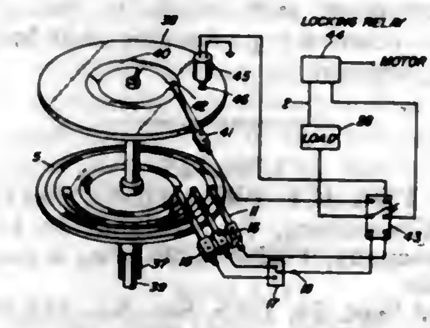


1. A cable connector connectng cable terminals on a stationary member to cable terminals on a rotary member, said connector comprising in combination:

- (a) a stationary member (1);
- (b) a rotatable member (2) supporting cable terminals and having a circular portion and being rotatable about an axis coinciding with the center axis of said circular member portion;
- (c) an electric cable (7) having cable terminals at one end;
- (d) a connector member (4) connecting cable terminals on the rotatable member to said cable terminals at one end of the cable, said connector member being fixedly secured to said circular member portion;
- (e) a magazine (9) mounted on said stationary member and housing said cable (7), said cable magazine having an opening (8) adjacent to said circular member portion; and
- (f) several releasable cable catching means (11) sesecured spaced apart along the periphery of said circular member portion for rotation in unison with said rotatable member, said catching means coacting with said cable to engage and retain along said circular member portion cable portions pulled out of the magazine by rotation of the rotatable member in one direction and to release the retained cable portions when and while the same are returned into the magazine by rotating the rotatable member in the opposite direction.

3,388,223
RESETTABLE ELECTRIC CLOCK TIMER MECHANISM

**John F. Marchand, 445 E. 65th St.,
New York, N.Y. 10021
Filed Mar. 31, 1966, Ser. No. 540,476
10 Claims. (Cl. 200—38)**

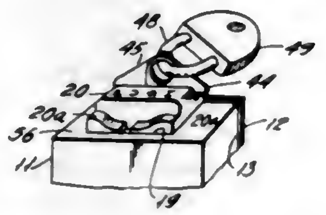


1. In a synchronous electric clock timer of the self-starting variety provided with slow turning switching elements and switching conducting paths thereon, said clock timer having a finite but definite overshoot when power to the timer motor is shut off, the improvement which comprises,

- (a) at least one rotatable switching element connected to be rotated by the timer,
- (b) a motor controlling conductive path on at least one rotatable switching element, said path having an insulating segment of size relative to the overshoot of the motor, at least one blade switch contacting said path and connected to motor switching means for the clock motor, whereby when the rotating element causes the blade switch to contact the insulating segment the motor stops after a predetermined distance of overshoot,
- (c) means for momentarily starting the timer motor for a sufficient period of time so that the blade switch comes in contact with a conducting portion of the path whereby the motor continues to turn,
- (d) switching elements rotated by the timer having at least one conducting path and blade switches cooperating therewith to change electrical connections of a load circuit, said conducting paths being interrupted with insulating segments longer than the distance of overshoot of the timer motor whereby on momentarily starting the timing motor a load switching cycle is initiated and takes place through at least

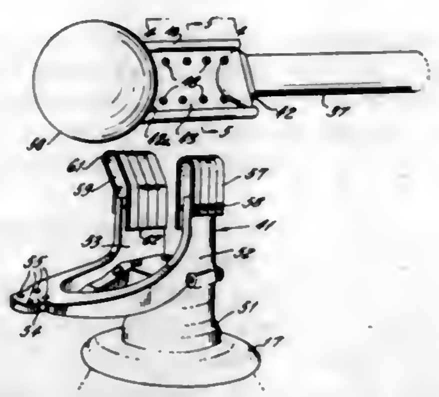
one predetermined interval determined by the relative lengths of the conducting path and non-conductive segment, and on completion of the timing cycle the timer is reset to initiate a new cycle when the momentary motor actuating means is energized.

3,388,224
CIRCUIT BREAKER LOCKING DEVICE
Louis W. Higgins, Detroit, Mich., assignor to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Aug. 31, 1964, Ser. No. 393,157
12 Claims. (Cl. 200—42)



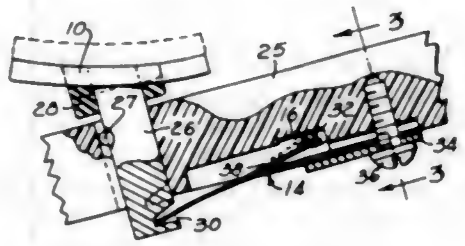
11. A circuit interrupting device comprising a housing having an opening therein, a pair of contacts supported within said housing, a handle protruding out through said opening and being movable between operating positions to open and close said contacts, a locking device mounted on said handle and being movable with said handle between said operating positions, when said handle is in one of said positions said locking device being movable on said handle to a locking position to prevent movement of said handle to the other of said positions, and means for padlocking said locking device in said locking position.

3,388,225
JAW FOR ICE BREAKING SWITCH
Arem Foti, Greensburg, Pa., assignor to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Sept. 29, 1966, Ser. No. 582,885
3 Claims. (Cl. 200—48)



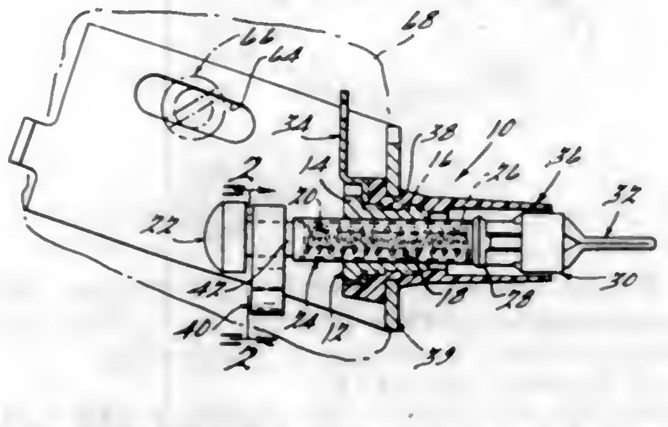
This invention broadly relates to a disconnect switch structure capable of being moved to the fully closed or connected position even under the presence of extreme icing conditions. The disconnect switch blade is provided with a beavertail structure having a substantially oval cross-sectional configuration having perpendicularly aligned major and minor diameters such that the major diameter is of the order of three times greater than the minor diameter. The contact surfaces of the beavertail are provided in the immediate region of the extreme ends of the major diameter. The beavertail structure is designed to cooperate with a jaw structure comprised of confronting contact surfaces. One contact surface is substantially flat over its entire length and is substantially vertically aligned. The other confronting surface is flat only a portion of its length with the remaining upper portion being aligned diagonally upward and away from its associated confronting structure to facilitate entry of the beavertail between the confronting contact surfaces of the jaw structure. The operating mechanism causes the beavertail to have its major diameter diagonally aligned as it enters into the region between the confronting surfaces of the jaw structure. The higher of the two beavertail contact surfaces is aligned to make engagement with the jaw structure contact surface which is substantially straight over its entire length when the beavertail is rotated so that its major diameter is substantially horizontally aligned. The substantially straight structure contact surface cooperates with the associated beavertail contact surface to provide a large shearing force upon the structure which is capable of shearing away ice even under the most severe conditions to provide good contact pressure between the beavertail and jaw structure even under severe icing conditions.

3,388,226
PULSE GENERATING KEYBOARD CONTACT SWITCH
Frederick P. Willcox, 565 Oenoke Ridge, New Canaan, Conn. 06840
Filed Apr. 12, 1966, Ser. No. 542,038
5 Claims. (Cl. 200—67)



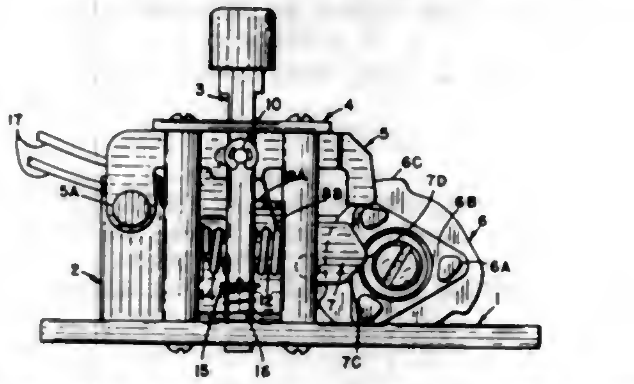
A momentary-contact switch especially designed for assembly into keyboard arrays by single-screw mounting, and adapted to provide a short series of contact engagements suitable for turning on a semiconductor switch, by the over-center vibrations of a spring contact tongue forming a portion of a stressed leaf spring arranged for deflection by a manual plunger. The series of contact engagements always terminates in an open-circuit condition within about 10 milliseconds, regardless of whether the plunger has been released by that time.

3,388,227
REMOVABLE SPACER MEMBER FOR INSTALLING PUSHBUTTON SWITCH ASSEMBLIES
Michael J. Basso, 7642 Woodward Ave. 48202, and Louis G. Cass, 8900 E. Jefferson 48214, both of Detroit, Mich.
Filed June 5, 1967, Ser. No. 643,596
4 Claims. (Cl. 200—159)



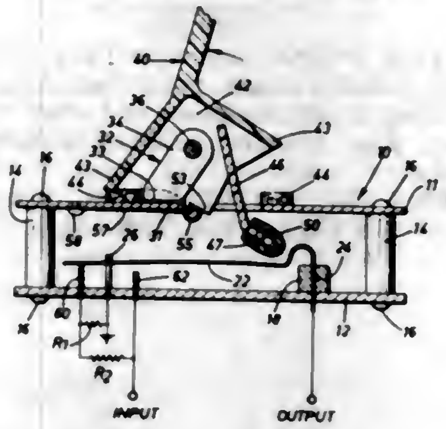
A removable spacer member having "clamps and grips" is disclosed to provide installation of an adjustable pushbutton switch assembly.

3,388,228
MOMENTARY TYPE PUSHBUTTON SWITCH WHEREIN THE CIRCUIT IS AUTOMATICALLY MADE AND BROKEN IRRESPECTIVE OF THE MANUALLY OPERABLE MEMBER
Gustave J. Nagy, Cayce, S.C., assignor to SCM Corporation, a corporation of New York
Filed Nov. 2, 1966, Ser. No. 591,491
9 Claims. (Cl. 200—160)



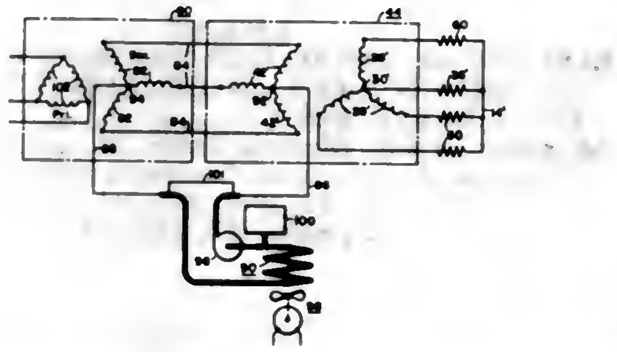
This disclosure relates to a manually operated pulse switch, having switch contact means supported for closing and opening. A member is operatively associated with the switch contacts and provided with a camming surface for closing and opening the same and manually operable force applying means is positioned for engagement with and for moving the switch closing member. An energy storing spring mechanism is associated with said member and adapted to be energized by said member upon depression of said force applying means. The energy stored in said spring mechanism is released upon movement of said member to one position to automatically move said camming surface past said switch contact means to sequentially close and open said switch contacts, whereby the length of time that the switch contacts are closed is controlled automatically, and not manually, so as to insure a constant duration of switch closing time for each operation of said switch.

3,388,229
SWITCH PARTICULARLY FOR ELECTRONIC ORGANS
Frits L. Lyvang, Kitchener, Ontario, Canada, assignor to Dominion Electrohome Industries Limited, Kitchener, Ontario, Canada
Filed Dec. 16, 1966, Ser. No. 602,209
16 Claims. (Cl. 200—166)



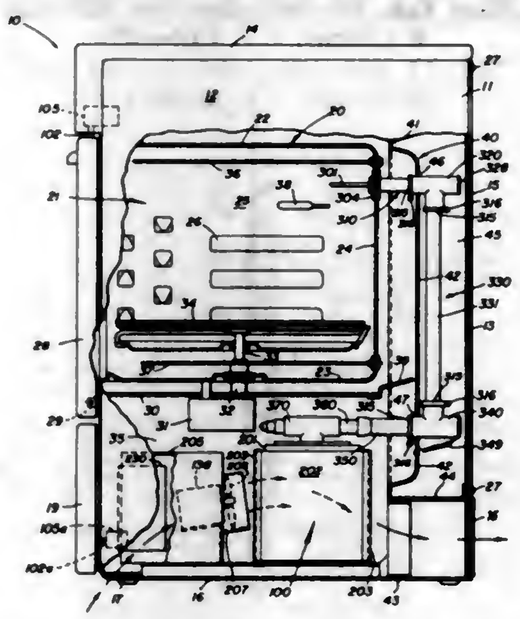
A two-position switch in which one end of a resilient wire is fixed to a frame to cantilever the other end. Two electrical terminals are fixed adjacent the free end of the wire on the same side thereof but at different axial locations along the wire. The first terminal is furthest from the fixed end and is closer to the wire than the second terminal, but neither is in contact with the wire. A pusher member either can push the wire into contact with the first terminal, or can push the wire sufficiently far to bring it into contact with the second terminal, the latter acting as a fulcrum to lever the wire away from the first terminal.

3,388,230
INDUCTIONALLY HEATED VAPOR GENERATORS AND OTHER FLUID SYSTEMS
Richard C. Cunningham and Wayne J. Severson, Pleasant Hills, Pa., assignors to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Feb. 28, 1964, Ser. No. 348,098
8 Claims. (Cl. 219—10.51)



6. Inductional heating apparatus for use with a closed fluid system, said apparatus comprising a branched conduit network forming part of said system, said conduit network including a plurality of parallel conduit means communicating therewith, at least said conduit means being fabricated from a conductive containment material, means for electrically connecting said conduit means into a short-circuited polyphasal network, said conduit means forming short-circuited secondary transformer conduit-windings when so connected, a polyphasal load transformer having a core structure coupled to said secondary conduit windings, a polyphasal coupling transformer, tubular polyphasal secondary and primary winding system on said core structure and on said coupling transformer respectively, means for circulating a fluidizable coolant material through the interior of said tubular winding system, and supply circuit means for said coupling transformer including primary winding means thereon.

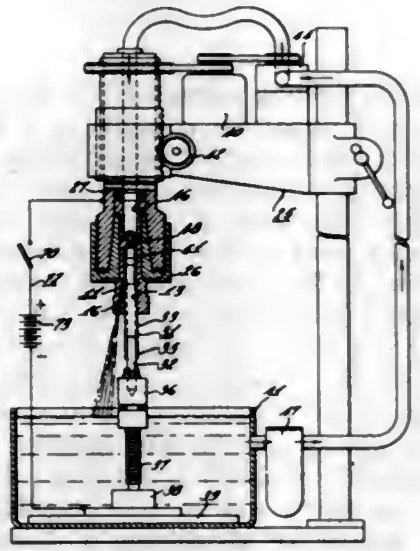
3,388,231
ELECTRONIC HEATING APPARATUS AND MICROWAVE COUPLING STRUCTURE AND TRANSMISSION LINE THEREFOR
James E. Staats, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Continuation-in-part of application Ser. No. 181,144, Mar. 20, 1962. This application Nov. 23, 1966, Ser. No. 596,519
20 Claims. (Cl. 219—10.55)



There is disclosed a combination electric and electronic range including a cooking cavity defined by a metal liner, a first machinery compartment below the liner and a second machinery compartment to the rear of the liner defined by the casing for the range and baffles arranged around the liner. The generator for electronic cooking is disposed in the lower machinery compartment and has the output thereof connected to the cooking cavity by a transmission line disposed in the machinery compartments. The transmission line is readily disassembled from the rear of the range.

3,388,232
ELECTRICAL DISCHARGE MACHINING METHOD TO OBTAIN VERY CLOSE CONCENTRICITIES ON A VALVE BODY

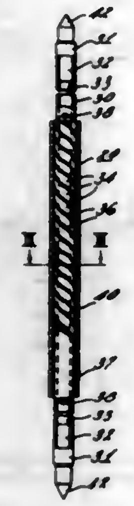
Alexander Dreisin, Olympia Fields, Ill., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed Apr. 22, 1965, Ser. No. 450,054
5 Claims. (Cl. 219—69)



A valve or nozzle body is bored and the bore is machined to a fine finish. An electroerosion electrode having a conical tip for machining and surface-finishing a coaxial valve seat is coaxially guided in the bore by an insulating sleeve thereon snugly fitting a portion of the bore. The electrode and the body have passages for circulation of dielectric gap-flushing liquid therethru.

3,388,233
ELECTRIC DISCHARGE MACHINING ELECTRODE AND ITS METHOD OF CONSTRUCTION

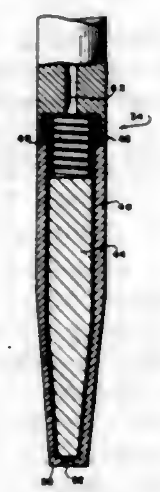
Walter A. Parrish, Jr., Homewood, Ill., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed Feb. 16, 1966, Ser. No. 527,920
6 Claims. (Cl. 219—69)



1. An electrode assembly for electric discharge machining a surface in a metallic body having a cylindrical electrode-guiding bore therein comprising an elongated central metallic electrode member, a discharge machining tip at one end of said electrode member having a surface complementary to the desired shape of the surface to be machined on said metallic body, a metallic guide sleeve surrounding a portion of said electrode member intermediate its ends, tubular insulation between said electrode member and said guide sleeve, and an adhesive having high dielectric strength securing said electrode member, said insulation, and said guide sleeve together, said guide sleeve having an accurately machined outer cylindrical surface of a diameter slightly less than said bore and having close concentricity with said surface on said tip.

3,388,234
RESISTANCE WELDING TIP

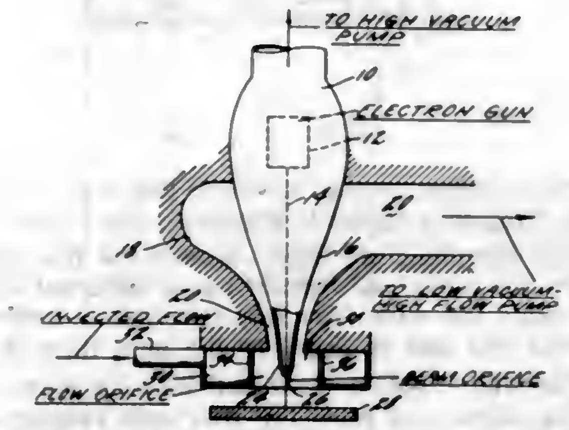
Cecil B. Gentle, Jr., 2007 Vanderbilt Drive SW., Huntsville, Ala. 35801
Filed Jan. 7, 1965, Ser. No. 424,154
3 Claims. (Cl. 219—119)



A resistance welding electrode includes a hollow tip having an end recess for accommodating an object to be secured to a weldment. In one embodiment, the tip has a hollow chamber containing either an electromagnet or a permanent magnet so that the object is held within the recess by magnetic attraction during the welding operation. In another embodiment the tip has a bore which communicates with a vacuum producing source so that the object will be securely held within the recess due to the pressure difference that is created.

3,388,235
VORTEX PRESSURE CONTROL DEVICE

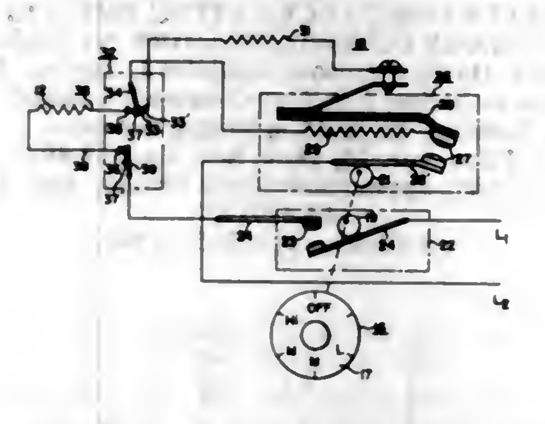
Edward A. Pinsley, Glastonbury, and Allan P. Walch, Manchester, Conn., assignors to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Dec. 1, 1965, Ser. No. 510,910
8 Claims. (Cl. 219—121)



1. A charged particle working device having a beam generating chamber, means in said chamber for generating a beam of charged particles, means for substantially evacuating said generating chamber to reduce the gaseous content thereof, aperture means in said chamber from which said beam may exit to a higher pressure region, aperture means including a diffuser section having its smaller area at the chamber exit and its larger area upstream of the generated beam, said larger area being greater than 400 times the area of said smaller area, said chamber surrounding said aperture means and tapering away therefrom, wall means surrounding said ramp and extending downwardly away from said chamber beyond said aperture means, said wall means forming a second chamber outside said beam generating chamber and exposed on one side to the atmosphere, and means for introducing a fluid into said second chamber and substantially tangentially of said wall to produce a vortex substantially surrounding said aperture means.

3,388,236
CONTROL FOR A SURFACE HEATER FOR COOKING APPARATUS

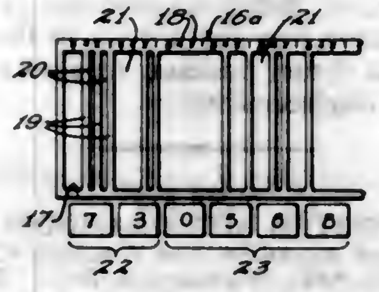
Calvin J. Holtkamp, Mansfield, Ohio, assignor to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed June 24, 1965, Ser. No. 466,783
5 Claims. (Cl. 219—485)



Switch means comprising an "infinite switch" and a switch for use with surface heater units of the type used in electric ranges. The selector switch serves to place the "infinite switch" in parallel with at least one resistance element to limit the current load on the "infinite switch" to the current value at which it was calibrated, which with certain heater elements may be less than the current required thereby.

3,388,237
METHOD AND MEANS OF AUTOMATICALLY PROCESSING INFORMATION CONTAINED ON RAILROAD CARS

Worth G. Read, 3162 Hamline Ave. N., St. Paul, Minn. 55116
Filed Aug. 28, 1962, Ser. No. 220,008
3 Claims. (Cl. 235—61.12)



1. A device for identifying car information of interest including:

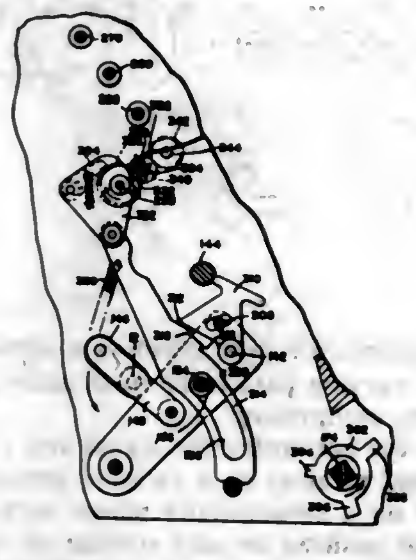
a body including a pair of spaced parallel elongated strips,

parallel transverse bars integrally connecting said strips at substantially right angles thereto arranged in a binary pattern representative of said information of interest,

said bars and strips being formed of flexible resilient material and said bars being generally arcuate in form with the center of arcuation generally parallel to said strips.

3,388,238
COIN RECORDING MECHANISM

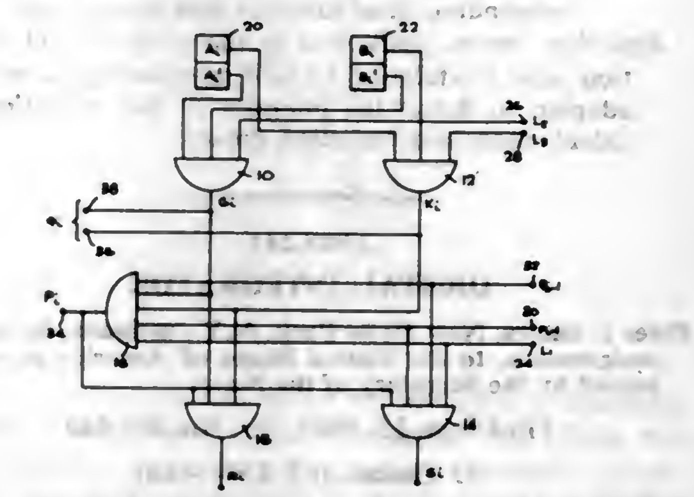
Paul F. Good, Timonium, and Gorman W. White and James B. Edwards, Baltimore, Md., assignors to Universal Controls, Inc., Towson, Md., a corporation of Maryland
Filed Aug. 26, 1966, Ser. No. 575,377
7 Claims. (Cl. 235—100)



A coin recording mechanism suited for use in public transportation comprises means for feeding coins or tokens individually to a measuring position, and means for positioning a shaft in accordance with the diameter of the coin or token. A first counter is operated when the diameter measurement determines that a coin is being measured, and registers the amount of the coin. A plurality of separate counters is provided, each operating similarly to register the quantity of tokens of a particular size. The counters can be caused to print their totals on a record sheet.

3,388,239
ADDER

Glen R. Duncan and William H. Wertz, Canoga Park, Calif., assignors to Litton Systems, Inc., Beverly Hills, Calif.
Filed Dec. 2, 1965, Ser. No. 511,207
18 Claims. (Cl. 235—175)



A combination of logical circuits which is adapted to be controlled to generate an arithmetic sum or its complement, the complement of the logical product, the logical sum, or the non-equivalence function of two binary digital number, using interconnected inverting gates.

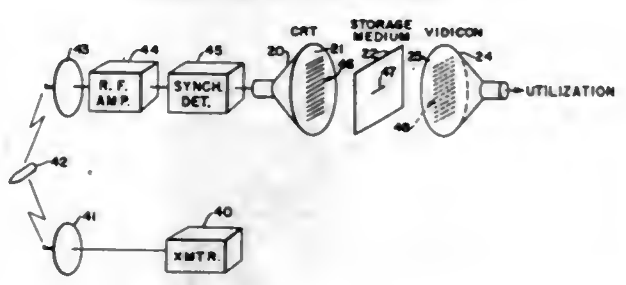
3,388,240

OPTICAL CORRELATOR USING A MATCHED FILTER SYSTEM WITH RASTER TYPE DISPLAY

Manuel A. Robbins, Lutherville, Md., assignor to Martin-Marietta Corporation, New York, N.Y., a corporation of Maryland

Filed Sept. 11, 1963, Ser. No. 308,315

16 Claims. (Cl. 235—181)



1. A system for distinguishing a signal having at least one time varying parameter from accompanying noise in a receiver, comprising:
  means for presenting the signal and noise combination in said receiver as a variable intensity radiation display on a substantially planar surface, so that
    the position on said surface of each point of said display corresponds to a particular point in time, and
    the intensity of radiation from each said point is substantially constant outwardly from said surface throughout a solid angle and corresponds to the value of said at least one parameter of said combination of signal and noise at said point in time;
  radiation intensity modulating means spaced from said surface and positioned in the path of said radiation from said surface for intensity modulating said radiation in accordance with the characteristics of said signal, so that
    the position of each point on said modulating means corresponds to a particular time value of said signal and
    the degree of intensity modulation effected at each said point corresponds to the value of said at least one parameter of said signal for the corresponding time value of said signal; and
  detection means positioned in the path of said radiation after modulation by said modulating means and adapted to detect the intensity of said radiation incident upon said detection means.

3,388,241

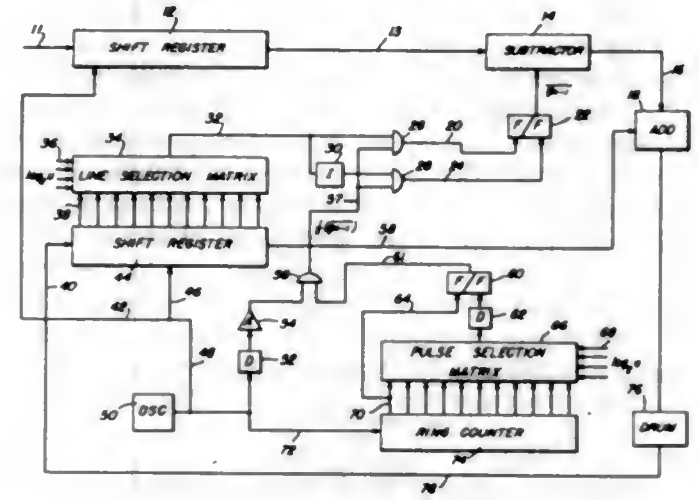
DIGITAL INTEGRATOR

Peter J. Isaacs, New Hyde Park, N.Y., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Filed Sept. 15, 1965, Ser. No. 487,640

11 Claims. (Cl. 235—168)

A digital integrator for performing digitally the iterative solution of a correlation equation. Digital signals are read into a shift register and are sequentially smoothed through subtractor, adder and multiplication networks with timed feedback arrangements providing additional input signals necessary for the appropriate arithmetic operations.



3,388,242

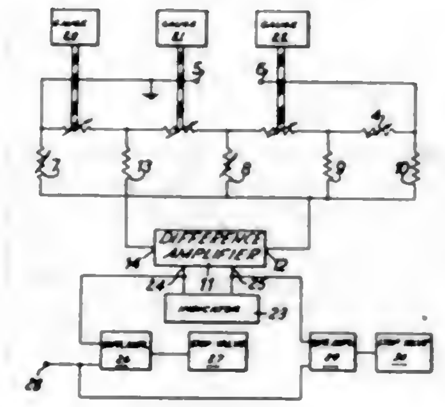
APPARATUS FOR CALCULATING THE WEIGHTED AVERAGE OF TWO OR MORE NUMBERS

Ivan Boris David Johnson, Guildford, Surrey, England, assignor to S. Smith & Sons (England) Limited, Cricklewood, London, England, a British company

Filed Apr. 10, 1964, Ser. No. 358,898

Claims priority, application Great Britain, Apr. 18, 1963, 15,217/63

8 Claims. (Cl. 235—184)



An electric analog network calculates the displacement of an aircraft's center of gravity from a datum position. The weight of fuel in each of the aircraft's fuel tanks is represented by an individual resistance in a resistance-chain of the network. Voltage is applied across the chain, and resistors connected from a common line to individual points in the chain have conductances dependent upon the moment-arms of the individual weights about the datum position. A difference amplifier, connected between the common line and a point in the chain corresponding to the datum position, supplies a signal representative of the displacement.

3,388,243

EDGE LIGHTED MEMORANDUM BOARD

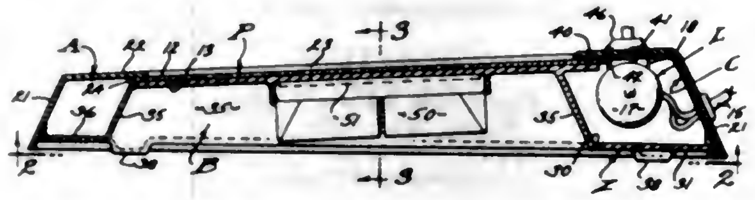
Ronald E. Adler, Los Angeles, Calif.
(201 I St. SW., Washington, D.C. 20024)

Filed Oct. 1, 1965, Ser. No. 492,142

10 Claims. (Cl. 240—2)

An edge lighted memorandum board having a transparent panel which can be drawn upon. The board has a primary body part with an opening which exposes one surface of the panel and carries illuminating means at

an edge of the panel. Another body part coextensively underlies the other surface of the panel and has a matte surface engaging the panel. A reinforcement portion depends from the panel and extends below the body part to support it and the panel.



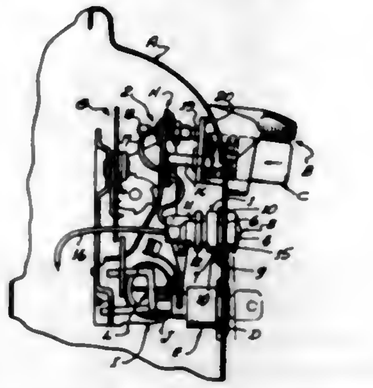
3,388,244

KEYHOLE AREA ILLUMINATION MEANS

John H. Castoe, 6718 Shady Grove St.,
Tujunga, Calif. 91042

Filed Aug. 31, 1965, Ser. No. 484,067

4 Claims. (Cl. 240—2.13)



A keyhole area illumination device for motor vehicle doors operable by pushing the latch releasing button of the locking mechanism only and characterized by the addition of components to the existing locking mechanism and by the absence of the substitution of parts for the locking mechanism.

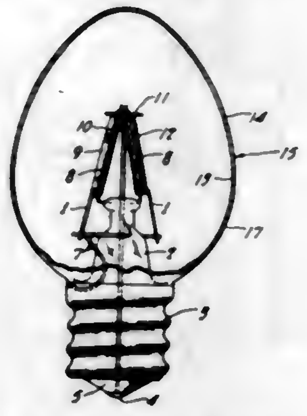
3,388,245

MULTICOLOR LIGHTING APPARATUS

Donald R. Larsen, Buena Park, Calif., assignor to the estate of Verneur E. Pratt

Filed Jan. 21, 1966, Ser. No. 522,195

15 Claims. (Cl. 240—3.1)



In one embodiment a light is provided which has two or more filaments with associated different colored color filters. The filaments are connected in series between a first and a second electrode through bimetallic strips. The second electrode extends annularly around the first electrode with the strips biased against the second electrode's annular portion to effect a normally closed circuit. The filters are arranged to obtain a resultant color when two or more filaments are energized simultaneously. In an alternate form the production of a resultant color is effected through a bimetallic strip actuated commutator. A third form of the invention includes a bimetallic spring which is coupled to the color filters. The spring is operable to expose individual of the color filters to a single filament and to expose adjoining filters to effect the resultant of their color.

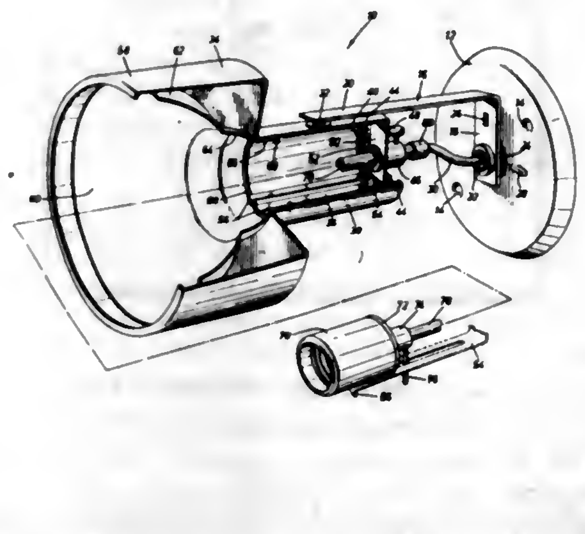
3,388,246

LIGHTING FIXTURE

Frederick Arthur Bailey, Port Credit, Ontario, Canada, assignor to Rotaflex of Canada Limited, Toronto, Ontario, Canada

Filed Feb. 20, 1967, Ser. No. 617,221

2 Claims. (Cl. 240—44.2)



A lighting fixture formed of a housing within which is a flanged reflector. A bifurcated member has a hooked end secured to the flange, the other end being secured to the housing. The position of a lamp holder in the reflector is adjustable because it is attached to a rod slidably supported in the bifurcated member.

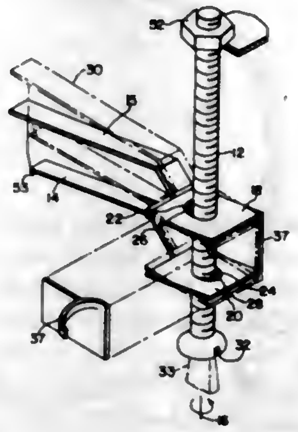
3,388,247

LUMINAIRE AND AN ADJUSTABLE SECURING DEVICE THEREFOR

Carle E. Rackley, Westlake, Ohio, assignor to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania

Filed Dec. 30, 1965, Ser. No. 517,660

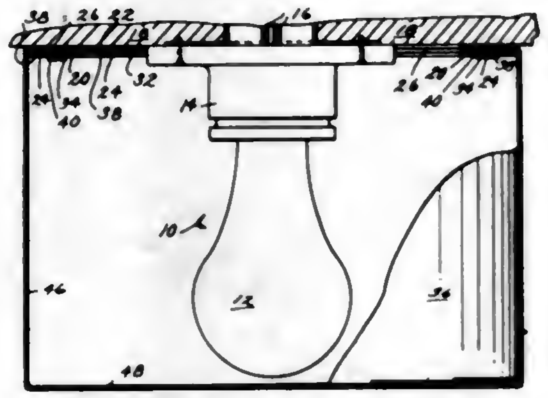
10 Claims. (Cl. 240—78)



An adjustable securing device for mounting a luminaire or similar article to a rafter or support. The article has affixed thereto in spaced relationship a plurality of vertically extending screws each of which carries a tiltable and rotatable hanger member which includes a pair of parallel arms having screw engaging apertures and an extending support member. The hanger is tiltable to remove lip portions of the screw engaging apertures from engagement with the screw to provide quick adjustment of the hanger along the screw. Coaction between the extending support member and the rafter or support reengages the lip portions of the apertures with the screw to secure the luminaire or article in its mounted position.

3,388,248
LIGHTING FIXTURE DIFFUSER ASSEMBLY

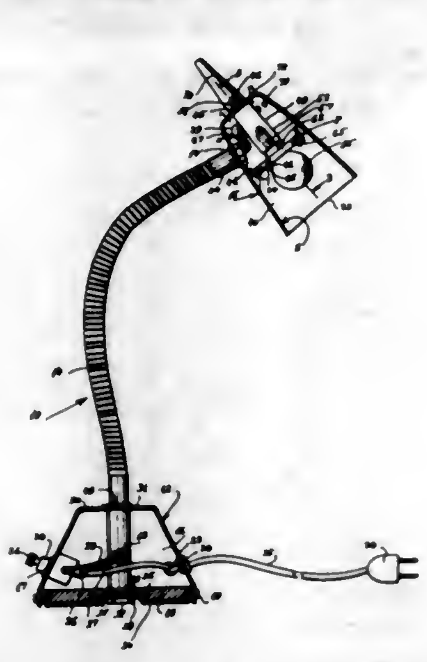
Seymour Auerbach, 115 Hesketh St.,
Chevy Chase, Md. 20015
Filed July 27, 1966, Ser. No. 568,236
13 Claims. (Cl. 240—78)



The device, while physically independent of the existing lighting fixture, dresses or updates the existing lighting fixture. The device includes a support annulus, structure for attaching the support annulus to the ceiling or wall surrounding the existing fixture, a diffuser (commonly called a globe or shade) and cooperative structure on the support annulus and diffuser for removably securing the diffuser to the support annulus so that the diffuser circumferentially surrounds and/or envelops the existing lighting fixture.

3,388,249
HIGH INTENSITY LAMP BULB AND LAMP

Harry W. Siegel, 1155 Ocean Ave., and Max A. Orbach,
794 Midwood St., both of Brooklyn, N.Y. 11230
Filed Feb. 5, 1965, Ser. No. 430,557
3 Claims. (Cl. 240—81)



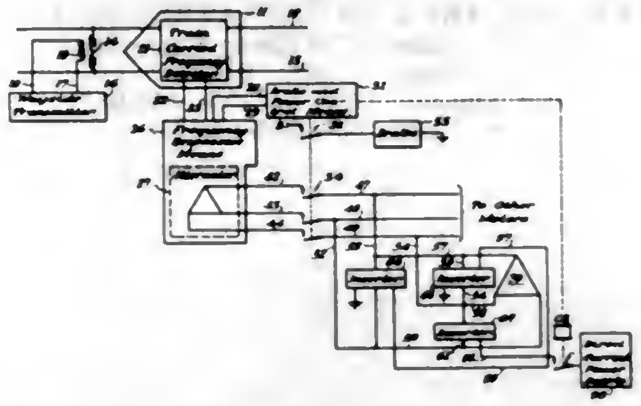
A head for a portable miniature desk lamp, said head having a hollow tapered casing closed at its narrow end and serving as a lampshade. The casing has a reflecting inner surface. Means is provided for mounting a lamp bulb on the closed end inside the casing, and means is provided for connecting the lamp bulb to a source of electric motive force. A separate reflector device is supported by the neck of the lamp bulb.

ERRATUM

For Class 246—31 see:
Patent No. 3,387,880

3,388,250
TRAIN SPEED CONTROL SYSTEM

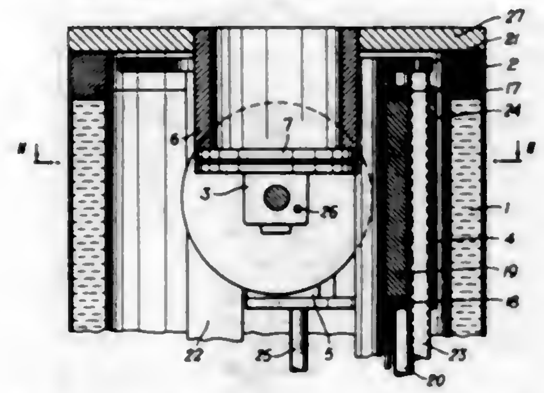
George W. Baughman, Swissvale, Pa., assignor to Westinghouse Air Brake Company, Swissvale, Pa., a corporation of Pennsylvania
Filed Oct. 1, 1965, Ser. No. 492,008
16 Claims. (Cl. 246—187)



This invention relates to a train speed control system in which the propulsion motor or motors are multiphase induction motors supplied with alternating current from a direct current power supply through the medium of switching devices, the rate of switching of which determines the frequency of the alternating current and hence the speed of the motor. The rate of switching is directly dependent on the frequency of a variable frequency speed control signal delivered to the train from the wayside.

3,388,251
DEVICE FOR THE COOLING OR HEATING OF OBJECTS ARRANGED ON A SPECIMEN CARRIER

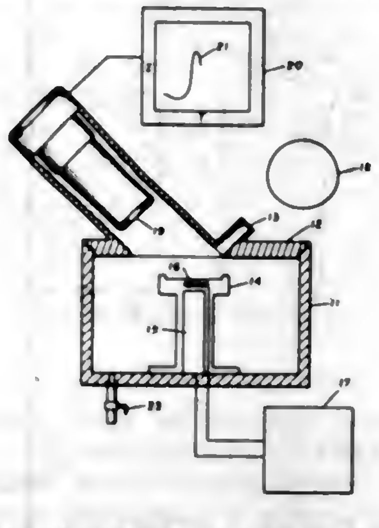
Fritz Grasenick and Siegfried Gessner, both of
12 Rechbauerstrasse, Graz, Austria
Filed June 29, 1964, Ser. No. 378,872
Claims priority, application Austria, July 11, 1963,
A 5,584/63
4 Claims. (Cl. 250—49.5)



1. A device for the cooling or heating of articles, particularly of preparations used in electron microscopy, in a treatment chamber, comprising a specimen carrier to receive the article to be treated, means for displacing, tilting and rotating the said specimen carrier about an axis thereof, at least one body having a temperature different from that of the said specimen carrier which may be brought into a heat conductive contact with the said body, and a stem elastically connected with the specimen carrier on the side of the specimen carrier facing away from the surface carrying the article thus to thereby permit a limited amount of axial displacement and inclination of the specimen carrier in relation to the said stem for the purpose of achieving uniformity of the heat-conductive contact between the specimen carrier and the said body.

3,388,252
THERMOLUMINESCENT CHARACTERIZATION OF QUARTZIFEROUS MATERIALS

William L. Medlin, Dallas, Tex., assignor to Mobil Oil Corporation, a corporation of New York
Filed Nov. 21, 1963, Ser. No. 325,362
16 Claims. (Cl. 250—71)



1. A method of obtaining a glow curve for a quartziferous material, comprising the steps of:

(a) annealing said quartziferous material at a temperature and for a time sufficient to render it susceptible to thermoluminescent excitation by ultraviolet light,

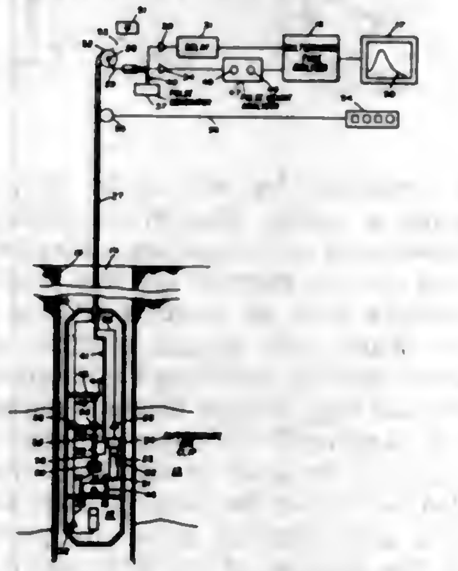
(b) cooling said material to a temperature below the temperature of at least one glow peak,

(c) irradiating said material with ultraviolet light, and

(d) heating said material at a substantially constant rate and measuring the thermoluminescent emission therefrom as a function of temperature to obtain a glow curve.

3,388,253
RADIOACTIVE WELL LOGGING SYSTEM UTILIZING MECHANICALLY CONTROLLED PULSED NEUTRON SOURCE

William R. Mills, Jr., Dallas, Tex., assignor to Mobil Oil Corporation, a corporation of New York
Filed Mar. 25, 1964, Ser. No. 354,654
8 Claims. (Cl. 250—83.3)



1. In radiation well logging, a borehole system for producing periodically bursts of primary radiation spaced in time for irradiating the formations traversed by a borehole and synchronizing pulses for conditioning a radiation recording system comprising:

a borehole unit for traversing a borehole,

means including cable means for moving said borehole unit through a borehole,

a first material located in said unit and characterized by the continuous emission of radiation,

a second material located in said unit for emitting primary radiation of a different nature when exposed to radiation emitted by said first material,

means located in said unit and mounted for periodic movement relative to at least one of said materials to expose periodically said second material to radiation emitted by said first material only during predetermined time intervals to produce bursts of primary radiation spaced in time,

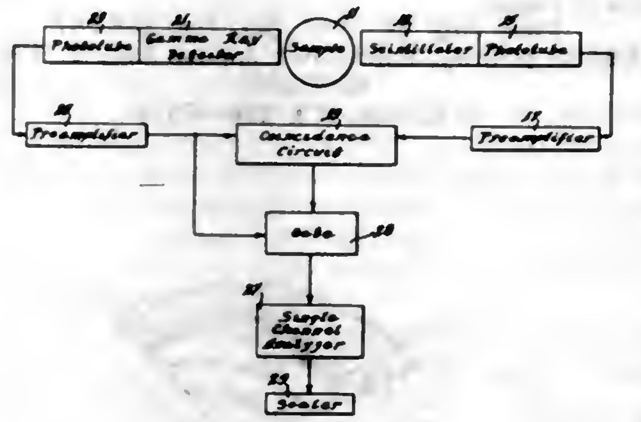
means located in said unit and responsive to the periodic movement of said last-named means to a predetermined position for producing a synchronizing pulse concomitant with each of said bursts of primary radiation produced from said second material when periodically exposed to radiation from said first material,

detecting means located in said unit for detecting secondary radiation resulting from the irradiation of the formations with primary radiation, and

means for applying the output of said detecting means and the pulses produced by said synchronizing means to said radiation recording system.

3,388,254
METHOD FOR DETERMINING THE AMOUNT OF CESIUM-137 IN IRRADIATED NUCLEAR FUEL

William A. Haller, Richard W. Perkins, and Julian M. Nielsen, Richland, Wash., assignors to the United States of America as represented by the United States Atomic Energy Commission
Filed Sept. 7, 1966, Ser. No. 577,776
2 Claims. (Cl. 250—83.3)

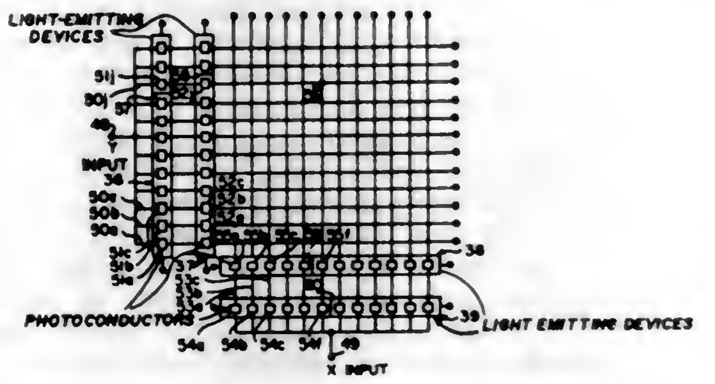


1. In a method for determining the burnup of irradiated nuclear reactor fuel based on the amount of cesium-137 present in the irradiated fuel, the improvement in the method for determining the amount of cesium-137 present in the irradiated fuel, comprising: dissolving a representative portion of the irradiated fuel to obtain a sample thereof, detecting the beta particles emitted from said sample and generating beta representative electrical pulses corresponding thereto, detecting the gamma rays emitted from said sample and generating gamma representative electrical pulses corresponding thereto, eliminating those gamma representative pulses which are coincident in time with beta representative pulses, and measuring the rate of occurrence of the remaining gamma representative pulses.

3,388,255

SOLID-STATE VOLTAGE-SCANNED DEVICE INCLUDING LONG NARROW P-N JUNCTION MATERIAL WITH PHOTOCONDUCTORS THEREON

George A. May, 3621 Ayemer St., Apt. 3,
London, Ontario, Canada
Continuation-in-part of application Ser. No. 339,121, Jan. 21, 1964. This application June 22, 1964, Ser. No. 377,021
24 Claims. (Cl. 250—209)

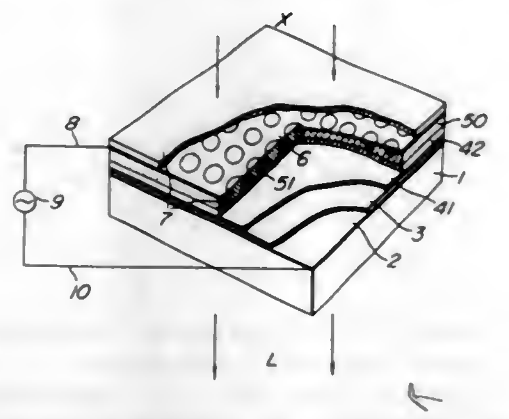


1. A voltage-indicating or current-indicating device comprising a conducting layer, a semiconductor layer in close contact with the conducting layer, and a second semiconductor layer of opposite conductivity to the first semiconductor layer and in close contact with the first semiconductor layer, all layers being of equal length and of uniform cross section, a pair of terminals one at either end of the second semiconductor layer, and a terminal attached to the conducting layer, the said semiconductor layers being selected so that current flow through the junction between said layers causes emission of light.

3,388,256

LIGHT AMPLIFIER INCLUDING A LAYER FOR CONVERTING X-RAYS TO VISIBLE RADIATION

Tadao Kohashi, Yokohama, Japan, assignor to Matsushita Electric Industrial Co., Ltd., Osaka, Japan, a corporation of Japan
Filed July 29, 1964, Ser. No. 385,887
Claims priority, application Japan, Aug. 2, 1963, 38/41,543
3 Claims. (Cl. 250—213)

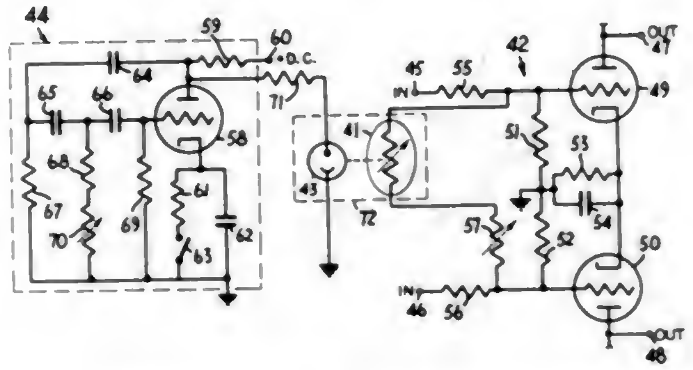


1. A light intensifier for radiations comprising an electroluminescent layer, a photo-transparent first electrode disposed on one side of said electroluminescent layer, a radioluminescent layer mounted on the other side of said electroluminescent layer, a plurality of recessions in said radioluminescent layer on the far side thereof from said electroluminescent layer, at least one second electrode disposed on the top portion of the recessed radioluminescent layer, a photoconductive layer covering the recessed surface of said radioluminescent layer as well as its recessed portions, said photoconductive layer being electrically connected with said second electrode, and an electric voltage source applied across said phototransparent first electrode and said second electrode.

3,388,257

SYSTEM FOR INTRODUCING TREMOLO AND VIBRATO INTO AUDIO FREQUENCY SIGNALS

Robert R. Ten Eyck, Morgan, N.J., assignor to The Ampeg Company, Inc., Linden,, N.J., a corporation of New York
Filed Jan. 14, 1965, Ser. No. 425,579
7 Claims. (Cl. 250—217)

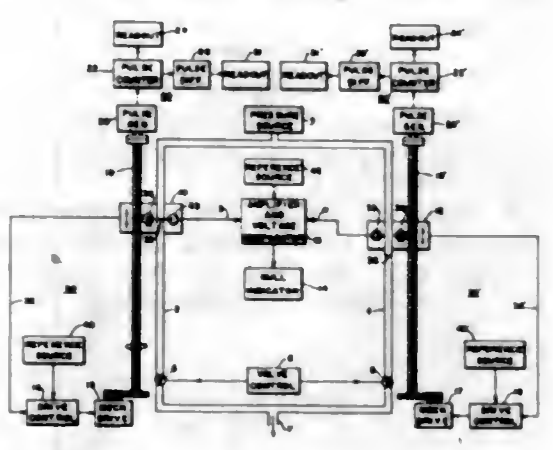


Photoconductive cells in an audio frequency signal circuit are activated by a radiant energy source that is in turn selectively energized from a low frequency generator in order to provide a modulation of the audio frequency in the form of tremolo and/or vibrato musical effects.

3,388,258

FLUID FLOW METER WITH COMPARATOR REFERENCE MEANS

Daniel J. Grant, Chevy Chase, Md., assignor to the United States of America as represented by the Administrator of the National Aeronautics and Space Administration
Filed Apr. 5, 1965, Ser. No. 445,807
24 Claims. (Cl. 250—218)

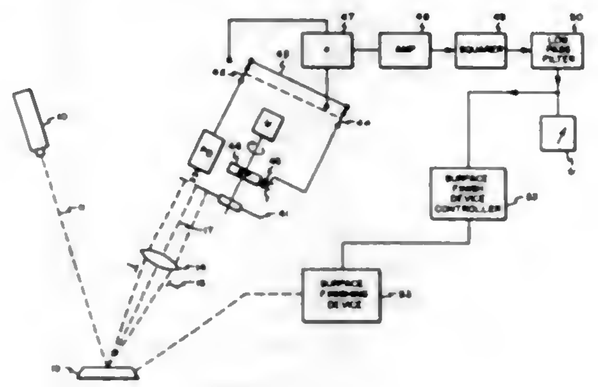


1. An apparatus for sensing the relative position of a fluid within a tubular member comprising: level sensing means positioned for independent longitudinal movement along said tubular member and for generating an output in accordance with its position relative to the level of said fluid within said tubular member, reference means being adjustable for providing an output equal to the output from said level sensing means when said level sensing means is positioned to have a particular relationship with respect to the level of said fluid, comparator means connected to receive the outputs from said level sensing means and said reference means for providing an output which is the measure of the relationship between the inputs applied thereto, and indicating means connected to have applied thereto said output from said comparator means.

3,388,259

PHOTOSENSITIVE SURFACE FINISH INDICATOR

Robert A. Flower, White Plains, N.Y., assignor to General Precision Systems Inc., a corporation of Delaware
Filed Mar. 22, 1965, Ser. No. 441,490
16 Claims. (Cl. 250—219)

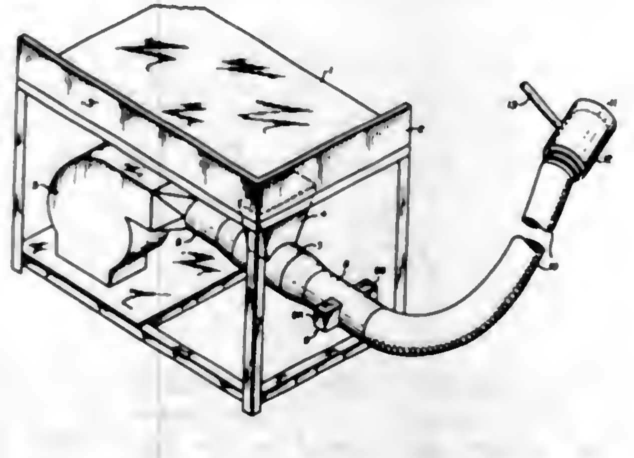


1. Apparatus for measuring the roughness of a surface including,
means for generating and transmitting electromagnetic wave energy on to a surface,
optical means for receiving a diffraction image of said electromagnetic wave energy reflected from said surface,
means for detecting the amplitudes of the waves of energy reflected from said surface to said optical means in accordance with the angle of reflection as a function of the roughness of the said surface,
means for generating a first alternating current signal representative of the said amplitudes,
means for storing said first alternating current signal,
means for generating a second alternating current signal representative of the said amplitudes,
means for comparing said first alternating current signal and said second alternating current signal, and
means responsive to such comparison for providing an output corresponding to the difference between said first and second alternating current signals.

3,388,260

PHOTOSENSITIVE DEVICE FOR CONVEYING AND COUNTING FABRICS

William Boon, The Towers, 215 Passaic Ave.,
Passaic, N.J. 07055
Filed Apr. 23, 1964, Ser. No. 362,080
8 Claims. (Cl. 250—222)

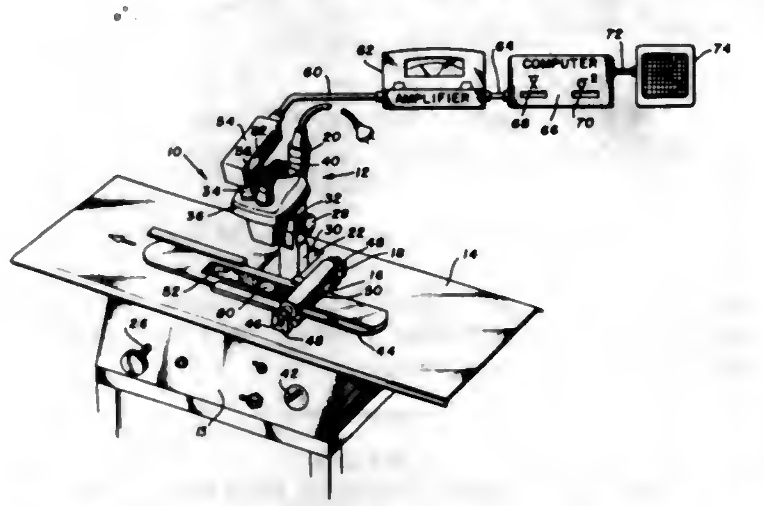


An apparatus for counting and conveying generally light weight and bulky fabric items, such as, underwear, handkerchiefs, soiled linen, etc., for textile factories and laundries.

3,388,261

METHOD AND APPARATUS FOR DETERMINING FABRIC STREAKINESS

Thomas S. Roberts and Kenneth D. Hixon, Decatur, Ala., assignors to Monsanto Company, St. Louis, Mo., a corporation of Delaware
Filed Sept. 24, 1965, Ser. No. 490,046
14 Claims. (Cl. 250—224)



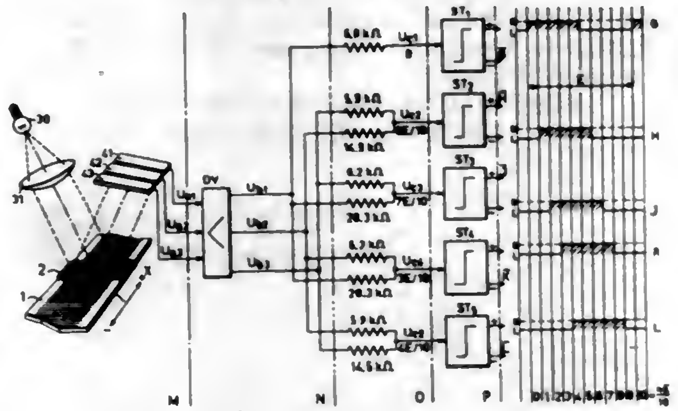
14. A device for numerically assessing visible dye nonuniformity in a fabric comprising:
(a) a source of radiant energy;
(b) means for moving a dyed sample through the field of radiations produced by said source whereby radiant energy will be reflected from said sample which will have an intensity proportional to the dye depth of said sample;
(c) means for converting radiant energy to direct current electrical energy;
(d) optical means for directing the radiant energy reflected from said sample to said means for converting radiant energy to electrical energy whereby the electrical energy emitted from said means for converting will vary according to the intensity of said reflected energy;
(e) means for computing the arithmetic mean of the magnitude of said direct current electrical energy produced during the period of time said dyed fabric is moving through said field of radiations, said arithmetic means being directly proportional to the average dye depth of said sample;
(f) means for computing the variance of the magnitude of said direct current electrical energy from said arithmetic mean produced during the period of time said dyed fabric is moving through said field of radiations, said variance being proportional to the visual appearance of dye depth variations about said average dye depth of said sample;
(g) means for transmitting said electrical energy from said means for converting to said means for computing the mean and variance; and
(h) means for converting said means and variance into visually displayed quantitative values.

3,388,262

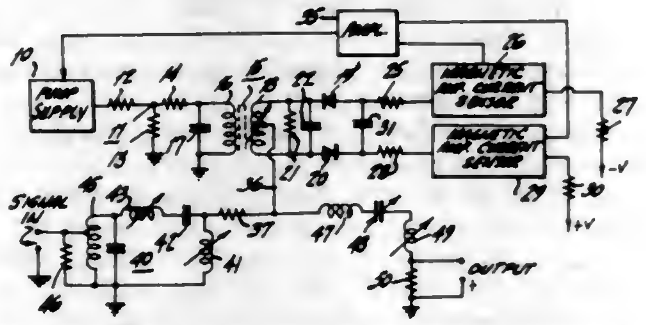
ELECTRO-OPTICAL DISPLACEMENT MEASURING ARRANGEMENT

Theo Stutz, Zollikerberg, Zurich, Switzerland, assignor to Contraves A.G., Zurich, Switzerland
Filed Dec. 9, 1964, Ser. No. 417,012
Claims priority, application Switzerland, Mar. 16, 1964, 3,381/64; Sept. 22, 1964, 12,285/64
17 Claims. (Cl. 250—237)

Three or four signals, mutually displaced by equal fractions of a cycle, each cycle representing a unit measurement of a measured quantity, are fed to a differentiating arrangement (several embodiments shown), for eliminating the D.C. component. Purely A.C. differentiating output voltages are fed in combination to a plurality *p* of Scott circuits, each followed by a polarity discriminator. In combination, the *p* binary outputs of the discriminators yield 2*p* different combinations, each characterizing a predetermined fraction of a unit measurement of the measured quantity.



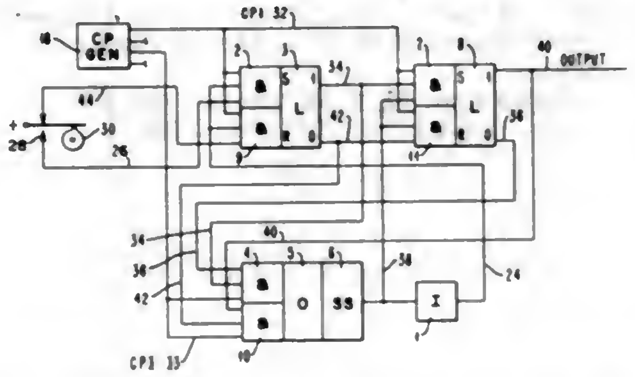
3,388,263
AGC FOR BROADBAND PARAMETRIC AMPLIFIER
James W. Daniel, Jr., Cherry Hill, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Oct. 26, 1966, Ser. No. 589,574
7 Claims. (Cl. 307—88.3)



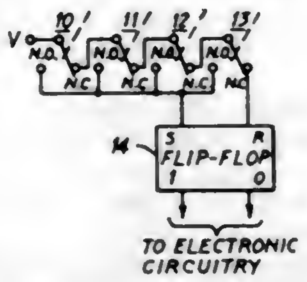
1. A broad band parametric amplifier comprising,
(a) a non linear reactance device,
(b) a first frequency signal source coupled to said device to pump said device at said first frequency,
(c) a source of broad band signal frequencies coupled to said device,
(d) means coupled to said device for supporting a third idler frequency equal to a beat frequency of said signal frequencies and said first frequency to enable amplification of said signal frequencies,
(e) means for detecting variations in the magnitude of current through said device to provide a control signal, which is solely determined by said current variations,
(f) and means coupled to said first frequency signal source and responsive to said control signal to determine the amplitude of said first signal over the broad band of said signal frequencies so as to reduce said current variations.

3,388,264
NANOSECOND CIRCUIT FOR ELIMINATING CAM BOUNCE
Richard S. Carter, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed May 1, 1964, Ser. No. 364,248
10 Claims. (Cl. 307—93)

Disclosed is a nanosecond logical circuit for isolating relatively slow, noisy switching circuits (e.g., cam-operated contacts) from a very fast system. Isolation is achieved through a pair of latches which are interlocked through a timed signal. The latches operate in response to initial input change in voltage, but thereafter, they are unresponsive to other changes in voltage such as those introduced by cam bounce or other noise sources. If the circuit is switched on by a noise pulse, it will stay on for a timed period, or if it is switched off, it will stay off for a timed period.

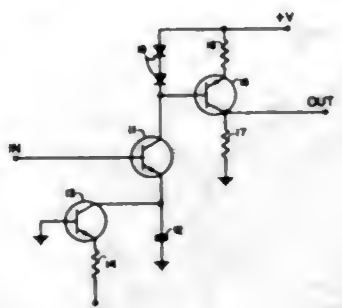


3,388,265
COUPLING CIRCUIT
Carl M. Wright, Falls Church, Va., assignor to Radio Corporation of America, a corporation of Delaware
Filed Jan. 8, 1965, Ser. No. 424,265
1 Claim. (Cl. 307—112)



A circuit arrangement is described for connecting a plurality of switches to electronic logic circuitry in a manner that isolates the logic circuitry from the noise inherent in mechanical switches. A flip-flop and a number of single-pole, double-throw switches are connected so that the switches present an AND function to one input of the flip-flop and an OR function to the other. This circuit obviates the necessity of providing a flip-flop for each switch when more than one switch is required.

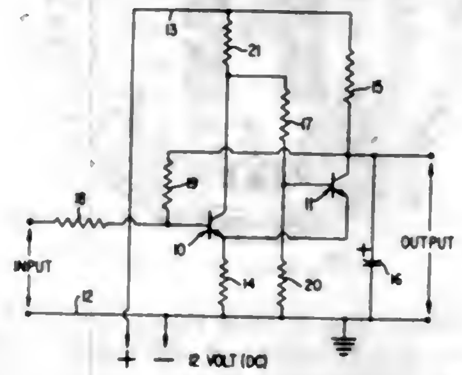
3,388,266
PULSE PROCESSOR
Raymond A. Kjar, Alexandria, Va., assignor to the United States of America as represented by the Secretary of the Navy
Filed June 11, 1965, Ser. No. 463,408
13 Claims. (Cl. 307—231)



A pulse processor having a self-adjusting acceptance barrier which includes a storage means for storing a signal of a level determined by the input pulse to the processor provided that the input pulse exceeds the storage level. Pulses having an amplitude greater than the barrier will be accepted at any time while pulses having an amplitude less than the barrier will not be accepted.

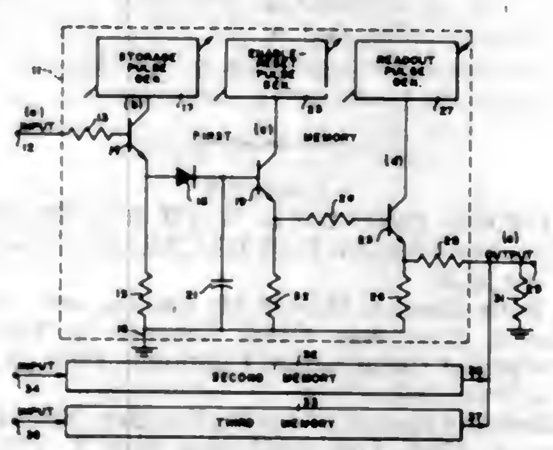
The reception of a signal of amplitude exceeding the barrier creates the condition for generating a pulse output from the processor.

3,388,267
BISTABLE DEMODULATOR CIRCUIT
James T. Hardin and Rodger T. Lovrenich, Lambertville, Mich., assignors to Eltra Corporation, Toledo, Ohio, a corporation of New York
Filed Oct. 15, 1965, Ser. No. 496,464
5 Claims. (Cl. 307—233)



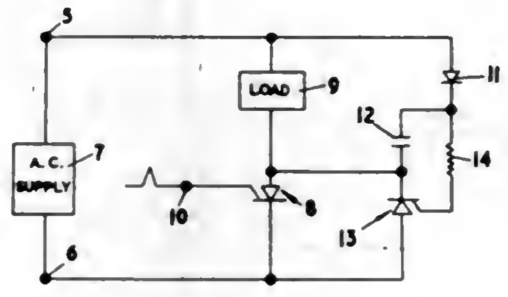
5. A bistable demodulator circuit including a pair of transistors having emitter collector and, control electrodes, a power supply, a pair of input terminals and a pair of output terminals, said first transistor operably connected to said power supply with its control electrode operably connected to one of said input terminals whereby said first transistor is turned off when low voltage oscillations are applied to its control electrode from said input terminal, the second transistor biased across said power supply with its control electrode operably connected to the output of said first transistor whereby said second transistor will conduct only when said first transistor is non-conducting, a capacitor operably connected between one of said output terminals, the output of said second transistor and said power supply whereby said capacitor will be charged to a predetermined energy level when said second transistor is non-conducting and whereby said stored energy will be discharged to said output terminals when a signal at said input terminal turns off said first transistor and thus turns on said second transistor.

3,388,268
MEMORY DEVICE
Francis J. Murphree, Sunnyside, Fla., assignor to the United States of America as represented by the Secretary of the Navy
Filed Nov. 9, 1964, Ser. No. 410,034
11 Claims. (Cl. 307—238)



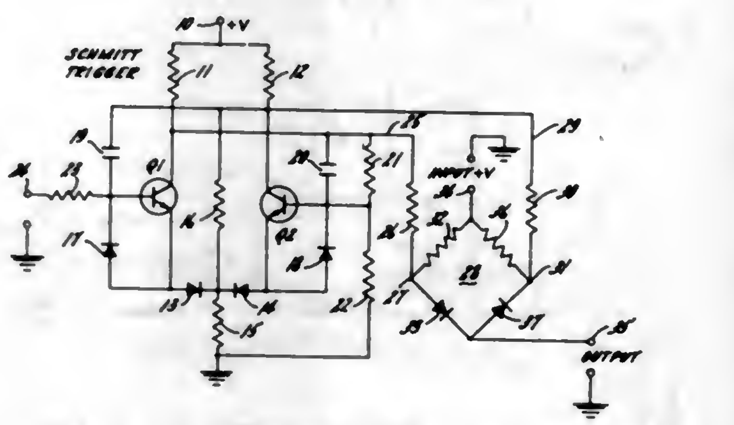
A memory device having an adjustable pulse generator for timely producing a storage pulse, a transistorized storage circuit for storing a data signal in response to said storage pulse, an adjustable pulse generator for timely producing an enable-reset pulse, a transistorized circuit for the clearing of said stored data signal in response to said enable-reset pulse, an adjustable readout pulse generator for timely producing a readout pulse, and a transistorized circuit for reading out the data signal from said transistorized storage circuit in response to the aforesaid readout pulse.

3,388,269
A.C. CONTROL CIRCUIT
Michael Murray Bertioli, Lichfield, England, assignor to Joseph Lucas (Industries) Limited, Birmingham, England
Filed Mar. 2, 1965, Ser. No. 436,623
Claims priority, application Great Britain, Mar. 3, 1964, 8,876/64
2 Claims. (Cl. 307—252)



1. An A.C. control circuit comprising a first controlled rectifier connected in series with a load between terminals which in use are connected to the A.C. source, a second controlled rectifier having its cathode and anode connected respectively to the anode and cathode of the first controlled rectifier, and a capacitor arranged to be charged when the first controlled rectifier conducts, and to discharge through the gate and cathode of the second controlled rectifier when the first controlled rectifier ceases to conduct at the end of a half cycle, so that the second controlled rectifier is rendered conductive and conducts for the next half cycle.

3,388,270
SCHMITT TRIGGER OR MULTIVIBRATOR CONTROL OF A DIODE BRIDGE MICROSECOND SWITCH AND CHOPPER CIRCUIT
Dorsey Davidoff, New York, N.Y., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Nov. 4, 1964, Ser. No. 409,039
3 Claims. (Cl. 307—257)



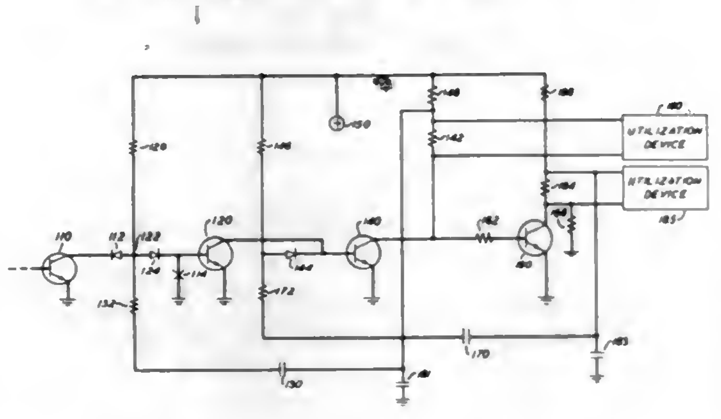
A microsecond switch and chopper circuit having a Schmitt trigger or bistable multivibrator with triggering pulses applied thereto for triggering same, the output of the Schmitt trigger or multivibrator being coupled to a diode bridge circuit to switch it off and on in accordance with the triggering pulses in very rapid sequence.

3,388,271
TIMING CIRCUIT INCLUDING THREE ACTIVE DEVICES AND TWO NETWORKS FOR RESPECTIVELY CONTROLLING THE DE-ENERGIZATION TIMES OF TWO OF THE DEVICES

Alexander Feiner, Red Bank, and Douglas J. Watson, Oceanport, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Nov. 27, 1964, Ser. No. 414,300

10 Claims. (Cl. 307—267)



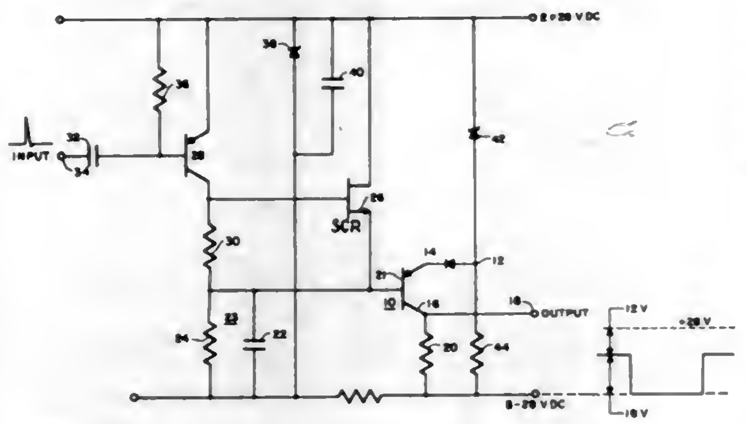
A simple and reliable three-transistor timing circuit responds to each change of state appearing at its input to provide complementary output indications whose respective durations are at least equal to a predetermined time interval. The circuit includes a timing network for maintaining one of the transistors de-energized for a minimum specified time in response to a positive-going input signal and a second timing network for maintaining a different one of the transistors de-energized for a minimum specified time in response to a negative-going input signal.

3,388,272
RESETTABLE MONOSTABLE MULTIVIBRATOR

John O. Dick, Riverside, and Howard M. Forrester, Corona, Calif., assignors to the United States of America as represented by the Secretary of the Navy

Filed Oct. 29, 1964, Ser. No. 407,592

3 Claims. (Cl. 307—273)



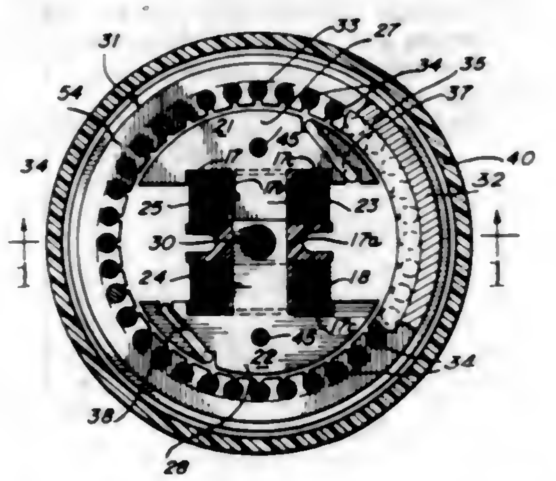
A monostable multivibrator which can by reset by the re-establishing of the charge on the charging capacitor when triggered regardless of its state of charge prior to that time.

3,388,273
MOTOR

Dhu Aine J. Davis, Wheaton, Ill., assignor to Hermetic Coil Co., Inc., a corporation of Connecticut

Filed Sept. 7, 1965, Ser. No. 485,368

3 Claims. (Cl. 310—67)



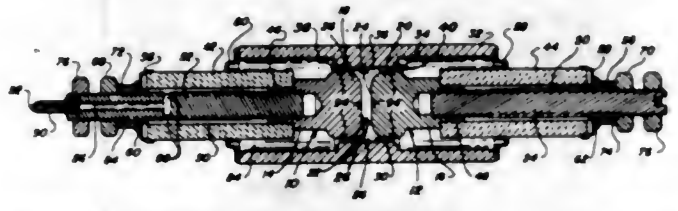
An AC machine has a basic stator construction useful for induction, synchronous or hysteresis motors. The rotor is a ring surrounding the stator and rotating about the periphery of arcuate stator pole pieces. The stator includes a bobbin having a rectangular opening therethrough, a coil wound thereon and a pair of opposed stator pole pieces each with a leg portion extending into the bobbin. The rotor shaft passes through a center web of the bobbin and is supported in bearings on either side thereof.

3,388,274
AXIAL SPARK GAP WITH A COAXIAL THIRD ELECTRODE ADJACENT THE MAIN AXIAL ELECTRODES

Chester J. Kawiecki, Santa Barbara, and Walter T. Pranke, Jr., Goleta, Calif., assignors to Joslyn Mfg. and Supply Co., Chicago, Ill., a corporation of Illinois

Filed Apr. 5, 1966, Ser. No. 540,326

12 Claims. (Cl. 313—54)



A spark-gap device includes a pair of aligned electrodes and a third cylindrical electrode surrounding the first two. The third cylindrical electrode is extended inwardly towards the aligned electrodes to provide a confined arcing surface, and also to provide structural reinforcement. A pair of cylindrical insulators are respectively received within either end of the cylindrical electrode in spaced relation thereto, and each insulator supports one of the aforementioned aligned electrodes.

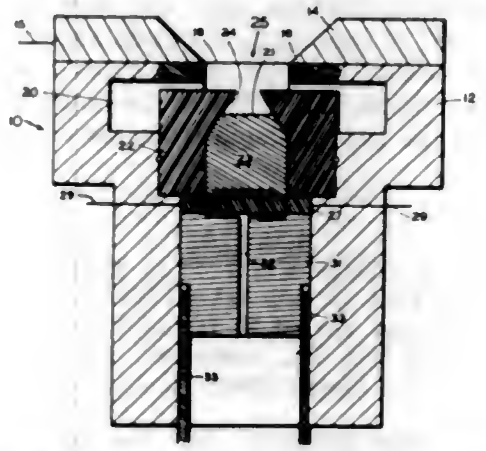
3,388,275
CATHODE PROVIDED WITH ION-PRODUCING MATERIAL FOR DECREASING SPACE CHARGE

Lee H. Bettenhausen, Harold M. Epstein, and Arnold M. Plummer, Columbus, Ohio, assignors to The Battelle Development Corporation, Columbus, Ohio, a corporation of Delaware

Continuation-in-part of application Ser. No. 511,947, Dec. 6, 1965. This application June 8, 1966, Ser. No. 556,054

10 Claims. (Cl. 313—55)

Dose rates in a flash X-ray tube are increased significantly by coupling to the cathode 23, 123, etc., a nonconducting conical "focusing" member 22, 122, etc., that provides



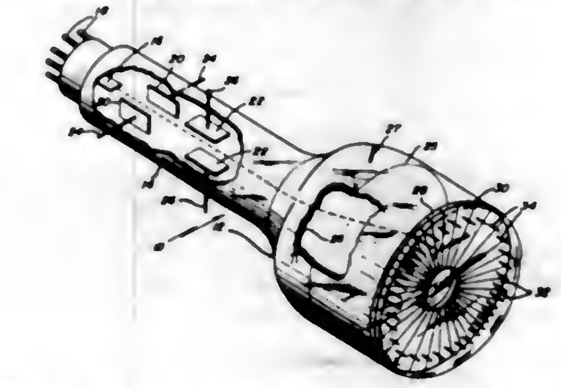
a plasma to neutralize the space charge and increases the density of fast electrons that flow to the anode 18.

3,388,276
HIGH ANGULAR RESOLUTION CATHODE RAY TUBE WITH SECTORLIKE ELECTRODES HAVING DIFFERENT SECONDARY EMISSION AREAS

Gordon R. Spencer, Westwood, Mass., assignor to Raytheon Company, Lexington, Mass., a corporation of Delaware

Filed Dec. 1, 1966, Ser. No. 598,492

10 Claims. (Cl. 313—68)



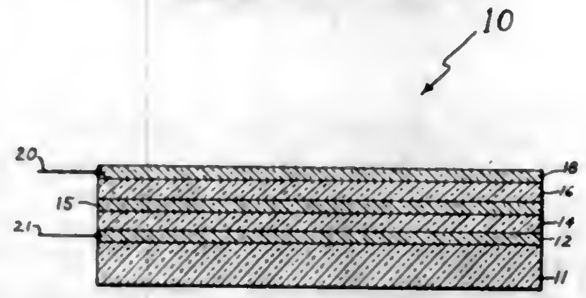
A cathode ray tube comprising a segmented metal target having a plurality of sectors, each sector being divided into at least two areas having different secondary emission ratios, a lead connected to each sector, an electron gun for directing an electrom beam onto the target and deflection plates positioned between the target and the electron gun for deflecting the beam to a selected sector of the target and onto a selected area of the selected sector.

3,388,277
ELECTROLUMINESCENT DEVICE COMPRISING ELECTROLUMINESCENT FILMS EMITTING LIGHT OF COMPLEMENTARY COLORS

William A. Thornton, Jr., Cranford, N.J., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Filed Sept. 27, 1966, Ser. No. 583,117

1 Claim. (Cl. 313—108)



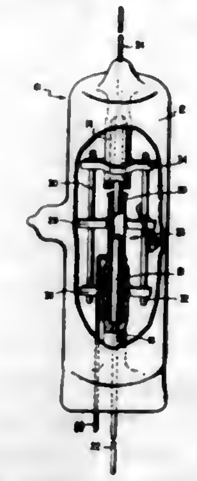
A white light emitting electroluminescent film device utilizing molecular electroluminescent films prepared by evaporation techniques, the device comprising two such electroluminescent layers characterized by emission of light of colors which are complementary, e.g., orange or yellow, and blue, so that the combined emission is of substantially white light, the electroluminescent films being separated by a barrier layer of silicon oxide to prevent migration of doping elements therebetween, and electrode means for subjecting the electroluminescent films simultaneously to an electrical field.

3,388,278
COLD-CATHODE GAS TUBE HAVING A TUBULAR CONTROL ELECTRODE

Paul W. Stutsman, Needham, Mass., assignor to Raytheon Company, Lexington, Mass., a corporation of Delaware

Filed July 1, 1964, Ser. No. 379,687

7 Claims. (Cl. 313—197)



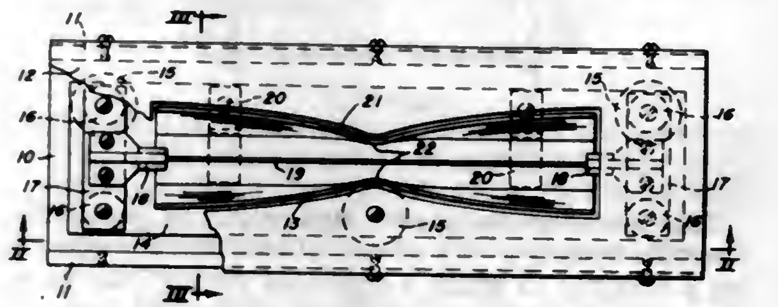
1. A cold-cathode gas-filled electric discharge device, comprising a dielectric envelope containing an inert gaseous medium and enclosing a radioactive material, a cathode electrode and an anode electrode mounted within said envelope and defining a space charge region therebetween, each of said electrodes having means connected thereto to provide respective connections external to said envelope, a floating potential tertiary electrode mounted within said envelope and encircling said space charge region, the distance between said tertiary electrode and each of said other electrodes being less than that between said anode and cathode electrodes, and means for applying potential between the cathode and anode electrodes to produce a space charge in said space charge region therebetween, said tertiary electrode being sensitive to said space charge to cause ionization of said gas in the space charge region in response thereto without the aid of external voltage.

3,388,279
ELECTRON-BEAM GUN

Charles R. Kelly, Pittsburgh, Pa., assignor to United States Steel Corporation, a corporation of Delaware

Filed Oct. 5, 1965, Ser. No. 493,154

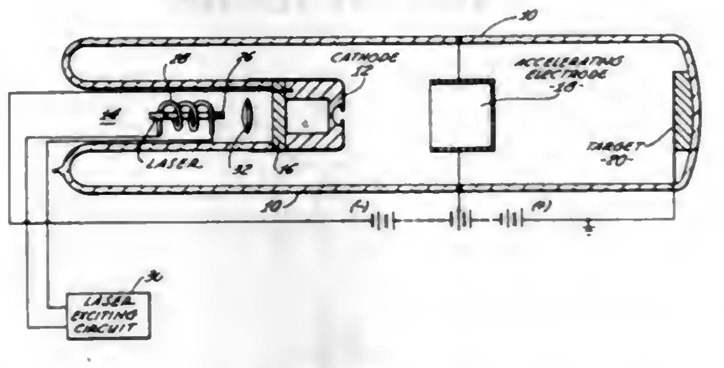
3 Claims. (Cl. 313—279)



An electron-beam gun including a thermionic emitter is provided with a trough-shaped baffle confining electron emission to a limited arc outwardly from the emitter. The baffle is of hour-glass shape longitudinally, i.e., has its mid-portion drawn in to a width less than that of the end portions. This tends to correct non-uniform emission along the length of the emitter by reducing emission in the region where it would be greatest, without the use of the invention.

3,388,280
LASER ENERGIZED HOT CATHODE TYPE OF ELECTRON DISCHARGE DEVICE

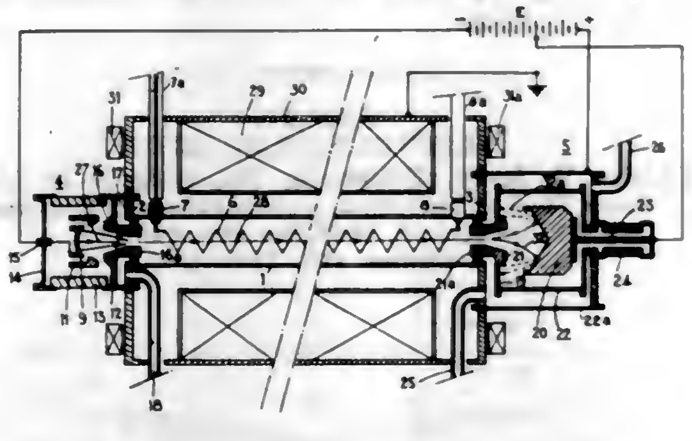
Victor E. De Lucia, 927 Euclid Ave.,
Santa Monica, Calif. 90403
Filed Apr. 19, 1966, Ser. No. 543,711
7 Claims. (Cl. 313—337)



An electron discharge device of the hot cathode type is provided. In accordance with the concepts of the present invention, a laser-type beam including infra-red heat rays is directed to the cathode to bring it up to its operating electron emissive temperature. This technique precludes any need for the usual electric heating of the cathode, and inherent insulation problems.

3,388,281
ELECTRON BEAM TUBE HAVING A COLLECTOR ELECTRODE INSULATIVELY SUPPORTED BY A COOLING CHAMBER

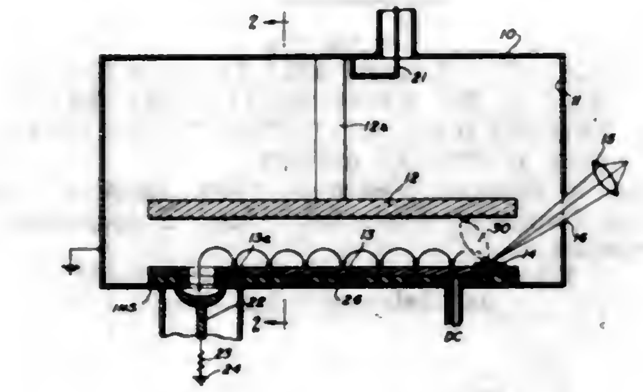
Michel Marie-Clement Arnaud, Igny, France, assignor to Compagnie Francaise Thomson Houston-Hotchkiss Brandt, a French corporation
Filed Aug. 5, 1965, Ser. No. 477,455
Claims priority, application France, Aug. 7, 1964
984,519
8 Claims. (Cl. 315—3.5)



This invention discloses a high-frequency power electron tube operating with a beam of electrons and comprising a collector to which a depressed voltage may be applied. In this tube, an apertured diaphragm electrode, which is at the potential of the HF circuit component of the tube, is located between the collector electrode and HF circuit component and extends longitudinally between the two transverse front-walls of a double-walled all-metal cooling-jacket in the shape of a cylindrical box which extends to the rear-end of the tube and surrounds the collector electrode. A cooling liquid circulates in the jacket and not only cools the diaphragm electrode which is accessible to said liquid but cools also the collector electrode by dissipating the heat radiated from the collector to the jacket.

3,388,282
BIASED CROSSED FIELD DYNAMIC ELECTRON MULTIPLIER

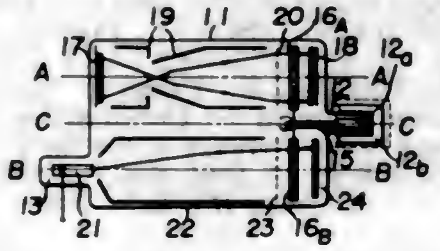
Robert B. Hankin, Ernest P. Dallafior, and Bernard P. Alpiner, Chicago, Ill., assignors, by mesne assignments, to The Hallicrafters Co., a corporation of California
Filed Mar. 29, 1965, Ser. No. 443,222
7 Claims. (Cl. 315—4)



A crossed-field dynamic electron multiplier in which the two plates which define the path of electron travel are insulated from each other and an electrostatic bias is maintained between them with the emissive plate at a negative potential with respect to the other plate.

3,388,283
ELECTRON TUBE DEVICE FOR IMAGE TRANSMISSION AND RECEPTION

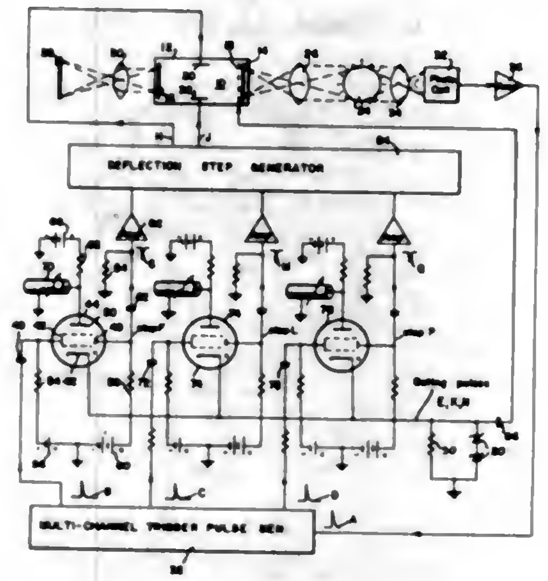
Shoichi Miyashiro, Yokohama-shi, Japan, assignor to Tokyo Shibaura Electric Co., Ltd., Kawasaki-shi, Japan, a corporation of Japan
Filed Apr. 19, 1966, Ser. No. 543,577
Claims priority, application Japan, Apr. 23, 1965, 40/23,709
4 Claims. (Cl. 315—12)



Optical images projected upon a photoelectric surface or applied as modulating signals to an electron gun, are selectively recorded on pluralities of storage targets located within a tube, and mechanically placeable in position by rotating the targets; the targets are connected to a rotor located within the tube, surrounded on the outside thereof by a stator so control of target location can be achieved without break of tube vacuum.

3,388,284
SYNCHRONIZING ARRANGEMENT

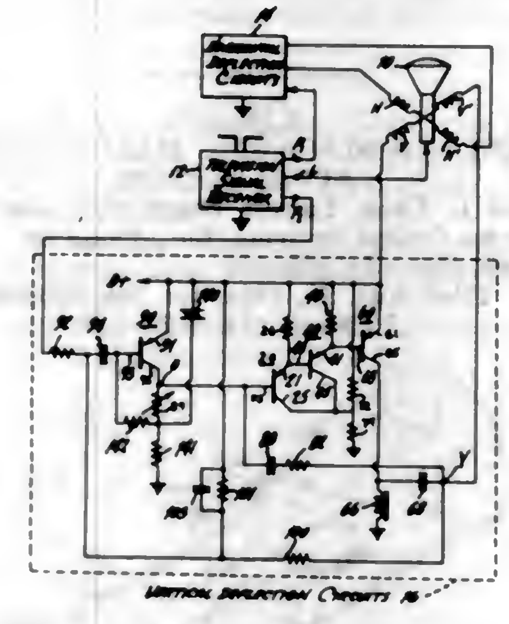
John J. Hickey, Hawthorne, Calif., assignor to TRW Inc., Redondo Beach, Calif., a corporation of Ohio
Filed May 26, 1965, Ser. No. 458,860
7 Claims. (Cl. 315—18)



Rectangular gating pulses developed in a thyratron switching tube are used to unblank an image converter camera tube. A deflection waveform synchronized with the trailing edge of the gating pulse is developed in response to the trailing edge of the gating pulse.

3,388,285
SIZE STABILIZATION

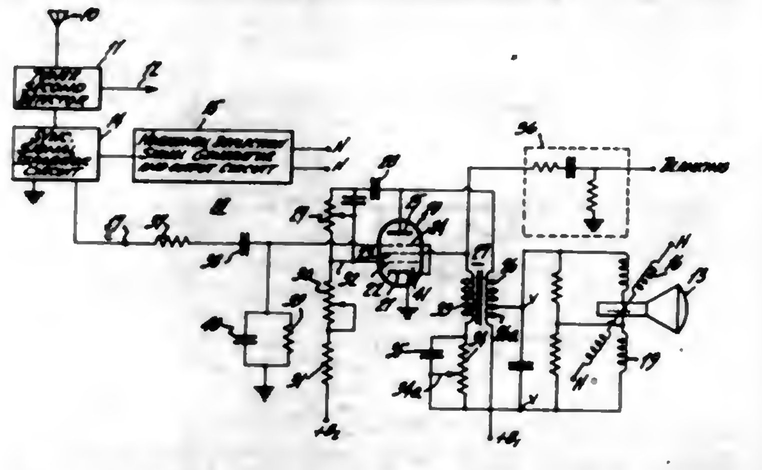
Todd J. Christopher, Canton, Ohio, and James A. McDonald, Indianapolis, Ind., assignors to Radio Corporation of America, a corporation of Delaware
Filed May 14, 1965, Ser. No. 455,748
3 Claims. (Cl. 315—19)



A transistor vertical deflection circuit having a plural stage emitter follower amplifier. A negative feedback path includes a capacitor for developing a sawtooth voltage and a variable height controlling resistor. Variation in the capacitor charging current, with resultant raster size change, due to variations in the line voltage supply are compensated for by a voltage dependent resistor regulating the voltage across the variable height controlling resistor.

3,388,286
VERTICAL DEFLECTION CIRCUIT UTILIZING A SINGLE MULTI-ELECTRODE ELECTRON DISCHARGE DEVICE

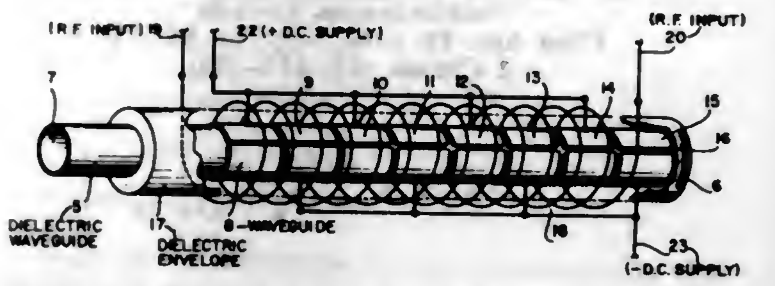
Wayne M. Austin, Hanover, and Jack Allen Dean, East Brunswick, N.J., assignors to Radio Corporation of America, a corporation of Delaware
Filed Oct. 19, 1964, Ser. No. 404,830
7 Claims. (Cl. 315—27)



A vertical deflection circuit for a television receiver or similar device utilizing a single pentode electron tube for generating electron beam deflection signals at a sufficiently high current level to drive directly an electromagnetic deflection yoke, wherein said pentode electron tube has a feedback capacitor coupled between the output and input electrodes, additional feedback is provided for coupling, in reversed phase, potential variations produced at said anode to the screen grid and synchronizing signals are supplied to a second control grid.

3,388,287
TM_{01} MODE RF PULSE GENERATOR

Peter P. Keenan, Van Nuys, Calif., assignor to Lockheed Aircraft Corporation, Burbank, Calif.
Filed Jan. 4, 1965, Ser. No. 422,958
13 Claims. (Cl. 315—39)

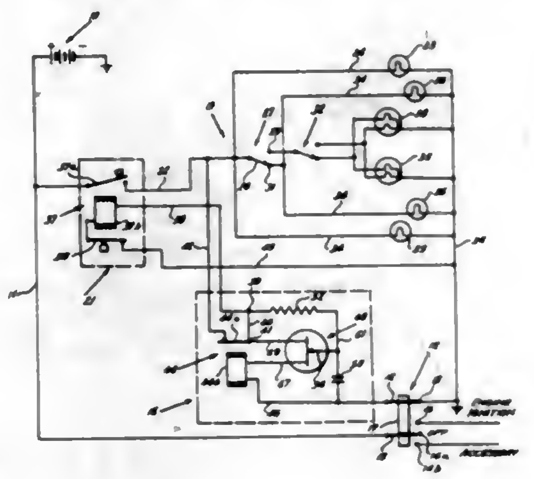


An extremely high-frequency wave generator is described which is capable of producing nanosecond pulses of RF energy at multi-kilowatt levels. The wavelengths of the generated waves may range from microwaves to sub-millimeter waves. Adjacent half-wave segments of circular TM_{01} mode waveguide are supplied with charges of opposing polarity and thereafter coupled into a continuous series arrangement by means of electronic switches, thereby resulting in the propagation of an RF pulse in the TM_{01} mode.

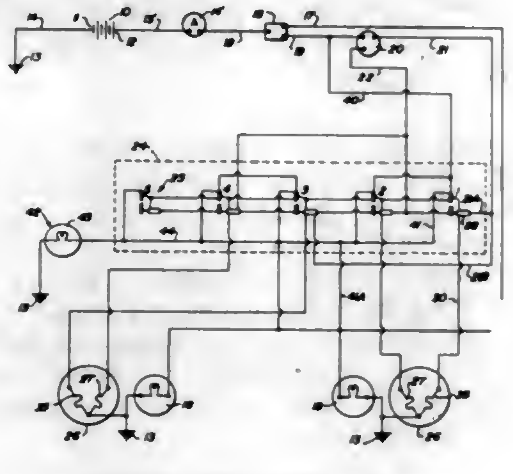
3,388,288
VEHICLE LIGHT CONTROL SYSTEM TO DEENERGIZE THE LIGHT CIRCUIT A PREDETERMINED TIME AFTER THE IGNITION IS DEENERGIZED

Willis L. Kibler, Detroit, Mich., assignor to The Delman Company, Cookeville, Tenn., a corporation of Tennessee
Filed Apr. 13, 1966, Ser. No. 542,257
4 Claims. (Cl. 315—77)

The control system provides for the manual control of a vehicle light circuit in a usual manner when the vehicle engine is in operation. When the engine ignition system is opened the light circuit is automatically turned off following a predetermined time period after the ignition switch has been opened. The light circuit is energized by the manual closing of a normally open relay switch that is electrically maintained closed by a relay coil in a holding circuit, and which relay coil is energized in response to the manual closing of the relay switch. A time delay circuit includes a relay that has a normally closed relay switch connected with the holding circuit. A transistor in the time delay circuit is operable in response to an opening of the engine ignition switch to energize the relay coil in the time delay circuit whereby to open the normally closed relay switch of the time delay circuit. As a result the holding circuit is de-energized and the manual relay switch is released to its normally open position to open the light circuit.

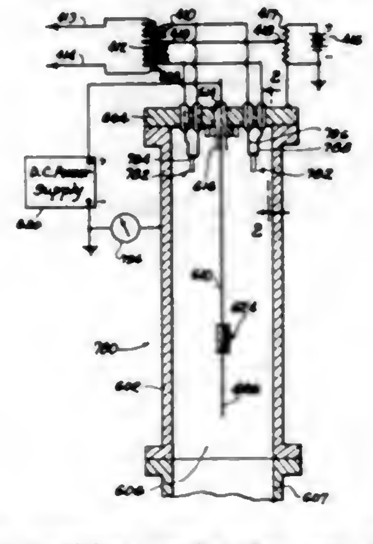


3,388,289
LAMP FAILURE DETECTOR AND STANDBY DEVICE
Paul Zakus, 140 15th St. W., Prince Albert, Saskatchewan, Canada
Filed Apr. 11, 1966, Ser. No. 541,739
2 Claims. (Cl. 315—83)



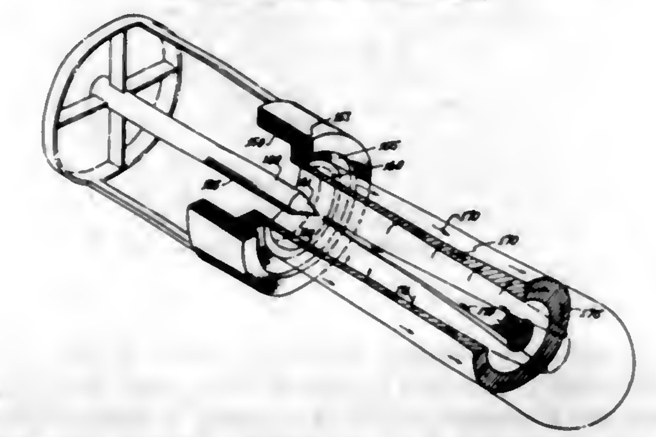
A vehicle lighting system including headlamps with upper and lower beam filaments and parking lamps, along with a conventional main switch and dimmer switch. An automatic control device provides a separate current path from the switches to each parking lamp and to each filament of the headlamps, each separate current path including a relay which automatically closes circuit to the parking lamps when the headlamp filament in that current path is broken.

3,388,290
ELECTRON ORBITING DEVICE INCLUDING A FLAT, RIBBON-TYPE, THERMIONIC FILAMENT
Raymond G. Herb and Theodore E. Pauly, Madison, Wis., assignors to Wisconsin Alumni Research Foundation, Madison, Wis., a corporation of Wisconsin
Filed Apr. 13, 1965, Ser. No. 447,678
Claims priority, application France, Apr. 15, 1964, 970,934
11 Claims. (Cl. 315—108)



An electron orbiting device for use as an ion-getter vacuum pump, ion gauge, electrometer tube, amplifying device or the like, comprising a cylindrical anode rod or wire, a cylindrical boundary electrode concentric with said anode, means for applying a positive voltage to said anode relative to said boundary electrode to produce a radial electric field therebetween, and an electron emitting electrode disposed between said anode and said boundary electrode toward one end thereof and at a potential approximately the same as that of the boundary electrode or slightly positive relative thereto, said electron emitting electrode preferably being in the form of a flat ribbon and having a flat electron emitting surface in a radial plane and disposed edgewise toward said anode so that the electrons emitted by said surface will be given substantial angular momentum about said anode whereby the electrons will be introduced into orbits around said anode.

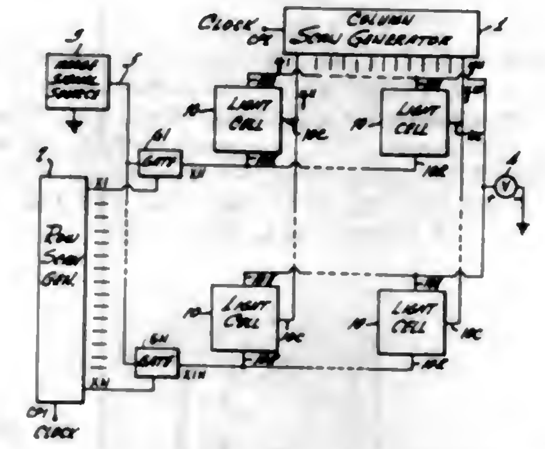
3,388,291
ANNULAR MAGNETIC HALL CURRENT ACCELERATOR
Gordon L. Cann, Laguna Beach, Calif., assignor to Electro-Optical Systems, Inc., Pasadena, Calif., a corporation of California
Filed Aug. 31, 1964, Ser. No. 393,288
7 Claims. (Cl. 315—111)



Hall current generator apparatus for electromagnetically accelerating and confining an ionized gas plasma. An annular field coil concentrically surrounds an arc jet apparatus to create an axisymmetric magnetic field radially expanding in the downstream direction, the relationship between gas pressure and magnetic field strength being

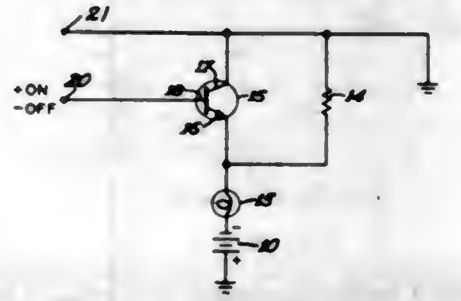
such that the magnetic field interactions predominate over dynamic forces to provide an axially extending tubular sheath of current concentrically surrounding a plasma cylinder, the magnetic field diverging out of the current density to create axial accelerating forces and radially inwardly directed plasma confining forces.

3,388,292
INSULATED GATE FIELD-EFFECT TRANSISTOR MEANS FOR INFORMATION GATING AND DRIVING OF SOLID STATE DISPLAY PANELS
Joseph R. Burns, Trenton, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Feb. 15, 1966, Ser. No. 527,563
3 Claims. (Cl. 315—169)



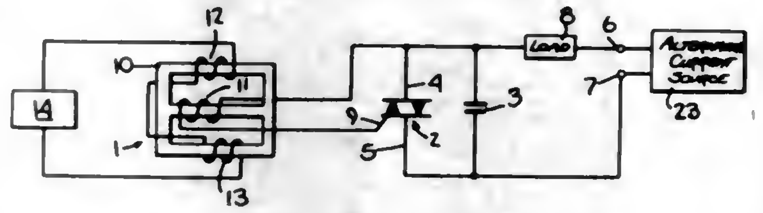
A scanned array of light cells including field-effect transistor selection and holding circuits are described. Each light cell in the array includes an output field-effect transistor having its conduction path connected in series with a light emissive element. At least one selection field-effect transistor has its conduction path connected between an image signal source and the gate of the output transistor. A scan generator periodically turns the selection transistor on and off, whereby the image signal is stored on the gate capacitance of the output transistor during the off time so that the output transistor continues to conduct a steady current during the off time.

3,388,293
INDICATOR LAMP IN A TRANSISTOR EMITTER FOLLOWER CIRCUIT WITH A LAMP WARMUP RESISTOR IN PARALLEL WITH THE TRANSISTOR
Richard J. Petschauer, Minneapolis, Minn., assignor to Fabri-Tek Incorporated, Minneapolis, Minn., a corporation of Wisconsin
Filed May 20, 1965, Ser. No. 457,356
5 Claims. (Cl. 315—175)



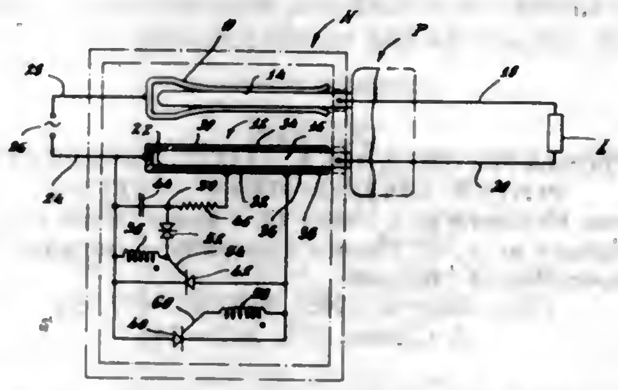
An indicator lamp circuit in which a multi-junction transistor is used to switch the indicator lamp off and on. The transistor is connected in grounded-collector configuration, with the indicator lamp and a source of energy serially connected between the emitter and the collector of the transistor. A lamp pre-heat resistor is also connected across the emitter and collector of the transistor. The grounded collector transistor connection results in a decreased load to the source of signal energy, as well as removing the need for input impedance networks to the switching transistor.

3,388,294
SATURABLE REACTOR DIMMER
Ariel R. Davis, 3476 Fleetwood Drive,
Salt Lake City, Utah 84109
Continuation-in-part of application Ser. No. 467,977, June 29, 1965. This application Sept. 21, 1965, Ser. No. 488,842
17 Claims. (Cl. 315—194)



A phase control circuit utilizing a saturable reactor for varying the time of application of firing signals to controlled solid state devices to control the amount of load current passed. The circuits include negative feedback circuits for load current correction and self regulation and saturating transformers for narrowing and sharpening the rise time of the firing signal.

3,388,295
CURRENT INTERRUPTER
John Misencik, Shelton, and Sung C. Lee, Bridgeport, Conn., assignors to Harvey Hubbell, Incorporated, Bridgeport, Conn., a corporation of Connecticut
Filed Aug. 20, 1965, Ser. No. 481,370
14 Claims. (Cl. 317—11)

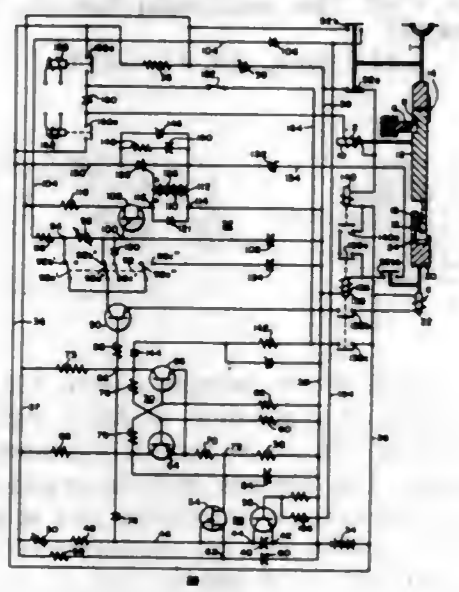


A load current interrupter having reduced arcing characteristics. A movable current carrying member is designed to sequentially engage and disengage from three conductive elements which are normally insulated from one another but are electrically interconnected by the movable member when it is fully engaged. A semiconductor switch is connected to carry load current between two of the conductive elements when the movable member is disengaged from the third. One of these two conductive elements is connected to a triggering circuit which "closes" and "opens" the switch.

3,388,296
RECLOSING RELAY APPARATUS
Nathaniel D. Tenenbaum, Plainfield, N.J., and Millard C. Hayden, Sangerville, Maine, assignors to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed July 29, 1966, Ser. No. 568,866
9 Claims. (Cl. 317—22)

1. In an apparatus for controlling the energization of the opening and closing elements of a reclosing type of circuit controller, a timer having a set condition and a timed-out condition and timing means for determining the

time interval required by the timer to change its condition from its said set condition to its said timed-out condition, a control means having first and second operating conditions, an initiation circuit, actuating means, means connecting said actuating means to said initiating circuit and to said timing means whereby a change in energization of said actuating means initiates the operation of said initiating circuit and places said timer into said set condition, means connecting said timing means to said control means whereby said timing means is actuated to time out its said time interval upon the actuation of said control means to its said first condition, and means connecting said control means to said initiating circuit whereby said control means is actuated to its said first condition as a consequence of the operation of said initiating circuit, and means actuated by said timing means as a consequence of the timing out of said time interval for actuating said control means to its said second condition.

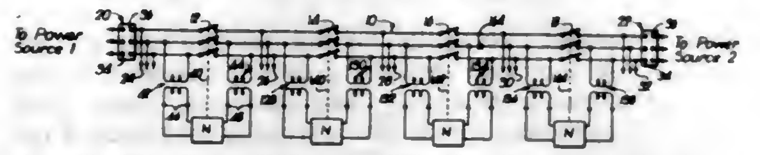


3,388,297
AUTOMATIC SECTIONALIZING OF ELECTRIC POWER DISTRIBUTION SYSTEMS

Thomas E. Curtis and Philip G. Chance, Centralia, Mo., assignors to A. B. Chance Company, Centralia, Mo., a corporation of Missouri

Filed Aug. 6, 1965, Ser. No. 477,796

8 Claims. (Cl. 317—24)



Automatic sectionalizing apparatus is employed in a power distribution system to simultaneously open the sectionalizing switches of the system in response to the occurrence of a fault, sequentially reclose the switches beginning at the power stations and advancing toward the fault, and then reopen the switch or switches associated with the faulted section to isolate the latter from the line.

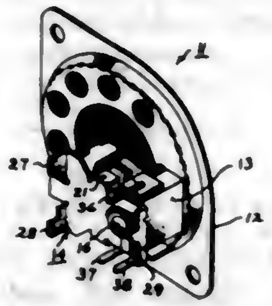
3,388,298
LOUDSPEAKER MOUNTING ARRANGEMENT

Charles J. Sabonis, Utica, N.Y., assignor to General Electric Company, a corporation of New York

Filed Jan. 3, 1966, Ser. No. 518,152

1 Claim. (Cl. 317—101)

An arrangement for mounting a loudspeaker to a circuit board comprising a mounting bracket including oppositely extending mounting and positioning tabs, the loudspeaker being adjustably connected to the mounting bracket between the positioning tabs in such a manner that the electrical terminals of the loudspeaker and the mounting tabs of the mounting bracket are received by associated apertures in the circuit board.

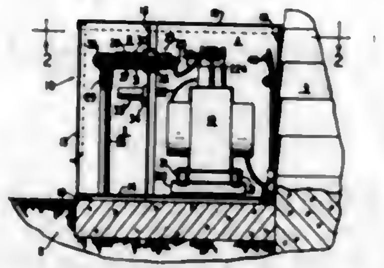


3,388,299
RESIDENTIAL UNDERGROUND ELECTRIC DISTRIBUTION ASSEMBLY

Ralph E. Brideweser, Goldsboro, N.C., and Edward A. Neydli, Watertown, Wis., assignors to Sola Basic Industries, Inc., Milwaukee, Wis., a corporation of Wisconsin

Filed Feb. 13, 1967, Ser. No. 615,740

9 Claims. (Cl. 317—120)



As assembly suitable for power supply to residences from underground distribution wiring, including an enclosure with a bulkhead and a dry-type transformer on one side of the bulkhead and disconnect means on the other side.

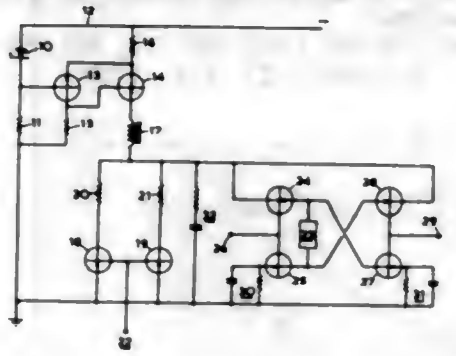
3,388,300
ELECTRIC SWITCHING MEANS FOR CONTROLLING HIGHLY INDUCTIVE CIRCUITS

Reginald Hugh Allmark, Stoke-on-Trent, England, and Wilfred James Jones, Edinburgh, Scotland, assignors to The English Electric Company Limited, London, England, a British company

Filed Apr. 10, 1964, Ser. No. 359,558

Claims priority, application Great Britain, Apr. 11, 1963, 14,521/63

3 Claims. (Cl. 317—148.5)



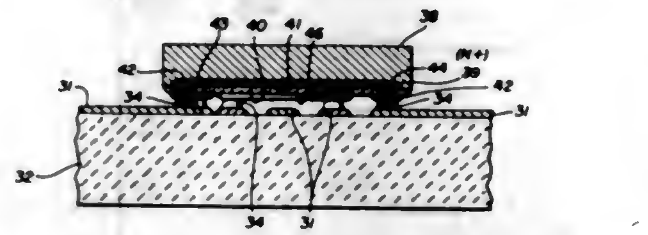
1. An electrical switching means comprising two transistors of the same conductivity type, referred to hereinafter as the control and switching transistors respectively, a series electrical circuit for connection with a source of constant unidirectional potential and including in series connection a linear resistor, the collector-emitter path of the control transistor, a linear inductor, and the collector-emitter path of the switching transistor, means connecting a magnetic core store drive circuit in parallel with the switching transistor, closed-loop control means having an input connection connected with the collector of the control transistor and an output connection connected with the base of the control transistor for varying the base-emitter potential of the control transistor in dependence upon its collector potential in a manner tending to maintain the collector electrode of the control transistor at a constant potential corresponding to that developed when the current flow in the control transistor is equal to the desired drive circuit current, and input circuit means connected with the base electrode of the switching transistor for applying thereto a two-state input potential signal whereby according to the state of the input potential signal the switching transistor is rendered either non-conductive or fully conductive.

3,388,301
MULTICHIP INTEGRATED CIRCUIT ASSEMBLY WITH INTERCONNECTION STRUCTURE

Brian David James, Menlo Park, Calif., assignor to Signetics Corporation, Sunnyvale, Calif., a corporation of California

Filed Dec. 9, 1964, Ser. No. 417,091

9 Claims. (Cl. 317—234)



1. In a multichip integrated circuit assembly, a rigid structure, at least a portion of the structure being formed of an insulating material, a plurality of thin film metallic connecting elements disposed solely within the confines of the rigid structure, said connecting elements being electrically isolated from each other and having contact areas, a plurality of spaced leads mounted on said structure so that they are insulated from each other and are supported by the structure, means forming connections between said connecting elements and said leads so that said connecting elements are electrically connected to the leads and serve as extensions to the leads, a semiconductor body having junction circuit elements formed therein, said body also having conducting pads carried thereby connected to said junction circuit elements and lying in a common plane, an additional body formed of insulating material having exclusively passive circuit elements carried thereon, said additional body having conducting pads carried thereby and connected to said passive circuit elements, said rigid structure and said first named and additional bodies being positioned so that the contact areas of the connecting elements on the rigid structure and the pads on the first named and additional bodies are generally facing each other, and means forming electrical connections between said pads and said areas whereby said leads can be used to make contact with said junction circuit elements and said passive circuit elements to form a circuit.

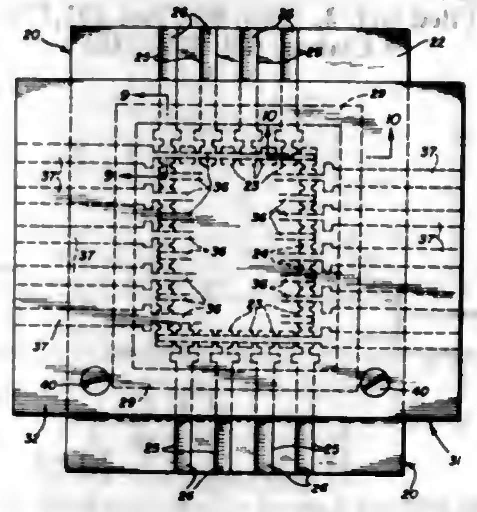
3,388,302
CERAMIC HOUSING FOR SEMICONDUCTOR COMPONENTS

John J. McManus, Manhasset, N.Y., assignor to Coors Porcelain Company, Golden, Colo., a corporation of Colorado

Continuation of application Ser. No. 317,893, Oct. 22, 1963. This application Dec. 30, 1966, Ser. No. 609,266

14 Claims. (Cl. 317—234)

In accordance with the invention there is provided a housing for semiconductor circuitry which comprises a ceramic base and a ceramic top plate secured together to form the housing, the ceramic base being provided with a series of accurately aligned cavities, each adapted to receive a semiconductor and arranged in a plurality of parallel spaced apart rows with grooves connecting the cavities in each row, each row of interconnected cavities and grooves having on the floor thereof a thin conductive layer bonded to the base for making electrical connection with the semiconductors in the cavities, each of these conductive layers extending over a surface of the ceramic base which is on the exterior of the housing. The top plate is provided with a plurality of parallel spaced apart electrically conductive coatings on the bottom surface thereof and extending across cavities of adjacent rows of cavities in the base for making electrical contact with the semiconductors in the cavities, each of these parallel spaced apart electrically conductive coatings extending over a surface of the top plate on the exterior of the housing. In the preferred embodiment each of the base and top plate is provided with a ledge which extends outwardly of the housing and over which the conductive coatings of the base and top plate, respectively, extend.

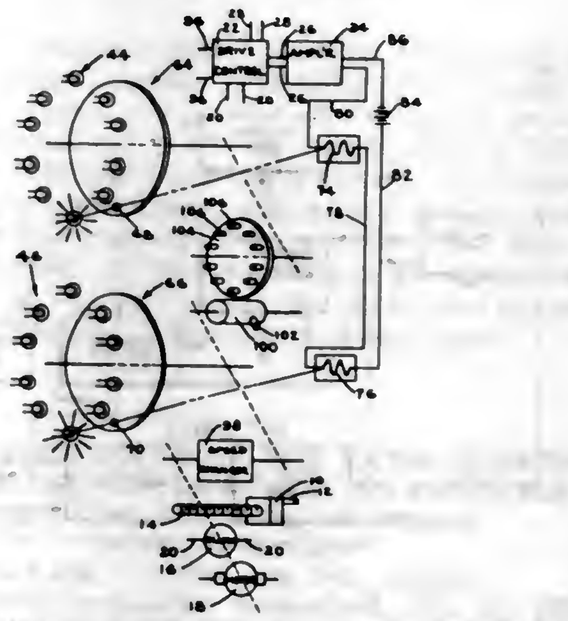


3,388,303
SETTABLE LIMIT CONTROL DEVICE USING MATCHED PATTERNS

Howard E. Rommel, 451 Center Road, Easton, Conn. 06425

Filed Sept. 4, 1964, Ser. No. 394,490

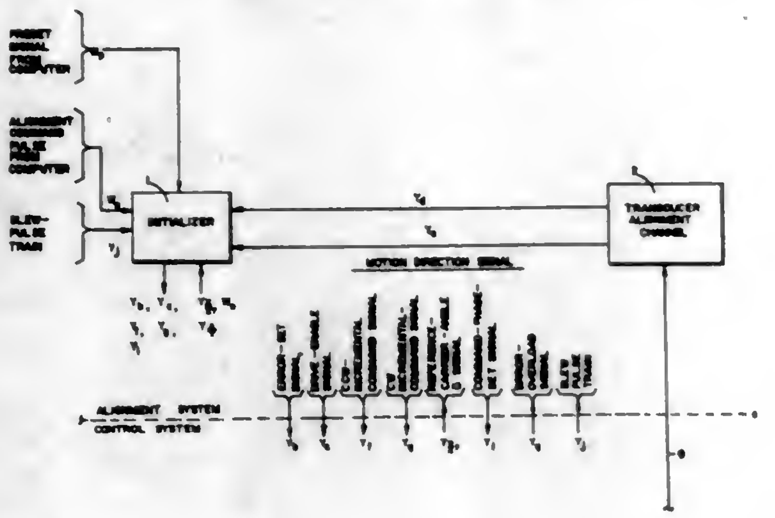
10 Claims. (Cl. 318—18)

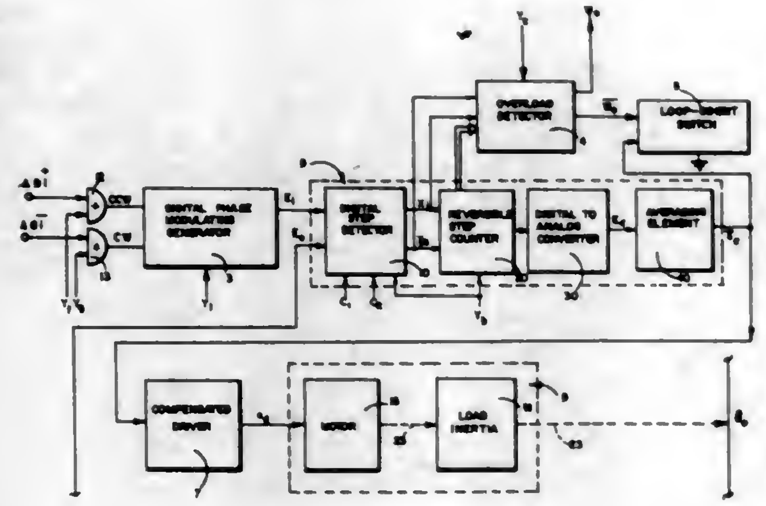


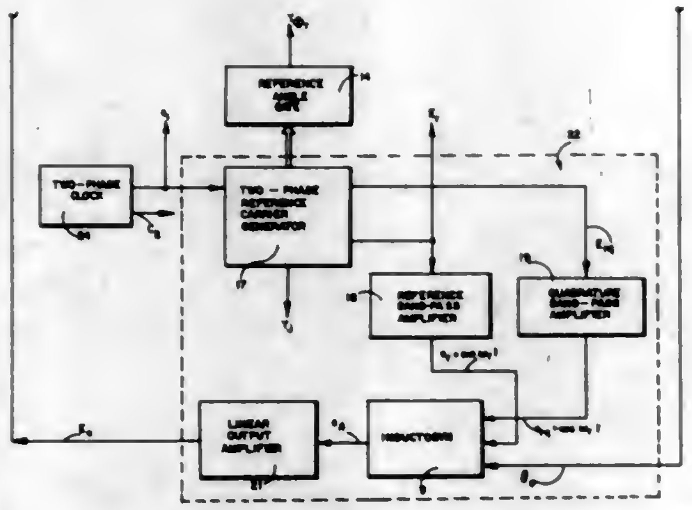
A limit control device for machine tools, having a master pattern tape controlling two banks of lamps. A variable pattern device comprises two movable shutters associated respectively with the banks of lamps. The pattern device varies with movement of the tool feed of the machine, and when it matches the master pattern displayed by the banks of lamps a control is activated to halt the tool feed, whereby the depth of cut of the tool has been automatically effected.

3,388,304
DIGITAL SERVOMECHANISM ALIGNMENT SYSTEM

Charles E. Lenz, Fullerton, Calif., assignor to North American Rockwell Corporation, a corporation of Delaware
Filed Oct. 2, 1964, Ser. No. 401,176
9 Claims. (Cl. 318—18)



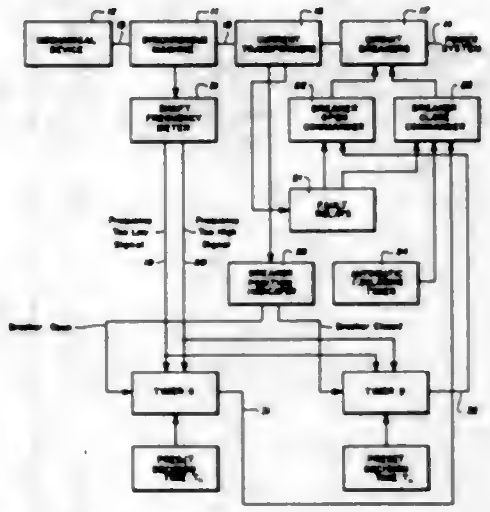




A digital alignment system which operates with an incremental digital position control system of the phase comparison type. The alignment system functions by moving an output shaft towards a reference position until it is within a predetermined number of radians of that position. The control system input command is then changed to a predetermined fixed value. The output shaft is subsequently released to the control of the incremental digital servomechanism allowing the output shaft to be driven to the alignment position with the full accuracy of the digital control system and without error due to the alignment system.

3,388,305
SYSTEM, APPARATUS AND METHOD FOR IMPROVING STABILITY OF SYNCHRONOUS MACHINES

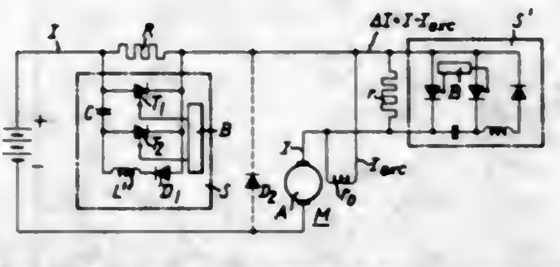
Otto J. M. Smith, 612 Euclid Ave., Berkeley, Calif. 94708
Filed Jan. 21, 1964, Ser. No. 339,136
101 Claims. (Cl. 318—175)



1. In an electrical system, an electrical circuit having impedance properties, an electrical machine having one stationary part, one movable part, at least one excitation winding and at least one power winding, said power winding being a part of said electrical circuit, means for sensing a first state variable of the machine proportional to the speed of said movable part, means for sensing a second state variable of the machine other than the alternating voltage magnitude, the time derivative of the alternating voltage magnitude and the alternating current magnitude, means producing a first signal responsive to said first state variable, means producing a second signal responsive to said second state variable, a single means responsive both to said first signal and to said second signal for controlling the power flow in said electrical circuit by affecting the impedance properties of said electrical circuit.

3,388,306
CONTROL CIRCUIT FOR DIRECT CURRENT MOTORS INCLUDING SEMICONDUCTOR CELL MEANS CONNECTED ACROSS STARTING RESISTORS

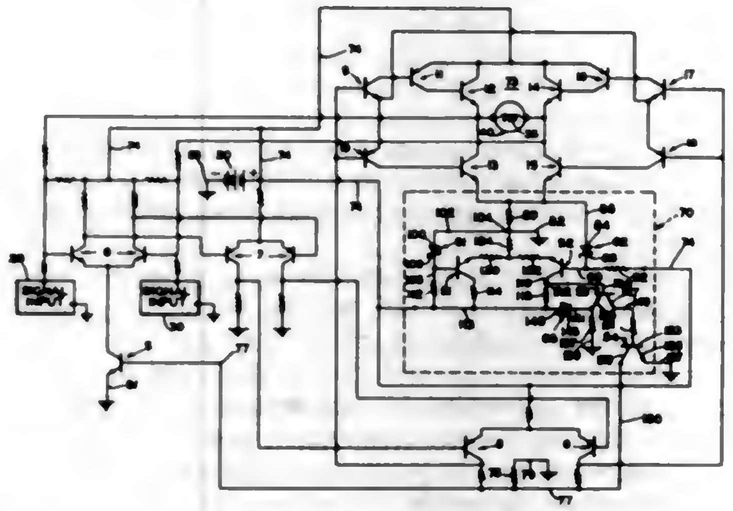
Floris Koppelmann, Berlin, and Karl Steimel, Konigstein-Johanniswald, Taunus, Germany, assignors to Licentia Patent-Verwaltungs-G.m.b.H., Frankfurt am Main, Germany
Filed Nov. 7, 1963, Ser. No. 322,110
Claims priority, application Germany, Nov. 7, 1962, L 43,391
7 Claims. (Cl. 318—421)



1. A circuit arrangement comprising in combination:
(a) a motor having an armature and a field winding;
(b) starting resistor means connected in series with said armature of said motor;
(c) semiconductor cell means connected across said starting resistor means in consequence of which said starting resistor means are short-circuited when said cell means are conductive; and
(d) variable means for periodically rendering said cell means alternately conductive and non-conductive, whereby the effective resistance of said starting resistor means may be varied by changing the ratio of the time interval during which said cell means are conductive to the time interval during which said cell means are non-conductive.

3,388,307
MOTOR LOAD LIMITING CIRCUITRY

Frank Prapis, Paterson, and Joseph A. Zbuchalski, Lyndhurst, N.J., assignors to The Bendix Corporation, Teterboro, N.J., a corporation of Delaware
Filed Oct. 22, 1964, Ser. No. 405,711
4 Claims. (Cl. 318—434)

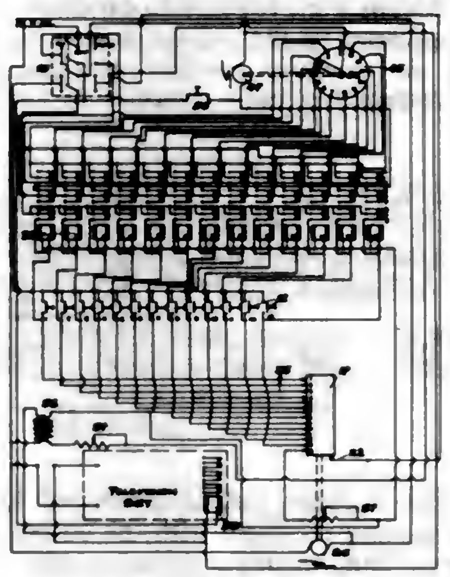


A current limiter for an electric motor including a variable gain amplifier for supplying current to the motor winding. Current sensitive means are provided for effecting a voltage drop proportional to the current supplied to the motor winding, and upon said voltage drop exceeding a predetermined threshold the variable gain amplifier is controlled in a sense to decrease the gain thereof so as to prevent excessive current from being supplied to the motor winding.

3,388,308
AUTOMATIC TELEVISION PROGRAMMER

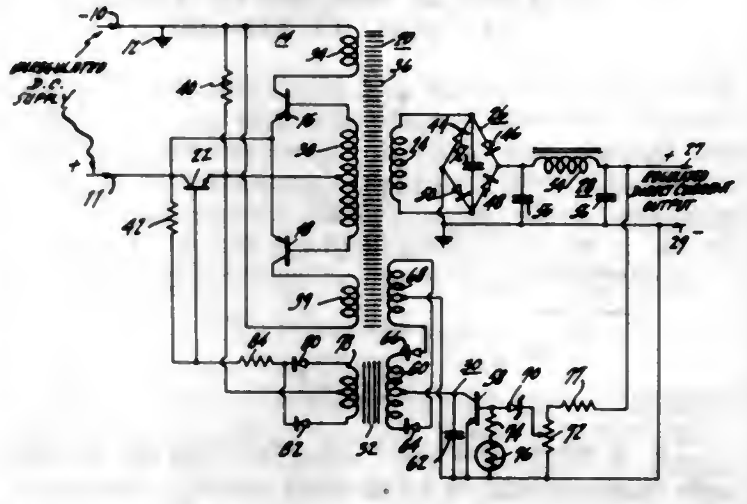
John G. Fontaine, 2817 NE. 26th Court, Fort Lauderdale, Fla. 33312
Filed Mar. 18, 1965, Ser. No. 440,754
9 Claims. (Cl. 318—467)

A television programming device including a channel selector, an electrical circuit by means of which the selector is moved to bring in one or another of a plurality of television channels, a rotary switching device for closing the circuit at selected times and for maintaining the television set in operation for predetermined periods of time, and a drive for rotating the rotary switching device at a predetermined rate of speed. The rotary switching device includes a plurality of drums carried at selected points spaced apart to correspond to certain periods of time such as half-hour periods. Each of the drums has a spiral arrangement of contact teeth disposed on its periphery, and there is a plurality of contact fingers arranged to be engaged by specific teeth on particular drums according to the adjusted positions of the drums. On each drum there may be one tooth for each channel, and another tooth for turning the set off. There may also be a position on the drum where there is no tooth so that the set is neither turned on nor off at this position. Push button switches may also be provided for operating the channel selector manually to bring in a desired channel.



3,388,309
VOLTAGE REGULATOR INCLUDING ISOLATION BETWEEN INPUT AND OUTPUT

Frank H. Banks, Webster, N.Y., and David W. Patterson, Huntsville, Ala., assignors to Radio Corporation of America, a corporation of Delaware
Filed Dec. 27, 1965, Ser. No. 516,225
2 Claims. (Cl. 321—2)

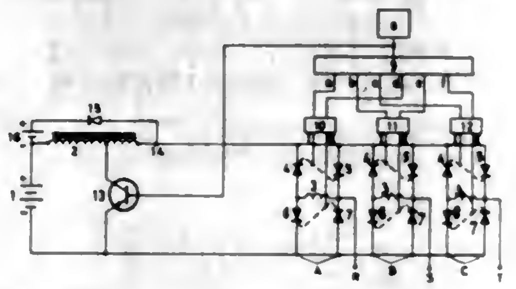


A regulated voltage supply is provided. The unregulated source of voltage supplies an inverter whose output is transformer coupled to a rectifier. The voltage of the rectifier is compared with a standard voltage and the difference voltage controls an alternating current. This alternating current is transformer coupled to a rectifier which controls the power supply of the inverter. Since there is no direct current connection between the unregulated source and the regulated output, the source and the output may be grounded independently of each other.

3,388,310
CIRCUIT ARRANGEMENT FOR EXTINGUISHING CONTROLLED RECTIFIERS IN AN INVERTER

Marcel Etter, 6 Blvd. des Promenades, Geneva, Switzerland
Filed Jan. 17, 1966, Ser. No. 520,983
Claims priority, application Switzerland, Feb. 23, 1965, 2,470/65
5 Claims. (Cl. 321—5)

An inverter is disclosed as including a source of D.C. potential, a pair of input connectors connected to the source, and plurality of line breaker units connected across the input conductors. Each unit has at least two branches, and each branch is constituted by a main controlled rectifier and an auxiliary controlled rectifier connected in series, with opposed polarity relationship, at a respective junction point. Means are provided to produce simultaneously a transient reversal of the voltage across the units and the ignition of an auxiliary rectifier resulting in extinction of the corresponding main rectifier in series therewith.

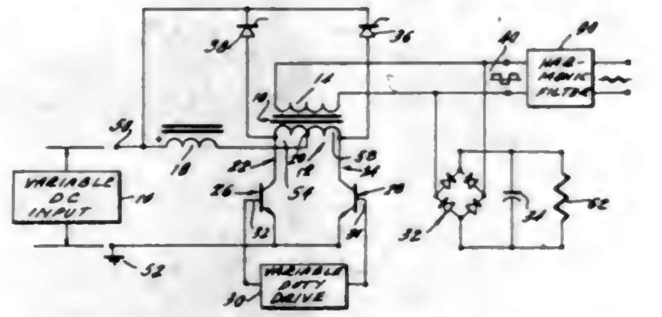


Each unit has a phase output connected to the junction points of the main rectifiers with the corresponding auxiliary rectifiers and, through these junction points, alternately with each terminal of the source of potential through the then energized main rectifier. Means are further provided controlling the periodical sequence of ignition of the main rectifiers in the different units.

3,388,311
POWER CONVERTER FOR CONVERTING AN UNREGULATED DC INPUT VOLTAGE INTO A REGULATED OUTPUT VOLTAGE

Albert de la Lastra, Bethpage, N.Y., assignor to SBD Systems, Inc., Farmingdale, N.Y., a corporation of New York

Filed May 27, 1966, Ser. No. 553,484
16 Claims. (Cl. 321—16)



13. A power converter for converting an unregulated DC input voltage to a regulated output voltage comprising:

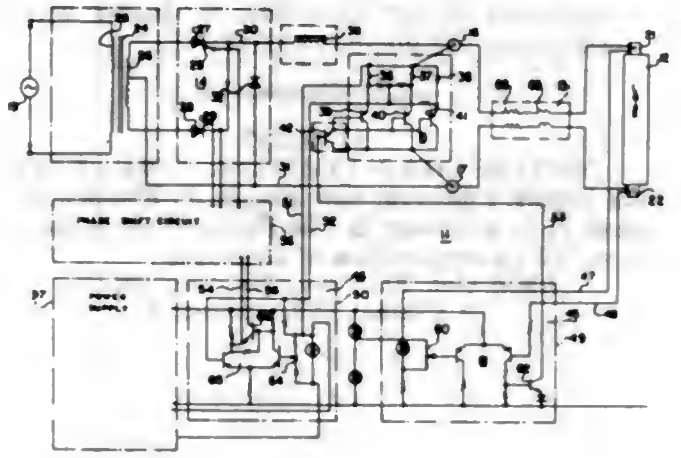
- a transformer having a primary and secondary inductively coupled thereto;
- normally non-conducting alternate circuit paths connected to the primary of said transformer, said circuit paths being alternately switched off and on at predetermined time intervals to cause current generated by an unregulated DC input voltage to alternately flow in opposite directions through said primary;
- voltage limiting means cooperating with said transformer for limiting the magnitude of input voltage which may appear across the primary of said transformer to a predetermined amount;
- energy storage means connected to said primary for accumulating input voltage which is in excess of said predetermined amount; and
- normally non-conducting alternate return circuits connected to said energy storage means and sequentially, alternately changed to a conducting state at times intermediate said predetermined time intervals to permit said energy storage means to discharge the accumulated input voltage which is in excess of said predetermined amount across the primary of said transformer;

whereby the output voltage appearing across said secondary is a regulated waveform.

3,388,312
DUAL RESPONSE REGULATOR

Richard J. Klein, Cuba, N.Y., assignor to Acme Electric Corporation, a corporation of New York

Filed Apr. 7, 1966, Ser. No. 540,943
19 Claims. (Cl. 321—18)



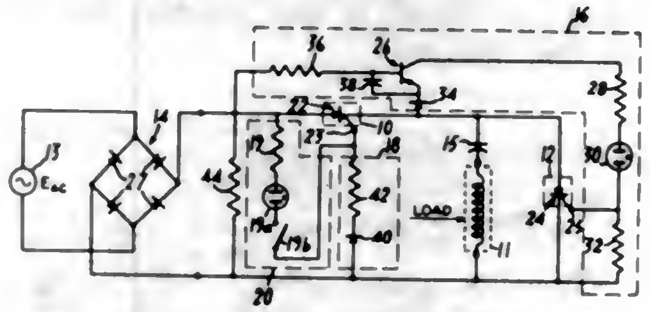
19. A dual response regulator system to control a substantially constant voltage to a load through a cable having resistance and inductive reactance comprising, in combination,

- a step-down transformer having a primary winding connectable to an AC source,
- a secondary winding on said transformer,
- a first regulator in said system including a controlled rectifier connected to said secondary winding,
- an inductive reactor connected in series between the output of said controlled rectifier and the input terminals of the cable,
- a second shunt regulator in said system connected across the input terminals of the cable,
- said shunt regulator including a resistor connected in series with a power transistor to shunt some of the current across the input terminals of the cable,
- a control circuit for said shunt regulator and having input terminals,
- control conductors connected from the output terminals of the cable at the input to the load and connected to control said shunt regulator control circuit for high speed control of said dual response regulator above a crossover frequency,
- a control circuit for said controlled rectifier,
- means responsive to the average current through said resistor in said shunt regulator to control said control circuit for said controlled rectifier for low speed response below said crossover frequency,
- said series inductive reactor having an inductance value sufficient to establish a voltage thereacross equal and opposite to the reactance voltage drop in the cable at said crossover frequency, whereby said low speed control circuit of said controlled rectifier maintains an average current through said resistor and consequently into the load and high frequency changes of load current control said high speed control circuit to control said shunt regulator for rapid changes of load current at frequencies above said crossover frequency and whereby said series inductive reactor performs a triple function of filtering for said controlled rectifier, establishing a voltage drop thereacross for AC fluctuation in load current and establishing a voltage proportional to *L di/dt* for a forcing voltage applied to the cable proportional to load current changes.

3,388,313
FREQUENCY DOUBLER USING SERIES CONNECTED SWITCHES TO CONTROL LOAD CURRENT POLARITY

William W. Fisher, Woodstock, N.Y., assignor to Rotron Manufacturing Company, Inc., Woodstock, N.Y., a corporation of New York

Filed Aug. 10, 1965, Ser. No. 478,661
10 Claims. (Cl. 321—60)

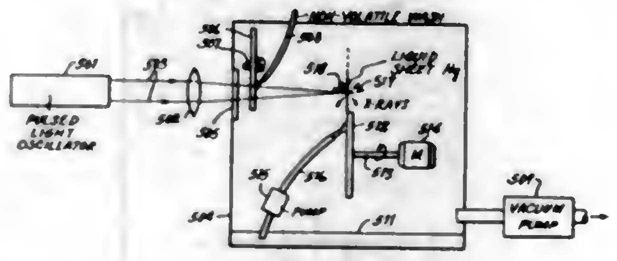


A frequency doubler circuit including a rectifier for providing a full-wave rectified A.C. signal and a pair of silicon controlled rectifiers connected in series between the rectifier and reference potential. A capacitor in series with the load between reference potential and a point between the first and second silicon control rectifiers provides a current path through the load during a portion of the doubled frequency cycle and stores current for the second portion of that cycle. When the rectified voltage signal falls below the voltage charge reached by the capacitor, a control signal is developed by a transistor circuit responsive to such voltage difference to trigger the second silicon control rectifier into conduction, thereby providing a discharge path in the opposite direction through the load for the stored capacitor current. When the capacitor has sufficiently discharged, the second silicon controlled rectifier no longer conducts; this results in the development of the signal across the load-capacitor circuit, which is coupled to again bring the first silicon controlled rectifier into its conductive condition. This action initiates the following cycle of operation during the next half cycle of the alternating current input signal.

3,388,314
APPARATUS FOR GENERATING RADIATION OF FREQUENCIES HIGHER THAN THOSE OF LIGHT

Gordon Gould, New York, N.Y., assignor, by mesne assignments, to Control Data Corporation, South Minneapolis, Minn., a corporation of Minnesota

Original application Apr. 6, 1959, Ser. No. 804,540. Divided and this application Aug. 21, 1967, Ser. No. 665,667
3 Claims. (Cl. 321—69)

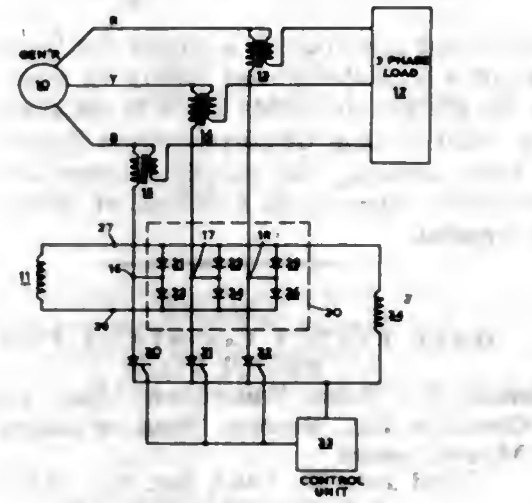


Apparatus of various types is disclosed for the amplification and generation of light by the stimulated emission of photons from ions, atoms and molecules in the gaseous liquid and solid state with the amplified light being characterized by spatial or time coherence, including types of apparatus in which the ions, atoms or molecules are excited by light or by an electronic discharge and types of apparatus in which the stimulated emission of photons is accomplished in a resonator consisting of a pair of opposed specular reflectors or other environment where the light energy is caused to build up in intensity; and systems incorporating such light amplifying or generating apparatus, including systems for the generation of intense heat and high temperature reactions in solids, liquids and gases, communications systems and distance and time measuring systems.

3,388,315
EXCITATION CIRCUITS FOR SELF-EXCITED ALTERNATING CURRENT GENERATORS

Christopher John Yarrow, Bradford, England, assignor to The English Electric Company Limited, London, England, a British company

Filed Mar. 21, 1966, Ser. No. 535,920
Claims priority, application Great Britain, Mar. 22, 1965, 12,076/65
10 Claims. (Cl. 322—25)

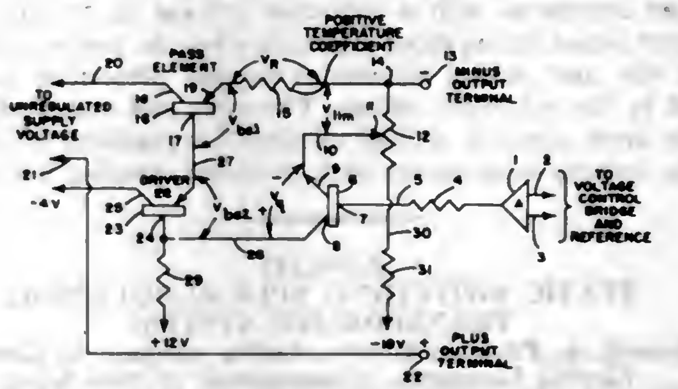


An excitation circuit which is associated with the output of a self-excited alternating current generator for deriving both voltage dependent excitation and, through one or more current transformers, current dependent excitation for the generator field winding, in which impedance for reducing the voltage dependent excitation to an acceptable level is provided by the current transformers.

3,388,316
TEMPERATURE COMPENSATION OF CURRENT LIMITING IN REGULATED POWER SUPPLIES

Joseph R. Gately, Woodside, N.Y., assignor to Forbro Design Corp., New York, N.Y., a corporation of New York

Filed Aug. 27, 1964, Ser. No. 392,401
7 Claims. (Cl. 323—9)

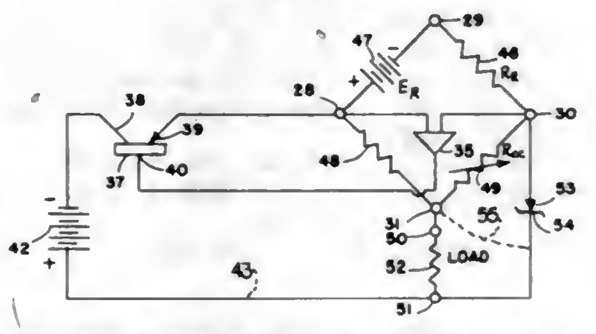

POSITIVE TEMPERATURE COEFFICIENT
PASS ELEMENT
MINUS OUTPUT TERMINAL
TO UNREGULATED SUPPLY VOLTAGE
DRIVER
TO VOLTAGE CONTROL BRIDGE AND REFERENCE
+12V
PLUS OUTPUT TERMINAL

The present invention is a temperature stabilized circuit for current limiting in a volting regulated power supply. The negative temperature coefficient elements of the current limiting circuit, tending to cause run away, are balanced by positive temperature coefficient elements resulting in a temperature stable circuit.

3,388,317
VOLTAGE LIMITING CIRCUIT FOR REGULATED POWER SUPPLY

Paul Birman, Flushing, N.Y., assignor to Forbro Design Corp., New York, N.Y., a corporation of New York

Filed Aug. 18, 1965, Ser. No. 480,587
3 Claims. (Cl. 323—22)

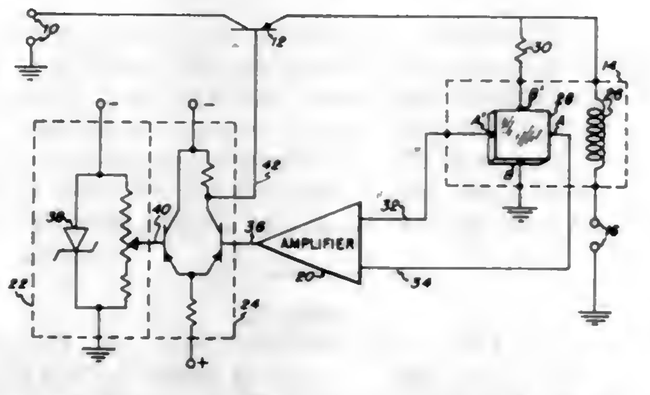


The present invention is a circuit for limiting the load voltage of a regulated power supply by means of a Zener diode. By placing the Zener diode in the regulator circuit, only a small amount of current flows through the Zener even when limiting the output voltage of a regulated power supply when large amounts of output power are being supplied.

3,388,318
HALL EFFECT CONSTANT POWER REGULATOR

Donald F. O'Brien, Watertown, Mass., assignor to Onnetics, Inc., Boston, Mass., a corporation of Massachusetts

Filed July 30, 1963, Ser. No. 298,699
9 Claims. (Cl. 323—20)



A constant current power regulator utilizing a Hall effect device to sense the instantaneous voltage and current applied to a load. The output of the Hall effect device is a voltage that is proportional to the instantaneous power (the product of voltage X current) and which is then compared with a reference voltage to produce an error signal during those instances when the power applied to the load makes excursions beyond prescribed limits set by the reference voltage. The sense and magnitude of the error signal is utilized to control a regulator to bring the instantaneous power back to within specified limits.

3,388,319
STATIC SWITCHING SELF-REGULATING TRANSFORMER SYSTEM

Donald A. Paynter, Goleta, Calif., assignor to General Electric Company, a corporation of New York

Filed Apr. 13, 1966, Ser. No. 542,332
19 Claims. (Cl. 323—43.5)

1. In a transformer having a primary winding adapted for connection to an alternating current power source, a secondary winding adapted to be coupled to a load and taps on one of the windings, a tap changer connected to the taps to maintain the secondary output voltage at a predetermined voltage comprising:

(a) switching means connected to the transformer taps for selectively interconnecting the taps to vary the transformer turns ratio,

(b) sensing means connected to the secondary for sensing an output voltage variation from the predetermined voltage, said sensing means producing a first signal indicating the direction of variation,

(c) zero current detector means connected in series with said switching means for producing a pulse each time the current in said switching means passes through zero, and

(d) switch changing means connected to said sensing means, said zero current detector means and said switching means, said switch changing means producing signals for changing said switching means in response to a signal from said sensing means and said zero current detector means when the secondary output voltage varies from the predetermined voltage, said switch changing means causing said switching means to change the tap interconnection when the current in said switching means is substantially zero.

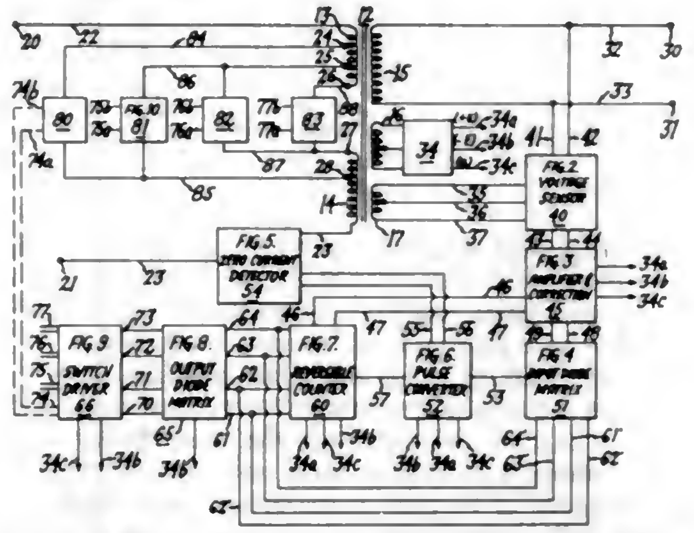
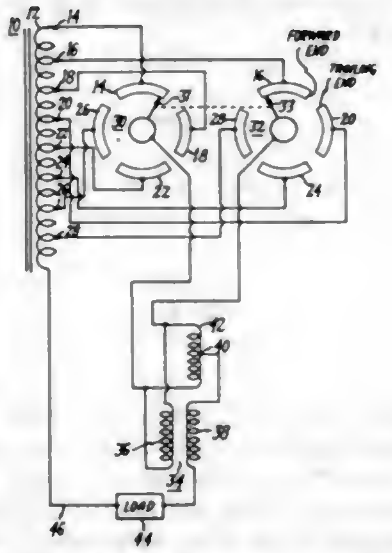


FIG. 10
FIG. 5. ZERO CURRENT DETECTOR 54
FIG. 2 VOLTAGE SENSOR 40
FIG. 3 AMPLIFIER & CORRECTION 45
FIG. 9 SWITCH DRIVER 66
FIG. 8. OUTPUT DIODE MATRIX
FIG. 7. REVERSIBLE COUNTER 60
FIG. 6. PULSE CONVERTER 52
FIG. 4 INPUT DIODE MATRIX 51
80
81
82
83
34
34a
34b
34c

3,388,320
VOLTAGE REGULATOR COARSE CONTROL DEVICE UTILIZING CURRENT LIMITING REACTOR MEANS

Charles W. Schoendube, Lee, and Roger A. Prior, Pittsfield, Mass., assignors to General Electric Company, a corporation of New York

Filed Apr. 28, 1966, Ser. No. 545,949
2 Claims. (Cl. 323—43.5)



1. A voltage regulator having coarse voltage control and vernier voltage control comprising, in combination:

(A) a first induction means, a winding of said first induction means divided into a plurality of tapped sections,

(1) a pair of contact devices, each of said contact devices comprising a plurality of circularly arranged contacts with the contacts of one contact device being connected to said winding at one of said plurality of tap sections alternately with the contacts of said other contact device,

(2) a pair of switching means, one switching means operable with each of said contact devices,

  (a) each said switching means including a movable finger, each said movable finger positioned to engage one plurality of circularly arranged contacts on each of said contact devices,

  (b) means for moving said movable fingers in unison such that one of said fingers will be in electrical contact with at least one of said contacts,

(3) a current limiting reactor electrically connected between said movable fingers,

(4) a center tap on said current limiting reactor,

  (a) a second induction means, one winding of said second induction means electrically connected between said movable fingers in parallel circuit relation with said current limiting reactor,

    (1) a second winding of said second induction means, means connecting said second winding to said center tap of said current limiting reactor,

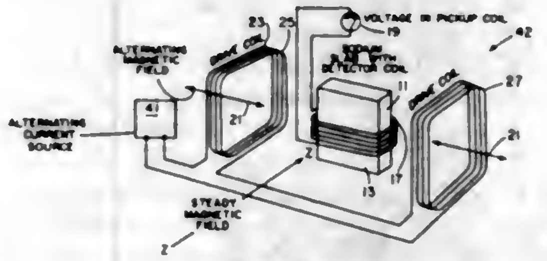
  (b) said second winding effective to provide bucking or boosting voltages to vary the voltage between said tap sections of said winding of said first induction means, and

  (c) means completing a circuit from said center tap of said current limiting reactor to a load through said second winding.

3,388,321
MAGNETO-PLASMA WAVE DEVICE

Raymond Bowers and James R. Houck, Ithaca, N.Y., assignors to the United States of America as represented by the United States Atomic Energy Commission

Filed May 28, 1964, Ser. No. 371,164
3 Claims. (Cl. 324—.5)



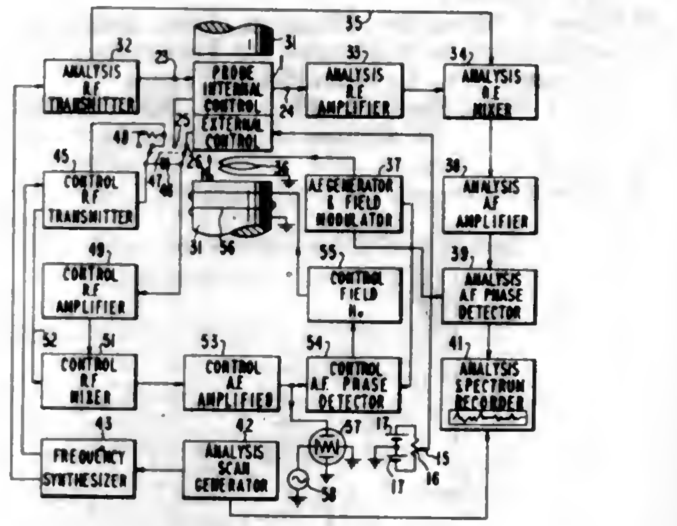
Method and apparatus for measuring the strength and polarity of a magnetic field by providing an alternating current signal whose frequency is proportional to the strength of a magnetic field and in which a solid is inserted at low temperature to produce self oscillating magneto-plasma waves corresponding to the strength of the field.

3,388,322
GYROMAGNETIC RESONANCE SPECTROMETER HAVING SELECTABLE INTERNAL AND EXTERNAL RESONANT CONTROL GROUPS

Weston A. Anderson and Forrest A. Nelson, Palo Alto, Calif., assignors to Varian Associates, Palo Alto, Calif., a corporation of California

Filed Feb. 21, 1966, Ser. No. 529,034
10 Claims. (Cl. 324—.5)

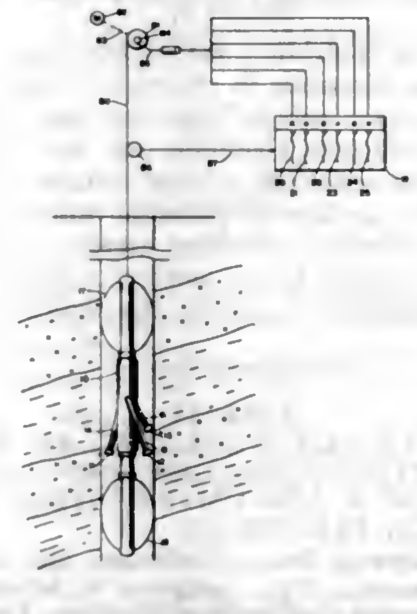
1. A gyromagnetic resonance spectrometer including, means for simultaneously immersing a sample group under analysis, an internal control group and an external control group, in a D.C. polarizing magnetic field, means for exciting and detecting gyromagnetic resonance of the sample group and a selected one of the control groups, means forming a control channel responsive to the detected resonance of the selected control group for automatically controlling the resonance conditions over the sample group under analysis to prevent undesired drift effects, whereby maintenance of automatic control of the resonance conditions over the sample group on switching from external to internal control of the spectrometer as occasioned by withdrawal and subsequent insertion of the internal control group into the magnetic field is facilitated.



3,388,323
BOREHOLE SYSTEM INCLUDING THREE ANGULARLY SPACED COIL MEANS FOR MEASURING SUBSURFACE DIP

Allen A. Stripling, Dallas, Tex., assignor to Mobil Oil Corporation, a corporation of New York

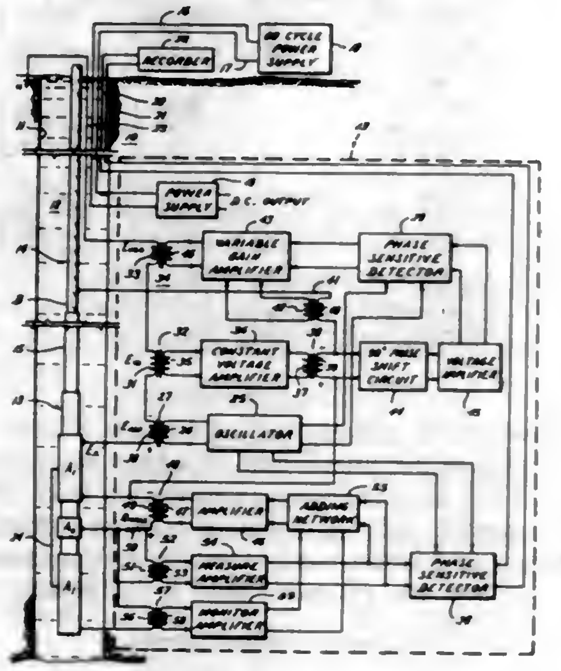
Filed Sept. 30, 1965, Ser. No. 491,779
1 Claim. (Cl. 324—8)



The specification describes a borehole logging technique and system for determining subsurface dip from two independent parameters indicative of magnetic susceptibility and electrical conductivity or resistivity, both derived from magnetic field measurements carried out at three angular positions adjacent the borehole walls. In the embodiment disclosed, three coils are employed for carrying out the borehole measurements. These coils are energized to generate magnetic fields at three angular regions around the borehole wall and the outputs thereof are phase separated into magnetic susceptibility and resistivity measurements.

3,388,324
ELECTRODE ARRAY METHODS AND APPARATUS, WITH UNDESIRED INDUCED VOLTAGE CANCELLATION, FOR INVESTIGATING EARTH FORMATIONS

William J. Sloughter, Houston, Tex., assignor, by mesne assignments, to Schlumberger Technology Corporation, Houston, Tex., a corporation of Texas
Filed Sept. 23, 1965, Ser. No. 489,566
26 Claims. (Cl. 324—10)

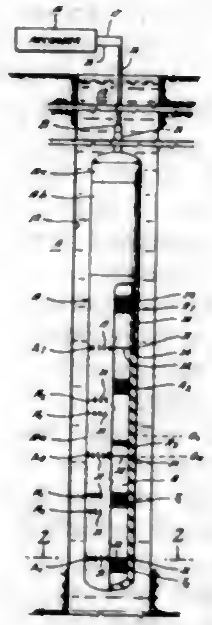


1. In apparatus for investigating earth formations traversed by a borehole, the combination comprising:
(a) an electrode array adapted for movement through the borehole, the array including at least one electrode adapted to emit current into the surrounding earth formations;
(b) a potential reference electrode;
(c) means for supplying current to said at least one electrode;
(d) means for controlling the current supplied to said at least one electrode in response to the voltage difference between said at least one electrode and the potential reference electrode, the voltage difference including an undesired voltage induced in the circuit connection coupling the potential reference electrode with the current controlling means; and
(e) means coupled to the current controlling means for substantially cancelling the undesired induced voltage.

3,388,325
APPARATUS FOR SUPPLYING AN EQUAL POTENTIAL TO CIRCUMFERENTIAL PORTIONS OF A CIRCUMFERENTIALLY EXTENDING ELECTRODE

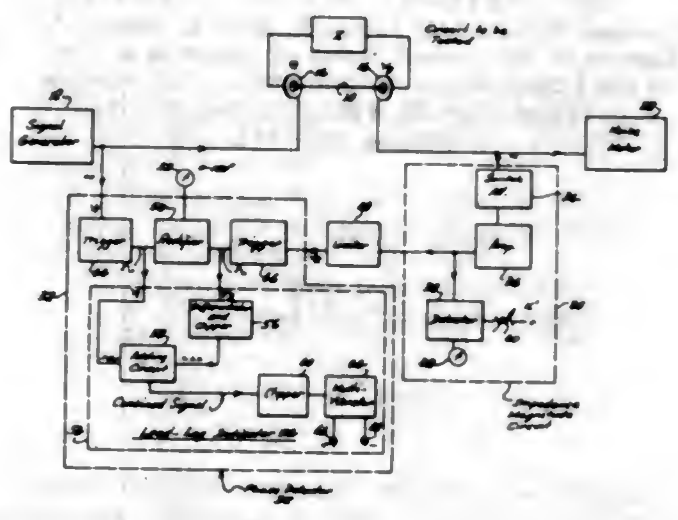
James A. Birdwell, Owen H. Huston, and Albert C. Skellie, Houston, Tex., assignors to Schlumberger Well Surveying Corporation, Houston, Tex., a corporation of Texas
Filed Feb. 23, 1966, Ser. No. 529,440
9 Claims. (Cl. 324—10)

In accordance with an illustrative embodiment of the invention, apparatus for providing an equal potential distribution on a circumferentially extending electrode means located on the same borehole support means with an electromagnetic coil system has been shown. In a preferred form, the resistance values of a resistive network which supplies current to various circumferential portions of the electrode means are selected to provide this equal potential distribution, yet the closed loop resistance of the resistive network is sufficiently high that the electrode means will not interfere with the operation of the coil system.



3,388,326
NETWORK FOR DETERMINING MAGNITUDE AND PHASE ANGLE OF NOISE IMPEDANCE

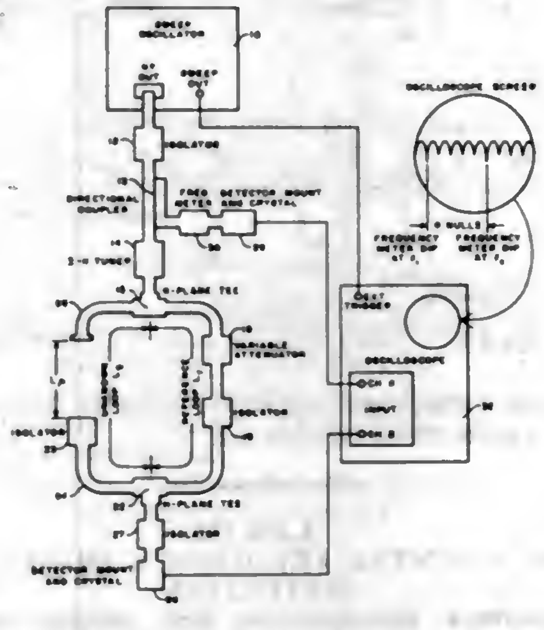
James L. Brooks, Oxnard, Calif., assignor to the United States of America as represented by the Secretary of the Navy
Filed July 29, 1964, Ser. No. 386,095
2 Claims. (Cl. 324—57)



The invention is a network for determining magnitude and phase angle of the noise impedance of a circuit. A signal generator and an impedance magnitude circuit are respectively coupled across one of the circuit lines to be tested. A phase detector is connected between the signal generator and the impedance magnitude circuit and a limiter means is connected between the impedance magnitude circuit and the phase detector for clipping the signal output from the impedance magnitude circuit to a level substantially equal to the signal level received by the phase detector from the signal generator. The signal phase detector includes a time difference circuit and a lead-lag indicator connected thereacross. The lead-lag indicator includes a pulse forming circuit means, an adding circuit means and a clipping means which cooperate with one another to indicate the direction of the phase difference.

3,388,327
SYSTEM FOR MEASUREMENT OF MICROWAVE DELAY LINE LENGTH

Lee Sutton, Norco, and Jimmy J. Hoote, Riverside, Calif., assignors to the United States of America as represented by the Secretary of the Navy
Filed Oct. 19, 1965, Ser. No. 498,163
2 Claims. (Cl. 324—58)



1. A system for measuring the length of a microwave delay line, comprising:
(a) a sweep oscillator for repeatedly sweeping through a desired frequency range,
(b) first and second waveguide H-plane T's,
(c) a first waveguide means including a first waveguide isolator, a directional coupled and an E–H plane tuner connected in series to feed the frequency swept signal from said sweep oscillator to the center port of said first H-plane T,
(d) a second waveguide means forming a reference loop of known length and including a variable attenuator and a second waveguide isolator connected in series between a side port of said first H-plane T and a side port of said second H-plane T,
(e) a delay line of unknown length to be measured being connected between the other side port of said first H-plane T and the other side port of said second H-plane T and forming an unknown loop,
(f) a third waveguide means including a first crystal detector and a waveguide isolator connected in series to the center port of said second H-plane T for observing the signal level in said second H-plane T,
(g) a fourth waveguide means consisting of a second crystal detector and a frequency meter connected in series to said directional coupler for determining the frequency of the system at desired intervals,
(h) a display means to which said crystal detectors are connected for viewing series of power changes in said second H-plane T due to phase interactions of the frequency swept signal through said known and unknown loops and measuring the number of nulls thereof,
(i) the length of said delay line (L_x) being determined from the measured number of additional nulls (N), generated as a result of the frequency of said signal power level being changed from a first selected frequency (f_1) to a second selected frequency (f_2), and the measured value of the frequencies (f_1 and f_2 in accordance with the formula

$$L_x=L_s-\delta=NC\left[\frac{1}{\sqrt{f_1^2-f_c^2}-\sqrt{f_2^2-f_c^2}}\right]-\delta$$

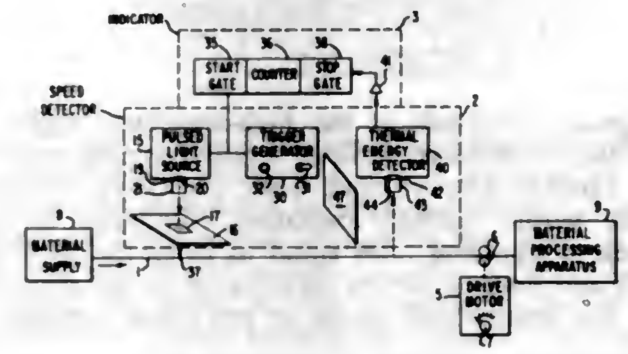
where C is the velocity of light (2.9979×10^{10} cm./sec.); f_c is the cutoff frequency of the waveguide of the system and, δ is the known length of any waveguide added to the delay line forming the unknown loop for connection purposes to facilitate measurement.

ERRATUM

For Class 324—61 see:
Patent No. 3,387,776

3,388,328
PULSED LASER SYSTEM FOR RELATIVE SPEED MEASUREMENT

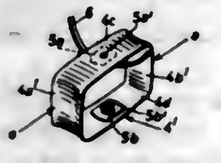
John W. Drenning, Baltimore, Md., assignor to Koppers Company, Inc., Pittsburgh, Pa., a corporation of Delaware
Filed June 10, 1965, Ser. No. 462,923
1 Claim. (Cl. 324—70)



A velocity measuring system having a regularly recurrently pulsed laser and spaced infrared detector with a velocity indicator responsive to the detector and having means initiated into operation synchronously with operation of the laser.

3,388,329
COIL FOR MOVING-COIL INSTRUMENTS AND METHOD OF PRODUCING THE SAME

Fritz Ruempelein, Munich, Germany, assignor to Agfa Aktiengesellschaft, Leverkusen, Germany
Filed Mar. 26, 1965, Ser. No. 442,891
Claims priority, application Germany, Apr. 24, 1964, A 45,860
13 Claims. (Cl. 324—154)

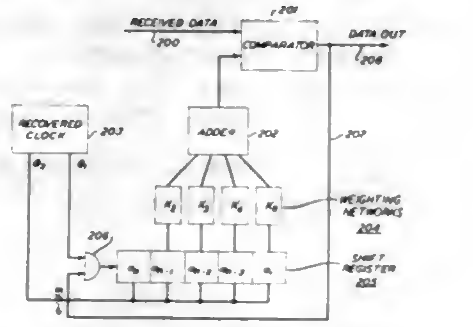


The frame of the coil for moving-coil instruments is constituted by an annulus of sheet metal having a rectangular outline. The walls of one pair of opposed frame walls are concave on the outside so that they resemble troughs and prevent lateral shifting of convolutions which are wound around the frame. The frame is produced by deforming two opposed walls in a sleeve-like blank of rectangular outline.

3,388,330
PARTIAL RESPONSE MULTILEVEL DATA SYSTEM

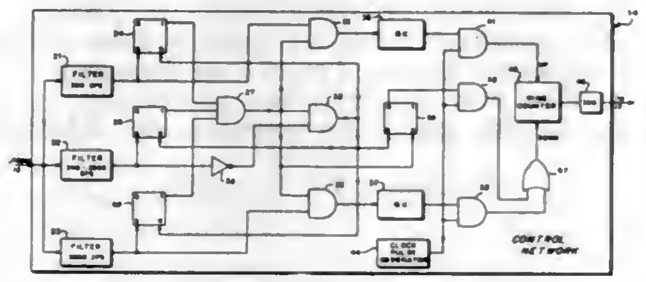
Ernest R. Kretzmer, Holmdel, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Mar. 19, 1965, Ser. No. 441,197
16 Claims. (Cl. 325—42)

Band-limited transmission facilities, when excited by binary data signals at rates exceeding the facility bandwidth, disperse the response to individual inputs over more than one signaling interval, i.e., the response to an individual input is only partial with respect to the duration of each signaling interval. The total dispersed response to an indiivdual input signal can be analyzed as the superposition of two or more spaced ideal $(\sin x)/x$ impulse responses and classified according to the pattern of the superpositions. Each class of superposition can further be related to the spectral shaping of the transmission facility. Controlled spectral shaping by means of selected low- or bandpass filters concentrates spectral energy at the low-frequency or center-frequency regions of the facility transmission band and permits smooth, gradual roll-offs at the high-frequency region. Although the resultant transmitted signals become multilevel for random binary input data, precoding of the input data before facility excitation eliminates error propagation at signaling rates equal to twice the facility bandwidth and imparts binary significance to the several levels of the transmitted signal at individual sampling instants.



3,388,331
AUTOMATIC FREQUENCY CONTROL OF A RADIO RECEIVER

John R. Rawley, 1838 Rockwell Road,
Abington, Pa. 19001
Filed May 28, 1965, Ser. No. 459,960
6 Claims. (Cl. 325—420)

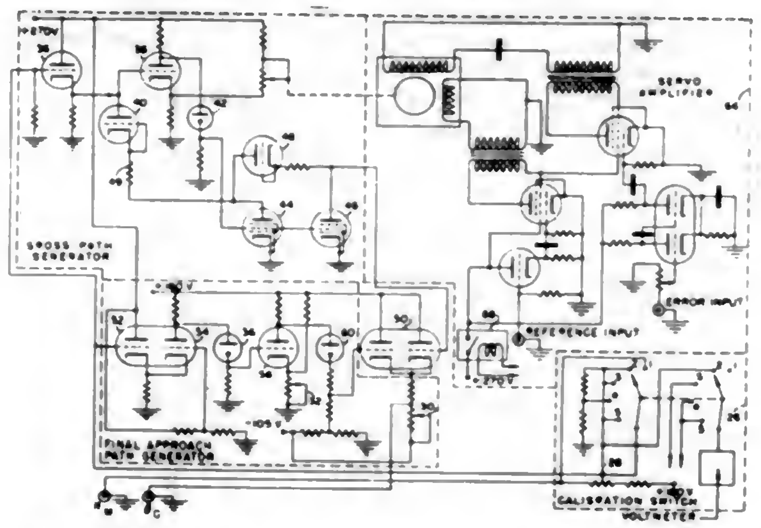


A radio receiver is provided with a frequency control system having three bandpass filters which respectively pass signals in the frequency range below, within, and above the normal voice range. If a voice signal drifts out of the voice range, it is detected and returned to the center of the voice range. Detection is achieved by a scanning device which causes a search to be made through an anticipated frequency range until the voice signal is detected, whereupon a control network reinstates the drifted signal to the center of the voice range.

3,388,332
COMPUTER DEVICE FOR AIRCRAFT CARRIER APPROACH SYSTEM

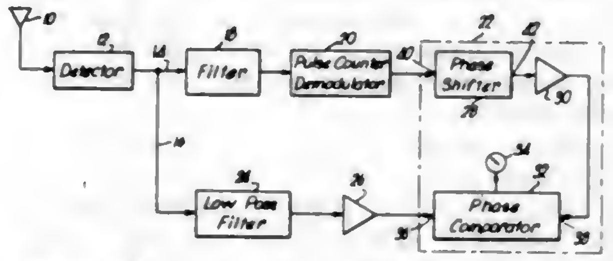
Albert Brodzinsky, Joseph B. Reynolds, Jr., and Irving M. Saffitz, Washington, D.C., assignors to the United States of America as represented by the Secretary of the Navy
Original application Nov. 30, 1951, Ser. No. 259,275, now Patent No. 3,131,018, dated Apr. 28, 1964. Divided and this application Nov. 27, 1963, Ser. No. 334,958
2 Claims. (Cl. 328—142)

A computer device located on an aircraft carrier for deriving a flight path for an approaching aircraft. An approximately semicircular path is created by taking a voltage corresponding to the aircraft's distance from the carrier and first generating a gross flight path signal and then generating a final approach signal when the aircraft comes within a predetermined distance.



3,388,333
PULSE COUNTER FREQUENCY MODULATION DETECTION

Neal Scribner, Independence, Mo., assignor to Wilcox Electric Company, Inc., Kansas City, Mo., a corporation of Kansas
Original application Apr. 12, 1963, Ser. No. 272,794, now Patent No. 3,351,864, dated Nov. 7, 1967. Divided and this application Aug. 22, 1967, Ser. No. 662,504
6 Claims. (Cl. 329—104)

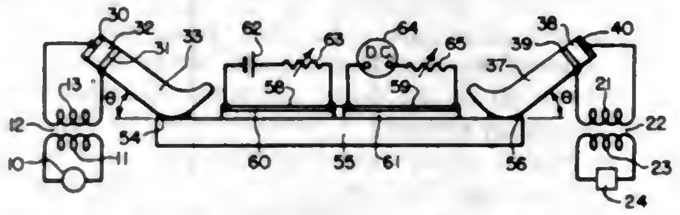


A radio navigation receiver is adapted to receive a space modulated carrier component and a frequency modulated subcarrier component of a navigation signal and has an AM detector which passes the space modulation and the subcarrier. Subsequent filter circuitry separates the space modulation and the subcarrier, the latter being fed to a pulse counter demodulator for detection of the modulating signal. The pulse counter demodulator utilizes bistate switching means responsive to a predetermined, low amplitude level of each half cycle of the subcarrier for producing a train of generally rectangular pulses which are fed to succeeding circuitry where the modulating signal is recovered. Such modulating signal and the detected space modulation are then fed to separate inputs of a phase angle meter where a phase comparison of the two detected signals is effected.

3,388,334
SOLID STATE TRAVELING WAVE DEVICES

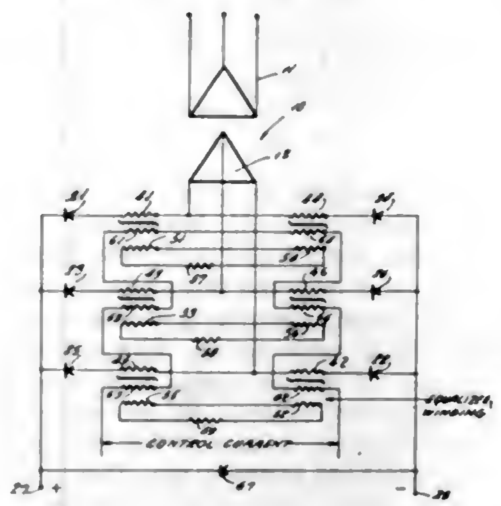
Robert Adler, Northfield, Ill., assignor to Zenith Radio Corporation, Chicago, Ill., a corporation of Delaware
Continuation-in-part of application Ser. No. 499,936, Oct. 21, 1965. This application Sept. 21, 1967, Ser. No. 669,533
12 Claims. (Cl. 330—5.5)

A solid-state acoustic signal translating device having input and output transducers coupled to a relatively long piezoelectric element. Semiconductor film means secured to the long element has induced therein bunching of charge carriers, such as electrons or holes, corresponding to the effective wavelength of the acoustic waves in the element. D.C. voltage applied to the film means causes the carriers to drift. One portion of the carriers causes acoustic waves traveling in one direction in the piezoelectric element to be amplified. Another portion of the carriers causes acoustic waves traveling in the opposite direction to be attenuated. The combination provides an unconditionally stable amplifier.



3,388,335
EQUALIZED FLUX RESET CIRCUIT FOR MAGNETIC AMPLIFIERS

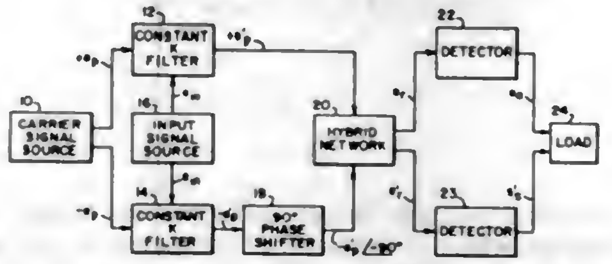
Isadore K. Dortort, Philadelphia, Pa., assignor to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Dec. 2, 1964, Ser. No. 415,291
6 Claims. (Cl. 330—8)



A three-phase bridge connected magnetic amplifier is disclosed having auxiliary windings on each magnetic core. The auxiliary windings on the magnetic cores in diametrically opposed phases of the magnetic amplifier circuit are directly connected to one another to force equal blocking voltages and resetting voltages on their respective cores.

3,388,336
PHASE SHIFT AMPLIFIER APPARATUS USING CONSTANT K FILTER NETWORKS IN PUSH-PULL RELATIONSHIP

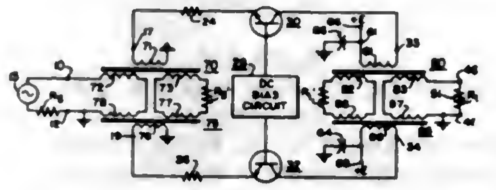
John Mattern, Baltimore, Md., assignor to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Feb. 11, 1965, Ser. No. 431,836
18 Claims. (Cl. 330—10)



Phase shift amplifier including first and second signal paths each including a constant K filter. A carrier signal is applied to both of the constant K filters which operate in push-pull relationship and the phase shift characteristics of these filters are changed in accordance with an input signal. The signal in one path is additionally phase shifted and applied, along with the signal in the other path to a hybrid network which then provides a resultant vector summation which varies in amplitude in accordance with the input signal. The hybrid network output is detected and applied to a load device.

3,388,337
HYBRID BALANCED PUSH-PULL AMPLIFIER

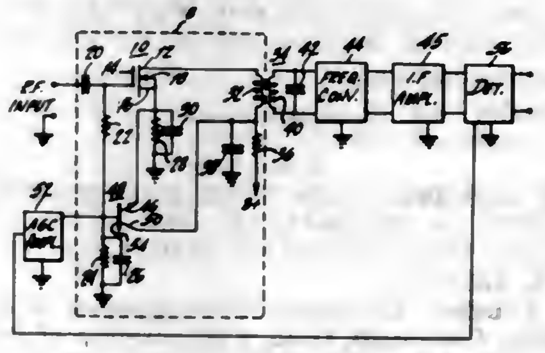
Franklin G. Lee, Baltimore, and Harold A. Male, Glen Burnie, Md., assignors to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Nov. 24, 1964, Ser. No. 413,585
7 Claims. (Cl. 330—15)



A hybrid balanced push-pull amplifier wherein hybrid isolation of the source and load is obtained by the use of a proper impedance between the center tap of a balanced transformer and ground on the input as well as the output sides of a push-pull pair of transistors. The isolating impedance in both instances is selected to have a value substantially equal to the square of the turns ratio of its associated transformer times the magnitude of its associated source or load impedance divided by four. Alternatively a multicore hybrid with terminating impedances matched to the source or load impedance provides isolation for a push-pull amplifier across a wide band.

3,388,338
GAIN CONTROLLED AMPLIFIER USING FIELD EFFECT TYPE TRANSISTOR AS THE ACTIVE ELEMENT THEREOF

Wayne M. Austin, Hanover, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed June 13, 1966, Ser. No. 557,313
8 Claims. (Cl. 330—29)



1. A circuit for controlling the gain of an amplifier comprising:

a first semiconductor device having input, output and common electrodes;

signal input circuit means coupled between the input and common electrodes of said first device;

signal output circuit means coupled between the output and common electrodes of said first device;

a second semiconductor device comprising a junction transistor having base, emitter and collector electrodes;

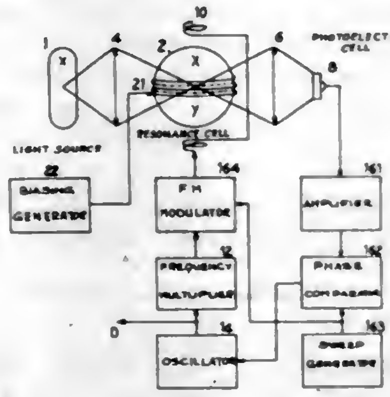
means providing a direct current connection between said base electrode and one of said input and common electrodes;

means providing a direct current connection between said emitter electrode and the other of said input and common electrodes;

means providing a direct current connection between said collector electrode and said output electrode;
means providing a source of gain controlling potential which increases in a pre-determining polarity direction to reduce the gain of said amplifier;
means including said source of gain controlling potential connected between said base and emitter electrodes so that said base and emitter electrodes are initially reverse biased, but increases in said gain controlling potential in said polarity direction reduces said reverse bias over a first range of said gain controlling potential and forward biases said base and emitter electrodes over a second range of said gain controlling potential.

3,388,339
ATOMIC CLOCKS WITH SPIN EXCHANGE COLLISION

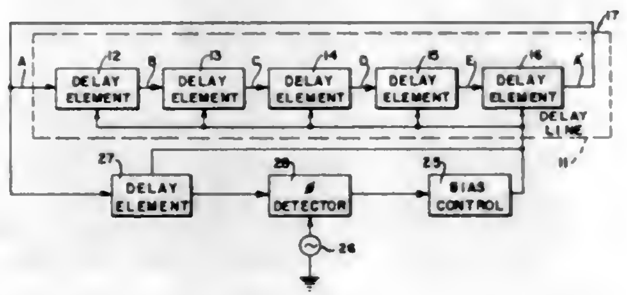
Léon Malnar and Henri Brun, Paris, France, assignors to CSF—Compagnie Generale de Telegraphie Sans Fil, a corporation of France
Filed July 29, 1966, Ser. No. 568,959
Claims priority, application France, Aug. 4, 1965, 27,179
6 Claims. (Cl. 331—3)



The invention relates to atomic clocks using at least one resonance cell filled with a mixture of two alkali elements. One of said elements is optically pumped by means of a suitable light source and atoms of the other element are aligned by means of a spin exchange collision process occuring within the cell. Means are provided for accurately sensing the frequency of the spectral lines of said other element.

3,388,340
PHASE CONTROLLED RING OSCILLATOR COMPRISING A PLURALITY OF ACTIVE DELAY STAGES INDIVIDUALLY COUPLED TO A CONTROL DEVICE

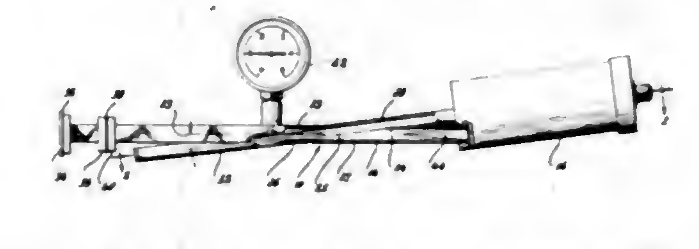
Don J. Loughry, Cincinnati, Ohio, assignor to Avco Corporation, Cincinnati, Ohio, a corporation of Delaware
Filed Dec. 29, 1965, Ser. No. 517,399
3 Claims. (Cl. 331—4)



This is a square wave ring oscillator comprising a cascaded odd-numbered plurality of individual phase-inverting transistor stages of the relaxation oscillator type. A feedback coupling renders co-phasal the square wave input and output. This ring oscillator is made to track a source of reference waves by the combination of a phase comparator and a control device. The output of the control device is applied individually to all of the delay stages. The relative delay times of the stages are maintained accurately with the same initial phase adjustment. Any error induced by a change in one delay element is averaged among all of the delay elements. An additional active variable delay element is interposed in the coupling between the output of the ring oscillator and an input of the phase comparator. The other input to the comparator is from a reference source. The control device also varies the delay time of this additional element.

3,388,341
MICROWAVE NOISE SOURCE STANDARD

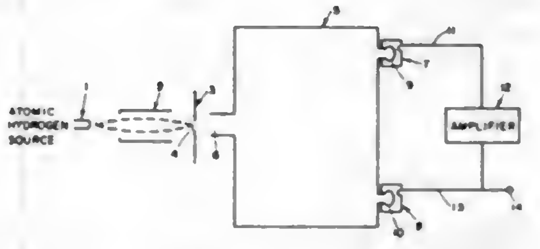
Richard H. Geiger, Stamford, Conn., assignor, by mesne assignments, to Signalite Incorporated, Neptune, N.J., a corporation of New Jersey
Filed Mar. 31, 1967, Ser. No. 627,432
14 Claims. (Cl. 331—78)



The disclosure relates to a gas discharge noise source standard including a gas discharge tube for generating microwave noise energy and a mount for coupling this noise energy to one or more output ports as a calibrating signal. The gas discharge tube is formed having a quartz envelope backfilled with xenon. The quartz envelope at the cathode end of the discharge tube is enlarged to increase the xenon fill volume to envelope surface ratio. The cathode structure is heated for improved operating efficiency and shielded for long life. The mount is formed of oxygen-free, high conductivity (OFHC) copper and is backfilled with a non-oxidizing gas. The insertion angle between the mount and the tube positive column is 7 degrees.

3,388,342
ATOMIC HYDROGEN MASER WITH ENLARGED ATOM STORAGE CONTAINER

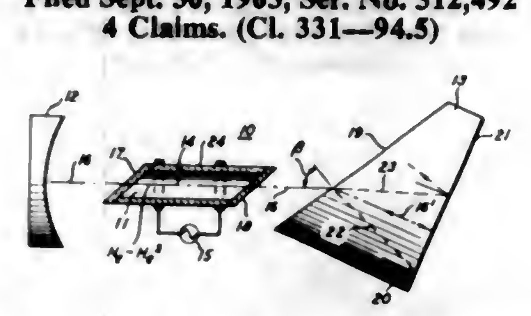
Norman F. Ramsey, Belmont, Mass., assignor to the United States of America as represented by the Secretary of the Navy
Filed Mar. 29, 1967, Ser. No. 627,593
5 Claims. (Cl. 331—94)



An atomic hydrogen maser including an atomic storage container which is made large compared to the wavelength of the hyperfine transition frequency of hydrogen to reduce undesirable wall effects. Two smaller cavity resonators which may contain atom storage bulbs are connected with the interior of the storage container, and R.F. energy from one of the resonators is amplified to produce an output signal a portion of which is applied to excite the other resonator.

3,388,343
OPTICAL MASER WITH REFLECTING PRISM

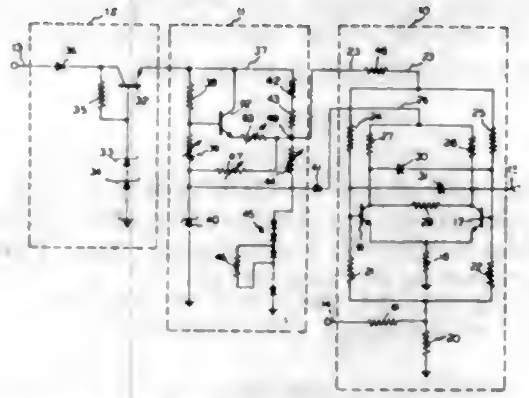
Alan D. White, Berkeley Heights, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Sept. 30, 1963, Ser. No. 312,492
4 Claims. (Cl. 331—94.5)



An optical maser in which one cavity extremity comprises a dispersive prism having a first plane energy refracting surface, and a second plane energy reflecting surface upon which the rays of interest are orthogonally incident. An alternative prism embodiment includes a cylindrical refracting surface and a spherical reflecting surface.

3,388,344
TEMPERATURE COMPENSATION OF OSCILLATORS AND THE LIKE

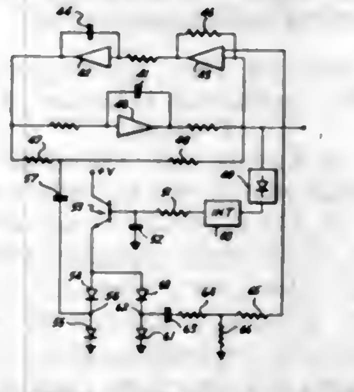
Laurice J. West, Levittown, Pa., assignor to United Aircraft Corporation, a corporation of Delaware
Filed June 9, 1966, Ser. No. 556,387
6 Claims. (Cl. 331—109)



A multiple range temperature compensation circuit for electronic circuitry experiencing nonlinear changes with temperature by automatically and sequentially switching plural approximately linear signal increments at different temperatures, with each increment being individually adjustable to closely simulate a small segment of nonlinear variation.

3,388,345
VARIABLE RESISTANCE NETWORKS FOR CONTROLLING THE LOOP GAIN OF AN OSCILLATOR

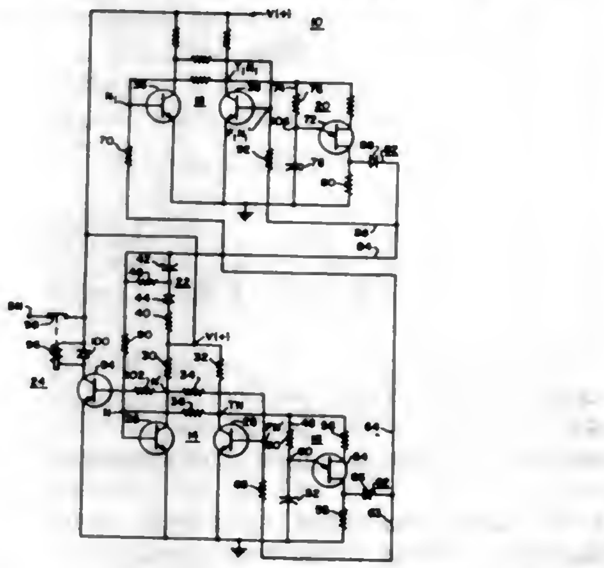
Walter T. Towner, Canton, Mass., assignor to Weston Instruments, Inc., Newark, N.J., a corporation of Delaware
Filed Feb. 3, 1967, Ser. No. 613,888
9 Claims. (Cl. 331—109)



An oscillator which includes an amplifier has a resistive feedback circuit and a variable AC impedance to ground provided by a diode circuit which controls the loop gain of the oscillator. The diode circuit is driven by a current from a power amplifier which is controlled by a DC voltage derived from the oscillator output signal, the magnitude of the DC voltage being proportional to the average value of the oscillator output signal and a DC reference voltage.

3,388,346
SEMICONDUCTOR MULTIVIBRATOR PULSE TRAIN GENERATING CIRCUIT

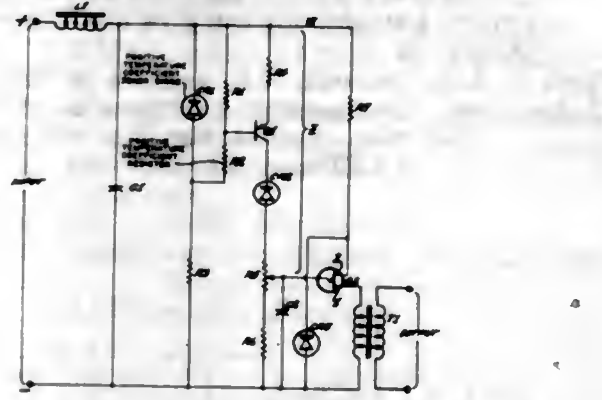
James L. Roof, Fort Shawnee, Lima, and Paul Knauer, Lima, Ohio, assignors to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed May 18, 1965, Ser. No. 456,680
7 Claims. (Cl. 331—111)



A circuit for generating pulse trains, especially where a short on time and a long off time are desired. The circuit includes multivibrator means with separate timing circuits for switching the multivibrator means between stable states to obtain output pulses with independently adjusted on and off times.

3,388,347
DC VOLTAGE LEVEL SENSING RELAXATION OSCILLATOR

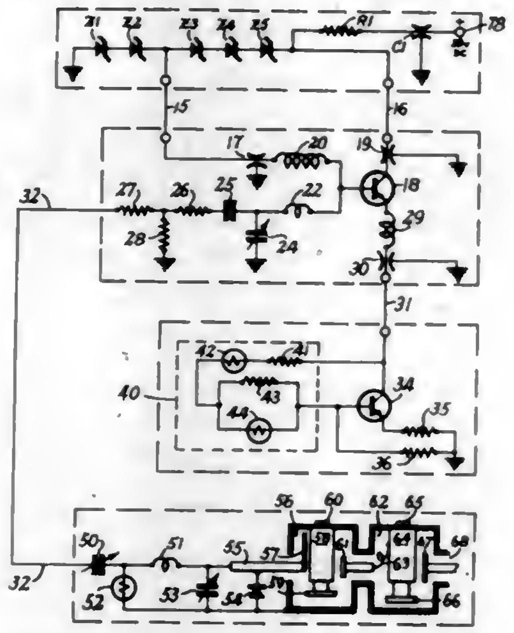
Richard A. Dinzl, Littleton, Colo., and Charles W. Singleterry, Huntsville, Ala., assignors to the United States of America as represented by the Secretary of the United States Air Force
Filed Apr. 12, 1967, Ser. No. 632,158
5 Claims. (Cl. 331—111)



A relaxation oscillator that is sensitive to the input DC voltage level. When the input voltage is above a predetermined level, the circuit oscillates; and conversely, when the input voltage level is below the predetermined voltage level, the circuit does not oscillate. The output of the circuit taken from an isolation transformer is used to drive any type of control circuit required to fulfill the system requirements.

3,388,348
TEMPERATURE COMPENSATED MICROWAVE SOURCE

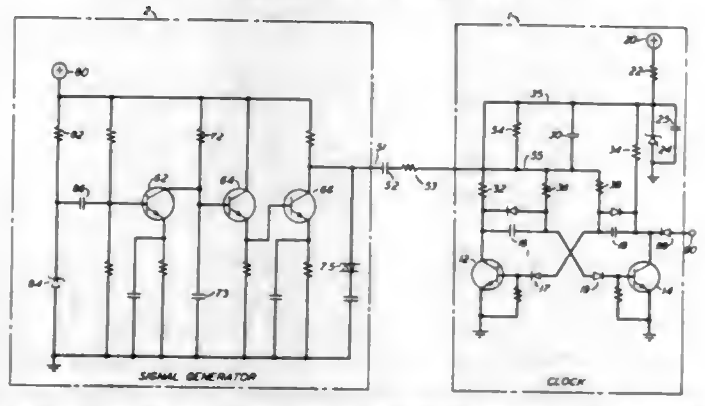
Benjamin F. Gregory, Tampa, Fla., assignor to Trak Microwave Corporation, Tampa, Fla.
Filed May 9, 1967, Ser. No. 637,239
10 Claims. (Cl. 331—117)



The application discloses a solid state microwave source capable of sustained continuous wave operation at constant frequency and power output throughout environmental changes in ambient temperature ranging from −55° C. to +125° C. In an alternative embodiment a frequency-modulated solid state microwave source is disclosed having broad-band frequency tuning capabilities and maintaining uniform modulation characteristics and power output over the same broad range of temperature changes. The source in both embodiments comprises a Colpitts type transistor oscillator having an integral temperature compensating network including both thermistor and "Sensistor" elements in combination with a direct current amplifier for varying the emitter current of the oscillator transistor according to a predetermined function as ambient temperature changes. The oscillator, which operates in the UHF spectrum, is directly coupled to a two-cavity frequency multiplier in a unitary compact structure with the temperature compensating elements to produce stable microwave energy output regardless of ambient temperature variations.

3,388,349
METHOD FOR REDUCING INTERFERENCE CAUSED BY ELECTROMAGNETIC RADIATION FROM CLOCK CONTROLLED SYSTEMS

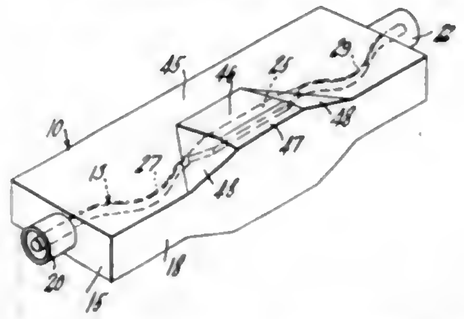
Cyrus F. Ault, Lincroft, N.J., assignor to Bell Telephone Laboratories, Incorporated, a corporation of New York
Filed Nov. 9, 1964, Ser. No. 409,836
15 Claims. (Cl. 332—18)



1. A method for reducing interference caused by electromagnetic radiation from a clock controlled system which comprises modulating the clock frequency.

3,388,350
MICROWAVE TRANSMISSION LINE APPARATUS HAVING FLEXIBLY CONNECTED DISPLACEABLE CONDUCTOR

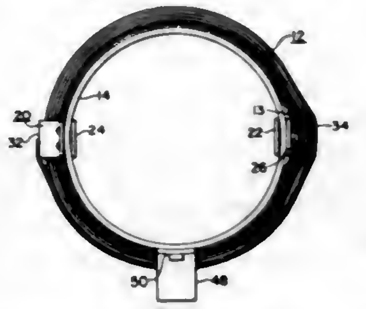
Jesse L. Butler, Groton Road, R.F.D. 2, Nashua, N.H. 03060
Filed May 21, 1965, Ser. No. 457,570
16 Claims. (Cl. 333—10)



An adjustable transmission line component includes a casing that defines two outer conductor ground planes and on which are supported two terminal structures between which an inner conductor extends. The inner conductor includes a rigid control section that is connected to the terminals by two flexible slab line sections, each of which is relatively rigid in the vertical plane and relatively flexible in the horizontal plane. The spacing of the outer conductors and the amount of dielectric material change in a transition region. The central portion of the inner conductor is moved an adjusting screw through the transition region to change the velocity of propagation of the signal applied at the terminals through the component, thereby producing a phase shift.

3,388,351
FOIL OR STRIP INDUCTOR DEVICE

Andrew S. Sweetana, Jr., Bloomington, Ind., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Feb. 14, 1964, Ser. No. 344,954
4 Claims. (Cl. 333—79)



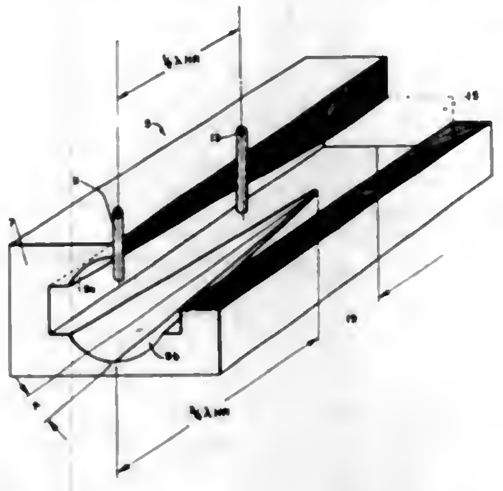
A current limiting reactor or line trap utilizing wound foil and having improved terminal construction for high currents.

3,388,352
WAVEGUIDE

Dieter Ramonat, Backnang, Germany, assignor to Telefunken Patentverwertungsgesellschaft m.b.H., Ulm, Germany
Filed Feb. 25, 1966, Ser. No. 530,034
Claims priority, application Germany, Feb. 25, 1965, T 28,063
8 Claims. (Cl. 333—98)

1. A broadband waveguide transition member having low reflection, for the connection of a corrugated waveguide having a substantially elliptical cross-section to a rectangular waveguide, comprising in combination:

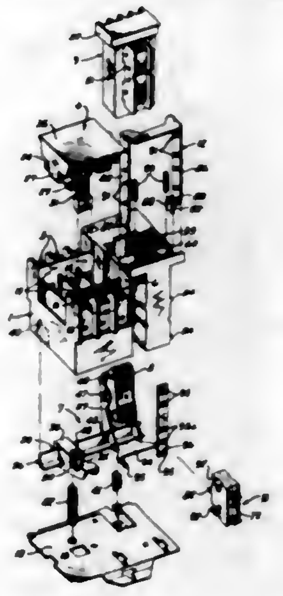
a rectangular waveguide for directly abutting a corrugated elliptical waveguide, said rectangular waveguide forming the transition member and including two pairs of spaced parallel inner surfaces arranged transversely to each other with one of said pair of surfaces being spaced more closely than the other pair, each of said closely spaced surfaces being provided with an axially symmetrical tapered recess, said tapered recesses enlarging in the direction of the elliptical waveguide and extending ¾λ_{HR} wherein λ_{HR} is the wavelength of the rectangular waveguide, and said tapered recesses being provided with a constant inclination angle which lies between 2° and 12°;



compensating members disposed within at least one of said tapered recesses and one of said members being provided at the abutting end of said rectangular waveguide, whereby said tapered recesses and said compensating members effect a matching of the properties of the rectangular and elliptical waveguides.

3,388,353
ELECTRICAL CONTACTOR HAVING MAIN CIRCUIT CONTROL CONTACTS AND AUXILIARY CONTROL CONTACTS INTERCONNECTED TO BE ACTUATED FROM A COMMON ELECTROMAGNETIC ACTUATOR

Eduard W. Isler, Cleveland, Ohio, assignor, by mesne assignments, to A. O. Smith Corporation, Milwaukee, Wis., a corporation of New York
Filed Oct. 7, 1965, Ser. No. 493,824
21 Claims. (Cl. 335—132)

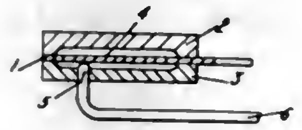


A contactor for an A.C. motor includes an insulating housing with exterior openings or sockets to receive a plug-in contact carrier, a plug-in magnetic actuating coil unit and a plug-in auxiliary contact. The coil unit includes a magnetic coil wound on a core and mounted within an outer opening. A resilient pad holds the coil unit in the housing. An armature forming a part of a motion transfer assembly is mounted within the housing with the armature aligned with the core of the coil unit. The armature is carried by a pivotal arm of the transfer member and is spring biased to space the armature from the core. When the coil is energized, the armature pivots the transfer member and moves a contact actuator which is carried by the transfer member. A contact carrier is mounted within the housing and includes an arm which projects through a suitable opening in the housing and which is connected to the contact actuator by a spring loaded pin and slot connection. The spring connection allows pivoting of the contact carrier to release it from the slot and pin connection for removal.

The auxiliary contacts include an outer housing from which one leg of an operating crank projects. A reciprocating actuating member is slidably mounted within the contactor housing, connected to the transfer member and includes a pair of spaced slots for interengagement with the exterior leg of the crank. When inserted in one position, the one slot engages the crank to hold the contacts in a normally closed or open condition. When the auxiliary switch is inserted in a reverse position, the normal condition of the contacts is automatically reversed.

3,388,354
CERAMIC REED RELAY

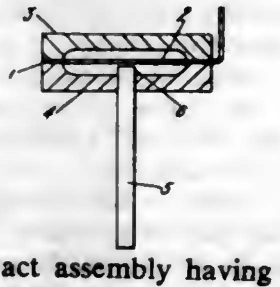
Edward Ronald Myatt, Redbourn, and Ernest Frederick Loveland, London, England, assignors to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware
Filed Aug. 1, 1966, Ser. No. 569,120
Claims priority, application Great Britain, July 30, 1965, 32,742/65
24 Claims. (Cl. 335—151)



1. A sealed contact assembly for a relay within a hermetically sealed rectangular parallelepiped capsule comprising, a rectangular flat plate of ferromagnetic material, an armature formed from and integral with the plate, the armature extending in the direction of the longer pair of sides of the plate, the armature being substantially equal to the length of said sides, at least one fixed contact sealed through a wall of the capsule to co-operate with a contact portion at the unconnected end of said armature, and electrical connections to the plate and hence to said armature and to the fixed contact.

3,388,355
CERAMIC REED RELAY HAVING FLUX CARRYING MEANS ASSOCIATED WITH THE ARMATURE

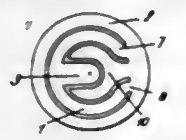
Edward Ronald Myatt, Redbourn, and Ernest Frederick Loveland, London, England, assignors to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware
Filed Aug. 1, 1966, Ser. No. 569,176
Claims priority, application Great Britain, July 30, 1965, 32,743/65
14 Claims. (Cl. 335—151)



1. A sealed contact assembly having two members of ferromagnetir material, which members are spaced apart

and project into a sealed enclosure of electrically insulating material, each of the members having a contact making portion, which members overlap each other at least over their respective contact making portions, said assembly having a fixed contact provided by one of said members and an armature provided by the other one of said members, the application of flux to said members causing said armature to engage with said fixed contact, flux carrying means associated with said armature for increasing the effective flux in the air gap between the armature and said fixed contact, said member forming said armature being a strip-like member which is reduced in thickness over a portion of its length including its contact carrying portion, and including a member of ferromagnetic material secured to the armature member between its fixed end and the portion of reduced thickness, which member extends parallel to said armature at least to a point opposite said fixed contact, which member is spaced from said armature over a substantial portion of its length, wherein said member provides a further flux path between the contact bearing portion of said armature and the fixed end of said armature for increasing the effective flux in the air gap between the armature and said fixed contact.

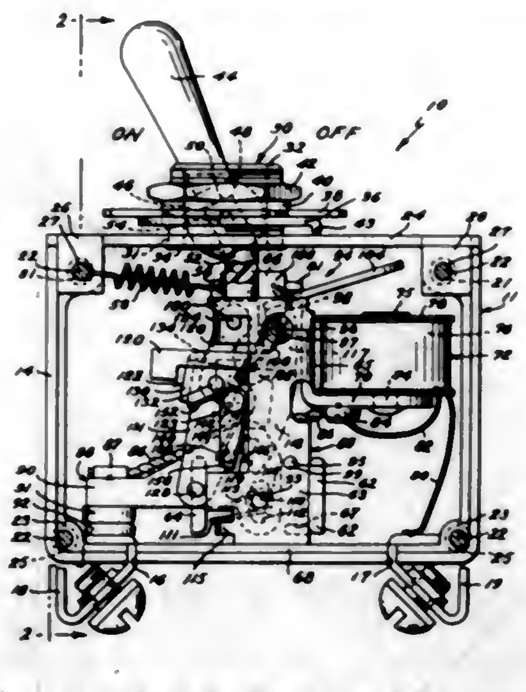
3,388,356
CERAMIC REED RELAY
Edward Ronald Myatt, Jr., Redbourn, and Ernest Frederick Loveland, London, England, assignors to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware
Filed Aug. 1, 1966, Ser. No. 569,411
Claims priority, application Great Britain, July 30, 1965, 32,741/65
8 Claims. (Cl. 335—151)



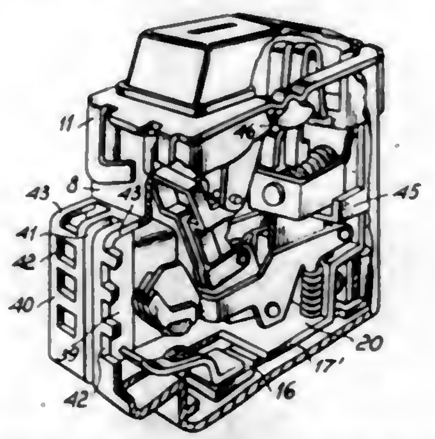
1. A contact assembly for a relay within a hermetically sealed enclosure comprising, a flat plate of ferromagnetic material having at least one slot dividing it into an inwardly projecting movable portion which forms the armature of the relay and a fixed remainder portion which provides low reluctance paths in a magnetic circuit for operating the relay, a fixed contact sealed through one wall of the enclosure to cooperate with a contact portion of the armature, and electrical connections to the plate and hence to the armature, and to the fixed contact.

3,388,357
MAGNETIC TYPE CIRCUIT BREAKER
Martin W. Lawson, North Easton, and Clifford A. Bodge, Attleboro, Mass., assignors to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware
Continuation of application Ser. No. 298,536, July 26, 1963. This application Sept. 2, 1966, Ser. No. 577,086
17 Claims. (Cl. 335—161)

A new and improved circuit breaker of the magnetic type is shown to comprise a frame mechanism embodying a substantially U-shaped frame, an arm pivotally mounted on said frame to support a movable contact, and magnetic means mounted on the frame for moving said arm under predetermined conditions; a housing assembly embodying a pair of insulating housing parts, means holding the parts together to define a chamber, a fixed contact mounted in the chamber, and a housing cover for use in mounting the circuit breaker on a control panel, the housing parts having abutments which engage extremities of the frame at a plurality of locations for completely entrapping the frame in a fixed location within the housing so that movement of the contact arm engages and disengages the fixed contact in the housing to close and open a circuit; and normally operable means connected to the frame mechanism for moving the contact arm to open and close the circuit. Alternate circuit breaker constructions are shown as well as circuit breaker constructions in which the housing parts form an additional enclosure or chamber for mounting an auxiliary switch, the auxiliary switch including a movable contact, an actuating member retained in a guideway formed on the housing enclosure, and a fixed contact, the actuating member being engageable with the movable contact arm for actuating the auxiliary switch contacts in response to movement of the contact arm in the main frame mechanism.

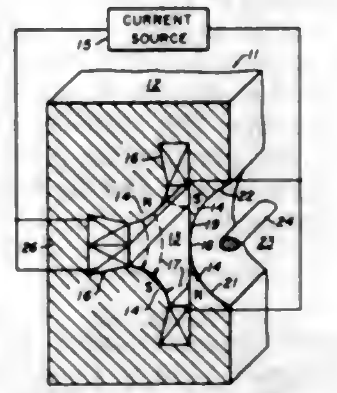


3,388,358
CIRCUIT BREAKER
Mario Paganelli, Varese, Italy, assignor to Bassani, S.p.A., Milan, Italy
Filed Jan. 21, 1965, Ser. No. 426,763
Claims priority, application Italy, Apr. 11, 1964, 46,026/64
12 Claims. (Cl. 335—191)



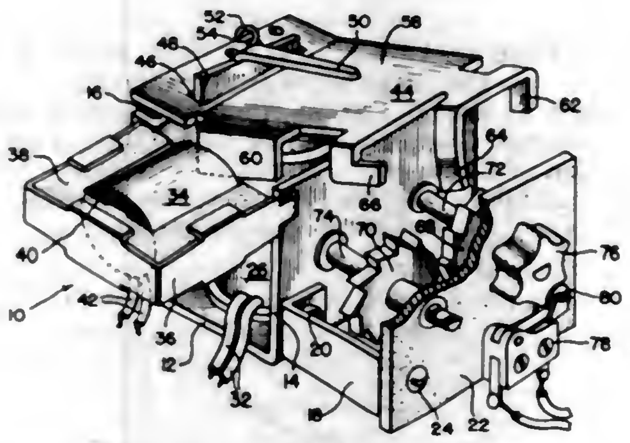
A circuit breaker in which at least one movable contact engaging a corresponding stationary contact is carried on one end of a spring-loaded arm pivotally supported on a lever system cooperating with current controlled means actuated during an overload, in which the elements of the circuit breaker are arranged and constructed to keep the contacts, in absence of an overload, in engagement with each other and to pivot, during an overload, the arm first in one direction about the point of engagement between the contacts until the other end of the arm engages a stop, and to turn then the arm in the opposite direction about the point of engagement of the other end of the arm with the stop to rapidly open the circuit breaker.

3,388,359
PARTICLE BEAM FOCUSSING MAGNET WITH A SEPTUM WALL
Glen R. Lambertson, Oakland, Calif., assignor to the United States of America as represented by the United States Atomic Energy Commission
Filed Jan. 31, 1967, Ser. No. 613,047
7 Claims. (Cl. 335—210)



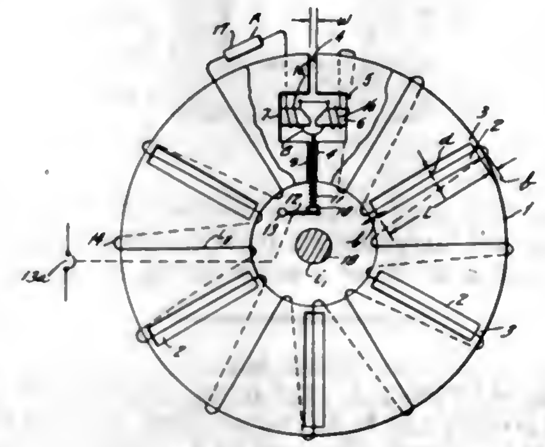
This invention is a quadrupole electromagnet specifically designed for focussing a maximum number of secondary particles as are emitted in diverging paths from a target bombarded by the primary beam of a high energy particle accelerator. The compact physical structure of the magnet alleviates spatial congestion of the target region of the accelerator, in that one wall of the magnet contains a thin septum which allows the beam focussing field of the magnet to be disposed near the primary beam and the target without physically or magnetically interfering therewith.

3,388,360
ELECTRICAL RELAY
Wilbert Parisoe, Highland Park, Ill., assignor to Zenith Radio Corporation, Chicago, Ill., a corporation of Delaware
Filed Mar. 16, 1966, Ser. No. 534,778
10 Claims. (Cl. 335—268)



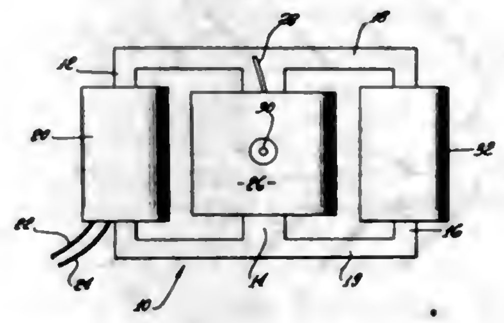
1. An electrical relay selectively actuable in either of two different modes to perform either of a pair of independent control functions, which relay comprises:
- a first electromagnet responsive to an applied electric current to develop an attracting force along a first predetermined axis;
- a second electromagnet responsive to an applied electric current to develop an attracting force along a second predetermined axis skewed to said first axis;
- a common armature having two portions of ferromagnetic material respectively intersecting said first and second axes and mounted for movement in a first mode in response to energization of said first electromagnet and for movement in a second and different mode in response to concurrent energization of said first and second electromagnets;
- and a pair of independent utilization devices respectively and individually engageable by said armature upon movement thereof in said respective first and second modes.

3,388,361
MAGNETIC TRIP STRUCTURE FOR ZERO CURRENT CIRCUIT INTERRUPTERS
Fritz Kesselring,, Kusnacht, Zurich, Switzerland, assignor to Siemens-Schuckertwerke A.G., Berlin, Germany, a corporation of Germany
Filed June 28, 1966, Ser. No. 561,111
3 Claims. (Cl. 335—281)



1. A magnetic trip structure for a circuit interrupter; said magnetic trip structure comprising a magnetic structure encircling a current conductor connected to said circuit interrupter; a plurality of circumferentially spaced radial air gaps extending through said magnetic structure; one of said air gaps extending through a cavity in said magnetic structure; said cavity containing a pair of spaced magnetic poles and an armature spanning across said poles; said pair of poles and said armature being magnetically in parallel with said one of said air gaps; first winding means wound on said pair of magnetic poles; second winding means wound on said magnetic structure; said first and second windings connected in series with opposing polarities; and magnetic bridge means connected across each of the other of said plurality of air gaps; each of said magnetic bridge means occupying from 4 to 12% of the total area of their respective air gaps.

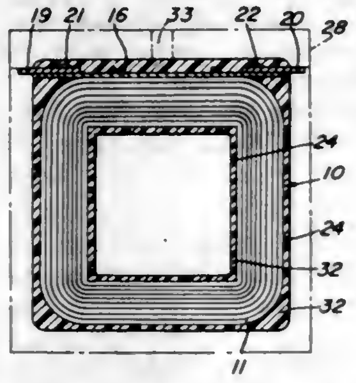
3,388,362
ELECTRIC IGNITION TRANSFORMER
Joseph G. Raffaelli, Los Angeles, Calif., assignor to International Telephone and Telegraph Corporation, New York, N.Y., a corporation of Maryland
Filed Aug. 4, 1966, Ser. No. 570,245
4 Claims. (Cl. 336—73)



A transformer core has three legs on which are mounted, respectively, a primary winding, a secondary winding, and a shorted-turn secondary winding. A spark gap is connected in series across the secondary winding. Application of A.C. power to the primary winding produces recurring sparking at the spark gap.

3,388,363
ENCAPSULATED ELECTRICAL COIL AND METHOD OF MAKING

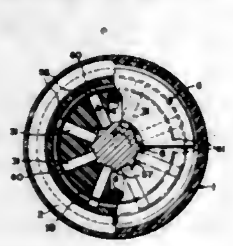
Robert R. Novick, Fort Wayne, Ind., assignor to Square D Company, Park Ridge, Ill., a corporation of Michigan
Filed Feb. 8, 1966, Ser. No. 525,943
3 Claims. (Cl. 336—96)



An insulative cord helically wound about the wall of an annular coil body holds a terminal plate and serves to space the coil body from a mold during encapsulation.

3,388,364
DEVICE HAVING A HELICAL ELEMENT AND AN ADJUSTABLE CONTACTOR THEREFOR

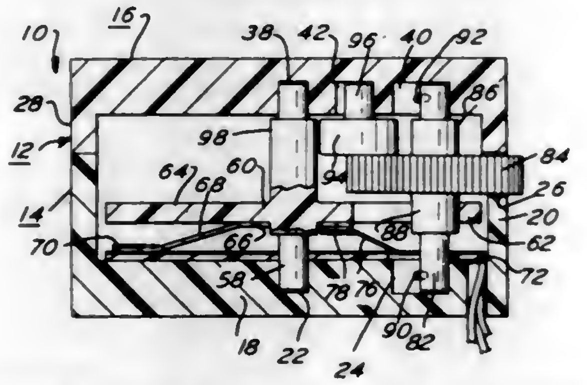
Anthony J. Lombardi, Wyckoff, N.J., assignor to International Telephone and Telegraph Corporation, Nutley, N.J.
Filed Sept. 12, 1966, Ser. No. 578,865
9 Claims. (Cl. 338—143)



A device is provided for use with a helical element comprising means which selectively effect contact engagement with turns of the helical element and which withhold contact engagement during adjustment relative to the helical element.

3,388,365
VARIABLE RESISTOR WITH VERNIER DRIVE

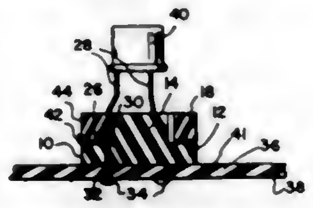
George W. Wood, Hammonton, N.J., assignor to IRC, Inc., Philadelphia, Pa.
Filed July 25, 1967, Ser. No. 655,949
8 Claims. (Cl. 338—162)



A variable resistor comprising a flat, rectangular housing, having one rounded corner and an enclosed cavity. A resistance element having an annular resistance path is mounted within the housing. A shaft is rotatably supported within the cavity for rotation about the axis of the annular resistance path. A contact is carried by the shaft and slidably engages the resistance path. A drive wheel is rotatably supported in the housing and extends through an opening in the rounded corner of the housing to permit rotation of the drive wheel. A first drive connection is provided between the drive wheel and the shaft whereby rotation of the drive wheel rotates the shaft only a fraction of the amount that the drive wheel rotates. A second drive connection is provided between the drive wheel and the shaft whereby rotation of the drive wheel rotates the shaft substantially the same amount. The drive wheel is movable between a position in which the first drive connection is operable and a position in which the second drive connection is operable. This provides a vernier drive in which the second drive connection provides rough adjustments of the variable resistor and the first drive connection provides fine adjustments.

3,388,366
ELECTRONIC COMPONENT CONNECTOR

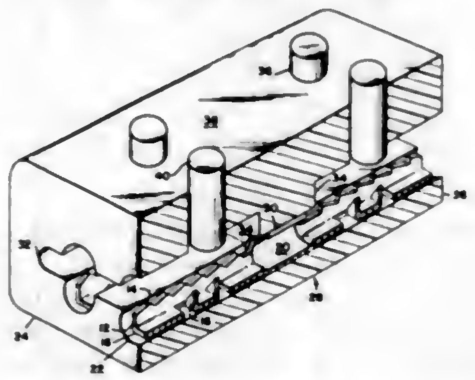
Glenn R. Mitchell, 1830 N. Country Club Drive, Mesa, Ariz. 85201
Filed Jan. 21, 1966, Ser. No. 522,096
11 Claims. (Cl. 339—17)



An electronic component connector having a collar provided with a bore open from end to end and adapted to surround a group of conductors extending from an electronic component, and adapted to resiliently clamp said conductors about a projection of a base member which may be permanently coupled to a circuit board or other circuitry, said projection having contacts with which said collar is adapted to force said conductors of said component into firm engagement.

3,388,367
ELECTRICAL CONNECTOR FOR EITHER FLAT OR ROUND CONDUCTORS

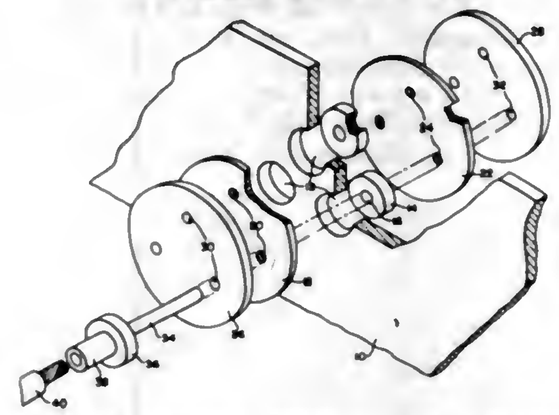
Albert C. Brown, Corona, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed June 20, 1966, Ser. No. 558,878
6 Claims. (Cl. 339—32)



In the disclosed electrical connector, a connector block has an elongated slot and at least one contact chamber which extends through the major cross-section of the connector block and extends across the slot. Within the chamber is a U-shaped contact element, the sides of which have one set of teeth, the bottom portion having another set. A pressure pin forces an insulated electrical conductor placed within the slot onto one of the sets of teeth such that the teeth pierce the insulation of the electrical conductor and make an electrically conductive contact.

3,388,368
ELECTRICAL TERMINAL ASSEMBLY AND METHOD OF MAKING SAME

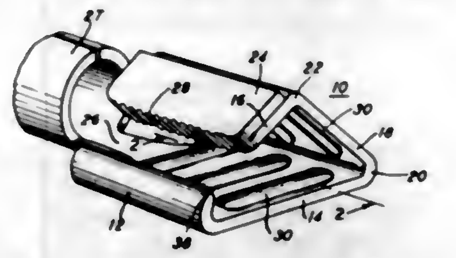
Rudolph S. Sauber, Greenville, Mich., assignor to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed June 9, 1967, Ser. No. 644,949
5 Claims. (Cl. 339—94)



An electrical terminal assembly for conducting electricity through a metallic wall of a hermetically sealed compressor in electrically insulated relation thereto, the assembly being formed of selected parts of uncured plastic assembled with conducting pins and other finished parts to the wall opening, and then cured in place so that the entire assembly is bonded together and hermetically seals the wall opening with the pins being held in electrically insulated relation to the wall.

3,388,369
ELECTRICAL CONNECTOR FOR SHEET CONDUCTORS

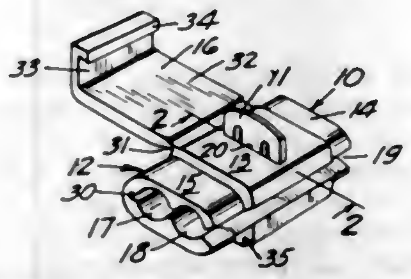
Janis J. Zalmans, Newark, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Mar. 18, 1966, Ser. No. 535,401
10 Claims. (Cl. 339—95)



A soft metal strip bent into a triangular shape has a gap in one arm. One portion of the arm at the gap is folded back toward its angle. A first metal sheet when placed into the gap is held by squeezing the beforementioned angle toward its opposing side till the arms adjacent the angle perform toggle action. A second metal sheet is held by the folded-back portion.

3,388,370
SOLDERLESS CONNECTOR FOR INSULATED WIRES

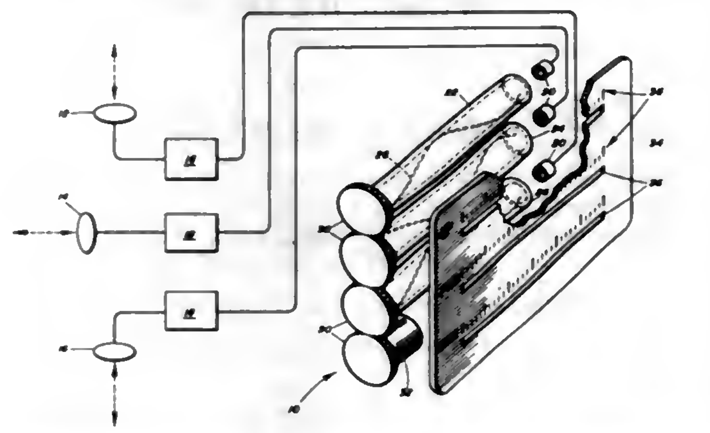
Robert A. Elm, St. Paul, Minn., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
Filed Apr. 14, 1966, Ser. No. 542,514
7 Claims. (Cl. 339—98)



A solderless wire-connector contains a slotted resilient metal connector plate slidably retained in a grooved insulating body having a folding self-locking cover unitary therewith.

3,388,371
SONIC ECHO SYSTEM

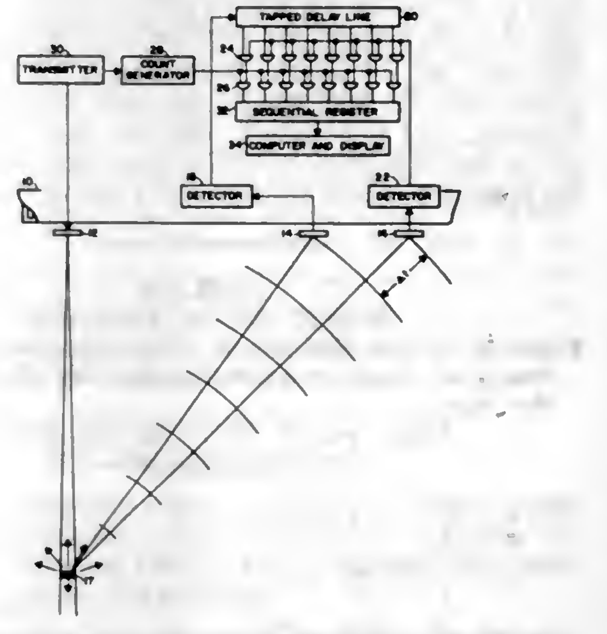
William B. McLean, China Lake, Calif., assignor to Walter G. Finch, Baltimore, Md.
Filed May 13, 1966, Ser. No. 549,987
2 Claims. (Cl. 340—3)



A plurality of electroacoustic transducers coupled with separate amplifier pulsers propagate a common sonar pulse in different directions and detect the echo pulse from each direction; a lamp is responsive to each said pulse to illuminate a rotating light conducting cylinder corresponding to each lamp, with each cylinder having a one-turn helical groove along its length for transmitting the illumination outwardly through a calibrated viewing slot in a display panel containing the viewing slot corresponding to each said cylinder.

3,388,372
DETERMINATION OF OCEAN SOUND VELOCITY PROFILES

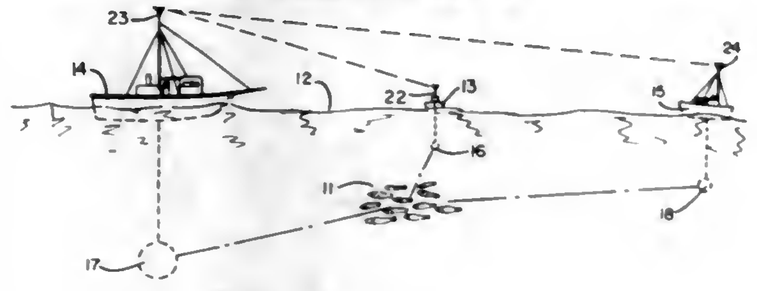
Gerhard H. De Witz, Glendale, Calif., assignor to General Precision, Inc., a corporation of Delaware
Filed May 22, 1967, Ser. No. 640,222
9 Claims. (Cl. 340—3)

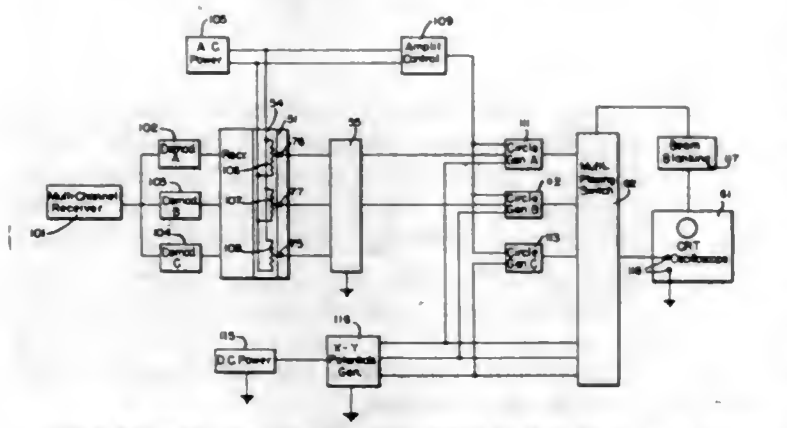


A method for the dynamic and continuous determination of sound velocities at various ocean depths by transmitting in a narrow beam sound pulses and, through reception with spaced receiving hydrophones, measure by triangulation the total sound transmit time of the transmitted pulse as it penetrates through, and is scattered by sound scatterers, such as small marine life, gasses, temperature and salinity discontinuities, and other types of acoustic obstacles which are present in all sea water and which appear to the receiver as the source of the sound pulses.

3,388,373
SEA-LIFE LOCATOR

Michael J. Prebish, Adelphi, Md., assignor to General Precision, Inc., Binghamton, N.Y., a corporation of Delaware
Continuation of application Ser. No. 514,525, Dec. 17, 1965. This application July 24, 1967, Ser. No. 655,673
8 Claims. (Cl. 340—6)

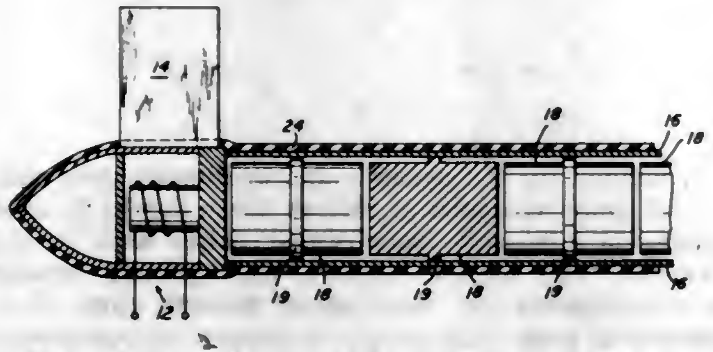




The location of underwater sounds has been a problem whose solution is sought by many individuals and groups. The present system uses a plurality of spaced underwater sound receivers coupled with means for transmitting the received sound to a single reception point. In the past, this information was used to manually plot the location of the sound. In the present system, the differences in the times of reception of the same sound by the separate receivers are converted into electrical voltages which are used to determine the size of circles traced by the cathode ray of a CRT about the relative locations on the face of the CRT of the sound receivers. The circles are then simultaneously enlarged by the same amounts until they intersect. The intersection indicates the relative location of the sound source. Potentiometers are used to generate the potentials which determine the size of the circles.

3,388,374
SONIC BEAM FORMER

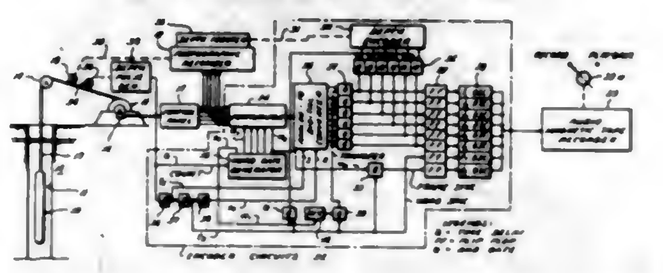
Frank R. Abbott, San Diego, Calif., assignor to the United States of America as represented by the Secretary of the Navy
Filed Jan. 25, 1967, Ser. No. 612,294
2 Claims. (Cl. 340—12)



The exterior of an end-fired beam-forming pipe is streamlined and smooth. The interior of the tube carries weights for adjusting the velocity of propagation of compressional waves in the wall of the tube to the optimum value for effective beam forming.

3,388,375
MAGNETIC TAPE RECORDING METHODS AND APPARATUS FOR WELL LOGGING

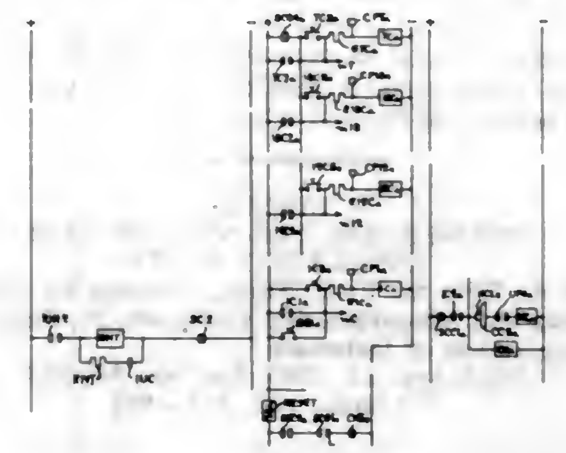
William J. Sloughter, Houston, Tex., assignor, by mesne assignments, to Schlumberger Technology Corporation, Houston, Tex., a corporation of Texas
Filed Oct. 26, 1965, Ser. No. 505,283
11 Claims. (Cl. 340—18)



This disclosure pertains to methods and apparatus for converting data signals to coded audio signals representative thereof and recording the audio signals on magnetic tape. Thereafter, the audio signals are reproduced and transmitted by suitable means, as a telephone line, to a distant point where the coded audio signals are decoded to reproduce the original data. More particularly, a plurality of well logging signals are digitized on a time sharing basis and audio signals having different frequencies are generated in accordance with the presence or absence of bits in the various bit positions of the digital signals. The digitizing operation is controlled by the movement of the well logging instrument through the borehole and suitable bit positions having audio signals of given frequencies are utilized for synchronization signals. When the magnetic tape is played back for transmission of the audio signals to the distant point, the synchronization data is utilized to control the recorder movement at the distant point.

3,388,376
SECURITY CONTROL OF AUTOMATIC ELEVATOR CARS

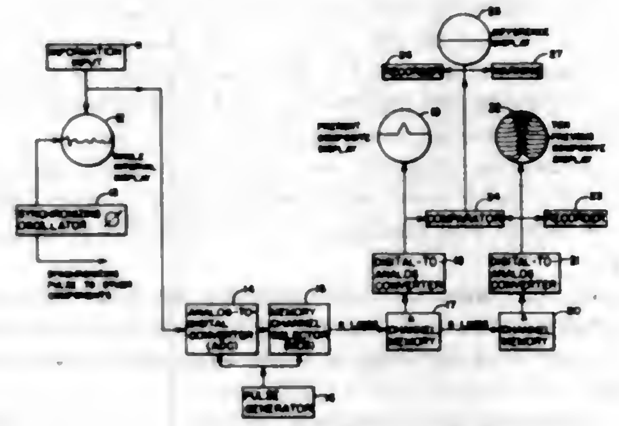
John E. Magee, Greenburgh, N.Y.
(191 Forest Blvd., Ardsley, N.Y. 10502)
Filed Apr. 26, 1965, Ser. No. 450,791
13 Claims. (Cl. 340—20)



To prevent unauthorized use, elevator cars are dispatched from a landing, such as the dispatching landing, under control of a plurality of passenger operable switches, a plurality of which must be operated in coded combinations to dispatch the car to the desired landing. Landing call registration devices function normally, and in the event that the switches are not operated properly in a car, an alarm may sound, the car may be forced to travel to a landing where a landing call is registered, or another car may be dispatched to answer the landing call.

3,388,377
METHOD AND APPARATUS FOR DIGITAL DATA PROCESSING

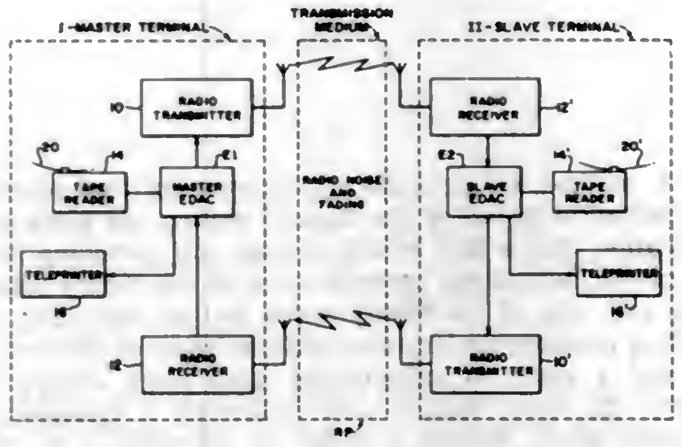
Theodore Robert Folsom and Richard A. Cramer, La Jolla, Calif., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Apr. 16, 1964, Ser. No. 360,466
1 Claim. (Cl. 340—146.1)



A signal processing system for recovering repetitive signals from noise. System synchronized to divide signal interval into many segments, each of which is associated with a storage device that is sequentially connected into the system. Signal segments are digitalized by converter and predetermined number of digitalized segments are summed in each storage device. Storage devices are scanned and contents displayed in analog form. Provisions are also included to display change between present display and prior displays.

3,388,378
ERROR DETECTION AND CORRECTION APPARATUS FOR DUPLEX COMMUNICATION SYSTEM

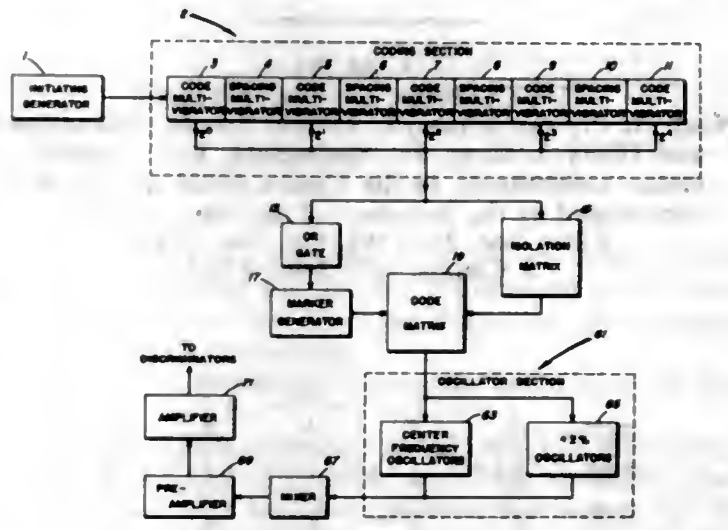
Robert Steeneck, New York, and John R. Cowan, Brooklyn, N.Y., assignors to Western Union Telegraph Company, New York, N.Y., a corporation of New York
Filed Sept. 22, 1964, Ser. No. 398,161
6 Claims. (Cl. 340—146.1)



In an error detection and correction apparatus successive blocks of signal data are generated at a transmission terminal and transmitted to a receiving terminal. Each block consists of information signal bits, check signal bits and accept-reject signal bits. At the receiving terminal other signal blocks are generated each consisting of another check signal, information signals and an accept-reject signal. The other check signal is transmitted back to the transmission terminal. If an error occurred in transmission of the signal block, the transmission terminal introduces an error into the check signal bits of the next block to prevent recording of the next block and to permit retransmission and recording of the preceding block until the block is correctly received and recorded.

3,388,379
TRACE IDENTIFIER

Arthur Simon, Silver Spring, and Frederick E. Shirk, Baltimore, Md., and John C. Biagioli, Phoenixville, Pa., assignors to the United States of America as represented by the Secretary of the Navy
Filed Mar. 24, 1964, Ser. No. 354,489
19 Claims. (Cl. 340—147)

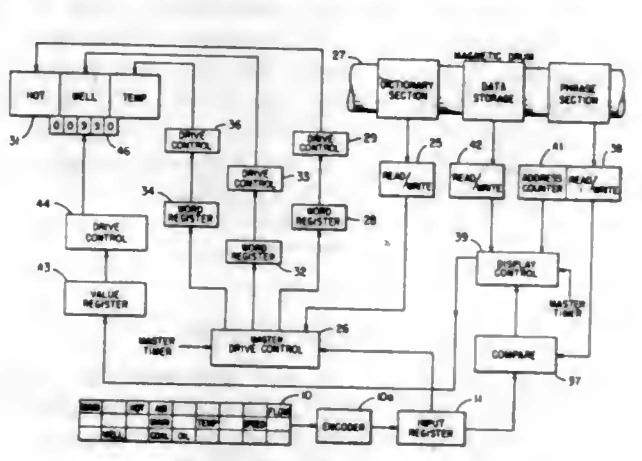


In a multi-channel FM signal processing unit, a trace identifier for placing channel numbers, in binary coded form, on oscillograph records obtained when calibrating the plurality of channels. First, a series of galvanometers, equal in number to the number of channels, are calibrated by connecting an equal number of known-frequency calibrating oscillators into the circuit of the signal processing unit. The trace identifier, which issues binary coded frequency modulated identifying numbers to each of the respective channels, is then switched into the circuit. The result is that each channel, which corresponds to a different center frequency, is easily recognized by means of its associated binary identifying number.

3,388,380
SYSTEM FOR DISPLAY OF A WORD DESCRIPTION OF PARAMETERS AND VALUES THEREOF IN RESPONSE TO AN INPUT OF A WORD DESCRIPTION OF THE PARAMETER

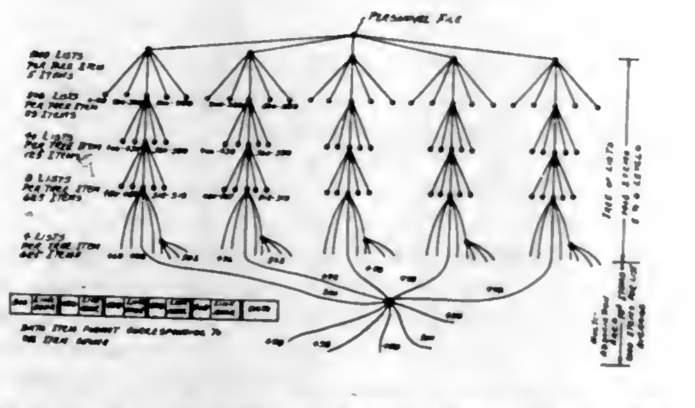
Bertram D. Coffin, Jr., Mentor, and John V. Werme, Painesville, Ohio, assignors to Bailey Meter Company, a corporation of Delaware
Filed June 17, 1965, Ser. No. 464,796
7 Claims. (Cl. 340—147)

A data display system including a panel of pushbuttons representing numerous measured parameters. A selection of pushbuttons representing a particular parameter generates a code which identifies the parameter selected. The system responds to this code by simultaneously reading from two independent sections of a magnetic drum, a word description of the parameter and the instantaneous numerical value of the selected parameter. The word description of the selected parameter and the numerical value of this parameter are visually displayed for viewing by a system operator.



3,388,381
DATA PROCESSING MEANS

Noah S. Prywes, Cynwyd, Samuel Litwin, Philadelphia, and Harry J. Gray, Jr., Springfield, Pa., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Dec. 31, 1962, Ser. No. 248,825
5 Claims. (Cl. 340—172.5)



2. Automatic programming means, based on the interpretive mode, comprising

a plurality of new data inputs having data and associative words organized into items,

the associative words comprising a descriptor and blank spaces for the addresses,

such descriptors being in natural language,

said new data input including automatic means for the assignment of machine codes for the corresponding descriptors, and further including blanks where linking addresses are required,

a pseudo-language input of a plurality of programs defining new words,

each program having a plurality of instruction items and further including blanks where linking addresses are required,

selected programs being recursive,

a command-word and operand pseudo-language program input comprising a plurality of command words each accompanied by at least one operand,

the command words each being a word in the vocabulary of the pseudo-language and the names of operands each being words in the vocabulary of the descriptors,

tree growing programs having decoding means for translating a name into a storage location,

means for transmitting said new data input and said pseudo-language input to said tree growing programs,

automatic memory space assignment means including a synchronizer for providing linking addresses,

said space assignment means being fed by said tree growing program and further including means for inserting addresses in such blanks,

an executive program coupled to said command word and operand pseudo-language input by means for selecting sentences sequentially from said program,

said executive program including means for separating the command from the operand names, means for initiating the retrieval and execution of a program corresponding to the command, and means for inserting the names of the operands in the program, and

an associative memory fed by said automatic memory space assignment means and said executive program, and in turn feeding said executive program,

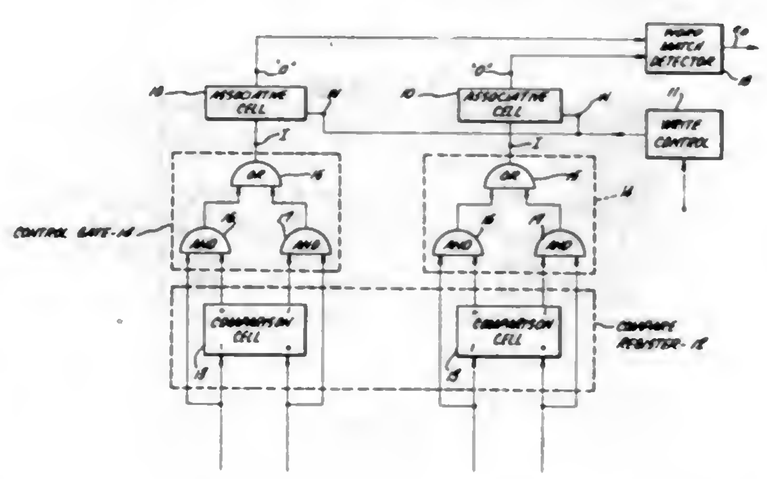
said associative memory comprising at least one data tree coupled to said automatic memory space assignment means and feeding at least one multi-association area,

at least one program tree coupled to said automatic memory space assignment means and said executive program and feeding at least one multi-association area,

said last-named multi-association area being coupled to said executive program.

3,388,382
MEMORY SYSTEM

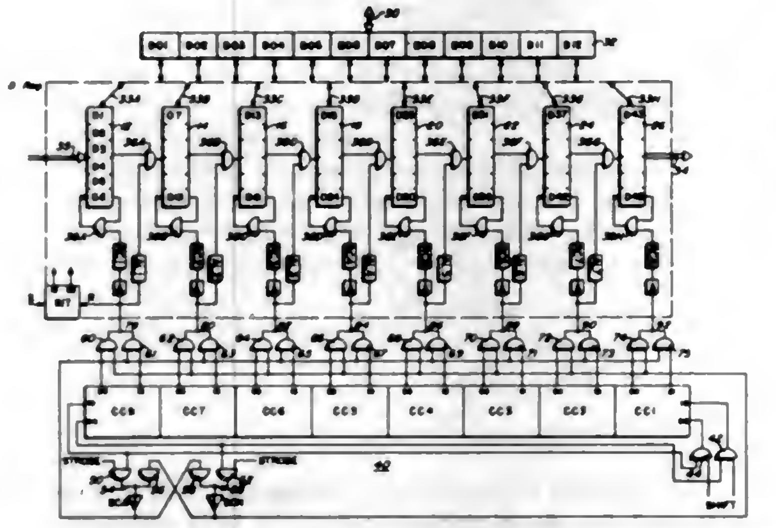
Edwin S. Lee III, West Covina, Calif., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed Dec. 13, 1963, Ser. No. 330,336
11 Claims. (Cl. 340—172.5)



1. A method of electronically comparing two pieces of information including the steps of writing one piece of information into a first binary storage cell providing binary output indications corresponding to the binary state of the cell, one of the binary states further indicating a matching relationship between said one piece of information and a piece of information undergoing comparison and the other binary state indicating a mismatching relationship, writing a piece of information to be compared into a second binary storage cell, and changing the binary state of the first cell only when the state of the second cell is changed whereby the indicated state of the first cell after the latter step is indicative of a match or mismatch between the two pieces of information undergoing comparison.

3,388,383
INFORMATION HANDLING APPARATUS

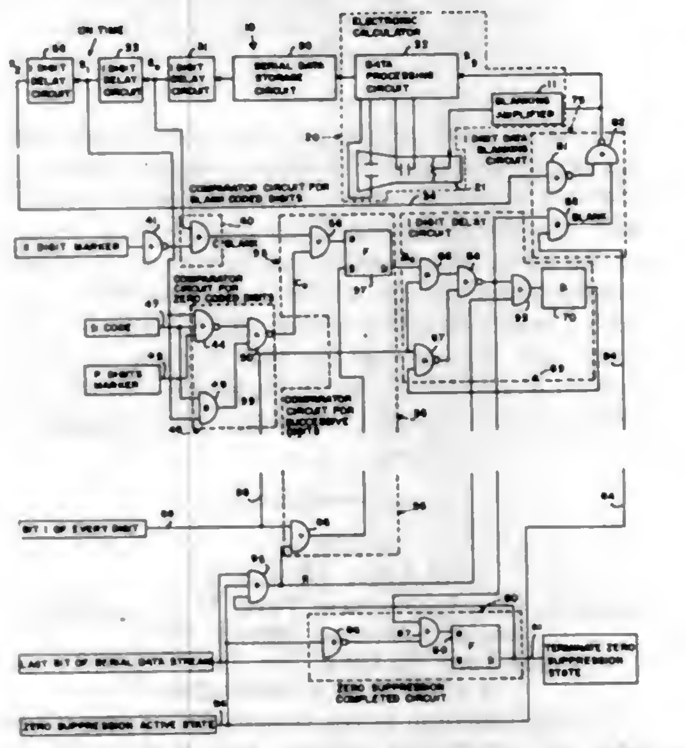
Prem Shivdasani, Newton, and David D. De Voy, Dedham, Mass., assignors to Honeywell Inc., Minneapolis, Minn., a corporation of Delaware
Filed July 13, 1965, Ser. No. 471,671
9 Claims. (Cl. 340—172.5)



An asynchronous transfer apparatus comprising a plurality of multistage register banks, each stage of which is provided with recirculation and transfer logic, and having control means including a novel shift register operatively connected thereto whereby information may be transferred essentially simultaneously from the respective stages of any particular register bank to the output of the transfer apparatus.

3,388,384
ZERO SUPPRESSION CIRCUIT

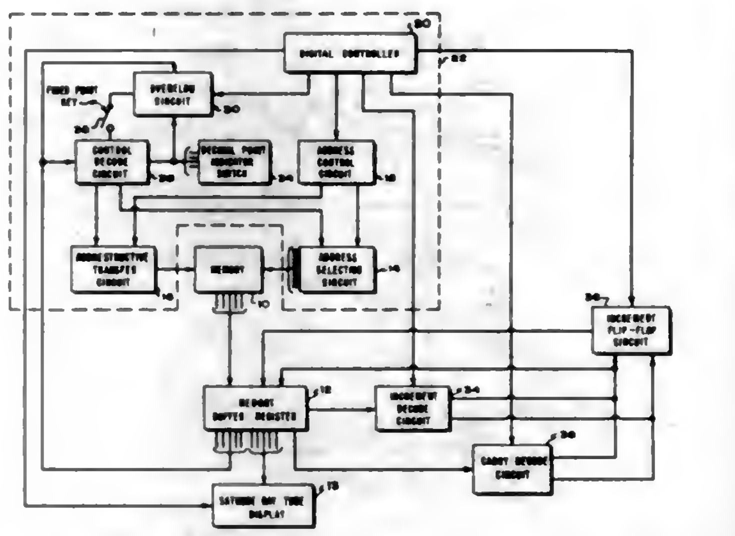
Howard Z. Bogert, Cupertino, Alan E. Pound, Sunnyvale, and George E. Avery, Saratoga, Calif., assignors to General Micro-Electronics Inc., Santa Clara, Calif., a corporation of Delaware
Filed Mar. 8, 1966, Ser. No. 532,659
15 Claims. (Cl. 340—172.5)


ON TIME
DIGIT DELAY CIRCUIT
DIGIT DELAY CIRCUIT
DIGIT DELAY CIRCUIT
SERIAL DATA STORAGE CIRCUIT
ELECTRONIC CALCULATOR
DATA PROCESSING CIRCUIT
BLANKING AMPLIFIER
BLANK
ZERO SUPPRESSION COMPLETED CIRCUIT
TERMINATE ZERO SUPPRESSION STATE
ZERO SUPPRESSION ACTIVE STATE
LAST BIT OF SERIAL DATA STREAM
BIT 1 OF EVERY DIGIT

1. A character suppression circuit for a calculator comprising means for advancing a data word with a coded signal representing a more significant character adjacent to a coded signal representing a less significant character, means for examining the coded signal representing the more significant character, means for examining the coded signal representing the less significant character adjacent to the more significant character, and means responsive to the examination of the coded signal representing the more significant character and the coded signal representing the less significant character adjacent to the more significant character for blanking the coded signal representing the less significant character.

3,388,385
NONDESTRUCTIVE ROUND-OFF DISPLAY CIRCUIT

Joseph A. Lukes, Palo Alto, Calif., assignor to Hewlett-Packard Company, Palo Alto, Calif., a corporation of California
Filed May 19, 1966, Ser. No. 551,461
7 Claims. (Cl. 340—172.5)



1. A circuit for processing a stored number without altering it to display the number rounded off at the least significant digit to be displayed following the decimal point, said circuit comprising:

first memory means for storing the number to be displayed;

processing means connected to said first memory means for successively processing each digit of the number from one digit less than the least significant digit to be displayed to the most significant digit to be displayed without altering the number stored in said first memory means and for incrementing said least significant digit by one only when the value of said one digit is greater than a selected value; and

display means connected to said processing means for displaying the number rounded off at said least significant digit following the decimal point.

3,388,386
TUNNEL DIODE MEMORY SYSTEM

Alan R. Deutermann, Philadelphia, Pa., assignor to Philco-Ford Corporation, a corporation of Delaware
Filed Oct. 22, 1965, Ser. No. 501,822
16 Claims. (Cl. 340—173)

12. A memory system comprising in combination:

(a) a matrix comprising *n* groups of *m* memory cells each, *n* and *m* being integers greater than one, each cell having first, second, and third terminals, one terminal of a resistor connected to said first terminal, one terminal of a tunnel diode connected to said second terminal, and one terminal of a conventional diode connected to said third terminal, the other terminals of said resistor, tunnel diode, and conventional diode being connected to a common junction,

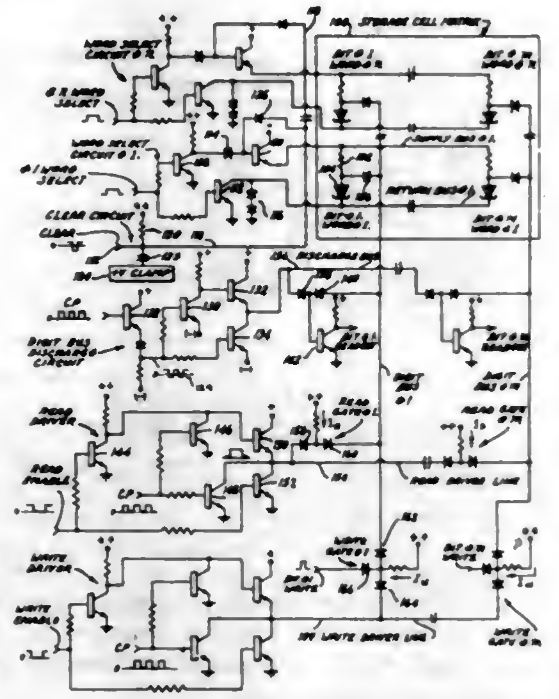
(b) *n* first busses, each connected to the first terminals of the cells in a group,

(c) *n* second busses, each connected to the second terminals of the cells in a group,

(d) *m* third busses, each connected to the third terminals of corresponding cells in each of the *n* groups,

(e) *n* means, each connected to the first and second busses of a group of cells, for supplying first and second bias voltages to said first and second busses, respectively, the difference between said first and second voltages being such as to allow each of said cells to assume two stable states, each of said means also arranged to selectively change said first and second voltages by an equal amount, whereby the voltages at the common junctions of the cells of a word is changed from a first value to a second value,

(f) means, associated with each of said *n* means, for selectively removing the first voltage on the first bus of a group of cells whenever the first and second voltages of a group of cells are changed by said amount,

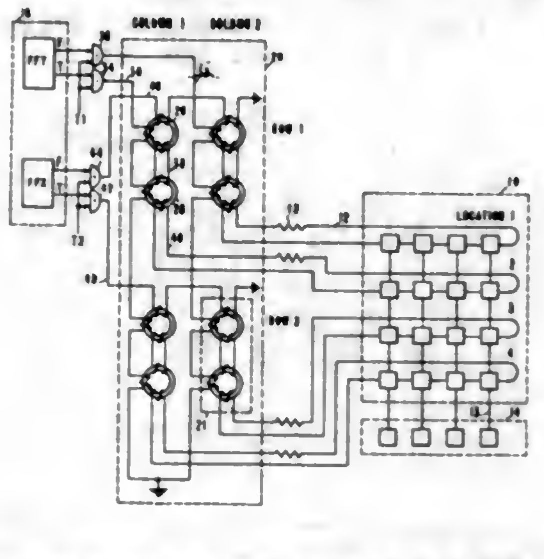


(g) means for selectively supplying a write signal to each of said third busses, the potential of said write signal with respect to the common junction of a cell lying between said first and second values, said write signal being capable of supplying a current sufficient to drive the tunnel diode of a cell to its high voltage state, and

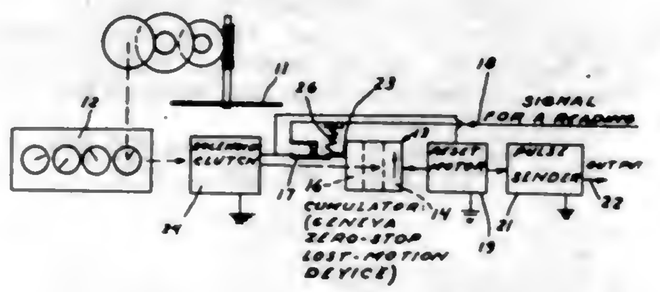
(h) means for selectively supplying a read signal to all of said third busses, the potential of said read signal with respect to the common junction of a cell lying between said first and second values, said read signal arranged to supply a current insufficient to change the state of the tunnel diode of a cell.

3,388,387
DRIVE CIRCUIT UTILIZING TWO CORES
James E. Webb, Administrator of the National Aeronautics and Space Administration, with respect to an invention of Lawrence J. Zottarelli, La Canada, Calif.
Filed July 7, 1964, Ser. No. 380,965
6 Claims. (Cl. 340—174)

1. In combination with a memory comprised of a plurality of storage elements arranged to define a plurality of locations, each location having a drive line coupled to the elements thereof, decoding apparatus for applying a unipolar pulse to a selected drive line, said apparatus comprising a plurality of magnetic core pairs, each pair including first and second magnetic cores; a plurality of sense windings, each sense winding coupling a different one of said second magnetic cores to a different one of said drive lines; first means for concurrently applying signals to the first and second cores of selected pairs for switching the first core thereof to a second state and for developing in the second core thereof a magnetic field oriented in a first direction; second means for applying a signal to selected pairs for switching the first core thereof to a first state; winding means coupling said first and second cores of each of said pairs for developing in said second cores a magnetic field oriented in a second direction in response to the first core being switched to a second state and for developing a magnetic field oriented in a first direction in response to said first core being switched to a first state.



3,388,388
CUMULATIVE DIGITAL PULSE REMOTE METER READING
Robert A. Brown, Lafayette, Ind., assignor to Duncan Electric Company, Inc., a corporation of Indiana
Filed Oct. 24, 1965, Ser. No. 505,073
12 Claims. (Cl. 340—203)



1. A remote meter reading system including a lost motion cumulator having an advancing element and a reference element with lost motion between them limited in the direction of relative approach to one another, means for driving the advancing element in a direction to accumulate lost motion in proportion to the movement of a drive element of a meter, a reset motor connected to drive the cumulator for closing out its lost motion, and a pulse sender driven correlatedly to the reset drive of the cumulator for sending a number of pulses proportional to the amount of the reset drive.

3,388,389
ALARM SYSTEMS
Lance L. Henriques, New York, N.Y., assignor to Davis Foreman, Bronx, N.Y.
Filed June 9, 1964, Ser. No. 373,728
3 Claims. (Cl. 340—216)

1. A carrier-current alarm system for cooperation with a source of alternating current and with an electrical-power transmission line, said system comprising:

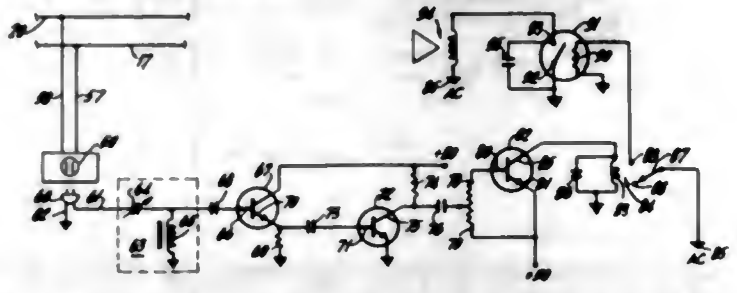
at least one lamp connected in circuit with said source and having a normally illuminated state casting a beam interruptable to initiate an alarm;

a rectifying circuit having an input connected in series with said lamp and said source and energizable by the latter, said rectifying circuit further having a direct-current output;

a solid-state controlled rectifier in series with said output of said rectifying circuit whereby burnout of said lamp renders said controlled rectifier nonconductive, said controlled rectifier having a gate, an anode and a cathode;

a photoelectric cell in the path of said beam having a relatively conductive state upon illumination thereby, said photoelectric cell being connected in series with said gate and between said gate and said anode whereby said gate is disconnected from said anode upon interruption of said beam to render said controlled rectifier conductive;

resetting-switch means connected across said anode and said cathode of said controlled rectifier for quenching same after impingment of said beam upon said photoelectric cell has been restored;



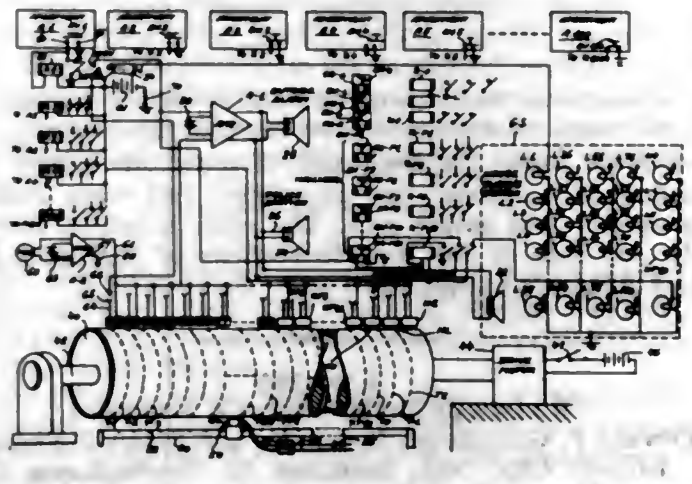
a carrier-current transmitter connected to said cathode of said controlled rectifier and energizeable when said controlled rectifier is conductive for generating a carrier-current alerting signal, said transmitter being coupled to said line for applying said signal thereto;

a carrier-current receiver responsive to said signal and coupled to said line at a location remote from said transmitter for detecting the transmission of said signal through said line;

signalling means operatively connected to said receiver and energizeable thereby in response to the receipt of said signal by said receiver; and

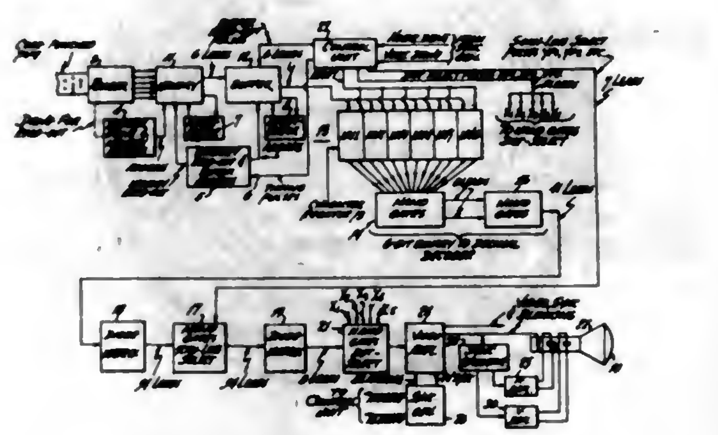
a time-delay circuit connected between said receiver and said signalling means for operating the latter only upon elapse of a predetermined time delay after receipt of said signal by said receiver, thereby excluding spurious operation of said signalling means.

3,388,390
ALARM SYSTEM HAVING RECORDED MESSAGES ON MAGNETIC DRUM
Lorenzo Ciaschi, 680 Eagle Ave., Bronx, N.Y. 10455
Filed Apr. 12, 1965, Ser. No. 447,440
2 Claims. (Cl. 340—293)



An electric emergency alarm system is disclosed for use in public places. Switches are strategically located and can be operated in an emergency. The switches are connected in circuit with a message reproducing a rotating magnetic drum having a multiplicity of tracks on which are prerecorded messages. When a switch is operated, one or more remotely located loudspeakers reproduce audible the appropriate message. Sound recording means including a microphone, amplifier and a movable erase head are provided for erasing recorded massages and recording new messages on selected tracks.

3,388,391
DIGITAL STORAGE AND GENERATION OF VIDEO SIGNALS
Robert J. Clark, Dorion, Quebec, Canada, assignor to Radio Corporation of America, a corporation of Delaware
Filed Apr. 7, 1965, Ser. No. 446,321
9 Claims. (Cl. 340—324)

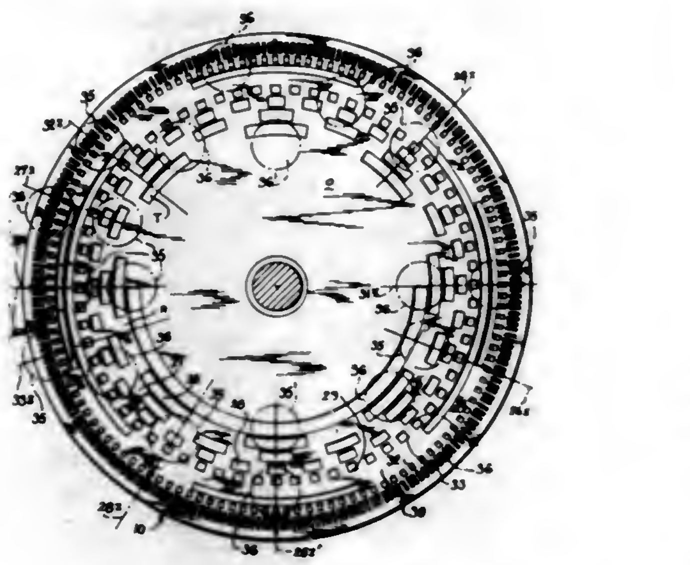


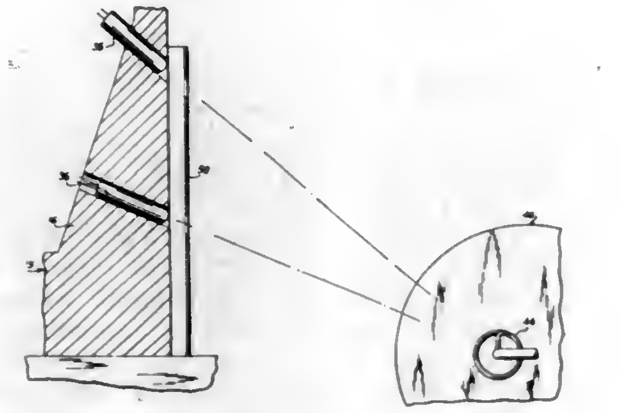
A display system is provided that displays on a display device character patterns that are stored in a digitally coded form in a memory. The display device may comprise a picture tube exhibiting a standard television scanline raster pattern. Each character pattern is composed of a plurality of scanlines and one scanline displays slices of a plurality of character patterns. The display system generates scanline pulses corresponding in duration to the scanlines in the raster as well as dot pulses corresponding to small divisions of each scanline. Various combinations of such scanline pulses and dot pulses are utilized to form all of the character patterns. To provide such a display, the digitally encoded character codes are first decoded to provide different character identifier pulses for each different character and having a duration of one character space on the display device. The character identifier pulses are then combined with scanline pulses to extract a set of scanlines for each character wherein identical dot sequences are grouped together. Such sets of signals are then combined with the dot pulses to apply these dot pulses to the display device in the proper scanlines.

3,388,392
OPTICAL ENCODER
John Fisher, Aurora, Ohio, assignor to The Warner & Swasey Company, Cleveland, Ohio, a corporation of Ohio
Continuation of abandoned application Ser. No. 56,590, Sept. 16, 1960. This application Aug. 24, 1964, Ser. No. 393,807
14 Claims. (Cl. 340—347)

1. A coding device for digitally indicating shaft position comprising a code wheel having a code thereon in the form of a plurality of concentric code zones each comprised of alternate transparent and opaque areas, said zones being displaced radially from each other and each zone extending circularly about the axis of said wheel, a plurality of reader units including a unit for each zone

disposed on one side of said wheel and positioned to receive light through the transparent areas of the corresponding zone as the areas rotate by the unit, said units each including a light-responsive element, a light source mounted on the other side of said wheel and disposed radially inwardly of said wheel from said reader units, a light blocking mask adjacent said wheel and blocking light traveling from said source to said reader units, said mask having a slit therein opposed to each reader unit and adjacent the corresponding zone to allow the passage of light from the light source through a transparent area of the zone when passing said slit to said light-responsive elements, said slits having areas proportioned such that the quantity of light passed by each slit when subjected to full illumination from said source through a transparent area of said code being substantially the same for all of said slits.





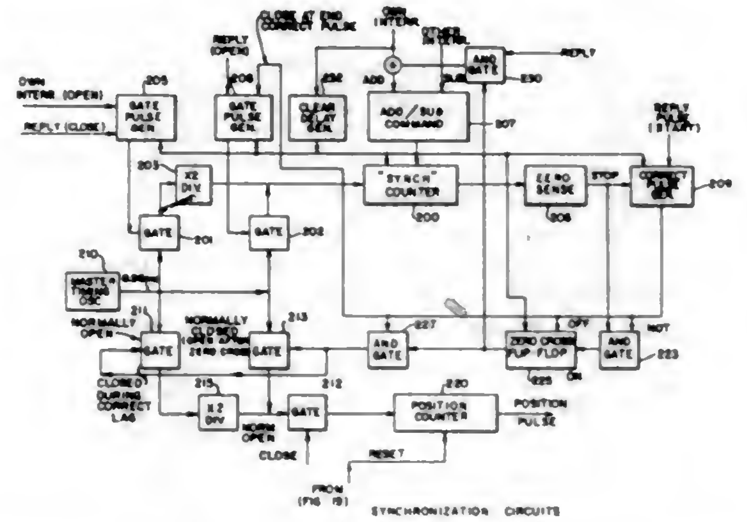
3,388,393
SYNCHRONIZED COMMUNICATIONS AND NAVIGATION SYSTEM

Walton Graham, Roslyn, and Stephen Porton, Wyandanch, N.Y., assignors to Control Data Corporation, Minneapolis, Minn., a corporation of Minnesota

Continuation-in-part of application Ser. No. 565,779, July 18, 1966. This application Jan. 10, 1967, Ser. No. 608,402

6 Claims. (Cl. 343—7.5)

This invention relates to a system for providing range, bearing and/or altitude information for a plurality of stations with respect to each other in order to provide for navigation, collision avoidance and air traffic control capabilities wherein synchronized reference signals are produced at all stations by a semi-random comparison between stations and in which adjustment of reference signal clocks is by advance only.

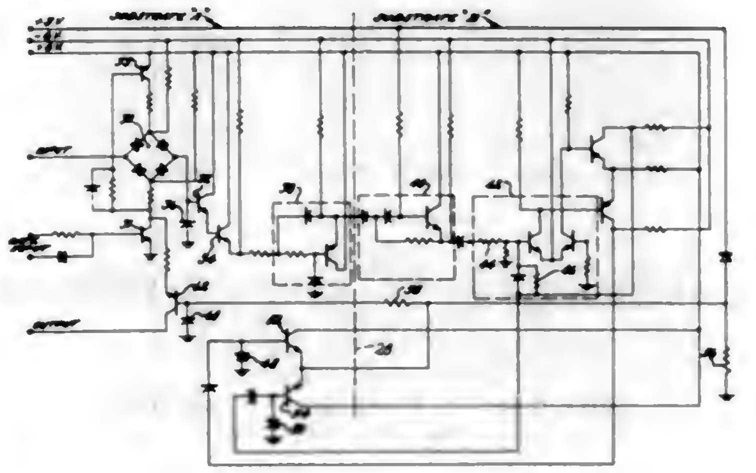


3,388,394
THIN FILM RANGE GATED FILTER CIRCUIT

William L. Cappadona, Commack, N.Y., assignor to the United States of America as represented by the Secretary of the Air Force

Filed Feb. 13, 1967, Ser. No. 616,442

1 Claim. (Cl. 343—7.7)



A microelectronic range gated filter circuit designed for a one to one translation to deposited thin film circuitry. One substrate forms the back side of a circuit module consisting of a boxcar, low-pass filter, full wave rectifier, integrator and output gate. The other substrate forming the top side of the module consists of high-pass filter and differential amplifier.

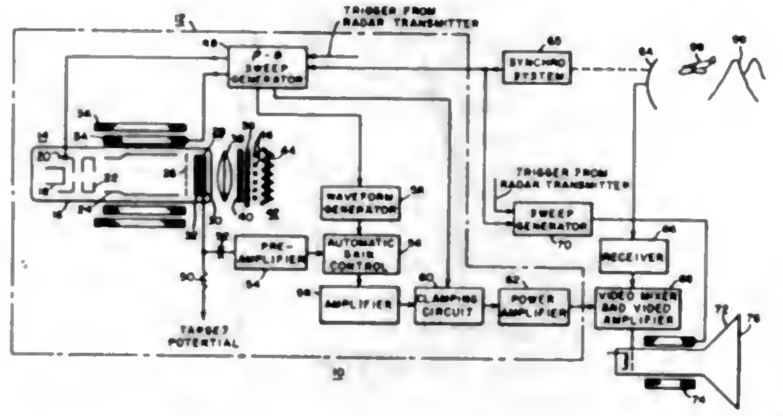
3,388,395
RADIATION SENSITIVE SYSTEM

Edward P. Gumphrey, Annapolis, and Murry J. Spangler, Ellicott City, Md., assignors to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania

Filed Jan. 31, 1967, Ser. No. 612,882

14 Claims. (Cl. 343—11)

This invention relates to a system for operating a radiation sensitive device such as a television camera tube to derive an output signal in a ρ, θ or PPI mode of operation. More specifically, a suitable waveform generator and AGC circuit are associated with the output signal of the television camera tube to compensate for variations in the output signal as a result of a variable angular velocity and for variations in the sweep repetition rate. This system has an important application in conjunction with radar systems where it is desired to superimpose the image of a map onto the display screen of the radar system.

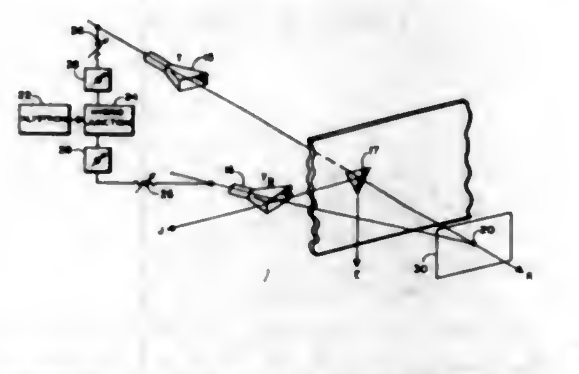


3,388,396
MICROWAVE HOLOGRAMS

Eugene L. Rope, El Cajon, and Gus P. Tricoles, San Diego, Calif., assignors to General Dynamics Corporation, a corporation of Delaware

Filed Oct. 17, 1966, Ser. No. 587,033

12 Claims. (Cl. 343—17)



A microwave hologram and method of forming same is described. The hologram includes a plurality of scatterers disposed at discrete locations upon a microwave transparent supporting member. Each of the scatterers are so sized and located upon the supporting member that when it is illuminated by a microwave beam an interference pattern develops which corresponds to that when the object alone is illuminated by the beam.

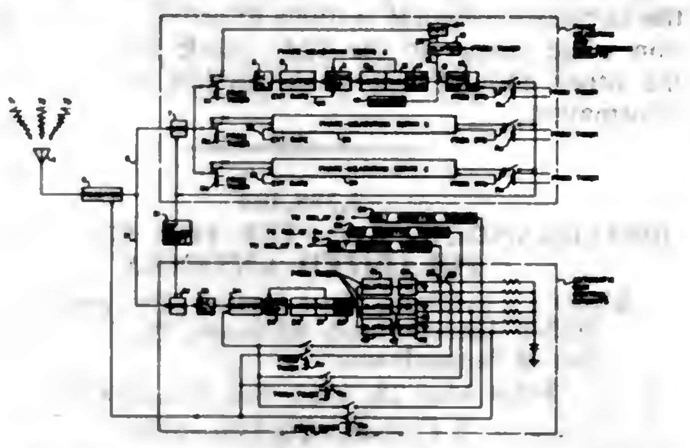
3,388,397
RADIO NAVIGATION RECEIVING SYSTEM UTILIZING AGC FOR SWITCHING FROM PHASE-MEASURING MODE OF OPERATION TO A DEAD RECKONING MODE

Alexander F. Thornhill, Accokeek, Md., and Melvin F. Williams, Washington, D.C., assignors to the United States of America as represented by the Secretary of the Navy

Filed Sept. 28, 1966, Ser. No. 583,120

15 Claims. (Cl. 343—105)

An airborne navigation receiver apparatus which utilizes phase-measuring servos and automatic gain control circuits so that when the incoming navigation signals are weak or are not transmitting for short time periods the AGC circuits enable the phase-measuring servos to go into a dead-reckoning mode of operation until the navigation signals are stronger and the phase-measuring servos are activated by these signals.

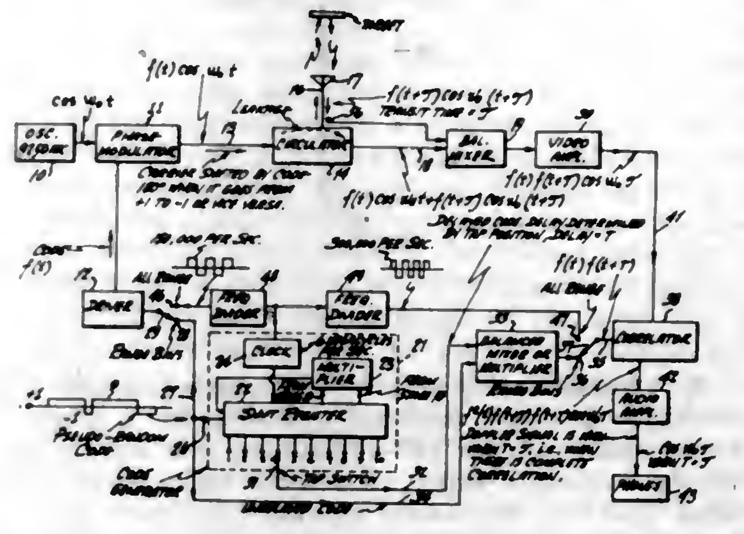


3,388,398
DOPPLER TYPE CORRELATION SYSTEM

Dale L. Kratzer, Trevose, Pa., and Edward D. Carfolite, Haddon Heights, N.J., assignors to Radio Corporation of America, a corporation of Delaware

Filed Oct. 24, 1966, Ser. No. 588,778

4 Claims. (Cl. 343—17.5)



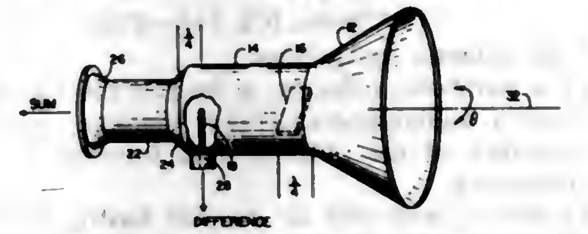
A Doppler radar system wherein a square wave code is used to phase modulate a continuous wave carrier signal which upon reflection from a target is correlated with a portion of the phase modulated carrier prior to transmission to derive a Doppler signal representative of a moving target. After the target is detected, the target range is derived.

3,388,399
ANTENNA FEED FOR TWO COORDINATE TRACKING RADARS

James E. Lewis, Washington, D.C., assignor to the United States of America as represented by the Secretary of the Navy

Filed Mar. 25, 1965, Ser. No. 442,840

4 Claims. (Cl. 343—783)



An antenna feed having circular cross sections for use in a radar system supplying range and angle information. The device includes two circular waveguide sections which are individually dimensioned to propagate energy in different modes so as to yield sum and difference signals. Energy in the TE_{11} mode is coupled out of one of the circular waveguide sections to provide range information while energy in the TM_{01} mode is coupled out of the other circular waveguide section to provide angle information.

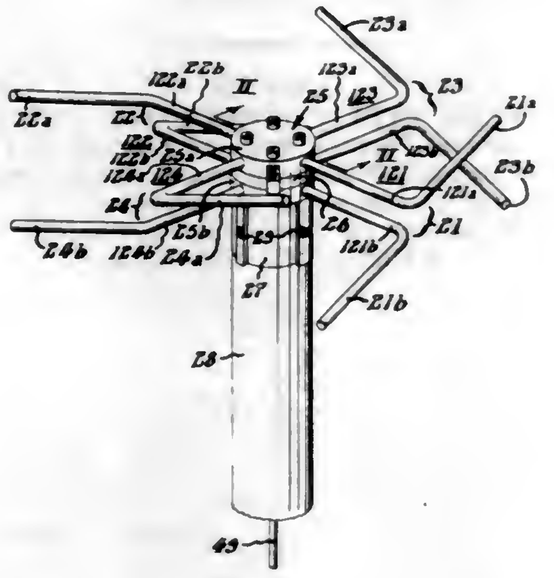
3,388,400

BROADBANDING ADAPTER FOR CIRCULARLY POLARIZED ANTENNA

Albert C. Veldhuis, West Chester, Pa., assignor to Trylon Incorporated, Elverson, Pa., a corporation of Pennsylvania

Filed May 28, 1965, Ser. No. 459,545

2 Claims. (Cl. 343—822)



1. A broadbanding adapter for modifying existing VHF circularly polarized antenna operating in a frequency range which includes 120 megacycles, said adapter comprising a straight length of coaxial cable having a coaxial open-end stub wound helically thereabout and connected thereto near one end, and connector means for interposing said straight length of coaxial cable and its helical coaxial open-end stub between the input receptacle of the antenna to be modified and the connector at the input end of the coaxial input cable, the length of said helical coaxial open-end stub being substantially .350 wavelength at 120 megacycles and its point of connection being substantially .124 wavelength from the antenna terminals.

3,388,401

PARABOLIC ANTENNA WITH LOW-LOSS FLEXIBLE RADOME

Walter F. Weir, Whitby, Ontario, Canada, assignor to Andrew Antenna Company Limited, Whitby, Ontario, Canada, a corporation of Canada

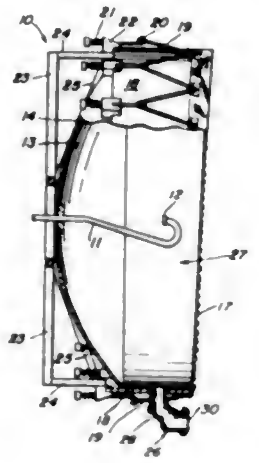
Filed June 30, 1965, Ser. No. 468,346

10 Claims. (Cl. 343—872)

1. An antenna comprising:

(a) a parabolic reflector, a feed at the focus thereof, and a radiation-transparent radome covering the aperture of the reflector and forming a protective enclosure,

(b) and at least one air conduit having its outer end facing in the direction to have the same wind exposure as the outer face of the radome and its inner end within the enclosure to substantially equalize the average pressure on the inside and outside of the radome,



(c) the radome consisting essentially of a thin weatherproof flexible elastic sheet.

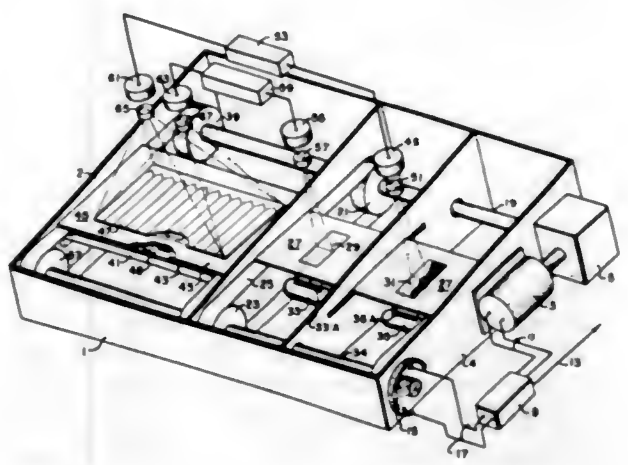
3,388,402

OPTICAL CORRELATION

Walter H. Glazier and Harland H. Heffring, Calgary, Alberta, Canada, assignors to Esso Production Research Company, a corporation of Delaware

Filed May 20, 1966, Ser. No. 551,572

5 Claims. (Cl. 346—1)



1. A method of optical convolution of a first optical function and a second variable function, comprising:

on a planar photosensitive recording means having a positive gamma characteristic for light of one wave length and a negative gamma characteristic for light of a second wave length, directing an image of a first function with first light rays of said one wave length, and second light rays of said second wave length; and

moving said image on said planar recording means and simultaneously varying the intensity of said first light rays in accordance with the sum of said second function and a bias function, and of said second light rays in accordance with said bias function.

3,388,403

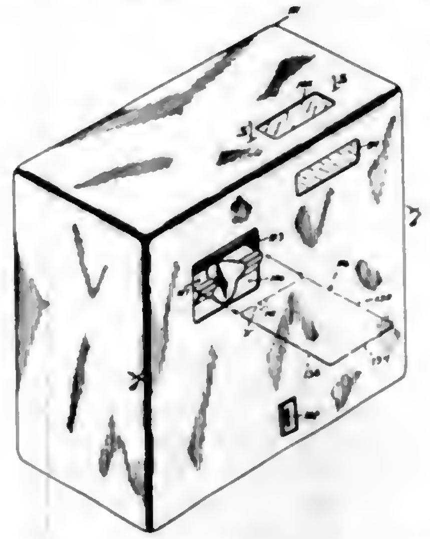
EMPLOYEE IDENTIFICATION CARD RECORDER

Carl K. Gieringer, Thomas J. Schinner, and Ernest B. Zimmer, Cincinnati, Ohio, assignors to The Cincinnati Time Recorder Company, Cincinnati, Ohio, a corporation of Ohio

Filed Nov. 10, 1966, Ser. No. 593,398

6 Claims. (Cl. 346—17)

An employee monitoring system is disclosed for providing, on a recording medium, permanent machine readable timed entries of the arrival and departure activities of a plurality of employees. The system includes a plurality of employee identification cards, each having embossed employee-identifying machine readable information thereon, and a recording unit responsive to insertion of a card therein for making a permanent record of the employee-identifying information and the time of card insertion. The recording unit includes a housing having entry viewing means and a card insertion slot, a time head which provides a periodically varying embossment of the current time in machine readable and humanly intelligible form, a card holder positioned adjacent the time head for receiving cards inserted into the slot, a platen for urging the record medium and embossments into imprinting relationship to produce an entry on the record medium of the employee-identifying information and the time of card insertion, and feed means for advancing the entry-bearing portion of the record medium to the viewing station to enable an employee inserting his card into the recording unit to view the entry made and thereby verify the time of card insertion.



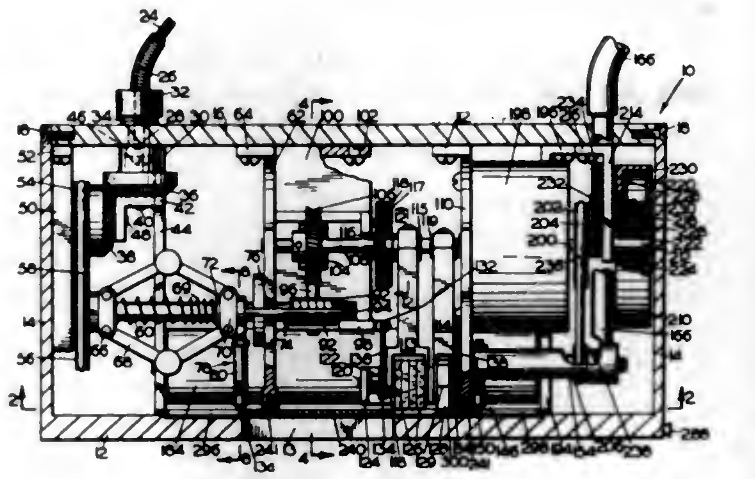
3,388,404

INFORMATION RECORDING DEVICE

Eugene S. Bush, deceased, late of Milwaukie, Oreg., by Winifred K. Bush, executrix, 6818 SE. Harmony Road, Milwaukie, Oreg.

Filed Aug. 16, 1966, Ser. No. 572,860

6 Claims. (Cl. 346—24)

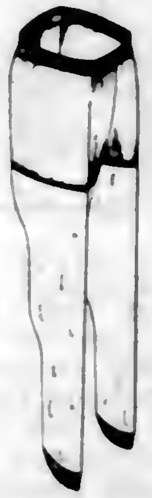


The recording device is primarily intended for recording the operation of vehicles on a tape. It includes a first stylus operated by a take-off from the speedometer cable for recording the speed on a graph appearing on one side of the tape moving at a constant speed in the device. The take-off from the speedometer cable also drives a first stamping head for applying mileage markings to the tape and a second stamping head which stamps fractional markings associated with the mileage markings. A second stylus is employed for recording engine performance markings on a second graph on the tape. The recording device is intended for use with a double layer of recording tape and has structure wherein after the data are printed on the tape the layers are separated from each other. One layer passes between drive rolls for pulling the tape assembly at the constant speed. This layer is deposited in one compartment in the device. The other layer comprises the layer that receives the markings and is deposited in a separate compartment. Knife means are employed to sever this latter layer from the supply of tape.

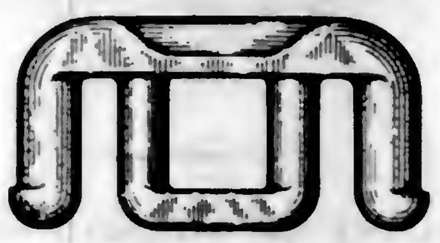
DESIGNS

JUNE 11, 1968

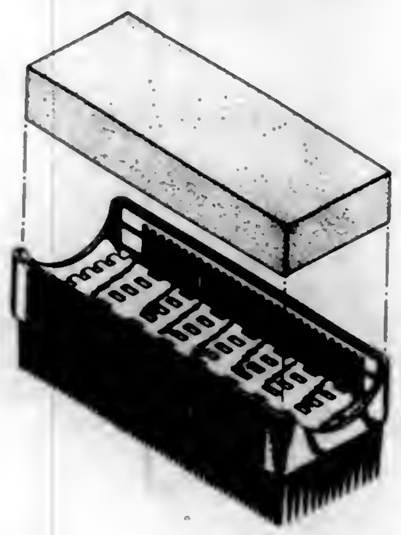
211,313
PANTY HOSE
Clyde A. Berry, Valdese, N.C., assignor to Pilot Research Corporation, Valdese, N.C., a corporation of North Carolina
Filed Mar. 27, 1967, Ser. No. 6,382
Term of patent 14 years
(Cl. D2—7)



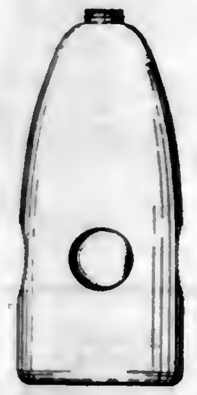
211,314
STRAP BUCKLE
John R. Beach, Elmhurst, Ill., assignor to Signode Corporation, a corporation of Delaware
Filed Aug. 4, 1967, Ser. No. 8,137
Term of patent 14 years
(Cl. D2—408)



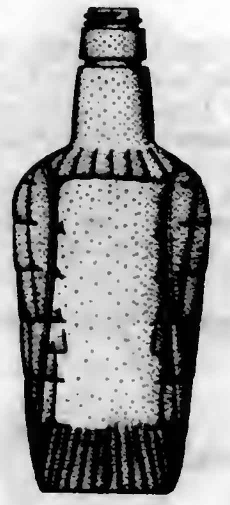
211,315
COMBINED BRUSH AND SPONGE
Jack W. Kaufman, 357 Frankel Blvd.,
Merrick, N.Y. 11566
Filed Sept. 14, 1967, Ser. No. 8,591
Term of patent 14 years
(Cl. D4—6)



211,316
BOTTLE OR THE LIKE
Gerhard Kustermann, Biesfeld uber Bergisch-Gladbach, Germany, assignor to Lever Brothers Company, New York, N.Y., a corporation of Maine
Filed Dec. 23, 1966, Ser. No. 5,165
Claims priority, application Great Britain June 30, 1966
Term of patent 14 years
(Cl. D9—19)

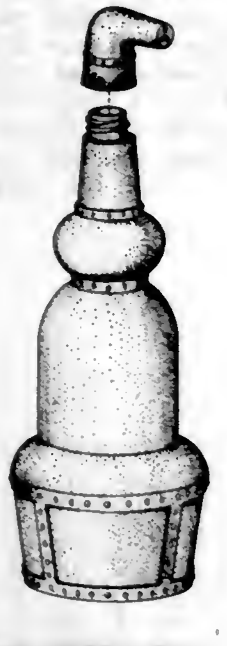


211,317
DECANTER
Budd S. Sheesley, New York, N.Y., assignor to Schenley Industries, Incorporated, New York, N.Y., a corporation of Delaware
Filed Feb. 16, 1967, Ser. No. 5,837
Term of patent 14 years
(Cl. D9—32)



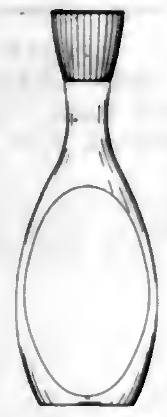
211,318
COMBINED BOTTLE AND CLOSURE

Bishop McLeod, Wantagh, N.Y., assignor to Schenley Industries, Incorporated, New York, N.Y., a corporation of Delaware
Filed Jan. 10, 1967, Ser. No. 5,375
Term of patent 14 years
(Cl. D9—83)



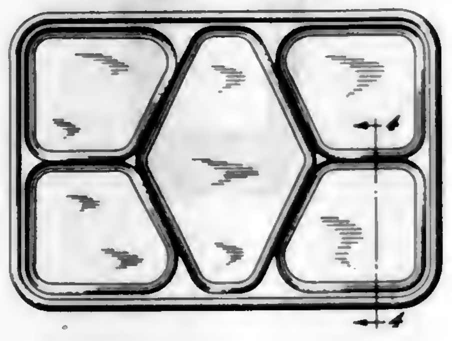
211,319
BOTTLE

Patrick R. Jeronimus, Park Forest, Ill., assignor to The Gillette Company, Boston, Mass., a corporation of Delaware
Filed Nov. 28, 1966, Ser. No. 4,834
Term of patent 14 years
(Cl. D9—138)



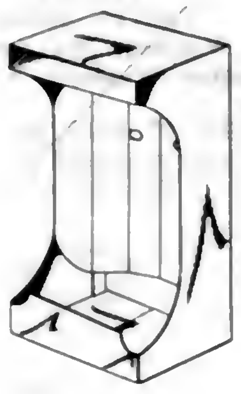
211,320
COMPARTMENTED TRAY

Ronald Alois Hanseter and Robert Perry Sigman, Neenah, and Bruce Homer Tynan, Appleton, Wis., assignors to American Can Company, New York, N.Y., a corporation of New Jersey
Filed Oct. 16, 1967, Ser. No. 8,998
Term of patent 14 years
(Cl. D9—185)



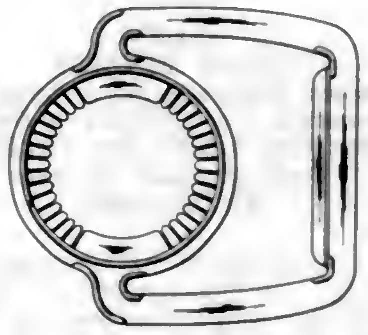
211,321
DISPLAY CARTON

Henry Ullmann, Northampton, England, assignor to The Mettoy Company Limited, London, England
Filed Feb. 27, 1967, Ser. No. 5,962
Term of patent 7 years
(Cl. D9—242)



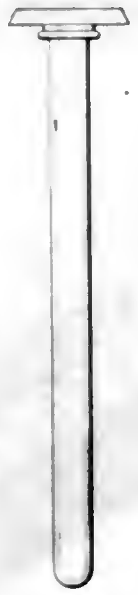
211,322
CARRYING HANDLE FOR A BOTTLE OR THE LIKE

Alfred V. Updegraff, Lakewood, and Lawrence A. Beyer, Shaker Heights, Ohio, assignors to Haynes Manufacturing Company, Cleveland, Ohio, a corporation of Ohio
Filed Dec. 29, 1966, Ser. No. 5,219
Term of patent 14 years
(Cl. D9—291)



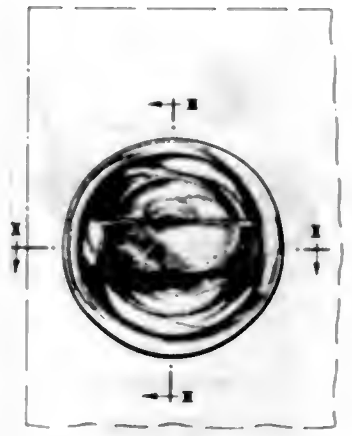
211,323
HANDLE FOR OVERHEAD DOOR

Charles T. Falk, Prairie Village, Kans., assignor to Hesse Carriage Company, Kansas City, Mo., a corporation of Missouri
Filed Apr. 27, 1967, Ser. No. 6,864
Term of patent 14 years
(Cl. D10—8)



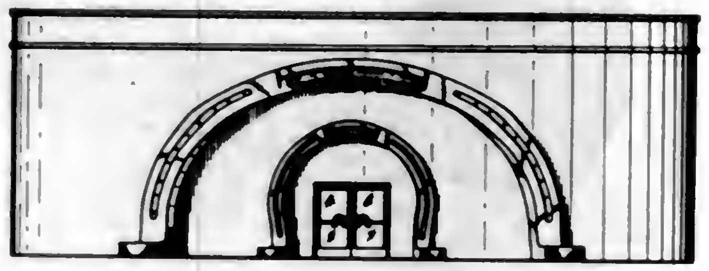
211,324
HANDLE

Albert S. Kirk, Broomall, Pa., assignor to Southco Incorporated, Lester, Pa., a corporation of Pennsylvania
Filed Dec. 4, 1967, Ser. No. 9,619
Term of patent 14 years
(Cl. D10—8)



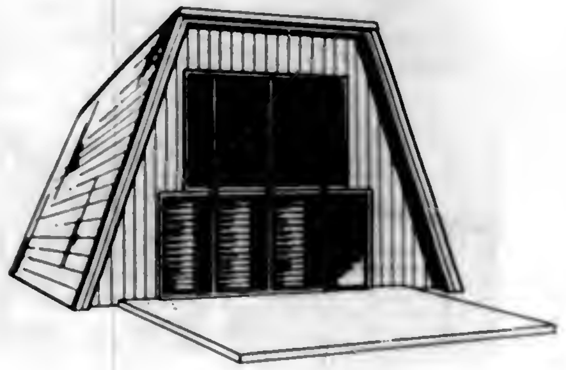
211,325
BUILDING FRONT

George R. Weisz, 1507 S. 6th St.,
Brainerd, Minn. 56401
Filed Sept. 25, 1967, Ser. No. 8,721
Term of patent 14 years
(Cl. D13—1)



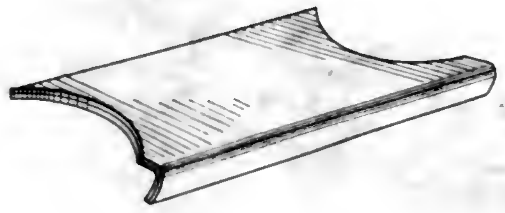
211,326
LEISURE HOME

Darwin W. Mark, Upland, Calif., assignor to Carefree Leisure Homes, Inc., a corporation of California
Filed Oct. 30, 1967, Ser. No. 9,199
Term of patent 14 years
(Cl. D13—1)



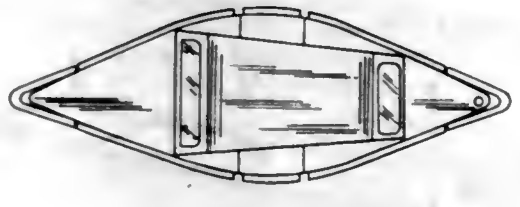
211,327
VINYL COVERED METAL STEP TREAD

Leib Karpfen, 34 Nassau St.,
Elmont, N.Y. 11003
Filed Oct. 12, 1967, Ser. No. 8,969
Term of patent 14 years
(Cl. D13—7)



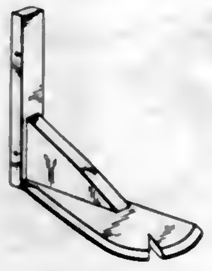
211,328
AUTOMOBILE

Erich O. Klebe, 1314 Farmdale,
Lehigh Acres, Fla. 33936
Filed Apr. 20, 1967, Ser. No. 6,773
Term of patent 14 years
(Cl. D14—3)



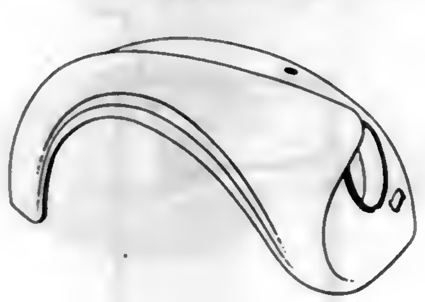
211,329
COMBINATION LIFT FORK AND BARK STRIPPER FOR AN END LIFT VEHICLE

John W. Rycraft, Klamath, Calif.
Filed June 12, 1967, Ser. No. 7,429
Term of patent 14 years
(Cl. D14—3)



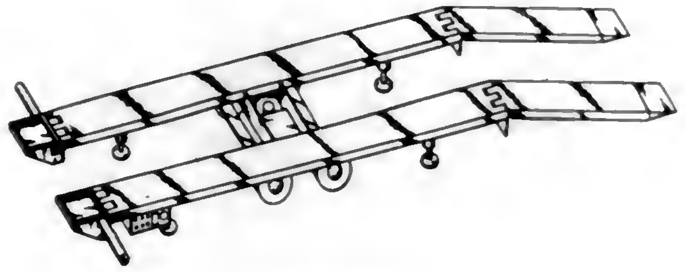
211,330
AUTOMOBILE FRONT FENDER OR SIMILAR ARTICLE

Robert G. Casas, 1183 N. Western Ave.,
Los Angeles, Calif. 90029
Filed Nov. 3, 1967, Ser. No. 9,262
Term of patent 7 years
(Cl. D14—3)



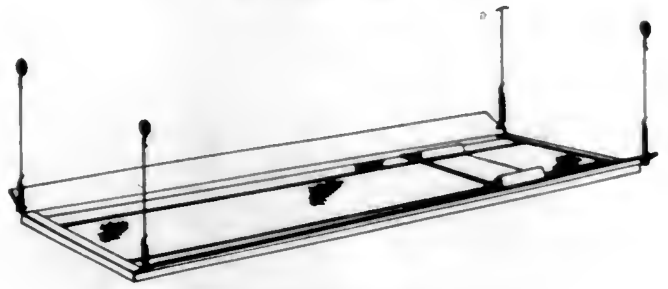
211,331
MOBILE WHEEL ALIGNMENT UNIT

Oklahoma Moore, Pasadena, Tex., assignor to Don Seitz, Pasadena, Tex.
Filed Nov. 7, 1967, Ser. No. 9,313
Term of patent 14 years
(Cl. D14—3)



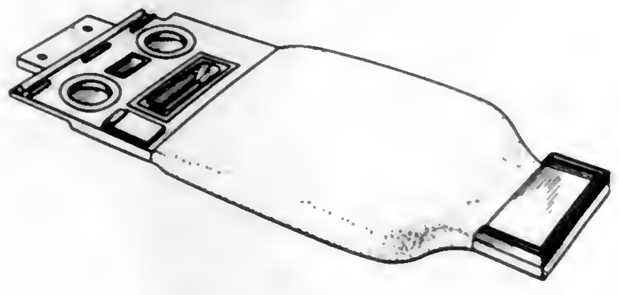
211,332
AUTO DRIP PAN

Walton P. Norvold, 2818 Dearford, Lakewood, Calif. 90712
Filed June 19, 1967, Ser. No. 7,510
Term of patent 14 years
(Cl. D14—6)



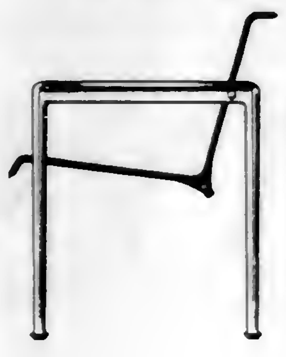
211,333
AUTOMOBILE ARM REST CONSOLE

Michael M. Graham, 2635 23rd St., Santa Monica, Calif. 90405
Filed Nov. 13, 1967, Ser. No. 9,354
Term of patent 14 years
(Cl. D14—6)



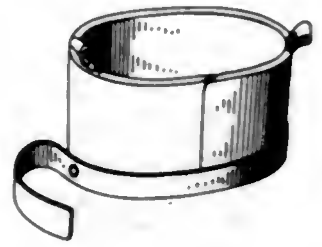
211,334
ARMCHAIR

Moses Richard Schultz, Barto, Pa., assignor to Knoll Associates, Inc., New York, N.Y., a corporation of New York
Filed Nov. 8, 1965, Ser. No. 88,044
Term of patent 14 years
(Cl. D15—1)



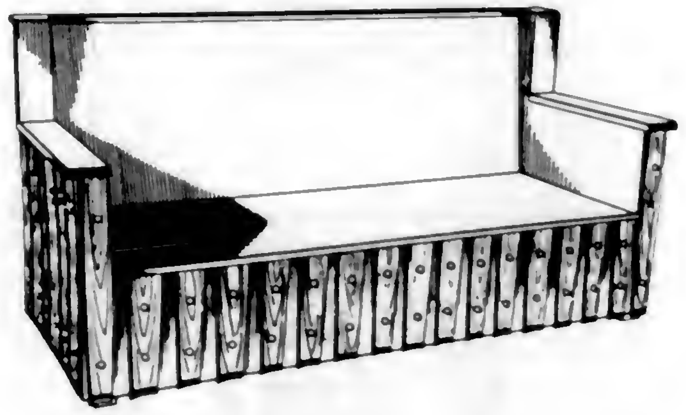
211,335
BABY HOLDING BELT FOR USE IN A SHOPPING CART

Richard L. Kausen and Judith L. Kausen, both ot 20810 Avenue 204, Lindsay, Calif. 93247
Filed May 4, 1967, Ser. No. 6,950
Term of patent 14 years
(Cl. D15—1)



211,336
SETTEE

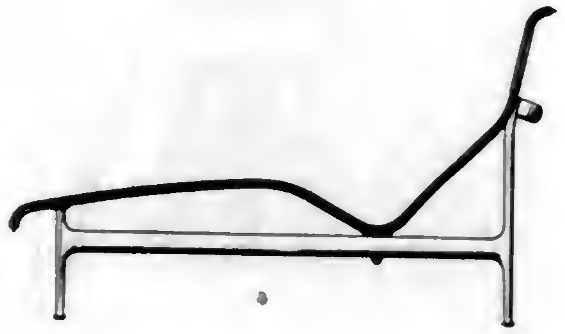
Louis Kettman, Rte. 1, Waterloo, Iowa 50701
Filed Sept. 30, 1966, Ser. No. 4,117
Term of patent 14 years
(Cl. D15—11)



211,337
CONTOUR CHAISE LONGUE

Moses Richard Schultz, Barto, Pa., assignor to Knoll Associates, Inc., New York, N.Y., a corporation of New York
Original design application Nov. 8, 1965, Ser. No. 88,044. Divided and this application Oct. 4, 1967, Ser. No. 9,347

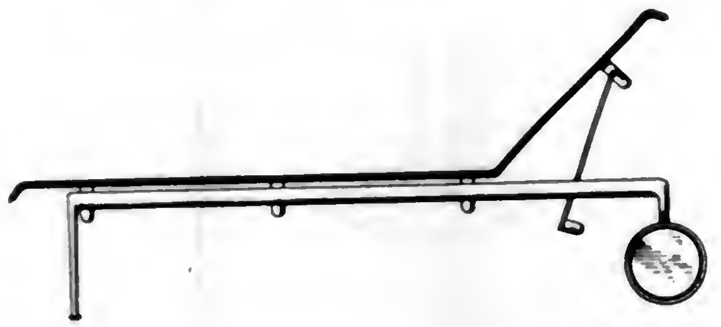
Term of patent 14 years
(Cl. D15—11)



211,338
CHAISE LONGUE

Moses Richard Schultz, Barto, Pa., assignor to Knoll Associates, Inc., New York, N.Y., a corporation of New York
Original design application Nov. 8, 1965, Ser. No. 88,044. Divided and this application Oct. 4, 1967, Ser. No. 9,349

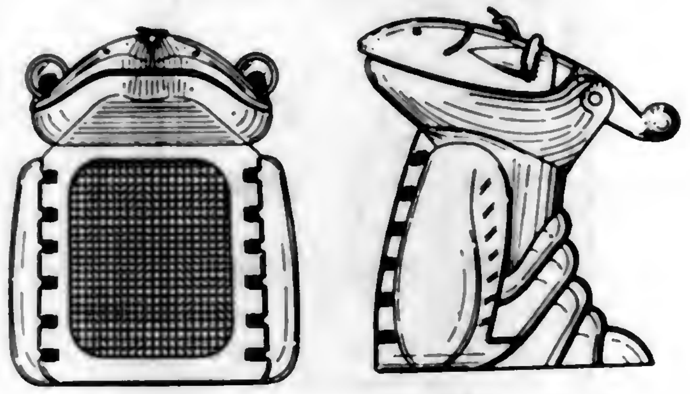
Term of patent 14 years
(Cl. D15—11)



211,339
INSECT CATCHER

Neil William Callahan, Jr., 18517 E. 7th St. N., Independence, Mo. 64050
Continuation-in-part of design application Ser. No. 7,433, June 12, 1967. This application Nov. 24, 1967, Ser. No. 9,535

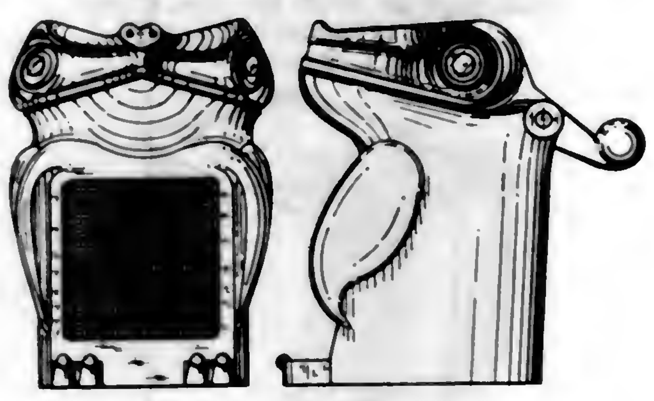
Term of patent 14 years
(Cl. D22—19)



211,340
INSECT CATCHER

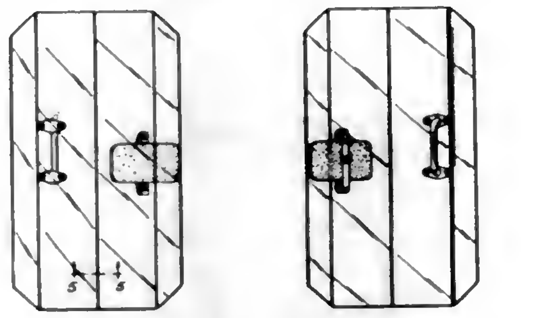
Neil William Callahan, Jr., 18517 E. 7th St. N., Independence, Mo. 64050
Continuation-in-part of design application Ser. No. 7,445, June 12, 1967. This application Nov. 24, 1967, Ser. No. 9,537

Term of patent 14 years
(Cl. D22—19)



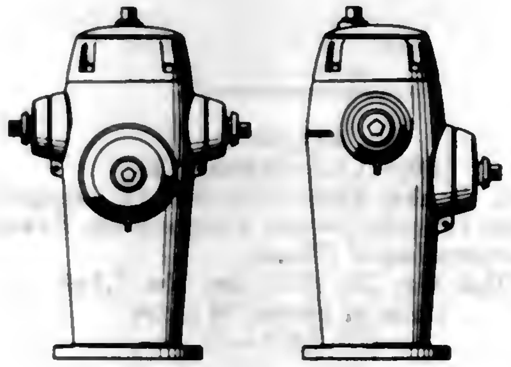
211,341
RIOT SHIELD OR SIMILAR ARTICLE

Albert A. Karlyn, Wethersfield, Conn., assignor to Gentex Corporation, New York, N.Y., a corporation of Delaware
Filed Mar. 6, 1967, Ser. No. 6,057
Term of patent 14 years
(Cl. D22—99)



211,342
FIRE HYDRANT

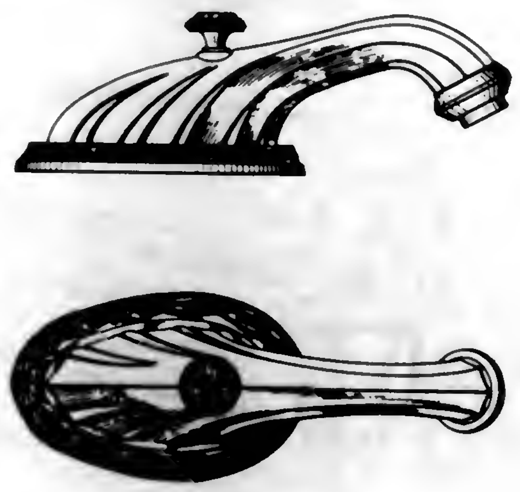
Jay O. Garrett, Provo, Utah, and Lloyd M. Gustaveson, Santa Clara, Calif., assignors to Pacific States Cast Iron Pipe Company, Division of McWane Cast Iron Company, a corporation of Delaware
Filed May 29, 1967, Ser. No. 7,289
Term of patent 14 years
(Cl. D23—12)



211,343
FAUCET SPOUT

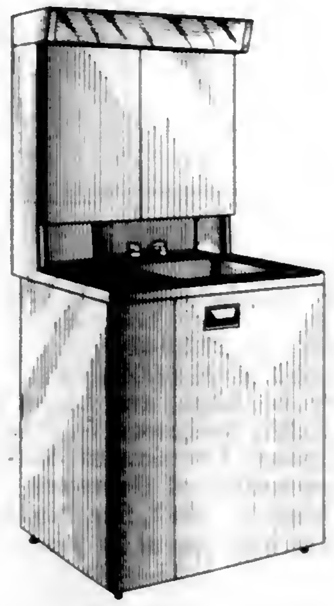
Allan F. Jones, Jamestown, N.Y., assignor to Period Brass, Inc., Jamestown, N.Y., a corporation of Texas
Continuation of design application Ser. No. 87,555, Oct. 18, 1965. This application Feb. 9, 1967, Ser. No. 6,221

Term of patent 14 years
(Cl. D23—23)



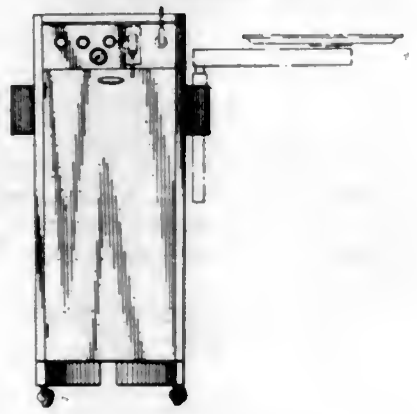
211,344
COMBINATION STORAGE CABINET AND SINK FOR LAUNDRY OR THE LIKE

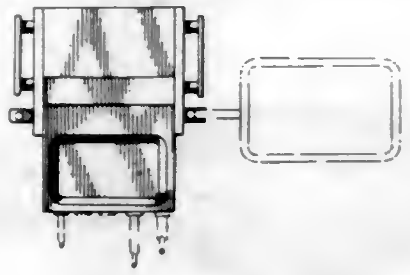
Aman U. Khan, St. Joseph, Mich., assignor to Whirlpool Corporation, a corporation of Delaware
Filed June 16, 1966, Ser. No. 2,702
Term of patent 14 years
(Cl. D23—59)



211,345
DENTAL CONSOLE

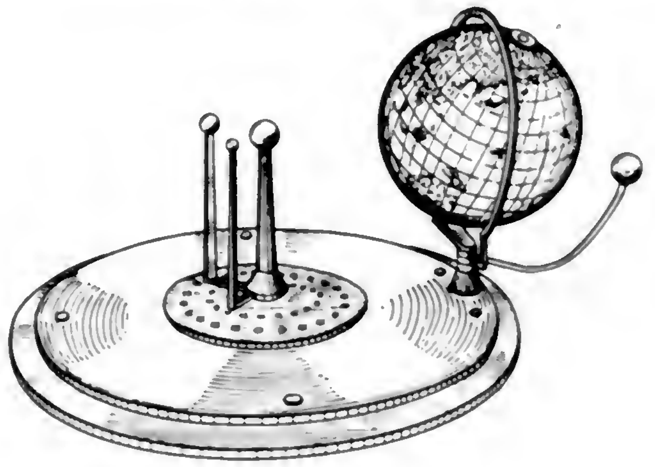
Richard A. Slouka, Carpentersville, Ill., assignor to American Hospital Supply Corporation, Evanston, Ill., a corporation of Illinois
Filed May 24, 1967, Ser. No. 7,249
Term of patent 14 years
(Cl. D24—1)





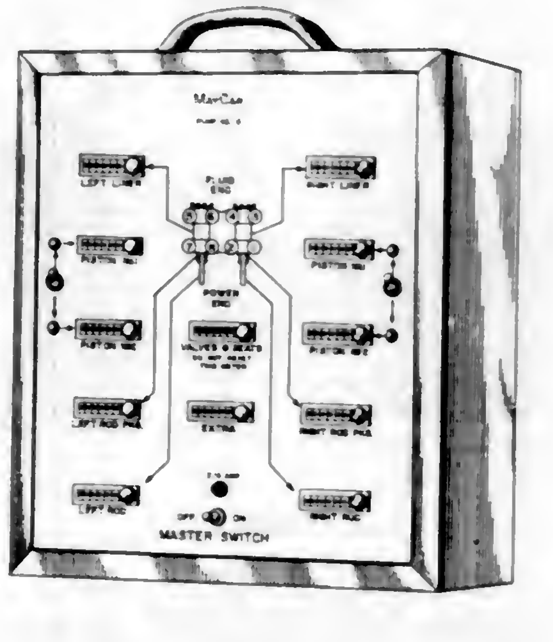
211,346
ORRERY

Philip S. Egan, Evanston, Ill., assignor to A. J. Nystrom and Co., Chicago, Ill., a corporation of Delaware
Filed July 19, 1967, Ser. No. 7,888
Term of patent 14 years
(Cl. D25—1)



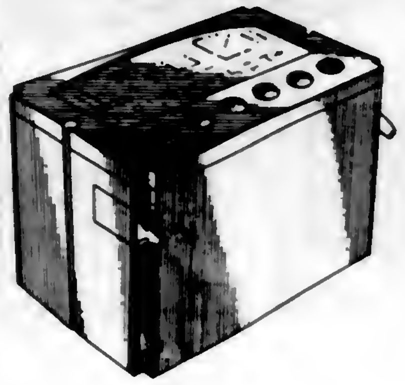
211,347
TIMING DEVICE OR SIMILAR ARTICLE

George T. Mays, 135 W. Henfer Park, New Orleans, La. 70123
Filed Oct. 22, 1965, Ser. No. 87,751
Term of patent 14 years
(Cl. D26—1)



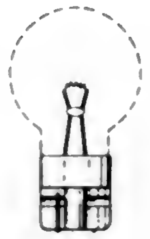
211,348
STORAGE BATTERY

John T. Redmon, Detroit, Mich., assignor to Globe-Union Inc., Milwaukee, Wis., a corporation of Delaware
Filed Sept. 20, 1965, Ser. No. 87,067
Term of patent 14 years
(Cl. D26—6)



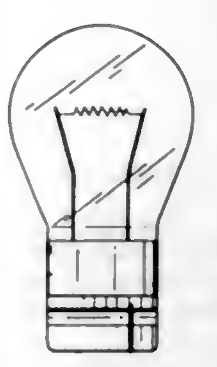
211,349
ELECTRIC LAMP

Thomas Hammond, Cobham, Surrey, England, assignor to Rival Lamps Limited, Weybridge, Surrey, England, a British company
Filed June 9, 1966, Ser. No. 2,618
Claims priority, application Great Britain Dec. 23, 1965
Term of patent 14 years
(Cl. D26—8)



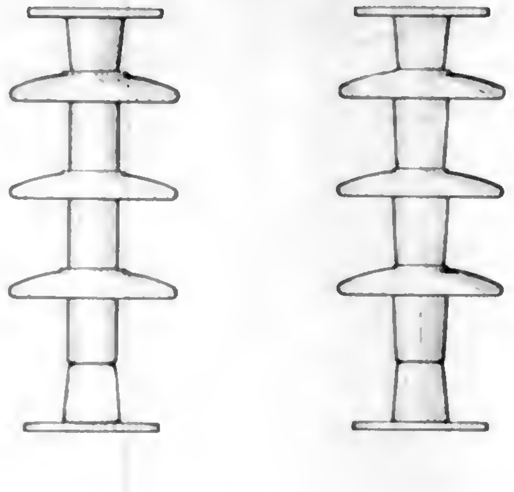
211,350
ELECTRIC LAMP

Thomas Hammond, Cobham, Surrey, England, assignor to Rival Lamps Limited, Weybridge, Surrey, England, a British company
Filed June 9, 1966, Ser. No. 2,619
Claims priority, application Great Britain Dec. 23, 1965
Term of patent 14 years
(Cl. D26—8)



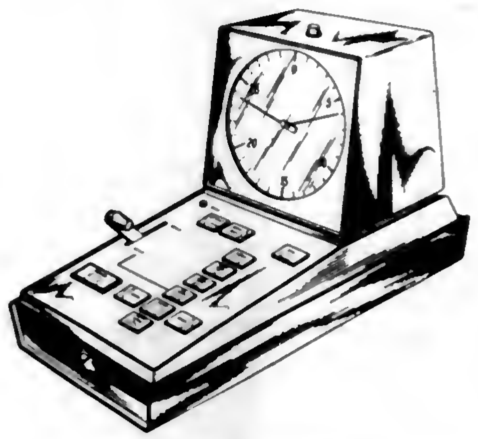
211,351
ELECTRICAL INSULATOR OR SIMILAR ARTICLE

William Austin Lankford and William H. Gilliland, Birmingham, Ala., assignors to USCO Power Equipment Corporation, Birmingham, Ala., a corporation of Alabama
Filed May 9, 1966, Ser. No. 2,225
Term of patent 14 years
(Cl. D26—10)



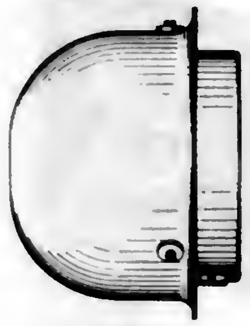
211,352
REMOTE CONTROL UNIT FOR A TV RECORDER

Robert W. Bornschlegel, Mountain View, Calif., assignor to Ampex Corporation, Redwood City, Calif., a corporation of California
Filed Mar. 13, 1967, Ser. No. 6,196
Term of patent 14 years
(Cl. D26—13)



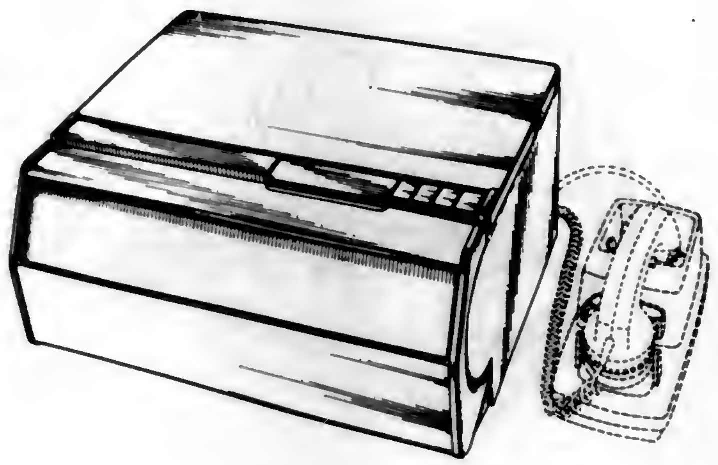
211,353
ULTRASONIC TRANSDUCER FOR A SPACE ALARM SYSTEM FOR BURGLAR DETECTION OR SIMILAR ARTICLE

Samuel M. Bagno, 18 Columbus Ave., Belleville, N.J. 07109
Filed Sept. 7, 1965, Ser. No. 86,879
Term of patent 14 years
(Cl. D26—14)

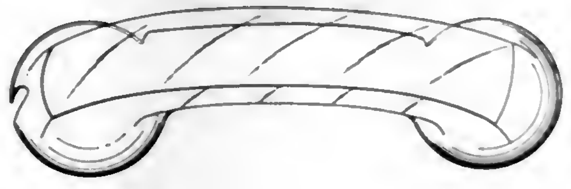


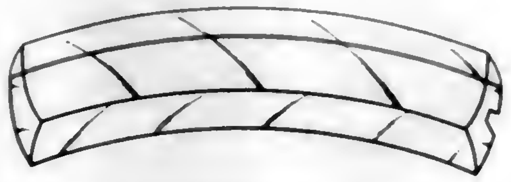
211,354
FACSIMILE TRANSCEIVER

Donald L. McFarland and Glenn Reese, Torrance, Calif., assignors to The Magnavox Company, Fort Wayne, Ind., a corporation of Delaware
Filed Aug. 16, 1966, Ser. No. 3,480
Term of patent 14 years
(Cl. D26—14)

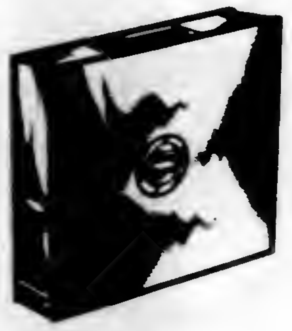


211,355
COVER FOR TELEPHONE HANDSETS
Gilman O. Farnham and Judith J. Farnham, both of
156 S. Main St., Barre City, Vt. 05641
Filed Dec. 2, 1966, Ser. No. 4,898
Term of patent 14 years
(Cl. D26—14)

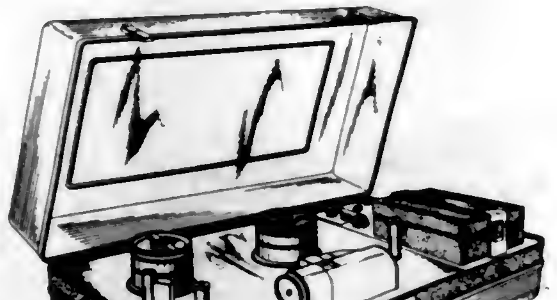




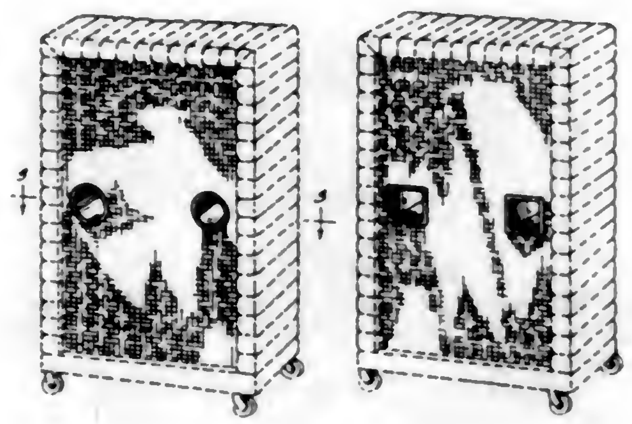
211,356
CONTAINER FOR STORING AND SHIPPING A REEL OF VIDEO TAPE OR SIMILAR ARTICLE
Raymond W. Jensen, Marina del Rey, Calif., assignor to Comdata Corporation, Los Angeles, Calif., a corporation of California
Filed Jan. 27, 1967, Ser. No. 5,592
Term of patent 14 years
(Cl. D26—14)



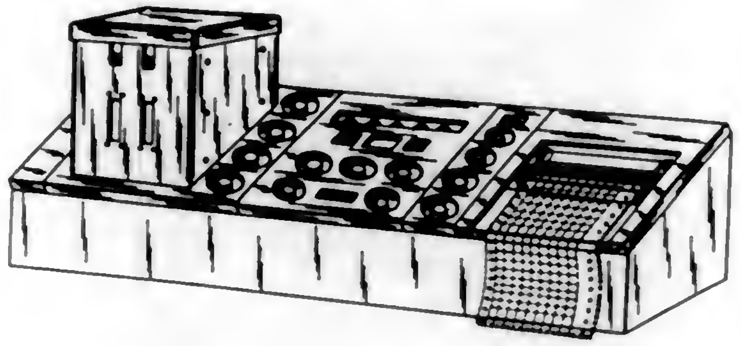
211,357
TELEVISION TAPE TRANSPORT
Charles E. Bozarth, Palo Alto, Calif., assignor to Ampex Corporation, Redwood City, Calif., a corporation of California
Filed Mar. 21, 1967, Ser. No. 6,327
Term of patent 14 years
(Cl. D26—14)



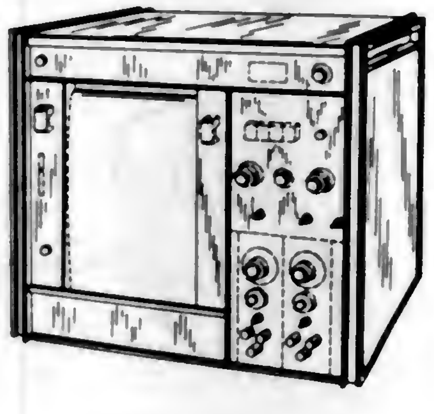
211,358
COMBINATION GRILLE AND SPEAKER PORTS FOR A LOUDSPEAKER ENCLOSURE
Charles A. Ross, 7th and S. Steuben,
Chanute, Kans. 66720
Filed July 19, 1967, Ser. No. 7,876
Term of patent 14 years
(Cl. D26—14)

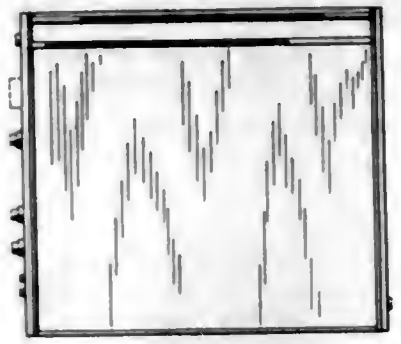


211,359
GAS CHROMATOGRAPH CONSOLE
John P. Salsgiver, West Acton, Mass., assignor to United Technical Corporation, Auburndale, Mass., a corporation of Massachusetts
Filed Aug. 15, 1967, Ser. No. 8,283
Term of patent 14 years
(Cl. D26—14)

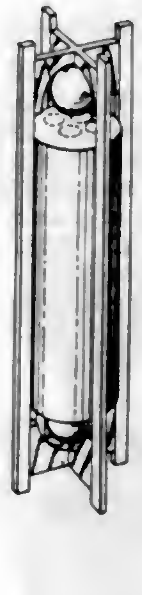


211,360
GRAPHIC RECORDER
Anthony P. H. Chan, Palo Alto, Calif., assignor to Varian Associates, Palo Alto, Calif., a corporation of California
Filed Aug. 21, 1967, Ser. No. 8,325
Term of patent 14 years
(Cl. D26—14)

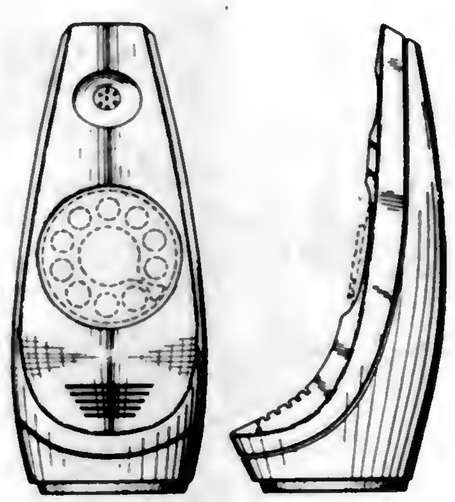




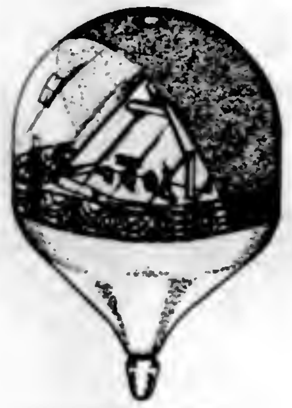
211,361
SPEAKER ENCLOSURE
Aston L. Moore, 220 Hammond Place,
South Bend, Ind. 46601
Filed Sept. 27, 1967, Ser. No. 8,753
Term of patent 14 years
(Cl. D26—14)



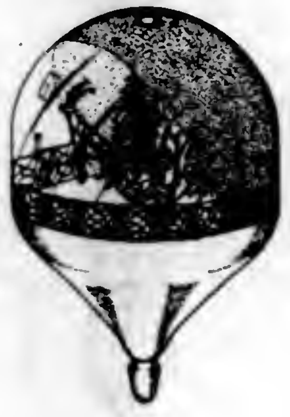
211,362
DESK TELEPHONE
George M. Janda, Westchester, Ill., assignor to Automatic Electric Laboratories, Inc., Northlake, Ill., a corporation of Delaware
Filed Nov. 30, 1967, Ser. No. 9,587
Term of patent 14 years
(Cl. D26—14)



211,363
CHRISTMAS ORNAMENT OR THE LIKE
Dario Moranduzzo, Via Aretina 161, Florence, Italy
Filed Sept. 22, 1966, Ser. No. 3,976
Term of patent 14 years
(Cl. D29—1)

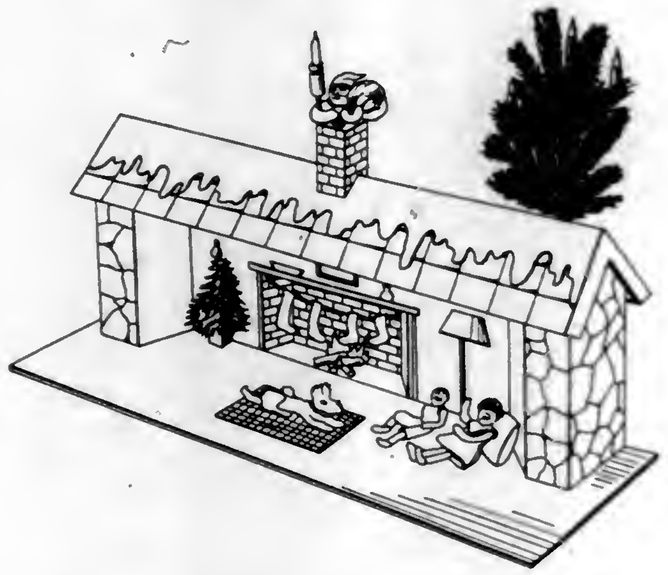


211,364
CHRISTMAS ORNAMENT OR THE LIKE
Dario Moranduzzo, Via Aretina 161, Florence, Italy
Filed Sept. 22, 1966, Ser. No. 3,984
Term of patent 14 years
(Cl. D29—1)



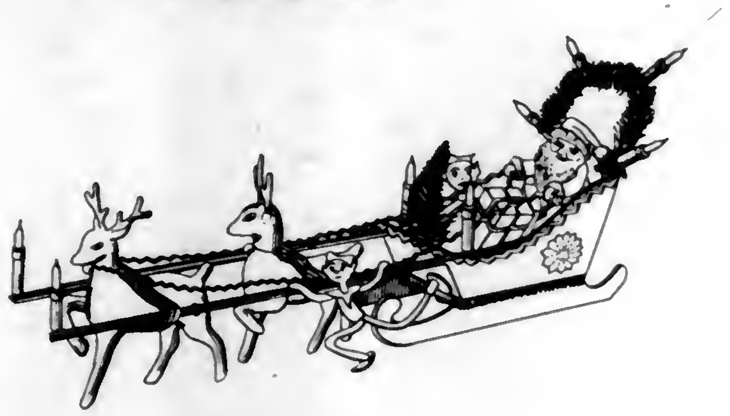
211,365
CHRISTMAS ORNAMENT

Otto Kadmon and Alice Kadmon, both of 144—37
76th Road, Flushing, N.Y. 11367
Filed Feb. 10, 1967, Ser. No. 5,756
Term of patent 7 years
(Cl. D29—1)



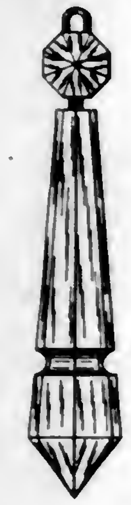
211,366
CHRISTMAS ORNAMENT OR THE LIKE

Otto Kadmon and Alice Kadmon, both of 144—37
76th Road, Flushing, N.Y. 11367
Filed Feb. 10, 1967, Ser. No. 5,757
Term of patent 7 years
(Cl. D29—1)



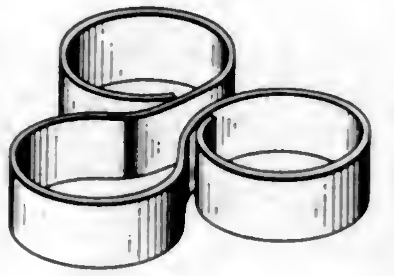
211,367
CHRISTMAS TREE ORNAMENT

Jack Burnbaum, Newton, Mass.
(451 D St., Boston, Mass. 02110)
Filed July 26, 1967, Ser. No. 8,011
Term of patent 14 years
(Cl. D29—1)



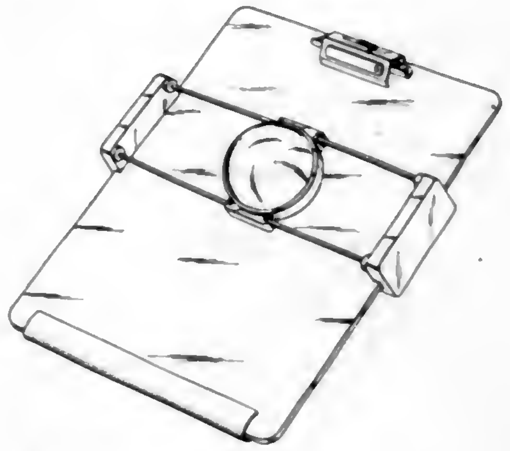
211,368
HOLDER FOR FOOD PANS FOR PETS

Tony Robert, 5701 Southwest Freeway,
Houston, Tex. 77027
Filed Sept. 9, 1966, Ser. No. 3,792
Term of patent 14 years
(Cl. D30—13)



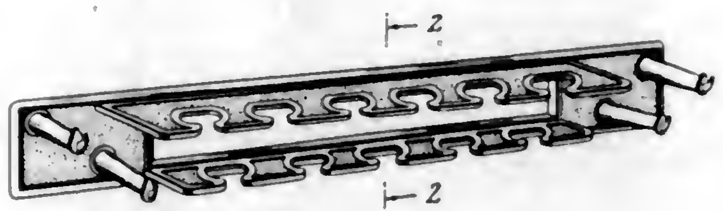
211,369
COMBINED MAP HOLDER AND VIEWER THEREFOR

Morley Hitchcock, Lake County, Ohio (8846 King
Memorial Road, Mentor, Ohio 44060)
Filed May 11, 1967, Ser. No. 7,081
Term of patent 14 years
(Cl. D33—3)



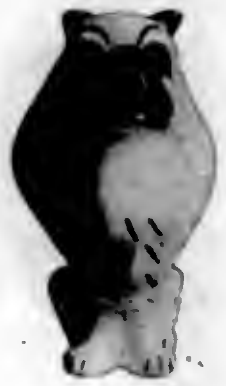
211,370
TIE RACK

James Paul Morrison, 2311 W. Azalea St.,
Tyler, Tex. 75701
Filed June 20, 1967, Ser. No. 7,525
Term of patent 7 years
(Cl. D33—8)



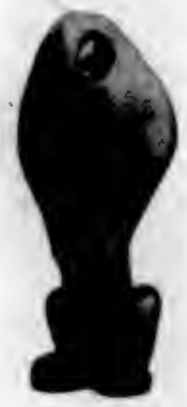
211,371
TOY DOG

Margaret Howard, Cogenhoe, Northants, England, assignor to The Mettoy Company Limited, London, England
Filed July 20, 1967, Ser. No. 7,909
Term of patent 3½ years
Claims priority, application Great Britain Feb. 8, 1967
(Cl. D34—2)



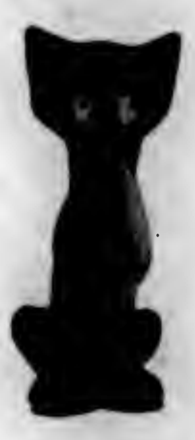
211,372
TOY DOG

Margaret Howard, Cogenhoe, Northants, England, assignor to The Mettoy Company Limited, London, England
Filed July 20, 1967, Ser. No. 7,910
Term of patent 3½ years
Claims priority, application Great Britain Feb. 8, 1967
(Cl. D34—2)



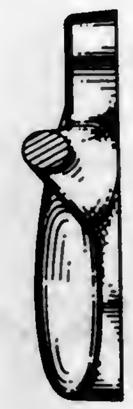
211,373
TOY DOG

Margaret Howard, Cogenhoe, Northants, England, assignor to The Mettoy Company Limited, London, England
Filed July 20, 1967, Ser. No. 7,911
Term of patent 3½ years
Claims priority, application Great Britain Feb. 8, 1967
(Cl. D34—2)



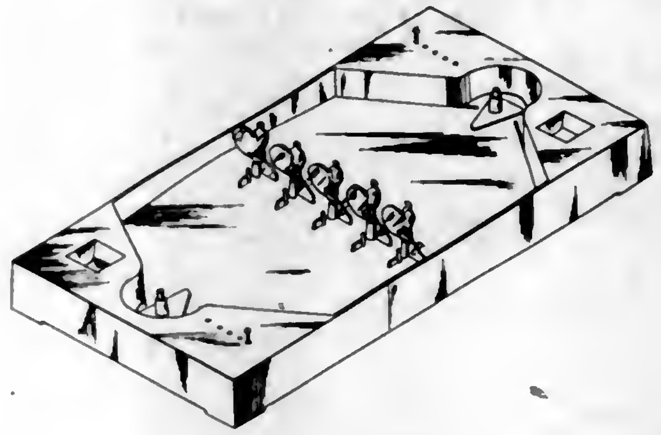
211,374
PUTTER HEAD

Sherwood M. Hanson, S. Main St.,
Sandwich, Ill. 60548
Filed Jan. 10, 1967, Ser. No. 5,366
Term of patent 14 years
(Cl. D34—5)



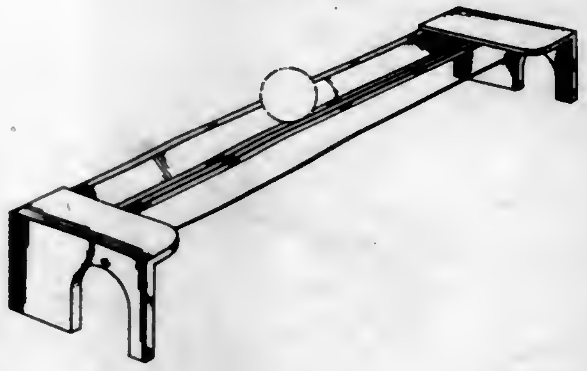
211,375
GAME BOARD

Ernest J. Swimmer, 340 E. 52nd St.,
New York, N.Y 10022
Filed Jan. 23, 1967, Ser. No. 5,550
Term of patent 3½ years
(Cl. D34—5)

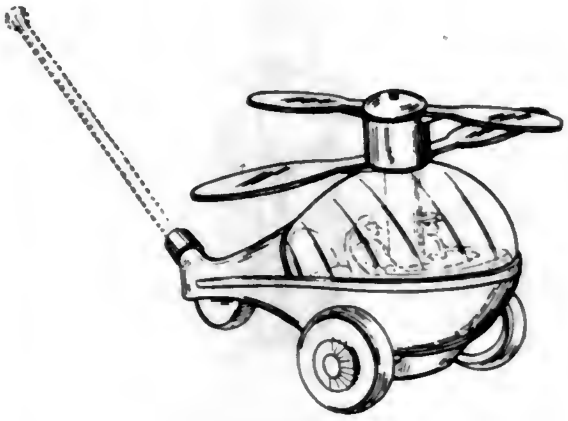


211,376
GOLF PUTTING INSTRUCTIONAL DEVICE

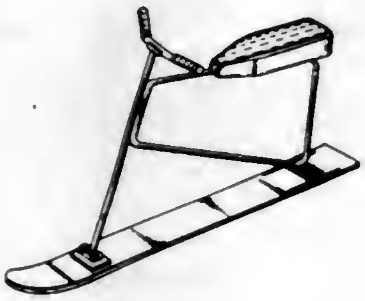
Marvin E. Chidester, P.O. Box 565,
Elberton, Ga. 30635
Filed Aug. 31, 1967, Ser. No. 8,450
Term of patent 14 years
(Cl. D34—5)



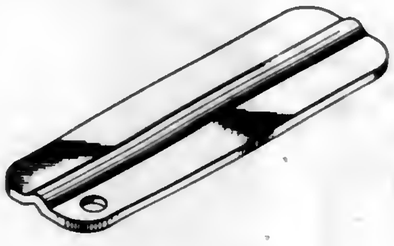
211,377
TRUNDLE TOY
Willis M. Lakin, Slinger, Wis., assignor to Marlin Toy Products, Inc., Horicon, Wis., a corporation of Illinois
Filed Feb. 23, 1967, Ser. No. 5,913
Term of patent 14 years
(Cl. D34—15)



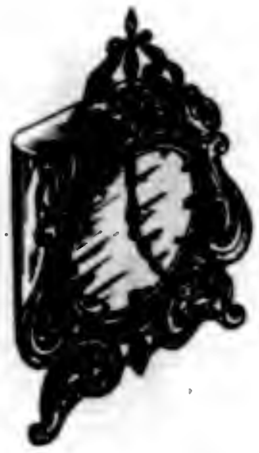
211,378
SNOW BIKE
Harry B. Deahong and Darrel L. Hamby, Phoenix, Ariz., assignors to Arcoa, Incorporated, Portland, Oreg., a corporation of Oregon
Filed July 25, 1967, Ser. No. 7,970
Term of patent 14 years
(Cl. D34—15)



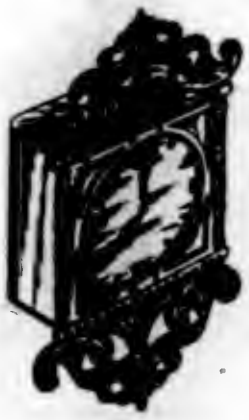
211,379
POCKET WHETSTONE
John K. Taggart, Indianapolis, Ind., assignor of one-half percent to Stephen A. Mattox
Filed July 28, 1967, Ser. No. 8,042
Term of patent 14 years
(Cl. D37—1)



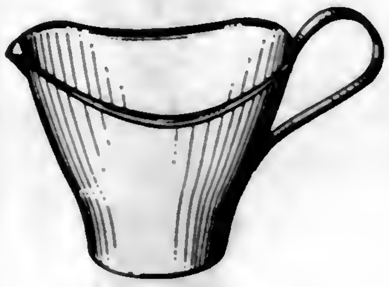
211,380
CLOCK
Dario Morandduzzo, Via Aretina 161, Florence, Italy
Filed Sept. 22, 1966, Ser. No. 3,982
Term of patent 14 years
(Cl. D42—7)



211,381
CLOCK
Dario Morandduzzo, Via Aretina 161, Florence, Italy
Filed Sept. 22, 1966, Ser. No. 3,983
Term of patent 14 years
(Cl. D42—7)

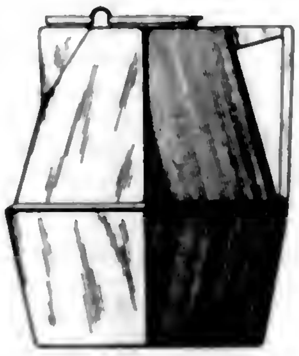


211,382
CREAMER OR THE LIKE
Rudolph Erenhouse, 849 Barth Drive,
Baldwin, N.Y. 11510
Filed Aug. 18, 1966, Ser. No. 3,519
Term of patent 14 years
(Cl. D44—21)



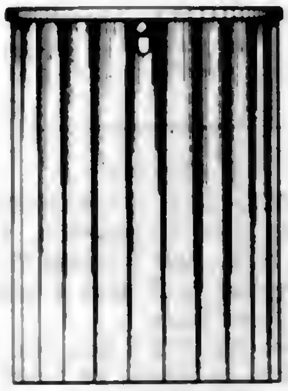
211,383
PITCHER

Victor F. Anderson, 13 W. Mantua Ave.,
Wenonah, N.J. 08090
Filed Sept. 21, 1967, Ser. No. 8,708
Term of patent 14 years
(Cl. D44—21)



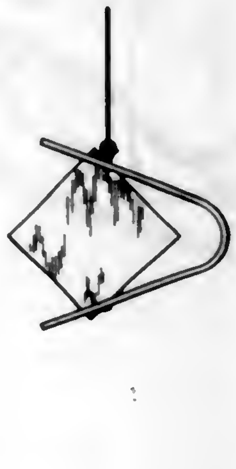
211,384
GLASS CHILLER

Maxwell Lehrhaupt, 50—11 194th St., Flushing, N.Y. 11365, and Donald Bieber, 27—35 167th St., Flushing, N.Y. 11265
Filed May 9, 1966, Ser. No. 2,230
Term of patent 14 years
(Cl. D44—29)



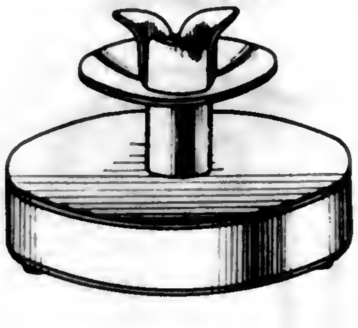
211,385
EARRING

Maurice Joseph Dweck, 11 W. 30th St.,
New York, N.Y. 10001
Filed May 15, 1967, Ser. No. 7,126
Term of patent 3½ years
(Cl. D45—9)



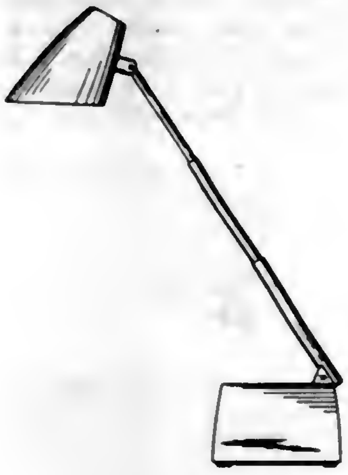
211,386
CANDLE HOLDER OR THE LIKE

Erik H. Bertelsen, 3546 Willow St.,
Flossmoor, Ill. 60422
Filed May 31, 1967, Ser. No. 7,307
Term of patent 14 years
(Cl. D48—2)



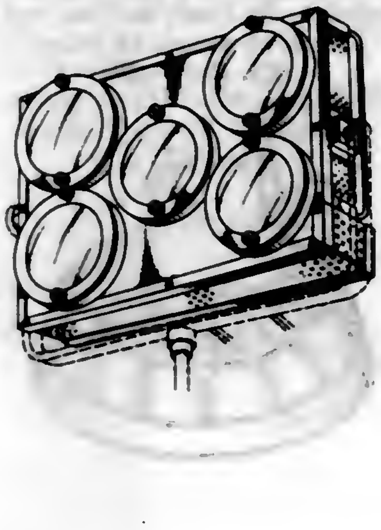
211,387
DESK LAMP

Henry P. Muller, Rego Park, N.Y., assignor to Lightolier Incorporated, Jersey City, N.J., a corporation of New York
Filed Apr. 13, 1967, Ser. No. 6,674
Term of patent 3½ years
(Cl. D48—20)



211,388
FLOODLIGHT FOR PHOTOGRAPHERS OR THE LIKE

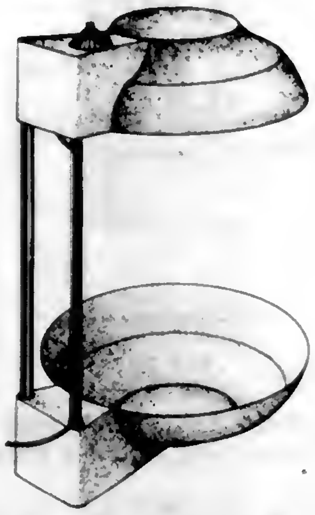
Stanley D. Harrison, Los Angeles, Calif., assignor to Mole-Richardson Co., Hollywood, Calif., a corporation of California
Filed May 5, 1967, Ser. No. 6,970
Term of patent 14 years
(Cl. D48—20)



211,389
FLUORESCENT LAMP FIXTURE FOR RIPENING PRODUCE OR SIMILAR ARTICLES

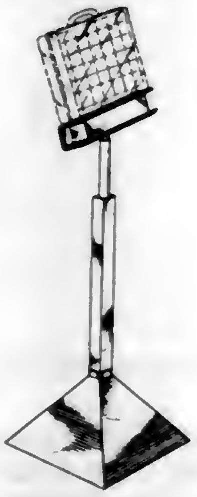
Hendrik A. J. de Vos, Wenham, Ruth E. Petersen, Medfield, and John J. Vetere, Beverly, Mass., assignors to Sylvania Electric Products Inc., a corporation of Delaware

Filed June 2, 1967, Ser. No. 7,343
Term of patent 14 years
(Cl. D48—20)



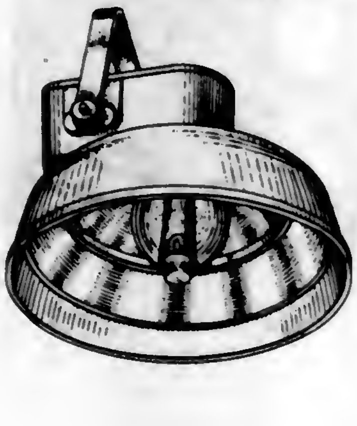
211,390
LIGHTING FIXTURE STAND

Leroy R. Woods, 16220 Armstead St., Granada Hills, Calif. 91344
Filed June 5, 1967, Ser. No. 7,351
Term of patent 14 years
(Cl. D48—20)



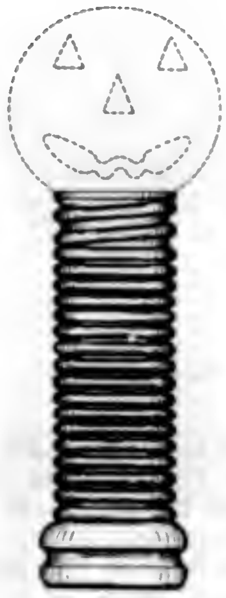
211,391
FLOODLIGHT

Myron F. Pettengill, Hendersonville, N.C., assignor to General Electric Company, a corporation of New York
Filed Oct. 18, 1967, Ser. No. 9,057
Term of patent 14 years
(Cl. D48—20)



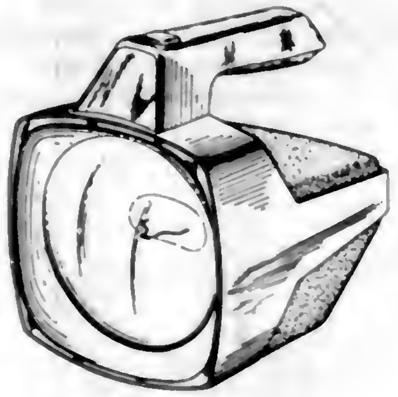
211,392
COMBINED FLASHLIGHT AND TOY

Leon D. Grebow, New York, N.Y.
(3850 Hudson Manor Terrace, Bronx, N.Y. 10463)
Filed Nov. 3, 1966, Ser. No. 4,533
Term of patent 14 years
(Cl. D48—24)



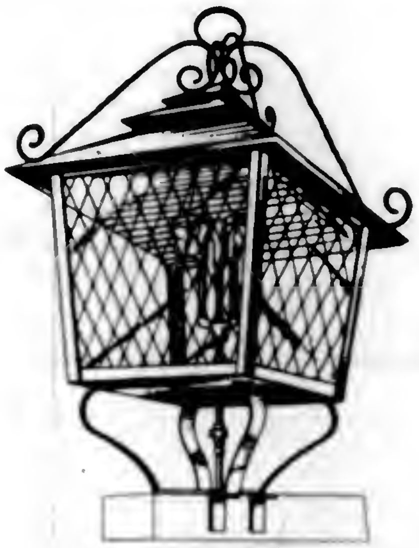
211,393
PORTABLE LANTERN

William H. Doring, Old Greenwich, Conn., David O. Chase, Camillus, N.Y., and William W. Sammons, Pittsfield, Mass., assignors to Union Carbide Corporation, a corporation of New York
Filed June 28, 1967, Ser. No. 7,631
Term of patent 14 years
(Cl. D48—24)



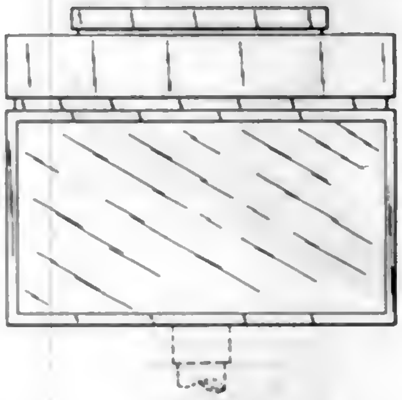
211,394
ORNATE GAS LAMP

Bernard Bernstein, 6029 N. 16th Drive,
Phoenix, Ariz. 85016
Filed Sept. 29, 1966, Ser. No. 4,081
Term of patent 3½ years
(Cl. D48—31)



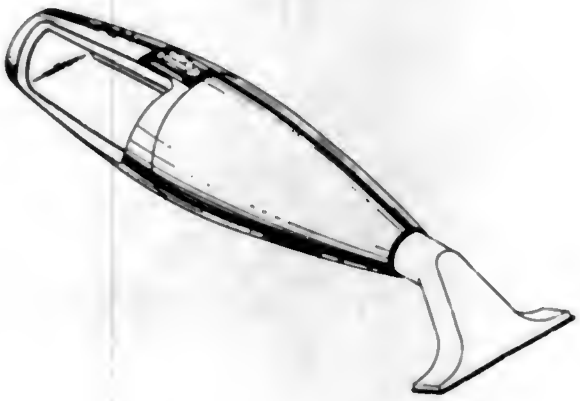
211,395
OUTDOOR LUMINAIRE

Reynolds B. Winslow, Syracuse, N.Y., assignor to Crouse-Hinds Company, Syracuse, N.Y., a corporation of New York
Filed Jan. 26, 1967, Ser. No. 5,577
Term of patent 14 years
(Cl. D48—31)



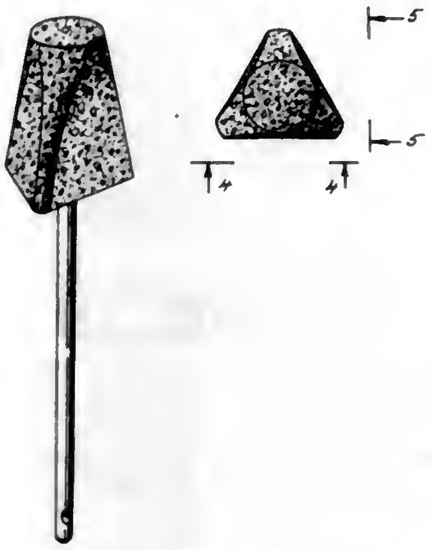
211,396
PORTABLE HAND-HELD VACUUM CLEANER

Takeo Hori, Fukuoka, Japan, assignor to Matsushita Electric Industrial Co., Ltd., Osaka, Japan, a corporation of Japan
Filed June 22, 1967, Ser. No. 7,566
Term of patent 14 years
(Cl. D49—14)



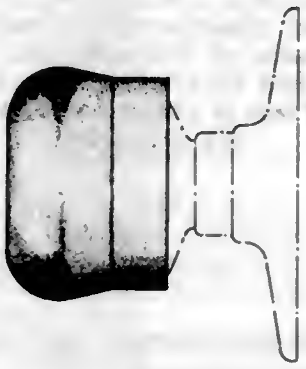
211,397
SPONGE MOP

Claire Marie Nika, 74 Glen Court,
North Plainfield, N.J. 07063
Filed Mar. 13, 1967, Ser. No. 6,193
Term of patent 14 years
(Cl. D49—22)



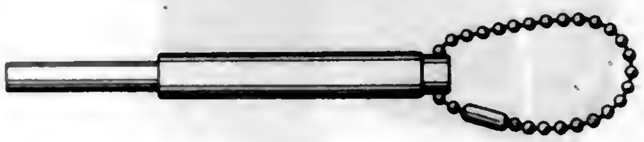
211,398
DOORKNOB COVER

Justice Hall, Los Angeles County, Calif.
(12732 Darla Ave., Granada Hills, Calif. 91344)
Continuation of design application Ser. No. 87,748, Oct. 22, 1965. This application Dec. 30, 1966, Ser. No. 5,302
Term of patent 14 years
(Cl. D50—3)



211,399
COMBINATION KEY CHAIN AND FIRE LIGHTER

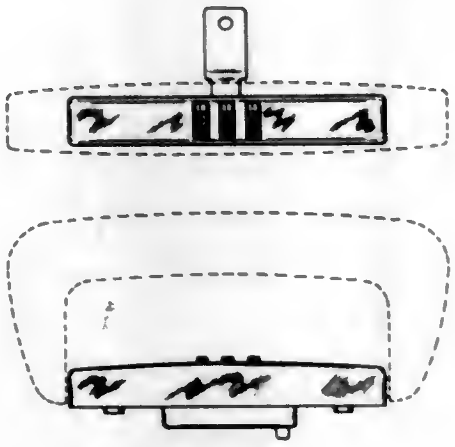
Richard C. Martin, Boulder, Colo., assignor to Ute Mountain Supply Company, Denver, Colo., a corporation of Colorado
Filed July 3, 1967, Ser. No. 7,708
Term of patent 14 years
(Cl. D50—4)



211,400
COMBINED HANDLE STUD AND COMBINATION LOCK

Charles S. Gehrie, Montclair, N.J., assignor to Presto Lock Co., Inc., Garfield, N.J., a corporation of New York

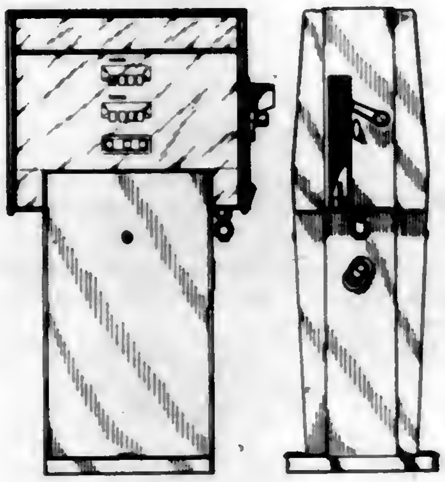
Filed May 15, 1967, Ser. No. 7,106
Term of patent 14 years
(Cl. D50—7)



211,401
GASOLINE DISPENSING PUMP

Robert A. Chieda and John Cuccio, Westport, Conn., and George D. Robinson, Greensboro, N.C., assignors to Gilbert & Barker Manufacturing Company, New York, N.Y., a corporation of Massachusetts

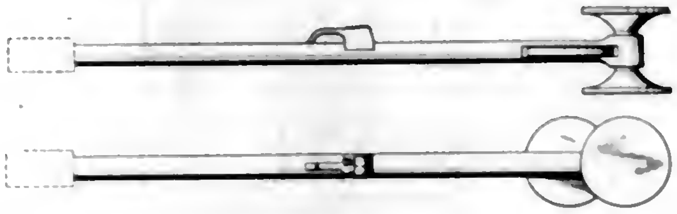
Filed July 27, 1967, Ser. No. 8,032
Term of patent 14 years
(Cl. D52—2)



211,402
FOREIGN OBJECT DETECTOR

Don E. Smith, Port Matilda, Pa., assignor to HRB-Singer, Inc., State College, Pa., a corporation of Delaware

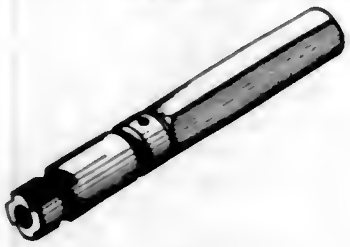
Filed May 2, 1967, Ser. No. 6,919
Term of patent 14 years
(Cl. D52—6)



211,403
REAMING TOOL

Bernard Miller, Portuguese Bend, Calif., assignor to Duro Engineering & Manufacturing, Inc., a corporation of California

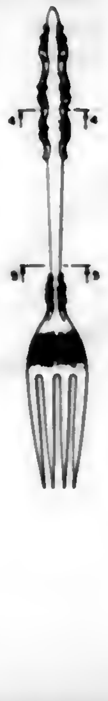
Filed June 9, 1967, Ser. No. 7,412
Term of patent 7 years
(Cl. D54—4)



211,404
FORK OR SIMILAR ARTICLE OF FLATWARE

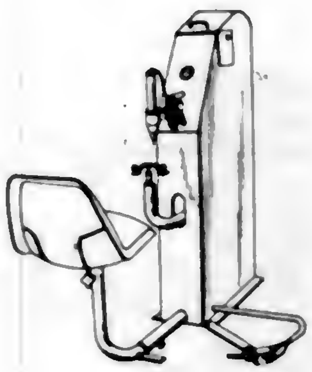
Siro R. Toffolon, Meriden, Conn., assignor to The International Silver Company, Meriden, Conn., a corporation of Connecticut

Filed Aug. 31, 1967, Ser. No. 8,443
Term of patent 14 years
(Cl. D54—12)



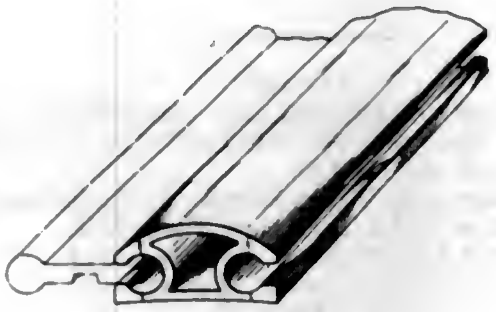
211,405
TIRE STUDDING DEVICE

Robert W. Houston, Cincinnati, Ohio, assignor to Studebaker Corporation, South Bend, Ind.
Filed Apr. 25, 1967, Ser. No. 6,824
Term of patent 14 years
(Cl. D54—13)



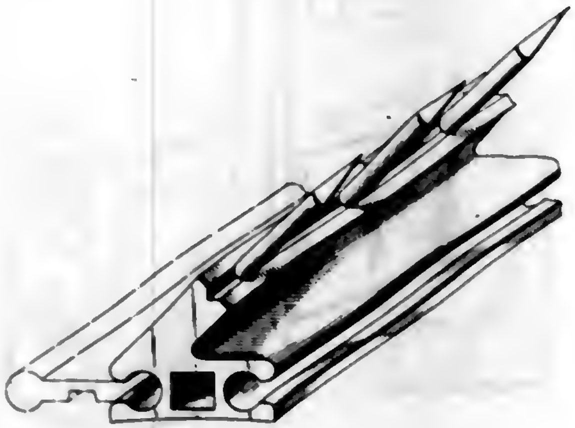
211,406
SLAT FOR A SLAT APRON

George Donald Flaith, Wyndmoor, Pa., assignor to Proctor & Schwartz, Inc., Philadelphia, Pa., a corporation of Pennsylvania
Filed Feb. 1, 1967, Ser. No. 5,653
Term of patent 14 years
(Cl. D55—1)



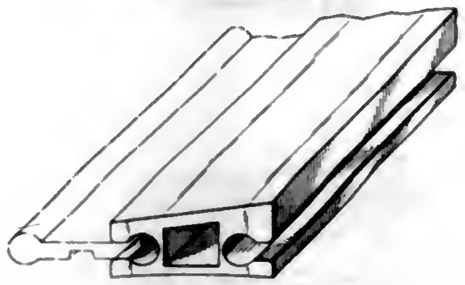
211,407
SLAT FOR A SPIKE APRON

George Donald Flaith, Wyndmoor, Pa., assignor to Proctor & Schwartz, Inc., Philadelphia, Pa., a corporation of Pennsylvania
Filed Feb. 1, 1967, Ser. No. 5,654
Term of patent 14 years
(Cl. D55—1)



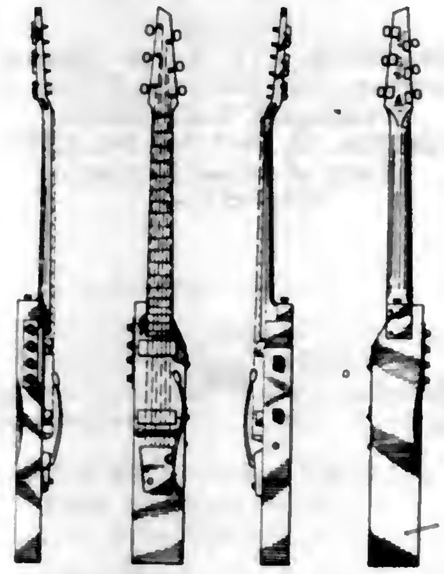
211,408
SLAT FOR A SLAT APRON

George Donald Flaith, Wyndmoor, Pa., assignor to Proctor & Schwartz, Inc., Philadelphia, Pa., a corporation of Pennsylvania
Filed Feb. 1, 1967, Ser. No. 5,655
Term of patent 14 years
(Cl. D55—1)



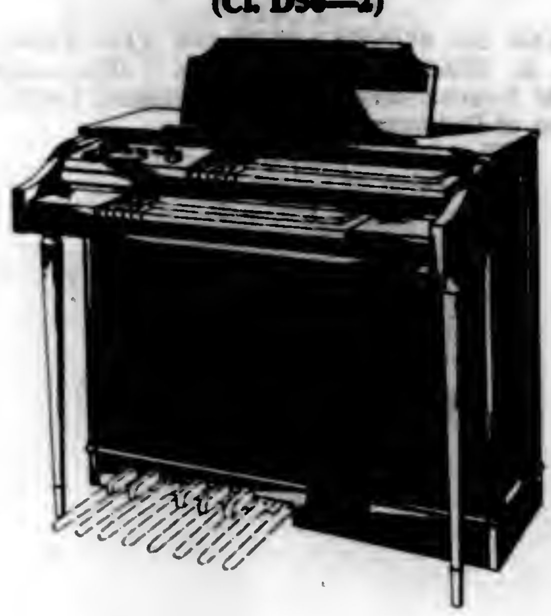
211,409
ELECTRIC GUITAR OR SIMILAR ARTICLE

Daniel J. Helland, 1668 Murphy Drive,
Green Bay, Wis. 54303
Filed May 5, 1967, Ser. No. 6,964
Term of patent 14 years
(Cl. D56—1)



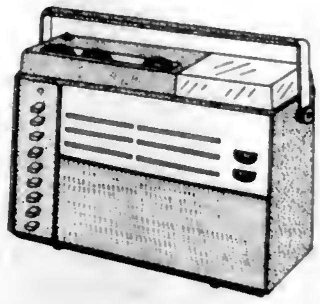
211,410
ORGAN CONSOLE

Winsor D. White, Jr., Blowing Rock, N.C., assignor to D. H. Baldwin Company, Cincinnati, Ohio, a corporation of Ohio
Filed Dec. 14, 1966, Ser. No. 5,036
Term of patent 14 years
(Cl. D56—2)



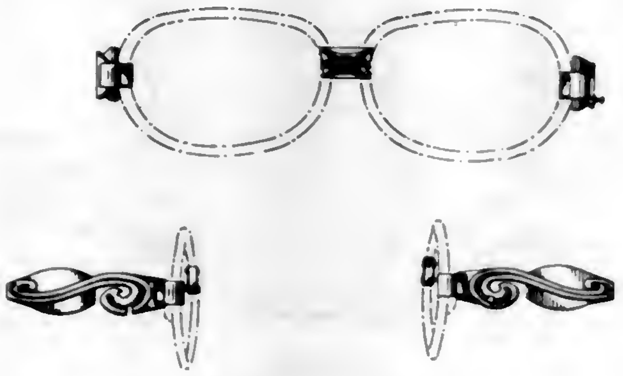
211,411
COMBINED PORTABLE RADIO AND MAGAZINE TAPE RECORDER OR SIMILAR ARTICLE

Donald Hugues MacGillavry, Riethoven, Netherlands, assignor to North American Philips Co., Inc.,
Filed Nov. 29, 1966, Ser. No. 4,842
Claims priority, application Switzerland June 1, 1966
Term of patent 14 years
(Cl. D56—4)



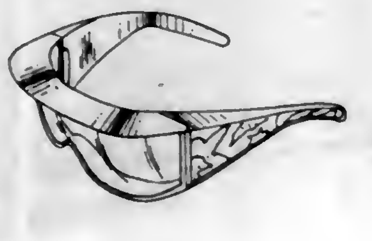
211,412
FOLDABLE EYEGLASS FRAME

Jack Amster, 1846 Redwood Terrace NW., Washington, D.C. 20012
Filed Jan. 10, 1967, Ser. No. 5,373
Term of patent 14 years
(Cl. D57—1)



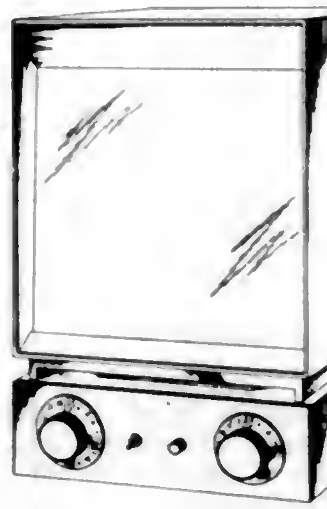
211,413
PAIR OF SUNGLASSES OR THE LIKE

Atherton R. Mitchell, Dillon Beach, Calif., assignor to Renauld International, Ltd., Burlingame, Calif., a corporation of Delaware
Filed Jan. 31, 1967, Ser. No. 5,633
Term of patent 14 years
(Cl. D57—1)



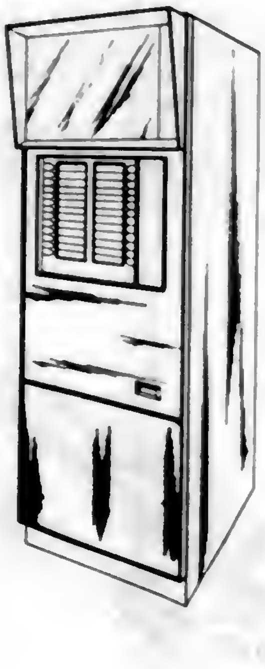
211,414
MICROFICHE VIEWER

Jack K. Hockenberry, Vestal, N.Y., assignor to International Business Machines Corporation, Armonk, N.Y., a corporation of New York
Filed Apr. 8, 1966, Ser. No. 1,823
Term of patent 14 years
(Cl. D61—1)



211,415
CABINET FOR A COMBINED MULTIPROGRAM PICTURE AND SOUND PROJECTION MACHINE OR SIMILAR ARTICLE

Henry A. Schwartz, Valley Stream, N.Y., assignor to Color-Sonics, Inc., New York, N.Y.
Filed July 11, 1966, Ser. No. 3,013
Term of patent 14 years
(Cl. D61—1)



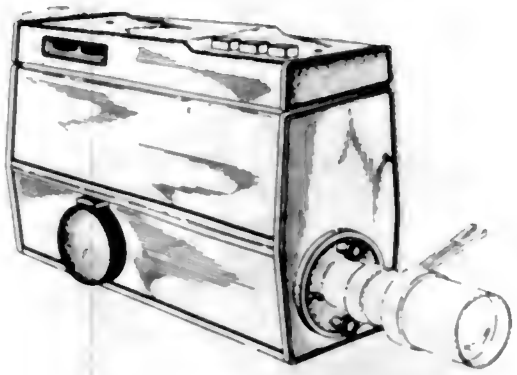
211,416
TELEVISION CAMERA

Charles E. Bozarth, Palo Alto, Calif., assignor to Ampex Corporation, Redwood City, Calif., a corporation of California

Filed Mar. 17, 1967, Ser. No. 6,277

Term of patent 14 years

(Cl. D61—1)



211,417
CAMERA

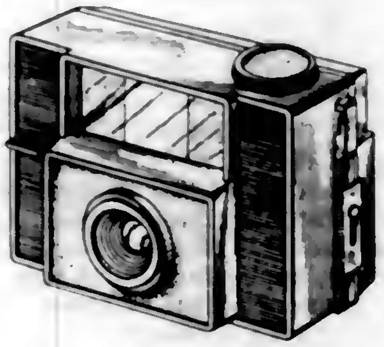
Lucien Antoine Regis Bouchetal de la Roche,
1 Place Jules Ferry, Lyon, France

Filed Aug. 25, 1967, Ser. No. 8,396

Claims priority, application France Mar. 1, 1967

Term of patent 14 years

(Cl. D61—1)



211,418
CAMERA

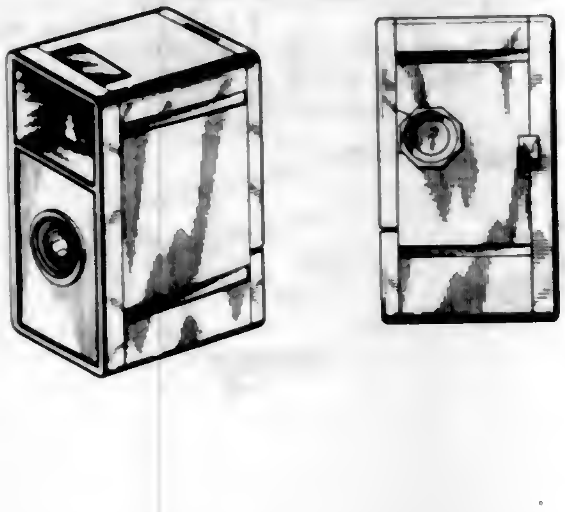
Lucien Antoine Regis Bouchetal de la Roche,
1 Place Jules Ferry Lyon, France

Filed Aug. 25, 1967, Ser. No. 8,397

Claims priority, application France Mar. 1, 1967

Term of patent 7 years

(Cl. D61—1)



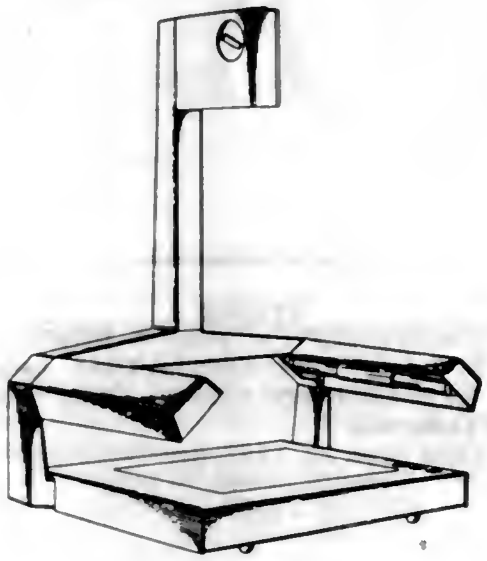
211,419
PHOTOGRAPHIC COPYING DEVICE

Kenneth W. Scott, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

Filed Sept. 11, 1967, Ser. No. 8,556

Term of patent 14 years

(Cl. D61—1)



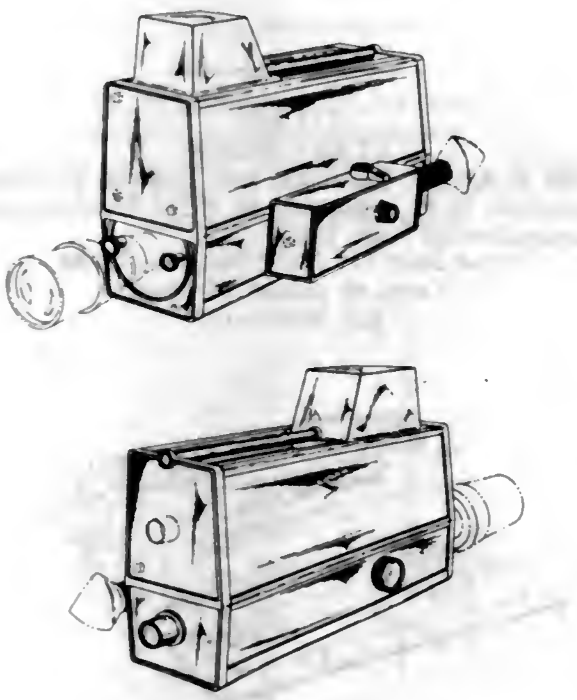
211,420
TELEVISION CAMERA

Charles E. Bozarth, Palo Alto, Calif., assignor to Ampex Corporation, Redwood City, Calif., a corporation of California

Filed Oct. 23, 1967, Ser. No. 9,102

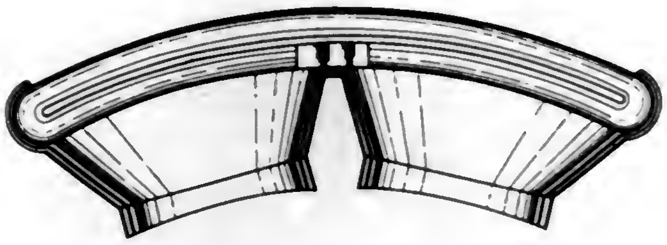
Term of patent 14 years

(Cl. D61—1)



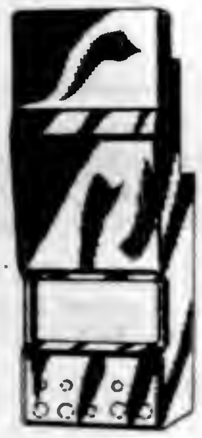
211,421
STEREOSCOPIC VIEWER

Harvey L. Ratliff, Jr., Waldorf, Md., assignor to Jetru Inc., Amarillo, Tex.
Filed Dec. 19, 1967, Ser. No. 9,850
Term of patent 14 years
(Cl. D61—1)



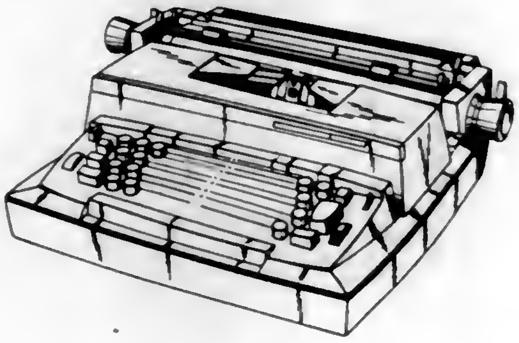
211,422
FRONT COVER FOR A PRESS

Millard K. Long, North Canton, Ohio, assignor to E. W. Bliss Company, Canton, Ohio, a corporation of Delaware
Filed Sept. 22, 1967, Ser. No. 8,695
Term of patent 14 years
(Cl. D63—1)



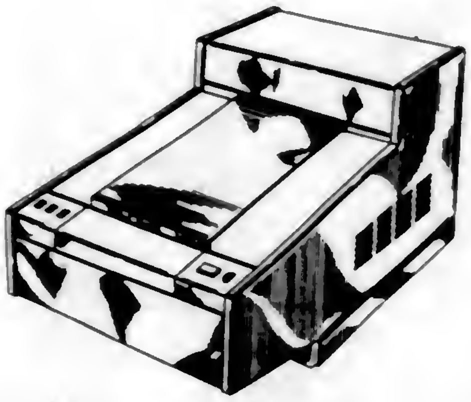
211,423
TYPEWRITER

Chester J. Abend, Camillus, and Thomas E. Hanson, Syracuse, N.Y., assignors to SCM Corporation, a corporation of New York
Filed July 21, 1967, Ser. No. 7,920
Term of patent 14 years
(Cl. D64—11)



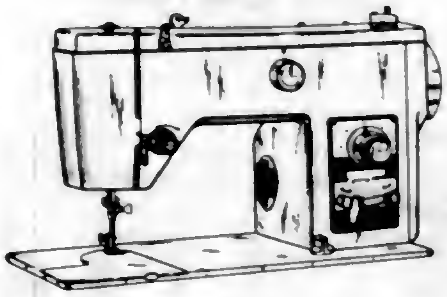
211,424
HOUSING FOR CALCULATING MACHINE

Alfons Boothby, Wilhelmshaven, Germany, assignor to Olympia Werke AG, Wilhelmshaven, Germany
Filed Oct. 18, 1967, Ser. No. 9,042
Term of patent 14 years
(Cl. D64—11)



211,425
SEWING MACHINE

Takaaki Ueda, Habikino, Japan, assignor to Koyo Kikai Kogyo Kabushiki Kaisha, Osaka, Japan
Filed Dec. 21, 1966, Ser. No. 5,137
Claims priority, application Japan July 11, 1966
Term of patent 14 years
(Cl. D70—1)



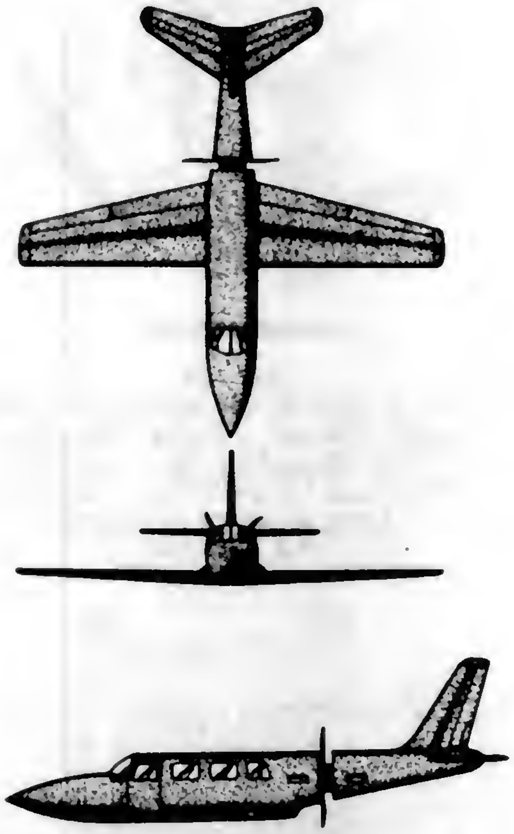
211,426
AIRCRAFT

Theodore R. Smith, Los Angeles, Calif., assignor to Ted Smith Aircraft Co., Inc., Northridge, Calif., a corporation of California

Filed Aug. 11, 1966, Ser. No. 3,426

Term of patent 14 years

(Cl. D71—1)



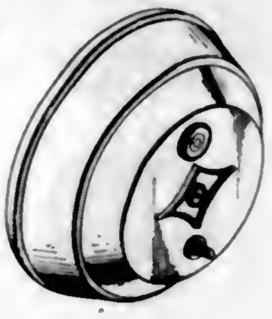
211,427
FIRE DETECTION AND ALARM UNIT

Vernon L. Brubaker, Huntington Beach, Calif., assignor to Casady Engineering Associates, Gardena, Calif., a corporation of California

Filed May 8, 1967, Ser. No. 7,013

Term of patent 14 years

(Cl. D72—1)



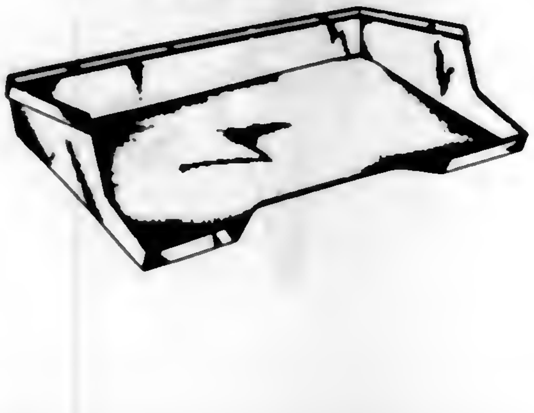
211,428
LETTER TRAY

Thomas H. Davis, Rocky River, Ohio, assignor to The General Industries Company, Elyria, Ohio, a corporation of Ohio

Filed June 1, 1967, Ser. No. 7,331

Term of patent 14 years

(Cl. D74—9)



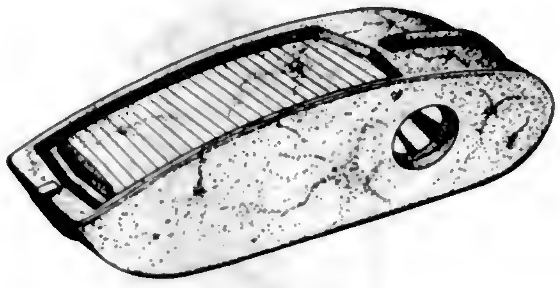
211,429
SLIDE-TOP PENCIL SHARPENER

Jack Fairchild Fleming, Summit, N.J., assignor to Sterling Plastics Co., Mountainside, N.J., a corporation of New Jersey

Filed June 21, 1967, Ser. No. 7,541

Term of patent 7 years

(Cl. D74—21)



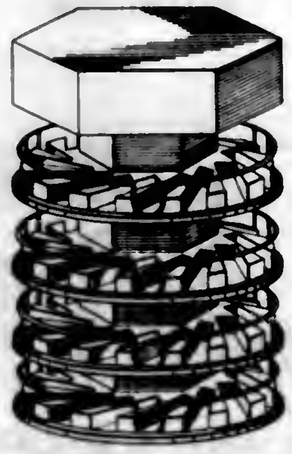
211,430
DISPLAY MERCHANDISER FOR PRE-RECORDED TAPE CARTRIDGES

George Balos, Chicago, Ill., assignor to Mercury Record Productions, Inc., Chicago, Ill., a corporation of Delaware

Filed May 17, 1967, Ser. No. 7,154

Term of patent 14 years

(Cl. D80—9)



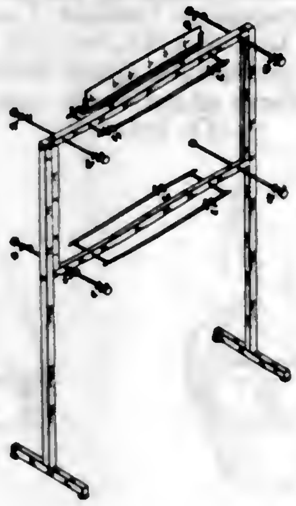
211,431
CLOTHING DISPLAY RACK

Daniel E. Gelles, Kerhonkson, N.Y.
(1140 Broadway, New York, N.Y. 10001)

Filed Nov. 13, 1967, Ser. No. 9,371

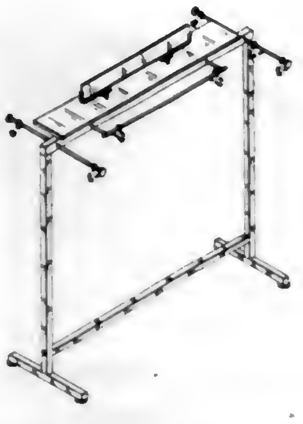
Term of patent 14 years

(Cl. D80—9)



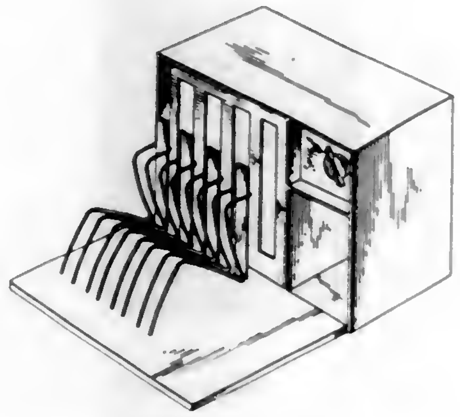
211,432
ARTICLE DISPLAY RACK

Daniel E. Gelles, Kerhonkson, N.Y.
(1140 Broadway, New York, N.Y. 10001)
Filed Nov. 13, 1967, Ser. No. 9,372
Term of patent 14 years
(Cl. D80—9)



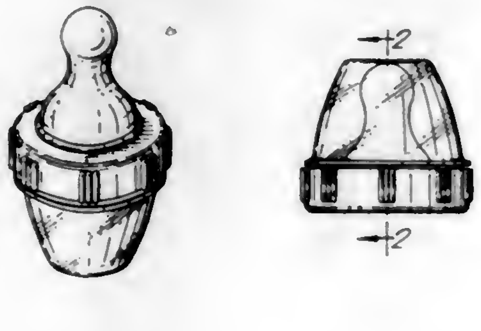
211,433
TOASTER

Jon W. Hauser, St. Charles, Ill., assignor of five percent to Charles H. Redman and 4 percent to Richard D. Shearer, both of St. Charles, Ill.
Filed July 21, 1967, Ser. No. 7,939
Term of patent 14 years
(Cl. D81—10)



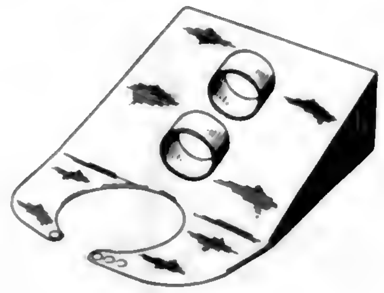
211,434
BABY'S FEEDER

David Atkin, London, England, assignor to The Cannon Rubber Manufacturers Limited, London, England
Filed Dec. 8, 1966, Ser. No. 4,969
Claims priority, application Great Britain July 14, 1966
Term of patent 14 years
(Cl. D83—8)



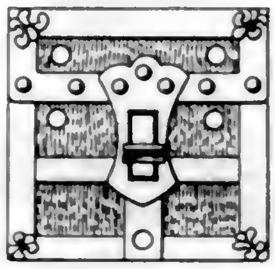
211,435
BABY BOTTLE HOLDER

Richard L. Kausen and Judith L. Kausen, both of 20810 Avenue 204, Lindsay, Calif. 93247
Filed May 10, 1967, Ser. No. 7,153
Term of patent 14 years
(Cl. D83—8)



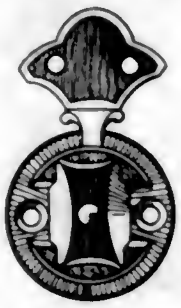
211,436
HANDBAG LOCK OR SIMILAR ARTICLE

David Damast, 22—14 40th Ave.,
Long Island City, N.Y. 11101
Filed Aug. 23, 1967, Ser. No. 8,355
Term of patent 3½ years
(Cl. D87—2)



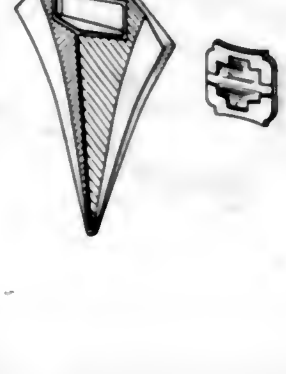
211,437
HANDBAG LOCK OR SIMILAR ARTICLE

David Damast, 22—14 40th Ave.,
Long Island City, N.Y. 11101
Filed Aug. 23, 1967, Ser. No. 8,357
Term of patent 3½ years
(Cl. D87—2)



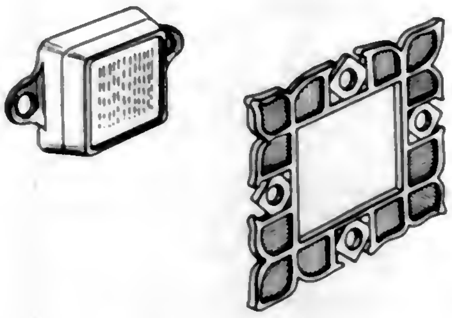
211,438
HANDBAG BUCKLE

David Damast, 22—14 40th Ave.,
Long Island City, N.Y. 11101
Filed Sept. 26, 1967, Ser. No. 8,738
Term of patent 3½ years
(Cl. D87—2)



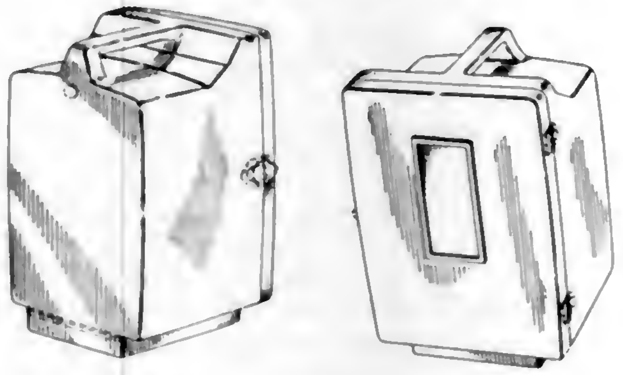
211,439
HANDBAG LOCK

**David Damast, 22—14 40th Ave.,
Long Island City, N.Y. 11101
Filed Sept. 26, 1967, Ser. No. 8,739
Term of patent 3½ years
(Cl. D87—2)**



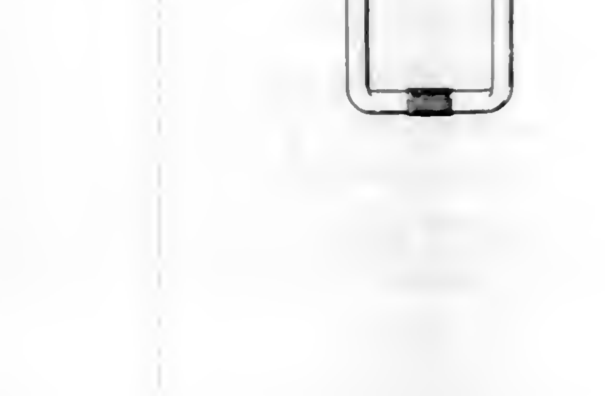
211,440
CARRYING CASE FOR MICROSCOPES

**Kenneth D. Maier, Mendon, N.Y., assignor to Bausch & Lomb Incorporated, Rochester, N.Y., a corporation of New York
Filed Mar. 23, 1967, Ser. No. 6,360
Term of patent 14 years
(Cl. D87—5)**



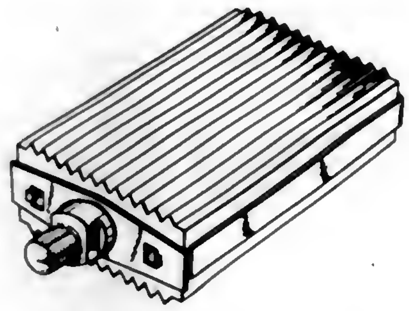
211,441
HANDLEBAR FOR BICYCLES

**Philip Steller, 75 Longfellow Road,
Great Neck, N.Y. 11023
Filed Dec. 14, 1967, Ser. No. 9,784
Term of patent 14 years
(Cl. D90—11)**



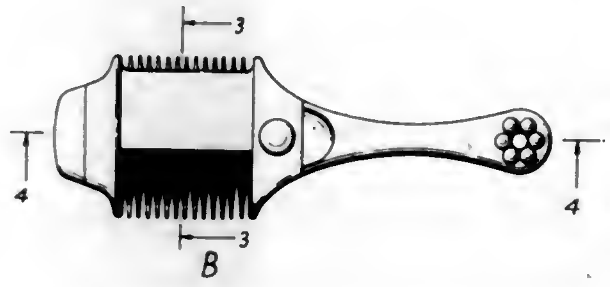
211,442
CYCLE PEDAL

**Frederick Arthur Adcock, Nottingham, England, assignor to Raleigh Industries Limited, a corporation of Great Britain
Filed Sept. 7, 1967, Ser. No. 8,560
Term of patent 14 years
(Cl. D90—14)**



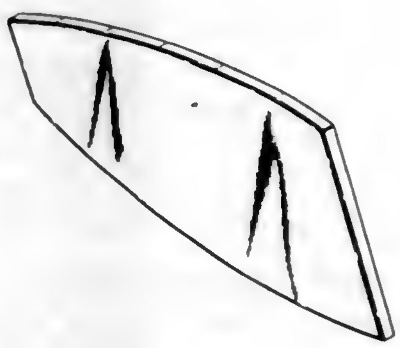
211,443
COMBINED COMB AND THINNING RAZOR

**Ng Fook Tin, 18 Hing Hon Road, 3rd Floor, Hong Kong
Filed Jan. 30, 1967, Ser. No. 5,605
Claims priority, application Great Britain Aug. 5, 1966
Term of patent 14 years
(Cl. D95—3)**



211,444
SIGN PANEL FOR A DOOR OR THE LIKE

**Peter Rowland Hill, The Bowery, Main St., Wymondham, Melton Mowbray, Leicestershire, England
Filed June 29, 1967, Ser. No. 7,634
Claims priority, application Great Britain Jan. 3, 1967
Term of patent 14 years
(Cl. D96—12)**



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LIST OF REISSUE PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 11TH DAY OF JUNE, 1968

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Bolesky, John D., to Therm-O-Disc, Inc. Snap acting thermal disc with bent-over angulated leaf spring contact member. Re. 26,406, 6–11–68, Cl. 337—343.

Brown Company: *See—*
Rumberger, George G. Re. 26,402.

Butler, George B., to Peninsula Chem Research, Inc. Saturated linear copolymers. Re. 26,407, 6–11–68, Cl. 260—78.5.

Cornell-Dubilier Electric Corp.: *See—*
Lunn, Lawrence M., Shields, and DeVault. Re. 26,404.

DeVault, Jean C.: *See—*
Lunn, Lawrence M., Shields, and DeVault. Re. 26,404.

Gronemeyer, Erich W.: *See—*
Kutik, Louis F. Re. 26,403.

Hance, Richard J., to Leeds & Northrup Co. Expendable phase change detector device. Re. 26,409, 6–11–68, Cl. 73—359.

Killian, Henry R., to Henry Pratt Co. Molded in place rubber seat butterfly valve. Re. 26,405, 6–11–68, Cl. 251—306.

Kutik, Louis F., 50% to Erich W. Gronemeyer. Plastic bristle brush. Re. 26,403, 6–11–68, Cl. 15—187.

Labs, Carlos B. Container assembly for aging whiskey. Re. 26,408, 6–11–68, Cl. 99—277.1.

Leeds & Northrup Co.: *See—*
Hance, Richard J. Re. 26,409.

Lunn, Lawrence M., J. L. Shields, and J. C. DeVault, to Cornell-Dubilier Electric Corp. Selective remote position control servosystem. Re. 26,404, 6–11–68, Cl. 318—29.

Peninsular Chem Research, Inc.: *See—*
Butler, George B. Re. 26,407.

Pratt Henry Co.: *See—*
Killian, Henry R. Re. 26,405.

Rumberger, George G., to Brown Co. Sealable overlap carton. Re. 26,402, 6–11–68, Cl. 229—37.

Shields, James L.: *See—*
Lunn, Lawrence M., Shields, and DeVault. Re. 26,404.

Therm-O-Disc, Inc.: *See—*
Bolesky, John D. Re. 26,406.

LIST OF DESIGN PATENTEES

Abend, Chester J., and T. E. Hanson, to SCM Corp. Typewriter. 211,423, 6–11–68, Cl. D64—11.

Adcock, Frederick A., to Raleigh Industries Ltd. Cycle pedal. 211,442, 6–11–68, Cl. D90—14.

American Can Co.: *See—*
Hanseter, Ronald A., Sigman, and Tynan. 211,320.

American Hospital Supply Corp.: *See—*
Slouka, Richard A. 211,345.

Ampex Corp.: *See—*
Bornschlegel, Robert W. 211,352.
Bozarth, Charles E. 211,357.
Bozarth, Charles E. 211,416.
Bozarth, Charles E. 211,420.

Amster, Jack. Foldable eyeglass frame. 211,412, 6–11–68, Cl. D57—1.

Anderson, Victor F. Pitcher. 211,383, 6–11–68, Cl. D44—21.

Arcoa, Inc.: *See—*
Deshong, Harry B., and Hamby. 211,378.

Atkin, David, to The Cannon Rubber Manufacturers Ltd. Baby's feeder. 211,434, 6–11–68, Cl. D83—8.

Automatic Electric Laboratories, Inc.: See—
Janda, George M. 211,362.

Bagno, Samuel M. Ultrasonic transducer for a space alarm system for burglar detection or similar article. 211,353, 6–11–68, Cl. D26—14.

Baldwin, D. H., Co.: *See—*
White, Winsor D., Jr. 211,410.

Balos, George, to Mercury Record Productions, Inc. Display merchandiser for pre-recorded tape cartridges. 211,430, 6–11–68, Cl. D80—9.

Bausch & Lomb Inc.: *See—*
Maier, Kenneth D. 211,440.

Beach, John R., to Signode Corp. Strap buckle. 211,314, 6–11–68, Cl. D2—408.

Bernstein, Bernard. Ornate gas lamp. 211,394, 6–11–68, Cl. D48—31.

Berry, Clyde A., to Pilot Research Corp. Panty hose. 211,313, 6–11–68, Cl. D2—7.

Bertelsen. Erik H. Candle holder or the like. 211,386, 6–11–68, Cl. D48—2.

Beyer, Lawrence A.: *See—*
Updegraff, Alfred V., and Beyer. 211,322.

Bieber, Donald: *See—*
Lehrhaupt, Maxwell, and Bieber. 211,384.

Bliss, E. W., Co.: *See—*
Long, Millard K. 211,422.

Boothby, Alfons, to Olympia Werke AG. Housing for calculating machine. 211,424, 6–11–68, Cl. D64—11.

Bornschlegel, Robert W., to Ampex Corp. Remote control unit for a TV recorder. 211,352, 6–11–68, Cl. D26—13.

Bouchetal de la Roche, Lucien A. R. Camera. 211,417, 6–11–68, Cl. D61—1.

Bouchetal de la Roche, Lucien A. R. Camera. 211,418, 6–11–68, Cl. D61—1.

Bozarth, Charles E., to Ampex Corp. Television tape transport. 211,357, 6–11–68, Cl. D26—14.

Bozarth, Charles E., to Ampex Corp. Television camera. 211,-416, 6–11–68, Cl. D61—1.

Bozarth, Charles E., to Ampex Corp. Television camera. 211,-420, 6–11–68, Cl. D61—1.

Brubaker, Vernon L., to Casady Engineering Associated. Fire detection and alarm unit. 211,427, 6–11–68, Cl. D72—1.

Burnbaum, Jack. Christmas tree ornament. 211,367, 6–11–68, Cl. D29—1.

Callahan, Neil W., Jr. Insect catcher. 211,339, 6–11–68, Cl. D22—19.

Callahan, Neil W., Jr. Insect catcher. 211,340, 6–11–68, Cl. D22—19.

Cannon Rubber Manufacturers Ltd., The: *See—*
Atkin, David. 211,434.

Carefree Leisure Homes, Inc.: *See—*
Mark, Darwin W. 211,326.

Casady Engineering Associated: *See—*
Brubaker, Vernon L. 211,427.

Casas, Robert G. Automobile front fender or similar article. 211,330, 6–11–68, Cl. D14—3.

Chan, Anthony P. H., to Varian Associates. Graphic recorder. 211,360, 6–11–68, Cl. D26—14.

Chase, David O.: *See—*
Doring, William H., Chase, and Sammons. 211,393.

Chidester, Marvin E. Golf putting instructional device. 211,-376. 6–11–68, Cl. D34—5.

Chieda, Robert A., J. Cuccio, and G. D. Robinson, to Gilbert & Barker Mfg. Co. Gasoline dispensing pump. 211,401, 6–11–68, Cl. D52—2.

Color-Sonics, Inc.: *See—*
Schwartz, Henry A. 211,415.

Comdata Corp.: *See—*
Jensen, Raymond W. 211,356.

Crouse-Hinds Co.: *See—*
Winslow, Reynolds B. 211,395.

Cuccio, John: *See—*
Chieda, Robert A., Cuccio, and Robinson. 211,401.

Damast, David. Handbag lock or similar article. 211,436, 6–11–68, Cl. D87—2.

Damast, David. Handbag lock or similar article. 211,437, 6–11–68, Cl. D87—2.

Damast, David. Handbag buckle. 211,438, 6–11–68, Cl. D87—2.

Damast, David. Handbag lock. 211,439, 6–11–68, Cl. D87—2.

Davis, Thomas H., to The General Industries Co. Letter tray. 211,428, 6–11–68, Cl. D74—9.

Deshong, Harry B., and D. L. Hamby, to Arcoa, Inc. Snow bike. 211,378, 6–11–68, Cl. D34—15.

De Vos, Hendrik A. J., R. E. Petersen, and J. J. Vetere, to Sylvania Electric Products Inc. Fluorescent lamp fixture for ripening produce or similar articles. 211,389, 6–11–68, Cl. D48—20.

Doring, William H., D. O. Chase, and W. W. Sammons, to Union Carbide Corp. Portable lantern. 211,393, 6–11–68, Cl. D48—24.

Duro Engineering & Mfg., Inc.: *See—*
Miller, Bernard. 211,403.

Dweck, Maurice J. Earring. 211,385, 6–11–68, Cl. D45—9.

Eastman Kodak Co.: *See—*
Scott, Kenneth W. 211,419.

Egan, Philip S., to A. J. Nystrom and Co. Orrery. 211,346, 6–11–68, Cl. D25—1.

Erenhouse, Rudolph. Creamer or the like. 211,382, 6–11–68, Cl. D44—21.

Falk, Charles T., to Hesse Carriage Co. Handle for overhead door. 211,323, 6–11–68, Cl. D10—8.

Farnham, Gilman O. and J. J. Cover for telephone handsets. 211,355, 6–11–68, Cl. D26—14.

Farnham, Judith J.: *See—*
Farnham, Gilman O. and J. J. 211,355.

Flaith, George D., to Proctor & Schwartz, Inc. Slat for a slat apron. 211,406, 6–11–68, Cl. D55—1.

Flaith, George D., to Proctor & Schwartz, Inc. Slat for a spike apron. 211,407, 6–11–68, Cl. D55—1.

Flaith, George D., to Proctor & Schwartz, Inc. Slat for a slat apron. 211,408, 6–11–68, Cl. D55—1.
Fleming, Jack F., to Sterling Plastics Co. Slide-top pencil sharpener. 211,429, 6–11–68, Cl. D74—21.
Garrett, Jay O., and L. M. Gustaveson, to Pacific States Cast Iron Pipe Co., Division of McWane Cast Iron Co. Fire hydrant. 211,342, 6–11–68, Cl. D23—12.
Gehrie, Charles S., to Presto Lock Co., Inc. Combined handle stud and combination lock. 211,400, 6–11–68, Cl. D50—7.
Gelles, Daniel E. Clothing display rack. 211,431, 6–11–68, Cl. D80—9.
Gelles, Daniel E. Article display rack. 211,432, 6–11–68, Cl. D80—9.
General Electric Co.: *See—*
Pettengill, Myron F. 211,391.
General Industries Co., The: *See—*
Davis, Thomas H. 211,428.
Gentex Corp.: *See—*
Karlyn, Albert A. 211,341.
Gilbert & Barker Mfg. Co.: *See—*
Chieda, Robert A., Cuccio, and Robinson. 211,401.
Gillette Co., The: *See—*
Jeronimus, Patrick R. 211,319.
Gilliland, William H.: *See—*
Lankford, William A., and Gilliland. 211,351.
Globe-Union Inc.: *See—*
Remon, John T. 211,348.
Graham, Michael M. Automobile arm rest console. 211,333, 6–11–68, Cl. D14—6.
Grebow, Leon D. Combined flashlight and toy. 211,392, 6–11–68, Cl. D48—24.
Gustaveson, Lloyd M.: *See—*
Garrett, Jay O., and Gustaveson. 211,342.
HRB-Singer, Inc.: *See—*
Smith, Don E. 211,402.
Hall, Justice. Doorknob cover. 211,398, 6–11–68, Cl. D50—3.
Hamby, Darrel L.: *See—*
Deshong, Harry B., and Hamby. 211,378.
Hammond, Thomas, to Rival Lamps Ltd. Electric lamp. 211,349, 6–11–68, Cl. D26—8.
Hammond, Thomas, to Rival Lamps Ltd. Electric lamp. 211,350, 6–11–68, Cl. D26—8.
Hanseter, Ronald A., R. P. Sigman, and B. H. Tynan, to American Can Co. Compartmented tray. 211,320, 6–11–68, Cl. D9—185.
Hanson, Sherwood M. Putter head. 211,374, 6–11–68, Cl. D34—5.
Hanson, Thomas E.: *See—*
Abend, Chester J., and Hanson. 211,423.
Harrison, Stanley D., to Mole-Richardson Co. Floodlight for photographers or the like. 211,388, 6–11–68, Cl. D48—20.
Hauser, Jon W., 5% to C. H. Redman, and 4% to R. D. Shearer. Toaster. 211,433, 6–11–68, Cl. D81—10.
Hayes Mfg. Co.: *See—*
Updegraff, Alfred V., and Beyer. 211,322.
Helland, Daniel J. Electric guitar or similar article. 211,409, 6–11–68, Cl. D56—1.
Hesse Carriage Co.: *See—*
Falk, Charles T. 211,323.
Hill, Peter R. Sign panel for a door or the like. 211,444, 6–11–68, Cl. D96—12.
Hitchcock, Morley. Combined map holder and viewer therefor. 211,369, 6–11–68, Cl. D33—3.
Hockenberry, Jack K., to International Business Machines Corp. Microfiche viewer. 211,414, 6–11–68, Cl. D61—1.
Hori, Takeo, to Matsushita Electric Industrial Co., Ltd. Portable hand-held vacuum cleaner. 211,396, 6–11–68, Cl. D49—14.
Houston, Robert W., to Studebaker Corp. Tire studding device. 211,405, 6–11–68, Cl. D54—13.
Howard, Margaret, to The Mettoy Co. Ltd. Toy dog. 211,371, 6–11–68, Cl. D34—2.
Howard, Margaret, to The Mettoy Co. Ltd. Toy dog. 211,372, 6–11–68, Cl. D34—2.
Howard, Margaret, to The Mettoy Co. Ltd. Toy dog. 211,373, 6–11–68, Cl. D34—2.
International Business Machines Corp.: *See—*
Hockenberry, Jack K. 211,414.
International Silver Co., The: *See—*
Toffolon, Siro R. 211,404.
Janda, George M., to Automatic Electric Laboratories, Inc. Desk telephone. 211,362, 6–11–68, Cl. D26—14.
Jensen, Raymond W., to Comdata Corp. Container for storing and shipping a reel of video tape, or similar article. 211,356, 6–11–68, Cl. D26—14.
Jeronimus, Patrick R., to The Gillette Co. Bottle. 211,319, 6–11–68, Cl. D9—138.
Jetru Inc.: *See—*
Ratliff, Harvey L., Jr. 211,421.
Jones, Allan F., to Period Brass, Inc. Faucet spout. 211,343, 6–11–68, Cl. D23—23.
Kadmon, Alice: *See—*
Kadmon, Otto and A. 211,365.
Kadmon, Otto and A. 211,366.
Kadmon, Otto and A. Christmas ornament. 211,365, 6–11–68, Cl. D29—1.
Kadmon, Otto and A. Christmas ornament or the like. 211,366, 6–11–68, Cl. D29—1.
Karlyn, Albert A., to Gentex Corp. Riot shield or similar article. 211,341, 6–11–68, Cl. D22—99.
Karpfen, Leib. Vinyl covered metal step tread. 211,327, 6–11–68, Cl. D13—7.
Kaufman, Jack W. Combined brush and sponge. 211,315, 6–11–68, Cl. D4—6.
Kausen, Judith L.: *See—*
Kausen, Richard L. and J. L. 211,335.
Kausen, Richard L. and J. L. 211,435.
Kausen, Richard L. and J. L. Baby holding belt for use in a shopping cart. 211,335, 6–11–68, Cl. D15—1.
Kausen, Richard L. and J. L. Baby bottle holder. 211,435, 6–11–68, Cl. D83—8.
Kettman, Louis. Settee. 211,336, 6–11–68, Cl. D15—11.
Khan, Aman U., to Whirlpool Corp. Combination storage cabinet and sink for laundry or the like. 211,344, 6–11–68, Cl. D23—59.
Kirk, Albert S., to Southco Inc. Handle. 211,324, 6–11–68, Cl. D10—8.
Klebe, Erich O. Automobile. 211,328, 6–11–68, Cl. D14—3.
Knoll Associates, Inc.: *See—*
Schultz, Moses R. 211,334.
Schultz, Moses R. 211,337.
Schultz, Moses R. 211,338.
Koyo Kikai Kogyo Kabushiki Kaisha: *See—*
Ueda, Takaaki. 211,425.
Kustermann, Gerhard, to Lever Bros. Co. Bottle or the like. 211,316, 6–11–68, Cl. D9—19.
Lakin, Willis M., to Marlin Toy Products, Inc. Trundle toy. 211,377, 6–11–68, Cl. D34—15.
Lankford, William A., and W. H. Gilliland, to USCO Power Equipment Corp. Electrical insulator or similar article. 211,351, 6–11–68, Cl. D26—10.
Lehrhaupt, Maxwell, and D. Bieber. Glass chiller. 211,384, 6–11–68, Cl. D44—29.
Lever Bros. Co.: *See—*
Kustermann, Gerhard. 211,316.
Lightoller Inc.: *See—*
Muller, Henry P. 211,387.
Long, Millard K., to E. W. Bliss Co. Front cover for a press. 211,422, 6–11–68, Cl. D63—1.
MacGillavry, Donald H., to North American Philips Co., Inc. Combined portable radio and magazine tape recorder or similar article. 211,411, 6–11–68, Cl. D56—4.
Magnavox Co., The: *See—*
McFarland, Donald L., and Reese. 211,354.
Maier, Kenneth D., to Bausch & Lomb Inc. Carrying case for microscopes. 211,440, 6–11–68, Cl. D87—5.
Mark, Darwin W., to Carefree Leisure Homes, Inc. Leisure home. 211,326, 6–11–68, Cl. D13—1.
Marlin Toy Products, Inc.: *See—*
Lakin, Willis M. 211,377.
Martin, Richard C., to Vte Mountain Supply Co. Combination key chain and fire lighter. 211,399, 6–11–68, Cl. D50—4.
Matsushita Electric Industrial Co., Ltd.: *See—*
Hori, Takeo. 211,396.
Mattox, Stephen A.: *See—*
Taggart, John K. 211,379.
Mays, George T. Timing device or similar article. 211,347, 6–11–68, Cl. D26—1.
McFarland, Donald L., and G. Reese, to The Magnavox Co. Facsimile transceiver. 211,354, 6–11–68, Cl. D26—14.
McLeod, Bishop, to Schenley Industries, Inc. Combined bottle and closure. 211,318, 6–11–68, Cl. D9—83.
Mercury Record Productions, Inc.: *See—*
Balos, George. 211,430.
Mettoy Co. Ltd., The: *See—*
Howard, Margaret. 211,371.
Howard, Margaret. 211,372.
Howard, Margaret. 211,373.
Ullmann, Henry. 211,321.
Miller, Bernard, to Duro Engineering & Mfg., Inc. Reaming tool. 211,403, 6–11–68, Cl. D54—4.
Mitchell, Atherton R., to Renauld International, Ltd. Pair of sunglasses or the like. 211,413, 6–11–68, Cl. D57—1.
Mole-Richardson Co.: *See—*
Harrison, Stanley D. 211,388.
Moore, Aston L. Speaker enclosure. 211,361, 6–11–68, Cl. D26—14.
Moore, Oklahoma, to D. Seitz. Mobile wheel alignment unit. 211,331, 6–11–68, Cl. D14—3.
Moranduzzo, Dario. Christmas ornament or the like. 211,363, 6–11–68, Cl. D29—1.
Moranduzzo, Dario. Christmas ornament or the like. 211,364, 6–11–68, Cl. D29—1.
Moranduzzo, Dario. Clock. 211,380, 6–11–68, Cl. D42—7.
Moranduzzo, Dario. Clock. 211,381, 6–11–68, Cl. D42—7.
Morrison, James P. Tie rack. 211,370, 6–11–68, Cl. D33—8.
Muller, Henry L., to Lightoller Inc. Desk lamp. 211,387, 6–11–68, Cl. D48—20.
Nika, Claire M. Sponge mop. 211,397, 6–11–68, Cl. D49—22.
North American Philips Co., Inc.: *See—*
MacGillavry, Donald H. 211,411.
Norvold, Walton P. Auto drip pan. 211,332, 6–11–68, Cl. D14—6.
Nystrom, A. J., and Co.: *See—*
Egan, Philip S. 211,346.
Olympia Werke AG: *See—*
Boothby, Alfons. 211,424.
Pacific States Cast Iron Pipe Co., Division of McWane Cast Iron Co.: *See—*
Garrett, Jay O., and Gustaveson. 211,342.
Period Brass, Inc.: *See—*
Jones, Allan F. 211,343.
Petersen, Ruth E.: *See—*
De Vos, Hendrik A. J., Petersen, and Vetere. 211,389.
Pettengill, Myron F., to General Electric Co. Floodlight. 211,391, 6–11–68, Cl. D48—20.
Pilot Research Corp.: *See—*
Berry, Clyde A. 211,313.
Presto Lock Co., Inc.: *See—*
Gehrie, Charles S. 211,400.

- Proctor & Schwartz, Inc. : *See—*
  - Flaith, George D. 211,406.
  - Flaith, George D. 211,407.
  - Flaith, George D. 211,408.
- Raleigh Industries Ltd. : *See—*
  - Adcock, Frederick A. 211,442.
- Ratliff, Harvey L., Jr., to Jetru Inc. Stereoscopic viewer. 211,421, 6–11–68, Cl. D61—1.
- Redman, Charles H. : *See—*
  - Hauser, Jon W. 211,433.
- Reese, Glenn : *See—*
  - McFarland, Donald L., and Reese. 211,354.
- Remon, John T., to Globe-Union Inc. Storage battery. 211,348, 6–11–68, Cl. D26—6.
- Renauld International, Ltd. : *See—*
  - Mitchell, Atherton R. 211,413.
- Rival Lamps Ltd. : *See—*
  - Hammond, Thomas. 211,349.
  - Hammond, Thomas. 211,350.
- Robert, Tony. Holder for food pans for pets. 211,368, 6–11–68, Cl. D30—13.
- Robinson, George D. : *See—*
  - Chieda, Robert A., Cuccio, and Robinson. 211,401.
- Ross, Charles A. Combination grille and speaker ports for a loudspeaker enclosure. 211,358, 6–11–68, Cl. D26—14.
- Rycraft, John W. Combination lift fork and bark stripper for an end lift vehicle. 211,329, 6–11–68, Cl. D14—3.
- SCM Corporation : *See—*
  - Abend, Chester J., and Hanson. 211,423.
- Salsgiver, John P., to United Technical Corp. Gas chromatograph console. 211,359, 6–11–68, Cl. D26—14.
- Sammons, William W. : *See—*
  - Doring, William H., Chase, and Sammons. 211,393.
- Schenley Industries, Inc. : *See—*
  - McLeod, Bishop. 211,318.
  - Sheesley, Budd S. 211,317.
- Schultz, Moses R., to Knoll Associates, Inc. Armchair. 211,334, 6–11–68, Cl. D15—1.
- Schultz, Moses R., to Knoll Associates, Inc. Contour chaise lounge. 211,337, 6–11–68, Cl. D15—11.
- Schultz, Moses R., to Knoll Associates, Inc. Chaise lounge. 211,338, 6–11–68, Cl. D15—11.
- Schwartz, Henry A., to Color-Sonics, Inc. Cabinet for a combined multiprogram picture and sound projection machine or similar article. 211,416, 6–11–68, Cl. D61—1.
- Scott, Kenneth W., to Eastman Kodak Co. Photographic copying device. 211,419, 6–11–68, Cl. D61—1.
- Seitz, Don : *See—*
  - Moore, Oklahoma. 211,331.
- Shearer, Richard D. : *See—*
  - Hauser, Jon W. 211,433.
- Sheesley, Budd S., to Schenley Industries, Inc. Decanter. 211,317, 6–11–68, Cl. D9—32.
- Sigman, Robert P. : *See—*
  - Hanseter, Ronald A., Sigman, and Tynan. 211,320.
- Signode Corp. : *See—*
  - Beach, John R. 211,314.
- Slouka, Richard A., to American Hospital Supply Corp. Dental console. 211,345, 6–11–68, Cl. D24—1.
- Smith, Don E., to HRB-Singer, Inc. Foreign object detector. 211,402, 6–11–68, Cl. D52—6.
- Smith, Ted, Aircraft Co., Inc. : *See—*
  - Smith, Theodore R. 211,426.
- Smith, Theodore R., to Smith, Ted, Aircraft Co., Inc. Aircraft. 211,426, 6–11–68, Cl. D71—1.
- Southco Inc. : *See—*
  - Kirk, Albert S. 211,324.
- Steller, Philip. Handlebar for bicycles. 211,441, 6–11–68, Cl. D90—11.
- Sterling Plastics Co. : *See—*
  - Fleming, Jack F. 211,429.
- Studebaker Corp. : *See—*
  - Houston, Robert W. 211,405.
- Swimmer, Ernest J. Game board. 211,375, 6–11–68, Cl. D34—5.
- Sylvania Electric Products Inc. : *See—*
  - De Vos, Hendrik A. J., Petersen, and Vetere. 211,389.
- Taggart, John K., ½ to Stephen A. Mattox. Pocket whetstone. 211,379, 6–11–68, Cl. D37—1.
- Tin, Ng Fook. Combined comb and thinning razor. 211,443, 6–11–68, Cl. D95—3.
- Toffolon, Siro R., to The International Silver Co. Fork or similar article of flatware. 211,404, 6–11–68, Cl. D54—12.
- Tynan, Bruce H. : *See—*
  - Hanseter, Ronald A., Sigman, and Tynan. 211,320.
- USCO Power Equipment Corp. : *See—*
  - Lankford, William A., and Gilliland. 211,351.
- Ueda, Takaati, to Koyo Kikai Kogyo Kabushiki Kaisha. Sewing machine. 211,425, 6–11–68, Cl. D70—1.
- Ullmann, Henry, to The Mettoy Co., Ltd. Display carton. 211,321, 6–11–68, Cl. D9—242.
- Union Carbide Corp. : *See—*
  - Doring, William H., Chase and Sammons. 211,393.
- United Technical Corp. : *See—*
  - Salsgiver, John P. 211,359.
- Updegraff, Alfred V., and L. A. Beyer, to Hayes Mfg. Co. Carrying handle for a bottle or the like. 211,322, 6–11–68, Cl. D9—291.
- Varian Associates : *See—*
  - Chan, Anthony P. H. 211,360.
- Veter, John J. : *See—*
  - De Vos, Hendrik A. J., Petersen, and Vetere. 211,389.
- Vte Mountain Supply Co. : *See—*
  - Martin, Richard C. 211,399.
- Weisz, George R. Building front. 211,325, 6–11–68, Cl. D13—1.
- Whirlpool Corp. : *See—*
  - Khan, Aman U. 211,344.
- White, Winsor D., Jr., to D. H. Baldwin Co. Organ console. 211,410, 6–11–68, Cl. D56—2.
- Winslow, Reynolds B., to Crouse-Hinds Co. Outdoor luminaire. 211,395, 6–11–68, Cl. D48—31.
- Woods, Leroy R. Lighting fixture stand. 211,390, 6–11–68, Cl. D48—20.

LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 11TH DAY OF JUNE, 1968

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

- ACF Industries, Inc.: *See*—
    - Brown, Morris C., and Martin. 3,387,831.
    - Pulcrano, Frank C., and Becker. 3,387,570.
- A/S Nunc: *See*—
    - Ingvorsen, Helmut. 3,388,043.
- Abbott, Frank R., to United States of America, Navy. Sonic beam former. 3,388,374, 6–11–68, Cl. 340—12.
- Abendroth, Hans-Joachim, and G. Henrich, to Farbenfabriken Bayer Aktiengesellschaft. Process for the production of hydrazine. 3,387,919, 6–11–68, Cl. 23—190.
- Abex Corp.: *See*—
    - Born, Ellis H., Burnham, and Wolfe. 3,388,070.
- Abitibi St. Anne Paper Ltd.: *See*—
    - Reid, Kevin W. 3,387,897.
- Ackart, William K., Sr., and H. B. Barish, to Lockheed Aircraft Corp. Twist drill. 3,387,511, 6–11–68, Cl. 77—70.
- Acme Electric Corp.: *See*—
    - Klein, Richard J. 3,388,312.
- Adams, Charles D., to Melpar, Inc. Extendible boom. 3,387,414, 6–11–68, Cl. 52—108.
- Adams, Harry E. Compass oriented fluid velocity and direction sensor. 3,387,491, 6–11–68, Cl. 73—189.
- Adams, Leland D., Jr. Life raft cradle. 3,387,811, 6–11–68, Cl. 248—146.
- Addressograph-Multigraph Corp.: *See*—
    - Shelffo, Loren E., and East. 3,387,586.
- Adler, Robert, to Zenith Radio Corp. Solid state traveling wave devices. 3,388,334, 6–11–68, Cl. 330—5.5.
- Adler, Ronald E. Edge lighted memorandum board. 3,388,243, 6–11–68, Cl. 240—2.
- Aeroflex Laboratories, Inc.: *See*—
    - Houghton, Clayton W. 3,387,547.
    - Houghton, Clayton W., and Sanders. 3,387,532.
- Agfa Aktiengesellschaft: *See*—
    - Ruempelein, Fritz. 3,388,329.
    - Wrinkler, Alfred, Ernst, and Stierstorfer. 3,387,546.
- Agfa-Gevaert Aktiengesellschaft: *See*—
    - Kochler, Roland, Baasner, Nagel, and Engelage. 3,387,760.
    - Schneider, Othmar, and Viehrig. 3,387,371.
    - Wick, Richard, Zeller, and Brandt. 3,387,533.
- Agway Inc.: *See*—
    - Whitman, John C. 3,387,366.
- Aiken, William R. Stereophonic sound reproducing arrangement. 3,388,217, 6–11–68, Cl. 179—1.
- Ainslie, Thomas D., to Phillips-Van Heusen Corp. Fabric testing apparatus. 3,387,484, 6–11–68, Cl. 73—7.
- Air Products and Chemicals, Inc.: *See*—
    - Craig, Robert G., and Friedman. 3,388,055.
- Akron Brass Co.: *See*—
    - Allenbaugh, George G., Jr. 3,387,791.
- Aktiebolaget Bofors: *See*—
    - Eriksson, Nils B., and Nordin. 3,388,222.
- Aktiebolaget Gylling & Co.: *See*—
    - Almenfors, Bo L., and Johansson. 3,387,598.
- Aktiebolaget Nordiska Armaturfabrikerna: *See*—
    - Ilander, Nils. 3,388,038.
- Alampi, Daniel A., to General Electric Co. Metal-coated plastic laminate. 3,388,036, 6–11–68, Cl. 161—185.
- Alburn, Harvey E., and D. William, to American Home Products Corp. Bisulfite addition compounds of carbohydrate periodate oxidation products. 3,388,115, 6–11–68, Cl. 260—210.
- Alexander, Robert R., to The Kendall Co. Multi-layered nonwoven fabrics. 3,388,028, 6–11–68, Cl. 161—156.
- Algino, Joseph M., to The Dole Valve Co. Ice cube dispenser with screw feed. 3,387,743, 6–11–68, Cl. 221—75.
- Allen, Charles A., E. F. Cooney, and P. M. Freeze, to Allis-Chalmers Mfg. Co. Axially adjustable rigid shaft coupling. 3,387,869, 6–11–68, Cl. 287—62.
- Allen, Robert H., and L. D. Yats, to The Dow Chemical Co. Method of alkylating polystyrene. 3,388,111, 6–11–68, Cl. 260—93.5.
- Allenbaugh, George G., Jr., to Akron Brass Co. Nozzle. 3,387,791, 6–11–68, Cl. 239—458.
- Allied Chemical Corp.: *See*—
    - Amano, Carl K., and Taylor 3,387,921.
    - Dien, Chi K. 3,388,094.
    - Dien, Chi K. 3,388,149.
    - Evans, Francis W., and Litt. 3,388,078.
    - Farrell, Thomas J. 3,388,196.
    - Flanner, Lloyd T. 3,387,425.
    - Kray, Raymond J., and Bellet. 3,388,186.
    - Newallis, Peter E., Pierpont, and Rumanowski. 3,388,150.
    - Rast, Gustav E. 3,387,983.
- Allis-Chalmers Mfg. Co.: *See*—
    - Allen, Charles A., Cooney, and Freeze. 3,387,869.
    - Dreisin, Alexander. 3,388,232.
    - Nowotny, Lloyd A. 3,387,375.
    - Parrish, Walter A., Jr. 3,388,233.
    - Plate, John R., and Peterson. 3,387,862.
- Allmark, Reginald H., and W. J. Jones, to The English Electric Co. Ltd. Electric switching means for controlling highly inductive circuits. 3,388,300, 6–11–68, Cl. 317—148.5.
- Allphin, Nylen L., Jr., to Chevron Research Co. Magnesium overbased phenate. 3,388,063, 6–11–68, Cl. 252—33.4.
- Almenfors, Bo L., and K.-G. S. Johansson, to Aktiebolaget Gylling & Co. Automatic internal combustion engine starting apparatus. 3,387,598, 6–11–68, Cl. 123—41.15.
- Alpiner, Bernard P.: *See*—
    - Hankin, Robert B., Dallaflor, and Alpiner. 3,388,282.
- Althaus, Edgar C. Rolling hoop toy. 3,387,778, 6–11–68, Cl. 235—95.
- Altman, Gerald. Graphic materials incorporating microsphere distributions for the presentation of visual information. 3,388,027, 6–11–68, Cl. 161—4.
- Altman, Moses D., to Warner-Lambert Pharmaceutical Co. N-cyanoethyl derivatives of nitro-p-phenylenediamine. 3,388,148, 6–11–68, Cl. 260—465.
- Altmann, Albrecht, to Blaupunkt-Werke G.m.b.H. Synchronous demodulator circuit for color television receivers. 3,388,213, 6–11–68, Cl. 178—5.4.
- Alvey Conveyor Mfg. Co.: *See*—
    - Roth, Ernest E., and Tanner. 3,387,718.
- Amano, Carl K., and M. L. Taylor, to Allied Chemical Corp. Process for the selective recovery of alumina from ores. 3,387,921, 6–11–68, Cl. 23—102.
- American Bosch Arma Corp.: *See*—
    - De Luca, Frank. 3,387,790.
- American Can Co.: *See*—
    - Grimsley, Arvid K., and Scheindel. 3,388,017.
    - Rohowetz, Stanley E. 3,387,789.
- American Cyanamid Co.: *See*—
    - Curran, William V., and Angier. 3,388,164.
    - De Lapp, Darvin F., and Deichert. 3,387,988.
    - Winterbottom, Robert, Bitha, and Kissman. 3,388,162.
- American Excelsior Corp.: *See*—
    - Pitsch, Ronald D. 3,387,382.
- American Home Products Corp.: *See*—
    - Alburn, Harvey E., and Dvonch. 3,388,115.
- American Hospital Supply Corp.: *See*—
    - Jellies, David A. 3,387,732.
- American Optical Co.: *See*—
    - Cole, Henry B. 3,387,959.
- American Velcro, Inc.: *See*—
    - Mates, Jack K., and Stanos. 3,387,341.
- Amerocat Corp.: *See*—
    - Walters, Joseph M. 3,387,864.
- Ammons, Vernon G.: *See*—
    - Wismer, Marco, Ammons, and Miller. 3,388,101.
- Ampeg Co., Inc., The: *See*—
    - Ten Eyck, Robert R. 3,388,257.
- Ampex Corp.: *See*—
    - Flowers, Dervin L. 3,387,993.
    - Johnson, Delmar R., and Wolter. 3,388,221.
- Anaconda Wire and Cable Co.: *See*—
    - Burr, Harvey. 3,387,478.
    - Lansch, John L. 3,388,207.
- Andersen, Olav A., to A. Brenna. Reinforcement spacer for the support of reinforcing bars in molding forms for concrete. 3,387,423, 6–11–68, Cl. 52—678.
- Anderson, Lawrence K., and M. Di Domenico, Jr., to Bell Telephone Laboratories, Inc. Aperture-limited optical wave coupler. 3,387,909, 6–11–68, Cl. 350—96.
- Anderson, Weston A., and F. A. Nelson, to Varian Associates. Gyromagnetic resonance spectrometer having selectable internal and external resonant control groups. 3,388,322, 6–11–68, Cl. 324—.5.
- Ando, Sadaji, to Nippon Hatsujo Kabushiki Kaisha. Hinge and method of making the same. 3,387,850, 6–11–68, Cl. 29—11.
- Andress, Harry J., Jr.: *See*—
    - Capowski, Julius, and Andress. 3,387,954.
- Andrew Antenna Co. Ltd.: *See*—
    - Weir, Walter F. 3,388,401.
- Angier, Robert B.: *See*—
    - Curran, William V., and Angier. 3,388,164.
- Anspon, Harry D., to General Aniline & Film Corp. Preparation of isopropenyl acetylene. 3,388,181, 6–11–68, Cl. 260—678.
- Apelian, Henry M.: *See*—
    - Gans, Eugene H., and Apelian. 3,388,041.
- Appel, Mel, to Buddy L Corp. Toy gasoline pump. 3,387,404, 6–11–68, Cl. 46—39.

- Appel, Rolf, to Olin Mathieson Chemical Corp. Process for preparing iminobis(sulfuryl halide). 3,387,946, 6–11–68, Cl. 23—357.
- Aqua-Chem, Inc.: *See*—
    - Goeldner, Richard W., and Leitner. 3,388,045.
- Aquarium Systems, Inc.: *See*—
    - Kelley, William E., and Smith. 3,387,587.
- Arima, Kei, G. Tamura, M. Nagasawa, and M. Bae, to Noda Institute for Scientific Research. Process for preparing androst-4-ene-3,17-dione and androsta-1,4-diene-3,17-dione from sterol compounds by the action of microorganisms. 3,388,042, 6–11–68, Cl. 195—51.
- Arita, Noboru: *See*—
    - Kanai, Hiroyuki, Morikawa, and Arita. 3,387,838.
- Armand, Marc R.: *See*—
    - Fouche, Lucien F. H. M., and Armand. 3,387,592.
- Armington, Raymond Q., to The Triax Co. Detecting device for an automatic warehousing system. 3,387,724, 6–11–68, Cl. 214—16.4.
- Arnaud, Michel M.-C., to Compagnie Francaise Thomson Houston-Hotchkiss Brandt. Electron beam tube having a collector electrode insulatively supported by a cooling chamber. 3,388,281, 6–11–68, Cl. 315—3.5.
- Arndt, Karl. Cartridge feed in lever-operated rifle. 3,387,398, 6–11–68, Cl. 42—17.
- Arneklev, Duane R.: *See*—
    - Baker, Don R., Brokke, and Arneklev. 3,388,122.
- Arnold, Arthur A.: *See*—
    - Ward, Clyde L., Jr., and Arnold. 3,387,648.
- Arthur, James B., and N. E. Lloyd, to Celanese Corp. Process and apparatus for distributing liquids. 3,387,992, 6–11–68, Cl. 117—105.3.
- Arvin Industries, Inc.: *See*—
    - Babb, Jack D. 3,388,210.
- Ashley, Robert F.: *See*—
    - Whipple, Harry W. 3,387,746.
- Askoslovenska Akademie ved: *See*—
    - Figar, Stepan. 3,387,608.
- Asplund, Arne J. A., and K. N. Cederquist, to Defibrator Aktiebolag. Method in the manufacture of wood pulp from chips in grinding apparatus in two stages. 3,388,037, 6–11–68, Cl. 162—23.
- Athena Industries, Inc.: *See*—
    - Metcalf, Derek N. G. 3,387,808.
- Atlantic Richfield Co.: *See*—
    - Bitar, Louie S., and Sorgenti. 3,388,154.
    - Cruse, Joe T. 3,387,599.
    - Hendrix, Lloyd T. 3,388,046.
- Atlas Copco Aktiebolag: *See*—
    - Persson, Jan E. 3,387,770.
- Atwood, Kenton A.: *See*—
    - Habermehl, Robert H., and Atwood. 3,387,942.
- Atzberger, Frank. Brake-shoe grinding device. 3,387,411, 6–11–68, Cl. 51—95.
- Auerbach, Seymour. Lighting fixture diffuser assembly. 3,388,248, 6–11–68, Cl. 240—78.
- Ault, Cyrus F., to Bell Telephone Laboratories, Inc. Method for reducing interference caused by electromagnetic radiation from clock controlled systems. 3,388,349, 6–11–68, Cl. 332—18.
- Austin, Wayne M., to Radio Corp. of America. Gain controlled amplifier using field effect type transistor as the active element thereof. 3,388,338, 6–11–68, Cl. 330—29.
- Austin, Wayne M., and J. A. Dean, to Radio Corp. of America. Vertical deflection circuit utilising a single multi-electrode electron discharge device. 3,388,286, 6–11–68, Cl. 315—27.
- Automobiles M. Berliet: *See*—
    - Guilhamat, Louis, and Mounier-Poulat. 3,387,856.
- Avco Corp.: *See*—
    - Loughry, Don J. 3,388,340.
    - Mertens, William J. 3,387,560.
- Avery, George E.: *See*—
    - Bogert, Howard Z., Pound, and Avery. 3,388,384.
- Baasner, Wilhelm: *See*—
    - Koehler, Roland, Baasner, Nagel, and Engelage. 3,387,760.
- Babb, Jack D., to Arvin Industries, Inc. Printed circuit board adapter. 3,388,210, 6–11–68, Cl. 174—138.
- Babson, Arthur L., to Warner-Lambert Pharmaceutical Co. Process for differentiating the iso-enzymes of lactic dehydrogenase. 3,388,044, 6–11–68, Cl. 195—103.5.
- Badali, Joseph A., V. A. Kulikowski, and E. S. Vartanian, to Olin Mathieson Chemical Corp. Automatic safety device with manual release for bolt action firearms. 3,387,400, 6–11–68, Cl. 42—70.
- Bade, Heinz E., to J. F. Behrens. Pneumatic fastening machines for staples, nails, or the like fasteners. 3,387,541, 6–11–68, Cl. 91—461.
- Badische Anilin- & Soda-Fabrik Aktiengesellschaft: *See*—
    - Kroeper, Hugo and Sand. 3,388,132.
    - Schellenberg, Rolf, and Nitzschke. 3,387,783.
    - Senkpiel, Werner, Dachs, Wilhelm, Wagner, Becht, and Werst. 3,387,995.
    - Woellhaf, Josef, Wagner, Uhl, and Hedderich. 3,387,322.
- Bae, Mu: *See*—
    - Arima, Kei, Tamura, Nagasawa, and Bae. 3,388,042.
- Bailey, Drury J. Method and apparatus for separating heavy minerals. 3,387,706, 6–11–68, Cl. 209—155.
- Bailey, Frederick A., to Rotaflex of Canada Ltd. Lighting fixture. 3,388,246, 6–11–68, Cl. 240—44.2.
- Bailey Meter Co.: *See*—
    - Coffin, Bertram D., Jr., and Werme. 3,388,380.
- Baker, Don R., M. E. Brokke, and D. R. Arneklev, to Stauffer Chemical Co. Certain N-acyl-3-azabicyclo-(3.2.2)nonane compounds. 3,388,122, 6–11–68, Cl. 260—239.
- Baldwin, Samuel L., to General Electric Co. Luminaire. 3,387,866, 6–11–68, Cl. 285—184.
- Baldwin, Samuel L., and J. S. Franklin, to General Electric Co. Hinge device. 3,387,737, 6–11–68, Cl. 220—31.
- Bancroft, Joseph & Sons Co.: *See*—
    - Trifunovic, Alexander L., and Zeis. 3,387,349.
- Banks, Frank H., and D. W. Patterson, to Radio Corp. of America. Voltage regulator including isolation between input and output. 3,388,309, 6–11–68, Cl. 321—2.
- Barbieri, Siegfried, to Durst A.G. Automatic focusing device. 3,387,534, 6–11–68, Cl. 88—24.
- Barish, Herman B.: *See*—
    - Ackart, William K., Sr., and Barish. 3,387,511.
- Barlow, Gordon A.: *See*—
    - Glass, Marvin I., and Barlow. 3,387,846.
- Barnes, Philip E., and F. D. Laun, to United Aircraft Corp. Control mechanism. 3,387,663, 6–11–68, Cl. 170—160.2.
- Barnett, Forest H., J. W. and H. J. Parachute suspension soft landing means. 3,387,805, 6–11–68, Cl. 244—138.
- Barnett, Henry J.: *See*—
    - Barnett, Forest H., J. W. and H. J. 3,387,805.
- Barnett, James W.: *See*—
    - Barnett, Forest H., J. W. and H. J. 3,387,805.
- Barona, Narses, to Ethyl Corp. Process for the production of dicarboxylic acids. 3,388,157, 6–11–68, Cl. 260—533.
- Barr, John D.: *See*—
    - Stillwell, Peter F. T. C., Barr, and Reeve. 3,387,776.
- Bartolo, Angela D. Flash cards for teaching arithmetic. 3,387,391, 6–11–68, Cl. 35—31.
- Barton, Loy E.: *See*—
    - Spanel, Abram N., and Barton. 3,387,577.
- Bassani, S.p.A.: *See*—
    - Paganelli, Mario. 3,388,358.
- Basso, Michael J., and L. G. Cass. Removable spacer member for installing push button switch assemblies. 3,388,227, 6–11–68, Cl. 200—159.
- Battelle Development Corp., The: *See*—
    - Bettenhausen, Lee H., Epstain, and Plummer. 3,388,275.
    - Goldberger, William M. 3,387,927.
- Bauger, Louis J., R. R. C. Beyler, R. J. R. Dubarry-Barbe, M. Planko, and W. Vesper, to Societe Nationale d'Etude et de Construction de Moteurs d'Aviation. Dual fuel injection device for propulsion motors, more especially for methane-carrying ships. 3,387,462, 6–11–68, Cl. 62—50.
- Baughman, George W., to Westinghouse Air Brake Co. Train speed control system. 3,388,250, 6–11–68, Cl. 246—187.
- Bauman, Jack L., to International Harvester Co. Implement duplex hitch. 3,387,861, 6–11–68, Cl. 280—412.
- Bayer, Otto: *See*—
    - Dieterich, Dieter, Bayer, and Peter. 3,388,087.
- Beal, Philip F., III, and J. E. Pike, to The Upjohn Co. 16α-fluoromethyl-21-fluoro and 21-desoxy compounds of the pregnane series. 3,388,138, 6–11–68, Cl. 260—397.4.
- Bechman, William H., and J. O. Winsor, to Westinghouse Air Brake Co. Suspension unit. 3,387,840, 6–11–68, Cl. 267—64.
- Becht, Guenter: *See*—
    - Senkpiel, Werner, Dachs, Wilhelm, Wagner, Becht, and Werst. 3,387,995.
- Beckenstein, Leonard A., to The Singer Co. Knitting machine with two-section raise cam. 3,387,466, 6–11–68, Cl. 66—38.
- Beckenstein, Leonard A., to The Singer Co. Knitting machine cam-needle apparatus. 3,387,467, 6–11–68, Cl. 66—57.
- Becker, Carl E.: *See*—
    - Pulcrano, Frank C., and Becker. 3,387,570.
- Beckers, Hans, to Hamac-Hansella Gesellschaft mit beschrankter Haftung. Container forming machine. 3,387,953, 6–11–68, Cl. 93—36.
- Beha, Walter, to Schoeller & Co. Elektrotechnische Fabrik. Housing for cigarette dispenser. 3,387,904, 6–11–68, Cl. 312—245.
- Behrens, Joh F.: *See*—
    - Bade, Heinz E. 3,387,541.
- Belanger, Paul J., and E. J. Richard, to Foster Grant Co., Inc. Molding apparatus. 3,387,334, 6–11–68, Cl. 18—36.
- Belke, William H., and W. E. Streight, to Caterpillar Tractor Co. Electronic steering circuit for large vehicles. 3,387,684, 6–11–68, Cl. 180—79.2.
- Bell Telephone Laboratories, Inc.: *See*—
    - Anderson, Lawrence K., and Di Domenico. 3,387,909.
    - Ault, Cyrus F. 3,388,349.
    - Feiner, Alexander, and Watson. 3,388,271.
    - Foster, Norman F. 3,388,002.
    - Kretzmer, Ernest R. 3,388,330.
    - Sinclair, William R., and Stillinger. 3,388,053.
    - Szabo, Joseph M., Jr. 3,388,048.
    - White, Alan D. 3,388,343.
    - Zalmans, Janis J. 3,388,369.
- Bellet, Richard J.: *See*—
    - Kray, Raymond J., and Bellet. 3,388,186.
- Beloit Corp.: *See*—
    - De Noyer, Donald B., and McNabb. 3,387,317.
    - Salomon, Salomon M., and Schroeder. 3,387,708.
- Beltz, Klaus, K. W. H. Kribbe, deceased, (by G. K. Kribbe, nee Hanhardt and E. Kribbe, nee Kuhrt, heirs), J. Cremer, and H. Harnisch, to Knapsack Aktiengesellschaft. Method and apparatus for producing alkali metal and/or alkali earth metal phosphates. 3,387,922, 6–11–68, Cl. 23—106.
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- Bendix Corp., The: *See*—
    - Fallon, Arthur Dennis. 3,388,012.
    - Noris, Eugene P. 3,387,362.
    - Prapis, Frank, and Zbuchalski. 3,388,307.

Bennett, Alan J., to Tinnerman Products, Inc. Self-threading nut with thread-engaging ribs. 3,387,642, 6–11–68, Cl. 151—7.

Bennett, Frank P., to General Aniline & Film Corp. Previewing means for projectors. 3,387,535, 6–11–68, Cl. 88—24.

Bennett Industries, Inc.: *See—*
Goldshalk, Alva J., Shankland, and Yates. 3,387,749.

Bentele, Max, to Curtiss-Wright Corp. Rotary combustion engine with precombustion chamber. 3,387,595, 6–11–68, Cl. 123—8.

Benton, Robert C., and B. W. Heffner, to Chemcut Corp. Continuous etching machine having a controlled conveyor speed. 3,388,023, 6–11–68, Cl. 156—345.

Berenbaum, Morris B., to Thiokol Chemical Corp. Di-schiff bases of hydroxyl substituted diamines and B-diketones, derivatives, and metal chelates thereof. 3,388,141, 6–11–68, Cl. 260—439.

Berenbaum, Morris B., and L. Citarel, to Thiokol Chemical Corp. Carboxylic acid esters derived from aziridines. 3,388,140, 6–11–68, Cl. 260—402.5.

Berger, Leo J., Jr., and R. W. Clayton, to Scans Associates, Inc. Pneumatic amplifier. 3,387,619, 6–11–68, Cl. 137—86.

Bergfelt, Nils H., and V. C. Spellman, to Optical Coating Laboratory, Inc. Chip changing apparatus. 3,387,742, 6–11–68, Cl. 221—67.

Bergquist, Roger T.: *See—*
Wise, Walter R., Jr., Nashman, Walker, and Bergquist. 3,387,669.

Berker, Karl-August, to Gunther Papermeier KG. Heating and cooling arrangement for mixers. 3,387,651, 6–11–68, Cl. 165—109.

Berlin, Daniel. Child's safety automobile seat. 3,387,883, 6–11–68, Cl. 297—253.

Berner, Klaus: *See—*
Bohnert, Erwin, Berner, Meininger, and Hoyer. 3,387,914.

Bernhardt, Karl-Heinz, and W. Marx, to Schloemann Aktiengesellschaft. Flying two-drum shears for cutting rolled stock. 3,387,518, 6–11–68, Cl. 83—37.

Bernstein, Jack: *See—*
Pribyl, Edward J., and Bernstein. 3,388,121.

Berryman, William O., to Schlumberger Technology Corp. Cement retaining well packer. 3,387,660, 6–11–68, Cl. 166—133.

Bertioli, Michael M., to Joseph Lucas (Industries) Ltd. A.C. control circuit. 3,388,269, 6–11–68, Cl. 307—252.

Beryllium Corp., The: *See—*
Borana, Simon J., and Kosuba. 3,387,966.

Best, Roland W.: *See—*
Lotzgesell, James A., and Best. 3,388,120.

Beteiligungs- und Patentverwaltungsgesellschaft mit beschrankter Haftung: *See—*
Brüderlein, Johannes. 3,387,499.
Fischer, Georg, and Petry. 3,387,892.
Hoever, Paul. 3,387,893.

Bethlehem Steel Co.: *See—*
Padfield, Ralph C. 3,387,575.
Pullen, Charles C. 3,387,472.
Winkler, Robert L. 3,387,479.

Bettenhausen, Lee H., H. M. Epstein, and A. M. Plummer, to The Battelle Development Corp. Cathode provided with ion producing material for decreasing space charge. 3,388,275, 6–11–68, Cl. 313—55.

Beuscher, William B. Pipe cleaner, cigarette holder, and ash tray combination. 3,387,614, 6–11–68, Cl. 131—232.

Beyler, Roland R. C.: *See—*
Bauger, Louis J., Beyler, Dubarry-Barbe, Pianko, and Vesper. 3,387,462.

Bick, Edward H., and W. J. Klein, to United States Steel Corp. Ram attachment for tractors. 3,387,728, 6–11–68, Cl. 214—620.

Biddle, Charles E., Sr.: *See—*
Fisher, James O., Sr., Whitley, and Biddle. 3,387,722.

Bidwell, Howard, 50% to R. Bidwell. Method of the automatic processing of paper stocks. 3,387,794, 6–11–68, Cl. 241—21.

Bidwell, Howard. Apparatus for the processing of fibrous and other materials including paper stocks. 3,387,795, 6–11–68, Cl. 241—34.

Bidwell, Rachel: *See—*
Bidwell, Howard. 3,387,794.

Bieber, Herman: *See—*
Spenadel, Lawrence, and Bieber. 3,388,015.

Bigge, Henry W.: *See—*
Whitmire, William A., and Webber. 3,387,860.

Bigioli, John C.: *See—*
Simon, Arthur, Shirk, and Bigioli. 3,388,379.

Billings, Miro, to Rexall Drug and Chemical Co. Apparatus for extruding seamless plastic tubing. 3,387,331, 6–11–68, 18—14.

Bird, Merrill S. Caged animal movement controlling device. 3,387,588, 6–11–68, Cl. 119—106.

Birdwell, James A., O. H. Huaton, and A. C. Skellie, to Schlumberger Well Surveying Corp. Apparatus for supplying an equal potential to circumferential portions of a circumferentially extending electrode. 3,388,325, 6–11–68, Cl. 324—10.

Birk, Ted W. Rotary internal combustion engine. 3,387,594, 6–11–68, Cl. 123—1.

Birks, Robert K.: *See—*
Moore, Marvin D., and Birks. 3,387,918.

Birman, Paul, to Forbro Design Corp. Voltage limiting circuit for regulated power supply. 3,388,317, 6–11–68, Cl. 323—22.

Bishop, John W., to United States of America, Interior. System for regulating the total heat output in a burning fluidized bed heat exchanger or boiler. 3,387,590, 6–11–68, Cl. 122—4.

Bitar, Louie S., and H. A. Sorgenti, to Atlantic Richfield Co. Method of producing good color epoxide-taurine condensation products. 3,388,154, 6–11–68, Cl. 260—513.

Bitha, Panayota: *See—*
Winterbottom, Robert, Bitha, and Kissman. 3,388,162.

Black Clawson Co., The: *See—*
Sutton, Frederic H. 3,387,384.

Black and Decker Mfg. Co., The: *See—*
Walter, Harvey J. 3,387,352.

Black, Sheppard A., and J. D. Heide, to Uniroyal, Inc. Tire carcass building drum. 3,388,024, 6–11–68, Cl. 156—415.

Black, William B.: *See—*
Chaney, David W., and Black. 3,388,199.

Blair, Robert E.: *See—*
Buell, Halsey W., and Blair. 3,387,955.

Blanc, Roger: *See—*
Doskocil, Fernand, and Blanc. 3,387,311.

Blatz, Robert A., to Handgards, Inc. Plastic glove. 3,387,307, 6–11–68, Cl. 2—167.

Blaupunkt-Werke G.m.b.H.: *See—*
Altmann, Albrecht. 3,388,213.

Bloeck, Siegfried: *See—*
Seipp Werner, Drechsler, and Bloeck. 3,387,475.

Bloom Engineering Co., Inc.: *See—*
Bricmont, Frances H., and Miller. 3,387,834.

Bloom, Martin S., and M. R. Sharpe, to Imperial Chemical Industries, Ltd. Method of bonding together building panels and two-component adhesive composition used therefor. 3,388,022, 6–11–68, Cl. 156—326.

Blue, Sidney D., to Reeves Brothers, Inc. Abrasive scouring materials. 3,387,956, 6–11–68, Cl. 51—297.

Blum, Seymour, A. Mountvala, and R. McKinley, to IIT Research Institute. Method of making piezoelectric layers by flame spraying. 3,388,001, 6–11–68, Cl. 117—213.

Bobo, Frank E., Jr.: *See—*
Cape, Francis B., Bobo, and Matthews. 3,387,451.
Lathem, James M., Bobo, and Matthews. 3,387,448.

Bockenstette, Kenneth R., to MS Industries, Inc. Reinforced plastic bakery tray and the like. 3,387,740, 6–11–68, Cl. 220—71.

Bodek, Boleslaw W.: *See—*
Coker, Gerald C., and Bodek. 3,387,406.

Bodge, Clifford A.: *See—*
Lawson, Martin W., and Bodge. 3,388,357.

Bofill, Carlos S. Silver condenser for drawing frames. 3,387,339, 6–11–68, Cl. 19—150.

Bogert, Howard Z., A. E. Pound, and G. E. Avery, to General Micro-Electronics Inc. Zero suppression circuit. 3,388,3384, 6–11–68, Cl. 340—172.5.

Boggs, Alben C., to Edwin L. Wiegand Co. Method of making electic heating elements. 3,387,363, 6–11–68, Cl. 29—619.

Boggs, Alben C., to Edwin L. Wiegand Co. Method of terminating resistors. 3,387,364, 6–11–68, Cl. 29—621.

Bohner, William R.: *See—*
Simpson, Jack N., and Bohner. 3,387,304.

Bohnert, Erwin, K. Berner, F. Meininger, and E. Hoyer, to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning. Process for dyeing or printing materials of fibrous structure containing hydroxyl groups. 3,387,914, 6–11–68, Cl. 8—54.2.

Boissonnas, Roger: *See—*
Guttmann, Stephan, Boissonnas, and Pless. 3,388,113.

Bond, Frank D., Jr., L. C. Matsch, and J. A. Proctor, to Union Carbide Corp. Method of making hose for low-temperature liquids. 3,387,449, 6–11–68, Cl. 57—160.

Boomhower, Robert R. Puzzle. 3,387,847, 6–11–68, Cl. 273—159.

Boon, William. Photosensitive device for conveying and counting fabrics. 3,388,260, 6–11–68, Cl. 250—222.

Booth, Anthony J.: *See—*
Whittaker, Harold, and Booth. 3,387,833.

Borden, John C. Multiple member joining arrangement. 3,387,868, 6–11–68, Cl. 287—51.

Born, Ellis H., P. B. Burnham, and P. B. Wolfe, to Abex Corp. Method and apparatus for highline tension control. 3,388,070, 6–11–68, Cl. 254—172.

Borner, Peter: *See—*
Imohl, Wolfgang, and Borner. 3,388,103.

Borsig Aktiengesellschaft: *See—*
Drobka, Witold. 3,387,652.
Lück, Friederich. 3,387,771.

Bortz, Harold E., and J. E. Thomson, to Western Stamping Corp. Coin sorting and dispensing device. 3,387,616, 6–11–68, Cl. 133—3.

Bosch, Robert G.m.b.H.: *See—*
Voit, Willy. 3,387,562.

Bosche, Gene R., to Dayco Corp. Mixer for particulate material. 3,387,828, 6–11–68, Cl. 259—85.

Boschen, John A., and A. R. Close, to Ford Motor Co. Seat back latch mechanism. 3,387,885, 6–11–68, Cl. 297—379.

Bosso, Joseph F.: *See—*
Doerge, Herman P., and Bosso. 3,388,086.

Boudry, Jean C., M. Chambon, P. Faugeras, C. Lheureux,, and X. L. R. Talmont, to Commissariat a l'Energie Atomique. Processes for simultaneously purifying and concentrating plutonium solutions. 3,387,945, 6–11–68, Cl. 23—341.

Bouffard, Roland A., to Esso Research and Engineering Co. Rust-inhibited hydrocarbon fuels. 3,387,963, 6–11–68, Cl. 44—63.

Bowers, Raymond, and J. R. Houck, to United States of America, Atomic Energy Commission. Magneto-plasma wave device. 3,388,321, 6–11–68, Cl. 324—.5.

Bowman, Scisco. Fish stringers. 3,387,753, 6–11–68 Cl. 224—7.

Braca, Guiseppe: *See*—
Pino, Piero, and Braca. 3,387,932.

Bradfield, Todd S., J. L. Michal, W. R. Peck, and F. B. Stencel, to Stencel Aero Engineering Corp. Load recovery systems. 3,387,803. 6–11–68, Cl. 244—122.

Brand, Othal E.: *See*—
Whipple, Harry W. 3,387,746.

Brandt, Hans-Ado: *See*—
Wick, Richard, Zeller, and Brandt. 3,387,533.

Brauer, Lothar W. Indicator for nitrogen dioxide. 3,388,075, 6–11–68, Cl. 252—408.

Braun, Gunther: *See*—
Merten, Rudolf, and Braun. 3,388,081.

Brenchley, George R. Motor driven metering valve. 3,387,748, 6–11–68, Cl. 222—70.

Brendel, Gottfried J., to Ethyl Corp. Process for preparing lithium aluminum hydride. 3,387,947, 6–11–68, Cl. 23—365.

Brenden, Byron B., and J. C. Spanner, to United States of America, Atomic Energy Commission. Apparatus for measuring incremental radial displacement of a channel wall. 3,387,870, 6–11–68, Cl. 33—1.

Brenna, Arne: *See*—
Andersen, Olav A. 3,387,423.

Bricmont, Frances H., and F. H. Miller, to Bloom Engineering Co., Inc. Hearth firing apparatus. 3,387,834, 6–11–68, Cl. 263—6.

Brideweser, Ralph E., and E. A. Neydli, to Sola Basic Industries, Inc. Residential underground electric distribution assembly. 3,388,299, 6–11–68, Cl. 317—120.

Bridge Chemicals Ltd.: *See*—
Sly, James C. P., Hansell, and Flavell. 3,388,187.

Bright-Brooks Lumber Co. of Charlotte, Inc., The: *See*—
Wanzer, Philip H. 3,387,422.

Brignac, Edmond P., to Monsanto Co. Dimensionally stabilized polyamide yarns and rubber products reinforced therewith. 3,388,029, 6–11–68, Cl. 161—170.

British Telecommunications Research Ltd.: *See* —
Davis, John C. H. 3,388,219.

Brizgys, Bernardas, to Wyandotte Chemicals Corp. Halogenated silane-stabilized compositions containing unreacted isocyanate groups and the use thereof in the preparation of polyurethane reaction products. 3,388,102, 6–11–68, Cl. 260—77.5.

Broadway Mfg. Co.: *See*—
Longo, Paul F., and Parmet. 3,387,886.

Brod, Charles, Jr., to International Harvester Co. Safety valve filter. 3,387,435, 6–11–68, Cl. 55—482.

Brodzinsky, Albert, J. B. Reynolds, Jr., and I. M. Saffitz, to United States of America, Navy. Computer device for aircraft carrier approach system. 3,388,332, 6–11–68, Cl. 328—142.

Broerman, Arthur B., to Phillips Petroleum Co. Pneumatic amplifier sampling valve for chromatographic analyzers. 3,387,496, 6–11–68, Cl. 73—422.

Brokke, Mervin E.: *See*—
Baker, Don R., Brokke, and Arneklev. 3,388,122.

Brooke, Alvin W., H. C. Kuntzleman, and H. G. Markey, to International Business Machines Corp. Start-stop synchronous data transmission system. 3,388,216, 6–11–68, Cl. 178—53.1.

Brooks, Doyle K. Knock-down shelving assembly. 3,387,713, 6–11–68, Cl. 211—148.

Brooks, James L., to United States of America, Navy. Network for determining magnitude and phase angle of noise impedance. 3,388,326, 6–11–68, Cl. 324—57.

Brown, Albert C., to Hughes Aircraft Co. Electrical connector for either flat or round conductors. 3,388,367, 6–11–68, Cl. 339—32.

Brown, David M., to Rolls-Royce Ltd. Exhaust nozzles. 3,387,788, 6–11–68, Cl. 239—265.37.

Brown, Edgar D., Jr., to General Electric Co. Leather treating composition. 3,388,089, 6–11–68, Cl. 260—33.4.

Brown, Edward A., to G. D. Searle & Co. 17α-alkyl-17β-methyl-3-oxo-13δ-gonene epoxides and intermediates. 3,388,125, 6–11–68, Cl. 260—239.55

Brown, Manthei, Davis & Mullins: *See*—
Mullins, George E., and Goodwin. 3,387,649.

Brown, Morris C., and C. L. Martin, to ACF Industries, Inc. Carburetor anti-surge device. 3,387,831, 6–11–68, Cl. 261—51.

Brown, Robert A., to Duncan Electric Co., Inc. Cumulative digital pulse remote meter reading. 3,388,388, 6–11–68, Cl. 340—203.

Brown, Thomas Desmond, to I.W.S. Nominee Co. Ltd. Production of yarn. 3,387,450, 6–11–68, Cl. 57—160.

Brownawell, Darrell W.: *See*—
Takashima, Herbert, Jacobson, and Brownawell. 3,388,067.

Browning Industries, Inc.: *See*—
Browning, Val A. 3,387,538.

Browning, Val A., to Browning Industries, Inc. Barrel recoil structure for firearms. 3.387,538, 6–11–68, Cl. 89—177.

Brüderlein, Johannes, to Beteiligungs-und Patentverwaltungsgesellschaft mit beschrankter Haftung. Mechanical vibrator with electromagnetic damping means. 3,387,499, 6–11–68, Cl. 74—61.

Brun, Henri: *See*—
Malnar, Leon, and Brun. 3,388,339.

Bruson, Herman A., and H. L. Plant, to Olin Mathieson Chemical Corp. Dinitro-2-methyl-2-phenylindanones. 3,388,166, 6–11–68, Cl. 260—590.

Bryant, George M., and N. L. Zutty, to Union Carbide Corp. Dyeable polypropylene. 3,388,190, 6–11–68, Cl. 260—897.

Buchanan, William V., and R. D. Murir. Changeable display device. 3,387,897, 6–11–68, Cl. 40—140.

Buck, Donald J., to Fabri-Tek Inc. Component sizing gates. 3,387,705, 6–11–68, Cl. 209—75.

Buckley, Francis T., G. R. Mason, and R. F. Riek, to Monsanto Co., and Mobay Chemical Co. Laminated safety glass. 3,388,033, 6–11–68, Cl. 161—183.

Buddy L Corp.: *See*—
Appel, Mel. 3,387,404.

Budzich, Tadeusz. Energy storing mechanism for power drive. 3,387,683, 6–11–68, Cl. 180—66.

Buehl, Walter M., and J. H. Cowan, Jr., to Corning Glass Works. Method of reducing reboil in molten glass. 3,387,961, 6–11–68, Cl. 65—32.

Buell, Halsey W., and R. E. Blair, to The Carborundum Co. Abrasive coated products. 3,387,955, 6–11–68, Cl. 51—295.

Buerki, Christian E., and K. E. Rawald, to Norris-Thermador Corp. Self-cleaning oven. 3,387,601, 6–11–68, Cl. 126—21.

Burgin, Kermit H. Branch separator and fruit picker. 3,387,443, 6–11–68, Cl. 56—328.

Burke, Oliver W., Jr. Mechanical modification of wet silica pigment for reduction of free water retentivity thereof. 3,387,931, 6–11–68, Cl. 23—182.

Burner, Andre H., and J. M. Burner, to The French Oil Mill Machinery Co. Process and system for treating rubber. 3,387,793, 6–11–68, Cl. 241—20.

Burner, Jean M.: *See*—
Burner Andre H. 3,387,793.

Burnham, Peter B.: *See*—
Born, Ellis H., Burnham, and Wolfe. 3,388,070.

Burns, Joseph R., to Radio Corp. of America. Insulated gate field-effect transistor means for information gating and driving of solid state display panels. 3,388,292, 6–11–68, Cl. 315—169.

Burr, Harvey, to Anaconda Wire and Cable Co. Tube forming apparatus. 3,387,478, 6–11–68, Cl. 72—176.

Burroughs Corp.: *See*—
Lee, Edwin S., III. 3,388,382.

Burrows, Arthur T. C., to Geo. W. King Ltd. Electrically operated hoists or pulley blocks. 3,387,822, 6–11–68, Cl. 254—174.

Bush, Eugene S., deaceased, by W. K. Bush. Information recording device. 3.388,404, 6–11–68, Cl. 346—24.

Bush, Winifred K.: *See*—
Bush Eugene S. 3.388.404.

Butler, Jesse L. Microwave transmission line apparatus having flexibly connected displaceable conductor. 3,388,350, 6–11–68, Cl. 333—10.

Butler, Russell L., to The Dow Chemical Co. Tobacco pouch. 3,387,640, 6–11–68, Cl. 150—7.

C M Manufacturing & Machine Co.: *See*—
Murphy, James A. 3,387,835.

CSF—Compagnie Generale de Telegraphie Sans Fil: *See*—
Malnar, Leon, and Brun. 3,388,339.

Cadiou, Jean G., to Societe Anonyme Andre Citroen. Automatic gearbox with converter. 3,387,506, 6–11–68, Cl. 74—732.

Caldwell, John R., and C. H. Hall, to Gunter & Cooke, Inc. Sliver coiler. 3,387,340, 6–11–68, Cl. 19—159.

Callahan. George P., 50% to City of Los Angeles. Method for the reduction of the hydrogen sulfide content of digestion gas. 3.388,057, 6–11–68, Cl. 210—7.

Cameron, Daniel F., and M. M. Turner, to Continental Oil Co. Method for producing dialkylaluminum hydride compounds. 3,388,142, 6–11–68, Cl. 260—448.

Campana, Robert J., J. C. Melcher, P. S. Merrill, and W. E. Sargent, to United States of America, Atomic Energy Commission. Thermoelectric generator. 3,388,008, 6–11–68, Cl. 136—205.

Campbell, Andrew B., to Hillman-Kelley. Backup wrench. 3,387,512, 6–11–68, Cl. 81—54.

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Canadian Ingersoll-Rand Co. Ltd.: *See*—
Young, Douglas L. C. 3,387,489.

Canadian International Paper Co.: *See*—
Reid, Kevin W. 3,387,897.

Canadian Patents and Development Ltd.: *See*—
Jarlan, Gerard E. 3,387,458.

Canal, Ludwig. Process and device for melting on melting shelves. 3,387,837, 6–11–68, Cl. 263—30.

Cann, Gordon L., to Electro-Optical Systems, Inc. Annular magnetic hall current accelerator. 3,388,291, 6–11–68, Cl. 315—111.

Cape, Francis B., F. E. Bobo, Jr., and R. M. Matthews, to Chadbourn Gotham, Inc. Covered stretch yarn and method for producing. 3,387,451, 6–11–68, Cl. 57—163.

Caplet, Thomas B.: *See*—
Shoemaker, Stephen P., Jr., Koby, and Caplet. 3,387,474.

Capowski, Julius, and H. J. Andress, Jr., to Mobil Oil Corp. Liquid hydrocarbon fuels containing a quaternary ammonium compound. 3,387,954, 6–11–68, Cl. 44—72.

Cappadona, William L., to United States of America, Air Force. Thin film range gated filter circuit. 3,388,394, 6–11–68, Cl. 343—7.7.

Capra, Ottavio A. Float means for flush tanks. 3,387,308, 6–11–68, Cl. 4—18.

Carbon Co., The: *See*—
Murphy, Richard M., and Messman. 3,387,941.

Carborundum Co., The: *See*—
Buell, Halsey W., and Blair. 3,387,955.
Howard, Elmer E. 3,387,957.

Carfolite, Edward D.: *See*—
Kratzer, Dale L., and Carfolite. 3,388,398.

Carino, Anthony J. Hold-down device. 3,387,813, 6-11-68, Cl. 248—361.
Carlyon, Richard A., Jr., to Sta-Soil Corp. Agricultural apparatus. 3,387,827, 6-11-68, Cl. 259—36.
Carpenter, Louis M. Wire stripper. 3,387,514, 6-11-68, Cl. 81—9.51.
Carr Lane Mfg. Co.: *See—*
Thoma, Jule W. 3,387,812.
Carter, George A. Tomato coring machine. 3,387,639, 6-11-68, Cl. 146—52.
Carter, Lloyd G.: *See—*
Evans, George W., and Carter. 3,387,661.
Carter, Richard S., to International Business Machines Corp. Nanosecond circuit for eliminating cam bounce. 3,388,264, 6-11-68, Cl. 307—93.
Cass, Louis G.: *See—*
Basso, Michael J., and Cass. 3,388,227.
Castoe, John H. Keyhole area illumination means. 3,388,244, 6-11-68, Cl. 240—2.13.
Catalysts & Chemicals Inc.: *See—*
Habermehl, Robert H., and Atwood. 3,387,942.
Reitmeier, Ronald E. 3,388,074.
Caterpillar Tractor Co.: *See—*
Belke, William H., and Streight. 3,387,684.
Cederquist, Karl N.: *See—*
Asplund, Arne J. A., and Cederquist. 3,388,037.
Celanese Corp.: *See—*
Arthur, James B., and Lloyd. 3,387,992.
Celanese Corp. of America: *See—*
Trammell, Harlan M., Truesdale, and Manning. 3,387,447.
Cessna Aircraft Co., The: *See—*
Cummings, Dale K. 3,387,664.
Chadbourn Gotham, Inc.: *See—*
Cape, Francis B., Bobo, and Matthews. 3,387,451.
Lathem, James M., Bobo, and Matthews. 3,387,448.
Chakoian, George, R. T. Crowell, and N. M. Southwick, to United States of America, Navy. Torpedo suspension band. 3,387,537, 6-11-68, Cl. 89—1.5.
Chambon, Marcel: *See—*
Boudry, Jean C., Chambon, Faugeras, Lheureux, and Talmont. 3,387,945.
Chan, William, and G. L. Steffes, to Vapor Corp. Multiple boiler control system. 3,387,589, 6-11-68, Cl. 122—1.
Chance, A. B., Co.: *See—*
Curtis, Thomas E., and Chance. 3,388,297.
Chance, Philip G.: *See—*
Curtis, Thomas E., and Chance. 3,388,297.
Chandler, Lloyd E. Exercise machine in which the user pushes or pulls against a resisting force produced by pneumatic cylinder operating in conjunction with compressed air. 3,387,843, 6-11-68, Cl. 272—79.
Chaney, David W., and W. B. Black, to Monsanto Co. Preparation of acrylonitrile-vinyl alcohol copolymers. 3,388,199, 6-11-68, Cl. 264—182.
Chaplin, Harvey R., Jr.: *See—*
Fresh, John N., and Chaplin. 3,387,685.
Chapman, Rodney M.: *See—*
Privott, Wilbur J., Jr., and Chapman. 3,387,327.
Chatillon Societa Anonima Italiana per le Fibre Tessili Artificiali S.p.A.: *See—*
Mazzolini, Corrado, Denti, and Curti. 3,388,031.
Mazzolini, Corrado, and Denti. 3,388,201.
Chemcut Corp.: *See—*
Benton, Robert C., and Heffner. 3,388,023.
Chemetron Corp.: *See—*
Ward, Bert G., Jr. 3,387,784.
Chemical and Industrial Corp., The: *See—*
Russo, Vincent J. 3,388,014.
Cherre, Vincent W. Pressurizer unit for coffee percolator. 3,387,554, 6-11-68, Cl. 99—312.
Chevron Research Co.: *See—*
Allphin, Nylen L., Jr. 3,388,063.
Chicago Copper & Chemical Co.: *See—*
Moore, Marvin D., and Birks. 3,387,918.
Chisholm, Douglas S., to The Dow Chemical Co. Device for generating arcs. 3,387,498, 6-11-68, Cl. 74—1.
Christenson, Russell R., to The Dow Chemical Co. Plastic foam protecting of apparatus and equipment during moving thereof. 3,388,195, 6-11-68, Cl. 264—45.
Christodolu, Constantinos. Retrieving tool. 3,387,877, 6-11-68, Cl. 294—50.9.
Christopher, Todd J., and J. A. McDonald, to Radio Corp. of America. Size stabilization. 3,388,285, 6-11-68, Cl. 315—19.
Chupp, John P.: *See—*
Early, Jack D., and Chupp. 3,388,163.
Chuy, Daniel T.: *See—*
Chuy, Ruth G. and D. T. 3,387,390.
Chuy, Ruth G. and D. T. Flash card game and stand. 3,387,390, 6-11-68, Cl. 35—31.
Ciaschi, Lorenso. Alarm system having recorded messages on magnetic drum. 3,388,390, 6-11-68, Cl. 340—293.
Ciccotelli, Anthony A., Jr. Automatic needle bar positioner. 3,387,579, 6-11-68, Cl. 112—221.
Cincinnati Time Recorder Co., The: *See—*
Gieringer, Carl K., Schinner, and Zimmer. 3,388,403.
Citarel, Louis: *See—*
Berenbaum, Morris B., and Citarel. 3,388,140.
City of Los Angeles: *See—*
Callahan, George P. 3,388,057.
Clark Equipment Co.: *See—*
Frost, Barry L. 3,387,501.
McKee, Dale W., and Williamson. 3,387,726.
Clark, Joseph R., to Parsons, Brinckerhoff, Quade & Douglas. Process and composition for purification of water supplies and aqueous wastes. 3,388,060, 6-11-68, Cl. 210—52.
Clark, Robert J., to Radio Corp. of America. Digital storage and generation of video signals. 3,388,391, 6-11-68, Cl. 340—324.
Clark, William T. Method of assembling observatory dome. 3,387,356, 6-11-68, Cl. 29—471.7.
Clarke, Ray A., to E. I. du Pont de Nemours and Co. Heteropoly acid coloration medium and process. 3,387,916, 6-11-68, Cl. 8—55.
Clayton, Robert W.: *See—*
Berger, Leo J., Jr., and Clayton. 3,387,619.
Clifford, Robert L.: *See—*
Sinkey, Barry L., and Clifford. 3,387,754.
Close, Albert R.: *See—*
Boschen, John A., and Close. 3,387,885.
Cobb, Edwin N.: *See—*
King, Robert E., Cobb, and Schmidt. 3,388,209.
Coblitz, Sanford E. Chain-tool. 3,387,513, 6-11-68, Cl. 81—66.
Coe, Thomas D., to Wakefield Engineering, Inc. Heat transfer apparatus. 3,387,653, 6-11-68, Cl. 165—165.
Coffin, Bertram D., Jr., and J. V. Werme, to Bailey Meter Co. System for display of a word description of parameters and values thereof in response to an input of a word description of the parameter. 3,388,380, 6-11-68, Cl. 340—147.
Coker, Gerald C., and B. W. Bodek, to Ford Motor Co. Dual-hinged tailgate. 3,387,406, 6-11-68, Cl. 49—192.
Cole, Henry B., to American Optical Co. Method for forming image-transfer devices embodying light-conducting fibers and light-absorbing filaments. 3,387,959, 6-11-68, Cl. 65—4.
Collier, Samuel L., to Mission Mfg. Co. Percussion tool. 3,387,671, 6-11-68, Cl. 173—78.
Colonbani, Don P. L. J., and A. O. G. Ernst, to Societe Nationale d'Etude et de Construction de Moteurs d'Aviation. Arrangement for controlling the deflection of a jet stream emitted by a nozzle. 3,387,787, 6-11-68, Cl. 239—265.17.
Combustion Engineering, Inc.: *See—*
Hochmuth, Frank W., and Mullen. 3,387,895.
Mullen, Joseph F. 3,387,574.
Commissariat a l'Energie Atomique: *See—*
Boudry, Jean C., Chambon, Faugeras, Lheureux, and Talmont. 3,387,945.
Compagnie Francaise Thomson Houston-Hotchkiss Brandt: *See—*
Arnaud, Michel M.-C. 3,388,281.
Compass Container Co., Inc.: *See—*
Turpen, Russell L. 3,387,734.
Concut, Inc.: *See—*
Simms, Glen E., and Cook. 3,387,891.
Constellation Steel Mill Equipment: *See—*
Pray, Edwin B. 3,387,523.
Construction Specialties, Inc.: *See—*
McGuinness, Raymond. 3,387,424.
Contact Battery Mfg. Co.: *See—*
Hahn, Laurence W., and Kossow. 3,388,005.
Container Corp. of America: *See—*
Herring, Walter R. 3,387,355.
Continental Aviation & Engineering Corp.: *See—*
Smith, Raymond. 3,387,920.
Continental Can Co., Inc.: *See—*
Ravve, Abraham, and Fitko. 3,388,084.
Continental Gummi-Werke Aktiengesellschaft: *See—*
Menell, Hans, and Nadler. 3,387,841.
Continental Oil Co.: *See—*
Cameron, Daniel F., and Turner. 3,388,142.
Rose, Russell G. 3,388,143.
Shock, D'Arcy A., and Davis. 3,387,888.
Contraves AG: *See—*
Reich, Heinrich, Meili, and Gilhooley. 3,387,561.
Stutz, Theo. 3,388,262.
Control Data Corp.: *See—*
Gould, Gordon. 3,388,314.
Graham, Walton, and Porton. 3,388,393.
Control Systems Corp.: *See—*
Newsom, Roy R. 3,387,378.
Cook, David E.: *See—*
Simms, Glen E., and Cook. 3,387,891.
Cook, Evin L., to Mobil Oil Corp. Cavitational method for drilling wells. 3,387,672, 6-11-68, Cl. 175—69.
Cooney, Edward F.: *See—*
Allen, Charles A., Cooney, and Freeze. 3,387,869.
Coors Porcelain Co.: *See—*
McManus, John J. 3,388,302.
Copeland Refrigeration Corp.: *See—*
Gannaway, Edwin L., and Iiams. 3,387,774.
Corella, Arthur P.: *See—*
Schneider, William S., and Corella. 3,387,701.
Cormack, Alexander D., M. O. Saltarelli, J. B. Scott, and C. Y. Yeung, to Jones Division, Beloit Corp. Defibrating device. 3,387,796, 6-11-68, Cl. 241—43.
Corning Glass Works: *See—*
Buehl, Walter M., and Cowan. 3,387,961.
Cortese, Thomas F.: *See—*
Edwards, Philip. 3,387,906.
Cory Corp.: *See—*
Karlen, Harvey R. 3,387,903.
Costanza, Albert J., and G. E. Myer, to The Goodyear Tire & Rubber Co. Amino terminated polymers. 3,388,107, 6-11-68, Cl. 260—79.
Coty, Vernon F., to Mobil Oil Corp. Method of fixing nitrogen utilizing azotobacter aromaticum. 3,387,964, 6-11-68, Cl. 71—7.
Courtaulds North America, Inc.: *See—*
Roberts, Ronald, Martin, and Richardson. 3,388,117.

Cowan, James H., Jr.: *See—*
Buehl, Walter M., and Cowan. 3,387,961.
Cowan, John R.: *See—*
Steeneck, Robert, and Cowan. 3,388,378.
Crafts, Cecil A., M. D. McFarlane, and J. E. Mitchell, to Robertshaw Controls Co. Inductive signal transfer device, useful for aviators' helmets. 3,387,606, 6-11-68, Cl. 128—141.
Craig, Robert G., and L. Friedman, to Air Products and Chemicals, Inc. Catalytic hydrogenation of unsaturated hydrocarbons. 3,388,055, 6-11-68, Cl. 208—143.
Cramer, Francis B., to E. I. du Pont de Nemours and Co. Polyesters from perhaloalkyl bisphenols and sepcified aromatic acid halides. 3,388,097, 6-11-68, Cl. 260—47.
Cramer, Richard A.: *See—*
Folsom, Theodore R., and Cramer. 3,388,377.
Cranston, Albert E., Jr., W. C. Cranston, and W. J. Rowell, to Devco, Inc. Snare-type wire binding machine. 3,387,556, 6-11-68, Cl. 100—4.
Cranston, Wilber C.: *See—*
Cranston, Albert E., Jr., W. C. Cranston, and Rowell. 3,387,556.
Cremer, Joseph: *See—*
Beltz, Klaus, Kribbe, Cremer, and Harnisch. 3,387,922.
Beltz, Klaus, Cremer, Müller-Schiedmayer, and Thomas. 3,387,929.
Niermann, Hermann, Klee, Forst, and Cremer. 3,387,937.
Crestworth Ltd.: *See—*
Smith, David G. 3,387,396.
Crompton & Knowles Corp.: *See—*
Kilgallon, John. 3,387,348.
Cronite Co., Inc., The: *See—*
Steffens, Robert N. 3,387,779.
Crouch, Lindsley B., to Cuba Specialty Mfg. Co., Inc. Tubular coupling. 3.387.403, 6-11-68, Cl. 43—65.
Crovatt, Lawrence W., Jr., to Monsanto Co. Polycarbonamides having an improved antistatic property. 3,388,104, 6-11-68, Cl. 260—78.
Crowell, Russell T.: *See—*
Chakoian, George, Crowell, and Southwick. 3,387,537.
Crowley, John E., Jr. Tray for carding machine cleaner. 3,387,336, 6-11-68, Cl. 19—107.
Crowley, John E., Jr. Tray and shelf for carding machine cleaner. 3,387,337, 6-11-68, Cl. 19—107.
Cruse, Joe T., to Atlantic Richfield Co. Vacuum indicating device. 3,387,599, 6-11-68, Cl. 123—146.5.
Cruz, Edward S., to Lockheed Aircraft Corp. Aircraft landing gear. 3,387,802, 6-11-68, Cl. 244—102.
Cruz, Mamerto M., Jr., to FMC Corp. Non-fibrous particulate cellulose and method of making same. 3,388,119, 6-11-68, Cl. 260—212.
Cuba Specialty Mfg. Co., Inc.: *See—*
Crouch, Lindsley B. 3,387,403.
Cugini, Edward T., to Shaffer Tool Works. Tandem stripper sealing apparatus. 3,387,851, 6-11-68, Cl. 277—2.
Cummings, Dale K., to The Cessna Aircraft Co. Variable pitch propeller. 3,387,664, 6-11-68, Cl. 170—160.23.
Cunningham, Richard C., and W. J. Severson, to Westinghouse Electric Corp. Inductionally heated vapor generators and other fluid systems. 3,388,230, 6-11-68, Cl. 219—10.51.
Curran, William V., and R. B. Angier, to American Cyanamid Co. Method of preparing 1-adamantanamine. 3,388,164, 6-11-68, Cl. 260—563.
Current, James H., to Schlumberger Well Surveying Corp. Valved well packer and setting tool therefor. 3,387,659, 6-11-68, Cl. 166—125.
Currie, Grover C., Jr., to Weyerhaeuser Co. Packaging machine. 3,387,428, 6-11-68, Cl. 53—49.
Curti, Romano: *See—*
Mazzolini, Corrado, Denti, and Curti. 3,388,031.
Curtis, Thomas E., and P. G. Chance, to A. B. Chance Co. Automatic sectionalizing of electric power distribution systems. 3,388,297, 6-11-68, Cl. 317—24.
Curtiss-Wright Corp.: *See—*
Bentele, Max. 3,387,595.
Cyba, Henryk A., to Universal Oil Products Co. Phosphate salt of reaction product of dicarboxylic acid, anhydride or ester and alkanolamine. 3,388,191, 6-11-68, Cl. 260—925.
Dachs, Karl: *See—*
Senkpiel, Werner, Dachs, Wilhelm, Wagner, Becht, and Werst. 3,387,995.
Daimler-Benz Aktiengesellschaft: *See—*
Wirsching, Robert J. 3,387,597.
Daito Chemical Industry Co., Ltd.: *See—*
Ito, Shinya, Kanno, and Nakagawa. 3,388,114.
Dakli, Ibrahim, N. Lupi, V. Zamboni, and A. D'Emilio, to Montecatini Edison S.p.A. Water-soluble paraformaldehyde compositions. 3,388,172, 6-11-68, Cl. 260—615.5.
Dale, Brian, and R. C. Ingraham, to Sylvania Electric Products, Inc. Method of producing semiconductor devices. 3,387,359, 6-11-68, Cl. 29—577.
Dallaflor, Ernest P.: *See—*
Hankin, Robert B., Dallaflor, and Alpiner. 3,388,282.
Dally, Roy, to General Electric Co. Tone arm and cartridge combination. 3,387,849, 6-11-68, Cl. 274—24.
Daniel, James W., Jr., to Radio Corp. of America. AGC for broadband parametric amplifier. 3,388,263, 6-11-68, Cl. 307—88.3.
Danielisz, Miklos, M. Dohr, and J. Galinke, to Lord Corp. Hardenable compositions of hardenable epoxy compounds, processes of hardening and hardened epoxy resins. 3,388,105, 6-11-68, Cl. 260—78.4.
Dann, Otto. Novel 2-phenyl-thianaphthene-diamidines. 3,388,185, 6-11-68, Cl. 260—330.5.
Davidoff, Dorsey, to United States of America, Navy. Schmitt trigger or multivibrator control of a diode bridge microsecond switch and chopper circuit. 3,388,270, 6-11-68, Cl. 307—257.
Davies, James J.: *See—*
Walles, Wilhelm E., and Davies. 3,387,917.
Davis, Ariel R. Saturable reactor dimmer. 3,388,294, 6-11-68, Cl. 315—194.
Davis Dhn A. J., to Hermetic Coil Co., Inc. Motor. 3,388,273, 6-11-68, Cl. 310—67.
Davis, Hunt, to Worthington Corp. Multistage turbomachine. 3,387,769, 6-11-68, Cl. 230—130.
Davis, J. G., II: *See—*
Shock, D'Arcy A., and Davis. 3,387,888.
Davis, John C. H., to British Telecommunications Research Ltd. Active filters for electrical signalling systems. 3,388,219, 6-11-68, Cl. 179—15.
Davis, Paul, to Sweetheart Plastics. Vent opening. 3,387,765, 6-11-68, Cl. 229—43.
Dawson, Dennis E., to Midland-Ross Corp. Retractable trainline connector device. 3,387,714, 6-11-68, Cl. 213—1.3.
Day, Allan R., and A. D. Lourie. Substituted 1,4-diazabicyclo [4.4.0]decanes. 3,388,128, 6-11-68, Cl. 260—268.
Day, Frank, and R. C. Womeldorph, to Owens-Corning Fiberglas Corp. Apparatus for producing fibers from high temperature fusible material. 3,387,958, 6-11-68, Cl. 65—1.
Dayco Corp.: *See—*
Bosche, Gene R. 3,387,828.
Dean, Abner. Multilevel folding table. 3,387,573, 6-11-68, Cl. 108—117.
Dean, Jack A.: *See—*
Austin, Wayne M., and Dean. 3,388,286.
De Beaumont, Henry, to Societe Pour l'Utilisation Rationnelle des Fluides. Thermodynamic process and apparatus. 3,387,773, 6-11-68, Cl. 230—172.
De Biasi, Charles P. Rail transportation control system. 3,387,880, 6-11-68, Cl. 246—31.
De Castelet, Gaetan de C., to Regie Nationale des Usines Renault. Method of electrodepositing micro-crack chromium coatings. 3,388,049, 6-11-68, Cl. 204—29.
Decker, Alfred S., G. R. Obenshain, and L. H. Wideman, to Owens-Illinois, Inc. Electrostatic printing apparatus of the offset type. 3,387,557, 6-11-68, Cl. 101—35.
De Coye de Castelet, Gaetan, to Regie Nationale des Usines Renault. Variable speed friction transmissions for vehicles. 3,387,507, 6-11-68, Cl. 74—796.
De Coye de Castelet, Gaetan, to Regie Nationale des Usines Renault. Radial seals of rotary engines. 3,387,589, 6-11-68, Cl. 91—56.
De Coye de Castelet, Gaetan, to Regie Nationale des Usines Renault. Air-conditioning devices for vehicles. 3,387,549, 6-11-68, Cl. 98—2.
Defibrator Aktiebolag: *See—*
Asplund, Arne J. A., and Cederquist. 3,388,037.
Dehne, John S.: *See—*
Harrington, Francis H., and Dehne. 3,387,373.
Deichert, William G.: *See—*
De Lapp, Darwin F., and Deichert. 3,387,988.
Deknatel, Inc.: *See—*
Smith, Robert H., and Kurtz. 3,387,313.
de Körosy, Francis, and J. Shorr. Process for the production of permselective membranes. 3,388,080, 6-11-68, Cl. 260—2.2.
De la Lastra, Albert, to SBD Systems, Inc. Power converter for converting an unregulated DC input voltage into a regulated output voltage. 3,388,311, 6-11-68, Cl. 321—16.
De Lancey Warren H. Pressure balancing means for pump impellers. 3,387,564, 6-11-68, Cl. 103—103.
Delany, James F., and C. Lauxen, to Radio Corp. of America. Low jitter web and tape drive. 3,387,758, 6-11-68, Cl. 226—108.
De Lapp, Darwin F., and W. G. Deichert, to American Cyanamid Co. Mar resistant products and process for making same. 3,387,988, 6-11-68, Cl. 117—76.
De Laval Separator, The: *See—*
Norton, Douglas J. 3,387,677.
Della Flora, Robert J.: *See—*
Gauthier, William D., and Della Flora. 3,387,607.
Delman Co., The: *See—*
Kibler, Willis L. 3,388,288.
Delmar Chemicals Ltd.: *See—*
Podesva, Ctirad. 3,388,116.
De Luca, Frank, to American Bosch Arma Corp. Fuel injection nozzle. 3,387,790, 6-11-68, Cl. 239—453.
De Lucia, Victor E. Laser energized hot cathode type of electron discharge device. 3,388,280, 6-11-68, Cl. 313—337.
De Marco, Robert F., to Fluid Controls, Inc. Metal insert for wall openings and method of combining the same therewith. 3,387,735, 6-11-68, Cl. 220—24.
D'Emilio, Avio: *See—*
Dakli, Ibrahim, Lupi, Zamboni, and E'Emilio. 3,388,172.
De Noyer, Donald B., and C. B. McNabb, to Beloit Corp. Doctor back. 3,387,317, 6-11-68, Cl. 15—256.51.
Denti, Francesco: *See—*
Mazzolini, Corrado, Denti, and Curti. 3,388,031.
Mazzolini, Corrado, and Denti. 3,388,201.
De Penti, Kenneth L., to Midland-Ross Corp. Retractable trainline connector apparatus. 3,387,715, 6-11-68, Cl. 213—1.3.
De Penti, Kenneth L., to Midland-Ross Corp. Car coupler anti-creep mechanism. 3,387,716, 6-11-68, Cl. 213—100.
De Sarro, Emma. Detachable and removable roller skates. 3,387,852, 6-11-68 Cl. 280—11.2.
Designatronics Inc.: *See—*
Walker, Melvin F. 3,387,465.

De Toledo, Fernando A.: *See—*
Sonneborn, Ralph H., and De Toledo. 3,387,325.
Deutermann, Alan R., to Philco-Ford Corp. Tunnel diode memory system. 3,388,386, 6–11–68, Cl. 340—173.
Devco, Inc.: *See—*
Cranston, Albert E., Jr., W. C. Cranston, and Rowell. 3,387,556.
De Vilbiss Co., The: *See—*
Gauthier, William D., and Della Flora. 3,387,607.
De Voy, David D.: *See—*
Shivdasani, Prem, and De Voy. 3,388,383.
De Witz, Gerhard H., to General Precision, Inc. Determination of ocean sound velocity profiles. 3,388,372, 6–11–68, Cl. 340—3.
Dick, John O., and H. M. Forrester, to United States of America, Navy. Resettable monostable multivibrator. 3,388,272, 6–11–68, Cl. 307—273.
Di Domenico, Mauro, Jr.: *See—*
Anderson, Lawrence K., and Di Domenico. 3,387,909.
Dieges & Clust: *See—*
Harrington, Francis H., and Dehne. 3,387,373.
Dien, Chi K., to Allied Chemical Corp. Colored plastic compositions and colors therefor. 3,388,094, 6–11–68, Cl. 260—41.
Dien, Chi K., to Allied Chemical Corp. Oxidation of 2,5-diarylamino-3,6-dihydroterephthalic esters. 3,388,149, 6–11–68, Cl. 260—471.
Diesing, Arthur C.: *See—*
Kamienski, Conrad W., Diesing, and Morrison. 3,388,178.
Dieterich, Dieter, O. Bayer, and J. Peter, to Farbenfabriken Bayer Aktiengesellschaft. Aqueous dispersions of quaternized polyurethanes. 3,388,087, 6–11–68, Cl. 260—29.2.
Dinzl, Richard A., and C. W. Singleterry, to United States of America, Air Force. DC voltage level sensing relaxation oscillator. 3,388,347, 6–11–68, Cl. 331—111.
Distillers Co. Ltd., The: *See—*
Sturt, Alan C. 3,388,188.
Doerge, Herman P., and J. F. Bosso, to Pittsburgh Plate Glass Co. Epoxy resins from a hardwood tar and an epihalohydrin. 3,388,086, 6–11–68, Cl. 260—28.
Dohr, Manfred: *See—*
Danielisz, Miklos, Dohr, and Galinke. 3,388,105.
Dole Valve Co., The: *See—*
Algino, Joseph M. 3,387,743.
Domba, Elemer, to Nalco Chemical Co. Method of preventing and inhibiting foam. 3,388,072, 6–11–68, Cl. 252—321.
Domba, Elemer, to Nalco Chemical Co. Process of defoaming and inhibiting foam formation in aqueous systems. 3,388,073, 6–11–68, Cl. 252—321.
Dominion Electrohome Industries Ltd.: *See—*
Lyvang, Frits L. 3,388,229.
Dortenzo, Alexander T., and F. F. Standley, to Koppers Co., Inc. Lance apparatus for treating molten metals. 3,387,838, 6–11–68. Cl. 266—34.
Dortort, Isadore K., to I-T-E Circuit Breaker Co. Equalized flux reset circuit for magnetic amplifier. 3,388,335, 6–11–68, Cl. 330—8.
Doskocil, Fernand, and R. Blanc. Shoe cleaning machine. 3,387,311, 6–11–68, Cl. 15—36.
Dotzer, Richard: *See—*
Urban, Gerd, and Dotzer. 3,388,131.
Doumas, Arthur C., to The Dow Chemical Co. Recovery of tellurium and/or selenium from aqueous solutions. 3,387,928, 6–11–68, Cl. 23—139.
Dow Chemical Co., The: *See—*
Harrell, Bob R., Goodenough, and Gregory. 3,387,926.
Allen, Robert H., and Yats. 3,388,111.
Butler, Russell L. 3,387,640.
Chisholm, Douglas S. 3,387,498.
Christenson, Russell R. 3,388,195.
Doumas, Arthur C. 3,387,928.
Rodgers, Samuel M., Jr., Wakeman, and Savage. 3,388,082.
Routson, Willis G. 3,387,630.
Schertzer, John, and Schols. 3,387,930.
Walles, Wilhelm E., and Davies. 3,387,917.
Dow Corning Corp.: *See—*
Musolf, Martin C., and Plueddemann. 3,388,144.
Willis, Nathaniel. 3,387,915.
Dowty Hydraulic Units Ltd.: *See—*
Flint, John C. E., and Spence. 3,387,628.
Dowty Rotol Ltd.: *See—*
Morris, Edward H., and Nightingale. 3,387,626.
Drechsler, Gerhard: *See—*
Seipp, Werner, Drechsler, and Bloeck. 3,387,475.
Dreisin, Alexander, to Allis-Chalmers Mfg. Co. Electrical discharge machining method to obtain very close concentricities on a valve body. 3,388,232, 6–11–68, Cl. 219—69.
Drenning, John W., to Koppers Co., Inc. Pulsed laser system for relative speed measurement. 3,388,328, 6–11–68, Cl. 324—70.
Dreschler, Lee: *See—*
Koolnis, Stanley R. 3,387,763.
Dresser Industries, Inc.: *See—*
Treese, Roy. 3,387,863.
Drica–Minieris, Oswald A., and R. L. Gardner, to Monsanto Co. Apparatus for forming a flat narrow strip of parallel bonded filaments. 3,388,025, 6–11–68, Cl. 156—441.
Drobka, Witold, to Borsig Aktiengesellschaft. Heat exchanger reinforcing means. 3,387,652, 6–11–68, Cl. 165—162.
Druey, Jean, and P. Schmidt, 5% to J. W. Foley. N-substituted pyrazolo-pyrimidines. 3,388,203, 6–11–68, Cl. 260—256.4.
Drum, Lester R.: *See—*
Kelly, Robert F., Myers, Hazlett, Drum, and Gimber. 3,387,536.
Dubarry-Barbe, Robert J. R.: *See—*
Bauger, Louis J., Beyler, Dubarry-Barbe, Pianko, and Vesper. 3,387,462.
Dugan, George V.: *See—*
Fisher, James O., Sr., Whitley, and Biddle. 3,387,722.
Dulmage, William J., and W. A. Light, to Eastman Kodak Co. Coatings for regulating transfer in photosensitive transfer elements. 3,387,974, 6–11–68, Cl. 96—28.
Duncan Electric Co., Inc.: *See—*
Brown, Robert A. 3,388,388.
Duncan, Glen R., and W. H. Wertz, to Litton Systems, Inc. Adder. 3,388,239, 6–11–68, Cl. 235—175.
Dunton, Guthrie R., III, and L. Q. Green, to E. I. du Pont de Nemours and Co. Process for rendering glass scratch resistant by decomposition of a titanium ester chelate. 3,387,994, 6–11–68, Cl. 117—124.
Du Pont de Nemours, E. I., and Co.: *See—*
Clarke, Ray A. 3,387,916.
Cramer, Francis B. 3,388,097.
Dunton, Guthrie R., III., and Green. 3,387,994.
Hollberg, Herbert J., and Owens. 3,387,326.
Iwasyk, John M., and Lawes. 3,387,405.
Johnson, Rayner S. 3,388,153.
Magat, Eugene E., and Walker. 3,388,170.
Reilly, Victor J., and Stalter. 3,387,939.
Roesky, Herbert W. 3,387,950.
Sculley, John D. 3,387,997.
Sheard, John L. 3,388,176.
Todd, Leslie J. 3,388,177.
Tolliver, James W. 3,387,996.
Durst A.G.: *See—*
Barbieri, Siegfried. 3,387,534.
Dusenbery, John, Co., Inc.: *See—*
Young, Roger W. 3,387,798.
Dvonch, William: *See—*
Alburn, Harvey E., and Dvonch. 3,388,115.
E & B Inc.: *See—*
Simpson, Jack N., and Bohner. 3,387,304.
Eaker, Garlan L., and J. W. Morton, to General Electric Co. Roller scribe head. 3,387,480, 6–11–68, Cl. 72—203.
Early, Jack D., and J. P. Chupp, to Monsanto Co. Substituted 2′-chloro-4′-nitrosalicylanilides. 3,388,163, 6–11–68, Cl. 260—559.
East, Robert M.: *See—*
Shelffo, Loren E., and East. 3,387,586.
Eastman Kodak Co.: *See—*
Dulmage, William J., and Light. 3,387,974.
Fox, Charles J., and Johnson. 3,387,973.
Hawkins, James M., and Shields. 3,388,109.
Kindig, Guilford E., and Malone. 3,388,006.
Martin, William A. 3,387,755.
Reedy, Albert J. 3,388,152.
Ebertz, Helmut, to Zeiss Ikon Aktiengesellschaft. Mirror reflex viewfinder with roof edge prism. 3,387,530, 6–11–68, Cl. 88—1.5.
Edgar, Leonard D. Self-defense manikin practice device. 3,387,842, 6–11–68, Cl. 272—76.
Edwards, James B.: *See—*
Good, Paul F., White, and Edwards. 3,388,238.
Edwards, Philip, ½ to T. F. Cortese. Roller drawer support apparatus and system. 3,387,906, 6–11–68, Cl. 312—342.
Eggstein, Giorgio, to Ernst Heinkel Aktiengesellschaft. Apparatus for pressurizing fluids. 3,387,455, 6–11–68, Cl. 60—54.6.
Eggstein, Giorgio, and E. Schaeetner, to Ernst Heinkel Aktiengesellschaft. Disc brake caliper mounting means. 3,387,687, 6–11–68, Cl. 188—73.
Ehrenreich, A., & Cie: *See—*
Gottschald, Rudolf. 3,387,871.
Eichler, Elfriede: *See—*
Lindner, Kurt, and Eichler. 3,388,069.
Eilers, Carl G., and J. N. Rypkema, to Zenith Radio Corp. Compatible stereo sound system employing time modulation techniques. 3,388,214, 6–11–68, Cl. 178—5.6.
Eisen- und Drahwerk Erlau AG: *See—*
Sobota, Herbert. 3,387,896.
Elbert, Donald L., and W. H. Horne, to International Business Machines Corp. Transfer medium for typing on non-receptive surfaces. 3,387,986, 6–11–68, Cl. 117—36.1.
Elbling, Irving N.: *See—*
Goldberg, Newton N., and Elbling. 3,388,185.
Electrolux Corp.: *See—*
Ferraris, John T., and Kowalewski. 3,387,819.
Electro-Optical Systems, Inc.: *See—*
Cann, Gordon L. 3,388,291.
Elektrokemisk A/S: *See—*
Haavik, Niles J., and Nyberg. 3,388,205.
Ellis, Charles A., to General Fittings Co. Hot water heating system and regulating valve therefor. 3,387,629, 6–11–68, Cl. 137—614.19.
Ellis, Robert W., to Owens-Illinois, Inc. Glass furnace electrode. 3,388,204, 6–11–68, Cl. 13—18.
Elm, Robert A., to Minnesota Mining and Mfg. Co. Solderless connector for insulated wires. 3,388,370, 6–11–68, Cl. 339—98.
Eltra Corp.: *See—*
Hardin, James T., and Lovrenich. 3,388,267.
Engelage, Guenter: *See—*
Kohler, Roland, Baasner, Nagel, and Engelage. 3,387,760.
Engineering & Development Co. of Colorado: *See—*
Goble, Ralph W. 3,387,379.
English Electric Co. Ltd., The: *See—*
Allmark, Reginald H., and Jones. 3,388,300.
Yarrow, Christopher J. 3,388,315.
Epstein, Harold M.: *See—*
Bettenhausen, Lee H., Epstein, and Plummer. 3,388,275.
Erchak, Michael, Jr., to Rexall Drug and Chemical Co. Glow discharge polymerization coating of polyolefin surfaces to render them receptive to adhesives, inks, and the like. 3,387,991, 6–11–68, Cl. 117—93.1.

Ercoli, Alberto, to Warner-Lambert Pharmaceutical Co. 3-enol ethers of progesterone and 6-methyl derivatives thereof. 3,388,139, 6–11–68, Cl. 260—397.4.
Erdenberger, Peter, to United States Gypsum Co. Apparatus for distributing melt and forming fibers therefrom. 3,387,960, 6–11–68, Cl. 65—15.
Erikson, Kenneth R., to Magnaflux Corp. Focused contact transducer. 3,387,604, 6–11–68, Cl. 128—24.
Eriksson, Nils B., and B.-O. Nordin, to Aktiebolaget Bofors. Cable connector for fixed and movable members. 3,388,222, 6–11–68, Cl. 191—12.
Ernst, Adolphe O. G.: *See—*
Colonbani, Don P. L. J., and Ernst. 3,387,787.
Ernst, Heinz: *See—*
Winkler, Alfred, Ernst, and Stierstorfer. 3,387,546.
Essig, Robert A., to Luxaire, Inc. Two stage check valve. 3,387,623, 6–11–68, Cl. 137—512.1.
Esso Production Research Co.: *See—*
Glazier, Walter H., and Heffring. 3,388,402.
Esso Research and Engineering Co.: *See—*
Bouffard, Roland A. 3,387,953.
King, Laurence F. 3,387,981.
Lewis, Emil H. 3,388,056.
Nightingale, Eugene R., Jr. 3,387,920.
O'Halloran, Rosemary. 3,388,066.
Ramsden, Hugh E. 3,388,179.
Rogers, Dilworth T., and Munday. 3,387,982.
Spenadel, Lawrence, and Bieber. 3,388,015.
Takashima, Herbert, Jacobson, and Brownawell. 3,388,067.
Estes, Robert T., and G. C. Stow, Jr., to Monsanto Co. Twistless synthetic multifilament yarns and process for making the same. 3,388,030, 6–11–68, Cl. 161—172.
Ethyl Corp.: *See—*
Barona, Narses. 3,388,157.
Brendel, Gottfried J. 3,387,947.
Etter, Marcel. Circuit arrangement for extinguishing controlled rectifiers in an inverter. 3,388,310, 6–11–68, Cl. 321—5.
Eubanks, Charles S. Outboard motor support. 3,387,806, 6–11–68, Cl. 248—4.
Evans, Francis W., and M. H. Litt, to Allied Chemical Corp. Novel epoxy compounds and polymers therefrom. 3,388,078, 6–11–68, Cl. 260—2.
Evans, George W., and L. G. Carter, to Halliburton Co. Well casing seals. 3,387,661, 6–11–68, Cl. 166—243.
FMC Corp.: *See—*
Cruz, Mamerto M., Jr. 3,388,119.
Looker, Olin L. 3,387,611.
Tillotson, Glen R. 3,387,612.
Fabri-Tek Inc.: *See—*
Buck, Donald J. 3,387,705.
Petschauer, Richard J. 3,388,293.
Fallon, Arthur D., to The Bendix Corp. Method of forming a semiconductor device by diffusing and alloying. 3,388,012, 6–11–68, Cl. 148—177.
Falls Industries: *See—*
Sarvadi, George, Jr. 3,387,430.
Fansteel Metallurgical Corp.: *See—*
Stuart, Robert E., and Wilson. 3,388,010.
Farbenfabriken Bayer Aktiengesellschaft: *See—*
Abendroth, Hans-Joachim, and Henrich. 3,387,919.
Dieterich, Dieter, Bayer, and Peter. 3,388,087.
Merten, Rudolf, and Braun. 3,388,081.
Merz, Walter. 3 388,145.
Thoma, Wilhelm, and Rinke. 3,388,100.
Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning: *See—*
Bohnert, Erwin, Berner, Meininger, and Hoyer. 3,387,914.
Geiger, Rudolf, Sturm, and Siedel. 3 388,112.
Kuhlkamp, Alfred, and Werner. 3,388,110.
Farha, Chick M. Method for flavoring uncooked poultry. 3,387,979, 6–11–68, Cl. 99—194.
Farrell, John J. Apparatus for metering a coated carrier. 3,387,585, 6–11–68, Cl. 118—104.
Farrell, Thomas J., to Allied Chemical Corp. Decorative plastic. 3,388,196, 6–11–68, Cl. 264—75.
Faugeras, Pierre: *See—*
Boudry, Jean C., Chambon, Faugeras, Lheureux, and Talmont. 3,387,945.
Feder, Aaron, and R. Lavi, to Northrup Corp. Aerodynamic shield device for VTOL jet aircraft engine exhaust. 3,387,456, 6–11–68, Cl. 60—204.
Federal-Mogul Corp.: *See—*
Kwok, Michael C. T. 3,388,083.
Williams, Charles W. 3,387,901.
Fedit, Rene G., and M. Janodet, to Les Vaporisateurs Marcel Franck. Atomizer pump assemblies. 3,387,789, 6–11–68, Cl. 239—333.
Feiner, Alexander, and D. J. Watson, to Bell Telephone Laboratories, Inc. Timing circuit including three active devices and two networks for respectively controlling the de-energization times of two of the devices. 3,388,271, 6–11–68, Cl. 307—267.
Ferguson, Richard, and C. V. Hinton, to Terleco, Inc. Tubular saw head. 3,387,637, 6–11–68, Cl. 143—85.
Ferrara, Vincent. Scrubbers. 3,387,432, 6–11–68, Cl. 55—228.
Ferraris, John T., and J. J. Kowalewski, to Electrolux Corp. Airflow-electric coupling for vacuum cleaner. 3,387,319, 6–11–68, Cl. 15—327.
Fiandt, Ronald M., to Globe-Union Inc. Thin wall polypropylene battery case. 3,388,007, 6–11–68, Cl. 136—166.
Field, William L. Convertible shipping box. 3,387,733, 6–11–68, Cl. 217—12.
Fielding, Harold C., and F. Nyman, to Imperial Chemical Industries Ltd. Process for making fluorochlorobenzenes and hexafluorobenzene. 3,388,174, 6–11–68, Cl. 260—650.
Figar, Stephan, to Askoslovenska Akademie ved. Electrode for electromedical measurement. 3,387,608, 6–11–68, Cl. 128—206.
Finch, Walter G.: *See—*
McLean, William B. 3,388,371.
Firestone Tire & Rubber Co., The: *See—*
Halasa, Adel F. 3,388,146.
Smith, George E. P., Jr. 3,388,096.
Smith, George E. P., Jr. 3,388,108.
Fischel, Norman A., to Universal Oil Products Co. Dehydrogenation of paraffin hydrocarbon over Pt catalyst treated with aluminum monofluoride vapor. 3,388,184, 6–11–68, Cl. 260—683.3.
Fischer, Artur. Rotary motion transmitting device. 3,387,504, 6–11–68, Cl. 74—431.
Fischer, Georg, and H. Petry, to Beteiligungs- und Patentverwaltungsgesellschaft mit beschrankter Haftung. Gallery driving machine with roller pilot drill and relatively rotated outer drills. 3,387,892, 6–11–68, Cl. 299—60.
Fischer, Georg, Aktiengesellschaft: *See—*
Landolt, Hermann. 3,387,510.
Fischer & Porter Co.: *See—*
Mannherz, Elmer D., Rohmann, and Hermanns. 3,387,492.
Fischer, Raymond C., F. L. Randolph, and R. F. Roberson, to International Harvester Co. Automatic steering apparatus for implements. 3,387,665, 6–11–68, Cl. 172—6.
Fischer, Wilbur E. Component mounting clamp. 3,387,814, 6–11–68, Cl. 248—361.
Fisher, James O., Jr.: *See—*
Fisher, James O., Sr., Whitley, and Biddle. 3,387,722.
Fisher, James O., Sr., R. O. Whitley, and C. E. Biddle, Sr., to J. O. Fisher, Jr., E. R. Shadoff, D. Harmon, R. F. Mest, and G. V. Dugan. Apparatus for parking vehicles in vertically arranged pairs. 3,387,722, 6–11–68, Cl. 214—16.1.
Fisher, John, to The Warner & Swasey Co. Optical encoder. 3,388,392, 6–11–68, Cl. 340—347.
Fisher, William W., to Rotron Mfg. Co., Inc. Frequency doubler using series connected switches to control load current polarity. 3,388,313, 6–11–68, Cl. 321—60.
Fitko, Chester W.: *See—*
Ravve, Abraham, and Fitko. 3,388,084.
Fitz-Gerald, Lislie G., to Westland Aircraft, Ltd. Pipe-clip arrangement. 3,387,343, 6–11–68, Cl. 24—81.
Fives–Penhoet: *See—*
Fouche, Lucien F. H. M. and Armand. 3,387,592.
Flair Mfg. Corp.: *See—*
Weinstein, Richard. 3,387,622.
Flanner, Lloyd T., to Allied Chemical Corp. Process for preparing aerosol packages. 3,387,425, 6–11–68, Cl. 53—22.
Flavell, William: *See—*
Sly, James C. P., Hapsell, and Flavell. 3,388,187.
Flint, John C. E., and P. Spence, to Dowty Hydraulic Units Ltd. Slide valves. 3,387,628, 6–11–68, Cl. 137—596.12.
Flora, Laurence H., to Tinnerman Products, Inc. Slide-type fastening device. 3,387,529, 6–11–68, Cl. 85—36.
Flower, Robert A., to General Precision Systems, Inc. Photosensitive surface finish indicator. 3,388,259, 6–11–68, Cl. 250—219.
Flowers, Dervin L., to Ampex Corp. Magnetic tape with a lubricant containing mineral oil and fatty acid amide in the magnetic coating. 3,387,993, 6–11–68, Cl. 117—121.
Fluid Controls, Inc.: *See—*
De Marco, Robert F. 3,387,735.
Focht, John R., to Precision Valve Corp. Brush dispenser. 3,387,911, 6–11–68, Cl. 401—190.
Fogarty, John E.: *See—*
Perry, Thomas E., Henke, Fogarty, Rinebolt, Place, and Poole. 3,387,967.
Fogelson, Mark, to National Video Corp. Electron vacuum tube getter and method of using the same. 3,387,908, 6–11–68, Cl. 316—25.
Foley, John W.: *See—*
Meininger, Edward H., and Shellberg. 3,388,203.
Folsom, Theodore R., and R. A. Cramer, to United States of America, Navy. Method and apparatus for digital data processing. 3,388,377, 6–11–68, Cl. 340—146.1.
Fontaine, John G. Automatic television programmer. 3,388,308, 6–11–68, Cl. 318—467.
Forbro Design Corp.: *See—*
Birman, Paul. 3,388,317.
Gately, Joseph R. 3,388,316.
Ford Motor Co.: *See—*
Boschen, John A., and Close. 3,387,885.
Coker, Gerald C., and Bodek. 3,387,406.
Gorys, John P., and Jensen. 3,387,409.
Igras, Raymond A., and Strosberg. 3,388,052.
McIlroy, Robert. 3,387,830.
Searles, John J., and Winn. 3,387,508.
Fordon, William J.: *See—*
Mastrobattista, Alex A., and Fordon. 3,387,850.
Foreman, Davis: *See—*
Henriques, Lance L. 3,388,389.
Forrest, Gerald V. Packaging container. 3,387,764, 6–11–68, Cl. 229—37.
Forrester, Howard M.: *See—*
Dick, John O., and Forrester. 3,388,272.
Forst, Wilhelm: *See—*
Niermann, Hermann, Klee, Forst, and Cremer. 3,387,937.
Forthmann, Rudiger: *See—*
Schneider, Armin, and Forthmann. 3,387,936.
Foster Grant Co., Inc.: *See—*
Belanger, Paul J., and Richard. 3,387,334.

- Foster, Jackie T., to Maremont Corp. Mechanism for handling and sorting bobbins. 3,387,703, 6–11–68, Cl. 209—73.
- Foster, Norman F., to Bell Telephone Laboratories, Inc. Method of forming a piezoelectric ultrasonic transducer. 3,388,002, 6–11–68, Cl. 117—217.
- Foti, Arem, to I-T-E Circuit Breaker Co. Jaw for ice breaking switch. 3,388,225, 6–11–68, Cl. 200—48.
- Fouche, Lucien F. H. M., and M. R. Armand, to Fives-Penhoet. Tubular heat-transfer elements. 3,387,592, 6–11–68, Cl. 122—406.
- Fox, Charles J., and A. L. Johnson, to Eastman Kodak Co. Photoconductive substances having triphenylamine moieties for electrophotography. 3,387,973, 6–11–68, Cl. 96—1.5.
- Franklin, John S.: *See*—
  - Baldwin, Samuel L., and Franklin. 3,387,737.
- Frech, Kenneth J., to The Goodyear Tire & Rubber Co. Olefin pyrolysis process promoted with mixtures of bromine and aromatic hydrocarbons. 3,388,183, 6–11–68, Cl. 260—680.
- Freedman, Robert P., to General Dynamics Corp. System to automatically control gage and the like. 3,387,471, 6–11–68, Cl. 72—9.
- Freeman, Jeremiah P., and R. C. Petry, to Rohm & Haas Co. N,N-difluoramides and method for preparing same. 3,388,160, 6–11–68, Cl. 260—558.
- Freeze, Paul M.: *See*—
  - Allen, Charles A., Cooney, and Freeze. 3,387,869.
- French Oil Mill Machinery Co., The: *See*—
  - Burner, Andre H. 3,387,793.
- Fresh, John N., and H. R. Chaplin, Jr., to United States of America, Navy. Expandable air cushion vehicle. 3,387,685, 6–11–68, Cl. 180—119.
- Friday, Leonard D.: *See*—
  - McClellan, Leslie L. 3,387,859.
- Friedman, Lee: *See*—
  - Craig, Robert G., and Friedman. 3,388,055.
- Fritz, John A.: *See*—
  - Marks, Alexander A., and Fritz. 3,387,603.
- Frohbieter, Edwin H., to Whirlpool Corp. Refrigeration apparatus with defrost means. 3,387,463, 6–11–68, Cl. 62—140.
- Frost, Barry L., to Clark Equipment Co. Shift linkage transmission. 3,387,501, 6–11–68, Cl. 74—335.
- Funk, Roger S. Automatic marking and cutting of flexible sheets. 3,387,548, 6–11–68, Cl. 95—73.
- Funke, Emil, to P. F. Peddinghaus. Probing device on punch presses and the like. 3,387,525, 6–11–68, Cl. 83—554.
- Furstenberg, Joachim: *See*—
  - Nagel, Ernst, and Furstenberg. 3,387,318.
- GPE Controls, Inc.: *See*—
  - Graffy, Thomas F., and Zaka. 3,387,757.
- Galinke, Joachim: *See*—
  - Danieliss, Miklos, Dohr, and Galinke. 3,388,105.
- Gallie, Daniel G.: *See*—
  - Heskestad, Gunnar, and Gallie. 3,387,647.
- Gannaway, Edwin L., and D. K. Ilams, to Copeland Refrigeration Corp. Means for inhibiting noise and slugging in refrigerant compressors. 3,387,774, 6–11–68, Cl. 230—232.
- Gans, Eugene H., and H. M. Apelian, to Richardson-Merrell Inc. 3,388,041, 6–11–68, Cl. 167—82.
- Gant, Carlen R.: *See*—
  - Lindenschmidt, Robert E., and Gant. 3,387,905.
- Gardner, Robert L.: *See*—
  - Drica-Minieris, Oswald A., and Gardner. 3,388,025.
- Garland, Theodore F. Material cleaning apparatus. 3,387,709, 6–11–68, Cl. 209—458.
- Garrard Engineering Ltd. (formerly The Garrard Engineering and Mfg. Co. Ltd.): *See*—
  - Rowland, Eric, and Wilkins. 3,387,361.
- Garraway, George H. Combined turbojet and turboprop engine. 3,387,457, 6–11–68, Cl. 60—224.
- Gartner, Karlheinz, and E. Lorch, to Messrs. Automation fur Graphische Technik G.m.b.H. Method of joining sets of stacked, superimposed sheets, and apparatus for applying joining strips. 3,387,542, 6–11–68, Cl. 93—1.
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- Gates, Richard L., to Koppers Co., Inc. Method and apparatus for finger-joining lumber. 3,388,020, 6–11–68, Cl. 156—266.
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- Gauthier, William D., and R. J. Della Flora, to The De Vilbiss Co. Apparatus for inhalation therapy. 3,387,607, 6–11–68, Cl. 128—173.
- Gebrueder Netzsch: *See*—
  - John, Willy. 3,387,347.
- Geiger, Richard H., to Signalite Inc. Microwave noise source standard. 3,388,341, 6–11–68, Cl. 331—78.
- Geiger, Rudolf, K. Sturm, and W. Siedel, to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning. ACTH active peptides modified at the N-terminal position. 3,388,112, 6–11–68, Cl. 260—112.5.
- General Aniline & Film Corp.: *See*—
  - Anspon, Harry D. 3,388,181.
  - Bennett, Frank P. 3,387,535.
- General Dynamics Corp.: *See*—
  - Freedman, Robert P. 3,387,471.
  - Hilsenberg, Hubert E. 3,387,634.
  - Jonas, Julius and Pfenneberger. 3,387,824.
  - Rope, Eugene L., and Tricoles. 3,388,396.
- General Electric Co.: *See*—
  - Alampi, Daniel A. 3,388,036.
  - Baldwin, Samuel L. 3,387,866.
  - Baldwin, Samuel L., and Franklin. 3,387,737.
  - Brown, Edgar D., Jr. 3,388,089.
  - Dally, Roy. 3,387,849.
  - Eaker, Garlan L., and Morton. 3,387,480.
  - Hoag, Yates M. 3,387,800.
  - Nichols, Frank S., Lipsey, and Nonken. 3,388,211.
  - Nichols, Frank S., Lipsey, and Nonken. 3,388,212.
  - Paynter, Donald A. 3,388,319.
  - Sabonis, Charles J. 3,388,298.
  - Schoendube, Charles W., and Prior. 3,388,320.
  - Staats, James E. 3,388,231.
  - Wilcock, Donald F., and Kushner. 3,387,482.
- General Fittings Co.: *See*—
  - Ellis, Charles A. 3,387,629.
- General Micro-Electronics Inc.: *See*—
  - Bogert, Howard Z., Pound, and Avery. 3,388,384.
- General Precision, Inc.: *See*—
  - De Witz, Gerhard H. 3,388,372.
  - Prebish, Michael J. 3,388,373.
- General Precision Systems, Inc.: *See*—
  - Flower, Robert A. 3,388,259.
- General Steel Industries, Inc.: *See*—
  - Lich, Richard L. 3,387,569.
- General Time Corp.: *See*—
  - Ring, Thomas F., Keene, and Robinson. 3,387,452.
- General Tire & Rubber Co., The: *See*—
  - Miller, Harvey E., and Mundy. 3,387,839.
- Gentle, Cecil B., Jr. Resistance welding tip. 3,388,234, 6–11–68, Cl. 219—119.
- George, Peter D. Modular lathes. 3,387,515, 6–11–68, Cl. 82—2.
- Georgia-Pacific Corp.: *See*—
  - Markham, Aaron E. 3,388,061.
- Geselbracht, Gordon A.: *See*—
  - Tigler, Leon, Weston, and Geselbracht. 3,387,913.
- Gessner, Siegfried: *See*—
  - Grasenick, Fritz, and Gessner. 3,388,251.
- Gibson, Christian D., and S. B. Jones, to The Raymond Corp. Fork truck. 3,387,731, 6–11–68, Cl. 214—700.
- Gieringer, Carl K., T. J. Schinner, and E. B. Zimmer, to The Cincinnati Time Recorder Co. Employee identification card recorder. 3,388,403, 6–11–68, Cl. 346—17.
- Gilchrist, Reginald S.: *See*—
  - Mattingly, Denis A. E., and Gilchrist. 3,387,468.
- Gilhooley, James: *See*—
  - Reich, Heinrich, Meili, and Gilhooley. 3,387,561.
- Gillis, Robert P., and S. M. Quint, to Johns-Manville Corp. Apparatus for forming asbestos cement pipes. 3,388,039, 6–11–68, Cl. 162—284.
- Gimber, George A.: *See*—
  - Kelly, Robert F., Myers, Haslett, Drum, and Gimber. 3,387,536.
- Gingras, Roch H. Safety device for fired pressure vessels. 3,387,593, 6–11–68, Cl. 122—504.1.
- Giraldi, Orlando T. Tensioning device for spectacle frames. 3,387,910, 6–11–68, Cl. 351—113.
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  - Wilson, Alexander J. 3,387,540.
- Giulie, Joe D., and L. N. Wilder, to Icore Industries. Scale preloading mechanism. 3,387,679, 6–11–68, Cl. 177—164.
- Glantz, Hershey. Signal for automobiles. 3,387,584, 6–11–68, Cl. 116—28.
- Glass, Marvin, & Associates: *See*—
  - Glass, Marvin I., and Barlow. 3,387,846.
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- Goodwin, Charles I.: *See*—
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- Gregory, Richard L.: *See*—
  - Harrell, Bob R., Goodenough, and Gregory. 3,387,926.
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  - Rahmel, Henry A., and Grube. 3,387,797.
- Guest, John, and J. A. Knox, to Halliburton Co. Well casing seals. 3,387,656, 6–11–68, Cl. 166—25.
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  - Caldwell, John R., and Hall. 3,387,340.
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- Hall, George E., and A. B. Redpath, to Westinghouse Electric Corp. Bearing tester. 3,387,485, 6–11–68, Cl. 73—9.
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  - Evans, George W., and Carter. 3,387,661.
  - Guest, John, and Knox. 3,387,656.
- Hallicrafters Co., The: *See*—
  - Hankin, Robert B., Dallafior, and Alpiner. 3,388,282.
- Hamac-Hansella Gesellschaft mit beschrankter Haftung: *See*—
  - Beckers, Hans. 3,387,543.
- Hammond Corp.: *See*—
  - Schrecongost, Ray B. 3,387,527.
- Handgards, Inc.: *See*—
  - Blatz, Robert A. 3,387,307.
- Hanhardt, Kribbe H.: *See*—
  - Beltz, Klaus, Kribbe, Cremer, and Harnisch. 3,387,922.
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- Hansell, David P.: *See*—
  - Sly, James C. P., Hansell, and Flavell. 3,388,187.
- Harbers, Henry C., Jr. Vehicle suspension. 3,387,858, 6–11–68, Cl. 280—124.
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- Harding, James, to Union Carbide Corp. Polymers of bisphenols of spirobi(meta-dioxan). 3,388,098, 6–11–68, Cl. 260—47.
- Hardy, William C., to Sun Oil Co. Downhole ignitor. 3,387,657, 6–11–68, Cl. 166—60.
- Hare, Lloyd E., to Litton Business Systems, Inc. Positive action spring clutch. 3,387,690, 6–11–68, Cl. 192—26.
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  - Fisher, James O., Sr., Whitley, and Biddle. 3,387,722.
- Harnisch, Heinz: *See*—
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- Harrington, Francis H., and J. S. Dehne, to Dieges & Clust. Finger ring gauges. 3,387,373, 6–11–68, Cl. 33—147.
- Harris-Intertype Corp.: *See*—
  - Sorkin, Jack L. 3,387,976.
- Harrison, Homer S., to Mechanical Handling Systems, Inc. Drive for conveyor chain. 3,387,697, 6–11–68, Cl. 198—203.
- Hartlapp, Gerhard: *See*—
  - Heymer, Gero, Hartlapp, and Traulsen. 3,387,924.
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  - Harvey, Leo M., and Hilton. 3,387,481.
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  - Tanabe, Katsumi, Takasaki, Sakai, Hayashi, Morisawa, and Hashimoto. 3,388,124.
- Hawes, Alan B. Flexible connection between adjacent monorail coaches. 3,387,568, 6–11–68, Cl. 105—15.
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- Hayashi, Ryoso: *See*—
  - Tanabe, Katsumi, Takasaki, Sakai, Hayashi, Morisawa, and Hashimoto. 3,388,124.

- Hayden, Millard C.: *See—*
  - Tenenbaum, Nathaniel D., and Hayden. 3,388,296.
- Haynes, Louis E. Earth excavating device. 3,387,890, 6–11–68, Cl. 299—37.
- Haslett, William H., Jr.: *See—*
  - Kelly, Robert F., Myers, Haslett, Drum, and Gimber. 3,387,536.
- Hasy, Andrew C., and J. V. Karabinos, to E. R. Squibb & Sons, Inc. Products of the reaction of chloral with hydrohalides with alkanolamines and dialkanolamines. 3,388,165, 6–11–68, Cl. 260—584.
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  - Hahn, Robert S., and Youden. 3,387,899.
- Hecht, Richard, to National Research Corp. High vacuum pump with cryosorption pumping element. 3,387,767, 6–11–68, Cl. 230—69.
- Hedderich, Otto: *See—*
  - Woellhaf, Josef, Wagner, Uhl, and Hedderich. 3,387,322.
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  - Benton, Robert C., and Heffner. 3,388,023.
- Heffring, Harland H.: *See—*
  - Glazier, Walter H., and Heffring. 3,388,402.
- Heide, John D.: *See—*
  - Black, Sheppard A., and Heide. 3,388,024.
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  - Eggstein, Giorgio. 3,387,455.
  - Eggstein, Giorgio, and Schaeetner. 3,387,687.
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- Hendrix, Lloyd T., to Atlantic Richfield Co. Separation of methanol, water and glycol by plural distillation utilizing heat recovery. 3,388,046, 6–11–68, Cl. 203—18.
- Henke, Robert H.: *See—*
  - Perry, Thomas E., Henke, Fogarty, Rinebolt, Place, and Poole. 3,387,967.
- Henkel & Cie G.m.b.H.: *See—*
  - Lindner, Kurt, and Eichler. 3,388,069.
- Henrich, Gunter: *See—*
  - Abendroth, Hans-Joachim, and Henrich. 3,387,919.
- Henriques, Lance L., to D. Foreman. Alarm systems. 3,388,389, 6–11–68, Cl. 340—216.
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  - Lamborn, Bayard T. 3,388,076.
  - Snyder, John C. 3,387,933.
  - Snyder, John C. 3,387,948.
  - Snyder, John C. 3,387,949.
  - Thigpen, Jonathan I. 3,388,019.
  - Vandenbeg, Edwin J. 3,388,079.
- Hermanns, Henry: *See—*
  - Mannhers, Elmer D., Rohmann, and Hermanns. 3,387,492.
- Hermetic Coil Co., Inc.: *See—*
  - Davis, Dhu A. J. 3,388,278.
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- Heskestad, Gunnar, and D. G. Gallie. Air treating means including an air flow directing system. 3,387,647, 6–11–68, Cl. 165—32.
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  - Lukes, Joseph A. 3,388,385.
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- Hildebrand, Robert. Air drier for stacked materials. 3,387,381, 6–11–68, Cl. 34—66.
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  - Kamlet, Mortimer J., Shipp, and Hill. 3,388,147.
- Hillman-Kelley: *See—*
  - Campbell, Andrew B. 3,387,512.
- Hilsenberg, Hubert E., to General Dynamics Corp. Coil forming device. 3,387,634, 6–11–68, Cl. 140—92.2.
- Hilton, Ralph W.: *See—*
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- Himelreich, Louis E.: *See—*
  - Hedgspeth, Duel G., and Himelreich. 3,387,376.
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- Hinton, Charles V.: *See—*
  - Ferguson, Richard, and Hinton. 3,387,637.
- Hitov, Joseph J.: *See—*
  - Rainer, William C., Redding, Hitov, Sloan, and Stewart. 3,388,051.
- Hixon, Kenneth D.: *See—*
  - Roberts, Thomas S., and Hixon. 3,388,261.
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  - Habib, David P., and Hodgins. 3,387,977.
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  - Horner, Ellwood J. 3,387,559.
- Hoekstra, James, to Universal Oil Products Co. Catalyst for treatment of combustible waste products. 3,388,077, 6–11–68, Cl. 252—466.
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  - Mattinoe, Paul T., and Hofmann. 3,388,035.
- Hollberg, Herbert J., and J. E. Owens, to E. I. du Pont de Nemours and Co. Apparatus for charging and spreading a web. 3,387,326, 6–11–68, Cl. 18—8.
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- Holycross, Frank R., to Wallace-Murray Corp. Diverter spout. 3,387,816, 6–11–68, Cl. 251—175.
- Home Metal Products Co.: *See—*
  - Stalker, James E. 3,387,434.
- Honeywell Inc.: *See—*
  - Mueller, Richard S. 3,387,807.
  - Shivdasani, Prem, and De Voy. 3,388,383.
- Hooker Chemical Corp.: *See—*
  - Minklei, Alfred O. 3,387,934.
- Hoote, Jimmy J.: *See—*
  - Sutton, Lee, and Hoote. 3,388,327.
- Hoover Co., The: *See—*
  - Prosser, Eric S., and Hall. 3,387,873.
- Horizons Inc.: *See—*
  - Wainer, Eugene. 3,387,970.
  - Wainer, Eugene. 3,388,050.
- Horne, William H.: *See—*
  - Elbert, Donald L., and Horne. 3,387,986.
- Horner, Ellwood J., to R. Hoe & Co., Inc. Holding means for laminated relief printing plate. 3,387,559, 6–11–68, Cl. 101—383.
- Houck, James R.: *See—*
  - Bowers, Raymond, and Houck. 3,388,321.
- Houdaille Industries, Inc.: *See—*
  - Rumsey, Rollin D. 3,387,505.
- Houghton, Clayton W., to Aeroflex Laboratories, Inc. Multiplex still-frame camera. 3,387,547, 6–11–68, Cl. 95—36.
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- Howlett Machine Works: *See—*
  - Howlett, James W. 3,387,417.
- Hoyer, Ernst: *See—*
  - Bohnert, Erwin, Berner, Meininger, and Hoyer. 3,387,914.

- Hubbell, Harvey, Inc.: *See—*
  - Misencik, John, and Lee. 3,388,295.
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- Huey, Brooks T. Convertible building construction. 3,387,413, 6–11–68, Cl. 62—69.
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  - Brown, Albert C. 3,388,367.
- Hughes, David E., to Pittsburgh Plate Glass Co. Air curtain for observation window. 3,387,551, 6–11–68, Cl. 98—88.
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  - Wood, George W. 3,388,365.
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  - Dortort, Isadore K. 3,388,335.
  - Foti, Arem. 3,388,225.
  - Higgins, Louis W. 3,388,224.
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  - Brown, Thomas D. 3,387,450.
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  - Giulie, Joe D., and Wilder. 3,387,679.
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  - Waldo, Russell W. 3,387,320.
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  - Yamaguchi, Toshihiro, Yamamoto, and Imamura. 3,388,193.
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  - Bloom, Martin S., and Sharpe. 3,388,022.
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  - Viney, David J. 3,388,175.
- Imperial Chemical Industries of Australia and New Zealand Ltd.: *See—*
  - Temple, Peter L. 3,387,566.
- Indiana Brass Co.: *See—*
  - Johnson, Earl D. 3,387,309.
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  - Thompson, Robert L. 3,387,673.
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  - Carter, Richard S. 3,388,264.
  - Elbert, Donald L., and Horne. 3,387,986.
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  - Bauman, Jack L. 3,387,861.
  - Broad, Charles, Jr. 3,387,495.
  - Fischer, Raymond C., Randolph, and Roberson. 3,387,665.
  - Karlsson, Elof K. 3,387,440.
  - Kasper, Roman J. 3,387,436.
  - Kasper, Roman J. 3,387,446.
  - May, Patrick L., and Majkrzak. 3,387,725.
  - Olsson, Nils O. 3,387,751.
  - Padleckas, Leonard. 3,387,454.
  - Rice, Russell E. 3,387,667.
  - Ruhl, Charles A. L. 3,387,523.
  - Sammarco, Peter, and Zimmerman. 3,387,691.
  - Tracy, James T. 3,387,459.
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  - Johnson, Ronald W. 3,387,987.
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  - Myatt, Edward R., and Loveland. 3,388,354.
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- International Telephone and Telegraph Corp.: *See—*
  - Lombardi, Anthony J. 3,388,364.
  - Raffaelli, Joseph G. 3,388,362.
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  - King, William J. 3,388,009.
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- Jackson Vibrators, Inc.: *See—*
  - Reynolds, Donald W. 3,387,567.
- Jacobson, Norman: *See—*
  - Takashima, Herbert, Jacobson, and Brownawell. 3,388,067.
- Jaggers, Clifford. Lawn sprinkling apparatus and systems. 3,387,785, 6–11–68, Cl. 239—200.
- Jakobsen, Robert E. K., to Schlumberger Ltd. (Schlumberger N.V.). Chair. 3,387,887, 6–11–68, Cl. 297—445.
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- Janetos, Nicholas S.: *See—*
  - Marzocchi, Alfred, and Janetos. 3,387,990.
- Janodet, Marcel: *See—*
  - Fedit, Rene G., and Janodet. 3,387,789.
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- Jellies, David A., to American Hospital Supply Corp. Hanger construction for parenteral liquid container. 3,387,732, 6–11–68, Cl. 215—100.
- Jenkins, Lloyd T.: *See—*
  - Jackson, Charles E., Jenkins, and Slade. 3,388,200.
- Jensen, Peter L.: *See—*
  - Gorys, John P., and Jensen. 3,387,409.
- Johansson, Karl-Gustav S.: *See—*
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  - Gillis, Robert P., and Quint. 3,388,039.
  - Long, Ernest G. 3,387,420.
  - Mastrobattista, Alex A., and Fordon. 3,387,850.
  - Sinclair, David. 3,387,486.
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  - Standley, Wendell E. 3,387,522.
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  - Fox, Charles J., and Johnson. 3,387,973.
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- Jones, Clintford R.: *See—*
  - Larsen, Earl I., Krock, and Jones. 3,387,951.
- Jones Division, Beloit Corp.: *See—*
  - Cormack, Alexander D., Saltarelli, Scott, and Yeung. 3,387,796.
- Jones & Laughlin Steel Corp.: *See—*
  - Paliwoda, Eugene J., and McManus. 3,387,968.
- Jones, Stanford B.: *See—*
  - Gibson, Christian D., and Jones. 3,387,731.

Jones, Wilfred J.: *See*—
  Allmark, Reginald H., and Jones. 3,388,300.
Joslyn Mfg. and Supply Co.: *See*—
  Kawiecki, Chester J., and Pranke. 3,388,274.
Kamberg, Henry, and J. K. Wood. Decking with trim strip. 3,387,419, 6–11–68, Cl. 52—255.
Kamienski, Conrad W., A. C. Diesing, and R. C. B. Morrison, to Lithium Corp. of America, Inc. Preparation of solutions of lithium-conjugated polyene hydrocarbon adducts. 3,388,178, 6–11–68, Cl. 260—665.
Kamlet, Mortimer J., K. G. Shipp, and M. E. Hill, to United States of America, Navy. 2-fluoro-2,2-dinitroethyl carbonates and production thereof. 3,388,147, 6–11–68, Cl. 260—463.
Kanai, Hiroyuki, T. Morikawa, and N. Arita. Metallic card clothing. 3,387,338, 6–11–68, Cl. 19—114.
Kandle, Louis A.: *See*—
  Hindin, Eugene, Kandle, and Levitt. 3,387,729.
Kanno, Katsuo: *See*—
  Ito, Shinya, Kanno, and Nakagawa. 3,388,114.
Karabinos, Joseph V.: *See*—
  Hazy, Andrew C., and Karabinos. 3,388,165.
Karlen, Harvey R., to Cory Corp. Liquid heater. 3,387,903, 6–11–68, Cl. 312—228.
Karlsson, Elof K., to International Harvester Co. Impact relief mechanism for row dividers and the like. 3,387,440, 6–11–68, Cl. 56—119.
Kasper, Roman J., to International Harvester Co. Rotary cutter. 3,387,436, 6–11–68, Cl. 56—6.
Kasper, Roman J., to International Harvester Co. Rotary plant cutter and method of cutting. 3,387,446, 6–11–68, Cl. 56—503.
Kaufman, Edward R.: *See*—
  Trainor, James T., and Kaufman. 3,387,980.
Kawiecki, Chester J., and W. T. Pranke, Jr., to Joslyn Mfg. and Supply Co. Axial spark gap with a coaxial third electrode adjacent the main axial electrodes. 3,388,274, 6–11–68, Cl. 313—54.
Keane, Raymond A.: *See*—
  Ring, Thomas F., Keane, and Robinson. 3,387,452.
Keenan, Peter P., to Lockheed Aircraft Corp. TM$_{01}$ mode RF pulse generator. 3,388,287, 6–11–68, Cl. 315—39.
Keith, Frederick W., Jr., to Pennsalt Chemicals Corp. Centrifugal separation of a solids-liquid mixture. 3,388,054, 6–11–68, Cl. 208.33.
Kelley, William E., and J. Smith, to Aquarium Systems, Inc. Culture system. 3,387,587, 6–11–68, Cl. 119—2.
Kelly, Charles R., to United States Steel Corp. Electron-beam gun. 3,388,279, 6–11–68, Cl. 313—279.
Kelly, Robert F., W. H. Myers, W. H. Haslett, Jr., L. R. Drum, and G. A. Gimber, to United States of America, Navy. Ministore launching system. 3,387,536, 6–11–68, Cl. 89—1.5.
Kelsey, Cadwallader W., to Skycar, Inc. Vertical takeoff aircraft. 3,387,801, 6–11–68, Cl. 244—23.
Kemp, Norman H. Closure seal. 3,387,738, 6–11–68, Cl. 220—46.
Kemp, William P.: *See*—
  Sherrington, Leonard G., and Kemp. 3,387,944.
Kendall Co., The: *See*—
  Alexander, Robert R. 3,388,028.
Kesselring, Fritz, to Siemens-Schuckertwerke A.G. Magnetic trip structure for zero current circuit interrupters. 3,388,361, 6–11–68, Cl. 335—281.
Kibler, Willis L., to The Delman Co. Vehicle light control system to de-energize the light circuit a pre-determined time after the ignition is de-energized. 3,388,288, 6–11–68, Cl. 315—77.
Kilgallon, John, to Crompton & Knowles Corp. Device for making an internally coated tubular blank. 3,387,348, 6–11–68, Cl. 25—38.
Kim, Kee W.: *See*—
  Grove, Marvin H., and Kim. 3,387,819.
Kimura, Eishun, to Matsushita Electronics Corp. Method of forming a p-n junction in a polycrystalline material. 3,388,013, 6–11–68, Cl. 148—186.
Kindig, Guilford E., and H. L. Malone, to Eastman Kodak Co. Alkaline battery provided with a terminal protection plate. 3,388,006, 6–11–68, Cl. 136—163.
King, Geo. W., Ltd.: *See*—
  Burrows, Arthur T. C. 3,387,822.
King, Laurence F., to Esso Research and Engineering Co. Bitumen composition of improved temperature susceptibility. 3,387,981, 6–11–68, Cl. 106—279.
King, Robert E., E. N. Cobb, and J. E. Schmidt, to Square D Co. Feeder bus duct having provision for power tap-off device. 3,388,209, 6–11–68, Cl. 174—71.
King, Walter B.: *See*—
  Heinecke, Albert, King, and Winchester. 3,387,644.
King, William J., to Ion Physics Corp. Method of forming a P-N junction by an ionic beam. 3,388,009, 6–11–68, Cl. 148—1.5.
Kirihara, Shigeki: *See*—
  Ishida, Shuichi, Kirihara, and Usukura. 3,388,167.
Kissman, Henry M.: *See*—
  Winterbottom, Robert, Bitha, and Kissman. 3,388,162.
Kitchen & Perry, Inc.: *See*—
  Perry, Bryan J., Jr. 3,387,387.
Kiyooka, Shigeo, and J. Okabe, to Sanyo Pulp Co. Ltd. Soil stabilizer composition and method of making from spent sulfite liquors. 3,387,965, 6–11–68, Cl. 71—25.
Kjar, Raymond A., to United States of America, Navy. Pulse processor. 3,388,266, 6–11–68, Cl. 307—231.
Klee, Helmuth: *See*—
  Niermann, Hermann, Klee, Forst, and Cermer. 3,387,937.
Klein, Richard J., to Acme Electric Corp. Dual response regulator. 3,388,312, 6–11–67, Cl. 321—18.
Klein, Wallace J.: *See*—
  Bick, Edward H., and Klein. 3,387,728.
Kleinewafers Gravuren G.m.b.H.: *See*—
  Roosen, Karl-Heinz. 3,387,351.
Klimstra, Paul D., to G. D. Searle & Co. (Optionally 17-alkylated) 2,3-imino-5α-androstan 17β-ols and intermediates thereto. 3,388,123, 6–11–68, Cl. 260—239.5.
Klinger Mfg. Co., The: *See*—
  Mattingly, Denis A. E., and Gilchrist. 3,387,468.
Klinzing, A. F., Co. Inc.: *See*—
  Prentice, George D. 3,387,696.
Klockow, Michael: *See*—
  Machleidt, Hans, Lechner, and Klockow. 3,388,192.
Knapsack Aktiengesellschaft: *See*—
  Beltz, Klaus, Kribbe, Cremer, and Harnisch. 3,387,922.
  Heymer, Gero, Hartlapp, and Traulsen. 3,387,924.
  Niermann, Hermann, Klee, Forst, and Cremer. 3,387,937.
  Schneider, Armin, and Forthmann. 3,387,936.
Knapsack-Griesheim Aktiengesellschaft: *See*—
  Beltz, Klaus, Cremer, Muller-Schiedmayer, and Thomas. 3,387,929.
Knauer, Paul: *See*—
  Roof, James L., and Knauer. 3,388,346.
Knox, John A.: *See*—
  Guest, John, and Knox. 3,387,656.
Koby, Daniel D.: *See*—
  Shoemaker, Stephen P., Jr., Koby, and Caplet. 3,387,474.
Koehler, Roland, W. Baasner, E. Nagel, and G. Engelage, to Agfa-Gevaert Aktiengesellschaft. Apparatus for centering bands of light-sensitive material or the like. 3,387,760, 6–11–68, Cl. 226—198.
Kohashi, Tadao, to Matsushita Electric Industrial Co., Ltd. Light amplifier including a layer for converting X-rays to visible radiation. 3,388,256, 6–11–68, Cl. 250—213.
Kongpricha, Santad: *See*—
  Jache, Albert W., and Kongpricha. 3,387,935.
Koolnis, Stanley R., to L. Drechsler and F. Zandell. Reclosable dispensing container with snap locking top tab. 3,387,763, 6–11–68, Cl. 229—17.
Koppelmann, Floris, and K. Steimel, to Licentia Patent-Verwaltungs-G.m.b.H. Control circuit for direct current motors including semiconductor cell means connected across starting resistors. 3,388,306, 6–11–68, Cl. 318—422.
Koppers Co., Inc.: *See*—
  Dortenzo, Alexander T., and Standley. 3,387,888.
  Drenning, John W. 3,388,328.
  Gates, Richard L. 3,388,020.
Korey, John. Golf glove. 3,387,306, 6–11–68, Cl. 2—159.
Koshuba, Walter J.: *See*—
  Morana, Simon J., and Koshuba. 3,387,966.
Kossow, John F.: *See*—
  Hahn, Laurence W., and Kossow. 3,388,005.
Kowalewski, John J.: *See*—
  Ferraris, John T., and Kowalewski. 3,387,319.
Kratzer, Dale L., and E. D. Carfolite, to Radio Corp. of America. Doppler type correlation system. 3,388,398, 6–11–68, Cl. 343—17.5.
Kraut, Herman G., and A. E. Lemaire, to The Stanley Works. Apparatus and method for packaging. 3,387,426, 6–11–68, Cl. 53—22.
Kray, Raymond J., and R. J. Bellet, to Allied Chemical Corp. Carboxy terminated graft copolymers of aminocarboxylic acids, or lactams on acrylic copolymers. 3,388,186, 6–11–68, Cl. 260—857.
Krdzic, Ljubomir. Universal fruit picker. 3,387,444, 6–11–68, Cl. 56—334.
Kreeger, Fred L. Portable fence. 3,387,825, 6–11–68, Cl. 256—10.
Kretzmer, Ernest R., to Bell Telephone Laboratories, Inc. Partial response multilevel data system. 3,388,330, 6–11–68, Cl. 325—42.
Kribbe, Edith: *See*—
  Beltz, Klaus, Kribbe, Cremer, and Harnisch. 3,387,922.
Kribbe, Gertrud K.: *See*—
  Beltz, Klaus, Kribbe, Cremer, and Harnisch. 3,387,922.
Kribbe, Kurt W. H.: *See*—
  Beltz, Klaus, Kribbe, Cremer, and Harnisch. 3,387,922
Krock, Richard H.: *See*—
  Larsen, Earl I., Krock, and Jones. 3,387,951.
Kroeper, Hugo, and J. Sand, to Badische Anilin- & Soda-Fabrik Aktiengesellschaft. Production of imidazoles. 3,388,132, 6–11–68, Cl. 260—309.
Kuether, Siegfried, to Tamco Ltd. Water jet propulsion apparatus. 3,387,583, 6–11–68, Cl. 115—.5.
Kugler, Emanuel. Plastic bags. 3,387,766, 6–11–68, Cl. 229—62.
Kuhlkamp, Alfred, and G. Werner, to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning. Telomers and process for preparing them. 3,388,110, 6–11–68, Cl. 260—85.7.
Kulaszewski, Edward S. Receptacle rim guard or accessory. 3,387,741, 6–11–68, Cl. 220—73.
Kulikowski, Victor A.: *See*—
  Badali, Joseph A., Kulikowski, and Vartanian. 3,387,400.
Kuntzleman, Harry C.: *See*—
  Brooke, Alvin W., Kuntzleman, and Markey. 3,388,216.
Kurita Industrial Co., Ltd.: *See*—
  Mizuno, Shuzo. 3,387,782.
Kuroo, Yoshiyasu: *See*—
  Nakamura, Keiichi, and Kuroo. 3,387,360.
Kurtz, Leonard D.: *See*—
  Smith, Robert H., and Kurtz. 3,387,313.
Kurz, Donald A. Abacus with mechanical means for holding unit counters in position. 3,387,392, 6–11–68, Cl. 35—33.

Kushner, Gerald J.: *See*—
  Wilcock, Donald F., and Kushner. 3,387,482.
Kwake, John P. Closure for inflatable structure. 3,387,412, 6–11–68, Cl. 52—2.
Kwok, Michael C. T., to Federal-Mogul Corp. Novel rubber/fiber compositions and process for preparing same. 3,388,083 6–11–68, Cl. 260—17.4.
La Chapelle, Edward A., to Western Electric Co., Inc. Multilayer thin-film coated substrate with metallic parting layer to permit selective sequential etching. 3,387,952, 6–11–68, Cl. 29—183.5.
Lakso Co. Inc., The: *See*—
  Hendrickson, Ralph. 3,387,695.
Lambertson, Glen R., to United States of America, Atomic Energy Commission. Particle beam focussing magnet with a septum wall. 3,388,359, 6–11–68, Cl. 335—210.
Lamborn, Bayard T., to Hercules Inc. Preparation of titanium catalyst. 3,388,076, 6–11–68, Cl. 252—429.
Lancini, Giancarlo, and P. Sensi, to Lepetit S.p.A. Aminomethyl derivatives of tetracycline. 3,388,161, 6–11–68, Cl. 260—559.
Landers, Otis L., and M. L. McKenzie, to Pneumafil Corp. Card doffer cheek cleeaning. 3,387,335, 6–11–68, Cl. 19—107.
Landis & Gyr, A.G.: *See*—
  Huber, August. 3,387,985.
Landolt, Hermann, to Georg Fischer Aktiengesellschaft. Device for cutting to length and centering work pieces and stock material. 3,387,510, 6–11–68, Cl. 77—65.
Langston Co.: *See*—
  Moore, William H. 3,387,719.
Lansch, John L., to Anaconda Wire and Cable Co. Oil pressure controller for pipe-type electric cable. 3,388,207, 6–11–68, Cl. 174—11.
Laporte Chemicals Ltd.: *See*—
  Leaver, John P. 3,387,938.
Larsen, Donald R., to The Estate of V. E. Pratt. Multicolor lighting apparatus. 3,388,245, 6–11–68, Cl. 240—3.1.
Larsen, Earl I., R. H. Krock, and C. R. Jones, to P. R. Mallory & Co., Inc. Composites of beryllium-copper-manganese. 3,387,951, 6–11–68, Cl. 29—182.1.
Lathem, James M., F. E. Bobo, Jr., and R. M. Matthews, to Chadbourn Gotham, Inc. Stretched and stabilized yarns and fabrics. 3,387,448, 6–11–68, Cl. 57—152.
Laughlin, Loran L. Coin-operated gas timer and burner for use therewith. 3,387,747, 6–11–68, Cl. 222—2.
Laun, Fred D.: *See*—
  Barnes, Philip E., and Laun. 3,387,663.
Laure, George R., to The W-L Molding Co. Check valve. 3,387,625, 6–11–68, Cl. 137—543.19.
Lauth, Corliss, to Multifasteners Corp. d.b.a. Cast Forge Co. Method and apparatus for high pressure permanent molding. 3,387,646, 6–11–68, Cl. 164—120.
Lauxen, Carl: *See*—
  Delany, James F., and Lauxen. 3,387,758.
Lavi, Rahim: *See*—
  Feder, Aaron, and Lavi. 3,387,456.
Lawes, Bernard C.: *See*—
  Iwasyk, John M., and Lawes. 3,387,405.
Lawson, Martin W., and C. A. Bodge, to Texas Instruments Inc. Magnetic type circuit breaker. 3,388,357, 6–11–68, Cl. 335—161.
Leaver, John P., to Laporte Chemicals Ltd. Process for or relating to the production of hydrogen peroxide. 3,387,938, 6–11–68, Cl. 23—207.
Lebourg, Maurice P., to Schlumberger Technology Corp. Well packer apparatus. 3,387,658, 6–11–68, Cl. 166—120.
Lechner, Horst: *See*—
  Machleidt, Hans, Lechner, and Klockow. 3,388,192.
Lee, Edwin S., III, to Burroughs Corp. Memory system. 3,388,382, 6–11–68, Cl. 340—172.5.
Lee, Franklin G., and H. A. Male, to Westinghouse Electric Corp. Hybrid balanced push-pull amplifier. 3,388,337, 6–11–68, Cl. 330—15.
Lee, Sung C.: *See*—
  Misencik, John, and Lee. 3,388,295.
Leesona Corp.: *See*—
  Rosenblatt, Solomon. 3,388,004.
Lehmann, Walter, to G. Gussmann. Method of and device for making spring cores for spring core mattresses. 3,387,633, 6–11–68, Cl. 140—3.
Leitner, Gordon F.: *See*—
  Goeldner, Richard W., and Leitner. 3,388,045.
Lemaire, Albert E.: *See*—
  Kraut, Herman G., and Lemaire. 3,387,426.
Lemelson, Jerome H. Extrusion apparatus and method. 3,387,330, 6–11–68, Cl. 18—13.
Lemelson, Jerome H., to The Triax Co. Remote carrier control apparatus for a warehouse system. 3,387,723, 6–11–68, Cl. 214—16.4.
Lenard, Katherine: *See*—
  Taylor, Edward C., and Lenard. 3,388,136.
Lenz, Charles E., to North American Rockwell Corp. Digital servomechanism alignment system. 3,388,304, 6–11–68, Cl. 318—18.
Lepetit S.p.A.: *See*—
  Lancini, Giancarlo, and Sensi. 3,388,161.
Les Vaporisateurs Marcel Franck: *See*—
  Fedit, Rene G., and Janodet. 3,387,789.
Le Tourneau, Robert G. Gear reduction drive units embodied in vehicle wheels. 3,389,502, 6–11–68, Cl. 74—391.
Levake Industries: *See*—
  Levake, Richard N. 3,387,692.
Levake, Richard N., to Levake Industries. Control assembly for a liquid dispenser. 3,387,692, 6–11–68, Cl. 194—6.
Levitt, Semond: *See*—
  Hindin, Eugene, Kandle, and Levitt. 3,387,729.
Levitt, Semond, to Strick Corp. Container lifting frame with means to shift same laterally on a forklift truck. 3,387,730, 6–11–68, Cl. 214—621.
Levkoff, Henry, and J. Phillips, to Witco Chemical Co., Inc. Food coating compositions comprising ethylenevinyl acetate copolymer and acetylated monoglyceride. 3,388,085, 6–11–68, Cl. 260—23.
Lewis, Emil H., to Esso Research and Engineering Co. Process for the hydrogenation of steam cracked naphtha. 3,388,056, 6–11–68, Cl. 208—143.
Lewis, James E., to United States of America, Navy. Antenna feed for two coordinate tracking radars. 3,388,399, 6–11–68, Cl. 343—783.
Leybold-Heraeus G.m.b.H. & Co.: *See*—
  Wutz, Maximilian. 3,387,772.
Lheureux, Colette: *See*—
  Boudry, Jean C., Chambon, Faugeras, Lheureux, and Talmont. 3,387,945.
Libbey-Owens-Ford Glass Co.: *See*—
  Mattinoe, Paul T., and Hofmann. 3,388,035.
Liberman, Alexei Y. Overhead transmission line with aerodynamic damper for suppressing galloping. 3,388,208, 6–11–68, Cl. 174—42.
Licentia Patent-Verwaltungs-G.m.b.H.: *See*—
  Koppelmann, Floris, and Steimel. 3,388,306.
Lich, Richard L., to General Steel Industries, Inc. Railway truck and spring bolster structure. 3,387,569, 6–11–68, Cl. 105—196.
Light, William A.: *See*—
  Dulmage, William J., and Light. 3,387,974.
Lindenschmidt, Robert E., and C. R. Gant, to Whirlpool Corp. Cabinet with means for making receptacle therein accessible. 3,387,905, 6–11–68, Cl. 312—274.
Lindner, Kurt, and E. Eichler, to Henkel & Cie G.m.b.H. Liquid active oxygen detergent bleaching concentrate. 3 388,069, 6–11–68, Cl. 252—99.
Lips N. V.: *See*—
  Van Beckhoven. 3,387,645.
Lipsey, Goldner F.: *See*—
  Nichols, Frank S., Lipsey, and Nonken. 3,388,211.
  Nichols, Frank S., Lipsey, and Nonken. 3,388,212.
Lithium Corp. of America, Inc.: *See*—
  Kamienski, Conrad W., Diesing, and Morrison. 3,388,178.
Litma, Allan O. Device in paper and cardboard forming machines of the suction forming cylinder type. 3,388,040, 6–11–68, Cl. 162—329.
Litt, Morton H.: *See*—
  Evans, Francis W., and Litt. 3,388,078.
Little, Frank H. Wheel chock. 3,387,686, 6–11–68, Cl. 188—32.
Litton Business Systems, Inc.: *See*—
  Hare, Lloyd E. 3,387,690.
Litton Systems, Inc.: *See*—
  Duncan, Glen R., and Wertz. 3,388,239.
Litwin, Samuel: *See*—
  Prywes, Noah S., Litwin, and Gray. 3,388,381.
Lloyd, Neil E.: *See*—
  Arthur, James B., and Lloyd. 3,387,992.
Lockheed Aircraft Corp.: *See*—
  Ackart, William K., Sr., and Barish. 3,387,511.
  Cruz, Edward S. 3,387,802.
  Irvine, Theodore F., and Maithonis. 3,387,333.
  Keenan, Peter P. 3,388,287.
  Vaughn, Robert L. 3,388,062.
Lombardi, Anthony J., to International Telephone and Telegraph Corp. Device having a helical element and an adjustable contactor therefor. 3,388,364, 6–11–68, Cl. 338—143.
Lo Monaco, Sergio: *See*—
  Mazzolini, Corrado, and Lo Monaco. 3,388,189.
Long, Ernest G., to Johns-Manville Corp. Ventilating covering element for built-up roofing. 3,387,420, 6–11–68, Cl. 52—302.
Longo, Paul P., and A. Parmet, to Broadway Mfg. Co. Automobile headrest. 3,387,886, 6–11–68, Cl. 297—397.
Lonza Ltd.: *See*—
  Pino, Piero, and Braca. 3,387,932.
Looker, Olin L., to FMC Corp. Vine crop harvester. 3,387,611, 6–11–68, Cl. 130—30.
Loomans, Bernard A., to Baker Perkins Inc. Mixer apparatus. 3,387,826, 6–11–68, Cl. 259—6.
Lopiekes, Dolores V., to Monsanto Research Co. Herbicidal ether. 3,388,171, 6–11–68, Cl. 260—613.
Lorch, Erwin: *See*—
  Gartner, Karlheinz, and Lorch. 3,387,542.
Lord Corp.: *See*—
  Danieliss, Miklos, Dohr, and Galinke. 3,388,105.
Lotzgesell, James A., and R. W. Best, to A. E. Staley Mfg. Co. Acylated cyanoalkylated starch materials. 3,388,120, 6–11–68, Cl. 260—233.5.
Loughry, Don J., to Avco Corp. Phase controlled ring oscillator comprising a plurality of active delay stages individually coupled to a control device. 3,388,340, 6–11–68, Cl. 331—4.
Louik, Leonard. Wheel structures. 3,387,894, 6–11–68, Cl. 301—63.
Lourie, Alan D.: *See*—
  Day, Allan R., and Lourie. 3,388,128.
Lovelace, Byron K.: *See*—
  Waters, Warren P., and Lovelace. 3,388,000.
Loveland, Ernest F.: *See*—
  Myatt, Edward R., and Loveland. 3,388,354.
  Myatt, Edward R., and Loveland. 3,388,355.
  Myatt, Edward R., Jr., and Loveland. 3,388,356.
Lovrenich, Rodger T.: *See*—
  Hardin, James T., and Lovrenich. 3,388,267.

- Lovullo, Patrick R., and G. T. Sowinski, to National Gypsum Co. Imitation ceiling beam attachment clip. 3,387,872, 6-11-68, Cl. 278—189.35.
- Lucas, Joseph (Industries), Ltd.: *See—*
  - Bertioli, Michael M. 3,388,269.
- Lück, Friederich, to Borsig Aktiengesellschaft. Rotary piston compressor. 3,387,771, 6-11-68, Cl. 230—141.
- Ludwig, Carl, to McDowell-Wellman Engineering Co. Bucket chain conveyor. 3,387,721, 6-11-68, Cl. 214—14.
- Lukes, Joseph A., to Hewlett-Packard Co. Nondestructive round-off display circuit. 3,388,385, 6-11-68, Cl. 340—172.5.
- Lundeberg Edgar C. Swaging machine feeding apparatus. 3,387,744, 6-11-68, Cl. 221—150.
- Lupear, George J. Work tool fixture. 3,387,509, 6-11-68, Cl. 77—59.
- Lupi, Nazareno: *See—*
  - Dakli, Ibrahim, Lupi, Zamboni, and D'Emilio. 3,388,172.
- Luxaire, Inc.: *See—*
  - Essig, Robert A. 3,387,623.
- Lyons, George W., Jr. Combination removable handle and latch operating key for flush doors. 3,387,876, 6-11-68, Cl. 292—348.
- Lyvang, Frits L., to Dominion Electrohome Industries Ltd. Switch particularly for electronic organs. 3,388,229, 6-11-68, Cl. 200—166.
- M & J Valve Co.: *See—*
  - Grove, Marvin H. 3,387,632.
  - Grove, Marvin H., and Kim. 3,387,819.
  - Van Arsdale, Lyle R. 3,387,483.
- MS Industries, Inc.: *See—*
  - Bockenstette, Kenneth R. 3,387,740.
- Macfarlane, John L. Automatic weighing machine. 3,387,675, 6-11-68, Cl. 177—16.
- Machleidt, Hans, H. Lechner, and M. Klockow, to E. R. Squibb & Sons, Inc. 3-(fluoromethyl)-3-buten-1-ol pyraphosphate and process for making same. 3,388,192, 6-11-68, Cl. 260—933.
- MacKew, James. Dental floss holder. 3,387,615, 6-11-68, Cl. 132—91.
- Mackey, Kenneth J., to The Torit Corp. Dust collector. 3,387,433, 6-11-68, Cl. 55—356.
- MacLellan, Kenneth B. W., and W. A. A. Witham, to MacLellan Rubber Ltd. Flexible seals. 3,387,544, 6-11-68, Cl. 94—18.
- MacLellan Rubber Ltd.: *See—*
  - MacLellan, Kenneth B. W., and Witham. 3,387,544.
- Mac Peek, Donald L.: *See—*
  - Marcus, Erich, and Mac Peek. 3,388,180.
- Madison Industries, Inc.: *See—*
  - Vandersteeg, William J. 3,387,517.
- Maeder, Edward G.: *See—*
  - Reynolds, David P., and Maeder. 3,387,702.
- Magat, Eugene E., and I. F. Walker, to E. I. du Pont de Nemours and Co. Polyoxyethylene adduct of 2,6-di-t-butylphenol. 3,388,170, 6-11-68, Cl. 260—613.
- Magee, John E. Security control of automatic elevator cars. 3,388,376, 6-11-68, Cl. 340—20.
- Magnaflux Corp.: *See—*
  - Erikson, Kenneth R. 3,387,604.
- Magnavox Co., The: *See—*
  - Mayle, Louis F. 3,388,215.
- Malthonis, William C.: *See—*
  - Irvine, Theodore F., and Malthonis. 3,387,333.
- Majkrzak, John R.: *See—*
  - May, Patrick L., and Majkrzak. 3,387,725.
- Major, Colette J., to E. Major. Infusion package. 3,387,978, 6-11-68, Cl. 99—77.1.
- Major, Emery: *See—*
  - Major, Colette J. 3,387,978.
- Male, Harold A.: *See—*
  - Lee, Franklin G., and Male. 3,388,337.
- Mallory, P. R. & Co., Inc.: *See—*
  - Larsen, Earl I., Krock, and Jones. 3,387,951.
- Malnar, Leon, and H. Brun, to CSF—Compagnie Generale de Telegraphic Sans Fil. Atomic clocks with spin exchange collision. 3,388,339, 6-11-68, Cl. 331—3.
- Malone, Ernest L.: *See—*
  - Martin, Edward J., and Malone. 3,387,752.
- Malone, Harold L.: *See—*
  - Kindig, Guilford E., and Malone. 3,388,006.
- Mandarino, Vincent C., Jr., and L. H. Sauer, to Whirlpool Corp. Nozzle for liquid extraction apparatus. 3,387,385, 6-11-68, Cl. 34—133.
- Mannherz, Elmer D., C. P. Rohmann, and H. Hermanns, to Fischer & Porter Co. Magnetic flowmeters for low flow rates. 3,387,492, 6-11-68, Cl. 73—194.
- Manning, John A., Jr.: *See—*
  - Trammell, Harlan M., Truesdale, and Manning. 3,387,447.
- Manning, William F., to Mobil Oil Corp. Self-adjusting tripod structure for supporting an underwater well conductor pipe. 3,387,459, 6-11-68, Cl. 61—46.5.
- Mansei Kogyo Kabushiki Kaisha: *See—*
  - Goto, Kanjiro. 3,387,912.
- Marathon Oil Co.: *See—*
  - Olson, Danford H., and Storms. 3,388,173.
- Marchand, John F. Resettable electric clock timer mechanism. 3,388,223, 6-11-68, Cl. 200—38.
- Marcus, Erich, and D. L. Mac Peek, to Union Carbide Corp. Di(ω-alkenyl)cyclopentanes. 3,388,180, 6-11-68, Cl. 260—666.
- Maremont Corp.: *See—*
  - Foster, Jackie T. 3,387,703.
- Markey, Harold G.: *See—*
  - Brooke, Alvin W., Kuntzleman, and Markey. 3,388,216.
- Markham, Aaron E., to Georgia-Pacific Corp. Drilling mud. 3,388,061, 6-11-68, Cl. 252—8.5.
- Marks, Alexander A., and J. A. Fritz, said Fritz assor. to McKee & McHale, Inc. Burner controls. 3,387,603, 6-11-68, Cl. 126—343.5.
- Marshall, Donald E. Washing apparatus and method. 3,387,310, 6-11-68, Cl. 8—158.
- Marshall, Wilbur A. Automatic shut-off valve. 3,387,627, 6-11-68, Cl. 137—594.
- Martin, Charles L.: *See—*
  - Brown, Morris C., and Martin. 3,387,831.
- Martin, Edward J., and E. L. Malone. Fish stringer and conveying device. 3,387,752, 6-11-68, Cl. 224—7.
- Martin, Joseph H. Lathe tool attachment. 3,387,516, 6-11-68, Cl. 82—25.
- Martin-Marietta Corp.: *See—*
  - Robbins, Manuel A. 3,388,240.
  - Tigler, Leon, Weston, Geselbracht, Meszaros, and Rupp. 3,387,913.
- Martin, Robert T.: *See—*
  - Roberts, Ronald, Martin, and Richardson. 3,388,117.
- Martin, Thomas P., to Pittsburgh Plate Glass Co. Sealing and spacing element. 3,387,416, 6-11-68, Cl. 52—208.
- Martin, Walter H. Quick-freeze installation with radiant cooling. 3,387,464, 6-11-68, Cl. 62—380.
- Martin, William A., to Eastman Kodak Co. Sprocket sound reproduction apparatus and method. 3,387,755, 6-11-68, Cl. 226—6.
- Marx, Werner: *See—*
  - Bernhardt, Karl-Heinz, and Marx. 3,387,518.
- Marzocchi, Alfred, and N. S. Janetos, to Owens-Corning Fiberglas Corp. Structures formed of glass fiber-elastomer systems. 3,387,990, 6-11-68, Cl. 117—177.
- Mason, Garry R.: *See—*
  - Buckley, Francis T., Mason, and Riek. 3,388,033.
- Mastrobattista, Alex A., and W. J. Fordon, to Johns-Manville Corp. Method of manufacturing a seal. 3,387,850, 6-11-68, Cl. 277—1.
- Mater, Charles E.: *See—*
  - West, George C., and Mater. 3,387,989.
- Mates, Jack K., and P. P. Stanos, said Mates assor. to American Velcro, Inc. Fastening device. 3,387,341, 6-11-68, Cl. 24—73.
- Mathers, Charles T., to Orendorff Mfg. Co. Earth working tool. 3,387,668, 6-11-68, Cl. 172—719.
- Matricardi, Louis R.: *See—*
  - Vogt, John R., and Matricardi. 3,387,971.
- Matsch, Ladislas C.: *See—*
  - Bond, Frank D., Jr., Matsch, and Proctor. 3,387,449.
- Matsushita Electric Industrial Co., Ltd.: *See—*
  - Kohashi, Tadao. 3,388,256.
- Matshushita Electronics Corp.: *See—*
  - Kimura, Eishun. 3,388,013.
- Mattern, John, to Westinghouse Electric Corp. Phase shift amplifier apparatus using constant filter networks in push-pull relationship. 3,388,336, 6-11-68, Cl. 330—10.
- Matthews, Robert M.: *See—*
  - Cape, Francis B., Bobo, and Matthews. 3,387,451.
  - Lathem, James M., Bobo, and Matthews. 3,387,448.
- Mattingly, Denis A. E., and R. S. Gilchrist, to The Klinger Mfg. Co. Circular knitting machines. 3,387,468, 6-11-68, Cl. 66—133.
- Mattinoe, Paul T., and J. J. Hofmann, to Libbey-Owens-Ford Glass Co. Transparent laminates and method for producing same. 3,388,035, 6-11-68, Cl. 161—183.
- Matushek, John W., H. S. Wille, and W. Van Der Sluys, to Pullman Inc. Container mounting arrangement for flat car. 3,387,571, 6-11-68, Cl. 105—366.
- May, George A. Solid-state voltage-scanned device including long narrow P-N junction material with photoconductors thereon. 3,388,255, 6-11-68, Cl. 250—209.
- May, Patrick L., and J. R. Majkrzak, to International Harvester Co. Hydraulic ram slide bale thrower. 3,387,725, 6-11-68, Cl. 214—42.
- Mayle, Louis F., to The Magnavox Co. Search tune system for television receivers. 3,388,215, 6-11-68, Cl. 178—5.8.
- Mays, Wilburt W. Live fish bait means. 3,387,402, 6-11-68, Cl. 43—41.
- Mazzeo, Rosario. Key mechanism for clarinet. 3,387,528, 6-11-68, Cl. 84—382.
- Mazzolini, Corrado, F. Denti, and R. Curti, to Chatillon Societa Anonima Italiana per le Fibre Tessili Artificiali S.p.A. Crimped and crimpable vinylic filaments and fibers. 3,388,031, 6-11-68, Cl. 161—173.
- Mazzolini, Corrado, and S. Lo Monaco, to Monsanto Co. Copolymers for acrylic fibers having improved basic dyeing properties comprising acrylonitrile, a cinnamic acid and vinylacetate or vinyl chloride. 3,388,189, 6-11-68, Cl. 260—895.
- Mazzolini, Corrado, and F. Denti, to Chatillon Societa Anonima Italiana per le Fibre Tessili Artificiali S.p.A. Polyvinyl chloride textile fibres and method of manufacturing. 3,388,201, 6-11-68, Cl. 264—184.
- McClain, Sam D. Ink and water fountain roller controls for printing press. 3,387,568, 6-11-68, Cl. 101—351.
- McClellan, Leslie L., 49% to Leonard D. Friday. Trailer for motor bikes. 3,387,859, 6-11-68, Cl. 280—204.
- McClenahan, Douglas S. Revolver latch mechanism. 3,387,399, 6-11-68, Cl. 42—62.
- McClung, Robert A.: *See—*
  - Moses, Nelson K., and McClung. 3,387,781.

- McCollough, Fred, Jr.: *See—*
  - Vanstrom, Reginald E., and McCollough. 3,387,925.
- McCombie, Robert L., to Mobay Chemical Co. Laminated safety glass. 3,388,034, 6-11-68, Cl. 161—183.
- McCutchen, Joseph K. Mechanism for and method of feeding yarn in a tufting machine. 3,387,578, 6-11-68, Cl. 112—79.
- McDonald, James A.: *See—*
  - Christopher, Todd J., and McDonald. 3,388,285.
- McDonnell Douglas Corp.: *See—*
  - Heinecke, Albert, King, and Winchester. 3,387,644.
- McDowell-Wellman Engineering Co.: *See—*
  - Ludwig, Carl. 3,387,721.
- McFarlane, Maynard D.: *See—*
  - Crafts, Cecil A., McFarlane, and Mitchell. 3,387,606.
- McFarlane, Murray C., to H. H. Robertson Co. Wall structure having inwardly arched panels. 3,387,415, 6-11-68, Cl. 52—222.
- McGraw-Edison Co.: *See—*
  - Walker, Richard K. 3,387,848.
- McGuinness, Raymond, to Construction Specialties, Inc. Cooling tower screen. 3,387,424, 6-11-68, Cl. 52—732.
- McHenry, Edgar R., and E. L. Piper, to Union Carbide Corp. High-strength carbon foam. 3,387,940, 6-11-68, Cl. 23—209.2.
- McHugh, Carl M., to Research Corp. Process and apparatus for cleaning plant leaves. 3,387,613, 6-11-68, Cl. 131—138.
- McIlroy, Robert, to Ford Motor Co. Carburetor air bleed. 3,387,830, 6-11-68, Cl. 261—39.
- McKee, Dale W., and W. A. Williamson, to Clark Equipment Co. High lift straddle carrier. 3,387,726, 6-11-68, Cl. 214—390.
- McKee & McHale, Inc.: *See—*
  - Marks, Alexander A., and Fritz. 3,387,603.
- McKenzie, Malcolm L.: *See—*
  - Landers, Otis L., and McKenzie. 3,387,335.
- McKinley, Robert: *See—*
  - Blum, Seymour, Mountvala, and McKinley. 3,388,001.
- McKoy, James B., Jr.: *See—*
  - Griffin, Tom D., McKoy, and Millar. 3,387,943.
- McLean, William B., to Walter G. Finch. Sonic echo system. 3,388,371, 6-11-68, Cl. 340—3.
- McManus, James C.: *See—*
  - Paliwoda, Eugene J., and McManus. 3,387,968.
- McManus, John J., to Coors Porcelain Co. Ceramic housing for semiconductor components. 3,388,302, 6-11-68, Cl. 317—234.
- McMasters, Douglas Q.: *See—*
  - Murray, Leslie D., and McMasters. 3,388,016.
- McNabb, Clarence B.: *See—*
  - DeNoyer, Donald B., and McNabb. 3,387,317.
- Mead Corp., The: *See—*
  - Wood, Prentice J. 3,387,879.
- Mebane, Alexander, to Ortho Pharmaceutical Corp. 1-(α-methoxycyclopentoxy) methyl-2-methyl-3-ethyl-4-phenyl-4-cyclohexene. 3,388,168, 6-11-68, Cl. 260—611.
- Mechanical Handling Systems, Inc.: *See—*
  - Harrison, Homer S. 3,387,697.
- Medlin, William L., to Mobil Oil Corp. Thermoluminescent characterization of quartziferous materials. 3,388,252, 6-11-68, Cl. 250—71.
- Meili, Walter: *See—*
  - Reich, Heinrich, Meili, and Gilhooley. 3,387,561.
- Meininger, Edward H., and C. F. Shellberg, 5% to J. W. Foley. Method for molding articles from plastic resinous materials. 3,388,203, 6-11-68, Cl. 264—225.
- Meininger, Fritz: *See—*
  - Bohnert, Erwin, Berner, Meininger, and Hoyer. 3,387,914.
- Melcher, Joseph C.: *See—*
  - Campana, Robert J., Melcher, Merrill, and Sargent. 3,388,008.
- Melpar, Inc.: *See—*
  - Adams, Charles D. 3,387,414.
  - Haxskavio, Michael, and Smith. 3,387,999.
- Meltzer, Jacques: *See—*
  - Welle, Hendricus B. A., and Meltzer. 3,388,151.
- Menard, Louis D. Apparatus for drilling and construction. 3,387,670, 6-11-68, Cl. 173—49.
- Menell, Hans, and H. Nadler, to Continental Gummi-Werke Aktiengesellschaft. Method of and apparatus for cutting to length and folding webs, especially rubberised cord fabric webs for the manufacture of tires. 3,387,841, 6-11-68, Cl. 270—61.
- Merck & Co., Inc.: *See—*
  - Shen, Tsung-Ying, and Sarett. 3,388,127.
- Merrill, Peter S.: *See—*
  - Campana, Robert J., Melcher, Merrill, and Sargent. 3,388,008.
- Merritt, Robert E., and W. C. Nichols, to Renfro-Hosiery Mills Co. Display card carrier. 3,387,395, 6-11-68, Cl. 40—102.
- Merten, Rudolf, and G. Braun, to Farbenfabriken Bayer Aktiengesellschaft. Hydrophilic polyurethane foam. 3,388,081, 6-11-68, Cl. 260—2.5.
- Mertens, William J., to Avco Corp. Breech seal for rocket ammunition. 3,387,560, 6-11-68, Cl. 102—43.
- Merz, Walter, to Farbenfabriken Bayer Aktiengesellschaft. Production of lower alkyl isocyanates. 3,388,145, 6-11-68, Cl. 260—453.
- Merson, Joseph. Hair clipper with adjustable auxiliary comb. 3,387,367, 6-11-68, Cl. 30—201.
- Messman, Henry C.: *See—*
  - Murphy, Richard M., and Messman. 3,387,941.
- Messrs. Automation fur graphische Technik G.m.b.H.: *See—*
  - Gartner, Karlheinz, and Lorch. 3,387,542.
- Messrs. Ehrenreich A. & Cie: *See—*
  - Gottschald, Rudolf, and Vogt. 3,387,870.
- Mest, Robert F.: *See—*
  - Fisher, James O., Sr., Whitley, and Biddle. 3,387,722.
- Metcalf, Derek N. G., to Athena Industries, Inc. Collapsible support structure. 3,387,808, 6-11-68, Cl. 248—46.
- Messetta, Louis. Rotary fluid handling device. 3,387,565, 6-11-68. Cl. 103—135.
- Michal, Joseph L.: *See—*
  - Bradfield, Todd S., Michal, Peck, and Stencel. 3,387,803.
- Micheel, Carl J. Boat loader and carrying mechanism for vehicles. 3,387,727, 6-11-68, Cl. 214—450.
- Midland-Ross Corp.: *See—*
  - Dawson, Dennis E. 3,387,714.
  - De Penti, Kenneth L. 3,387,715.
  - De Penti, Kenneth L. 3,387,716.
- Millar, Leonard L.: *See—*
  - Griffin, Tom D., McKoy, and Millar. 3,387,943.
- Miller, Franklin H.: *See—*
  - Bricmont, Frances H., and Miller. 3,387,834.
- Miller, Gerald W.: *See—*
  - Wismer, Marco, Ammons, and Miller. 3,388,101.
- Miller, Harvey E., and A. Mundy, to The General Tire & Rubber Co. Adhesive bonded bushing and method of making same. 3,387,839, 6-11-68, Cl. 267—57.1.
- Mills, William R., Jr., to Mobil Oil Corp. Radioactive well logging system utilising mechanically controlled pulsed neutron source. 3,388,253, 6-11-68, Cl. 250—83.3.
- Minds, George W., Jr. Snap on brace for louver blades. 3,387,552, 6-11-68, Cl. 98—121.
- Minkiel, Alfred O., to Hooker Chemical Corp. Manufacture of phosphine. 3,387,934, 6-11-68, Cl. 23—204.
- Minnesota Mining and Mfg. Co.: *See—*
  - Elm Robert A. 3,388,370.
  - Good, Paul J. 3,387,545.
- Misencik, John, and S. C. Lee, to Harvey Hubbell, Inc. Current interrupter. 3,388,295, 6-11-68, Cl. 317—11.
- Mission Mfg. Co.: *See—*
  - Collier, Samuel L. 3,387,671.
- Mitchell, Glenn R. Electronic component connector. 3,388,366, 6-11-68 Cl. 339—17.
- Mitchell, John E.: *See—*
  - Crafts, Cecil A., McFarlane, and Mitchell. 3,387,606.
- Miyashiro, Shoichi, to Tokyo Shibaura Electric Co. Ltd. Electron tube device for image transmission and reception. 3,388,283, 6-11-68, Cl. 315—12.
- Mizuno, Shuzo, to Kurita Industrial Co., Ltd. Apparatus for producing a fountain including a stroboscopic light. 3,387,782, 6-11-68, Cl. 239—20.
- Mobay Chemical Co.: *See—*
  - Buckley, Francis T., Mason, and Riek. 3,388,033.
  - McCombie, Robert L. 3,388,034.
  - Saunders, James H. 3,388,032.
- Mobil Oil Corp.: *See—*
  - Capowski, Julius, and Andress. 3,387,954.
  - Cook, Evin L. 3,387,672.
  - Coty, Vernon F. 3,387,964.
  - Hurd, Billy G. 3,387,655.
  - Manning, William F. 3,387,459.
  - Medlin, William L. 3,388,252.
  - Mills, William R., Jr. 3,388,253.
  - Patton Bobbie J. 3,387,377.
  - Stripling, Allen A. 3,388,323.
- Molgano, Frank A., Jr. Fire extinguishing apparatus. 3,387,662, 6-11-68, Cl. 169—26.
- Molins Machine Co. Ltd.: *See—*
  - Williamson, David T N. 3,387,736.
- Monsanto Co.: *See—*
  - Brignac, Edmond P. 3,388,029.
  - Buckley, Francis T., Mason, and Riek. 3,388,033.
  - Chaney, David W., and Black. 3,388,199.
  - Crovatt, Lawrence W., Jr. 3,385,104.
  - Drica-Minieris, Oswald A., and Gardner. 3,388,025.
  - Early, Jack D., and Chupp. 3,388,163.
  - Estes, Robert T., and Stow. 3,388,030.
  - Goodner, Homer W. 3,387,756.
  - Graham, Paul R., and Ottinger. 3,388,088.
  - Griffin, Tom D., McKoy, and Millar. 3,387,943.
  - Harman, Carl A. 3,388,126.
  - Jackson, Charles E., Jenkins, and Slade. 3,388,200.
  - Mazzolini, Corrado, and Lo Monaco. 3,388,189.
  - Opferkuch, Robert E., Jr., and Ross. 3,388,202.
  - Privott, Wilbur J., Jr., and Chapman. 3,387,327.
  - Ridgway, James S. 3,388,099.
  - Roberts, Thomas S., and Hixon. 3,388,261.
  - Shen, Chung Y. 3,387,928.
  - Sims, James G. 3,388,198.
  - Vinicki, John. 3,388,194.
  - Wise, Raleigh W. 3,387,490.
- Monsanto Research Co.: *See—*
  - Lopiekes, Dolores V. 3,388,171.
- Monson, Wesley J.: *See—*
  - Thibodeaux, Denis A., Richard, and Monson. 3,387,745.
- Montecatini Edison S.p.A.: *See—*
  - Dakli, Ibrahim, Lupi, Zamboni, and D'Emilio. 3,388,172.
- Moore, Marvin D., and R. K. Birks, to Chicago Copper & chemical Co. Treatment of metallic ferrites. 3,387,918, 6-11-68, Cl. 23—51.
- Moore, William H., to Langston Co. Counter and bundle ejector. 3,387,719, 6-11-68, Cl. 214—6.
- Moran, Edward F. Portable power operated barbecue apparatus. 3,387,555, 6-11-68, Cl. 99—421.
- Morana, Simon J., and W. J. Koshuba, to The Beryllium Corp. Dry process for controlled surface oxidation of beryllium powders. 3,387,966, 6-11-68, Cl. 75—.5.
- Morikawa, Takashi: *See—*
  - Kanai, Hiroyuki, Morikawa, and Arita. 3,387,338.
- Morisawa, Yasuhiro: *See—*
  - Tanabe, Katsumi, Takasaki, Sakai, Hayashi, Morisawa, and Hashimoto. 3,388,124.

Morris, Dorothy N. Magnetic pile stabbing apparatus and method. 3,387,460, 6–11–68, Cl. 61—53.5.
Morris, Edward H., and H. C. E. Nightingale, to Dowty Rotol Ltd. Liquid supply system. 3,387,626, 6–11–68, Cl. 137—563.
Morris, Henry E. : *See*—
Reinhardt, Eli W., and Morris. 3,387,445.
Morrison, Robert C. B. : *See*—
Kamienski, Conrad W., Diesing, and Morrison. 3,388,178.
Morrison, Thomas W., to SKF Industries, Inc. Rolling bearing assemblies. 3,387,900, 6–11–68, Cl. 308—177.
Morton, James W. : *See*—
Eaker, Garlan L., and Morton. 3,387,480.
Moses, Nelson K., and R. A. McClung, to Railroad Rubber Products, Inc. Rail anchor and rail seat construction. 3,387,781, 6–11–68, Cl. 238—283.
Mossberg, Harry J. Valve inserting device. 3,387,354, 6–11–68, Cl. 29—221.5.
Mounier-Poulat, Francois : *See*—
Guilhamat, Louis, and Mounier-Poulat. 3,387,856.
Mountvala, Adi : *See*—
Blum, Seymour, Mountvala, and McKinley. 3,388,001.
Mullen, Joseph F. : *See*—
Hochmuth, Frank W., and Mullen. 3,387,895.
Mullen, Joseph F., to Combustion Engineering, Inc. System for pneumatically transporting high-moisture fuels such as bagasse and bark and an included furnace for drying and burning those fuels in suspension under high turbulence. 3,387,574, 6–11–68, Cl. 110—7.
Mueller, Richard S., to Honeywell Inc. Taut band anchor arrangement. 3,387,807, 6–11–68, Cl. 248—17.
Müller-Schiedmayer, Günther : *See*—
Beltz, Klaus, Cremer, Müller-Schiedmayer, and Thomas. 3,387,929.
Mullins, George E., and C. I. Goodwin, to Brown, Manthei, Davis & Mullins, Inc. Air stratification eliminator. 3,387,649, 6–11–68, Cl. 165—59.
Multifasteners Corp., d.b.a. Cast Forge Co. : *See*—
Lauth, Corliss. 3,387,646.
Munday, John C. : *See*—
Rogers, Dilworth T., and Munday. 3,387,982.
Mundy, Arthur : *See*—
Miller, Harvey E., and Mundy. 3,387,839.
Murir, Richard D. : *See*—
Buchanan, William V., and Murir. 3,387,397.
Murphree, Francis J., to United States of America, Navy. Memory device. 3,388,268, 6–11–68, Cl. 307—238.
Murphy, James A., to CM Mfg. & Machine Co. High temperature furnace conveyor. 3,387,835, 6–11–68, Cl. 263—8.
Murphy, Richard M., and H. C. Messman, to The Carbon Co. Process for desulfurizing carbonaceous materials. 3,387,941, 6–11–68, Cl. 23—209.9.
Murray, Leslie D., and D. Q. McMasters. Method and apparatus for patching articles. 3,388,016, 6–11–68, Cl. 156—94.
Muskat, Irving E., to Sinclair Research, Inc. Copolymers of maleic compounds and monoethylenically unsaturated monomers and method of preparing. 3,388,106, 6–11–68, Cl. 260—78.5.
Musolf, Martin C., and E. P. Plueddemann, to Dow Corning Corp. Polymercaptoorgano and polyhydroxyorgano silanes and siloxanes. 3,388,144, 6–11–68, Cl. 260—448.8.
Musser, Clair O. Toy planetarium. 3,387,393, 6–11–68, Cl. 35—45.
Musshake, Arnold : *See*—
Hoffmann, Horst, and Musshake. 3,387,650.
Mutz, Sterling F., Jr., to Outboard Marine Corp. Vehicle seat. 3,387,884, 6–11–68, Cl. 297—302.
Myatt, Edward R., and E. F. Loveland, to International Standard Electric Corp. Ceramic reed relay. 3,388,354, 6–11–68, Cl. 335—151.
Myatt, Edward R., and E. F. Loveland, to International Standard Electric Corp. Ceramic reed relay having flux carrying means associated with the armature. 3,388,355, 6–11–68, Cl. 335—151.
Myatt, Edward R., Jr., and E. F. Loveland, to International Standard Electric Corp. Ceramic reed relay. 3,388,356, 6–11–68, Cl. 335—151.
Mycue, Gordon E. Collapsible desk structure. 3,387,882, 6–11–68, Cl. 297—163.
Myer, Glen B. : *See*—
Costanza, Albert J., and Myer. 3,388,107.
Myers, Walter H. : *See*—
Kelly, Robert F., Myers, Hazlett, Drum, and Gimber. 3,387,536.
N.V. Polychemie AKU-GE : *See*—
Huntjens, Franciscus J. 3,388,095.
Nadler, Heinrich : *See*—
Menell, Hans, and Nadler. 3,387,841.
Nagano, Shosaburo : *See*—
Sakurai, Ryoichi, and Nagano. 3,388,156.
Nagasawa, Michitaro : *See*—
Arima, Kei, Tamura, Nagasawa, and Bae. 3,388,042.
Nagel, Erich : *See*—
Koehler, Roland, Baasner, Nagel, and Engelage. 3,387,760.
Nagel, Ernst, and J. Furstenberg, to Pneumafil Corp. Blow cleaning. 3,387,318, 6–11–68, Cl. 15—306.
Nagy, Gustave J., to SCM Corp. Monetary type push button switch wherein the circuit is automatically made and broken irrespective of the manually operable member. 3,388,228, 6–11–68, Cl. 200—160.
Nakagawa, Royichi : *See*—
Ito, Shinya, Kanno, and Nakagawa. 3,388,114.
Nakamura, Keiichi, and Y. Kuroo, to Sony Corp. Method of making a semiconductor device. 3,387,360, 6–11–68, Cl. 29—579.
Nalco Chemical Co. : *See*—
Domba, Elemer. 3,388,072.
Domba, Elemer. 3,388,073.
Wirth, Louis F., Jr. 3,388,058.
Wirth, Louis F., Jr. 3,388,059.
Nangoh, Tadao, and I. Yamazaki. Mixer for producing self-hardening moulding sands. 3,387,829, 6–11–68, Cl. 259—161.
Nardulli, Michael J. Removable sash construction for windows. 3,387,408, 6–11–68, Cl. 49—446.
Nashman, Morton P. : *See*—
Wise, Walter R., Jr., Nashman, Walker, and Bergquist. 3,387,669.
National Aeronautics and Space Administration : *See*—
Webb, James E. 3,388,387.
National Gypsum Co. : *See*—
Lovullo, Patrick R., and Sowinski. 3,387,872.
National Research Corp. : *See*—
Hecht, Richard. 3,387,767.
National Video Corp. : *See*—
Fogelson, Mark. 3,387,908.
Nebel, Joseph A. Stripper assemblies for slitting shears. 3,387,519, 6–11–68, Cl. 83—118.
Nehrich, Richard E., Jr., E. J. Schimitschek, and J. A. Trias, to United States of America, Navy. Liquid lasing solution formed with trifluoroacetylacetonate. 3,388,071, 6–11–68, Cl. 252—301.2.
Neilsen, Hildaur L. Perforating device with sheet centering gauge means. 3,387,520, 6–11–68, Cl. 83—167.
Neilsen, Hildaur L. Paper punching device with selectively disposable punches. 3,387,526, 6–11–68, Cl. 83—571.
Nelson, Earl W. Apparatus for dispersing a gas in a liquid. 3,387,832, 6–11–68, Cl. 261—93.
Nelson, Forrest A. : *See*—
Anderson, Weston A., and Nelson. 3,388,322.
Newallis, Peter E., R. L. Pierpont, and E. J. Rumanowski, to Allied Chemical Corp. Fluoroketone hemiketal esters. 3,388,150, 6–11–68, Cl. 260—476.
Newingham, Thomas D., to Sun Oil Co. Nonsquawking automatic transmission fluids. 3,388,068, 6–11–68, Cl. 252—75.
Newsom, Roy R., to Control Systems Corp. Method and apparatus for high frequency treatment of materials. 3,387,378, 6–11–68, Cl. 34—1.
Neydil, Edward A. : *See*—
Brideweser, Ralph E., and Neydil. 3,388,299.
Nichols, Frank S., G. F. Lipsey, and G. C. Nonken, to General Electric Co. Sealing bushing and wall member for electrical apparatus and method of assembling same. 3,388,211, 6–11–68, Cl. 174—152.
Nichols, Frank S., G. F. Lipsey, and G. C. Nonken, to General Electric Co. Plastic bushing for electrical apparatus and method of making. 3,388,212, 6–11–68, Cl. 174—153.
Nichols, Warren C. : *See*—
Merritt, Robert E., and Nichols. 3,387,395.
Nielsen, A. C., Co. : *See*—
Rahmel, Henry A., and Grube. 3,387,797.
Nielsen, Julian M. : *See*—
Haller, William A., Perkins, and Nielsen. 3,388,254.
Niemand, Leon, to Politechnika Warszawska. Combustion engine with revoluting pistons forming a closed kinematic chain. 3,387,596, 6–11–68, Cl. 123—8.
Niermann, Hermann, H. Klee, W. Forst, and J. Cremer, to Knapsack Aktiengesellschaft. Process for the manufacture of iron-free phosphorus pentasulfide. 3,387,937, 6–11–68, Cl. 23—206.
Nightingale, Eugene R., Jr., to Esso Research and Engineering Co. Dehydration of magnesium chloride utilizing two stages. 3,387,920, 6–11–68, Cl. 23—91.
Nightingale, Humphrey C. E. : *See*—
Morris, Edward H., and Nightingale. 3,387,626.
Nippon Chemical Industrial Co., Ltd. : *See*—
Yamaguchi, Toshihiro, Yamamoto, and Imamura. 3,388,193.
Nippon Hatsujo Kabushiki Kaisha : *See*—
Ando, Sadaji. 3,387,350.
Ishida, Shuichi, Kirihara, and Usukura. 3,388,167.
Nippon Kokan Kabushiki Kaisha : *See*—
Suganuma, Shigeru. 3,387,581.
Nitzschke, Karl-Heinz : *See*—
Schellenberg, Rolf, and Nitzschke. 3,387,783.
Noda Institute for Scientific Research : *See*—
Arima, Kei, Tamura, Nagasawa, and Bae. 3,388,042.
Nonken, Gordon C. : *See*—
Nichols, Frank S., Lipsey, and Nonken. 3,388,211.
Nichols, Frank S., Lipsey, and Nonken. 3,388,212.
Noordhoek, Harold and R., said R. Noordhoek assignor to said H. Noordhoek. Tube and bar bending control device. 3,387,473, 6–11–68, Cl. 72—22.
Noordhoek, Robert : *See*—
Noordhoek, Harold and R. 3,387,473.
Nordin, Bengt-Olof : *See*—
Eriksson, Nils Borge, and Nordin. 3,388,222.
Noris, Eugene P., to The Bendix Corp. Coined bar method of fabricating commutators. 3,387,362, 6–11–68, Cl. 29—597.
Norris-Thermador Corp. : *See*—
Buerki, Christian E., and Rawald. 3,387,601.
North American Philips Co., Inc. : *See*—
Welle, Hendricus B. A., and Meltzer. 3,388,151.
North American Rockwell Corp. : *See*—
Lenz, Charles E. 3,388,304.
North Shore Paper Co. : *See*—
Reid, Kevin W. 3,387,897.

Northrup Corp. : *See*—
Feder, Aaron, and Lavi. 3,387,456.
Ross, Donald E. 3,387,865.
Norton, Douglas J., to The De Laval Separator. Automated milker. 3,387,677, 6–11–68, Cl. 177—68.
Novack, Robert M., to Warner-Lambert Pharmaceutical Co. 4,4-dihalo-2-(4-biphenylyl) - 3 - butenoic acids. 3,388,155, 6–11–68, Cl. 260—515.
Novick, Robert R., to Square D Co. Encapsulated electrical coil and method of making. 3,388,363, 6–11–68, Cl. 336—96.
Nowotny, Lloyd A., to Allis-Chalmers Mfg. Co. Template for the gas cutting of holes. 3,387,375, 6–11–68, Cl. 33—174.
Nyberg, Gunnar : *See*—
Haavik, Niles J., and Nyberg. 3,388,205.
Nyloncraft, Inc. : *See*—
Wyllie, Robert, and Ropes. 3,387,323.
Nyman, Frank : *See*—
Fielding, Harold C., and Nyman. 3,388,174.
Obenshain, George R. : *See*—
Decker, Alfred S., Obenshain, and Wideman. 3,387,557.
O'Brien, Donald F., to Onnetics, Inc. Hall effect constant power regulator. 3,388,318, 6–11–68, Cl. 323—20.
O'Halloran, Rosemary, to Esso Research and Engineering Co. Reaction products of dihydrocarbon dithiophosphoric acid and phosphite. 3,388,066, 6–11–68, Cl. 252—46.6.
Okabe, Jiro : *See*—
Kiyooka, Shigeo, and Okabe. 3,387,965.
Okamoto, Takeshi, to Teijin Seiki Co., Ltd. Fiber tow cutting apparatus. 3,387,521, 6–11–68, Cl. 83—355.
Okonite Co., The : *See*—
Gooding, Frank H. 3,387,984.
Olin Mathieson Chemical Corp. : *See*—
Appel, Rolf. 3,387,946.
Badali, Joseph A., Kulikowski, and Vartanian. 3,387,400.
Bruson, Herman A., and Plant. 3,388,166.
Heying, Theodore L., Papetti, and Schaffling. 3,388,090.
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Jache, Albert W., and Kongpricha. 3,387,935.
Oliver, Earl J. Rack for merchandising and the like. 3,387,855, 6–11–68, Cl. 280—79.3.
Olson, Danford H., and P. W. Storms, to Marathon Oil Co. Preparation of nitroaromatic hydroxides. 3,388,173, 6–11–68, Cl. 260—622.
Olsson, Nils O., to International Harvester Co. Fluted feed material distributor. 3,387,751, 6–11–68, Cl. 222—267.
Onnetics, Inc. : *See*—
O'Brien, Donald F. 3,388,318.
Opferkuch, Robert E., Jr., and J. C. Ross, to Monsanto Co. Method for melting acrylonitrile polymers and copolymers. 3,388,202, 6–11–68, Cl. 264—211.
Optical Coating Laboratory, Inc. : *See*—
Bergfelt, Nils H., and Spellman. 3,387,742.
Orbach, Max A. : *See*—
Siegel, Harry W., and Orbach. 3,388,249.
Orendorff Mfg. Co. : *See*—
Mathers, Charles T. 3,387,668.
Ortho Pharmaceutical Corp. : *See*—
Mebane, Alexander. 3,388,168.
Osborne, Betty. Paper currency holder. 3,387,641, 6–11–68, Cl. 150—38.
O'Shea, Francis X. : *See*—
Hunter, Byron A., and O'Shea. 3,388,064.
Ottinger, August F. : *See*—
Graham, Paul R., and Ottinger. 3,388,088.
Outboard Marine Corp. : *See*—
Mutz, Sterling F., Jr. 3,387,884.
Ovshinsky, Herbert C. Electromagnetic clutch and brake transmission. 3,387,689, 6–11–68, Cl. 192—4.
Owen, Orlando N. Pneumatic cotton harvester. 3,387,437, 6–11–68, Cl. 56—12.
Owens-Corning Fiberglas Corp. : *See*—
Day, Frank, and Womeldorph. 3,387,958.
Marzocchi, Alfred, and Janetos. 3,387,990.
Sonneborn, Ralph H., and De Toledo. 3,387,325.
Owens-Illinois, Inc. : *See*—
Decker, Alfred S., Obenshain, and Wideman. 3,387,557.
Ellis, Robert W. 3,388,204.
Owens, John E. : *See*—
Hollberg, Herbert J., and Owens. 3,387,326.
Packaging Components, Inc. : *See*—
Heller, Joel. 3,387,699.
Padfield, Ralph C., to Bethlehem Steel Co. Basic roof construction for a metallurgical furnace. 3,387,575, 6–11–68, Cl. 110—99.
Padleckas, Leonard, to International Harvester Co. Positive transmission neutral control mechanism. 3,387,454, 6–11–68, Cl. 60—53.
Paganelli, Mario, to Bassani, S.p.A. Circuit breaker. 3,388,358, 6–11–68, Cl. 335—191.
Pallwoda, Eugene J., and J. C. McManus, to Jones & Laughlin Steel Corp. Free-cutting steels. 3,387,968, 6–11–68, Cl. 75—49.
Pangborn Corp., The : *See*—
Powell, George W. 3,387,410.
Papendick, Robert I., and J. F. Parr, Jr., to Tennessee Valley Authority. Fluid metering and dispensing apparatus. 3,387,635, 6–11–68, Cl. 141—37.
Papetti, Stelvio : *See*—
Heying, Theodore L., Papetti, and Schaffling. 3,388,090.
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Heying, Theodore L., Papetti, and Schaffling. 3,388,093.
Parisoe, Wilbert, to Zenith Radio Corp. Electrical relay. 3,388,360, 6–11–68, Cl. 335—268.
Parker, Earl R. : *See*—
Zackay, Victor F., and Parker. 3,388,011.
Parmet, Allen : *See*—
Longo, Paul P., and Parmet. 3,387,886.
Parr, James F., Jr. : *See*—
Papendick, Robert I., and Parr. 3,387,635.
Parrish, Walter A., Jr., to Allis Chalmers Mfg. Co. Electric discharge machining electrode and its method of construction. 3,388,233, 6–11–68, Cl. 219—69.
Parsons, Brinckerhoff, Quade & Douglas : *See*—
Clark, Joseph R. 3,388,060.
Patterson, David W. : *See*—
Banks, Frank H., and Patterson. 3,388,309.
Patterson, Henry W., Jr., to United-Carr Inc. Nut with integral support engaging arms. 3,387,643, 6–11–68, Cl. 151—41.72.
Patton, Bobbie J., to Mobil Oil Corp. Magnetometer utilizing a magnetic core rotated within a stationary coil perpendicular to the coil axis. 3,387,377, 6–11–68, Cl. 33—204.
Pauly, Theodore E. : *See*—
Herb, Raymond G., and Pauly. 3,388,290.
Paynter, Donald A., to General Electric Co. Static switching self-regulating transformer system. 3,388,319, 6–11–68, Cl. 323—43.5.
Peabody, William A., Jr., to Reynolds Metals Co. Web feeding method and apparatus. 3,387,429, 6–11–68, Cl. 53—228.
Pearse, John P. Windshield wiper. 3,387,316, 6–11–68, Cl. 15—250.36.
Pecis, John G., to Speakman Co. Push-pull valve. 3,387,631, 6–11–68, Cl. 137—625.17.
Peck, Walter R. : *See*—
Bradfield, Todd S., Michal, Peck, and Stencel. 3,387,803.
Peddinghaus, Paul F. : *See*—
Funke, Emil. 3,387,525.
Pennsalt Chemicals Corp. : *See*—
Keith, Frederick W., Jr. 3,388,054.
Perdue, Richard R., to W. R. Grace & Co. Method of forming a carton enclosed package from a preformed foldable blank. 3,387,427, 6–11–68, Cl. 53—27.
Perkins, Baker, Inc. : *See*—
Loomans, Bernard A. 3,387,826.
Perkins, Richard W. : *See*—
Haller, William A., Perkins, and Nielsen. 3,388,254.
Perrin, Jack L., and C. A. Tucker, to Towlsaver, Inc. Dispenser for sequentially dispensing rolls of tissue and the like. 3,387,902, 6–11–68, Cl. 312—39.
Perry, Bryan J., Jr., to Kitchen & Perry, Inc. Curing and drying apparatus. 3,387,387, 6–11–68, Cl. 34—208.
Perry, Thomas E., R. H. Henke, J. E. Fogarty, J. A. Rinebolt, R. J. Place, and S. W. Poole, to Republic Steel Corp. High purity steels and production thereof. 3,387,967, 6–11–68, Cl. 75—12.
Persson, Jan E., to Atlas Copco Aktiebolag. Motor compressor units. 3,387,770, 6–11–68, Cl. 230—139.
Pesson, Marcel, to Societe Anonyme dite: Laboratoire Roger Bellon. 1 hydrazino or amino isoquinolines. 3,388,130, 6–11–68, Cl. 260—286.
Peter, Julius : *See*—
Dieterich, Dieter, Bayer, and Peter. 3,388,087.
Peterson, Donald E. : *See*—
Plate, John R., and Peterson. 3,387,862.
Petry, Heinz : *See*—
Fischer, Georg, and Petry. 3,387,892.
Petry, Robert C. : *See*—
Freeman, Jeremiah P., and Petry. 3,388,160.
Petschauer, Richard J., to Fabri-Tek Inc. Indicator lamp in a transistor emitter follower circuit with a lamp warmup resistor in parallel with the transistor. 3,388,293, 6–11–68, Cl. 315—175.
Pfenneberger, Frank X. : *See*—
Jonas, Julius, and Pfenneberger. 3,387,824.
Philco-Ford Corp. : *See*—
Deutermann, Alan R. 3,388,386.
Phillips, James A., Jr., 30% to J. A. Phillips, Jr., and L. M. Phillips. Steam operated hot water heater with preheater. 3,387,591, 6–11–68, Cl. 122—32.
Phillips, Joseph : *See*—
Levkoff, Henry, and Phillips. 3,388,085.
Phillips, Leah M. : *See*—
Phillips, James A., Jr. 3,387,591.
Phillips Petroleum Co. : *See*—
Broerman, Arthur B. 3,387,496.
Phillips-Van Heusen Corp. : *See*—
Ainslie, Thomas D. 3,387,484.
Pianko, Marc : *See*—
Bauger, Louis J., Beyler, Dubarry-Barbe, Pianko, and Vesper. 3,387,462.
Pickard, Kenneth L. Internal alignment clamp. 3,387,761. Cl. 228—42.
Pierce, William L. Two wheel trailer. 3,387,854, 6–11–68, Cl. 280—69.
Pierpont, Roger L. : *See*—
Newallis, Peter E., Pierpont, and Rumanowski. 3,388,150.
Pike, John E. : *See*—
Beal, Philip F., III, and Pike. 3,388,188.
Pino, Piero, and G. Braca, to Lonza Ltd. Preparation of trimeric ruthenium tetracarbonyl. 3,387,932, 6–11–68, Cl. 23—203.
Pinsley, Edward A., and A. P. Walch, to United Aircraft Corp. Vortex pressure control device. 3,388,235, 6–11–68, Cl. 219—121.
Pioch, Robert J. Drop bottom container for compacted loads. 3,387,878, 6–11–68, Cl. 294—69.

- Piper, Ervin L.: *See*—
  - McHenry, Edgar R., and Piper. 3,387,940.
- Pitsch, Ronald D., to American Excelsior Corp. Molding apparatus. 3,387,332, 6–11–68, Cl. 18—19.
- Pittsburgh Plate Glass Co.: *See*—
  - Doerge, Herman P., and Bosso. 3,388,086.
  - Hughes, David E. 3,387,551.
  - Martin, Thomas P. 3,387,416.
  - Tilton, Robert L. 3,387,963.
  - Whitmire, Le Roy S. 3,387,962.
  - Wismer, Marco, Ammons, and Miller. 3,388,101.
- Place, Roderick J.: *See*—
  - Perry, Thomas E., Henke, Fogarty, Rinebolt, Place, and Poole. 3,387,967.
- Plant, Howard L.: *See*—
  - Bruson, Herman A., and Plant. 3,388,166.
- Plate, John R., and D. E. Peterson, to Allis-Chalmers Mfg. Co. Tractor hitch with sway limiting mechanism. 3,387,862, 6–11–68, Cl. 280—461.
- Pless, Janos: *See*—
  - Guttmann, Stephan, Boissonnas, and Pless. 3,388,113.
- Plueddemann, Edwin P.: *See*—
  - Musolf, Martin C., and Plueddemann. 3,388,144.
- Plummer, Arnold M.: *See*—
  - Bettenhausen, Lee H., Epstein, and Plummer. 3,388,275.
- Pneumafil Corp.: *See*—
  - Landers, Otis L., and McKenzie. 3,387,335.
  - Nagel, Ernst, and Furstenberg. 3,387,318.
- Podesva, Ctirad, to Delmar Chemicals Ltd. Process for the preparation of riboflavin phosphoric acid. 3,388,116, 6–11–68, Cl. 260—211.3.
- Pogacar, Peter P. Article for use in chromatographic and electrophoretic analysis, separation, and the like. 3,387,710, 6–11–68, Cl. 210—94.
- Poke, Marvin: *See*—
  - Sines, Thomas E. 3,388,206.
- Politechnika Warszawska: *See*—
  - Niemand, Leon. 3,387,596.
- Pollak, Henry M. and R. S. Radial arm saw support structure. 3,387,636, 6–11–68, Cl. 143—6.
- Pollak, Robert S.: *See*—
  - Pollak, Henry M. and R. S. 3,387,636.
- Poole, Sidney W.: *See*—
  - Perry, Thomas E., Menke, Fogarty, Rinebolt, Place, and Poole. 3,387,967.
- Porter, Irwin C. Calorie computing weigher. 3,387,676, 6–11–68, Cl. 177—17.
- Porton, Stephen: *See*—
  - Graham, Walton, and Porton. 3,388,393.
- Pound, Alan E.: *See*—
  - Bogert, Howard Z., Pound, and Avery. 3,388,384.
- Powell, George W., to The Pangborn Corp. Continuous cleaning apparatus. 3,387,410, 6–11–68, Cl. 51—15.
- Powers Mfg., Inc.: *See*—
  - Powers Whitney S., Jr. 3,387,704.
- Powers, Robert M., to A. E. Staley Mfg. Co. Surface-sizing of paper with cyanoethyl acid hydrolyzed starch. 3,387,998, 6–11–68, Cl. 117—156.
- Powers, Whitney S., Jr., to Powers Mfg., Inc. Aperture gauging and sorting device. 3,387,704, 6–11–68, Cl. 209—73.
- Pranke, Walter T., Jr.: *See*—
  - Kawiecki, Chester J., and Pranke. 3,388,274.
- Prapis, Frank, and J. A. Zbuchalski, to The Bendix Corp. Motor load limiting circuitry. 3,388,307, 6–11–68, Cl. 318—434.
- Pratt, Verneur E.: *See*—
  - Larsen, Donald R. 3,388,245.
- Pray, Edwin B., to Constellation Steel Mill Equipment. Shear construction. 3,387,523, 6–11–68, Cl. 83—461.
- Prebish, Michael J., to General Precision, Inc. Sea-life locator. 3,388,373, 6–11–68, Cl. 340—6.
- Precision Valve Corp.: *See*—
  - Focht, John R. 3,387,911.
- Prentice, George D., to A. F. Klinzing Co. Inc. Feed distributor. 3,387,696, 6–11–68, Cl. 198—64.
- Pribyl, Edward J., and J. Bernstein, to E. R. Squibb & Sons, Inc. Tetrahydrobenzocyclohexene and cycloheptene ethers. 3,388,121, 6–11–68, Cl. 260—239.
- Price-Pfister Brass Mfg. Co.: *See*—
  - Shupper, Samuel. 3,387,477.
- Prior, Roger A.: *See*—
  - Schoendube, Charles W., and Prior. 3,388,320.
- Pritts, Willis L., Jr. Coal drying apparatus. 3,387,380, 6–11–68, Cl. 34—48.
- Privott, Wilbur J., Jr., and R. M. Chapman, to Monsanto Co. Filament spinning apparatus. 3,387,327, 6–11–68, Cl. 18—8.
- Proctor, James A.: *See*—
  - Bond, Frank D., Jr., Matsch, and Proctor. 3,387,449.
- Prosser, Eric S., and W. G. Hall, to The Hoover Co. Door interlock for washing apparatus. 3,387,873, 6–11–68, Cl. 292—175.
- Prywes, Noah S., S. Litwin, and H. J. Gray, Jr., to United States of America, Navy. Data processing means. 3,388,381, 6–11–68, Cl. 340—172.5.
- Pulcrano, Frank C., and C. E. Becker, to ACF, Industries, Inc. Sequential hopper gate operating mechanism. 3,387,570, 6–11–68, Cl. 105—282.
- Pullen, Charles C., to Bethelehem Steel Corp. Automatic interlock to facilitate automatic control of rolling mill with varying numbers of operational stands. 3,387,472, 6–11–68, Cl. 72—14.
- Pullman Inc.: *See*—
  - Matushek, John W., Wille, and Van Der Sluys. 3,387,571.
- Quint, Stephen M.: *See*—
  - Gillis, Robert P., and Quint. 3,388,039.
- Rabinowitz, Alan R. Nut lock. 3,387,469, 6–11–68, Cl. 70—232.
- Rabjohn, Rodney R. Power operated wheel chair. 3,387,681, 6–11–68, Cl. 180—13.
- Rackley, Carle E., to Westinghouse Electric Corp. Luminaire and an adjustable securing device therefor. 3,388,247, 6–11–68, Cl. 240—78.
- Radio Corp. of America: *See*—
  - Austin, Wayne M. 3,388,338.
  - Austin, Wayne M., and Dean. 3,388,286.
  - Banks, Frank H., and Patterson. 3,388,309.
  - Burns, Joseph R. 3,388,292.
  - Christopher, Todd J., and McDonald. 3,388,285.
  - Clark, Robert J. 3,388,391.
  - Daniel, James W., Jr. 3,388,263.
  - Delany, James F., and Lauxen. 3,387,758.
  - Heiman, Frederic P. 3,387,358.
  - Kratzer, Dale L., and Carfolite. 3,388,398.
  - Wright, Carl M. 3,388,265.
- Raffaelli, Joseph G., to International Telephone and Telegraph Corp. Electric ignition transformer.,3,388,362, 6–11–68, Cl. 336—73.
- Rahmel, Henry A., and W. L. Grube, to A. C. Nielsen Co. Tape recorder. 3,387,797, 6–11–68, Cl. 242—55.11.
- Railroad Rubber Products, Inc.: *See*—
  - Moses, Nelson K., and McClung. 3,387,781.
- Rainer, William C., E. M. Redding, J. J. Hitov, A. W. Sloan, and W. D. Stewart, to W. R. Grace & Co. Polyethylene graft copolymers produced with high energy ionising radiation. 3,388,051, 6–11–68, Cl. 204—159.17.
- Ramonat, Dieter, to Telefunken Patentverwertungsgesellschaft m.b.H. Waveguide. 3,388,352, 6–11–68, Cl. 333—98.
- Ramsden, Hugh E., to Esso Research and Engineering Co. Organomagnesium addition compounds, process therefor, and derivatives thereof. 3,388,179, 6–11–68, Cl. 260—665.
- Ramsey, Norman F., to United States of America, Navy. Atomic hydrogen maser with enlarged atom storage container. 3,388,342, 6–11–68, Cl. 331—94.
- Randolph, Franklin L.: *See*—
  - Fischer, Raymond C., Randolph, and Roberson. 3,387,665.
- Rank Organisation Ltd.: *See*—
  - Stillwell, Peter F. T. C., Barr, and Reeve. 3,387,776.
- Rast, Gustav E., to Allied Chemical Corp. Organic color lakes. 3,387,983, 6–11–68, Cl. 106—289.
- Raub, Clifford G. Golf putter. 3,387,845, 6–11–68, Cl. 273—77.
- Ravve, Abraham, and C. W. Fitko, to Continental Can Co., Inc. Preparation of isano oil :phenol products. 3,388,084, 6–11–68, Cl. 260—19.
- Rawald, Kenneth E.: *See*—
  - Buerki, Christian E., and Rawald. 3,387,601.
- Rawley, John R. Automatic frequency control of a radio receiver. 3,388,331, 6–11–68, Cl. 325—420.
- Raybestos-Manhattan, Inc.: *See*—
  - Trainor, James T., and Kaufman. 3,387,980.
- Raymond Corp., The: *See*—
  - Gibson ,Christian D., and Jones. 3,387,731.
- Raytheon Co.: *See*—
  - Spencer, Gordon R. 3,388,276.
  - Stutsman, Paul W. 3,388,278.
- Read, Worth G. Method and means of automatically processing information contained on railroad cars. 3,388,237, 6–11–68, Cl. 235—61.12.
- Redding, Edward M.: *See*—
  - Rainer, William C., Redding, Hitov, Sloan, and Stewart. 3,388,051.
- Redpath, Arthur B.: *See*—
  - Hall, George E., and Redpath. 3,387,485.
- Reedy, Albert J., to Eastman Kodak Co. Polyene glycols and acetoxy-polyene glycols by pinacolic reduction of polyene aldehydes. 3,388,152, 6–11–68, Cl. 260—488.
- Reeve, Thomas C.: *See*—
  - Stillwell, Peter F. T. C., Barr, and Reeve. 3,387,776.
- Reeves Brothers, Inc.: *See*—
  - Blue, Sidney D. 3,387,956.
  - West, George C., and Mater. 3,387,989.
- Reeves, Philip C.: *See*—
  - Stamos, Chris, Reeves, and Wender. 3,387,383.
- Reeves, William R. Radio controlled fishing boat. 3,387,582, 6–11–68, Cl. 115—.5.
- Regie Nationale des Usines Renault: *See*—
  - De Coye de Castelet, Gaetan. 3,387,507.
  - De Coye de Castelet, Gaetan. 3,387,539.
  - De Coye de Castelet, Gaetan. 3,387,549.
  - De Coye de Castelet, Gaetan. 3,388,049.
- Reiber, Edward W. Adjustable leg invalid walker. 3,387,617, 6–11–68, Cl. 135—45.
- Reich, Heinrich, W. Meili, and J. Gilhooley, to Contraves AG. Actuator arrangement for a flying object. 3,387,561, 6–11–68, Cl. 102—83.
- Reid, Kevin W., ⅓ each to Canadian International Paper Co., and North Shore Paper Company and Abitibi St. Anne Paper Ltd. Track shoe. 3,387,897, 6–11–68, Cl. 305—41.
- Reilly, Victor J., and Neil J. Stalter, to E. I. du Pont de Nemours and Co. Stannate stabilizer compositions containing an alkylidene diphosphonic acid, their preparation and hydrogen peroxide solutions stabilized therewith. 3,387,939, 6–11–68, Cl. 23—207.5.
- Reinhardt, Eli W., and H. E. Morris. Green peanut vine turning machine. 3,387,445, 6–11–68, Cl. 56—370.
- Reitmeier, Ronald E., to Catalysts and Chemicals, Inc. Two-stage steam reforming with rapid warm-up in first stage by means of a promoted catalyst. 3,388,074, 6–11–68, Cl. 252—373.

- Renfro-Hosiery Mills Co.: *See*—
  - Merritt, Robert E., and Nichols. 3,387,395.
- Republic Steel Corp.: *See*—
  - Perry, Thomas E., Henke, Fogarty, Rinebolt, Place, and Poole. 3,387,967.
- Research Corp.: *See*—
  - McHugh, Carl M. 3,387,618.
- Rexall Drug and Chemical Co.: *See*—
  - Billings, Miro. 3,387,331.
  - Erchak, Michael, Jr. 3,387,991.
- Reynolds, David P., and E. G. Maeder, to Reynolds Metals Co. Package construction and method of making the same or the like. 3,387,702, 6–11–68, Cl. 206—65.
- Reynolds, Donald W., to Jackson Vibrators, Inc. Tamper blade suspension assembly. 3,387,567, 6–11–68, Cl. 104—12.
- Reynolds, Joseph B., Jr.: *See*—
  - Brodsinsky, Albert, Reynolds, and Saffitz. 3,388,332.
- Reynolds Metals Co.: *See*—
  - Peabody, William A., Jr. 3,387,429.
  - Reynolds, David P., and Maeder. 3,387,702.
- Rhines, Thomas B., to United Aircraft Corp. Valve construction. 3,387,804, 6—11–68, Cl. 244—129.
- Rice, Russell E., to International Harvester Co. Agricultural bed shaping implement. 3,387,667, 6–11–68, Cl. 172—701.
- Richard, Edgar J.: *See*—
  - Belanger, Paul J., and Richard. 3,387,384.
- Richard, Murphy P.: *See*—
  - Thibodeaux, Denis A., Richard, and Monson. 3,387,745.
- Richards, B. C., & Co. Pty. Ltd.: *See*—
  - Richards, Cecil G. F. 3,387,815.
- Richards, Cecil G. F., to B. C. Richards & Co. Pty. Ltd. Seat for ball valve and ball valve using the seat. 3,387,815, 6–11–68, Cl. 251—174.
- Richardson-Merrell Inc.: *See*—
  - Gans, Eugene H., and Apelian. 3,388,041.
- Richardson, William C.: *See*—
  - Roberts, Ronald, Martin, and Richardson. 3,388,117.
- Richmond, Stanley M. Newborn aspirator. 3,387,610, 6–11–68, Cl. 128—278.
- Rick, Edward A.: *See*—
  - Tinsley, Samuel W., and Rick. 3,388,182.
- Rickert, Sherwood A. Horizontal multiple plate filter assembly. 3,387,711, 6–11–68, Cl. 210—344.
- Ridgway, James S., to Monsanto Co. Terpolyamides. 3,388,099, 6–11–68, Cl. 260—47.
- Riek, Raymond F.: *See*—
  - Buckley, Francis T., Mason, and Riek. 3,388,088.
- Rinebolt, John A.: *See*—
  - Perry, Thomas E., Henke, Fogarty, Rinebolt, Place, and Poole. 3,387,967.
- Ring, Thomas F., R. A. Keane, and R. C. Robinson, to General Time Corp. Switch operating alarm timer. 3,387,452, 6–11–68, Cl. 58—21.155.
- Rinke, Heinrich: *See*—
  - Thoma, Wilhelm, and Rinke. 3,388,100.
- Robbins, Manuel A., to Martin-Marietta Corp. Optical correlator using of matched filter system with raster type display. 3,388,240, 6–11–68, Cl. 233—181.
- Roberson, Raymond F.: *See*—
  - Fischer, Raymond C., Randolph, and Roberson. 3,387,665.
- Roberts, Elmer L. Tandem wheel support for trailers and similar vehicles. 3,387,857, 6–11–68, Cl. 280—104.5.
- Roberts, Ronald, R. T. Martin, and W. C. Richardson, to Courtaulds North America, Inc. Filaments of regenerated cellulose. 3,388,117, 6–11–68, Cl. 260—212.
- Roberts & Schaeffer Co.: *See*—
  - Stamos, Chris, Reeves, and Wender. 3,387,383.
- Roberts, Thomas S., and K. D. Hixon, to Monsanto Co. Method and apparatus for determining fabric streakiness. 3,388,261, 6–11–68, Cl. 250—224.
- Robertshaw Controls Co.: *See*—
  - Crafts, Cecil A., McFarlane, and Mitchell. 3,387,606.
  - Willson, James R. 3,387,780.
- Robertson, Alan L., to The United Research and Development Co., Inc. Structural wall and the like. 3,387,421, 6–11–68, Cl. 52—310.
- Robertson, H. H., Co.: *See*—
  - McFarlane, Murray C. 3,387,415.
- Robichaux, Roland A. Sugar cane harvesters. 3,387,441, 6–11–68, Cl. 56—238.
- Robinson, Ralph C.: *See*—
  - Ring, Thomas F., Keane, and Robinson. 3,387,452.
- Rocket Jet Engineering Corp.: *See*—
  - Hendricks, Klaas, and Soja. 3,387,698.
- Rodgers, Samuel M., Jr., B. F. Wakeman, and A. B. Savage, to The Dow Chemical Co. Novel hydroxypropyl methyl cellulose ethers, a process for preparing the same, and compositions utilizing such ethers. 3,388,082, 6–11–68, Cl. 260—17.
- Rodgers, Wayne V.: *See*—
  - Schneider, William S., and Corella. 3,387,701.
- Roesky, Herbert W., to E. I. du Pont de Nemours and Co. Preparation, of phosphorus thiofluoride from phosphorus pentasulfide and hydrogen fluoride. 3,387,950, 6–11–68, Cl. 23—368.
- Rofe, Edward H. Flat path extractor. 3,387,717, 6–11–68, Cl. 214—1.
- Rogers, Dilworth T., and J. C. Munday, to Esso Research and Engineering Co. Process for manufacturing a hard bituminous composition with a curing agent. 3,387,982, 6–11–68, Cl. 106—281.
- Rogers, Oliver C. Joint construction. 3,387,867, 6–11–68, Cl. 285—336.
- Rohm & Haas Co.: *See*—
  - Freeman, Jeremiah P., and Petry. 3,388,160.
- Rohmann, Charles P.: *See*—
  - Mannherz, Elmer D., Rohmann, and Hermanns. 3,387,492.
- Rohowetz, Stanley E., to American Can Co. Container with dual tape opening device. 3,387,739, 6–11–68, Cl. 220—53.
- Rolls-Royce Ltd.: *See*—
  - Brown, David M. 3,387,788.
- Romero, Sergio P. Device for removing valve seats and the like. 3,387,353, 6–11–68, Cl. 29—213.
- Rommel, Howard E. Settable limit control device using matched patterns. 3,388,303, 6–11–68, Cl. 318—18.
- Ronningen-Petter Co.: *See*—
  - Schrink, George H. 3,387,712.
- Roof, James L., and P. Knauer, to Westinghouse Electric Corp. Semiconductor multivibrator pulse train generating circuit. 3,388,346, 6–11–68, Cl. 331—111.
- Roosen, Karl-Heinz, to Kleinewefers Gravuren G.m.b.H. Method of making stampling and embossing rollers. 3,387,351, 6–11–68, Cl. 29—148.4.
- Rope, Eugene L., and G. P. Tricoles, to General Dynamics Corp. Microwave holograms. 3,388,396, 6–11–68, Cl. 343—17.
- Ropes, James F.: *See*—
  - Wyllie, Robert, and Ropes. 3,387,823.
- Rose, Russell G., to Continental Oil Co. Growth reaction. 3,388,143, 6–11–68, Cl. 260—448.
- Rosenblatt, Solomon, to Leesona Corp. Method of making electrodes using hydrophobic polymer. 3,388,004, 6–11–68, Cl. 136—120.
- Ross, Donald E., to Northrop Corp. Drill string concept. 3,387,865, 6–11–68, Cl. 285—39.
- Ross, John C.: *See*—
  - Opferkuch, Robert E., Jr., and Ross. 3,388,202.
- Rotaflex of Canada Ltd.: *See*—
  - Bailey, Frederick A. 3,388,246.
- Roth, Ernest E., and H. E. Tanner, assors to Alvey Conveyor Mfg. Co. Pallet loading and unloading apparatus. 3,387,718, 6–11–68, Cl. 214—1.
- Rotron Mfg. Co., Inc.: *See*—
  - Fisher, William W. 3,388,313.
  - Zoehfeld, Gunther. 3,387,768.
- Routson, Willis G., to The Dow Chemical Co. Adjustable pressure reducing device. 3,387,630, 6–11–68, Cl. 137—625.3.
- Rowell, William J.: *See*—
  - Cranston, Albert E., Jr. and C. W., and Rowell. 3,387,556.
- Rowland, Eric, and E. W. Wilkins, to Garrard Engineering Ltd. (formerly The Garrard Engineering and Mfg. Co. Ltd.) Method of constructing the stator for a single phase induction motor. 3,387,361, 6–11–68, Cl. 29—596.
- Ruempelein, Fritz, to Agfa Aktiengesellschaft. Coil for moving-coil instruments and method of producing the same. 3,388,329, 6–11–68, Cl. 324—154.
- Rumanowski, Edmund J. *See*—
  - Newallis, Peter E., Pierpont, and Rumanowski. 3,388,150.
- Rumsey, Rollin D., to Houdaille Industries, Inc. Tuned torsional vibration damper. 3,387,505, 6–11–68, Cl. 74—574.
- Russo, Vincent J., to The Chemical and Industrial Corp. Ammonium nitrate explosive and process for producing same. 3,388,014, 6–11–68, Cl. 149—17.
- Rychlik, Frank J. Power transmission and clutch mechanism. 3,387,503, 6–11–68, Cl. 74—411.
- Rynberk, Robert W. Divider and sprinkler combination. 3,387,786, 6–11–68, Cl. 239—201.
- Rypkema Jouke N.: *See*—
  - Eilers Carl G., and Rypkema. 3,388,214.
- SBD Systems, Inc.: *See*—
  - De la Lastra, Albert. 3,388,311.
- SCM Corp.: *See*—
  - Nagy Gustave J. 3,388,228.
- S.E.R.T.E.C. Societe d'Etudes et de Recherches Techniques: *See*—
  - Seguenot, Gabriel J. 3,387,817.
- SKF Industries, Inc.: *See*—
  - Morrison, Thomas W. 3,387,900.
- Sabadishin, Steve. Pictorial plotting board and related plotting device. 3,387,372, 6–11–68, Cl. 33—76.
- Sabonis, Charles J., to General Electric Co. Loudspeaker mounting arrangement. 3,388,298, 6–11–68, Cl. 317—101.
- Saddler, Frederick R. Hydraulic trailer jack. 3,387,821, 6–11–68, Cl. 254—86.
- Saffitz, Irving M.: *See*—
  - Brodzinsky, Albert, Reynolds, and Saffitz. 3,388,332.
- Sakai, Kiyoshi: *See*—
  - Tanabe, Katsumi, Takasaki, Sakai, Hayashi, Mnrisawa, and Hashimote. 3,388,124.
- Sakier, George. Holder for tubes of paint or other substance. 3,387,810, 6–11–68, Cl. 248—108.
- Sakurai, Ryoichi, and S. Nagano, to Teijin Ltd. Method of recovering crude terephthalic acid. 3,388,156, 6–11–68, Cl. 260—525.
- Salomon, Salomon M., and R. W. Schroeder, to Beloit Corp. Paper machine screen. 3,387,708, 6–11–68, Cl. 209—273.
- Saltarelli, Martin O.: *See*—
  - Cormack, Alexander D., Saltarelli, Scott, and Yeung. 3,387,796.
- Sammarco, Peter, and A. Zimmerman, to International Harvester Co. Clutch control mechanism for alternate release and engagement. 3,387,691, 6–11–68, Cl. 192—92.
- Samways, Bruce. Stretch tubular film, 3,388,197, 6–11–68, Cl. 264—89.
- Sand, Jakob: *See*—
  - Kroeper, Hugo, and Sand. 3,388,132.
- Sanders, Revere G.: *See*—
  - Houghton, Clayton W., and Sanders. 3,387,532.

- Sandoz Ltd. (also known as Sandoz A.G.) : *See*—
  - Guttmann, Stephan, Boissonnas, and Pless. 3,388,113.
  - Hofmann, Albert, and Troxler. 3,388,129.
- Sankyo Co. Ltd. : *See*—
  - Tanabe, Katsumi, Takasaki, Sakai, Hayashi, Morisawa, and Hashimoto. 3,388,124.
- Santi, Mark G. Tensioning device. 3,387,344, 6–11–68, Cl. 24—126.
- Sanyo Electric Co., Ltd. : *See*—
  - Houshi, Teruo. 3,388,220.
- Sanyo Pulp Co. Ltd. : *See*—
  - Kiyooka, Shigeo, and Okabe. 3,387,965.
- Sarett, Lewis H. : *See*—
  - Shen, Tsung-Ying, and Sarett. 3,388,127.
- Sargent, Walter E. : *See*—
  - Campana, Robert J., Melcher, Merrill, and Sargent. 3,388,008.
- Sarvadi, George, Jr., to Falls Industries. Hydrochloric acid process. 3,387,430, 6–11–68, Cl. 55—51.
- Sauber, Rudolph S., to Westinghouse Electric Corp. Electrical terminal assembly and method of making same. 3,388,368, 6–11–68, Cl. 339—94.
- Sauer, Leo H. : *See*—
  - Mandarino, Vincent C., Jr., and Sauer. 3,387,385.
- Saunders, James H., to Mobay Chemical Co. Laminated safety glass. 3,388,032, 6–11–68, Cl. 161—183.
- Savage, Albert B. : *See*—
  - Rodgers, Samuel M., Jr., Wakeman, and Savage. 3,388,082.
- Savoir, Jean-Claude, to Velcro S.A. Grisons. Separable fastening device. 3,387,345, 6–11–68, Cl. 24—204.
- Sayigh, Adnan A. R., H. Ulrich, and J. B. Wright, to The Upjohn Co. Novel sulfonylcarbodiimides and process. 3,388,159, 6–11–68, Cl. 260—556.
- Scans Associates, Inc. : *See*—
  - Berger, Leo J., Jr., and Clayton. 3,387,619.
- Schaeetner, Erich : *See*—
  - Eggstein, Giorgio, and Schaeetner. 3,387,687.
- Schaff, Peter J. Oil pan drain plug assembly. 3,387,621, 6–11–68, Cl. 137—322.
- Schaffling, Otto G. : *See*—
  - Heying, Theodore L., Papetti, and Schaffling. 3,388,090.
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- Scheck, William V. Knife with non-sticking blade. 3,387,368, 6–11–68, Cl. 30—348.
- Scheindel, Christian T. : *See*—
  - Grimsley, Arvid K., and Scheindel. 3,388,017.
- Scheirich, H. J., Co. : *See*—
  - Hedgspeth, Duel G., and Himelreich. 3,387,376.
- Schellenberg, Rolf, and K.-H. Nitzschke, to Badische Anilin- & Soda-Fabrik Aktiengesellschaft. Apparatus for atomizing molten solids. 3,387,783, 6–11–68, Cl. 239—81.
- Schering Aktiengesellschaft : *See*—
  - Imohl, Wolfgang, and Borner. 3,388,103.
- Schertzer, John, and J. A. Schols, to The Dow Chemical Co. Process for the production of phosphoric acid. 3,387,930, 6–11–68, Cl. 23—165.
- Schimitschek, Erhard J. : *See*—
  - Nebrich, Richard B., Jr., Schimitschek, and Trias. 3,388,071.
- Schinner, Thomas J. : *See*—
  - Gieringer, Carl K., Schinner, and Zimmer. 3,388,403.
- Schladitz, Hermann J. : *See*—
  - Hutzenlaub, Ernst, and Schladitz. 3,387,500.
- Schladitz-Whiskers, A.G. : *See*—
  - Hutzenlaub, Ernst, and Schladitz. 3,387,500.
- Schloemann Aktiengesellschaft : *See*—
  - Bernhardt, Karl-Heinz, and Marx. 3,387,518.
- Schlumberger Ltd. (Schlumberger N. V.) : *See*—
  - Jakobsen, Robert E. K. 3,387,887.
- Schlumberger Technology Corp. : *See*—
  - Berryman, William O. 3,387,660.
  - Lebourg, Maurice P. 3,387,658.
  - Sloughter, William J. 3,388,324.
  - Sloughter, William J. 3,388,375.
- Schlumberger Well Surveying Corp. : *See*—
  - Birdwell, James A., Huston, and Skellie. 3,388,325.
  - Current, James H. 3,387,659.
- Schmerling, Louis, to Universal Oil Products Co. Halo-substituted cycloalkenylacyl derivatives of aryl polycarboxylic acids or anhydrides thereof. 3,388,137, 6–11–68, Cl. 260—346.3.
- Schmidt, Heinz. Device for the mechanical treatment of the vertebral column and its bone connection organs. 3,387,605, 6–11–68, Cl. 128—71.
- Schmidt, John E. : *See*—
  - King, Robert E., Cobb, and Schmidt. 3,388,209.
- Schmidt, Paul : *See*—
  - Druey, Jean, and Schmidt. 3,388,203.
- Schneider, Armin, and R. Forthmann, to Knapsack Aktiengesellschaft. Process for the manufacture of tetraphosphorus disulfide. 3,387,936, 6–11–68, Cl. 23—206.
- Schneider, Carl : *See*—
  - Schneider, William S., and Corella. 3,387,701.
- Schneider, Othmar, and W. Viehrig, to Agfa-Gevaert Aktiengesellschaft. Apparatus for producing imprints on paper or the like. 3,387,371, 6–11–68, Cl. 33—18.
- Schneider, William S., and A. P. Corella, 11¼% to W. V. Rodgers, and 10% to C. Schneider. Dispensing container. 3,387,701, 6–11–68, Cl. 206—46.
- Schoeller & Co. Elektrotechnische Fabrik : *See*—
  - Beha, Walter. 3,387,904.
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- Schols, John A. : *See*—
  - Schertzer, John, and Schols. 3,387,930.
- Schrecongost, Ray B., to Hammond Corp. All harmonic wave frequency divider. 3,387,527, 6–11–68, Cl. 84—1.01.
- Schrink, George H., to Ronningen-Petter Co. Filter backwash diffuser. 3,387,712, 6–11–68, Cl. 210—411.
- Schroeder, Robert W. : *See*—
  - Salomon, Salomon M., and Schroeder. 3,387,708.
- Scott, James B. : *See*—
  - Cormack, Alexander D., Saltarelli, Scott, and Yeung. 3,387,796.
- Scott, Peter H. : *See*—
  - Young, Thomas E., and Scott. 3,388,133.
  - Young, Thomas E., and Scott. 3,388,134.
- Scribner, Neal, to Wilcox Electric Co., Inc. Pulse counter frequency modulation detection. 3,388,033, 6–11–68, Cl. 329—104.
- Sculley, John D., to E. I. du Pont de Nemours and Co. Vinylidene chloride-acrylate-acrylic acid copolymer, wax-containing coating composition, coated polyolefin, and method of coating. 3,387,997, 6–11–68, Cl. 117—138.8.
- Searle, G. D., & Co. : *See*—
  - Brown, Edward A. 3,388,125.
  - Klimstra, Paul D. 3,388,123.
- Searles, Jonn J., and W. C. Winn, to Ford Motor Co. Multiple speed ratio power transmission control mechanism with pneumatically operated ratio controllers. 3,387,508, 6–11–68, Cl. 74—864.
- Seckerson, Clifford A., to United-Carr Inc. Resilient moulding fastener. 3,387,342, 6–11–68, Cl. 24—73.
- Seguenot, Gabriel J., to S.E.R.T.E.C. Societe d'Etudes et de Recherches Techniques. Packing devices for valves. 3,387,817, 6–11–68, Cl. 251—317.
- Seipp, Werner, G. Drechsler, and S. Bloeck, to Swiss Aluminum Ltd. Process for the manufacture of sheet metal articles coated with a thermoplastic resin. 3,387,475, 6–11–68 Cl. 72—46.
- Sendzimir, Tadeusz. Method of making clad metal. 3,387,357, 6–11–68, Cl. 29—494.
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- Sensi, Piero : *See*—
  - Lancini, Giancarlo, and Sensi. 3,388,161.
- Severson, Wayne J. : *See*—
  - Cunningham, Richard C., and Severson. 3,388,230.
- Shadoff, E. R. : *See*—
  - Fisher, James O., Sr., Whitley, and Biddle. 3,387,722.
- Shafer, Clarence E. Knee protector. 3,387,306, 6–11–68, Cl. 2—22.
- Shaffer Tool Works : *See*—
  - Cugini, Edward T. 3,387,851.
- Shankland, Ronald B., Sr. : *See*—
  - Godshalk, Alva J., Shankland, and Yates. 3,387,749.
- Sharpe, Michael R. : *See*—
  - Bloom, Martin S., and Sharpe. 3,388,022.
- Sheard, John L., to E. I. du Pont de Nemours and Co. Process and composition for chlorinating acetylene with aqueous cupric chloride solutions to produce trichloroethylene and perchlorethylene. 3,388,176, 6–11–68, Cl. 260—654.
- Shelffo, Loren E., and R. M. East, to Addressograph-Multigraph Corp. Magnetic developer apparatus. 3,387,586, 6–11–68, Cl. 118—637.
- Shellberg, Charles F. : *See*—
  - Meininger, Edward H., and Shellberg. 3,388,203.
- Shen, Chung Y, to Monsanto Co. Agglomerated tripolyphosphate. 3,387,928, 6–11–68, Cl. 23—106.
- Shen, Tsung-Ying, and L. H. Sarett, to Merck & Co., Inc. a-Halomethyl - 1 - pyrazine carbonyl-3-indolylacetic acids. 3,388,127, 6–11–68, Cl. 260—250.
- Sherrington, Leonard G., and W. P. Kemp, to Thorium Ltd. Batch separation of components of a mixture by total solute reflux. 3,387,944, 6–11–68, Cl. 23—310.
- Shields, Donald J. : *See*—
  - Hawkins, James M., and Shields. 3,388,109.
- Shields, Walter A. Closure cap for disposable hypedermic syringes. 3,387,609, 6–11–68, 128—218.
- Shipp, Kathryn G. : *See*—
  - Kamlet, Mortimer J., Shipp, and Hill. 3,388,147.
- Shippee, Winsor. Golf club with percussion chamber plenum 3,387,844, 6–11–68, Cl. 276—77.
- Shirk, Frederick E. : *See*—
  - Simon, Arthur, Shirk, and Biagioli. 3,388,379.
- Shirk, Marion. Oil gauge cleaner. 3,387,314, 6–11–68, Cl. 15—210.
- Shivdasani, Prem, and D. D. DeVoy, to Honeywell Inc. Information handling apparatus. 3,388,383, 6–11–68, Cl. 340—172.5.
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- Shoemaker, Stephen P., Jr., D. D. Koby, and T. B. Caplet. Coin operated amusement device. 3,387,474, 6–11–68, Cl. 72—80.
- Shorr, Jacob : *See*—
  - De Körosy, Francis, and Shorr. 3,388,080.
- Shupper, Samuel, to Price-Pfister Brass Mfg. Co. Apparatus and method for roll forming flexible tubing. 3,387,477, 6–11–68, Cl. 72—77.

- Siebert, Gerald H. Desulfurizing of water. 3,387,481, 6–11–68, Cl. 56—51.
- Siedel, Walter : *See*—
  - Geiger, Rudolf, Sturm, and Siedel. 3,388,112.
- Siegel, Harry W., and M. A. Orbach. High intensity lamp bulb and lamp. 3,388,249, 6–11–68, Cl. 240—81.
- Siemens Aktiengesellschaft : *See*—
  - Gunther, Karl-Georg. 3,387,476.
  - Urban, Gerd, and Dotzer. 3,388,131.
- Siemens-Schuckertwerke A.G. : *See*—
  - Kesselring, Fritz. 3,388,361.
- Siepmann, Walter, to Stahl-Armaturen Persta G.m.b.H. KG. Wedge means for gate valves. 3,387,818, 6–11–68, Cl. 251—327.
- Signalite Inc. : *See*—
  - Geiger, Richard H. 3,388,341.
- Signetics Corp. : *See*—
  - James, Brian D. 3,388,301.
- Simms, Glen E., and D. E. Cook, to Concut, Inc. Pavement cutting machine with telescoping frame. 3,387,891, 6–11–68, Cl. 299—39.
- Simon, Arthur, F. E. Shirk, and J. C. Biagioli, to United States of America, Navy. Trace identifier. 3,388,379, 6–11–68, Cl. 340—147.
- Simpson, Jack N., and W. R. Bohner, to E & B Inc. Safety cap suspension. 3,387,304, 6–11–68, Cl. 2—3.
- Sims, James G., to Monsanto Co. Method for producing iridescent filament. 3,388,198, 6–11–68, Cl. 264—177.
- Sinclair, David, to Johns-Manville Corp. Method and apparatus for determining the dewpoint of a gaseous mixture. 3,387,486, 6–11–68, Cl. 73—17.
- Sinclair Research, Inc. : *See*—
  - Haimbaugh, Roland N. 3,388,065.
  - Muskat, Irving E. 3,388,106.
  - Todd, John C. 3,387,654.
- Sinclair, William R., and D. W. Stillinger, to Bell Telephone Laboratories, Inc. Method of preparing a film resistor by sputtering a ternary alloy of tin, antimony and indium in the presence of oxygen. 3,388,053, 6–11–68, Cl. 204—192.
- Sines, Thomas E., 10% to Marvin Poke. Guitar with remote control organ playing means. 3,388,206, 6–11–68, Cl. 84—1.16.
- Singer Co., The : *See*—
  - Beckenstein, Leonard A. 3,387,466.
  - Beckenstein, Leonard A. 3,387,467.
- Singleterry, Charles W. : *See*—
  - Dinsl, Richard A., and Singleterry. 3,388,347.
- Sinkey, Barry L., and R. L. Clifford. Spare tire and wheel carrier. 3,387,754, 6–11–68, Cl. 224—42.21.
- Skellie, Albert C. : *See*—
  - Birdwell, James A., Huston, and Skellie. 3,388,325.
- Skladzien, Stanley B., to United States of America, Atomic Energy Commission. Oxygen scavenging method. 3,387,969, 6–11–68, Cl. 75—66.
- Skycar, Inc. : *See*—
  - Kelsey, Cadwallader W. 3,387,801.
- Slade, Philip E., Jr. : *See*—
  - Jackson, Charles E., Jenkins, and Slade. 3,388,200.
- Sloan, Arthur W. : *See*—
  - Rainer, William C., Redding, Hitov, Sloan, and Stewart. 3,388,051.
- Sloughter, William J., to Schlumberger Technology Corp. Electrode array methods and apparatus, with undesired induced voltage cancellation, for investigating earth formations. 3,388,324, 6–11–68, Cl. 324—10.
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- Smith, A. O., Corp. : *See*—
  - Isler, Eduard W. 3,388,353.
  - Jaskowiak, Frank T. 3,387,682.
- Smith, Andrew W., Jr., to Westinghouse Electric Corp. Method for measuring roll crown and improving the operation of a rolling mill. 3,387,470, 6–11–68, Cl. 72—8.
- Smith, David G., to Crestworth Ltd. Display devices. 3,387,396, 6–11–68, Cl. 40—106.21.
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- Smith, Jessop : *See*—
  - Kelley, William E., and Smith. 3,387,587.
- Smith, Otto J. M. System, apparatus and method for improving stability of synchronous machines. 3,388,305, 6–11–68, Cl. 318—175.
- Smith, Raymond, to Continental Aviation & Engineering Corp. Turbine engine construction. 3,387,820, 6–11–68, Cl. 253—39.
- Smith, Richard C. : *See*—
  - Haxskaylo, Michael, and Smith. 3,387,999.
- Smith, Robert H., and L. D. Kurtz, to Deknatel, Inc. Combined scrub brush and fingernail cleaner. 3,387,313, 6–11–68, Cl. 15—111.
- Smith, S., & Sons (England) Ltd. : *See*—
  - Johnson, Ivan B. D. 3,388,242.
- Smith, William A. : *See*—
  - Williams, James F., and Smith. 3,387,563.
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- Snyder, John C., to Hercules Inc. Preparation of metal hydrides. 3,387,933, 6–11–68, Cl. 23—204.
- Snyder, John C., to Hercules Inc. Preparation of alkaline earth metal aluminum hydrides. 3,387,948, 6–11–68, Cl. 23—365.
- Snyder, John C., to Hercules Inc. Preparation of metal hydrides. 3,387,949, 6–11–68, Cl. 23—365.
- Sobota, Herbert, to Eisen- und Drahtwerk Erlau AG. Antiskid and tire protective chain. 3,387,896, 6–11–68, Cl. 305—35.
- Societe Anonyme Andre Citroen : *See*—
  - Cadiou, Jean G. 3,387,506.
- Societe anonyme dite : Laboratoire Roger Bellon : *See*—
  - Pesson, Marcel. 3,388,130.
- Societe Nationale d'Étude et de Construction de Moteurs d'Aviation : *See*—
  - Bauger, Louis J., Beyler, Dubarry-Barbe, Pianko, and Vesper. 3,387,462.
  - Colonbani, Don P. L. J., and Ernst. 3,387,787.
- Societe Pour l'Utilisation Rationnelle des Fluides : *See*—
  - De Beaumont, Henry. 3,387,773.
- Soddy, Thomas C., to The Youngstown Steel Door Co. Self-locking leverless door operating mechanism. 3,387,407, 6–11–68, Cl. 49—220.
- Soja, John T. : *See*—
  - Hendricks, Klaas, and Soja. 3,387,698.
- Sola Basic Industries, Inc. : *See*—
  - Brideweser, Ralph E., and Neydil. 3,388,299.
- Sonneborn, Ralph H., and F. A. De Toledo, to Owens-Corning Fiberglas Corp. Mold cooling system and method for polymerizing resins. 3,387,825, 6–11–68, Cl. 18—6.
- Sony Corp. : *See*—
  - Nakamura, Keiichi, and Kuroo. 3,387,360.
  - Tamura, Michio. 3,387,975.
- Sorgenti, Harold A. : *See*—
  - Bitar, Louie S., and Sorgenti. 3,388,154.
- Sorkin, Jack L., to Harris-Intertype Corp. Photopolymer and lithographic plates. 3,387,976, 6–11–68, Cl. 96—86.
- Soucy, Wilfred R. Automatic valvular closure. 3,387,624, 6–11–68, Cl. 137—525.1.
- Southwick, Nathan M. : *See*—
  - Chakoian, George, Crowell, and Southwick. 3,387,537.
- Sowinski, Gerard T. : *See*—
  - Lovullo, Patrick R., and Sowinski. 3,387,872.
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- Spangler, Murry J. : *See*—
  - Gumphrey, Edward P., and Spangler. 3,388,395.
- Spanner, Jack C. : *See*—
  - Brenden, Byron B., and Spanner. 3,387,370.
- Speakman Co. : *See*—
  - Pecis, John G. 3,387,631.
- Speicher Bros., Inc. : *See*—
  - Speicher, Carl F. and M. E. 3,387,461.
- Speicher, Carl F. and M. E., to Speicher Bros., Inc. Machine and method for drainage line construction. 3,387,461, 6–11–68, Cl. 61—63.
- Speicher, Marcus E. : *See*—
  - Speicher, Carl F. and M. E. 3,387,461.
- Spellman, Vernon C. : *See*—
  - Bergfelt, Nils H., and Spellman. 3,387,742.
- Spenadel, Lawrence, and H. Bieber, to Esso Research and Engineering Co. Nitronium perchlorate propellants containing perhalohydrocarbon modifier. 3,388,015, 6–11–68, Cl. 149—19.
- Spence, Peter : *See*—
  - Flint, John C. E., and Spence. 3,387,628.
- Spencer, Gordon R., to Raytheon Co. High angular resolution cathode ray tube with sector-like electrodes having different secondary emission areas. 3,388,276, 6–11–68, Cl. 313—68.
- Sperry Rand Corp. : *See*—
  - Hurlburt, Joseph C. 3,387,488.
- Squade D Co. : *See*—
  - King, Robert E., Cobb, and Schmidt. 3,388,209.
  - Novick, Robert R. 3,388,363.
- Squibb, E. R., & Sons, Inc. : *See*—
  - Hazy, Andrew C., and Karabinos. 3,388,165.
  - Machleidt, Hans, Lechner, and Klockow. 3,388,192.
  - Pribyl, Edward J., and Bernstein. 3,388,121.
- Squier, William H., and J. A. Wall, to J. P. Stevens & Co., Inc. Process for manufacturing molded articles. 3,388,018, 6–11–68, Cl. 166—242.
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- Stahl-Armaturen Persta G.m.b.H. KG. : *See*—
  - Siepmann, Walter. 3,387,818.
- Staley, A. E., Mfg. Co. : *See*—
  - Lotzgesell, James A., and Best. 3,388,120.
  - Powers, Robert M. 3,387,998.
- Stalker, James E., to Home Metal Products Co. Flow control for ventilating hood. 3,387,434, 6–11–68, Cl. 55—470.
- Stalter, Neil J. : *See*—
  - Reilly, Victor J., and Stalter. 3,387,939.
- Stamos, Chris, P. C. Reeves, and J. D. Wender, Jr., to Roberts & Schaeffer Co. Method and apparatus for removing moisture from material. 3,387,383, 6–11–68, Cl. 34—90.
- Standley, Floyd F. : *See*—
  - Dortenzo, Alexander T., and Standley. 3,387,838.
- Standley, Wendell E., to Johns-Nigrelli-Johns, Inc. Straight line flap slitter. 3,387,522, 6–11–68, Cl. 83—365.

- Stanley Works, The: *See*—
  - Janus, Edward T. 3,387,821.
  - Kraut, Herman G., and Lemaire. 3,387,426.
- Stanos, Pardee P.: *See*—
  - Mates, Jack K., and Stanos. 3,387,341.
- Sta-Soil Corp.: *See*—
  - Carlyon, Richard A., Jr. 3,387,827.
- Stata, Stanley S. Shoe scraper floor gratings for automobile floors. 3,387,315, 6–11–68, Cl. 15—215.
- Stauffer Chemical Co.: *See*—
  - Baker, Don R., Brokke, and Arneklev. 3,388,122.
  - Vanstrom, Reginald E., and McCollough. 3,387,925.
- Stedman, Ferdinand C. Wire feeding means. 3,387,759, 6–11–68, Cl. 226—108.
- Steeneck, Robert, and J. R. Cowan, to Western Union Telegraph Co. Error detection and correction apparatus for duplex communication system. 3,388,378, 6–11–68, Cl. 340—146.1.
- Steffens, Robert N., to The Cronite Co., Inc. Paper-handling machines. 3,387,779, 6–11–68, Cl. 263—6.
- Steffes, George L.: *See*—
  - Chan, William, and Steffes. 3,387,589.
- Steimel, Karl: *See*—
  - Koppelmann, Floris, and Steimel. 3,388,306.
- Stelmach, John J. Fishing device. 3,387,401, 6–11–68, Cl. 43—17.
- Stelmak, John P. Method of making electrical connections to a miniature electronic component. 3,387,365, 6–11–68, Cl. 29—628.
- Stencel Aero Engineering Corp.: *See*—
  - Bradfield, Todd S., Michal, Peck, and Stencel. 3,387,803.
- Stencel, Fred B.: *See*—
  - Bradfield, Todd S., Michal, Peck, and Stencel. 3,387,803.
- Stencil, Leslie C. Automatic ice dispenser. 3,387,750, 6–11–68, Cl. 222—236.
- Stepanek, George R., and W. H. Terrell, to Sun Corp. Collapsible arm rest. 3,387,881, 6–11–68, Cl. 296—153.
- Sterling Drug, Inc.: *See*—
  - Surrey, Alexander R. 3,388,158.
- Stevens, J. P. & Co., Inc.: *See*—
  - Squier, William H., and Wall. 3,388,018.
  - Tesoro, Giuliana C. 3,388,118.
- Stewart, William D.: *See*—
  - Rainer, William C., Redding, Hitov, Sloan, and Stewart. 3,388,051.
- Stierstorfer, Heinrich: *See*—
  - Winkler, Alfred, Ernst, and Stierstorfer. 3,387,546.
- Stillinger, Donald W.: *See*—
  - Sinclair, William R., and Stillinger. 3,388,053.
- Stillwell, Peter F. T. C., J. D. Barr, and T. C. Reeve, to Rank Organisation Ltd. Gauging device including feedback means applying a signal comparison means to control the level of a detected signal. 3,387,776, 6–11–68, Cl. 324—61.
- Stookey, Kenneth W. Heat exchange apparatus. 3,387,836, 6–11–68, Cl. 263—20.
- Storms, Phillips W.: *See*—
  - Olson, Danford H., and Storms. 3,388,173.
- Stow, George C., Jr.: *See*—
  - Estes, Robert T., and Stow. 3,388,030.
- Streight, William E.: *See*—
  - Belke, William H., and Streight. 3,387,684.
- Strick Corp.: *See*—
  - Hindin, Eugene, Kandle, and Levitt. 3,387,729.
  - Levitt, Semond. 3,387,730.
- Stripling, Allen A., to Mobil Oil Corp. Borehole system including three angularly spaced coiled means for measuring subsurface dip. 3,388,323, 6–11–68, Cl. 324—8.
- Strittmatter, Wallace S. Motor-operated exercising device with load responsive indicating means. 3,387,493, 6–11–68, Cl. 73—379.
- Strosberg, Gordon G.: *See*—
  - Igras, Raymond A., and Strosberg. 3,388,052.
- Stuart, Alan C., to The Distillers Co. Ltd. Cross linked chloroprene polymers and blends thereof with benzene soluble chloroprene polymers. 3,388,188, 6–11–68, Cl. 260—890.
- Stuart, Robert E., and R. E. Wilson, to Fansteel Metallurgical Corp. Despersion-hardened metal sheet and process for making same. 3,388,010, 6–11–68, Cl. 148—11.5.
- Sturm, Karl: *See*—
  - Geiger, Rudolf, Sturm, and Siedel. 3,388,112.
- Stutsman, Paul W., to Raytheon Co. Cold-cathode gas tube having a tubular control electrode. 3,388,278, 6–11–68, Cl. 313—197.
- Stutz, Theo, to Contraves A.G. Electro-optical displacement measuring arrangement. 3,388,262, 6–11–68, Cl. 250—237.
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- Suganuma, Shigeru, to Nippon Kokan Kabushiki Kaisha. Cargo ships. 3,387,581, 6–11–68, Cl. 114—72.
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  - Stepanek, George R., and Terrell. 3,387,881.
- Sun Oil Co.: *See*—
  - Hardy, William C. 3,387,657.
  - Newingham, Thomas D. 3,388,068.
- Surrey, Alexander R., to Sterling Drug, Inc. 1-(dichlorobenzyl)-3-methyl (or 3,3-dimethyl) ureas. 3,388,158, 6–11–68, Cl. 260—553.
- Susquehanna Corp., The: *See*—
  - Godfrey, John N. 3,387,329.
- Sutton, Frederic H., to The Black Clawson Co. Paper drying machinery. 3,387,384, 6–11–68, Cl. 34—114.
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- Swanson, Kenneth H. Dental articulator. 3,387,369, 6–11–68, Cl. 32—32.
- Sweetana, Andrew S., Jr., to Westinghouse Electric Corp. Foil or strip inductor device. 3,388,351, 6–11–68, Cl. 333—79.
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  - Davis, Paul. 3,387,765.
- Swiss Aluminium Ltd.: *See*—
  - Seipp, Werner, Drechsler, and Bloeck. 3,387,475.
- Sylvania Electric Products, Inc.: *See*—
  - Dale, Brian, and Ingraham. 3,387,859.
- Szabo, Joseph M., Jr., to Bell Telephone Laboratories Inc. Fabrication of beam lead semiconductor devices. 3,388,048, 6–11–68, Cl. 204—15.
- T.M.M. (Research) Ltd.: *See*—
  - Whittaker, Harold, and Booth. 3,387,833.
- TRW Inc.: *See*—
  - Hickey, John J. 3,388,284.
- Takasaki, Rinji: *See*—
  - Tanabe, Katsumi, Takasaki, Sakai, Hayashi, Morisawa, and Hashimoto. 3,388,124.
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- Talmont, Xavier L. R.: *See*—
  - Boudry, Jean C., Chambon, Faugeras, Lheureux, and Talmont. 3,387,945.
- Tameo Ltd.: *See*—
  - Kuether, Siegfried. 3,387,583.
- Tamura, Gakuso: *See*—
  - Arima, Kei, Tamura, Nagasawa, and Bae. 3,388,042.
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- Tanner, Henry E.: *See*—
  - Roth, Ernest E., and Tanner. 3,387,718.
- Tavera, Antonio. Prepacked coffee package. 3,387,553, 6–11–68, Cl. 99—295.
- Taylor, Edward C., and K. Lenard. Dibenzo[b,d]pyrans and process. 3,388,136, 6–11–68, Cl. 260—345.3.
- Taylor, Melvin L.: *See*—
  - Amano, Carl K., and Taylor. 3,387,921.
- Teenifax Corp.: *See*—
  - Habib, David P., and Hodgins. 3,387,977.
- Teijin Ltd.: *See*—
  - Sakurai, Ryoichi, and Nagano. 3,388,156.
- Teijin Seiki Co., Ltd.: *See*—
  - Okamoto, Takeshi. 3,387,521.
- Telefunken Patentverwertungsgesellschaft m.b.H.: *See*—
  - Ramonat, Dieter. 3,388,352.
- Teletype Corp.: *See*—
  - Hagstrom, Arthur A. 3,387,694.
- Temple, Peter L., to Imperial Chemical Industries of Australia and New Zealand Ltd. Fluid operated prime mover. 3,387,566, 6–11–68, Cl. 103—152.
- Tenenbaum, Nathaniel D., and M. C. Hayden, to Westinghouse Electric Corp. Reclosing relay apparatus. 3,388,296, 6–11–68, Cl. 317—22.
- Ten Eyck, Robert R., to The Ampeg Co., Inc. System for introducing tremolo and vibrato into audio frequency signals. 3,388,257, 6–11–68, Cl. 250—217.
- Tennessee Valley Authority: *See*—
  - Papendick, Robert I., and Parr. 3,387,635.
- Terleco, Inc.: *See*—
  - Ferguson, Richard, and Hinton. 3,387,687.
- Terrell, William H.: *See*—
  - Stepanek, George R., and Terrell. 3,387,881.
- Terzian, Berj A. Oven with automatic air curtain means. 3,387,600, 6–11–68, Cl. 126—21.
- Tesoro, Giuliana C., to J. P. Stevens & Co., Inc. Chemical modification of cellulose and products thereof. 3,388,118, 6–11–68, Cl. 260—212.
- Texas Instruments Inc.: *See*—
  - Lawson, Martin W., and Bodge. 3,388,357.
  - Waters, Warren P., and Lovelace. 3,388,000.
- Thibodeaux, Denis A., M. P. Richard, and W. J. Monson. Sugar cane planting machine. 3,387,745, 6–11–68, Cl. 221—185.
- Thigpen, Jonathan I., to Hercules Inc. Lamination of oriented film to paper. 3,388,019, 6–11–68, Cl. 156—282.
- Thiokol Chemical Corp.: *See*—
  - Berenbaum, Morris B., and Citarel. 3,388,140.
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- Thoma, Wilhelm, and H. Rinke, to Farbenfabriken Bayer Aktiengesellschaft. Polyurethane polymers containing amide and urea groups. 3,388,100, 6–11–68, Cl. 260—75.
- Thomas, Friedrich: *See*—
  - Beltz, Klaus, Cremer, Müller-Schiedmayer, and Thomas. 3,387,929.
- Thomason, Harry E. Solar heater. 3,387,602, 6–11–68, Cl. 126—271.
- Thompson, Robert L., to Ingersoll-Rand Co. Rotary percussion gang drill. 3,387,673, 6–11–68, Cl. 175—96.
- Thoms, Jule W., to Carr Lane Mfg. Co. Bracket and reversible base member assembly for fixture construction. 3,387,812, 6–11–68, Cl. 248—274.
- Thomson, James E.: *See*—
  - Bortz, Harold E., and Thomson. 3,387,616.
- Thomson, Quentin R. Air distributor valve. 3,387,550, 6–11–68, Cl. 98—40.
- Thorium Ltd.: *See*—
  - Sherrington, Leonard G., and Kemp. 3,387,944.
- Thornhill, Alexander F., and M. F. Williams, to United States of America, Navy. Radio navigation receiving system utilizing AGC for switching from phase-measuring mode of operation to a dead reckoning mode. 3,388,397, 6–11–68, Cl. 343—105.

- Thornton, William A., Jr., to United States of America, Navy. Electroluminescent device comprising electroluminescent films emitting light of complementary colors. 3,388,277, 6–11–68, Cl. 313—108.
- Tigler, Leon, C. D. Weston, G. A. Geselbracht, L. A. Meszaros, and R. E. Rupp, deceased (by North Carolina National Bank, executor), to Martin-Marietta Corp. Method for coloring fibers with thiosulfuric acid derivatives of sulfur dyes. 3,387,913, 6–11–68, Cl. 8—37.
- Tillotson, Glen R., to FMC Corp. Vine crop harvester. 3,387,612, 6–11–68, Cl. 130—30.
- Tilton, Robert L., to Pittsburgh Plate Glass Co. Annealing lehr for glass sheets with reradiating side wall plates. 3,387,963, 6–11–68, Cl. 65—350.
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  - Bennett, Alan J. 3,387,642.
  - Flora, Laurence H. 3,387,529.
- Tinsley, Samuel W., and E. A. Rick, to Union Carbide Corp. Preparation of 1,7-octadiene. 3,388,182, 6–11–68, Cl. 260—680.
- Todd, John C., to Sinclair Research, Inc. Method for determining oxygen requirements for in-situ combustion. 3,387,654, 6–11–68, Cl. 166—4.
- Todd, Leslie J., to E. I. du Pont de Nemours and Co. Process and composition for chlorinating acetylene with aqueous cupric chloride solutions to produce trichlorethylene and perchlorethylene. 3,388,177, 6–11–68, Cl. 260—654.
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  - Miyashiro, Shoichi. 3,388,283.
- Tolliver, James W., to E. I. du Pont de Nemours and Co. Preparation of polyester yarns having improved heat characteristics. 3,387,996, 6–11–68, Cl. 117—138.8.
- Torit Corp., The: *See*—
  - Mackey, Kenneth J. 3,387,433.
- Toro Mfg. Corp.: *See*—
  - Hasenbank, Kenneth N. 3,387,346.
- Towlsaver, Inc.: *See*—
  - Perrin, Jack L., and Tucker. 3,387,902.
- Towner, Walter T., to Weston Instruments, Inc. Variable resistance networks for controlling the loop gain of an oscillator. 3,388,345, 6–11–68, Cl. 331—109.
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- Trainor, James T., and E. R. Kaufman, to Raybestos-Manhattan, Inc. Heat resistant inorganic bodies. 3,387,980, 6–11–68, Cl. 106—15.
- Trak Microwave Corp.: *See*—
  - Gregory, Benjamin F. 3,388,348.
- Trammell, Harlan M., W. J. Truesdale, and J. A. Manning, Jr., to Celanese Corp. of America. Traveler rings. 3,387,447, 6–11–68, Cl. 57—119.
- Traulsen, Karl: *See*—
  - Heymer, Gero, Hartlapp, and Traulsen. 3,387,924.
- Treese, Roy, to Dresser Industries, Inc. Safety joint. 3,387,863, 6–11–68, Cl. 285—2.
- Trias, John A.: *See*—
  - Nehrich, Richard B., Jr., Schimitschek, and Trias. 3,388,071.
- Triax Co., The: *See*—
  - Armington, Raymond Q. 3,387,724.
  - Lemelson, Jerome H. 3,387,723.
- Tricoles, Gus P.: *See*—
  - Rope, Eugene L., and Tricoles. 3,388,396.
- Trifunovic, Alexander L., and S. E. Zeis, to Joseph Bancroft & Sons Co. Differential feed roll crimper and method. 3,387,349, 6–11–68, Cl. 28—1.
- Troxler, Frans: *See*—
  - Hofmann, Albert, and Troxler. 3,388,129.
- Truesdale, Wade J.: *See*—
  - Trammell, Harlan M., Truesdale, and Manning. 3,387,447.
- Trylon Inc.: *See*—
  - Veldhuis, Albert C. 3,388,400.
- Tucker, Council A.: *See*—
  - Perrin, Jack L., and Tucker. 3,387,902.
- Turner, Malcolm M.: *See*—
  - Cameron, Daniel F., and Turner. 3,388,142.
- Turpen, Russell L., to Compass Container Co., Inc. Cargo container with drain construction. 3,387,734, 6–11–68, Cl. 220—1.
- Tyrer, James W. Molding and partition assembly system. 3,387,418, 6–11–68, Cl. 52—242.
- Uhl, Wilhelm: *See*—
  - Woellhaf, Josef, Wagner, Uhl, and Hedderich. 3,387,322.
- Ulrich, Henri: *See*—
  - Sayigh, Adnan A. R., Ulrich, and Wright. 3,388,159.
- Ulrich, Martin T. Foldable table. 3,387,572, 6–11–68, Cl. 108—34.
- Union Associates, Inc.: *See*—
  - Wilson, John L. 3,387,799.
- Union Carbide Corp.: *See*—
  - Bond, Frank D., Jr., Matsch, and Proctor. 3,387,449.
  - Bryant, George M., and Zutty. 3,388,190.
  - Harding, James. 3,388,098.
  - Hyre, John E., and Willeboordse. 3,388,169.
  - Marcus, Erich, and MacPeek. 3,388,180.
  - McHenry, Edgar R., and Piper. 3,387,940.
  - Tinsley, Samuel W., and Rick. 3,388,182.
  - Vogt, John R., and Matricardi. 3,387,971.
- Uniroyal, Inc.: *See*—
  - Black, Sheppard A., and Heide. 3,388,024.
  - Hunter, Byron A., and O'Shea. 3,388,064.
- United Aircraft Corp.: *See*—
  - Barnes, Philip E., and Laun. 3,387,663.
  - Pinsley, Edward A., and Walch. 3,388,235.
  - Rhines, Thomas B. 3,387,804.
  - West, Laurice J. 3,388,344.
- United-Carr Inc.: *See*—
  - Patterson, Henry W., Jr. 3,387,643.
  - Seckerson, Clifford A. 3,387,342.
- United Research and Development Co., Inc., The: *See*—
  - Robertson, Alan L. 3,387,421.
- United States of America
  - Air Force: *See*—
    - Cappadona, William L. 3,388,394.
    - Dinsl, Richard A., and Singleterry. 3,388,347.
  - Atomic Energy Commission: *See*—
    - Bowers, Raymond, and Houck. 3,388,321.
    - Brenden, Byron B., and Spanner. 3,387,370.
    - Campana, Robert J., Melcher, Merrill, and Sargent. 3,388,008.
    - Haller, William A., Perkins, and Nielsen. 3,388,254.
    - Lambertson, Glen R. 3,388,359.
    - Skladzien, Stanley B. 3,387,969.
    - Zackay, Victor F., and Parker. 3,388,011.
  - Interior: *See*—
    - Bishop, John W. 3,387,590.
    - Hodges, Arthur L., Jr. 3,387,487.
  - National Aeronautics and Space Administration: *See*—
    - Grant, Daniel J. 3,388,258.
  - Navy: *See*—
    - Abbott, Frank R. 3,388,374.
    - Brodzinsky, Albert, Reynolds, and Saffitz. 3,388,332.
    - Brooks, James L. 3,388,326.
    - Chakoian, George, Crowell, and Southwick. 3,387,537.
    - Davidoff, Dorsey. 3,388,270.
    - Dick, John O., and Forrester. 3,388,272.
    - Folsom, Theodore R., and Cramer. 3,388,377.
    - Fresh, John N., and Chaplin. 3,387,685.
    - Isaacs, Peter J. 3,388,241.
    - Jackley, Donald N. 3,388,003.
    - Kamlet, Mortimer J., Shipp, and Hill. 3,388,147.
    - Kelly, Robert F., Myers, Hazlett, Drum, and Gimber. 3,387,536.
    - Kjar, Raymond A. 3,388,266.
    - Lewis, James E. 3,388,399.
    - Murphree, Francis J. 3,388,268.
    - Nehrich, Richard E., Jr., Schimitschek, and Trias. 3,388,071.
    - Prywes, Noah S., Litwin, and Gray. 3,388,381.
    - Ramsey, Norman F. 3,388,342.
    - Simon, Arthur, Shirk, and Biagioli. 3,388,379.
    - Sutton, Lee, and Hoote. 3,388,327.
    - Thornhill, Alexander F., and Williams. 3,388,397.
    - Thornton, William A., Jr. 3,388,277.
    - Ward, Clyde L., Jr., and Arnold. 3,387,648.
- United States Gypsum Co.: *See*—
  - Erdenberger, Peter. 3,387,960.
- United States Steel Corp.: *See*—
  - Bick, Edward H., and Klein. 3,387,728.
  - Kelly, Charles R. 3,388,279.
- Universal Controls, Inc.: *See*—
  - Good, Paul F., White, and Edwards. 3,388,238.
- Universal Oil Products Co.: *See*—
  - Cyba, Henryk A. 3,388,191.
  - Fishel, Norman A. 3,388,184.
  - Hoekstra, James. 3,388,077.
  - Schmerling, Louis. 3,388,187.
- Upjohn Co., The: *See*—
  - Beal, Philip F., III, and Pike. 3,388,188.
  - Sayigh, Adnan A. R., Ulrich, and Wright. 3,388,159.
- Urban, Gerd, and R. Dotzer, to Siemens Aktiengesellschaft. Method of producing onium fluorides selected from the group consisting of pysidine nitrogen, antimony, phosphorus, boron and arsenic. 3,388,181, 6–11–68, Cl. 260—290.
- Usukura, Shinichi: *See*—
  - Ishida, Shuichi, Kirihara, and Usukura. 3,388,167.
- VEB Carl Zeiss Jena: *See*—
  - Hesse, Gerhard. 3,387,581.
- Valyi, Emery I. Blow molding apparatus. 3,387,324, 6–11–68, Cl. 18—5.
- Van Arsdale, Lyle R., to M & J Valve Co. Flowmeter proving apparatus. 3,387,483, 6–11–68, Cl. 73—3.
- Van Beckhoven, Josephus A., to Lips N.V. Shaping method including fixing the position of predetermined points in particulate mold material. 3,387,645, 6–11–68, Cl. 164—17.
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- Vandenberg, Edwin J., to Hercules Inc. High molecular weight polyethers containing silane groupings. 3,388,079, 6–11–68, Cl. 260—2.
- Van der Lely, Ary: *See*—
  - Van der Lely, Cornelis and A. 3,387,792.
- Van der Lely, Cornelis and A. Implement for spreading powdery or granular material. 3,387,792, 6–11–68, Cl. 239—688.
- Van Der Sluys, William: *See*—
  - Matushek, John W., Wille, and Van Der Sluys. 3,387,571.
- Vandersteeg, William J., to Madison Industries, Inc. Tool head. 3,387,517, 6–11–68, Cl. 82—25.
- Vanstrom, Reginald E., and F. McCollough, Jr., to Stauffer Chemical Co. Polymer suspension stabilizer. 3,387,925, 6–11–68, Cl. 23—109.
- Vapor Corp.: *See*—
  - Chan, William, and Steffes. 3,387,589.
- Varian Associates: *See*—
  - Anderson, Weston A., and Nelson. 3,388,322.
- Vartanian, Edwin S.: *See*—
  - Badali, Joseph A., Kulikowski, and Vartanian. 3,387,400.
- Vaughn, Robert L., to Lockheed Aircraft Corp. Cutting fluids for machining and/or working of titanium and its alloys. 3,388,062, 6–22–68, Cl. 252—33.4.
- Velcro S.A. Grisons: *See*—
  - Savoir, Jean-Claude. 3,387,345.
- Veldhuis, Albert C., to Trylon Inc. Broadbanding adapter for circularly polarized antenna. 3,388,400, 6–11–68, Cl. 343—822.

- Vesper, Walter: *See*—
  - Banger, Louis J., Beyler, Dubarry-Barbe, Pianke, and Vesper. 3,387,462.
- Viehrig, Wolfgang: *See*—
  - Schneider, Othmar, and Viehrig. 3,387,371.
- Viney, David J., to Imperial Chemical Industries, Ltd. Purification of 2,2,2-trifluoro-1-chloro-1-bromoethane. 3,388,175, 6–11–68, Cl. 260—653.
- Vinicki, John, to Monsanto Co. Method of forming microfibers. 3,388,194, 6–11–68, Cl. 264—0.
- Vogt, Jakob: *See*—
  - Gottschald, Rudolf, and Vogt. 3,387,870.
- Vogt, John R., and L. R. Matricardi, to Union Carbide Corp. Master alloy consisting essentially of molybdenum-vanadium-aluminum. 3,387,971, 6–11–68, Cl. 75—138.
- Voit, Willy, to Robert Bosch G.m.b.H. Fuel injection pump with means for changing the speed-delivery characteristic thereof. 3,387,562, 6–11–68, Cl. 103—37.
- W-L Molding Co., The: *See*—
  - Laure, George R. 3,387,625.
- Wagner, Herbert: *See*—
  - Woellhaf, Josef, Wagner, Uhl, and Hedderich. 3,387,822.
  - Senkpiel, Werner, Dachs, Wilhelm, Wagner, Becht, and Werst. 3,387,995.
- Wainer, Eugene, to Horizons Inc. Aluminum base alloys. 3,387,970, 6–11–68, Cl. 75—138.
- Wainer, Eugene, to Horizons Inc. Anodized aluminum alloy product. 3,388,050, 6–11–68, Cl. 204—58.
- Wakefield Engineering, Inc.: *See*—
  - Coe, Thomas D. 3,387,653.
- Wakeman, Burton F.: *See*—
  - Rodgers, Samuel M., Jr., Wakeman, and Savage. 3,388,082.
- Walch, Allan P.: *See*—
  - Pinsley, Edward A., and Walch. 3,388,235.
- Waldo, Russell W., to Ideal Security Hardware Corp. Rotary hydraulic door closer. 3,387,320, 6–11–68, Cl. 16—58.
- Waleson, Frederik R.: *See*—
  - Van De-Hey, Roche, and Waleson. 3,387,823.
- Walker, Harold H. Submersible water craft. 3,387,580, 6–11–68, Cl. 114—16.
- Walker, Isaac F.: *See*—
  - Magat, Eugene E., and Walker. 3,388,170.
- Walker, Lloyd P., Jr.: *See*—
  - Wise, Walter R., Jr., Nashman, Walker, and Berquist. 3,387,669.
- Walker, Melvin F., to Designatronics, Inc. Phase adjusting coupling. 3,387,465, 6–11–68, Cl. 64—24.
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- Walker, Richard K., to McGraw-Edison Co. Handpiece controls for dictating machines. 3,387,848, 6–11–68, Cl. 274—1.
- Wall, Charles G., to Wood-Metal Industries, Inc. Drawer construction. 3,387,907, 6–11–68, Cl. 312—348.
- Wall, Jerry A.: *See*—
  - Squier, William H., and Wall. 3,388,018.
- Wallace-Murray Corp.: *See*—
  - Holycross, Frank R. 3,387,816.
- Walles, Wilhelm E., and J. J. Davies, to The Dow Chemical Co. Method of removing acidic contaminants from gases. 3,387,917, 6–11–68, Cl. 23—2.
- Walter, Harvey J., to The Black and Decker Mfg. Co. Manually-loadable power-operated tool for installing anti-skid studs in vehicular tires. 3,387,352, 6–11–68, Cl. 29—212.
- Walters, Joseph M., to Amerocat Corp. Pipe coupling. 3,387,864, 6–11–68, Cl. 285—23.
- Walters, William R. Ball cock valve assembly. 3,387,620, 6–11–68, Cl. 137—244.
- Wanzer, Philip H., to The Bright-Brooks Lumber Co. of Charlotte, Inc. Floor construction. 3,387,422, 6–11–68, Cl. 52—387.
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- Ward, Clyde L., Jr., and A. A. Arnold, to United States of America, Navy. Cabinet enclosed recirculation cooling system carried on extensible chassis mounting electronic modules. 3,387,648, 6–11–68, Cl. 165—47.
- Warner-Lambert Pharmaceutical Co.: *See*—
  - Altman, Moses D. 3,388,148.
  - Babson, Arthur L. 3,388,044.
  - Ercoli, Alberto. 3,388,139.
  - Novack, Robert M. 3,388,155.
  - Young, Thomas E., and Scott. 3,388,133.
  - Young, Thomas E., and Scott. 3,388,134.
- Warner & Swasey Co., The: *See*—
  - Fisher, John. 3,388,392.
- Waters, Warren P., and B. K. Lovelace, to Texas Instruments Inc. Method of forming a metal contact on a semiconductor device. 3,388,000, 6–11–68, Cl. 117—212.
- Watson, Douglas J.: *See*—
  - Feiner, Alexander, and Watson. 3,388,271.
- Watson, John V. Single flight augers. 3,387,674, 6–11–68, Cl. 175—394.
- Webb, James E., Administrator of the National Aeronautics and Space Administration, with respect to an invention of L. J. Zottarelli. Drive circuit utilizing two cores. 3,388,387, 6–11–68, Cl. 340—174.
- Webber, Jack S.: *See*—
  - Whitmire, William A., and Webber. 3,387,860.
- Weinstein, Richard, to Flair Mfg. Corp. Valve. 3,387,622, 6–11–68, Cl. 137—495.
- Weir, Walter F., to Andrew Antenna Co. Ltd. Parabolic antenna with low-loss flexible radome. 3,388,401, 6–11–68, Cl. 343—872.
- Weirauch, Fred E. Educational visual aid. 3,387,389, 6–11–68, Cl. 35—31.
- Welle, Hendricus B. A., and J. Meltzer, to North American Philips Co., Inc. 3,5-dimethyl - 4 - dimethylaminomethylphenyl-N-methylcarbamate. 3,388,151, 6–11–68, Cl. 260—479.
- Wender, James D., Jr.: *See*—
  - Stamos, Chris, Reeves, and Wender. 3,387,883.
- Werme, John V.: *See*—
  - Coffin, Bertram D., Jr., and Werme. 3,388,380.
- Werner, Gerhard: *See*—
  - Kuhlkamp, Alfred, and Werner. 3,388,110.
- Werner, Willy T. Sign construction. 3,387,394, 6–11–68, Cl. 40—76.
- Werst, Gerhard: *See*—
  - Senkpiel, Werner, Dachs, Wilhelm, Wagner, Becht, and Werst. 3,387,995.
- Wertz, William H.: *See*—
  - Duncan, Glen R., and Wertz. 3,388,239.
- West, George C., and C. E. Mater, to Reeves Brothers, Inc. Simulated leather products. 3,387,989, 6–11–68, Cl. 117—76.
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- West, Laurice J., to United Aircraft Corp. Temperature compensation of oscillators and the like. 3,388,344, 6–11–68, Cl. 331—109.
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  - Higgins, Ralph M. 3,388,047.
  - La Chapelle, Edward A. 3,387,962.
  - Wiggins, David L. 3,387,775.
- Western Stamping Corp.: *See*—
  - Bortz, Harold E., and Thomson. 3,387,616.
- Western Union Telegraph Co.: *See*—
  - Steeneck, Robert, and Cowan. 3,388,378.
- Westinghouse Air Brake Co.: *See*—
  - Baughman, George W. 3,388,250.
  - Bechman, William H., and Winsor. 3,387,840.
- Westinghouse Electric Corp.: *See*—
  - Cunningham, Richard C., and Severson. 3,388,230.
  - Goldberg, Newton N., and Elbling. 3,388,186.
  - Gumphrey, Edward P., and Spangler. 3,388,395.
  - Hall, George E., and Redpath. 3,387,485.
  - Holtkamp, Calvin J. 3,387,874.
  - Holtkamp, Calvin J. 3,388,236.
  - Lee, Franklin G., and Male. 3,388,337.
  - Mattern, John. 3,388,336.
  - Rackley, Carle E. 3,388,247.
  - Roof, James L., and Knauer. 3,388,346.
  - Sauber, Rudolph S. 3,388,068.
  - Smith, Andrew W., Jr. 3,387,470.
  - Smith, William C. 3,387,707.
  - Sweetana, Andrew S., Jr. 3,388,351.
  - Tenenbaum, Nathaniel D., and Hayden. 3,388,296.
  - Williamson, Hugh C. 3,387,382.
  - Williamson, Hugh C. 3,387,388.
- Westland Aircraft, Ltd.: *See*—
  - Fitz-Gerald, Lislie G. 3,387,343.
- Weston, Charles D.: *See*—
  - Tigler, Leon, Weston, Geselbracht, Meszaros, and Rupp. 3,387,913.
- Weston Instruments, Inc.: *See*—
  - Towner, Walter T. 3,388,845.
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  - Frohbieter, Edwin H. 3,387,463.
  - Lindenschmidt, Robert E. and Gant. 3,387,905.
  - Mandarino, Vincent C., Jr., and Sauer. 3,387,385.
- White, Alan D., to Bell Telephone Laboratories, Inc. Optical maser with reflecting prism. 3,388,343, 6–11–68, Cl. 331—94.5.
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- White, Gorman W.: *See*—
  - Good, Paul F., White, and Edwards. 3,388,238.
- Whitley, Raymond O.: *See*—
  - Fisher, James O., Sr., Whitley, and Biddle. 3,387,722.
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  - Decker, Alfred S., Obenshain, and Wideman. 3,387,557.
- Wiegand, Edwin L. Co.: *See*—
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  - Scribner, Neal. 3,388,333.

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  - Giulie, Joe D., and Wilder. 3,387,679.
- Wilhelm, Hans: *See*—
  - Senkpiel, Werner, Dachs, Wilhelm, Wagner, Becht, and Werst. 3,387,995.
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- Wilkins, Edward W.: *See*—
  - Rowland, Eric, and Wilkins. 3,387,861.
- Willcox, Frederick P. Pulse generating keyboard contact switch. 3,388,226, 6–11–68, Cl. 200—67.
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  - Matushek, John W., Wille, and Van Der Sluys. 3,387,571.
- Willeboordse, Friso G.: *See*—
  - Hyre, John E., and Willeboordse. 3,388,169.
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  - Stuart, Robert E., and Wilson. 3,388,010.
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- Winn, William C.: *See*—
  - Searles, John J., and Winn. 3,387,508.
- Winsor, Jack O.: *See*—
  - Bechman, William H., and Winsor. 3,387,840.
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  - Wirth, Johannes. 3,387,693.
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- Witham, William A. A.: *See*—
  - MacLellan, Kenneth B. W., and Witham. 3,387,544.
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  - Born, Ellis H., Burnham, and Wolfe. 3,388,070.
- Wolter, Richard A.: *See*—
  - Johnson, Delmar R., and Wolter. 3,388,221.
- Womeldorph, Raymond C.: *See*—
  - Day, Frank, and Womeldorph. 3,387,958.
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  - Kamberg, Henry, and Wood. 3,387,419.
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  - Wall, Charles G. 3,387,907.
- Wood, Prentice J., to The Mead Corp. Carrier for flanged article. 3,387,879, 6–11–68, Cl. 294—87.2.
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  - Davis, Hunt. 3,387,769.
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  - Sayigh, Adnan A. R., Ulrich, and Wright. 3,388,159.
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  - Nangoh, Tadao, and Yamazaki. 3,387,829.
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  - Godshalk, Alva J., Shankland, and Yates. 3,387,749.
- Yats, Larry D.: *See*—
  - Allen, Robert H., and Yats. 3,388,111.
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  - Cormack, Alexander D., Saltarelli, Scott, and Yeung. 3,387,796.
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  - Johnson, Harry J. 3,388,021.
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  - Dakli, Ibrahim, Lupi, Zamboni, and D'Emilio. 3,388,172.
- Zandell, Fred: *See*—
  - Koolnis, Stanley R. 3,387,763.
- Zbuchalski, Joseph A.: *See*—
  - Prapis, Frank, and Zbuchalski. 3,388,307.
- Zeiss Ikon Aktiengesellschaft: *See*—
  - Ebertz, Helmut. 3,387,530.
- Zeller, Ambros: *See*—
  - Wick, Richard, Zeller, and Brandt. 3,387,533.
- Zenith Radio Corp.: *See*—
  - Adler Robert. 3,388,334.
  - Ellers, Carl C., and Rypkema. 3,388,214.
  - Parisoe, Wilbert. 3,388,360.
- Ziemba, Anthony J.: *See*—
  - Ziemba, Stanley C. and A. J. 3,387,889.
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  - Ziemba, Stanley C. and A. J. 3,387,889.
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  - Gieringer, Carl K., Schinner, and Zimmer. 3,388,403.
- Zimmerman, Arnold: *See*—
  - Sammarco, Peter, and Zimmerman. 3,387,691.
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- Zottarelli, Lawrence J.: *See*—
  - Webb, James E. 3,388,387.
- Zupon, Francis J. Dispensing container. 3,387,762, 6–11–68, Cl. 229—15.
- Zutty, Nathan L.: *See*—
  - Bryant, George M., and Zutty. 3,388,190.
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159 : 3,387,306
167 : 3,387,307
4– 18 : 3,387,308
192 : 3,387,309
8– 37 : 3,387,913
54.2 : 3,387,914
55 : 3,387,915
3,387,916
158 : 3,387,310
13– 18 : 3,388,204
23 : 3,388,205
15– 36 : 3,387,311
97 : 3,387,312
111 : 3,387,313
187 : RE.26,403
210 : 3,387,314
215 : 3,387,315
250.36: 3,387,316
256.51: 3,387,317
306 : 3,387,318
327 : 3,387,319
16– 58 : 3,387,320
94 : 3,387,321
18– 2 : 3,387,322
3,387,323
5 : 3,387,324
6 : 3,387,325
8 : 3,387,326
3,387,327
12 : 3,387,328
3,387,329
13 : 3,387,330
14 : 3,387,331
19 : 3,387,332
35 : 3,387,333
36 : 3,387,334
19–107 : 3,387,335
3,387,336
3,387,337
114 : 3,387,338
150 : 3,387,339
159 : 3,387,340
23– 2 : 3,387,917
51 : 3,387,918
91 : 3,387,920
102 : 3,387,921
106 : 3,387,922
3,387,923
107 : 3,387,924
109 : 3,387,925
110 : 3,387,926
126 : 3,387,927
139 : 3,387,928
165 : 3,387,929
3,387,930
182 : 3,387,931
190 : 3,387,919
203 : 3,387,932
204 : 3,387,933
3,387,934
205 : 3,387,935
206 : 3,387,936
3,387,937
207 : 3,387,938
.5 : 3,387,939
209.2 : 3,387,940
.9 : 3,387,941
213 : 3,387,942
230 : 3,387,943
310 : 3,387,944
341 : 3,387,945
357 : 3,387,946
365 : 3,387,947
3,387,948
3,387,949
368 : 3,387,950
24– 73 : 3,387,341
3,387,342
81 : 3,387,343
126 : 3,387,344
204 : 3,387,345
270 : 3,387,346
25– 26 : 3,387,347
38 : 3,387,348
28– 1 : 3,387,349
29– 11 : 3,387,350
148.4 : 3,387,351
182.1 : 3,387,951
29–183.5 : 3,387,952
212 : 3,387,352
213 : 3,387,353
221.5 : 3,387,354
235 : 3,387,355
471.7 : 3,387,356
494 : 3,387,357
571 : 3,387,358
577 : 3,387,359
579 : 3,387,360
596 : 3,387,361
597 : 3,387,362
619 : 3,387,363
621 : 3,387,364
628 : 3,387,365
30– 2 : 3,387,366
201 : 3,387,367
348 : 3,387,368
32– 32 : 3,387,369
33– 1 : 3,387,370
18 : 3,387,371
76 : 3,387,372
147 : 3,387,373
174 : 3,387,374
3,387,375
3,387,376
204 : 3,387,377
34– 1 : 3,387,378
3 : 3,387,379
48 : 3,387,380
66 : 3,387,381
72 : 3,387,382
90 : 3,387,383
114 : 3,387,384
133 : 3,387,385
145 : 3,387,386
208 : 3,387,387
234 : 3,387,388
35– 31 : 3,387,389
3,387,390
3,387,391
33 : 3,387,392
45 : 3,387,393
40– 76 : 3,387,394
102 : 3,387,395
106.21: 3,387,396
140 : 3,387,397
42– 17 : 3,387,398
62 : 3,387,399
70 : 3,387,400
43– 17 : 3,387,401
41 : 3,387,402
65 : 3,387,403
44– 63 : 3,387,953
72 : 3,387,954
46– 39 : 3,387,404
47– 9 : 3,387,405
49–192 : 3,387,406
220 : 3,387,407
446 : 3,387,408
486 : 3,387,409
51– 15 : 3,387,410
95 : 3,387,411
295 : 3,387,955
297 : 3,387,956
298 : 3,387,957
52– 2 : 3,387,412
69 : 3,387,413
108 : 3,387,414
208 : 3,387,416
222 : 3,387,415
223 : 3,387,417
242 : 3,387,418
255 : 3,387,419
302 : 3,387,420
310 : 3,387,421
387 : 3,387,422
678 : 3,387,423
732 : 3,387,424
53– 22 : 3,387,425
3,387,426
27 : 3,387,427
49 : 3,387,428
228 : 3,387,429
55– 51 : 3,387,430
3,387,431
228 : 3,387,432
356 : 3,387,433
470 : 3,387,434
482 : 3,387,435
56– 6 : 3,387,436
12 : 3,387,437
25 : 3,387,438
50 : 3,387,439
119 : 3,387,440
238 : 3,387,441
328 : 3,387,442
3,387,443
334 : 3,387,444
370 : 3,387,445
503 : 3,387,446
57–119 : 3,387,447
152 : 3,387,448
160 : 3,387,449
3,387,450
163 : 3,387,451
58– 21.155 3,387,452
60– 52 : 3,387,453
53 : 3,387,454
54.6 : 3,387,455
204 : 3,387,456
224 : 3,387,457
61– 3 : 3,387,458
46.5 : 3,387,459
53.5 : 3,387,460
63 : 3,387,461
62– 50 : 3,387,462
140 : 3,387,463
380 : 3,387,464
64– 24 : 3,387,465
65– 1 : 3,387,958
4 : 3,387,959
15 : 3,387,960
32 : 3,387,961
104 : 3,387,962
350 : 3,387,963
66– 38 : 3,387,466
57 : 3,387,467
133 : 3,387,468
70–232 : 3,387,469
71– 7 : 3,387,964
25 : 3,387,965
72– 8 : 3,387,470
9 : 3,387,471
14 : 3,387,472
22 : 3,387,473
30 : 3,387,474
46 : 3,387,475
56 : 3,387,476
77 : 3,387,477
176 : 3,387,478
177 : 3,387,479
203 : 3,387,480
379 : 3,387,481
73– 1 : 3,387,482
3 : 3,387,483
7 : 3,387,484
9 : 3,387,485
17 : 3,387,486
19 : 3,387,487
49 : 3,387,488
61 : 3,387,489
101 : 3,387,490
189 : 3,387,491
194 : 3,387,492
359 : RE.26,409
379 : 3,387,493
406 : 3,387,494
414 : 3,387,495
422 : 3,387,496
423 : 3,387,497
74– 1 : 3,387,498
61 : 3,387,499
231 : 3,387,500
335 : 3,387,501
391 : 3,387,502
411 : 3,387,503
431 : 3,387,504
574 : 3,387,505
732 : 3,387,506
796 : 3,387,507
864 : 3,387,508
75– .5 : 3,387,966
12 : 3,387,967
49 : 3,387,968
66 : 3,387,969
138 : 3,387,970
3,387,971
226 : 3,387,972
77– 59 : 3,387,509
77– 65 : 3,387,510
70 : 3,387,511
81– 9.51: 3,387,514
54 : 3,387,512
66 : 3,387,513
82– 2 : 3,387,515
25 : 3,387,516
3,387,517
83– 37 : 3,387,518
118 : 3,387,519
167 : 3,387,520
355 : 3,387,521
365 : 3,387,522
461 : 3,387,523
482 : 3,387,524
554 : 3,387,525
571 : 3,387,526
84– 1.01: 3,387,527
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382 : 3,387,528
85– 36 : 3,387,529
88– 1.5 : 3,387,530
14 : 3,387,531
24 : 3,387,532
3,387,533
3,387,534
3,387,535
89– 1.5 : 3,387,536
3,387,537
177 : 3,387,538
91– 56 : 3,387,539
369 : 3,387,540
461 : 3,387,541
93– 1 : 3,387,542
36 : 3,387,543
94– 18 : 3,387,544
95– 13 : 3,387,545
31 : 3,387,546
36 : 3,387,547
73 : 3,387,548
96– 1.5 : 3,387,973
28 : 3,387,974
36.1 : 3,387,975
86 : 3,387,976
91 : 3,387,977
98– 2 : 3,387,549
40 : 3,387,550
88 : 3,387,551
121 : 3,387,552
99– 77.1 : 3,387,978
194 : 3,387,979
277.1 : RE.26,408
295 : 3,387,553
312 : 3,387,554
421 : 3,387,555
100– 4 : 3,387,556
101– 35 : 3,387,557
351 : 3,387,558
383 : 3,387,559
102– 43 : 3,387,560
83 : 3,387,561
103– 5 : 3,387,644
37 : 3,387,562
50 : 3,387,563
103 : 3,387,564
135 : 3,387,565
152 : 3,387,566
104– 12 : 3,387,567
105– 15 : 3,387,568
196 : 3,387,569
282 : 3,387,570
366 : 3,387,571
106– 15 : 3,387,980
279 : 3,387,981
281 : 3,387,982
289 : 3,387,983
108– 34 : 3,387,572
117 : 3,387,573
110– 7 : 3,387,574
99 : 3,387,575
111– 85 : 3,387,576
112– 79 : 3,387,577
3,387,578
221 : 3,387,579
114– 16 : 3,387,580
72 : 3,387,581
115– .5 : 3,387,582
3,387,583
116– 28 : 3,387,584
117– 7 : 3,387,984
117– 19 : 3,387,985
36.1 : 3,387,986
71 : 3,387,987
76 : 3,387,988
3,387,989
77 : 3,387,990
93.1 : 3,387,991
105.3 : 3,387,992
121 : 3,387,993
124 : 3,387,994
138.8 : 3,387,995
3,387,996
3,387,997
156 : 3,387,998
201 : 3,387,999
212 : 3,388,000
213 : 3,388,001
217 : 3,388,002
118–104 : 3,387,585
637 : 3,387,586
119– 2 : 3,387,587
106 : 3,387,588
122– 1 : 3,387,589
4 : 3,387,590
32 : 3,387,591
406 : 3,387,592
504.1 : 3,387,593
123– 1 : 3,387,594
8 : 3,387,595
3,387,596
32 : 3,387,597
41.15: 3,387,598
146.5 : 3,387,599
126– 21 : 3,387,600
3,387,601
271 : 3,387,602
343.5 : 3,387,603
128– 2.06: 3,387,608
24 : 3,387,604
71 : 3,387,605
141 : 3,387,606
173 : 3,387,607
218 : 3,387,609
278 : 3,387,610
130– 30 : 3,387,611
3,387,612
131–138 : 3,387,613
232 : 3,387,614
132– 91 : 3,387,615
133– 3 : 3,387,616
135– 45 : 3,387,617
3,387,618
136–100 : 3,388,003
120 : 3,388,004
134 : 3,388,005
163 : 3,388,006
166 : 3,388,007
205 : 3,388,008
137– 86 : 3,387,619
244 : 3,387,620
322 : 3,387,621
495 : 3,387,622
512.1 : 3,387,623
525.1 : 3,387,624
543.19: 3,387,625
563 : 3,387,626
594 : 3,387,627
596.12: 3,387,628
614.19: 3,387,629
625.17: 3,387,631
.3 : 3,387,630
.43: 3,387,632
140– 3 : 3,387,633
92.2 : 3,387,634
141– 37 : 3,387,635
143– 6 : 3,387,636
85 : 3,387,637
144– 1 : 3,387,638
146– 52 : 3,387,639
148– 1.5 : 3,388,009
11.5 : 3,388,010
12.3 : 3,388,011
177 : 3,388,012
186 : 3,388,013
149– 17 : 3,388,014
19 : 3,388,015
150– 7 : 3,387,640
38 : 3,387,641
151– 7 : 3,387,642
41.72: 3,387,643
156– 94 : 3,388,016
203 : 3,388,017
242 : 3,388,018
266 : 3,388,020
282 : 3,388,019
306 : 3,388,021
326 : 3,388,022
345 : 3,388,023
415 : 3,388,024
441 : 3,388,025
513 : 3,388,026
161– 4 : 3,388,027
156 : 3,388,028
170 : 3,388,029
172 : 3,388,030
173 : 3,388,031
183 : 3,388,032
3,388,033
3,388,034
3,388,035
185 : 3,388,036
162– 23 : 3,388,037
246 : 3,388,038
284 : 3,388,039
329 : 3,388,040
164– 17 : 3,387,645
120 : 3,387,646
165– 32 : 3,387,647
47 : 3,387,648
59 : 3,387,649
75 : 3,387,650
109 : 3,387,651
162 : 3,387,652
165 : 3,387,653
166– 4 : 3,387,654
9 : 3,387,655
25 : 3,387,656
60 : 3,387,657
120 : 3,387,658
125 : 3,387,659
133 : 3,387,660
243 : 3,387,661
167– 82 : 3,388,041
169– 26 : 3,387,662
170–160.2 : 3,387,663
.23: 3,387,664
172– 6 : 3,387,665
20 : 3,387,666
701 : 3,387,667
719 : 3,387,668
173– 12 : 3,387,669
49 : 3,387,670
73 : 3,387,671
174– 11 : 3,388,207
42 : 3,388,208
71 : 3,388,209
138 : 3,388,210
152 : 3,388,211
153 : 3,388,212
175– 69 : 3,387,672
96 : 3,387,673
394 : 3,387,674
177– 16 : 3,387,675
17 : 3,387,676
68 : 3,387,677
124 : 3,387,678
164 : 3,387,679
189 : 3,387,680
178– 5.4 : 3,388,213
.6 : 3,388,214
.8 : 3,388,215
53.1 : 3,388,216
179– 1 : 3,388,217
3,388,218
15 : 3,388,219
3,388,220
100.2 : 3,388,221
180– 13 : 3,387,681
64 : 3,387,682
66 : 3,387,683
79.2 : 3,387,684
119 : 3,387,685
188– 32 : 3,387,686
73 : 3,387,687
134 : 3,387,688
191– 12 : 3,388,222
192– 4 : 3,387,689
26 : 3,387,690
92 : 3,387,691
194– 6 : 3,387,692

195– 51 : 3,388,042
103.5 : 3,388,044
139 : 3,388,043
197– 98 : 3,387,693
3,387,694
198– 33 : 3,387,695
64 : 3,387,696
203 : 3,387,697
200– 38 : 3,388,223
42 : 3,388,224
48 : 3,388,225
67 : 3,388,226
159 : 3,388,227
160 : 3,388,228
166 : 3,388,229
202–173 : 3,388,045
203– 18 : 3,388,046
204– 15 : 3,388,047
3,388,048
29 : 3,388,049
58 : 3,388,050
159.17: 3,388,051
181 : 3,388,052
192 : 3,388,053
206– 1 : 3,387,698
42 : 3,387,699
45.34: 3,387,700
46 : 3,387,701
65 : 3,387,702
208– 33 : 3,388,054
143 : 3,388,055
3,388,056
209– 73 : 3,387,703
3,387,704
75 : 3,387,705
155 : 3,387,706
223 : 3,387,707
273 : 3,387,708
458 : 3,387,709
210– 7 : 3,388,057
32 : 3,388,058
3,388,059
52 : 3,388,060
94 : 3,387,710
344 : 3,387,711
411 : 3,387,712
211–148 : 3,387,713
213– 1.3 : 3,387,714
3,387,715
100 : 3,387,716
214– 1 : 3,387,717
3,387,718
6 : 3,387,719
3,387,720
14 : 3,387,721
16.1 : 3,387,722
.4 : 3,387,723
3,387,724
42 : 3,387,725
390 : 3,387,726
450 : 3,387,727
620 : 3,387,728
621 : 3,387,729
3,387,730
700 : 3,387,731
215–100 : 3,387,732
217– 12 : 3,387,733
219– 10.51: 3,388,230
.55: 3,388,231
69 : 3,388,232
3,388,233
119 : 3,388,234
121 : 3,388,235
485 : 3,388,236
220– 1 : 3,387,734
24 : 3,387,735
31 : 3,387,736
3,387,737
46 : 3,387,738
53 : 3,387,739
71 : 3,387,740
73 : 3,387,741
221– 67 : 3,387,742
75 : 3,387,743
150 : 3,387,744
185 : 3,387,745
211 : 3,387,746
222– 2 : 3,387,747
70 : 3,387,748
143 : 3,387,749
236 : 3,387,750
267 : 3,387,751
224– 7 : 3,387,752
3,387,753
42.21: 3,387,754

226– 6 : 3,387,755
22 : 3,387,757
97 : 3,387,756
108 : 3,387,758
3,387,759
198 : 3,387,760
228– 42 : 3,387,761
229– 15 : 3,387,762
17 : 3,387,763
37 : Re.26,402
3,387,764
43 : 3,387,765
62 : 3,387,766
230– 69 : 3,387,767
117 : 3,387,768
130 : 3,387,769
139 : 3,387,770
141 : 3,387,771
145 : 3,387,772
172 : 3,387,773
232 : 3,387,774
234– 20 : 3,387,775
235– 61.12: 3,388,237
70 : 3,387,777
95 : 3,387,778
100 : 3,388,238
168 : 3,388,241
175 : 3,388,239
181 : 3,388,240
184 : 3,388,242
236– 46 : 3,387,780
238–283 : 3,387,781
239– 20 : 3,387,782
81 : 3,387,783
132.3 : 3,387,784
200 : 3,387,785
201 : 3,387,786
265.17: 3,387,787
.37: 3,387,788
333 : 3,387,789
453 : 3,387,790
458 : 3,387,791
688 : 3,387,792
240– 2 : 3,388,243
.13: 3,388,244
3.1 : 3,388,245
44.2 : 3,388,246
78 : 3,388,247
3,388,248
81 : 3,388,249
241– 20 : 3,387,793
21 : 3,387,794
34 : 3,387,795
43 : 3,387,796
242– 55.11: 3,387,797
67.1 : 3,387,798
72 : 3,387,799
74.2 : 3,387,800
244– 23 : 3,387,801
102 : 3,387,802
122 : 3,387,803
129 : 3,387,804
138 : 3,387,805
246– 31 : 3,387,880
187 : 3,388,250
248– 4 : 3,387,806
17 : 3,387,807
46 : 3,387,808
58 : 3,387,809
108 : 3,387,810
146 : 3,387,811
274 : 3,387,812
361 : 3,387,813
3,387,814
250– 49.5 : 3,388,251
71 : 3,388,252
83.3 : 3,388,253
3,388,254
209 : 3,388,255
213 : 3,388,256
217 : 3,388,257
218 : 3,388,258
219 : 3,388,259
222 : 3,388,260
224 : 3,388,261
237 : 3,388,262
251–174 : 3,387,815
175 : 3,387,816
306 : Re.26,405
317 : 3,387,817
327 : 3,387,818
329 : 3,387,819
252– 8.5 : 3,388,061
33.4 : 3,388,062
3,388,063

252– 42 : 3,388,064
.1 : 3,388,065
46.6 : 3,388,066
55 : 3,388,067
75 : 3,388,068
99 : 3,388,069
301.2 : 3,388,071
321 : 3,388,072
3,388,073
373 : 3,388,074
408 : 3,388,075
429 : 3,388,076
466 : 3,388,077
253– 39 : 3,387,820
254– 86 : 3,387,821
172 : 3,388,070
174 : 3,387,822
185 : 3,387,823
256– 1 : 3,387,824
10 : 3,387,825
259– 6 : 3,387,826
36 : 3,387,827
85 : 3,387,828
161 : 3,387,829
260– 2 : 3,388,078
3,388,079
.2 : 3,388,080
.5 : 3,388,081
17 : 3,388,082
.4 : 3,388,083
19 : 3,388,084
23 : 3,388,085
28 : 3,388,086
29.2 : 3,388,087
32.6 : 3,388,088
33.4 : 3,388,089
37 : 3,388,090
3,388,091
3,388,092
3,388,093
41 : 3,388,094
45.8 : 3,388,095
.9 : 3,388,096
47 : 3,388,097
3,388,098
3,388,099
75 : 3,388,100
77.5 : 3,388,101
3,388,102
3,388,103
78 : 3,388,104
.4 : 3,388,105
.5 : Re.26,407
3,388,106
79 : 3,388,107
.5 : 3,388,108
80 : 3,388,109
85.7 : 3,388,110
93.5 : 3,388,111
112.5 : 3,388,112
3,388,113
157 : 3,388,114
210 : 3,388,115
211.3 : 3,388,116
212 : 3,388,117
3,388,118
3,388,119
233.3 : 3,388,120
239 : 3,388,121
3,388,122
.5 : 3,388,123
.55: 3,388,124
3,388,125
247.1 : 3,388,126
250 : 3,388,127
268 : 3,388,128
285.5 : 3,388,129
286 : 3,388,130
290 : 3,388,131
309 : 3,388,132
326.9 : 3,388,133
3,388,134
330.5 : 3,388,135
345.3 : 3,388,136
346.3 : 3,388,137
397.4 : 3,388,138
3,388,139
402.5 : 3,388,140
439 : 3,388,141
448 : 3,388,142
3,388,143
.8 : 3,388,144
453 : 3,388,145
455 : 3,388,146
463 : 3,388,147

260–465 : 3,388,148
471 : 3,388,149
476 : 3,388,150
479 : 3,388,151
488 : 3,388,152
500.5 : 3,388,153
513 : 3,388,154
515 : 3,388,155
525 : 3,388,156
533 : 3,388,157
553 : 3,388,158
556 : 3,388,159
558 : 3,388,160
559 : 3,388,161
3,388,162
3,388,163
563 : 3,388,164
584 : 3,388,165
590 : 3,388,166
609 : 3,388,167
611 : 3,388,168
.5 : 3,388,169
613 : 3,388,170
3,388,171
615.5 : 3,388,172
622 : 3,388,173
650 : 3,388,174
653 : 3,388,175
654 : 3,388,176
3,388,177
665 : 3,388,178
3,388,179
666 : 3,388,180
678 : 3,388,181
680 : 3,388,182
3,388,183
683.3 : 3,388,184
830 : 3,388,185
857 : 3,388,186
872 : 3,388,187
890 : 3,388,188
895 : 3,388,189
897 : 3,388,190
925 : 3,388,191
933 : 3,388,192
978 : 3,388,193
261– 39 : 3,387,830
51 : 3,387,831
93 : 3,387,832
263– 3 : 3,387,833
6 : 3,387,779
3,387,834
8 : 3,387,835
20 : 3,387,836
30 : 3,387,837
264– 6 : 3,388,194
45 : 3,388,195
75 : 3,388,196
89 : 3,388,197
177 : 3,388,198
182 : 3,388,199
184 : 3,388,200
3,388,201
211 : 3,388,202
225 : 3,388,203
266– 34 : 3,387,838
267– 57.1 : 3,387,839
64 : 3,387,840
270– 61 : 3,387,841
272– 76 : 3,387,842
79 : 3,387,843
273– 77 : 3,387,844
3,387,845
110 : 3,387,846
159 : 3,387,847
274– 1 : 3,387,848
24 : 3,387,849
277– 1 : 3,387,850
2 : 3,387,851
280– 11.2 : 3,387,852
69 : 3,387,854
79.3 : 3,387,855
96.2 : 3,387,856
104.5 : 3,387,857
124 : 3,387,858
204 : 3,387,859
404 : 3,387,860
412 : 3,387,861
461 : 3,387,862
285– 2 : 3,387,863
23 : 3,387,864
39 : 3,387,865
184 : 3,387,866
336 : 3,387,867
287– 51 : 3,387,868

287– 62 : 3,387,869
87 : 3,387,870
3,387,871
189.35: 3,387,872
292–175 : 3,387,873
201 : 3,387,874
262 : 3,387,875
348 : 3,387,876
294– 50.9 : 3,387,877
69 : 3,387,878
87.2 : 3,387,879
296– 23 : 3,387,853
153 : 3,387,881
297–163 : 3,387,882
253 : 3,387,883
302 : 3,387,884
379 : 3,387,885
397 : 3,387,886
445 : 3,387,887
299– 4 : 3,387,888
12 : 3,387,889
37 : 3,387,890
39 : 3,387,891
60 : 3,387,892
3,387,893
301– 63 : 3,387,894
302– 64 : 3,387,895
305– 35 : 3,387,896
41 : 3,387,897
307– 88.3 : 3,388,263
93 : 3,388,264
112 : 3,388,265
231 : 3,388,266
233 : 3,388,267
238 : 3,388,268
252 : 3,388,269
257 : 3,388,270
267 : 3,388,271
273 : 3,388,272
308– 2 : 3,387,898
77 : 3,387,899
177 : 3,387,900
217 : 3,387,901
310– 67 : 3,388,273
312– 39 : 3,387,902
228 : 3,387,903
245 : 3,387,904
274 : 3,387,905
342 : 3,387,906
348 : 3,387,907
313– 54 : 3,388,274
55 : 3,388,275
68 : 3,388,276
108 : 3,388,277
197 : 3,388,278
279 : 3,388,279
337 : 3,388,280
315– 3.5 : 3,388,281
4 : 3,388,282
12 : 3,388,283
18 : 3,388,284
19 : 3,388,285
27 : 3,388,286
39 : 3,388,287
77 : 3,388,288
83 : 3,388,289
108 : 3,388,290
111 : 3,388,291
169 : 3,388,292
175 : 3,388,293
194 : 3,388,294
316– 25 : 3,387,908
317– 11 : 3,388,295
22 : 3,388,296
24 : 3,388,297
101 : 3,388,298
120 : 3,388,299
148.5 : 3,388,300
234 : 3,388,301
3,388,302
318– 18 : 3,388,303
3,388,304
29 : Re.26,404
175 : 3,388,305
421 : 3,388,306
434 : 3,388,307
467 : 3,388,308
321– 2 : 3,388,309
5 : 3,388,310
16 : 3,388,311
18 : 3,388,312
60 : 3,388,313
69 : 3,388,314
322– 25 : 3,388,315
323– 9 : 3,388,316

323– 20 : 3,388,318
22 : 3,388,317
43.5 : 3,388,319
3,388,320
324– .5 : 3,388,321
3,388,322
8 : 3,388,323
10 : 3,388,324
3,388,325
57 : 3,388,326
58 : 3,388,327
61 : 3,387,776
70 : 3,388,328
154 : 3,388,329
325– 42 : 3,388,330
420 : 3,388,331
328–142 : 3,388,332
329–104 : 3,388,333
330– 5.5 : 3,388,334
8 : 3,388,335
10 : 3,388,336
15 : 3,388,337
29 : 3,388,338
331– 3 : 3,388,339
4 : 3,388,340
78 : 3,388,341
94 : 3,388,342
.5 : 3,388,343
109 : 3,388,344
3,388,345
111 : 3,388,346
3,388,347
117 : 3,388,348
332– 18 : 3,388,349
333– 10 : 3,388,350
79 : 3,388,351
98 : 3,388,352
335–132 : 3,388,353
151 : 3,388,354
3,388,355
3,388,356
161 : 3,388,357
191 : 3,388,358
210 : 3,388,359
268 : 3,388,360
281 : 3,388,361
336– 73 : 3,388,362
96 : 3,388,363
337–343 : Re.26,406
338–143 : 3,388,364
162 : 3,388,365
339– 17 : 3,388,366
32 : 3,388,367
94 : 3,388,368
95 : 3,388,369
98 : 3,388,370
340– 3 : 3,388,371
3,388,372
6 : 3,388,373
12 : 3,388,374
18 : 3,388,375
20 : 3,388,376
146.1 : 3,388,377
3,388,378
147 : 3,388,379
3,388,380
172 : 3,388,384
.5 : 3,388,381
3,388,382
3,388,383
3,388,385
173 : 3,388,386
174 : 3,388,387
203 : 3,388,388
216 : 3,388,389
293 : 3,388,390
324 : 3,388,391
347 : 3,388,392
343– 7.5 : 3,388,393
.7 : 3,388,394
11 : 3,388,395
17 : 3,388,396
.5 : 3,388,398
105 : 3,388,397
783 : 3,388,399
822 : 3,388,400
872 : 3,388,401
346– 1 : 3,388,402
17 : 3,388,403
24 : 3,388,404
350– 96 : 3,387,909
351–113 : 3,387,910
401–190 : 3,387,911
431–130 : 3,387,912

D 2– 7 : 211,313
408 : 211,314
D 4– 6 : 211,315
D 9– 19 : 211,316
32 : 211,317
83 : 211,318
138 : 211,319
185 : 211,320
191 : 211,322
242 : 211,321
D10– 8 : 211,323
211,324
D13– 1 : 211,325
211,326
7 : 211,327
D14– 3 : 211,328
211,329
211,330
211,331
6 : 211,332
211,333
D15– 1 : 211,334

D15– 1 : 211,335
11 : 211,336
211,337
211,338
D22– 19 : 211,339
211,340
99 : 211,341
D23– 12 : 211,342
23 : 211,343
59 : 211,344
D24– 1 : 211,345
D25– 1 : 211,346
D26– 1 : 211,347
6 : 211,348
8 : 211,349
211,350
10 : 211,351
13 : 211,352
14 : 211,353
211,354
211,355
211,356

D26– 14 : 211,357
211,358
211,359
211,360
211,361
211,362
D29– 1 : 211,363
211,364
211,365
211,366
211,367
D30– 13 : 211,368
D33– 3 : 211,369
8 : 211,370
D34– 2 : 211,371
211,372
211,373
5 : 211,374
211,375
211,376
15 : 211,377
211,378

D37– 1 : 211,379
D42– 7 : 211,380
211,381
D44– 21 : 211,382
211,383
29 : 211,384
D45– 9 : 211,385
D48– 2 : 211,386
20 : 211,387
211,388
211,389
211,390
211,391
24 : 211,392
211,393
31 : 211,394
211,395
D49– 14 : 211,396
22 : 211,397
D50– 3 : 211,398
4 : 211,399
7 : 211,400

D52– 2 : 211,401
6 : 211,402
D54– 4 : 211,403
12 : 211,404
13 : 211,405
D55– 1 : 211,406
211,407
211,408
D56– 1 : 211,409
2 : 211,410
4 : 211,411
D57– 1 : 211,412
211,413
D61– 1 : 211,414
211,415
211,416
211,417
211,418
211,419
211,420
211,421
D63– 1 : 211,422

D64– 11 : 211,423
211,424
D70– 1 : 211,425
D71– 1 : 211,426
D72– 1 : 211,427
D74– 9 : 211,428
21 : 211,429
D80– 9 : 211,430
211,431
211,432
D81– 10 : 211,433
D83– 8 : 211,434
211,435
D87– 2 : 211,436
211,437
211,438
211,439
5 : 211,440
D90– 11 : 211,441
14 : 211,442
D95– 3 : 211,443
D96– 12 : 211,444

GEOGRAPHICAL INDEX OF RESIDENCE OF INVENTORS

(U.S. States, Territories and Armed Forces, the Commonwealth of Puerto Rico, and the Canal Zone)

(NOTE.—CODES ARE CHANGED AS OF JANUARY 1, 1967)

Alabama	1	Kentucky	21	Oregon	41
Alaska	2	Louisiana	22	Pennsylvania	42
American Samoa	3	Maine	23	Puerto Rico	43
Arizona	4	Maryland	24	Rhode Island	44
Arkansas	5	Massachusetts	25	South Carolina	45
California	6	Michigan	26	South Dakota	46
Canal Zone	7	Minnesota	27	Tennessee	47
Colorado	8	Mississippi	28	Texas	48
Connecticut	9	Missouri	29	Utah	49
Delaware	10	Montana	30	Vermont	50
District of Columbia	11	Nebraska	31	Virginia	51
Florida	12	Nevada	32	Virgin Islands	52
Georgia	13	New Hampshire	33	Washington	53
Guam	14	New Jersey	34	West Virginia	54
Hawaii	15	New Mexico	35	Wisconsin	55
Idaho	16	New York	36	Wyoming	56
Illinois	17	North Carolina	37	U.S. Air Force	57
Indiana	18	North Dakota	38	U.S. Army	58
Iowa	19	Ohio	39	U.S. Navy	59
Kansas	20	Oklahoma	40		

(First number in listing denotes location according to above key. Refer to patent number in body of the Official Gazette to obtain details as to inventor name, location, etc.)

Patents

1 : 3,387,635
3,387,756
3,387,865
3,388,117
3,388,160
3,388,194
3,388,202
3,388,234
3,388,261
4 : 3,387,621
3,387,692
3,388,366
6 : 3,387,307
3,387,333
3,387,354
3,387,369
3,387,378
3,387,389
3,387,393
3,387,399
3,387,412
3,387,417
3,387,419
3,387,456
3,387,474
3,387,477
3,387,481
3,387,495
3,387,511
3,387,512
3,387,552
3,387,553
3,387,563
3,387,572
3,387,599
3,387,601
3,387,606
3,387,630
3,387,632
3,387,634
3,387,644
3,387,648
3,387,667
3,387,668
3,387,675
3,387,679
3,387,681
3,387,686
3,387,698
3,387,701
6 : 3,387,732
3,387,734
3,387,742
3,387,748
3,387,761
3,387,777
3,387,802
3,387,811
3,387,819
3,387,824
3,387,827
3,387,843
3,387,845
3,387,851
3,387,855
3,387,858
3,387,859
3,387,860
3,387,887
3,387,891
3,387,902
3,387,906
3,387,993
3,388,003
3,388,008
3,388,011
3,388,016
3,388,046
3,388,057
3,388,062
3,388,063
3,388,071
3,388,122
3,388,147
3,388,206
3,388,217
3,388,239
3,388,243
3,388,244
3,388,245
3,388,272
3,388,274
3,388,280
3,388,284
3,388,287
3,388,291
3,388,301
3,388,304
3,388,305
3,388,319
6 : 3,388,322
3,388,326
3,388,327
3,388,359
3,388,362
3,388,367
3,388,371
3,388,372
3,388,374
3,388,377
3,388,382
3,388,384
3,388,385
3,388,396
8 : 3,387,305
3,387,379
3,387,754
3,387,876
3,387,921
3,388,173
3,388,347
9 : 3,387,313
3,387,319
3,387,321
3,387,357
3,387,400
3,387,421
3,387,426
3,387,459
3,387,471
3,387,550
3,387,574
3,387,662
3,387,663
3,387,690
3,387,744
3,387,790
3,387,801
3,387,804
3,387,880
3,387,895
3,387,935
3,387,941
3,387,959
3,387,980
3,387,988
3,388,064
3,388,090
3,388,091
3,388,092
9 : 3,388,093
3,388,159
3,388,165
3,388,166
3,388,226
3,388,235
3,388,295
3,388,303
3,388,341
10 : 3,387,349
3,387,405
3,387,516
3,387,631
3,387,994
3,388,010
3,388,019
3,388,055
3,388,079
3,388,097
3,388,153
3,388,170
11 : 3,388,218
3,388,332
3,388,387
3,388,399
12 : Re.26,403
Re.26,407
3,387,344
3,387,453
3,387,473
3,387,584
3,387,617
3,387,749
3,387,847
3,387,852
3,387,854
3,387,931
3,387,943
3,388,005
3,388,025
3,388,029
3,388,106
3,388,198
3,388,268
3,388,308
3,388,348
13 : 3,387,340
3,387,445
3,387,448
3,387,452
13 : 3,387,480
3,387,576
3,387,578
3,387,879
17 : Re.26,405
3,387,315
3,387,353
3,387,383
3,387,392
3,387,407
3,387,408
3,387,435
3,387,436
3,387,440
3,387,446
3,387,454
3,387,493
3,387,503
3,387,517
3,387,519
3,387,522
3,387,523
3,387,527
3,387,535
3,387,571
3,387,586
3,387,589
3,387,604
3,387,611
3,387,612
3,387,641
3,387,649
3,387,665
3,387,684
3,387,691
3,387,694
3,387,711
3,387,728
3,387,739
3,387,743
3,387,757
3,387,784
3,387,786
3,387,797
3,387,808
3,387,840
3,387,846
3,387,849
3,387,861
3,387,875
17 : 3,387,903
3,387,908
3,387,910
3,387,915
3,387,918
3,387,969
3,387,998
3,388,001
3,388,058
3,388,059
3,388,072
3,388,073
3,388,077
3,388,084
3,388,120
3,388,123
3,388,125
3,388,137
3,388,191
3,388,209
3,388,214
3,388,221
3,388,232
3,388,233
3,388,273
3,388,282
3,388,334
3,388,360
18 : 3,387,309
3,387,323
3,387,443
3,387,560
3,387,615
3,387,639
3,387,836
3,387,839
3,387,905
3,387,951
3,387,960
3,388,065
3,388,210
3,388,215
3,388,351
3,388,363
3,388,388
19 : 3,387,588
20 : 3,387,312
3,387,442
3,387,614
3,387,676

20 : 3,387,713
3,387,752
21 : 3,387,376
3,387,582
3,387,942
3,387,986
3,388,074
3,388,231
22 : 3,387,384
3,387,441
3,387,460
3,387,745
3,387,867
3,387,947
3,388,056
3,388,157
24 : 3,387,328
3,387,410
3,387,479
3,387,485
3,387,551
3,387,580
3,387,591
3,387,602
3,387,638
3,387,685
3,388,024
3,388,163
3,388,238
3,388,240
3,388,248
3,388,258
3,388,328
3,388,336
3,388,337
3,388,373
3,388,379
3,388,395
3,388,397
25 : 3,387,306
3,387,334
3,387,359
3,387,367
3,387,482
3,387,491
3,387,515
3,387,528
3,387,629
3,387,643
3,387,695
3,387,765
3,387,767
3,387,794
3,387,795
3,387,796
3,387,799
3,387,899
3,387,977
3,388,009
3,388,027
3,388,028
3,388,033
3,388,083
3,388,171
3,388,211
3,388,212
3,388,276
3,388,278
3,388,318
3,388,320
3,388,342
3,388,345
3,388,357
3,388,383
26 : Re.26,402
Re.26,408
3,387,324
3,387,374
3,387,385
3,387,386
3,387,390
3,387,394
3,387,406
3,387,409
3,387,418
3,387,463
3,387,498
3,387,501
3,387,508
3,387,509
3,387,567
3,387,619
3,387,625
3,387,627
3,387,640
3,387,646
3,387,653
3,387,666
3,387,689
3,387,697
26 : 3,387,699
3,387,712
3,387,717
3,387,726
3,387,733
3,387,741
3,387,759
3,387,762
3,387,820
3,387,826
3,387,828
3,387,830
3,387,877
3,387,878
3,387,885
3,387,901
3,387,917
3,388,052
3,388,082
3,388,102
3,388,111
3,388,138
3,388,144
3,388,184
3,388,195
3,388,224
3,388,227
3,388,267
3,388,288
3,388,368
27 : 3,387,310
3,387,320
3,387,346
3,387,433
3,387,705
3,387,807
3,387,882
3,388,237
3,388,293
3,388,370
28 : 3,387,356
3,387,437
29 : 3,387,569
3,387,570
3,387,718
3,387,778
3,387,812
3,387,831
3,387,923
3,387,962
3,388,088
3,388,181
3,388,297
3,388,333
31 : 3,387,809
3,387,884
32 : 3,387,750
33 : 3,387,373
3,388,350
34 : Re.26,404
3,387,330
3,387,331
3,387,358
3,387,362
3,387,368
3,387,372
3,387,391
3,387,404
3,387,416
3,387,420
3,387,424
3,387,425
3,387,484
3,387,486
3,387,494
3,387,520
3,387,526
3,387,568
3,387,577
3,387,579
3,387,585
3,387,595
3,387,616
3,387,647
3,387,669
3,387,706
3,387,723
3,387,758
3,387,779
3,387,798
3,387,835
3,387,848
3,387,850
3,387,886
3,387,909
3,387,916
3,387,920
3,387,952
3,387,953
3,387,954
34 : 3,387,964
3,387,982
3,387,984
3,387,991
3,388,002
3,388,004
3,388,012
3,388,015
3,388,017
3,388,021
3,388,026
3,388,039
3,388,044
3,388,047
3,388,053
3,388,060
3,388,066
3,388,076
3,388,078
3,388,098
3,388,119
3,388,121
3,388,127
3,388,136
3,388,148
3,388,150
3,388,155
3,388,179
3,388,186
3,388,196
3,388,204
3,388,257
3,388,260
3,388,263
3,388,271
3,388,277
3,388,286
3,388,292
3,388,296
3,388,307
3,388,330
3,388,338
3,388,343
3,388,349
3,388,364
3,388,365
3,388,369
36 : 3,387,308
3,387,341
3,387,366
3,387,397
3,387,403
3,387,411
3,387,449
3,387,457
3,387,465
3,387,466
3,387,467
3,387,469
3,387,478
3,387,505
3,387,514
3,387,524
3,387,532
3,387,545
3,387,547
3,387,554
3,387,559
3,387,573
3,387,594
3,387,600
3,387,609
3,387,622
3,387,624
3,387,677
3,387,704
3,387,731
3,387,755
3,387,763
3,387,766
3,387,768
3,387,769
3,387,800
3,387,810
3,387,814
3,387,844
3,387,872
3,387,911
3,387,925
3,387,934
3,387,955
3,387,956
3,387,957
3,387,961
3,387,973
3,387,974
3,387,978
3,387,983
3,387,992
3,388,006
36 : 3,388,041
3,388,067
3,388,085
3,388,089
3,388,094
3,388,118
3,388,149
3,388,152
3,388,158
3,388,162
3,388,164
3,388,168
3,388,176
3,388,177
3,388,207
3,388,216
3,388,223
3,388,241
3,388,249
3,388,259
3,388,264
3,388,270
3,388,298
3,388,302
3,388,309
3,388,311
3,388,312
3,388,313
3,388,314
3,388,316
3,388,317
3,388,321
3,388,376
3,388,378
3,388,389
3,388,390
3,388,393
3,388,394
37 : 3,387,327
3,387,335
3,387,336
3,387,337
3,387,395
3,387,422
3,387,428
3,387,451
3,387,637
3,387,737
3,387,803
3,387,866
3,387,913
3,387,996
3,388,018
3,388,030
3,388,099
3,388,104
3,388,178
3,388,199
3,388,200
3,388,299
38 : 3,387,674
3,387,709
39 : Re.26,406
3,387,316
3,387,325
3,387,352
3,387,382
3,387,388
3,387,430
3,387,431
3,387,461
3,387,513
3,387,529
3,387,557
3,387,564
3,387,587
3,387,607
3,387,618
3,387,623
3,387,664
3,387,683
3,387,714
3,387,715
3,387,716
3,387,721
3,387,724
3,387,735
3,387,740
3,387,774
3,387,775
3,387,781
3,387,791
3,387,793
3,387,806
3,387,816
3,387,842
3,387,869
3,387,874
3,387,881
3,387,927
39 : 3,387,958
3,387,967
3,387,970
3,387,971
3,387,976
3,387,997
3,388,014
3,388,035
3,388,036
3,388,050
3,388,070
3,388,096
3,388,107
3,388,108
3,388,142
3,388,146
3,388,183
3,388,236
3,388,247
3,388,275
3,388,285
3,388,340
3,388,346
3,388,353
3,388,380
3,388,392
3,388,403
40 : 3,387,496
3,387,558
3,387,620
3,387,654
3,387,656
3,387,857
3,387,888
3,387,979
3,388,143
41 : 3,387,556
3,387,610
3,387,720
3,387,722
3,387,727
3,387,821
3,387,823
3,388,404
42 : Re.26,409
3,387,304
3,387,355
3,387,363
3,387,364
3,387,365
3,387,380
3,387,401
3,387,402
3,387,432
3,387,438
3,387,470
3,387,472
3,387,492
3,387,536
3,387,548
3,387,555
3,387,575
3,387,603
3,387,636
3,387,673
3,387,707
3,387,719
3,387,729
3,387,730
3,387,780
3,387,813
3,387,825
3,387,834
3,387,838
3,387,864
3,387,883
3,387,889
3,387,894
3,387,900
3,387,907
3,387,933
3,387,948
3,387,949
3,387,963
3,387,966
3,387,968
3,388,020
3,388,023
3,388,032
3,388,034
3,388,048
3,388,054
3,388,068
3,388,086
3,388,101
3,388,115
3,388,128
3,388,133
3,388,134
3,388,140
42 : 3,388,141
3,388,154
3,388,185
3,388,225
3,388,230
3,388,250
3,388,279
3,388,331
3,388,335
3,388,344
3,388,381
3,388,386
3,388,398
3,388,400
44 : 3,387,537
3,387,990
3,388,051
45 : 3,387,387
3,387,427
3,387,447
3,387,613
3,387,703
3,388,228
47 : 3,387,413
3,387,439
3,387,725
3,387,890
3,387,939
3,387,940
3,388,109
48 : 3,387,314
3,387,377
3,387,434
3,387,464
3,387,483
3,387,488
3,387,502
3,387,655
3,387,657
3,387,658
3,387,659
3,387,660
3,387,661
3,387,671
3,387,672
3,387,738
3,387,746
3,387,785
3,387,863
3,387,926
3,387,928
3,388,000
3,388,252
3,388,253
3,388,323
3,388,324
3,388,325
3,388,375
49 : 3,387,497
3,387,538
3,387,747
3,388,294
50 : 3,387,487
3,387,868
3,387,898
51 : 3,387,326
3,387,329
3,387,414
3,387,429
3,387,590
3,387,702
3,387,832
3,387,989
3,387,999
3,388,265
3,388,266
53 : 3,387,370
3,388,061
3,388,254
54 : 3,387,490
3,388,126
3,388,169
3,388,180
3,388,182
3,388,190
55 : 3,387,317
3,387,332
3,387,375
3,387,682
3,387,696
3,387,708
3,387,753
3,387,805
3,387,853
3,387,862
3,388,007
3,388,045
3,388,203
3,388,290

Design Patents

1 : 211,351
4 : 211,378
211,394
6 : 211,326
211,330
211,332
211,333
211,335
211,352
211,354
211,356
211,357
211,360
211,388
211,390
211,398
211,403
211,413
211,416

6 : 211,420
211,426
211,427
211,435
8 : 211,399
9 : 211,341
211,393
211,401
211,404
11 : 211,412
12 : 211,328
13 : 211,376
16 : 211,329
17 : 211,314
211,319
211,345
211,346
211,362
211,374

17 : 211,386
211,430
211,433
18 : 211,361
211,379
19 : 211,336
20 : 211,323
211,358
22 : 211,347
24 : 211,421
25 : 211,359
211,367
211,389
26 : 211,344
211,348
27 : 211,325
29 : 211,339
211,340
34 : 211,353

34 : 211,383
211,397
211,400
211,429
36 : 211,315
211,317
211,318
211,327
211,343
211,365
211,366
211,375
211,382
211,384
211,385
211,387
211,392
211,395

36 : 211,414
211,415
211,419
211,423
211,431
211,432
211,436
211,437
211,438
211,439
211,440
211,441
37 : 211,313
211,391
211,410
39 : 211,322
211,369
211,405

39 : 211,422
211,428
42 : 211,324
211,334
211,337
211,338
211,402
211,406
211,407
211,408
48 : 211,331
211,368
211,370
49 : 211,342
50 : 211,355
55 : 211,320
211,377
211,409

U.S. DEPARTMENT OF COMMERCE

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June 11, 1968 Volume 851 Number 2

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Notices under 15 U.S.C. 1116; Trademark Act of July 5, 1946

Reg. No. 281,407 (SOCIAL REGISTER), Social Register Association, Periodical, **filed** Mar. 8, 1968, D.C., E.D.N.Y. (Brooklyn), Doc. 68C-221, *Social Register Association* v. *John R. Virus, doing business as Brandy Harvest.*

Reg. No. 297,436 (TWIN WORKS), J. A. Henckels, Steel, iron, lead, zinc, and copper; **Reg. No. 649,403** (TWIN), J. A. Henckels Zwillingswerk Aktiengesellschaft, Nail files, nail scissors, nail nippers, nail pliers, skin scissors, pincers, nail cleaners, nail scrapers, corn knives; **Reg. No. 658,117** (TWIN WORKS), same; **Reg. No. 768,620** (TWIN), same, Raw and partly worked base metals and metal alloys—namely, iron, manganese, molybdenum, tungsten, cobalt, chromium, copper, zinc, lead, tin, nickel, titanium, vanadium, antimony, steel, German silver, aluminum, brass, bronze, tombac; **Reg. No. 773,473**, same, Metal kitchen utensils, flat and hollow tableware, drainboards, percolators, flower pots, sink stoppers, bottle syphons, service trays, perforated metal trays for freezing and dehydrating, key rings and chains, pit props and parts therefor; **Reg. No. 773,474** (TWIN WORKS), same; **Reg. No. 773,491**, same, Raw and partly worked precious and base metals and metal alloys—namely, gold and silver, iron, manganese, molybdenum, tungsten, cobalt, chromium, copper, zinc, lead, tin, nickel, titanium, vanadium, antimony, steel, German silver, aluminum, brass, bronze and tombac, **filed** June 1, 1966, D.C., S.D.N.Y., Doc. 66-C-1576, *J. A. Henckels Zwillingswerk Aktiengesellschaft* v. *General Mills, Inc.* Stipulation and order of discontinuance with prejudice, Jan. 25, 1968.

Reg. No. 529,088 (GARLAND), Garland Knitting Mills, Women's and girls' sweaters made principally of knitted material; **Reg. No. 529,089** (GARLANDER), same, **filed** Jan. 8, 1968, D.C., S.D.N.Y., Doc. 68-C-76, *Garland Corporation* v. *Garland Blouse Co.* Consent judgment, defendant enjoined, Mar. 8, 1968.

Reg. No. 529,089. (See Reg. No. 529,088.)

Reg. No. 536,821 (NO-SEW AND DESIGN), Mathilde E. Heuck, doing business as M. E. Heuck, Metal skewers; **Reg. No. 537,932**, same, **filed** Nov. 18, 1966, D.C., W.D. Wash. (Seattle), Doc. 6964, *M. E. Heuck Co.* v. *Jeannette C. Cassell, Individually and doing business as Bowknot Skewer Co.* Filed stipulated permanent injunction, Mar. 29, 1968.

Reg. No. 537,932. (See Reg. No. 536,821.)

Reg. No. 570,912 (OK AND DESIGN), General Motors Corporation, Used automobiles and trucks, **filed** Dec. 18, 1967, D.C.N.J. (Newark), Doc. C-1281-67, *General Motors Corporation* v. *Somerset OK Motor Sales, Inc.* Consent judgment permanent injunction, Apr. 1, 1968.

Reg. No. 570,798 (ROQUEFORT), The Community of Roquefort, Cheese, **filed** Mar. 27, 1968, D.C., W.D. Okla. (Oklahoma City), Doc. 68-125-C, *The Community of Roquefort,*

CONDITION OF TRADEMARK APPLICATIONS AS OF APRIL 30, 1968

Total number of applications awaiting action [excluding renewals and Sec. 12(c)] ------------ 16, 519
Date of oldest new application ------------ May 23, 1967
Date of oldest amended application (filing date) ------------ April 20, 1965

C. M. WENDT, Director, Trademark Examining Operation **TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION**	**Oldest Application**	
	New	**Amended**
(I) L. J. BETTENDORF, Classes 2, 3, 4, 5, 7, 9, 10, 11, 27, 28, 30, 32, 33, 37, 38, 39, 40, 41, 42, 43, 50; Certification Marks, Classes A and B	5-23-67	4-20-65
(II) F. H. WETHERBEE, Classes 1, 6, 15, 18, 45, 46, 47, 48, 49, 51, 52; Collective Membership Mark, Class 200	6-28-67	7-6-65
(III) P. S. BALL, Classes 19, 21, 23, 26, 31, 34, 35, 36	8-18-67	10-23-65
(IV) M. E. ABRAMSON, Classes 8, 12, 13, 14, 16, 17, 20, 22, 24, 25, 29, 44; Service Marks, Classes 100, 101, 102, 103, 104, 105, 106, and 107	5-26-67	12-23-65
Renewals (All Classes)	4-9-68	--------
Sec. 12(c) Publications (All Classes)	4-15-68	--------

Applications filed during the month of April 1968—2,640

Registrations Issued ------------ 407—No. 850,411 to No. 850,817
Renewals Issued ------------ 100

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington, D.C., 20402 to whom all subscriptions should be made payable and all communications addressed; subscription price, $12.00 per annum, foreign mailing $4.00 additional; single copies, 25 cents each.

PRINTED COPIES OF TRADEMARK REGISTRATIONS are furnished by the Patent Office for 20 cents each. Address orders to the Commissioner of Patents, Washington, D.C. 20231.

Societe Anonyme des Caves et des Producteurs Reunis and Societe Auxiliarie de l'Agriculture & de l'Industrie du Sud-Quest de la France v. *Tally Ho Restaurants, Inc.*

Reg. No. 617,968 (TROPICANA), Fruit Industries, Inc., Fresh orange juice and fresh grapefruit juice, filed Mar. 28, 1968, D.C., S.D.N.Y., Doc. 68–C–1271, *Tropicana Industries, Inc.* v. *Pasquale Scarlato, doing business as Blair & Company.*

Reg. No. 631,649 (VW IN CIRCLE), Volkswagenwerk GmbH, Vehicles—namely, automobiles and trucks, aircraft, boats; and parts of and accessories for automobiles—namely, radiators, direction indicators, windshield defrosters, anti-dazzle appliances, windshield wipers, shock absorbers, brakes and baggage racks, filed June 16, 1967, D.C., M.D. Fla. (Jacksonville), Doc. 67–11–C–Oc, *Volkswagenwerk Aktiengesellschaft* v. *Billy Foster, doing business as Lake Volkswagen Specialist.* Consent judgment filed Oct. 2, 1967.

Reg. No. 645,378 (ANTARCTIC), Croton Watch Co., Inc., Watches, filed Apr. 2, 1968, D.C., S.D.N.Y., Doc. 68–C–1326, *Nivada, S.A.* v. *Croton Watch Co., Inc.*

Reg. No. 649,403. (See Reg. No. 297,436.)

Reg. No. 658,117. (See Reg. No. 297,436.)

Reg. No. 685,666 (CHEMSEARCH), National Disinfectant Company, Cleaning compositions for building floors and walls; **Reg. No. 725,504** (NATIONAL CHEMSEARCH AND DESIGN), National Chemsearch Corporation, Liquid dust mop treatment that fireproofs mops; disinfectants, wetting agents, coolants, anti-corroding agents, fumigants, and industrial and institutional deodorants; **Reg. No. 725,717**, same, Industrial and institutional detergents, solvent degreaser, glass cleaner, soap, antiseptic lotion cleaner, sewer and drain pipe cleaners, sewerage system cleaners, and paint remover, filed Sept. 8, 1967, D.C., N.D. Ill. (Chicago, Doc. 67c1544, *National Chemsearch Corp.* v. *Madison Chemical Corp.* Consent judgment granting perpetual injunction, Nov. 14, 1967.

Reg. No. 725,504. (See Reg. No. 685,666.)

Reg. No. 725,717. (See Reg. No. 685,666.)

Reg. No. 735,227 (DRIFTER), Kop-Ron Machine Corporation, House boats, filed Feb. 1, 1967, D.C., M.D. Tenn. (Nashville), Doc. C–4670, *Thelma K. Oron and Drifter Corp.* v. *House Boating Corp. of America.* Final decree, ownership of trademark "Drifter" is in the defendant, plaintiffs permanently enjoined and restrained, case dismissed, Nov. 28, 1967.

Reg. No. 761,718 (CINDERELLA), Cinderella International Company, Inc., Cosmetics—namely, spray cologne, filed Mar. 8, 1968, D.C., S.D.N.Y., Doc. 68–C–989, *Cinderella International Co., Inc.* v. *Fayette-Faberge, Inc.*

Reg. No. 768,620. (See Reg. No. 297,436.)

Reg. No. 773,473. (See Reg. No. 297,436.)

Reg. No. 773,474. (See Reg. No. 297,436.)

Reg. No. 773,491. (See Reg. No. 297,436.)

Reg. No. 785,129 (GUMBY), Clokey Productions, Inc. Plastic doll; **Reg. No. 821,079** (GUMBY'S PAL POKEY), Lakeside Industries, Inc., Flexible plastic doll, filed Mar. 8, 1968, D.C., C.D. Calif. (Los Angeles), Doc. 68–370–EC, *Lakeside Industries, Inc. and Clokey Productions, Inc.* v. *Arthur Clokey and the Los Angeles Free Press.*

Reg. No. 794,638 (KEM AND DESIGN), Kem Manufacturing Corporation, Insecticide, filed June 20, 1967, D.C.N.J. (Camden), Doc. C–660–67, *Kem Mfg. Corp.* v. *KRC Research, Inc., formerly Kem-Research, Inc.* Consent judgment for permanent injunction, Mar. 6, 1968.

Reg. No. 799,251 (SENOR PICO), Victor J. Bergeron, Restaurant, catering and banquet services; **Reg. No. 814,631** (SENOR PICO AND DESIGN), same, Powder mix for making a hot food beverage; **Reg. No. 825,046** (SENOR PICO), same, Tequila; **Reg. No. 825,047** (SENOR PICO AND DESIGN), same, filed D.C., C.D. Utah, Doc. C–96–67, *Senor Pico, Inc.* v. *Louis Nichols.* Defendant admits that plaintiff is the owner of the "Senor Pico" trademark and service mark, Registration Nos. 799,251, 814,631, 825,046, 825,047, and service mark registrations which were issued on Jan. 27, 1967, by the State of Utah; defendant has infringed and is enjoined, Oct. 16, 1967.

Reg. No. 814,631. (See Reg. No. 799,251.)

Reg. No. 821,079. (See Reg. No. 785,129.)

Reg. No. 825,046. (See Reg. No. 799,251.)

Reg. No. 825,047. (See Reg. No. 799,251.)

MARKS PUBLISHED FOR OPPOSITION

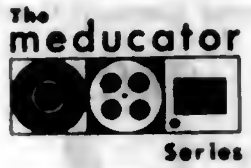
SECTION 1

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Application for the registration of these marks in more than one class has been filed as provided in section 30 of said act as amended by Public Law 772, 87th Congress, approved Oct. 9, 1962, 76 Stat. 769. Opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.

A separate fee of twenty-five dollars for each class opposed must accompany the opposition.

[NOTE: For publication of marks presented in applications for registration in one class, see section 2.]

SN 227,986. Burke Electronics, Inc., Philadelphia, Pa. Filed Sept. 17, 1965.



Class 38—Prints and Publications

For Audio and Visual Educational Materials—Namely, Slides, Films, Tapes, and the Like, Sold as a Unit for Use in Connection With Lectures on Various Aspects of the Practice of Medicine (Int. Cl. 9).

Class 107—Education and Entertainment

For Distribution and Leasing Audio and Visual Materiale and Devices Used for Educational Purposes (Int. Cl. 41).

First use June 3, 1965.

SN 234,718. Andreas Stihl Maschinenfabrik, Neustadt, Germany. Filed Dec. 16, 1965.

STIHL

Owner of German Reg. No. 608,076, dated Dec. 6, 1950.

Class 21—Electrical Apparatus, Machines, and Supplies

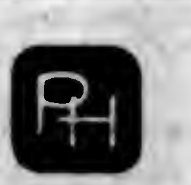
For Electric Motors (Int. Cl. 7).

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

For Saws, Internal Combustion Engines, Portable Brush Cutters and Cutters for Tree Surgery Driven by Two-Cycle Internal Combustion Engines, Tree Bark Removing Devices, Free Cutting Saws, Separating Grinding Devices, Earth Drilling Devices, and Tractors (Int. Cl. 7).

First use about 1928; in commerce about 1930.

SN 241,797. Parker-Hannifin Corporation, Cleveland, Ohio. Filed Mar. 24, 1966.



Applicant disclaims the letters "PH" when used to designate precipitation hardness or alkalinity. Owner of Reg. No. 738,484.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

For Valved Quick Couplers and Fuel Spray Noszles (Int. Cl. 6).
First use December 1957.

Class 14—Metals and Metal Castings and Forgings

For Metal Forgings and Die Castings (Int. Cl. 6).
First use December 1957.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

For Fluid Pressure Operated Motors, Pumps for Hydraulic Power Systems, Hydraulic Accumulators, Hydraulic Presses, Riveting Machines, Tube Bending Machines, Hand Operated Tube Benders, Tube Cutters, Tube Flaring Tools, Tube Reamers, Hose Coupling Assembly Machines, Hose Cutoff Machines, Tube Burring Tools, Ferrule Presetting Machines, Tube Swagers, Lubricating Devices, Compressors, Mufflers, Air Presses, Shock Absorbers for Hydraulic Power Systems, Threading Taps, Strap Vices, and Wrenches (Int. Cls. 7 and 8).
First use December 1957.

Class 31—Filters and Refrigerators

For Strainers, Filters, Air Line Filters, and Driers for Refrigeration Equipment (Int. Cl. 11).
First use December 1963.

Class 35—Belting, Hose, Machinery Packing, and Nonmetallic Tires

For O-Rings, Packings, Gaskets, and Flexible Hose (Int. Cl. 17).
First use December 1957.

SN 242,589. Gold Medal Products Co., Cincinnati, Ohio. Filed Apr. 4, 1966.

SNO-KONE

Class 2—Receptacles

For Paper Cups (Int. Cl. 16).
First use about Mar. 15, 1947.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

For Hand Held Ice Shavers, Machines for Making Shaved Ice Confections, and Dispensers for Flavorings With and Without Cup Dispensers (Int. Cls. 7 and 8).
First use on or about Mar. 15, 1950.

Class 26—Measuring and Scientific Appliances

For Measuring Dispensers for Flavorings With and Without Cup Dispensers (Int. Cl. 9).
First use on or about Mar. 15, 1964.

Class 31—Filters and Refrigerators

For Ice Display Cases (Int. Cl. 11).
First use on or about Mar. 15, 1950.

Class 39—Clothing

For Paper Hats (Int. Cl. 25).
First use on or about Mar. 15, 1957.

Class 46—Foods and Ingredients of Foods

For Shaved Ice Confections, Concentrated and Ready-To-Use Flavorings for Shaved Ice Confections (Int. Cl. 30).
First use on or about Mar. 15, 1948.

Class 50—Merchandise Not Otherwise Classified

For Advertising Display Signs (Int. Cl. 20).
First use on or about Mar. 15, 1948.

SN 249,820. True Blue Toys, Berkeley, Calif. Filed July 8, 1966.

True Blue Toys

Applicant disclaims any exclusive rights to the word "Toys."

Class 22—Games, Toys, and Sporting Goods

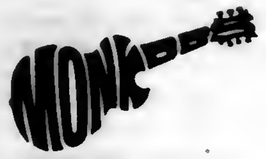
For Prepackaged Children's Games and Toys Which Are Sold Through Retail Outlets (Int. Cl. 28).

Class 38—Prints and Publications

For Children's Books (Int. Cl. 16).

First use Jan. 27, 1966.

SN 261,416. Screen Gems, Inc., New York, N.Y. Filed Dec. 27, 1966.



Owner of Reg. No. 829,594.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

For Wallets and Carry-All Cases in the Nature of Small Purses Used To Carry Personal Belongings (Int. Cl. 18).
First use Aug. 31, 1966.

Class 22—Games, Toys, and Sporting Goods

For Toy Trading Cards, Playing Cards, Toy Flicker Rings, Toy Charms, Toy Pin-On and Clip-On Novelty Display Buttons (Int. Cls. 16 and 28).
First use Sept. 22, 1966.

Class 36—Musical Instruments and Supplies

For Guitars and Carrying Cases for Phonograph Records (Int. Cls. 9 and 15).
First use Oct. 6, 1966.

Class 37—Paper and Stationery

For Notebooks, Ring Binders, and Pencil Cases (Int. Cl. 16).
First use Aug. 31, 1966.

Class 38—Prints and Publications

For Paperback Books, Magazines, Comic Books, and Comic Strips (Int. Cl. 16).
First use Sept. 22, 1966.

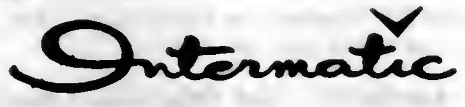
Class 39—Clothing

For Men's and Boys' Slacks, Walk Shorts, Sport Shirts, Knitted Shirts, Sweaters, Outer Jackets, Zippered Jackets, Rainwear, Trench Coats, and Hats (Int. Cl. 25).
First use Sept. 8, 1966.

Class 46—Foods and Ingredients of Foods

For Chewing Gum (Int. Cl. 30).
First use Sept. 22, 1966.

SN 266,822. International Register Company, Chicago, Ill. Filed Mar. 16, 1967.



Owner of Reg. No. 548,984.

Class 21—Electrical Apparatus, Machines, and Supplies

For Electric Lighting Fixtures and Burglar Alarms (Int. Cls. 9 and 11).
First use on or about Oct. 20, 1965.

Class 26—Measuring and Scientific Appliances

For Time Switches, Timers, and Timing Motors (Int. Cl. 9).
First use on or about Apr. 1, 1941.

Class 27—Horological Instruments

For Clocks (Int. Cl. 14).
First use 1952.

SN 266,823. Gulterman Company, Inc., New York, N.Y. Filed Mar. 16, 1967.

SEGIC

Class 19—Vehicles

For Front End Suspension and Steering Parts—Namely, Coil Springs, King Bolt Sets, Tie Rod Ends, Ball Joints, Drag Links, Steering Sectors, and Shock Absorbers (Int. Cl. 12).
First use on or about June 13, 1962.

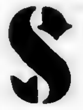
Class 21—Electrical Apparatus, Machines, and Supplies

For Generators, Generator Armatures, Starters, Starter Armatures, Starter Solenoids, Alternators; Electrical Parts—Namely, Voltage Regulators, Distributor Caps, Distributor Rotors, Condensers, Contact Point Sets, Ignition Coils, Generator Brushes, Starter Brushes, Cut-Outs, Light Relays, Horn Relays, and Switches (Int. Cls. 9 and 12).
First use Jan. 1, 1936.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

For Carburetors, Fuel Pumps, Water Pumps, Oil Pumps, Starter Drives; Engine Parts—Namely, Pistons, Piston Pins, Cylinder Sleeves, Valves, Valve Guides, Valve Springs; Exhaust System Parts—Namely, Mufflers, Exhaust Pipes, Tail Pipes; Universal Joints; and Hand Tools for Repair and Maintenance of Automotive Vehicles (Int. Cls. 8 and 12).
First use December 1956.

SN 267,553. Sports Industries, Inc., Gardena, Calif. Filed Mar. 24, 1967.



Class 22—Games, Toys, and Sporting Goods

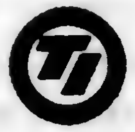
For Water Sports Equipment—Namely, Regulators, Masks, Goggles, Harnesses, Tank Assemblies, Fins, Snorkels, Spear Guns, Weights, Weight Belts, Exposure Suits, Gloves, Boots, Hoods, Inflatable Safety Vests, and Accessories Therefor (Int. Cl. 28).

Class 26—Measuring and Scientific Appliances

For Water Sports Equipment—Namely, Corrective Lenses for Masks, Pressure Gages, Decompression Meters, Watches, Depth Gauges, Compasses, and Thermometers (Int. Cl. 9).

First use July 1962.

SN 267,564. Thomas Industries Inc., Louisville, Ky. Filed Mar. 24, 1967.



Owner of Reg. Nos. 647,394, 752,104, and others.

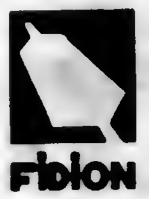
Class 21—Electrical Apparatus, Machines, and Supplies

For Electric Light Posts, Door Chimes, Transformers, Electrically Actuated Signaling Bells, Switches, Dimming and Control Equipment for Lighting Apparatus, Radio-Intercommunication Systems Including Fire Alarm and Entry Sensing Apparatus, and Parts for the Foregoing (Int. Cl. 9).
First use August 1959.

Class 34—Heating, Lighting, and Ventilating Apparatus

For Range Hoods (Int. Cl. 11).
First use on or about Apr. 18, 1966.

SN 268,687. ANIC Societa per Azioni, San Donato Milanese, Italy. Filed Apr. 10, 1967.



Priority claimed under Sec. 44(d) on Italian application filed Oct. 15, 1966; Reg. No. 217,550, dated Dec. 5, 1967.

Class 1—Raw or Partly Prepared Materials

For Raw, Partly-Finished, and Finished Textile Fibres in the Form of Filaments, Staple Fibers and Other Raw Fibrous Materials for Weaving (Int. Cl. 22).

Class 39—Clothing

For Neckties, Shirts, Drawers, Raincoats, Jackets, Stockings and Socks, Trousers, Dressing Gowns, Hats, Skirts, Petticoats, Overcoats, Coats, Mantles, Waistcoats, Nightgowns, Pajamas, Vests, Sweaters, Jerseys, Cardigans, Handkerchiefs, Kerchiefs, Scarfs, and Belts (Int. Cl. 25).

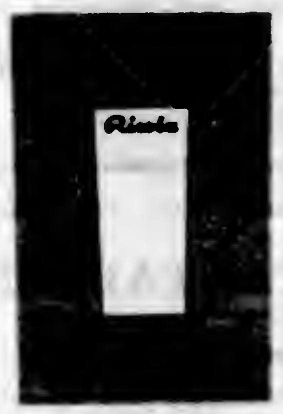
Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

For Textile Fabrics, Including Lace, Embroidery, Ribbons, Tapestry and Upholstery Cloth, for Use in Making Into Apparel and Household Articles; Curtains, Bed and Table Covers (Int. Cl. 24).

Class 43—Thread and Yarn

For Yarns and Threads (Int. Cl. 23).

SN 269,820. Richterich & Cie, Confiseriefabrik, d.b.a. Richterich & Co., Laufen, Berne, Switzerland. Filed Apr. 24, 1967.



No claim is made to the exclusive use of the representations of the herbs or the names of the herbs shown in the drawing separately and apart from the mark. Owner of U.S. Reg. No. 808,236.

Class 18—Medicines and Pharmaceutical Preparations

For Cough Drops (Int. Cl. 5).

Class 46—Foods and Ingredients of Foods

For Candy Containing Herbs (Int. Cl. 30).

First use June 1938; in commerce July 16, 1964.

SN 274,130. D. H. Baldwin Company, Cincinnati, Ohio. Filed June 19, 1967.

BALDWIN

Owner of Reg. Nos. 20,903, 701,819, and others.

Class 21—Electrical Apparatus, Machines, and Supplies

For Electronic Amplifiers for Musical Instruments (Int. Cl. 9).
First use June 19, 1947.

Class 36—Musical Instruments and Supplies

For Musical Instruments—Namely, Pianos, Electric Organs, Guitars, Banjos, Harpsichords, Trumpets, Trombones, Cornets, and Sousaphones (Int. Cl. 15).
First use in or about 1862.

SN 277,098. Sinclair Refining Company, New York, N.Y. Filed July 31, 1967.

DINOHEAT

Owner of Reg. Nos. 342,874, 779,741, and others.

Class 15—Oils and Greases

For Petroleum Waxes (Int. Cl. 4).

Class 34—Heating, Lighting, and Ventilating Apparatus

For Solid Fuel Heaters for Use in Providing Heat and Light for Orchards, Plants, Trees, Curing Concrete, Airport Runway Lights, and Other Applications Where an Open Flame Can Be Used (Int. Cl. 11).

First use Mar. 13, 1967.

SN 279,431. Centrax Limited, Newton Abbott, Devon, England. Filed Aug. 31, 1967.

CENTRAX

Owner of British Reg. Nos. 747,994, dated Nov. 14, 1965, and 889,987, dated Jan. 31, 1966.

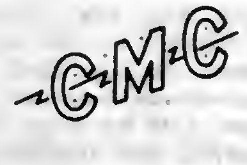
Class 21—Electrical Apparatus, Machines, and Supplies

For Electricity Generating Units and Parts Thereof (Int. Cl. 7).

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

For Machine Tools for Cutting Turbine Blades, Gas Turbines (Not for Land Vehicle Propulsion), and Parts Thereof (Int. Cl. 7).

SN 279,592. Communication Mfg. Co., Huntington Park, Calif. Filed Sept. 5, 1967.



Class 6—Chemicals and Chemical Compositions

For Solvents for Activating Adhesives From Dry, Non-Adhesive Condition To Render the Same Adhesive (Int. Cl. 1).
First use Sept. 11, 1963.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

For Wire Spool Holders; Solder Spool Holders; Flexible Arm Base Fittings; Brackets for Hangers; Cable Racks; Wire Rings; Tubing; Portable Bases; Base Plates; Guide Tracks for Movable Ladders; and Nests for Holding Feeler Gauges (Int. Cl. 6).
First use Aug. 27, 1962.

Class 21—Electrical Apparatus, Machines, and Supplies

For Magnifier Lights; Light Bulbs; Flexible Lights; Shelf Bases for Flexible Lights; Light Bases for Movable Ladders; Aluminum Strips for Wiring Terminals; Switch Stands; Lamp Bases for High Intensity Lamps; Individual Circuit Wires Used in Telephone Circuits as Identification Tags; and Telephone Stepping Switch Shorting Keys (Int. Cls. 9 and 11).
First use July 20, 1965.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

For Electric Terminal Bridging Tools; Electric Contact Scrubbing Tools; Contact-Cleaning Implements and Handles Therefor; and Tools for Tucking in Wires in Assemblies (Int. Cl. 8).
First use Aug. 23, 1965.

Class 26—Measuring and Scientific Appliances

For Polarity Testers; and Timing and Pulsing Testers (Int. Cl. 9).
First use Aug. 19, 1966.

Class 32—Furniture and Upholstery

For Mobile Work Benches; Cabinets for Relay Springs, Keys and Small Parts; and Mobile Work Bench Stools (Int. Cl. 20).
First use Aug. 20, 1965.

Class 50—Merchandise Not Otherwise Classified

For Magnetic Aisle Cords (Int. Cl. 20).
First use Aug. 23, 1965.

SN 280,362. Narco Scientific Industries, Inc., Fort Washington, Pa. Filed Sept. 15, 1967.

NARCO

Owner of Reg. No. 829,087.

Class 21—Electrical Apparatus, Machines, and Supplies

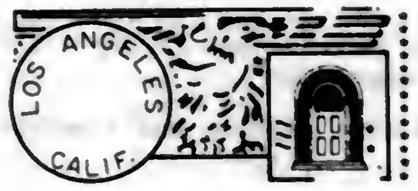
For Low Frequency, Very High Frequency, L-Band Frequency, and Audio Frequency Communication and Navigation Equipment for Aviation—Namely, Radio Transmitters, Radio Receivers, Radio Transceivers, Unicom Transceivers, VHF Receivers, VOR Receivers, ADF Receivers, Glide Slope Receivers, Marker Beacon Receivers and Indicators, Omni Converters and Indicators, Localizer and Localizer-Glide Slope Converters and Indicators, Transponders, VHF Antennas, Broad Band Antennas, NAV Antennas, Marker Beacon Antennas, Glide Slope Antennas and ADF Sense Antennas, Electronic Couplers, Electrical Switching Apparatus, and Tone Filters (Int. Cl. 9).

Class 26—Measuring and Scientific Appliances

For Left-Right Indicators, Ambiguity Indicators, Omni Range Measuring and Testing Equipment, Distance Measuring and Testing Equipment (DME), Ground Speed Indicators (GSI), Automatic Direction Finders (ADF), and Transponder Testing and Measuring Equipment (Int. Cl. 9).

First use Aug. 1, 1967.

SN 280,613. The Mailing House, Inc., Los Angeles, Calif. Filed Sept. 18, 1967.



Applicant disclaims exclusive rights to the meter mailer impression, except as used in conjunction with the representation of the front entry of a house in the stamp block as shown.

Class 100—Miscellaneous

For Consulting Services in the Field of Mailing and Publishing (Int. Cl. 42).

Class 101—Advertising and Business

For Direct Mail Advertising Services, Including Preparation of Mailing Lists, Private Mailing List Maintenance, Addressing, Mimeographing, Multigraphing, Automatic Typing, Typewriter Addressing, Mailings to Occupants, List Compiling, Label Affixing, Collating, Folding, Enclosing, Sealing, Metering, Sorting, Stamping, Bundling, Third Class Mailing, Hand Addressing, and Premium Handling (Int. Cl. 35).

First use prior to Sept. 1, 1962.

SN 286,968. ESB Incorporated, Philadelphia, Pa. Filed Dec. 15, 1967.

ESB

Owner of Reg. Nos. 730,323, 821,407, and others.

Class 12—Construction Materials

For Butyl Based Caulking and Sealing Compound (Int. Cl. 17).
First use Aug. 28, 1967.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

For Thermoplastic Hinge (Int. Cl. 20).
First use Apr. 5, 1966.

SN 288,464. Prestwick, Inc., Washington, D.C. Filed Jan. 10, 1968.

TANTALLON

Class 101—Advertising and Business

For Real Estate Brokerage, Leasing, and Management (Int. Cl. 35).

Class 102—Insurance and Financial

For Mortgaging Real Estate (Int. Cl. 36).

Class 103—Construction and Repair

For Construction, Maintenance, and Repair of Residential Communities—Namely, Houses, Public Buildings, Swimming Pools, Apartments, Marinas, Golf Courses, and Shopping Centers (Int. Cl. 37).

First use Apr. 15, 1961.

SN 288,755. Western Family Foods, Inc., San Francisco, Calif. Filed Jan. 15, 1968.

WESTERN SHORES

Class 6—Chemicals and Chemical Compositions

For Laundry Bleaches (Int. Cl. 3).

Class 52—Detergents and Soaps

For Detergents for Laundry and Household Use (Int. Cl. 3).

First use Apr. 21, 1966.

SN 289,750. Minnesota Mining and Manufacturing Company, St. Paul, Minn. Filed Jan. 29, 1968.

3M

Owner of Reg. Nos. 610,683 and 778,914.

Class 1—Raw or Partly Prepared Materials

For Synthetic Roving and Chopped Fibers (Int. Cl. 22).

Class 43—Thread and Yarn

For Yarns (Int. Cl. 23).

First use Nov. 6, 1967.

SN 289,751. Minnesota Mining and Manufacturing Company, St. Paul, Minn. Filed Jan. 29, 1968.

PLUTON

Owner of Reg. No. 734,986.

Class 1—Raw or Partly Prepared Materials

For Synthetic Roving and Chopped Fibers (Int. Cl. 22).

Class 43—Thread and Yarn

For Yarns (Int. Cl. 23).

First use Nov. 6, 1967.

SECTION 2

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Opposition under section 13 may be filed within thirty days of publication. See Rules 2.101 to 2.105.

A fee of twenty-five dollars must accompany the opposition.

[NOTE: For publication of marks presented in a combined application for registration in more than one class, see section 1.]

Class 1—Raw or Partly Prepared Materials

SN 257,181. SCM Corporation, New York, N.Y., assignee of The Glidden Company, Cleveland, Ohio. Filed Oct. 25, 1966.

POLYMARBLE

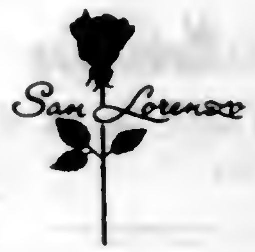
For Settable Synthetic Resinous Material Used in the Production of Cultured Marble (Int. Cl. 1).
First use June 10, 1966.

SN 260,276. Chas. Pfizer & Co., Inc., New York, N.Y. Filed Dec. 7, 1966.

PYROID

For Pyrolytic Graphite (Int. Cl. 1).
First use Aug. 15, 1962.

SN 262,443. San Lorenzo Nursery Company, Los Angeles, Calif. Filed Jan. 12, 1967.



No registration rights are claimed herein for the representation of the flower apart from the mark as shown, but applicant waives none of its common law rights therein.
For Cut Flowers (Int. Cl. 31).
First use Aug. 8, 1913.

SN 263,715. George Warner Seed Company, Inc., Hereford, Tex. Filed Jan. 31, 1967.

SUCROSSE

For Sorghum Sudangrass Hybrid Seed (Int. Cl. 31).
First use Apr. 21, 1966.

SN 271,225. Clark Bros. Felt Co., Fort Worth, Tex. Filed May 11, 1967.

DURAFLEX

For Resin Treated Cotton Felt Used for Padding in Furniture, Mattresses, and the Like, and in Packing (Int. Cl. 24).
First use Sept. 1, 1965.

SN 273,458. American Cyanamid Company, Wayne, N.J. Filed June 9, 1967.

CYGLAZE

For Synthetic Resin Molding Compound (Int. Cl. 1).
First use May 26, 1967.

SN 274,522. Interchemical Corporation, New York, N.Y. Filed June 22, 1967.

CONFORM

For Urethane Foam (Int. Cl. 17).
First use on or about Dec. 15, 1963.

SN 276,691. Rayonier Incorporated, New York, N.Y. Filed July 24, 1967.

RAYBULK

Owner of Reg. No. 380,856.
For Wood Pulp (Int. Cl. 1).
First use July 1, 1967.

SN 276,855. Ottawa Silica Company, Ottawa, Ill. Filed July 26, 1967.

BLACKHAWK

Owner of Reg. No. 373,528.
For Sand (Int. Cl. 19).
First use Oct. 1, 1924.

SN 284,788. M. J. Fassler & Co., Inc., Brooklyn, N.Y. Filed Nov. 14, 1967.

BPB

For Coated Fabrics for Making Bindings for Shoes, Handbags, Luggage, and the Like (Int. Cl. 24).
First use December 1952.

SN 291,367. Dow Badische Company, Williamsburg, Va. Filed Feb. 19, 1968.

WEATHERBRIGHT

For Synthetic Textile Fibers (Int. Cl. 22).
First use Jan. 26, 1968.

Class 2 — Receptacles

SN 242,137. Lion Packaging Products Co., Inc., Hicksville, N.Y. Filed Mar. 29, 1966.

BAG-WRAP

For Clear Plastic Household Bags in Roll Form (Int. Cl. 21).
First use Feb. 25, 1966.

SN 274,628. J & T Horlan Company Inc., Westbury, N.Y. Filed June 23, 1967.

FILTRA-MATIC

For Expansion Tanks for Use With Heating Systems (Int. Cl. 11).
First use Aug. 1, 1961.

SN 274,629. J & T Horlan Company Inc., Westbury, N.Y. Filed June 23, 1967.

EXPAND-O-MATIC

For Expansion Tanks for Use With Heating Systems (Int. Cl. 11).
First use Aug. 1, 1961.

SN 280,321. Martin Marietta Corporation, New York, N.Y. Filed Sept. 14, 1967.

NUTRI-MATIC

For Silos for Silage Storage, and Parts and Accessories Therefor, Sold as a Unit (Int. Cl. 19).
First use on or before Sept. 28, 1966.

SN 280,992. Vistron Corporation, Cleveland, Ohio. Filed Sept. 21, 1967.

T-D-M

For Garbage Bins, Trash Containers, Wastepaper Baskets, Liner Baskets, Laundry Tubs, Milk Cases, Pickling Barrels and Vats, Tote Boxes, and Packing Cases (Int. Cls. 20 and 21).
First use June 6, 1966.

SN 281,332. Vistron Corporation, Cleveland, Ohio. Filed Sept. 27, 1967.

LOMA

For Plastic Molded Goods, Specifically, Waste Baskets, Trash Cans, Bushel Baskets, Clothes Hampers, Picnic Baskets, Garbage Cans, Utility Pails, Ice Buckets, Storage Bins, Bread Baskets, Bread Boxes, Bowl Sets, Colanders, and Tissue Dispensers (Int. Cl. 21).
First use prior to Jan. 1, 1948.

SN 285,909. Container Corporation of America, Chicago, Ill. Filed Nov. 30, 1967.

CONTAINERVAC

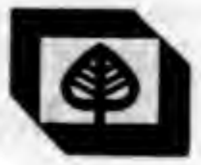
For Composite Receptacle Comprising a Plastic Bag Disposed Within a Paperboard Box (Int. Cl. 16).
First use on or before Nov. 1, 1967.

SN 285,910. Container Corporation of America, Chicago, Ill. Nov. 30, 1967.

PRODUCE-PAK

For Paperboard Box (Int. Cl. 16).
First use on or before Jan. 1, 1965.

SN 286,101. Container Corporation of America, Chicago, Ill. Filed Dec. 4, 1967.



For Paperboard Box (Int. Cl. 16).
First use on or before Jan. 1, 1965.

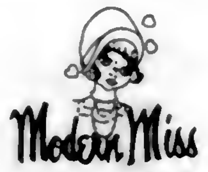
Class 3 — Baggage, Animal Equipments, Portfolios, and Pocketbooks

SN 280,848. Aetna Leather Novelty Co., Inc., West New York, N.J. Filed Sept. 21, 1967.

Jaclyn-ette

Owner of Reg. Nos. 784,632 and 820,961.
For Ladies' Handbags and Pocketbooks (Int. Cl. 18).
First use Aug. 31, 1967.

SN 280,887. Sealatron Corporation, Chicago, Ill. Filed Sept. 21, 1967.



For Children's and Ladies' Luggage, Hat Boxes, and Handbags (Int. Cl. 18).
First use Sept. 5, 1967.

SN 280,892. St. Thomas, Incorporated, Gloversville, N.Y. Filed Sept. 21, 1967.

CARETAKER

For Leather Billfolds, Pocket Secretaries, and Coin Purses (Int. Cl. 18).
First use April 1967.

Class 5 — Adhesives

SN 250,477. SCM Corporation, New York, N.Y., assignee of The Glidden Company, Cleveland, Ohio. Filed July 18, 1966.

Glidden

Owner of Reg. Nos. 134,658, 715,617, and others.
For Adhesives and Mastics for Use Primarily in Setting Wall Tile, Floor Tile, and Similar Surfacing Materials (Int. Cl. 1).
First use January 1965.

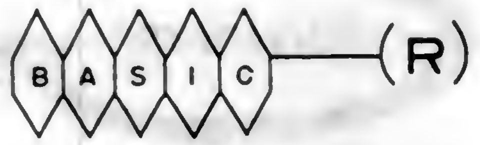
SN 278,084. The Borden Company, New York, N.Y. Filed Aug. 11, 1967.

BORDEN'S

Owner of Reg. No. 689,303 and others.
For Casein Adhesives (Int. Cl. 1).
First use May 9, 1958.

Class 6 — Chemicals and Chemical Compositions

SN 230,594. American Basic Chemicals, Inc., Midland, Tex. Filed Oct. 20, 1965.



For Liquid Organic Chemicals for Treating Soil for Stabilization, Compaction, Moisture, Seepage, and Dust Control (Int. Cl. 1).
First use Nov. 1, 1964.

SN 274,473. Watkins Products, Inc., Winona, Minn. Filed June 21, 1967.

ODER-CHEK

For Chemical Spray Used as a Deodorant and Air Freshener (Int. Cl. 5).
First use September 1940.

SN 280,094. Reichhold Chemicals, Inc., White Plains, N.Y. Filed Sept. 11, 1967.

AQUA-RID

For Chemicals Used for Treatment of Sewage, and Particularly To Remove Synthetic Detergents, Phosphate and Other Materials, Including Various Solids From Sewage (Int. Cl. 1).
First use Aug. 18, 1967.

SN 280,477. Stanley Home Products, Inc., Westfield, Mass. Filed Sept. 15, 1967.

TANGY

For Air Freshener (Int. Cl. 5).
First use Mar. 8, 1966.

SN 280,489. Texize Chemicals, Inc., Greenville, S.C. Filed Sept. 15, 1967.

FANTASTIK

For Laundry Starch (Int. Cl. 3).
First use Aug. 30, 1967.

SN 280,653. The Udylite Corporation, Warren, Mich. Filed Sept. 18, 1967.

STANNOSTAR

For Chemicals for Use in the Electrodeposition of Metals (Int. Cl. 1).
First use Aug. 14, 1967.

SN 280,784. Katalco Corporation, Chicago, Ill. Filed Sept. 20, 1967.

KATALCO

For Process Catalysts (Int. Cl. 1).
First use September 1966.

SN 280,806. Merck & Co., Inc., Rahway, N.J. Filed Sept. 20, 1967.

TOP FORM

For Insecticide and Repellent (Int. Cl. 5).
First use July 31, 1967.

SN 280,856. Continental Oil Company, Ponca City, Okla. Filed Sept. 21, 1967.

ALFONIC

For Ether Sulfates for Use as or in the Manufacture of Surfactants (Int. Cl. 1).
First use Mar. 25, 1964.

SN 281,048. Donald T. Duke, d.b.a. Duke Laboratories, Richmond, Ind. Filed Sept. 25, 1967.

D-D-S

For Germicidal Solution for Barber and Beauty Instruments (Int. Cl. 5).
First use Aug. 11, 1967.

SN 293,078. The C. B. Dolge Company, Westport, Conn. Filed Mar. 13, 1968.

PERMAX

Owner of Reg. No. 428,765.
For Insecticides (Int. Cl. 5).
First use Oct. 1, 1945.

Class 7 — Cordage

SN 274,588. Central Soya Company, Inc., Fort Wayne, Ind. Filed June 23, 1967.

GILT EDGE

Owner of Reg. No. 824,047.
For Baler and Binder Wire (Int. Cl. 6).
First use on or before May 22, 1967.

SN 277,689. N.V. Lankhorst Touwfabrieken, Sneek, Netherlands. Filed Aug. 7, 1967.

TRIPLE-"T"

For Baler Twine (Int. Cl. 22).
First use July 25, 1967; in commerce July 25, 1967.

SN 278,241. Puritan Cordage Mills, Louisville, Ky. Filed Aug. 14, 1967.

ARLINGTON

Owner of Reg. Nos. 753,679 and 758,302.
For Rope (Int. Cl. 22).
First use Oct. 16, 1962.

SN 281,154. Lion Ribbon Company, Inc., New York, N.Y. Filed Sept. 8, 1967.

SUNSHINE

For Ribbons for Floral Arrangements, and Decorative Wrapping (Int. Cl. 26).
First use in or before August 1967.

Class 8 — Smokers' Articles, Not Including Tobacco Products

SN 263,610. S. Brandt Imports, Inc., New York, N.Y. Filed Jan. 30, 1967.

DORY

For Smokers' Pipes (Int. Cl. 34).
First use Oct. 10, 1966.

SN 289,856. Ronson Corporation, Woodbridge, N.J. Filed Jan. 12, 1968.

ROVER

For Cigarette Lighters (Int. Cl. 34).
First use May 3, 1967.

Class 10 — Fertilizers

SN 272,727. Humic Acid Products, Inc., Dallas, Tex. Filed May 31, 1967.

H.A.D.

For Fertilizer Composed of Humic Acid Concentrate (Int. Cl. 1).
First use May 2, 1967.

SN 274,879. Marco Chemicals, Inc., Clinton, Ill. Filed June 27, 1967.

MARCO POLY-PHOS

For Liquid Fertilizer (Int. Cl. 1).
First use on or about May 19, 1967.

SN 278,411. Otsuka Kagaku Yakuhin Kabushiki Kaisha (Otsuka Chemical Co., Ltd.), Higashi-ku, Osaka, Japan. Filed Aug. 16, 1967.

OMH

Owner of Japanese Reg. No. 740,578, dated Apr. 28, 1967.
For Plant Growth Inhibiting Agent (Int. Cl. 1).

Class 12 — Construction Materials

SN 261,500. Jones Shutter Products, Inc., Hialeah, Fla. Filed Dec. 27, 1966.

AQUA-GUARD

The drawing is lined for the color red.
For Tub and Shower Enclosures (Int. Cl. 19).
First use Feb. 10, 1961.

SN 263,928. MacGregor-Comarain, Paris, France. Filed Feb. 3, 1967.

MAGRODOME

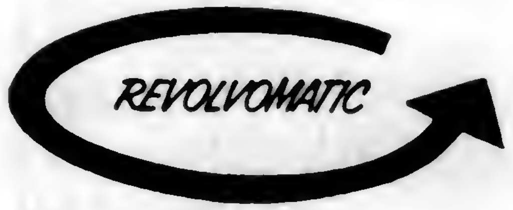
Owner of French Reg. No. 516,259, dated Oct. 9, 1963 (Seine); Natl. Inst. No. 216,924.
For Removable Roofs of the Retractable Type To Be Used To Cover Swimming Pools, Dance Floors, and the Like (Int. Cl. 19).

SN 267,278. Heinrich Biehl, Witzhave, near Trittau, Germany. Filed Mar. 21, 1967.

BIEDURAL

Owner of German Reg. No. 824,025, dated July 7, 1964.
For Dressing Cabins, Telephone Callboxes, Hot Houses, Hotbed Windows, Hogpens, e.g., Structures To House Hogs; All of the Above Articles Being Portable and Made of Synthetic Material, in Particular of Glass Fiber Reinforced Polyester Resins (Int. Cl. 19).

SN 276,433. International Steel Company, Evansville, Ind. Filed Mar. 23, 1967.



For Electrically Operated Revolving Door System (Int. Cl. 7).
First use Jan. 18, 1967.

SN 268,207. Mastic Corporation, South Bend, Inc. Filed Apr. 3, 1967.

VINYL IS FINAL

The word "Vinyl" is disclaimed apart from the mark as shown.
For Building Siding Material Formed of Polyvinylchloride (Int. Cl. 19).
First use Nov. 1, 1964.

SN 277,633. Construction Chemicals, Inc., Roanoke, Va. Filed Aug. 7, 1967.

Terroxy

For Epoxy Terrazzo Matrix (Int. Cl. 19).
First use April 1967.

SN 278,776. Amplex Manufacturing Company, Philadelphia, Pa. Filed Aug. 22, 1967.

MICRO-MATTE

For Plastic Sheeting and Panels for Lighting Fixtures, Wall Panels, and Sides (Int. Cl. 19).
First use June 7, 1963.

SN 279,302. R. J. Kirby Company, Chicago, Ill. Filed Aug. 29, 1967.

KIRBY KLAMP

For Brackets for Concrete Forms (Int. Cl. 19).
First use on or before June 1, 1966.

SN 287,807. Cyclops Corporation, Bridgeville, Pa. Filed Dec. 29, 1967.

GALV-PLUS

For Roof Deck (Int. Cl. 19).
First use Nov. 2, 1967.

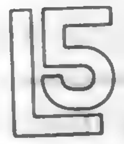
Class 13 — Hardware and Plumbing and Steam-Fitting Supplies

SN 260,303. Swish Products Limited, Tamworth, England. Filed Sept. 30, 1966.

FURNI-GLYDE

Owner of British Reg. No. 883,939, dated Sept. 7, 1965.
For Devices for Mounting and Guiding Doors, Drawers and Garment Hangers, and Parts Thereof Including Catches for the Foregoing, All Made Wholly or Principally of Plastic (Int. Cl. 20).

SN 263,587. The Lamson & Sessions Co., Cleveland, Ohio. Filed Jan. 30, 1967.



For Threaded Fasteners—Namely, Bolts (Int. Cl. 6).
First use July 1960.

SN 264,026. Charles Ayme de la Chevreliere, Paris, France. Filed Feb. 6, 1967.

SOLMATIC

Owner of French Reg. No. 712,985, dated June 29, 1966.
For Automatic Lawn and Garden Water Sprinklers.

SN 264,697. Vents, Inc., Southfield, Mich. Filed Feb. 14, 1967.

VIBRA-CONE

For Core Box Vents (Int. Cl. 6).
First use Oct. 25, 1966.

SN 266,891. Kainer Wesco Corporation, Wheeling, Ill. Filed Mar. 16, 1967.

HY-STY-LON

Owner of Reg. No. 733,655.
For Marine Rails (Int. Cl. 6).
First use on or about Sept. 29, 1966.

SN 269,739. Clayton Mark & Company, Evanston, Ill. Filed Apr. 21, 1967.

FIRE-GARD

For Ball Valves for Use With Inflammable Fluids (Int. Cl. 6).
First use Feb. 28, 1967.

SN 270,472. Bridgeport Brass Company, Bridgeport, Conn. Filed May 2, 1967.

BRASSCO WHISPER

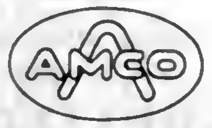
Owner of Reg. Nos. 790,215 and 788,935.
For Tank Flush Valves (Int. Cl. 6).
First use Feb. 17, 1967.

SN 270,829. Warren Fastener Corporation, Mount Clemens, Mich. Filed May 5, 1967.

NO-HOLE

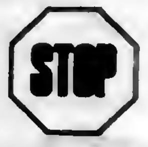
For Cooperating Fastener Elements—Namely, a Weldable Stud Element and a Fastener Element Adapted To Be Cooperatingly Engaged With the Stud Element (Int. Cl. 6).
First use about the middle of March 1963.

SN 271,418. Amco Wire Products Corp., Chicago, Ill. Filed May 15, 1967.



For Accessories for the Food Service Industry—Namely, Chafing Dishes, Racks To Hold Eating Utensils in Dishwashing Machines, Racks on Which To Store Food or Eating Utensils, and Grates for Holding and Draining Food (Int. Cls. 7 and 21).
First use February 1964; 1958 as to "Amco."

SN 271,483. Jacuzzi Bros., Incorporated, Little Rock, Ark. Filed May 15, 1967.



For Surge Suppressors for Use in Water Pressure and Like Systems (Int. Cl. 11).
First use Feb. 21, 1967.

SN 271,854. J. P. Stevens & Co., Inc., New York, N.Y. Filed May 18, 1967.

COMFORT SHADE

Applicant disclaims the word "Shade" apart from the mark as shown. Owner of Reg. No. 834,236.
For Fiberglass Screening (Int. Cl. 24).
First use at least as early as May 10, 1967.

SN 284,646. L. B. Foster Company, Pittsburgh, Pa. Filed Nov. 13, 1967.

PORTA-PIPE

For Lightweight Sections of Metal Pipe, and Valves and Fittings for Same, for Temporary Pipeline Construction in the Field (Int. Cl. 6).
First use July 1, 1967.

SN 293,665. Fast Way Fasteners, Inc., Lorain, Ohio. Filed Mar. 20, 1968.

FASTWAY

For Drive Pins, Threaded Studs, Plastic Anchors, Couplings, Self-Drilling Expansion Anchors, Machine Nuts, Discs, Wire Loops, Angle Clips, Pipe/Conduit Clamps, Suspension Fasteners, and Stud Pin Drivers, and Parts Thereof (Int. Cls. 6 and 20).
First use Oct. 9, 1957.

Class 14 — Metals and Metal Castings and Forgings

SN 279,678. Pennsylvania Steel Corporation, Detroit, Mich. Filed Sept. 5, 1967.

X-100

For Tool Steel, Bar Steel, Metal Castings and Forgings (Int. Cl. 6).
First use on or about Jan. 1, 1966.

SN 283,574. Reynolds Metals Company, Richmond, Va. Filed Oct. 27, 1967.

PLYFOIL

Owner of Reg. No. 553,509.
For Aluminous Metal Foil (Int. Cl. 6).
First use at least as early as September 1965; May 14, 1946, as to "Plifoil."

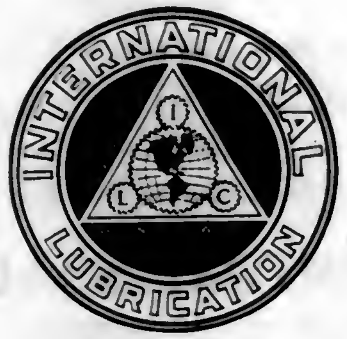
SN 286,862. Wilson Welding Alloys, Inc., Dallas, Tex. Filed Dec. 13, 1967.

PERFALLOY

For Powdered Metal Alloys for Application to Other Metals by Means of a Spray Torch (Int. Cl. 6).
First use Oct. 27, 1967.

Class 15 — Oils and Greases

SN 247,603. International Lubricant Corporation, New Orleans, La. Filed June 8, 1966.



No registration rights are claimed for the word "Lubrication," or the expression "Quality Service Around the World," apart from the mark shown, but the applicant waives none of its common law rights therein. Owner of Reg. Nos. 361,743 and 431,577.
For Lubricating Oils and Greases (Int. Cl. 4).
First use Feb. 5, 1946.

SN 283,092. Candle-Lite, Inc., Cincinnati, Ohio. Filed Oct. 23, 1967.

Fairy

For Candles (Int. Cl. 4).
First use May 1922.

SN 287,819. Hess Oil & Chemical Corporation, Perth Amboy, N.J. Filed Dec. 29, 1967.

HESS

Owner of Reg. Nos. 753,201, 836,173, and others.
For Automatic Transmission Fluid (Int. Cl. 1).
First use on or about May 31, 1967.

Class 16 — Protective and Decorative Coatings

SN 265,499. Dub-L-Kleen Chemical Corporation, College Point, N.Y. Filed Feb. 27, 1967.

DUB-L-SEAL

For Waterproof Sealing Composition for Floors, Walls, and the Like (Int. Cl. 17).
First use Sept. 19, 1966.

SN 271,959. Pressure Pak, Inc., West Palm Beach, Fla. Filed May 19, 1967.

nu kote

The drawing is lined for the color red. Owner of Reg. No. 710,439.
For Color Spray Coating for Fabrics, Vinyls, Rubber, or Leather (Int. Cl. 2).
First use Dec. 1, 1957.

SN 285,240. MacDermid Incorporated, Waterbury, Conn. Filed Nov. 20, 1967.

PHOSBLACK

For Immersion Solution for the Application of a Corrosion Resistant and Decorative Coating to Steel and Other Metals (Int. Cl. 1).
First use Oct. 15, 1963.

Class 17 — Tobacco Products

SN 238,358. P. Lorillard Company, New York, N.Y. Filed Feb. 8, 1966.

VAN LANDEWYCK'S LUXEMBOURG

Owner of Reg. No. 783,406.
For Pipe Tobacco (Int. Cl. 34).
First use Sept. 24, 1965.

SN 261,842. Stanley E. Hartman, d.b.a. Pacific Tobacco Company, Beaverton, Oreg. Filed Jan. 3, 1967.

CANCER

For Cigarettes (Int. Cl. 34).
First use Dec. 28, 1966.

SN 266,308. Danby Imported Cigar Corp., d.b.a. Danby Imported Cigars Corp., New York, N.Y. Filed Mar. 9, 1967.

DANBY

For Cigars (Int. Cl. 34).
First use July 15, 1960.

SN 267,185. St. Regis Tobacco Corporation Limited, Zurich, Switzerland. Filed Mar. 20, 1967.

Courtleigh

Owner of Swiss Reg. No. 219,154, dated July 25, 1966; and U.S. Reg. No. 759,533.
For Cigarettes (Int. Cl. 34).

SN 293,629. Larus & Brother Company, Richmond, Va. Filed Mar. 19, 1968.

WAIKIKI

For Cigarettes (Int. Cl. 34).
First use Feb. 15, 1968.

SN 293,672. Philip Morris Incorporated, New York, N.Y. Filed Mar. 20, 1968.

MODERATOR

For Cigarettes (Int. Cl. 34).
First use Mar. 1, 1968.

Class 18 — Medicines and Pharmaceutical Preparations

SN 270,666. Fleming Laboratories Incorporated, Charlotte, N.C. Filed May 4, 1967.

S/M

For Veterinary Anthelmintic Preparations (Int. Cl. 5).
First use Feb. 16, 1965.

SN 273,145. Winston Pharmaceuticals, Incorporated, Winston-Salem, N.C. Filed June 5, 1967.

CEBID

For Pharmaceutical Preparation Consisting of Ascorbic Acid Sustained Release Capsules Containing Pellets Made With a Special Sustained Release Base Providing Prolonged Therapeutic Effect of the Contents and for Use in the Treatment of Ascorbic Acid Deficiency (Int. Cl. 5).
First use May 19, 1967.

SN 273,211. Sterwin Chemicals, Inc., New York, N.Y. Filed June 6, 1967.

AZOLIX

For Anti-Infective Preparation for Veterinary Use (Int. Cl. 5).
First use Apr. 10, 1967.

SN 274,190. Dee Cee Laboratories, Inc., Madison, Tenn. Filed June 19, 1967.

MYOGESIC

For Analgesic Preparation in the Form of Liquid, Salve, and Tablets (Int. Cl. 5).
First use May 7, 1963.

SN 274,925. Allergan Pharmaceuticals, Santa Ana, Calif. Filed June 28, 1967.

SOAKATOR

For Contact Lens Soaking Solution (Int. Cl. 5).
First use June 5, 1967.

SN 274,972. The Jeffrey Martin Company, Union, N.J. Filed June 28, 1967.

Wākoz

For Preparations Used To Help Combat Drowsiness and To Help Keep Alert (Int. Cl. 5).
First use July 18, 1966.

SN 275,300. Polamer Drug Co., Inc., South River, N.J. Filed July 3, 1967.

ASPERGESIC

Owner of Reg. No. 807,466.
For Analgesic Tablets (Int. Cl. 5).
First use on or about Mar. 6, 1967.

SN 275,514. Conal Pharmaceuticals, Inc., Chicago, Ill. Filed July 7, 1967.

ANESTACON

For Urethral Anesthetic (Int. Cl. 5).
First use May 22, 1967.

SN 275,593. Abbott Laboratories, North Chicago, Ill. Filed July 10, 1967.

FP-BLEN

Owner of Reg. Nos. 734,461, 810,394, and others.
For Poultry Vaccine (Int. Cl. 5).
First use Mar. 18, 1966.

SN 275,636. Commerce Drug Co., Inc., Farmingdale, N.Y. Filed July 10, 1967.

OCU-TACT

For Wetting and Cleansing Solution for Contact Lenses (Int. Cl. 5).
First use June 24, 1963.

SN 275,637. Commerce Drug Co., Inc., Farmingdale, N.Y. Filed July 10, 1967.

OCU-DROP

For Eye Drops (Int. Cl. 5).
First use Dec. 9, 1948.

SN 292,738. Carter-Wallace, Inc., New York, N.Y. Filed Mar. 8, 1968.

JUST NICE

For Feminine Hygiene Cleansing Douche (Int. Cl. 5).
First use Jan. 31, 1968.

Class 19—Vehicles

SN 262,370. All Star Coach, Inc., Phoenix, Ariz. Filed Jan. 9, 1967.

For Pickup Truck Campers (Int. Cl. 12).
First use September 1956.

SN 270,383. Hardwick Manufacturing Co., Inc., Grandview, Mo. Filed May 1, 1967.

The drawing is lined for the color gold, but no claim is made as to color. The words "Hydraulic" and "K.C. Mo." are disclaimed apart from the mark as shown.
For Self-Unloading Construction Trucks (Int. Cl. 12).
First use Feb. 10, 1966.

SN 271,471. Hide-A-Way Jax, Inc., Fort Wayne, Ind. Filed May 15, 1967.

HIDE-A-WAY-EYE-GUARD

Owner of Reg. No. 800,278.
For Accessory for an Automobile Sun Visor To Prevent Sun Glare or Bright Lights From Affecting the Driver (Int. Cl. 12).
First use May 4, 1967.

SN 274,953. Coilform Company, Geneva, Ill. Filed June 28, 1967.

DYNAFLYTE

For Boats and Parts Therefor (Int. Cl. 12).
First use Mar. 23, 1967.

SN 277,572. Stencel Aero Engineering Corporation, Arden, N.C. Filed Aug. 4, 1967.

SCAT

For Ballistically Deployed Parachutes (Int. Cl. 12).
First use at least as early as Dec. 1, 1965.

SN 277,705. Pleasure Time Industry, South Haven, Mich. Filed Aug. 7, 1967.

PLEASURE MATE

For Camping Trailers (Int. Cl. 12).
First use Apr. 4, 1967.

SN 278,508. Mark Twain Marine Industries, Inc., Kansas City, Mo. Filed Aug. 17, 1967.

HUCK FINN

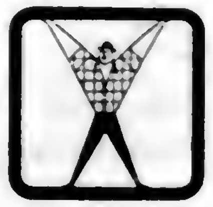
For Boats (Int. Cl. 12).
First use July 29, 1967.

SN 278,582. Dearborn Automobile Company, Inc., Marblehead, Mass. Filed Aug. 18, 1967.

DESERTER

For Automobiles (Int. Cl. 12).
First use May 31, 1967.

SN 278,819. Portland Wire and Iron Works, Portland, Oreg. Filed Aug. 22, 1967.



Owner of Reg. No. 745,713.
For Protecting Guard Canopies Used on Truck Tractors and Track Type Tractors, and Mounts and Parts for Such Canopies (Int. Cl. 12).
First use on or about Jan. 1, 1962.

SN 280,073. Liberty Coach Company, Inc., Syracuse, Ind. Filed Sept. 11, 1967.

CLIPPER

For Mobile Homes (Int. Cl. 12).
First use Nov. 11, 1966.

SN 282,157. Williams Manufacturing Co., Inc., Arlington, Tex. Filed Oct. 9, 1967.

WILLIAMS CRAFT

For Mobile Home Travel Trailers (Int. Cl. 12).
First use May 25, 1962.

SN 282,524. American Racing Equipment, Brisbane, Calif. Filed Oct. 16, 1967.

CENTRIFUGAL LOCK

For Balancing Weights for Automobile and Truck Wheels (Int. Cl. 12).
First use Sept. 5, 1962.

SN 284,052. A. O. Smith Corporation, Milwaukee, Wis. Filed Nov. 2, 1967.

Hopper Topper

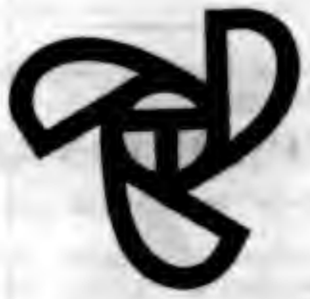
For Hatch Covers for Railway Cars, and Parts Thereof (Int. Cl. 12).
First use Sept. 22, 1967.

SN 284,515. Tollycraft Corporation, Kelso, Wash. Filed Nov. 9, 1967.

PLICOR

For Pleasure Craft Boats (Int. Cl. 12).
First use Sept. 7, 1966.

SN 284,516. Tollycraft Corporation, Kelso, Wash. Filed Nov. 9, 1967.



For Pleasure Craft Boats (Int. Cl. 12).
First use Sept. 1, 1961.

SN 284,517. Tollycraft Corporation, Kelso, Wash. Filed Nov. 9, 1967.

Tollycraft

For Pleasure Craft Boats (Int. Cl. 12).
First use July 23, 1955.

Class 21—Electrical Apparatus, Machines, and Supplies

SN 225,072. Servotronics, Inc., Cheektowaga, N.Y. Filed Aug. 5, 1965.

For Umbilical Connectors, Torque Motors, and Servo Valves (Int. Cl. 7).
First use on or about Nov. 22, 1959, on torque motors.

SN 250,391. J. J. Newberry Co., New York, N.Y. Filed July 15, 1966.

BILTMORE

For Electrically Operated Broilers (Int. Cl. 11).
First use May 2, 1966.

SN 256,242. Sigma Industries, Inc., Menlo Park, Calif. Filed Oct. 11, 1966.

SIGMAFORM

For Electrical Supplies—Namely, Heat Shrinkable Tubing, Molded Caps, Molded Boots, Enclosures, and Aperture Seals (Int. Cl. 9).
First use August 1965.

SN 256,460. Alloys Unlimited, Inc., Melville, N.Y., assignee of Micro Science Associates, Mountain View, Calif. Filed Oct. 14, 1966.

For Chemically Etched Lead Frames for Semiconductors, Magnetic Head Laminations, Etched Circuitry for Fluid Logic, and Electronic Packages for Silicon Wafers and Other Microelectronic Devices (Int. Cl. 9).
First use Aug. 6, 1962.

SN 260,011. Fred S. Boyer, d.b.a. Boyer Products Co., Chicago, Ill. Filed Dec. 5, 1966.

NOK-IN

For Closures for Holes in Electrical Junction Boxes (Int. Cl. 9).
First use Nov. 5, 1966.

SN 264,630. Myron J. Zucker, d.b.a. Myron Zucker Engineering Co., Bloomfield Hills, Mich. Filed Feb. 13, 1967.

CALMOUNT

For Capacitor Assemblies (Int. Cl. 9).
First use July 15, 1966.

SN 264,631. Myron J. Zucker, d.b.a. Myron Zucker Engineering Co., Bloomfield Hills, Mich. Filed Feb. 13, 1967.

CAPACIBANK

For Capacitor Assemblies (Int. Cl. 9).
First use January 1966.

SN 267,523. H. & A. Selmer, Inc., Elkhart, Ind. Filed Mar. 24, 1967.

Selmer

Owner of Reg. No. 384,119.
For Electronic Equipment—Namely, Microphones, Switches, Tuners, Rheostats, Loud Speakers, Preamplifiers, Basic Amplifiers, Tone Modifying Devices, and Control Apparatus for the Foregoing (Int. Cl. 9).
First use September 1939.

SN 268,192. Jerrold Electronics Corporation, Philadelphia, Pa. Filed Apr. 3, 1967.

GIBRALTAR

For Television Amplifiers (Int. Cl. 9).
First use in or about 1965.

SN 268,899. The Simco Company, Inc., Lansdale, Pa. Filed Apr. 11, 1967.

NEUTRO-VAC

For Dust Removal and Static Eliminator Systems for Cleaning Webs, Sheets, and Parts—Namely, Dust Collection and Cleaning Devices Employing Electrical Static Neutralizing Apparatus and Vacuum Suction Equipment (Int. Cl. 9).
First use on or about Aug. 22, 1963.

SN 269,577. Sound-Craft Systems, Incorporated, Morrilton, Ark. Filed Apr. 19, 1967.

SOUNDETTE

For Electrical Sound Transmission and Amplifying Equipment—Namely, Microphone Mixers, Control Amplifiers, Booster Amplifiers, Power Supplies, Console Cases for Such Equipment, and Speakers (Int. Cl. 9).
First use Jan. 26, 1967.
Subj. to Intf. with SN 281,927.

SN 273,303. Packaged Lighting Services, Inc., Yonkers, N.Y. Filed June 7, 1967.

TRAVELITER

For Electric Floodlights and Electric Spotlights, and Parts Thereof (Int. Cl. 11).
First use Mar. 29, 1967.

SN 273,304. Packaged Lighting Services, Inc., Yonkers, N.Y. Filed June 7, 1967.

BBQ-LITES

For Electric Floodlights and Electric Spotlights, and Parts Thereof (Int. Cl. 11).
First use Feb. 16, 1967.

SN 274,194. Design Progress Inc., Cleveland, Ohio. Filed June 19, 1967.

SIDE-GUARD

For Automotive Accessories, viz, Side Marker Lights for Automobiles and the Like Vehicles (Int. Cl. 11).
First use Oct. 22, 1966.

SN 274,321. Holyoke Wire and Cable Corporation, Holyoke, Mass. Filed June 20, 1967.

HOLYOKE

For Electrical Wire, Insulated Wire, Electrical Cables, Cable Connector Assemblies, and Electrical Harnesses (Int. Cl. 9).
First use June 1937.

SN 275,690. Robertson Transformer Co., Blue Island, Ill. Filed July 10, 1967.

PERMA FUSE

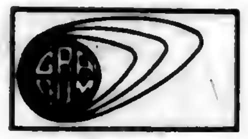
The word "Fuse" is disclaimed apart from the mark.
For Ballast for Fluorescent Lamps (Int. Cl. 11).
First use June 26, 1967.

SN 276,260. Starobin Electric Products Corporation, New York, N.Y. Filed July 18, 1967.

DURAGLOBE

For Globes for Electric Lighting Fixtures (Int. Cl. 11).
First use Feb. 16, 1967.

SN 277,165. Gracom Industries, Inc., Elmhurst, N.Y. Filed July 31, 1967.



The drawing is lined for the colors red and grey, and color is claimed as an integral portion of the mark.
For Home High Fidelity and Stereophonic Systems, Public Address Systems, and Fire and Burglar Alarms (Int. Cl. 9).
First use July 1, 1965.

SN 277,177. Industrial Suppliers Company, San Francisco, Calif. Filed July 31, 1967.

TELEPHONE VALET

The word "Telephone" is disclaimed apart from the mark as shown.
For Automatic Telephone Answering Device Which Provides a Pre-Recorded Message and Also Records the Caller's Message (Int. Cl. 9).
First use Apr. 14, 1967.

SN 277,180. Grady E. and Edna R. Jordan (joint owners), d.b.a. Casper Grinding and Supply, Casper, Wyo. Filed July 31, 1967.

MAGNA-LINE

For Magnetic Devices for Locating Cracks in Metal Objects (Int. Cl. 9).
First use Sept. 8, 1965.

SN 277,357. General Electric Company, Hendersonville, N.C. Filed Aug. 2, 1967.

POWR·SPOT

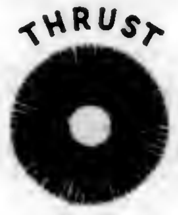
Owner of Reg. No. 750,066.
For Floodlights (Int. Cl. 11).
First use during June 1967.

SN 278,292. Fedtro, Inc., Rockville Centre, N.Y. Filed Aug. 15, 1967.

EXTEND-A-PHONE

For Telephone Extension Cords (Int. Cl. 9).
First use Aug. 8, 1967.

SN 278,749. Thrust Electronics, Inc., Chicago, Ill. Filed Aug. 21, 1967.



For Electrical Heating Units for Aiding in the Starting and Operation of Gasoline Engines (Int. Cl. 11).
First use May 26, 1967.

SN 279,816. Erie Technological Products, Inc., Erie, Pa. Filed Sept. 7, 1967.

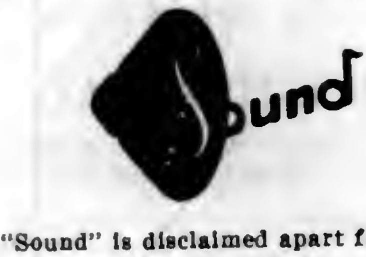
RED CAPS

For Monolithic Ceramic Capacitors (Int. Cl. 9).
First use July 17, 1967.

SN 281,385. National Union Electric Corporation, Jersey City, N.J. Filed Sept. 28, 1967.

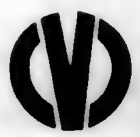
Owner of Reg. Nos. 513,610, 527,505, and others.
For Radio Receiving Sets, Electric Phonographs, Television Receiving Sets, Combination Radio Receiving Sets and Phonographs, Combination Radio and Television Receiving Sets, Combination Television Receiving Sets and Phonographs, Combination Radio Receiving Sets, Phonograph and Television Receiving Sets, and Parts for All the Foregoing (Int. Cl. 9).
First use Jan. 30, 1967.

SN 281,927. Sound Electronics Corporation, Mineola, N.Y. Filed Oct. 5, 1967.



The word "Sound" is disclaimed apart from the mark.
For Electronic Amplifiers (Int. Cl. 9).
First use Feb. 3, 1964.
Subj. to Intf. with SN 269,577.

SN 289,229. Constant Voltage Corp., Chicago, Ill. Filed May 25, 1967.



For Voltage Regulators and Controls (Int. Cl. 9).
First use March 1966.

SN 292,864. Sealectro Corporation, Mamaroneck, N.Y. Filed Mar. 11, 1968.

SEALECTROBOARD

Owner of Reg. Nos. 750,059, 750,060, and 830,118.
For Patchboard Employing Pins To Effect Circuit Selections in Programming Systems (Int. Cl. 9).
First use Jan. 15, 1968.

Class 22—Games, Toys, and Sporting Goods

SN 266,687. Paul A. Price Co., Inc., Roslyn, N.Y. Filed Mar. 14, 1967.

FOOTBALL STARS IN ACTION

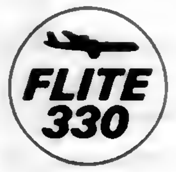
For Toy Figurines (Int. Cl. 28).
First use Mar. 6, 1967.

SN 279,057. The Electric Game Company, West Springfield, Mass. Filed Aug. 25, 1967.

FUNTRONICS

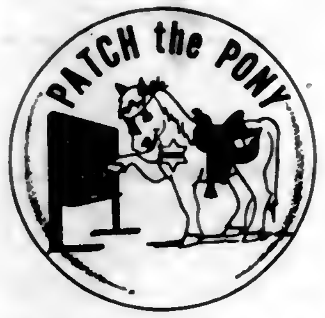
For Child's Construction Kit (Int. Cl. 28).
First use July 10, 1967.

SN 284,400. Harold J. Searer, d.b.a. Searer Rubber Company, Akron, Ohio. Filed Nov. 8, 1967.



For Golf Balls (Int. Cl. 28).
First use Aug. 30, 1967.

SN 285,497. Patch the Pony, Inc., Florence, Ala., assignee of Margaret H. Liles, Florence, Ala. Filed Nov. 24, 1967.



Without relinquishing any common law rights therein, the term "Pony" and the design representation of a pony are disclaimed apart from the mark as shown.
For Stuffed Animal Toy (Int. Cl. 28).
First use at least as early as Sept. 18, 1964.

SN 285,709. American Seating Company, Grand Rapids, Mich. Filed Nov. 28, 1967.

GREAT WOOD FLEET

No claim is made to the word "Wood" apart from the mark as shown.
For Toy Wooden Vehicles Used for Nursery and Kindergarten Classes (Int. Cl. 28).
First use on or before Oct. 25, 1967.

SN 286,127. Leon Shaffer Golnick Advertising, Inc., Baltimore, Md. Filed Dec. 4, 1967.

LITTLE PROFIT

For Dolls (Int. Cl. 28).
First use at least as early as Sept. 16, 1966.

SN 286,451. A. G. Spalding & Bros. Inc., Chicopee, Mass. Filed Dec. 7, 1967.

AWARD

For Game Rackets (Int. Cl. 28).
First use in or about November 1958.

SN 287,050. Uniroyal, Inc., New York, N.Y. Filed Dec. 15, 1967.

REGAL

Owner of Reg. Nos. 149,273, 149,533, and 808,418.
For Golf Balls (Int. Cl. 28).
First use at least as early as Nov. 1, 1967.

SN 287,607. W. J. Voit Rubber Corp., Santa Ana, Calif. Filed Dec. 26, 1967.

SNUGPACK

For Back Packs Used in Connection With the Self-Contained Underwater Breathing Apparatus Known as Scuba (Int. Cl. 28).
First use February 1960.

SN 287,861. Mattel, Inc., Hawthorne, Calif. Filed Jan. 2, 1968.

TOG' L

For Toy Construction Sets (Int. Cl. 28).
First use Nov. 2, 1967.

SN 288,375. Standard Packaging Corporation, New York, N.Y. Filed Jan. 8, 1968.

STAN PAK

Owner of Reg. Nos. 595,308, 604,047, and others.
For Games, Toys, and Sporting Goods—Namely, Paper Playing Cards, Toy Whistles, Coin Banks, Cribbage Boards, and Minnow Dippers (Int. Cls. 16 and 28).
First use at least as early as Apr. 12, 1967; Sept. 17, 1953, as to "Stanpak."

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

SN 232,584. Osaka Bearing Mfg. Co., Ltd., Sakai, Osaka, Japan. Filed Nov. 12, 1965.

HIC

Owner of Japanese Reg. No. 400,195–2, dated Feb. 2, 1951.
For Ball Bearings and Roller Bearings (Int. Cl. 7).
First use on or about Nov. 1, 1947; in commerce on or about June 1958.
Subj. to Intf. with SN 215,921.

SN 243,466. The John E. Mitchell Company, Inc., Dallas, Tex. Filed Apr. 14, 1966.

HANDYWASH

The representation of a part of applicant's goods appearing in the mark is disclaimed apart from the mark as shown.
For Pressure-Operated Car Wash Machines (Int. Cl. 7).
First use July 10, 1964.

SN 247,877. Bartlett-Snow-Pacific, Inc., San Francisco, Calif. Filed June 13, 1966.

THERMAL DISC

For Processors for Agitating and Heating or Cooling Fluent Materials, Such as Powders (Int. Cl. 11).
First use on or about May 28, 1964.

SN 249,249. Perma Sharp Manufacturing Corp., New York, N.Y. Filed June 29, 1966.

PERMA

Owner of Reg. No. 426,013.
For Stainless Steel Razor Blades (Int. Cl. 8).
First use Apr. 14, 1966.

SN 252,833. Dremel Manufacturing Company, Racine, Wis. Filed Aug. 22, 1966.

DREMEL

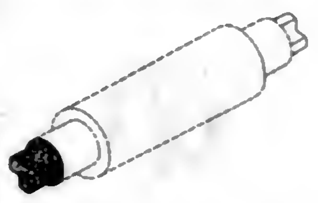
For Electric Tools—Namely, Hand-Manipulable, Rotating Chuck Type for Grinding, Drilling, Routing, Polishing, Engraving, Sanding, Sawing, Marking, De-Burring, Carving, Sharpening, Shaping, and Cutting; Hand-Manipulable, Reciprocating Sanders, Polishers, and Engravers; Both Hand-Manipulable and Mounted Jig Saws, Sanders, Grinders, and Buffers, and Hand-Manipulable Scroll Saws; and Fixtures, Flexible Shafts, and Accessories for the Above-Mentioned Tools; and Kits Comprising Various Combinations of the Above-Mentioned Tools, and Including Sand Paper, Polishing Pads, Drills, Saw Blades, Brushes, Carving Cutters, Routing Cutters, Collets, Emery Wheels, Dressing Stones, Polishing Wheels, Cut-Off Wheels, Buffing Wheels, Grinding Wheels, Wire Wheels, Engraving Points, and Mandrels (Int. Cl. 7).
First use at least as early as 1936.

SN 252,888. Pressure Pac Company, St. Paul, Minn. Filed Aug. 22, 1966.

PRESSURE-PAC

For Air-Pressure-Activated Work-Piece Holding and Feeding Devices for Use in Connection With Grinding Machines (Int. Cl. 7).
First use Feb. 5, 1966.

SN 254,359. United Engineering and Foundry Company, Pittsburgh, Pa. Filed Sept. 13, 1966.



The representation of the goods is disclaimed apart from the mark as shown. The drawing is lined for the color gold.
Owner of Reg. Nos. 222,455 and 774,462.
For Metal Rolls for Use in Rolling Mills for Metal, Paper, Plastic, and Rubber (Int. Cl. 7).
First use Mar. 27, 1935.

SN 257,162. Burgess Vibrocrafters, Inc., Grayslake, Ill. Filed Oct. 25, 1966.

BURGESS

Owner of Reg. Nos. 658,263, 660,990, and others.
For Insecticidal Fog Generating Devices Operated by Internal Combustion Engines (Int. Cl. 7).
First use Apr. 1, 1965.

SN 258,598. Shimano Kogyo Kabushiki Kaisha, Sakai, Japan. Filed Nov. 14, 1966.

TriMatic

For Variable Speed Gears and Controls for Two-Wheeled Vehicles (Int. Cl. 12).
First use at least as early as Feb. 28, 1966; in commerce Feb. 28, 1966.

SN 259,305. Louis Demarkus Corporation, Buffalo, N.Y. Filed Nov. 23, 1966.

DEMARKUS

For Food, Beverage, and Chemical Processing Equipment—Namely, Carbon Dioxide Generating and Purifying Apparatus; Nitrogen Generating Plants; Hydrogen Generating Plants; Inert Gas Generators; Gas Purification and Recovery Apparatus; Exothermic and Endothermic Gas Generators; Hop Separators; Beverage Carbonators; and Carbon Dioxide Compressors (Int. Cls. 7 and 11).
First use November 1935.

SN 259,306. Louis Demarkus Corporation, Buffalo, N.Y. Filed Nov. 23, 1966.

DE M

For Food, Beverage, and Chemical Processing Equipment—Namely, Carbon Dioxide Generating and Purifying Apparatus; Nitrogen Generating Plants; Hydrogen Generating Plants; Inert Gas Generators; Gas Purification and Recovery Apparatus; Exothermic and Endothermic Gas Generators; Hop Separators; Beverage Carbonators; and Carbon Dioxide Compressors (Int. Cls. 7 and 11).
First use November 1935.

SN 260,755. Midland Manufacturing Company, Inc., Memphis, Tenn. Filed Dec. 14, 1966.

The drawing is lined for the color red.
For Land Scraping and Leveling Units for Attachment to Tractors and the Like (Int. Cl. 7).
First use Apr. 22, 1966.

SN 261,283. Clarence O. Davidson, Lakeport, Calif. Filed Dec. 22, 1966.

DAVEBILT

For Crop Harvesting Apparatus—Namely, Pickers and Blowers for Blowing Refuse Away From Crops (Int. Cl. 7).
First use Sept. 1, 1964.

SN 262,530. Zero-Max Industries, Inc., Minneapolis, Minn. Filed Jan. 13, 1967.

FEEDSTER

For Feed Units for Feeding Work Pieces to Machine Tools (Int. Cl. 7).
First use Dec. 14, 1966.

SN 262,722. Thomson Industries, Inc., Manhasset, N.Y. Filed Jan. 17, 1967.

MAN MATION

For Manually Powered, Template Controlled Transfer Tables for Drilling and Milling (Int. Cl. 7).
First use Dec. 30, 1966.

SN 263,374. Griffin Wellpoint Corporation, New York, N.Y. Filed Jan. 26, 1967.

THE GRIFFIN WELLPOINT SYSTEMS INSURES PROTECTION

Applicant does not claim any exclusive right to the words "Wellpoint Systems" or "Insures Protection" apart from the mark as shown.
For Soil Dewatering Equipment—Namely, Wellpoints, Wellpoint Pumps, Holepunchers, and Parts for the Foregoing (Int. Cl. 7).
First use Jan. 2, 1947.

SN 264,005. Arthur W. Alexander and Elsie M. Alexander (joint owners), d.b.a. Crank Shaft Co., Los Angeles, Calif. Filed Feb. 6, 1967.

Fire-Dish

For Pistons (Int. Cl. 7).
First use Aug. 22, 1966.

SN 265,403. Spraymaster, Inc., East Farmingdale, N.Y., by change of name from Chamberlin Mfg. Corp., East Farmingdale, N.Y. Filed Feb. 24, 1967.

SPRAY-MASTER

For Compressed Air Liquid Spray Devices and Power Operated Air Compressors (Int. Cl. 7).
First use Mar. 15, 1966.

SN 268,247. W. Schneeberger AG, Roggwil, Bern, Switzerland. Filed Apr. 3, 1967.

SCHNEEBERGER

Priority claimed under Sec. 44(d) on Swiss Reg. No. 221,354, dated Nov. 11, 1966. Owner of U.S. Reg. No. 739,827.
For Precision-Type Longitudinal Guides Having Roller Bearings With Linear or Rotary Motion of the Rolling Bodies, and Roller Mounted Platforms of All Types (Int. Cl. 7).

SN 270,299. Terrazzo Machine & Supply Company, Inc., Minneapolis, Minn. Filed Apr. 28, 1967.

TERRCO

Owner of Reg. No. 634,795.
For Terrazzo Grinding and Polishing Machines (Int. Cl. 7).
First use Mar. 15, 1953.

SN 270,983. True Temper Corporation, Cleveland, Ohio. Filed May 8, 1967.

PERFECT

For Axes, Hatchets, Scythes, Hammers; and Hickory Handles for Axes, Hatchets, Scythes, Hammers, and Other Tools (Int. Cl. 8).
First use 1889.

SN 272,523. Tarrant Manufacturing Company, Saratoga Springs, N.Y. Filed May 26, 1967.

"BIG-T-Vac"

For Vacuum Street Cleaner (Int. Cl. 7).
First use May 16, 1967.

SN 275,431. Chicago Pneumatic Tool Company, New York, N.Y. Filed July 6, 1967.

TOUCH-TITE

For Power Operated Screwdrivers (Int. Cl. 7).
First use June 7, 1967.

SN 276,213. Barrett-Cravens Company, Northbrook, Ill. Filed July 18, 1967.

LTR

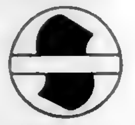
For Rack Attachment for Facilitating the Loading and Unloading of Fork Lift Trucks (Int. Cl. 7).
First use on or about June 13, 1967.

SN 276,361. The Greater Iowa Corporation, Des Moines, Iowa, assignee of Side-O-Matic Unloader Corporation, York, Pa. Filed July 19, 1967.

MOBILEER

For Industrial Hoist for Attachment to Bed of Motor Vehicle for Loading, Unloading, and Hoisting Heavy Objects (Int. Cl. 7).
First use July 6, 1967.

SN 277,084. Sundstrand Corporation, Rockford, Ill. Filed July 28, 1967.



Owner of Reg. Nos. 700,478 and 798,338.
For Pumps—Namely, Hydraulic Pumps and Lubricating Pumps (Int. Cl. 7).
First use Apr. 12, 1952.

SN 277,471. Phillips Drill Company, Michigan City, Ind. Filed Aug. 3, 1967.

606

For Percussive Hammer/Drills (Int. Cl. 7).
First use on or about Jan. 2, 1966.

SN 277,880. Brückner-Trockentechnik KG, Leonberg, Wurttemberg, Germany. Filed Aug. 9, 1967.

BRÜCKNER

Owner of German Reg. No. 820,731, dated June 16, 1966.
For Machines for the Coating, Cladding, Gelatinizing, Vulcanizing, Washing, Dyeing, Stretching, Drying, Hardening, Printing, and Hot Pressing of Webs of Material, in Particular Webs of Textiles, Paper, Plastic, and Metal (Int. Cl. 7).

SN 278,681. Fluco, Inc., Rockford, Ill. Filed Aug. 21, 1967.

FLUCO

For Components of Hydraulic Motive Power Systems—Namely, Fluid Pressure Actuators, Pressure Regulators, Lubricators, and Work Piece Supporting Slides and Guides (Int. Cl. 7).
First use Aug. 17, 1967.

SN 279,573. Spinslicer Company, Decatur, Ga. Filed Sept. 1, 1967.

SPINSLICER

For Mowing Machines (Int. Cl. 7).
First use in or about February 1967.

SN 279,638. GRS Corporation, Boulder, Colo. Filed Sept. 5, 1967.

GRAVERMEISTER

For Electric, Pneumatic Engraving Tools, and Parts Therefor (Int. Cl. 7).
First use July 8, 1966.

SN 279,850. Oliver Instrument Company, Adrian, Mich. Filed Sept. 7, 1967.

RECIPROMATIC

For Tool and Cutter Grinder (Int. Cl. 7).
First use Aug. 8, 1967.

SN 280,083. McGraw-Edison Company, Elgin, Ill. Filed Sept. 11, 1967.

ADJUST-O-CUT

For Grass Shears (Int. Cl. 8).
First use Oct. 1, 1966.

SN 283,476. Vicjet, Inc., Narberth, Pa. Filed Oct. 26, 1967.

TIGAR JET

The word "Jet" is disclaimed apart from the mark as shown.
For Fluid Driven, Hydraulic Jet Scrubbing Machines for Cleaning Tanks (Int. Cl. 7).
First use Apr. 29, 1966.

SN 283,600. Drake Engineering & Sales Corp., Los Angeles, Calif. Filed Oct. 30, 1967.

OFFY

For Internal Combustion Engines for Racing Cars, and Repair and Replacement Parts for Such Engines (Int. Cl. 12).
First use Oct. 16, 1967.

SN 287,776. Westbrook Elevator Manufacturing Co., Incorporated, Danville, Va. Filed Dec. 6, 1967.

Westbrook ELEVATORS

Applicant disclaims the word "Elevators" apart from the mark as shown.
For Freight and Passenger Elevators (Int. Cl. 7).
First use Dec. 1, 1918.

SN 288,909. Eversharp, Inc., Milford, Conn. Filed Jan. 16, 1968.

KRONA CHROME

The word "Chrome" is disclaimed apart from the mark as shown. Owner of Reg. Nos. 702,520, 817,744, and others.
For Safety Razors, Safety Razor Blades, and Dispensers Therefor (Int. Cl. 8).
First use Dec. 19, 1967.

SN 292,155. Eversharp, Inc., Milford, Conn. Filed Feb. 29, 1968.

YOUNG BLADE

The word "Blade" is disclaimed apart from the mark as shown.
For Safety Razors, Safety Razor Blades, and Dispensers Therefor (Int. Cl. 8).
First use Feb. 23, 1968.

SN 292,455. Schnellpressenfabrik Koenig & Bauer Aktiengesellschaft, Wurzburg, Germany. Filed Mar. 5, 1968.

KOEBAU RAPIDA

Owner of German Reg. No. 831,043, dated Mar. 20, 1967; and U.S. Reg. No. 642,589.
For Printing Presses (Int. Cl. 7).

Class 24 — Laundry Appliances and Machines

SN 280,081. McGraw-Edison Company, Elgin, Ill. Filed Sept. 11, 1967.

CARD-O-MATIC

For Regulator for the Operating Cycle of a Laundering Machine (Int. Cl. 7).
First use Aug. 18, 1964.

SN 281,310. New York Pressing Machinery Corporation, Paterson, N.J. Filed Sept. 27, 1967.

POLARIS 101

For Pressing Machines (Int. Cl. 7).
First use Sept. 15, 1967.

SN 282,150. Whitehouse Products, Inc., Brooklyn, N.Y. Filed Oct. 9, 1967.

the tumbler

For Laundry Nets (Int. Cl. 21).
First use on or about Aug. 7, 1967.

Class 26 — Measuring and Scientific Appliances

SN 241,439. Delta-Corders, Inc., Scottsdale, Ariz. Filed Mar. 21, 1966.

DELTA-CORDER

For Digital Incremental Magnetic Tape Recorder or Transport or System Utilizing Magnetic or Paper Tape Transports (Int. Cl. 9).
First use Nov. 12, 1965.

SN 247,822. Medelco, Incorporated, Wood Dale, Ill. Filed June 10, 1966.

MEDELCO

For Hospital Data Communication System, Comprising Data Preparation Means, Data Sending Means, Data Storage Means, and Data Readout Means (Int. Cl. 9).
First use October 1964.

SN 253,306. General Time Corporation, Stamford, Conn. Filed Aug. 29, 1966.

Weather-Mate

Owner of Reg. No. 816,589.
For Weather Instruments—Namely, Thermometers, Hygrometers, and Barometers (Int. Cl. 9).
First use July 5, 1966.

SN 255,369. United States Banknote Corporation, New York, N.Y. Filed Sept. 28, 1966.

PHOTO JET

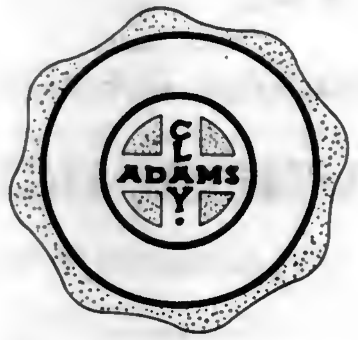
The word "Photo" is disclaimed apart from the mark as shown.
For Commercial Graphic Arts Cameras for the Making of Commercial Photographs for Use in Publications and the Like (Int. Cl. 9).
First use at least as early as Sept. 7, 1966.

SN 264,962. Rank Organisation Limited, London, England. Filed Feb. 17, 1967.

SURTRONIC

For Surface Roughness Measuring Instruments for Industrial Use (Int. Cl. 9).
First use December 1965; in commerce October 1966.

SN 267,015. Clay-Adams, Inc., New York, N.Y. Filed Mar. 17, 1967.



Owner of Reg. Nos. 667,724 and 833,314.
For Microscope Slides and Cover Glasses (Int. Cl. 9).
First use on or about Nov. 4, 1955.

SN 268,356. Bell & Howell Company, Chicago, Ill. Filed Apr. 5, 1967.

MASCOT

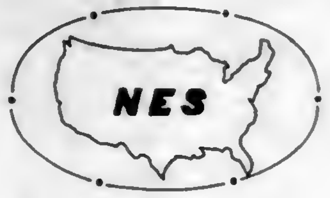
Applicant's related company owns Reg. No. 684,013.
For Microfilm Readers, i.e., Projectors (Int. Cl. 9).
First use Oct. 17, 1966.

SN 273,069. Ipco Hospital Supply Corporation, New York, N.Y. Filed June 5, 1967.

BENCH-PAK

For Laboratory Equipment—Namely, Capillary Pipettes (Int. Cl. 9).
First use Apr. 10, 1967.

SN 275,451. National Electronics Systems, Inc., Butler, Ind. Filed July 6, 1967.



The representation of the outline of the map of the United States is disclaimed apart from the mark as shown.
For Electronic Devices—Namely, Electronic Combination Smoke and Heat Detectors (Int. Cl. 9).
First use May 15, 1967.

SN 276,407. Brooks Manufacturing Company, Cincinnati, Ohio. Filed July 20, 1967.

TRIG-AIDE

For Calculating Device, Consisting of a Circular Chart and Indicator, for Assisting in Solving Trigonometic Problems (Int. Cl. 9).
First use May 27, 1967.

SN 282,348. B-D Laboratories, Inc., East Rutherford, N.J. Filed Oct. 12, 1967.

FIBROTUBE

For Coagulation Cups (Int. Cl. 9).
First use on or about June 29, 1962.

SN 282,398. Schwinn Bicycle Company, Chicago, Ill. Filed Oct. 12, 1967.

STING-RAY

Owner of Reg. No. 772,712.
For Speedometers (Int. Cl. 9).
First use May 20, 1966.

SN 285,980. Xicom Incorporated, Tuxedo, N.Y. Filed Dec. 1, 1967.

VISONIC

For Film Projectors, Viewers, and Cartridges (Int. Cl. 9).
First use May 5, 1967.

SN 290,798. Diamond Shamrock Corporation, d.b.a. Nopco Chemical Company, Cleveland, Ohio. Filed Feb. 12, 1968.

VITAMATIC

For Metering Machines for Automatically Measuring and Injecting Fixed Amounts of Vitamins Into Dairy Food Products (Int. Cl. 9).
First use Nov. 10, 1966.

Class 27 — Horological Instruments

SN 277,914. JAZ S.A., Paris, France. Filed Aug. 9, 1967.

JAZISTOR

Owner of French Reg. No. 499,356, dated Oct. 13, 1961 (Paris); Natl. Inst. No. 172,111; and U.S. Reg. No. 435,034.
For Clocks and Watches (Int. Cl. 14).

Class 28 — Jewelry and Precious-Metal Ware

SN 271,282. Oneida Ltd., Oneida, N.Y. Filed May 11, 1967.

MEDITERRANEA

For Sterling Silver Flatware (Int. Cl. 8).
First use June 27, 1966.

Class 29 — Brooms, Brushes, and Dusters

SN 268,602. Laverle F. James, Ottawa, Ontario, Canada. Filed Apr. 7, 1967.

LINTERBALL

For Dust and Cleaning Balls Made From Plastic or Synthetic Fabrics (Int. Cl. 21).
First use Feb. 1, 1965; in commerce Feb. 28, 1965.

SN 278,734. I. Sekine Company, Inc., New York, N.Y. Filed Aug. 21, 1967.

HEY KIDS

No claim is made to the word "Kids" apart from the mark as shown.
For Toothbrushes (Int. Cl. 21).
First use Aug. 2, 1967.

SN 282,601. Nif-Tee Distributing Limited, Vancouver, British Columbia, Canada. Filed Oct. 16, 1967.

NIFTEE

For Toothbrushes (Int. Cl. 21).
First use Feb. 28, 1967; in commerce May 23, 1967.

Class 31 — Filters and Refrigerators

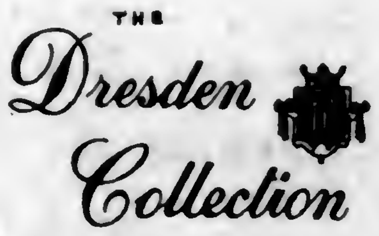
SN 270,258. Millipore Corporation, Bedford, Mass. Filed Apr. 28, 1967.

MILLITUBE

Owner of Reg. Nos. 566,930, 751,707, and others.
For Membrane Filters (Int. Cl. 11).
First use Mar. 22, 1967.

Class 32 — Furniture and Upholstery

SN 262,896. Trend Line, Inc., Hickory, N.C. Filed Jan. 19, 1967.



Without any intent to relinquish its common law rights, the applicant disclaims the word "Collection," apart from the mark as shown. The drawing is lined for the color red, but no claim is made to color.
For Living Room and Den Upholstered Furniture—Namely, Sofas, Chairs, Swivel Rockers, Ottomans, Sectionals, and Love Seats (Int. Cl. 20).
First use May 15, 1966.

SN 279,607. Acme Visible Records, Inc., Crozet, Va. Filed Sept. 5, 1967.

SLIDE-DEX

Owner of Reg. No. 796,360.
For Business Record Filing Receptacle Tubs With Shelves and Trays (Int. Cl. 20).
First use Aug. 21, 1967.
Subj. to Intf. with SN 282,052.

SN 282,052. Business Efficiency Aids, Inc., Skokie, Ill. Filed Oct. 9, 1967.

SLIDE DESK

Without waiving any of its common law rights, applicant disclaims the word "Desk," apart from the mark as shown.
For Tub Filing Cabinets (Int. Cl. 20).
First use during 1964.
Subj. to Intf. with SN 279,607.

Class 34 — Heating, Lighting, and Ventilating Apparatus

SN 259,332. Murray Iron Works Company, Burlington, Iowa. Filed Nov. 23, 1966.

UNI-WALL

For Water Tube Steam Generator (Int. Cl. 11).
First use Aug. 19, 1966.

SN 263,251. Broan Mfg. Co., Inc., Hartford, Wis. Filed Jan. 25, 1967.

LO-SONE

For Ventilators and Exhaust Fans for Buildings (Int. Cl. 11).
First use Dec. 13, 1966.

SN 266,157. Industrial Acoustics Company, Inc., Bronx, N.Y. Filed Mar. 7, 1967.

TRANQUIL-AIRE

For Ventilating Systems and Components Thereof—Namely, Blowers, Blower Enclosures, and Acoustically Treated Duct Work, Panels, and Baffles (Int. Cl. 11).
First use at least as early as Nov. 4, 1966.

SN 270,526. Chemetron Corporation, Chicago, Ill. Filed May 3, 1967.

DUAL SHIELD

For Electrodes for Electric Arc Welding and Electric Arc Welding Apparatus and Parts Thereof (Int. Cl. 9).
First use March 1957.

SN 273,385. Falcon Mfg. Company, Inc., Dallas, Tex. Filed June 8, 1967.

TOWN CRIER

For Gas Lamps (Int. Cl. 11).
First use June 1, 1967.

SN 274,017. Lisbon Industries, Incorporated, Lisbon, N. Dak. Filed May 22, 1967.

MYTEE GLO

For Portable Carbonaceous-Fueled Heaters (Int. Cl. 11).
First use Nov. 12, 1966.

SN 277,578. Waste Combustion Corporation, Richmond, Va. Filed Aug. 4, 1967.

CONSUMAT

For Incinerators (Int. Cl. 11).
First use Oct. 23, 1966.

SN 277,901. Encanto Products, Inc., Santa Barbara, Calif. Filed Aug. 9, 1967.

spun-form

For Lamp Shades and Diffusers (Int. Cl. 11).
First use June 2, 1967.

SN 279,098. Ronson Corporation, Woodbridge, N.J. Filed Aug. 25, 1967.

RONSON

Owner of Reg. Nos. 261,178, 805,495, and others.
For Broilers (Int. Cl. 11).
First use Aug. 2, 1967.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 256,731. The Fitzgerald Manufacturing Company, Torrington, Conn. Filed Oct. 19, 1966.

SEALING SANDWICH

Applicant disclaims the word "Sealing" apart from the mark as shown.
For Gaskets (Int. Cl. 17).
First use Oct. 3, 1966.

SN 275,751. Electrolux Corporation, New York, N.Y. Filed July 11, 1967.

ELECTROLUX

Owner of Reg. Nos. 195,691, 801,748, and others.
For Vacuum Cleaner Hose (Int. Cl. 17).
First use April 1924.

SN 281,570. Garlock Inc., Palmyra, N.Y. Filed Oct. 2, 1967.

MARINEPAK

For Fibrous and Braided Packings (Int. Cl. 17).
First use June 15, 1967.

SN 282,073. The B. F. Goodrich Company, Akron, Ohio. Filed Oct. 9, 1967.

DETROITER

For Pneumatic Tires (Int. Cl. 12).
First use Sept. 1, 1967.

SN 282,387. Nitto Tire Co., Ltd., Minato-ku, Tokyo, Japan. Filed Oct. 12, 1967.

NITTO

For Vehicle Tires and Tubes (Int. Cl. 12).
First use as early as 1949; in commerce in or about January 1960.

SN 282,388. Nitto Tire Co., Ltd., Minato-ku, Tokyo, Japan. Filed Oct. 12, 1967.

For Vehicle Tires and Tubes (Int. Cl. 12).
First use at least as early as January 1960; in commerce in or about January 1960.

SN 284,464. The Gates Rubber Company, Denver, Colo. Filed Nov. 9, 1967.

RIVIERA

Owner of Reg. No. 597,402.
For Pneumatic Tires (Int. Cl. 12).
First use June 22, 1964.

SN 284,671. The Kelly-Springfield Tire Company, Cumberland, Md. Filed Nov. 13, 1967.

RPM

For Tires (Int. Cl. 12).
First use June 2, 1967.

Class 36 — Musical Instruments and Supplies

SN 276,250. Rheem Manufacturing Company, New York, N.Y. Filed July 18, 1967.

THE PRO LINE

For Tape Recorders and Parts Thereof (Int. Cl. 9).
First use Apr. 18, 1967.

SN 276,969. Vanguard Recording Society, Inc., New York, N.Y. Filed July 27, 1967.

VANGUARD

Owner of Reg. No. 657,141.
For Grooved Phonograph Records (Int. Cl. 9).
First use Sept. 1, 1950.

SN 277,341. Boise Cascade Corporation, Boise, Idaho. Filed Aug. 2, 1967.

CASCADE

Owner of Reg. Nos. 764,146, 787,404, and 799,457.
For Magnetic Tape (Int. Cl. 9).
First use on or about Oct. 1, 1966.

SN 278,321. Synthetic Plastics Co., Newark, N.J. Filed Aug. 15, 1967.

PETER PAN

For Mechanically Grooved Phonograph Records (Int. Cl. 9).
First use on or about Oct. 1, 1947.

SN 278,929. Web IV Music, Inc., New York, N.Y. Filed Aug. 23, 1967.

BANG

For Phonograph Records (Int. Cl. 9).
First use Mar. 30, 1965.

SN 279,116. Tenna Corporation, Warrensville Heights, Ohio. Filed Aug. 25, 1967.

Cranwood

For Stereo Tape Players (Int. Cl. 9).
First use June 30, 1967.

SN 287,782. Ernie Ball, Inc., Tarzana, Calif. Filed Dec. 29, 1967.

ERNIE BALL

"Ernie Ball" is the nickname of Roland S. Ball, president of applicant corporation, whose consent is of record.
For Strings for Musical Instruments—Namely, Guitars (Int. Cl. 15).
First use on or about Jan. 31, 1962.

Class 37— Paper and Stationery

SN 258,104. The Hamlin Press Limited, London, England. Filed Nov. 7, 1966.

INTEK

Priority claimed under Sec. 44(d) on British Reg. No. 894,274, dated May 6, 1966.
For Recording Charts and Graphs (Int. Cl. 16).

SN 258,902. Eaton Allen Corp., Brooklyn, N.Y. Filed Nov. 17, 1966.

CO-REC-TOR

Owner of Reg. Nos. 749,243, 749,244, and 751,751.
For Coated Paper and Paper-Like Material for Masking Erroneous Typed Impressions (Int. Cl. 16).
First use Sept. 29, 1966.

SN 264,202. Eaton Allen Corp., Brooklyn, N.Y. Filed Feb. 8, 1967.

KO-REC-KIT

Owner of Reg. Nos. 736,991, 751,751, and 801,347.
For Paper Containing a Coating of a Transfer Substance for Correcting Original Typewritten Copies and Carbon Copies by Masking Erroneously Typed Impressions So as To Prepare the Paper for Receiving a Different Impression (Int. Cl. 16).
First use May 2, 1961.

SN 265,926. Louis Schnyder, d.b.a. International Business Systems, Philadelphia, Pa. Filed Mar. 3, 1967.

IBS

For Business Forms (Int. Cl. 16).
First use Sept. 15, 1966.

SN 269,429. Ketcham and McDougall, Inc., Roseland, N.J. Filed Apr. 18, 1967.

MEMOMATIC

For Memorandum Boxes and Accessories Therefor—Namely, Pads and Pencils, and Reels To Hold Accessories Such as Pencils (Int. Cl. 16).
First use July 17, 1946.

SN 271,075. Frank Y. Sherbondy, d.b.a. The Coat Retainer Company, San Antonio, Tex. Filed May 9, 1967.

THE SHORTWUN

For Garment Form Retainers—Namely, Strips of Cardboard, or the Like, Which Can Be Interlocked With the Front Panels of a Coat-Type Garment To Properly Position the Garment While Hung on a Hanger (Int. Cl. 16).
First use May 8, 1967.

SN 276,372. S. E. & M. Vernon, Inc., New York, N.Y. Filed July 19, 1967.

ROYALERASE

Owner of Reg. No. 544,106.
For Writing Paper (Int. Cl. 16).
First use June 1, 1967.

SN 280,548. The Budd Company, Philadelphia, Pa. Filed Sept. 18, 1967.

CIRPAKE

For Writing Paper (Int. Cl. 16).
First use at least as early as Mar. 2, 1967.

SN 280,549. The Budd Company, Philadelphia, Pa. Filed Sept. 18, 1967.

WINDWOOD

For Writing Paper (Int. Cl. 16).
First use at least as early as February 1966.

SN 280,713. Koh-I-Noor, Inc., Bloomsbury, N.J. Filed Sept. 19, 1967.

GLIDOMATIC

Owner of Reg. No. 435,303.
For Pencils and Fiber Tipped Markers (Int. Cl. 16).
First use Aug. 17, 1967.

SN 280,973. Scott Paper Company, Delaware County, Pa. Filed Sept. 22, 1967.

Owner of Reg. Nos. 787,427, 787,575, and 787,635.
For Printing and Converting Papers, Plastic Wrap, Paper Placemats, and Paper Tablecloths (Int. Cls. 16 and 17).
First use about Mar. 31, 1965.

SN 280,975. Scott Paper Company, Delaware County, Pa. Filed Sept. 22, 1967.

FAMILY WALDORF

Owner of Reg. Nos. 292,857, 548,353, and 553,530.
For Bathroom Tissue (Int. Cl. 16).
First use about June 26, 1967.

SN 281,221. Reynolds Metals Company, Richmond, Va. Filed Sept. 26, 1967.

HSM

For Transparent Plastic Film Packaging (Int. Cl. 17).
First use at least as early as Sept. 15, 1967.

SN 293,079. Fox River Paper Corporation, Appleton, Wis. Filed Mar. 13, 1968.

RAZZLEBERRY

For Writing Paper (Int. Cl. 16).
First use Mar. 7, 1968.

SN 293,081. Fox River Paper Corporation, Appleton, Wis. Filed Mar. 13, 1968.

PUMPKIN

For Writing Paper (Int. Cl. 16).
First use Feb. 26, 1968.

SN 293,082. Fox River Paper Corporation, Appleton, Wis. Filed Mar. 13, 1968.

LEMON TWIST

For Writing Paper (Int. Cl. 16).
First use Feb. 26, 1968.

Class 38 — Prints and Publications

SN 266,641. Claud Bonnar, London, England. Filed Mar. 14, 1967.

"METROGRID"

Priority claimed under Sec. 44(d) on British Reg. No. 900,736, dated Oct. 21, 1966.
For Maps (Int. Cl. 16).

SN 269,740. James D. Collier & Co., Memphis, Tenn. Filed Apr. 21, 1967.

BINGO·BANGO·BONGO

For Equipment, Sold as a Unit to Others, for Use as an Incentive Cash Distribution Game (Int. Cl. 28).
First use Jan. 4, 1967.

SN 282,698. Warren G. Harding, Inc., Sarasota, Fla. Filed Oct. 17, 1967.

AMERICAN EXCHANGOR

For Periodical Publication Relating to the Sale and Exchange of Real Property (Int. Cl. 16).
First use Aug. 12, 1967.

Class 39 — Clothing

SN 257,318. Sullivan Clothing Company, Incorporated, Norfolk, Va. Filed Oct. 26, 1966.

The word "Menswear" is disclaimed apart from the mark as shown.
For Suits of Clothing, Pants, Jackets, Shirts, and Slacks (Int. Cl. 25).
First use Aug. 20, 1966.

SN 263,125. States Nitewear Mfg. Co., Inc., New York, N.Y. Filed Jan. 23, 1967.

SUNBRERO

For Ladies' and Girls' Lounge Wear, Such as Shifts (Int. Cl. 25).
First use on or about Dec. 29, 1966.

SN 263,808. Bel-Mor Knitwear, Inc., New York, N.Y. Filed Feb. 2, 1967.

NYCRA

For Ladies' Sweaters, Suits, Skirts, and Pants (Int. Cl. 25).
First use Jan. 18, 1967.

SN 263,915. Imperial Handkerchief Mfg. Co., New York, N.Y. Filed Feb. 3, 1967.

***Imperial**

For Handkerchiefs (Int. Cl. 25).
First use at least as early as 1954.

SN 264,608. The Strouse, Adler Company, New Haven, Conn. Filed Feb. 13, 1967.

"Willowy" by
Smoothie

Owner of Reg. Nos. 585,276, 811,380, and others.
For Foundation Garments (Int. Cl. 25).
First use Jan. 20, 1967.

SN 267,615. Costa de Majorca Inc., New York, N.Y. Filed Mar. 27, 1967.

MULTIPAK

For Rainwear (Int. Cl. 25).
First use Mar. 1, 1967.

SN 267,677. Salem Shoe Manufacturing Company, Salem, Mass. Filed Mar. 27, 1967.

For Shoes (Int. Cl. 25).
First use on or about Oct. 22, 1959.

SN 272,310. J. Schoeneman, Inc., Owings Mills, Md. Filed May 24, 1967.

Briar AND Hearth

For Men's Suits, Vests, Coats, and Trousers (Int. Cl. 25).
First use Jan. 26, 1961.

SN 274,521. Everett K. Hunt, Baltimore, Md. Filed June 22, 1967.

MOD MITTS

The word "Mitts" is disclaimed apart from the mark as shown.
For Plastic, Leakproof Hair Coloring Gloves (Int. Cl. 25).
First use June 9, 1967.

SN 275,291. Pacific Paper Products, Inc., Tacoma, Wash. Filed July 3, 1967.

Sanidrape

Owner of Reg. No. 779,479.
For Polyethylene Medical Examination Gowns (Int. Cl. 25).
First use Feb. 28, 1967.

SN 275,430. Casualcraft, Inc., New York, N.Y. Filed July 6, 1967.

PERMA-JAC

For Outer Clothing, Particularly Coats (Int. Cl. 25).
First use on or about Jan. 15, 1967.

SN 275,476. Spartans Industries, Inc., New York, N.Y. Filed July 6, 1967.

WINDOW
PANE

For Hosiery (Int. Cl. 25).
First use June 9, 1967.

SN 275,959. Robinson Manufacturing Co., Dayton, Tenn. Filed July 13, 1967.

LORD DAYTON

Owner of Reg. No. 350,881.
For Male Underwear (Int. Cl. 25).
First use at least as early as November 1936.

SN 276,486. Sylva Manufacturing Corporation, New York, N.Y. Filed July 20, 1967.

BUNNYWARMER

For Single Unit Garment Covering a Child's Entire Body, Including the Feet, in Which the Child Can Walk or Sleep, Familiarly Known as a Sleep and Walk Garment (Int. Cl. 25).
First use Mar. 6, 1967.

SN 277,271. The Enro Shirt Company, Inc., Louisville, Ky. Filed Aug. 1, 1967.

HALF-TRACK

Owner of Reg. No. 786,468.
For Shirts, Sport Shirts, and Pajamas (Int. Cl. 25).
First use July 15, 1967.

SN 278,311. McCallie Shoe Co., Knoxville, Tenn. Filed Aug. 15, 1967.

BLUE GOLD

For Boys' and Girls' Shoes (Int. Cl. 25).
First use 1935.

SN 278,318. Skier Enterprises Inc., Brooklyn, N.Y. Filed Aug. 15, 1967.

SKIER'S BEAUTY CROWN

For Hair-Do Protector (Int. Cl. 26).
First use July 1967.

SN 278,820. Raymond's, Inc., Boston, Mass. Filed Aug. 22, 1967.

TRUDI LEE

The name "Trudi Lee" is fanciful and not the name of a particular designer of wearing apparel.
For Women's, Misses', and Juniors' Sportswear—Namely, Slacks, Sweaters, Shorts, Skirts, Jackets, Blouses, and Dresses (Int. Cl. 25).
First use Mar. 22, 1967.

SN 279,068. William Hahn & Co., Washington, D.C. Filed Aug. 25, 1967.

André Beauvort

"Andre Beauvort" is not the name of a particular living individual.
For Shoes (Int. Cl. 25).
First use June 14, 1967.

SN 279,106. Sherry Manufacturing Company, Inc., Miami, Fla. Filed Aug. 25, 1967.

For Ready-To-Wear Ladies' Terry Cloth and Cotton Robes, Jackets, and Shifts (Int. Cl. 25).
First use Apr. 3, 1967.

SN 279,215. Palm Beach Company, Portland, Maine. Filed Aug. 28, 1967.

SPRINGLITE

For Men's and Boys' Suits, Slacks, Coats, Trousers, and Sportcoats (Int. Cl. 25).
First use May 24, 1967.

SN 279,394. The Goodyear Tire & Rubber Company, Akron, Ohio. Filed Aug. 30, 1967.

CROSS HATCH

For Rubber Heels (Int. Cl. 25).
First use Aug. 4, 1967.

SN 279,475. Glensder Corporation, New York, N.Y. Filed Aug. 31, 1967.

MINI-TOPPER

For Ladies', Misses', and Girls' Outerwear—Namely, Shifts, Blouses, Scarfs, and Shrugs (Int. Cl. 25).
First use June 29, 1966.

SN 279,541. Arthur De Santis, Revere, Mass. Filed Sept. 1, 1967.

JO-BAR

For Women's Hosiery (Int. Cl. 25).
First use June 10, 1964.

SN 279,591. Anne Fogarty, Inc., New York, N.Y. Filed Sept. 5, 1967.

A. F. BOUTIQUE

For Ladies' Clothing and Accessories Therefor—Namely, Dresses, Suits, Blouses, Costumes, Coats, Slacks, Jackets, Shoes, and Fur Garments (Int. Cl. 25).
First use at least by November 1962.

SN 279,726. Fit-Rite Pants Company, Inc., New York, N.Y. Filed Sept. 6, 1967.

Owner of Reg. Nos. 724,246 and 755,582.
For Men's and Boys' Trousers and Slacks (Int. Cl. 25).
First use Aug. 21, 1967.

SN 279,931. Curlee Clothing Company, St. Louis, Mo. Filed Sept. 8, 1967.

PRE-EMPTOR

For Men's Suits, Topcoats, Sport Coats, and Slacks (Int. Cl. 25).
First use July 10, 1967.

SN 279,932. Curlee Clothing Company, St. Louis, Mo. Filed Sept. 8, 1967.

EPITOME

For Men's Suits, Topcoats, Sport Coats, and Slacks (Int. Cl. 25).
First use July 7, 1967.

SN 279,963. Slumbertogs, Inc., New York, N.Y. Filed Sept. 8, 1967.

FOOT WARMER

Owner of Reg. Nos. 772,384, 816,652, and others.
For Nightgowns (Int. Cl. 25).
First use Aug. 15, 1967.

SN 280,025. Curlee Clothing Company, St. Louis, Mo. Filed Sept. 11, 1967.

MASTER'S CHOICE

For Men's Suits, Topcoats, Sport Coats, and Slacks (Int. Cl. 25).
First use Aug. 23, 1967.

SN 280,501. Wolverine World Wide, Inc., Rockford, Mich. Filed Sept. 15, 1967.

HUSH PUPPIES

Owner of Reg. No. 663,849 and others.
For Clothing for Men, Women, and Children—Namely, Coats, Jackets, Dresses, Blouses, Skirts, Slacks, Trousers, Shirts, Sweaters, Belts, and Gloves (Int. Cl. 25).
First use on or about Nov. 1, 1966.

SN 280,589. John Hamilton Corp., New York, N.Y. Filed Sept. 18, 1967.

INSTA-SET

For Hair Set Cap (Int. Cl. 25).
First use Nov. 24, 1966.

SN 280,702. Goldring Inc., New York, N.Y. Filed Sept. 19, 1967.

RONLEY

Owner of Reg. No. 327,997.
For Fur Garments for Women, Including Coats, Stoles, Jackets, Capes, and Scarves (Int. Cl. 25).
First use Feb. 15, 1935.

SN 280,867. Gayar Shoe Corp., New York, N.Y. Filed Sept. 21, 1967.

OLLETANO

For Women's Shoes (Int. Cl. 25).
First use on or about July 10, 1966.

SN 281,365. Fairview Manufacturing Co., Inc., New York, N.Y. Filed Sept. 28, 1967.

CARRIAGE WHEEL

For Women's Dresses and Suits for Sport Wear and Dress Wear (Int. Cl. 25).
First use Dec. 16, 1966.

SN 283,900. Maury H. Joseph, New York, N.Y. Filed Nov. 1, 1967.

SKORT

For Combination Skirts and Shorts (Int. Cl. 25).
First use May 16, 1967.
Subj. to Intf. with SN 284,766.

SN 284,766. Valor, Inc., New Bedford, Mass. Filed Nov. 13, 1967.

SKOAT

For Ensembles Consisting of Matching Coat and Pant-Dresses (Int. Cl. 25).
First use Oct. 25, 1967.
Subj. to Intf. with SN 283,900.

SN 285,661. Happy Legs, Inc., New York, N.Y. Filed Nov. 27, 1967.

HAPPY LEGS

For Slacks and Pants Suits (Int. Cl. 25).
First use Oct. 26, 1967.

SN 285,864. Sportempos, Inc., New York, N.Y. Filed Nov. 29, 1967.

SUBURBIA

U.S.A.

The letters "U.S.A." are disclaimed apart from the mark as shown. Owner of Reg. Nos. 661,077 and 777,058.
For Ladies' Dresses (Int. Cl. 25).
First use Oct. 23, 1967.

SN 289,358. Uniroyal, Inc., New York, N.Y. Filed Jan. 22, 1968.

HI-KWIK

For Overshoes (Int. Cl. 25).
First use at least as early as 1940.

SN 291,671. Maidenform, Inc., New York, N.Y. Filed Feb. 23, 1968.

ARIA

For Foundation Garments and Lingerie (Int. Cl. 25).
First use Jan. 12, 1968.

SN 292,839. Blue Bell, Inc., Greensboro, N.C. Filed Mar. 11, 1968.

BIG BEN

Owner of Reg. Nos. 534,184, 632,757, and 814,077.
For Socks (Int. Cl. 25).
First use Feb. 8, 1968; July 1, 1915, on related goods.

SN 293,197. Camp and McInnes, Inc., Reading, Pa. Filed Mar. 14, 1968.

SUPER BOWL

For Men's Hosiery (Int. Cl. 25).
First use Mar. 8, 1968.

SN 293,200. Kops Bros., Inc., New York, N.Y. Filed Mar. 14, 1968.

CLICK-IT

Owner of Reg. No. 245,278.
For Women's Foundation Garments (Int. Cl. 25).
First use Mar. 1, 1968.

Class 40 — Fancy Goods, Furnishings, and Notions

SN 266,704. The Union Pin Company, Winsted, Conn. Filed Mar. 14, 1967.

MOMONIC

For Common Pins and Safety Pins (Int. Cl. 26).
First use at least as early as Nov. 30, 1966.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 267,202. Textiles Inc., Fall River, Mass. Filed Mar. 20, 1967.

WUNDERWALE

For Permanent Press Corduroy Fabric (Int. Cl. 24).
First use June 1, 1966.

SN 284,181. FMC Corporation, Philadelphia, Pa. Filed Nov. 6, 1967.

AVLIN

Owner of Reg. Nos. 695,742 and 707,600.
For Textile Fabrics for Use in Home Furnishings Including, e.g., Draperies, Curtains, Bedspreads, Table Covers, Slip Covers, Upholstery, and the Like; Also for Floor Coverings, e.g., Rugs, Carpets, and the Like (Int. Cls. 24 and 27).
First use Oct. 9, 1967.

SN 284,292. Courtaulds, Limited, London, England. Filed Nov. 7, 1967.

HARTUFT

Owner of British Reg. No. 891,505, dated Mar. 4, 1966.
For Carpets (Int. Cl. 27).

SN 293,085. Imperial Satin, Inc., Barrington, Ill. Filed Mar. 13, 1968.

SLEEP-IN-BEAUTY

For Friction-Proof Pillow Cover (Int. Cl. 24).
First use Feb. 12, 1968.

Class 43 — Thread and Yarn

SN 282,183. Filatures Prouvost-Masurel & Cie, La Lainiere de Roubaix, Roubaix (Nord), France. Filed Oct. 10, 1967.

PINGOREX

Owner of French Reg. No. 721,663, dated Mar. 17, 1967.
For Yarns and Threads (Int. Cl. 23).

Class 44 — Dental, Medical, and Surgical Appliances

SN 248,249. Physionic Engineering, Inc., Longmont, Colo. Filed June 16, 1966.

PORTASCAN

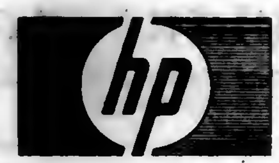
For Ultrasonic Diagnostic Equipment Used in the Field of Echoencephalography (Int. Cl. 10).
First use Jan. 21, 1964.

SN 248,859. Physionic Engineering, Inc., Longmont, Colo. Filed June 17, 1966.

PHYSIONIC PORTASCAN

For Ultrasonic Diagnostic Equipment Used in the Field of Echoencephalography (Int. Cl. 10).
First use Mar. 8, 1963.

SN 259,729. Hewlett-Packard Company, Palo Alto, Calif. Filed Nov. 30, 1966.



The drawing is lined for blue, but color is not claimed as an essential feature of the mark. Owner of Reg. Nos. 540,523, 645,097, and others.
For Medical Systems, Instruments, and Apparatus Used for Research, Diagnostic, or Therapeutic Purposes—Namely, Cardiological Instruments, Blood Chemistry Instruments, Stethoscopes, Metabolism Testing Instruments, Patient Monitoring and Recording Systems, Resuscitative Instruments, and Transducers, Electrodes, Preamplifiers, Oscillographic Recorders, Magnetic Tape Recorders, and Data Displays for Use in Physiological Measurements or Recording and Displaying Physiological Phenomena (Int. Cl. 10).
First use Apr. 22, 1966.

SN 261,573. Cordis Corporation, Miami, Fla. Filed Dec. 28, 1966.

STANDBY VENTRICOR

Owner of Reg. No. 773,750.
For Cardiac Pacer (Int. Cl. 10).
First use Oct. 27, 1966.

SN 261,680. Ralph R. Robinson, Middlesboro, Ky. Filed Dec. 29, 1966.

UTRACEPTOR

For Intra-Uterine Pessary for Fertility Control (Int. Cl. 10).
First use Apr. 17, 1966.

SN 270,752. Bio-Medical Systems, Inc., Danbury, Conn. Filed May 5, 1967.

SCIRT

For Medical Transponder—Namely, a Device for Causing the Flow of Body Fluids Exteriorly of the Body (Int. Cl. 10).
First use December 1966.

SN 271,043. Jacques Andre George Guy Henri de Gachassin-Lafite, the Vicomte d'Orthez, London, England. Filed May 9, 1967.

SABONA

Owner of British Reg. No. 800,834, dated Jan. 26, 1960.
For Copper Bracelets Having Thermal Qualities, for Use in the Relief of Rheumatism and Similar Ailments (Int. Cl. 10).

SN 279,357. Baxter Laboratories, Inc., Morton Grove, Ill. Filed Aug. 30, 1967.

TRIFLEX

For Disposable Vinyl Examination Gloves for Medical Uses (Int. Cl. 10).
First use Dec. 18, 1964.

SN 279,856. Propper Manufacturing Company, Inc., Long Island City, N.Y. Filed Sept. 7, 1967.

MI-THERM

For Thermometer Set Comprising a Clinical Thermometer, a Thermometer Case, a Holder for Said Thermometer and Case, and a Packet of a Germicidal Agent (Int. Cl. 10).
First use Aug. 15, 1967.

SN 280,384. Baxter Laboratories, Inc., Morton Grove, Ill. Filed Sept. 15, 1967.

ULTRA-FLO

For Disposable Coil Unit for Treatment of Uremia (Int. Cl. 10).
First use July 18, 1967.

SN 280,754. Abbott Laboratories, North Chicago, Ill. Filed Sept. 20, 1967.

ABBOCATH

For Indwelling Catheter (Int. Cl. 10).
First use Jan. 14, 1966.

SN 281,732. Troy Industries Inc., Tuckahoe, N.Y. Filed Oct. 3, 1967.

BLUSHING BEAUTY

For Facial Saunas, Sold Separately or as a Kit With Skin Moisturizer, Skin Freshener, and Facial Tones (Int. Cl. 11).
First use July 13, 1967.

Class 46 — Foods and Ingredients of Foods

SN 253,147. J. D. Jewell, Inc., d.b.a. J-Bird Farms, Gainesville, Ga. Filed Aug. 25, 1966.

J-BIRD FARMS

For Frozen and Precooked and Breaded Chicken (Int. Cl. 29).
First use Aug. 6, 1966.

SN 258,993. P. Ferrero & C. S.p.A., Alba, Cuneo, Italy. Filed Nov. 18, 1966.

NUTELLA

Owner of Italian Reg. No. 164,196, dated Oct. 10, 1963.
For Spread Containing Cocoa and Other Ingredients (Int. Cl. 29).

SN 267,005. The Borden Company, New York, N.Y. Filed Mar. 17, 1967.

NEW LONDON

For Swiss Cheese (Int. Cl. 29).
First use March 1962.

SN 269,421. SCM Corporation, New York, N.Y., assignee of The Glidden Company, d.b.a. Durkee Famous Foods, Cleveland, Ohio. Filed Apr. 18, 1967.

MAYDEX

For Mono and Diglycerides Used as Food Emulsifiers (Int. Cl. 1).
First use Feb. 20, 1965.

SN 273,704. Watkins Products, Inc., Winona, Minn. Filed June 12, 1967.

Krop Keep

For Preservative for the Control of Enzymes in Hay, Silage, and Grain Which Are Used as Livestock Feeds (Int. Cl. 1).
First use Mar. 15, 1966.

SN 279,446. Antra Corp., Tampa, Fla. Filed Aug. 31, 1967.

MR. PZ

For Cheddar Cheese Snacks (Int. Cl. 30).
First use May 31, 1967.

SN 279,447. Antra Corp., Tampa, Fla. Filed Aug. 31, 1967.

MR. PRETZ

For Cheddar Cheese Snacks (Int. Cl. 30).
First use May 31, 1967.

SN 282,021. Mead Johnson & Company (Delaware corporation), Evansville, Ind., assignee of Mead Johnson & Company (Indiana corporation), Evansville, Ind. Filed Oct. 6, 1967.

SKIMMERS

For Meat and/or Vegetable Flavored Low Calorie Snack Dip (Int. Cl. 5).
First use on or prior to Sept. 22, 1967.

SN 285,059. Ralston Purina Company, St. Louis, Mo. Filed Nov. 16, 1967.

HI-PROTENA

For Hog Feed (Int. Cl. 31).
First use Oct. 26, 1967.

SN 285,447. National Biscuit Company, New York, N.Y. Filed Nov. 22, 1967.

SOUPETTES

For Crackers (Int. Cl. 30).
First use Sept. 14, 1967.

SN 285,448. National Biscuit Company, New York, N.Y. Filed Nov. 22, 1967.

TIPPY & MITTY

For Cookies (Int. Cl. 30).
First use Nov. 3, 1967.

SN 285,449. National Biscuit Company, New York, N.Y. Filed Nov. 22, 1967.

LITTLE BITES

For Crackers (Int. Cl. 30).
First use Sept. 14, 1967.

SN 285,450. National Biscuit Company, New York, N.Y. Filed Nov. 22, 1967.

SOUPIES

For Crackers (Int. Cl. 30).
First use Sept. 14, 1967.

SN 285,669. O. G. Meyer Candy Company, Chicago, Ill. Filed Nov. 27, 1967.

OH-GEE

For Sugarless Hard Candy (Int. Cl. 30).
First use Nov. 14, 1967.

SN 286,555. Risser-Martin, Incorporated, Harrisonburg, Va. Filed Dec. 8, 1967.

Shenn-Dutch

For Fresh Eggs (Int. Cl. 29).
First use Jan. 1, 1967.

SN 292,737. Arden-Mayfair, Inc., d.b.a. Low Cost Markets, Los Angeles, Calif. Filed Mar. 8, 1968.

CAL FRESH

Owner of Reg. No. 837,623.
For Canned Fruits, Bottled Apple Juice, Peanut Butter, Canned Tuna, Canned Evaporated Milk, Bottled Apple Cider, Oleomargarine, Frozen Vegetables, and Frozen Orange Juice Concentrates (Int. Cls. 29, 32, and 33).
First use Nov. 22, 1966, on canned fruits.

Class 50 — Merchandise Not Otherwise Classified

SN 250,111. Walker & Zanger, Inc., New York, N.Y. Filed July 12, 1966.

GEMCARV

For Decorations for Furniture, Walls, and Similar Surfaces Made of Plastic Material To Simulate Carved Wood (Int. Cl. 20).
First use Aug. 2, 1965.

SN 258,709. Meuwissen Industrie N.V., Haarlem, Netherlands. Filed Nov. 15, 1966.

UNIPAL

Owner of Dutch Reg. No. 158,634, dated Dec. 17, 1965.
For Appliance for Mechanical Transport Consisting of Special Bitumen Paper, Reinforced With Steel and Iron Wire—Namely, Reinforced Paper Pallets (Int. Cl. 20).

SN 280,105. The Standard Products Company, Cleveland, Ohio. Filed Sept. 11, 1967.

FINE LINE

For Rubber-Based Floor Mats and Runners (Int. Cl. 27).
First use at least as early as Aug. 1, 1967.

SN 280,948. Warren S. Hastings, Mounds, Ill. Filed Sept. 22, 1967.

Magna-Tel

For Magnetic Signs for Use on the Doors of Automobiles (Int. Cl. 6).
First use Sept. 2, 1967.

SN 287,875. George E. Belcher Company, Stoughton, Mass. Filed Jan. 2, 1968.

INSTA-PAK

For Shoe Trees (Int. Cl. 21).
First use Nov. 30, 1967.

SN 287,876. George E. Belcher Company, Stoughton, Mass. Filed Jan. 2, 1968.

ULTRA-PAK

For Shoe Trees (Int. Cl. 21).
First use Nov. 30, 1967.

SN 288,438. Kem-Wove Industries, Inc., Charlotte, N.C. Filed Jan. 9, 1968.

KEM-GUARD

For Utility Mat, Fatigue Mat, and Knock-Off Mat or Doormat for Outdoor or Indoor Use (Int. Cl. 27).
First use Dec. 11, 1967.

SN 289,721. Shur-Line Manufacturing Co., Inc., Lancaster, N.Y. Filed Jan. 26, 1968.

Shur-kover

Owner of Reg. Nos. 659,814, 817,798, and 819,386.
For Plastic Sheet Used as a Painter's Drop Cloth (Int. Cl. 17).
First use on or about Sept. 29, 1961.

Class 51 — Cosmetics and Toilet Preparations

SN 239,641. Lovida AG, Chur, Switzerland. Filed Feb. 25, 1966.

JUVENA

Owner of Reg. No. 736,527.
For Bath Salts, Skin Cleansing Cream, Skin Cleansing Lotion, Perfumes and Colognes, Personal Deodorants, Hair Sprays, Nail Polish, Lipstick, Sun-Tan Preparations, and Eye, Face, and Leg Make-Up (Int. Cls. 3 and 5).
First use 1947; in commerce Oct. 1, 1953.

SN 268,444. Wilkinson Sword Limited, London, England. Filed Apr. 9, 1968.

WILKINSON SWORD

Owner of British Reg. No. 897,998, dated Aug. 5, 1966; and U.S. Reg. Nos. 613,015 and 818,916.
For Shaving and After-Shaving Preparations (Int. Cl. 3).
First use Feb. 25, 1966; in commerce Feb. 24, 1967.

SN 275,957. Practical Pharmaceuticals Limited, Newcastle-Upon-Tyne, England. Filed July 13, 1967.

LISETTE

Owner of British Reg. No. 897,091, dated July 13, 1966.
For Personal Deodorants (Int. Cl. 5).

SN 275,997. Avon Products, Inc., New York, N.Y. Filed July 14, 1967.

SPRAY POWER

Applicant disclaims the word "Spray" apart from the mark as shown.
For Aerosol Personal Deodorant (Int. Cl. 5).
First use June 27, 1967.

SN 278,134. Soft Sheen Products Co., Inc., Chicago, Ill. Filed Aug. 11, 1967.

MISS COOL

For Permanent Cream Hair Relaxer (Int. Cl. 3).
First use July 10, 1967.

SN 278,135. Stanley Home Products, Inc., Westfield, Mass. Filed Aug. 11, 1967.

SUN CHUM

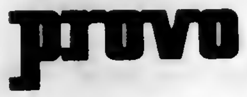
For Suntan Lotion (Int. Cl. 3).
First use Dec. 6, 1965.

SN 278,313. The Mennen Company, Morristown, N.J. Filed Aug. 15, 1967.

MATING SEASON

Owner of Reg. No. 833,079.
For After-Shave Lotion (Int. Cl. 3).
First use June 14, 1966.

SN 278,566. Apex Beauty Products Manufacturing Corp., d.b.a. Apex Beauty Products, Baltimore, Md. Filed Aug. 18, 1967.



For Men's Hair Straightener (Int. Cl. 3).
First use Aug. 15, 1967.

SN 278,573. Avon Products, Inc., New York, N.Y. Filed Aug. 18, 1967.

AROMESSENCE

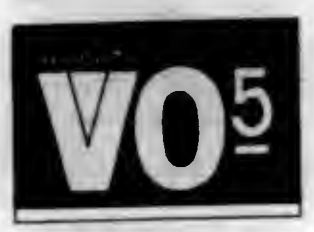
For Concentrated Liquid Cologne (Int. Cl. 3).
First use Aug. 3, 1967.

SN 278,774. Aldina Products, Inc., Des Plaines, Ill. Filed Aug. 22, 1967.

GARBAGE

For Men's After Shave Lotion and Cologne (Int. Cl. 3).
First use June 13, 1967.

SN 286,874. Alberto-Culver Company, Melrose Park, Ill. Filed Dec. 14, 1967.



Owner of Reg. Nos. 604,584, 753,458, and others.
For Personal Deodorant (Int. Cl. 5).
First use April 1967.

Class 52 — Detergents and Soaps

SN 257,935. Colgate-Palmolive Company, New York, N.Y. Filed Nov. 4, 1966.

The drawing is lined for the colors blue, red, and yellow. All wording shown on the drawing with the exception of the words "Avivex Fab" is disclaimed apart from the mark as shown. The blue background also is disclaimed except in association with the mark as shown. Owner of Reg. Nos. 139,710, 735,797, and others.
For Laundry Detergent (Int. Cl. 3).
First use Aug. 31, 1965.

SN 259,515. American Better Chemicals, Inglewood, Calif. Filed Nov. 28, 1966.

BLAST-OFF

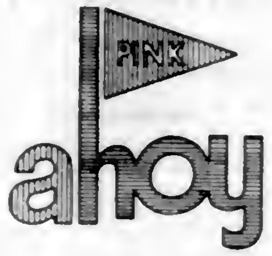
For Aerosol Spray Solvent Cleaner for Metallic Surfaces and for Electronic and Electrical Surfaces (Int. Cl. 3).
First use May 4, 1966.

SN 268,498. International Products and Services, Inc., Cleveland, Ohio. Filed Apr. 6, 1967.

COOL MAGIC

Without disclaiming common law rights to the same, applicant disclaims the right to the word "Cool" apart from the mark as shown.
For Liquid Detergent for Laundry Purposes (Int. Cl. 3).
First use on or about July 17, 1964.

SN 271,146. The Great Atlantic & Pacific Tea Company, Inc., New York, N.Y. Filed May 10, 1967.



The drawing is lined for the colors pink and blue. Applicant disclaims the word "Pink" apart from the mark as shown.
For Laundry and Dishwashing Detergent (Int. Cl. 3).
First use Apr. 3, 1967.

SN 274,209. West Laboratories, Inc., Long Island City, N.Y., assignee of Interstate Industries, Inc., d.b.a. Interstate Chemical Company, Kansas City, Mo. Filed June 19, 1967.

HOGWASH

For Liquid Disinfectant for Cleaning, Sanitizing, and Disinfecting Animals and Premises (Int. Cl. 5).
First use June 1, 1967.

SN 276,079. American Cyanamid Company, Wayne, N.J. Filed July 17, 1967.

DIRT GRABBER

For General Purpose Cleaner (Int. Cl. 3).
First use July 6, 1967.

SN 277,787. Avon Products, Inc., New York, N.Y. Filed Aug. 8, 1967.

SEA GARDEN

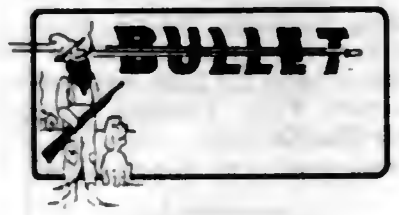
For Toilet Soap (Int. Cl. 3).
First use July 24, 1967.

SN 277,940. Stanley Home Products, Inc., Westfield, Mass. Filed Aug. 9, 1967.

GLAD TIDINGS

For Hair Shampoo (Int. Cl. 3).
First use July 13, 1966.

SN 278,196. Debco, Inc., Birmingham, Ala. Filed Aug. 14, 1967.



For Hand Cleaner Powders and Creams (Int. Cl. 3).
First use Aug. 1, 1967.

SN 286,876. Baron Blakeslee, Inc., Chicago, Ill. Filed Dec. 14, 1967.

BLACO STRIP

For Paint-Stripping Solvents (Int. Cl. 3).
First use on or about Nov. 3, 1967.

SN 289,459. Purex Corporation, Ltd., d.b.a. Industrial Equities, Inc. South Gate, Calif. Filed Jan. 24, 1968.

SPARKLIN' WHITE

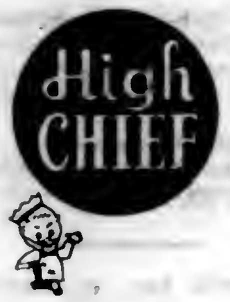
Owner of Reg. No. 598,064.
For Household Cleanser (Int. Cl. 3).
First use Nov. 20, 1967.

SN 292,239. Bevin Laboratories, Inc., Chicago, Ill. Filed Mar. 1, 1968.

MISTIC-MILD

For Detergent for Washing Dishes (Int. Cl. 3).
First use February 1960.

SN 293,198. King Kullen Grocery Co., Inc., Westbury, N.Y. Filed Mar. 14, 1968.

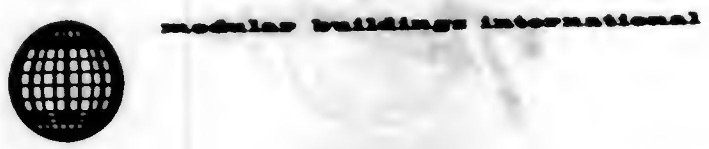


Owner of Reg. Nos. 819,735, 820,068, and others.
For All Purpose Household Cleaner With Ammonia (Int. Cl. 3).
First use Dec. 1, 1967.

SERVICE MARKS

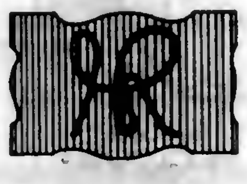
Class 100 — Miscellaneous

SN 227,603. Modular Buildings Inc., Bronx, N.Y. Filed Sept. 10, 1965.



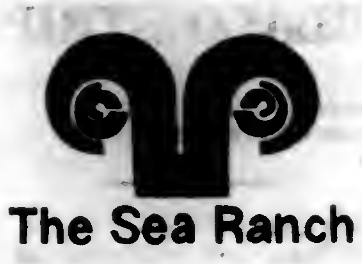
The term "Modular Buildings International" is disclaimed without waiving any common law rights therein.
For Architectural Design Services (Int. Cl. 42).
First use December 1964.

SN 245,477. P. Huber Hanes, Jr., Glendale Springs, N.C. Filed May 12, 1966.



The mark includes a fanciful representation of the letters "HR." The drawing is lined for the colors red and yellow.
For Breeding of Cattle (Int. Cl. 42).
First use Sept. 1, 1965.

SN 246,933. Oceanic Properties, Inc., Honolulu, Hawaii. Filed May 31, 1966.



For Community Development and Operation, Including the Provision of Housing, Social, Recreational, Public Utility, and Transport Facilities (Int. Cl. 42).
First use January 1965.

SN 278,544. Vonderbrink and Baron, Inc., Cincinnati, Ohio. Filed Aug. 17, 1967.

THE OLD SALOON

For Restaurant Services (Int. Cl. 42).
First use November 1964.

SN 279,955. Neba Roast Beef Restaurants, Inc., Albany, N.Y. Filed Sept. 8, 1967.

NEBA

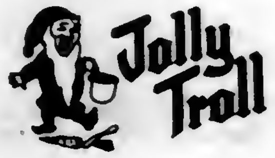
Owner of Reg. No. 826,544.
For Restaurant Services (Int. Cl. 42).
First use on or about July 2, 1962.

SN 280,870. Hilton Hotels Corporation, Chicago, Ill. Filed Sept. 21, 1967.

S-H

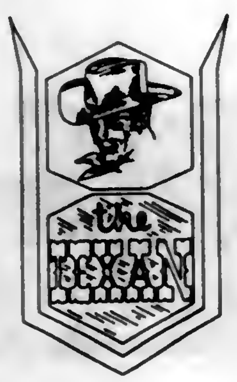
Owner of Reg. No. 832,666.
For Hotel, Motel, and Restaurant Services (Int. Cl. 42).
First use about Nov. 15, 1965.

SN 281,582. Jolly Troll, Inc., Minneapolis, Minn. Filed Oct. 2, 1967.



Owner of Reg. No. 836,079.
For Restaurant Services (Int. Cl. 42).
First use Dec. 7, 1964.

SN 283,176. The Texan Drive-Ins Ltd., Vancouver, British Columbia, Canada. Filed Oct. 23, 1967.



Owner of Canadian Reg. No. 150,975, dated May 26, 1967.
For Drive-In Restaurant Services (Int. Cl. 42).

SN 291,684. Plastic Tooling Aids Laboratory, Inc., Bridgeport, Conn. Filed Feb. 23, 1968.

**PTA
PROTOTYPES**

Without waiving its common law rights therein, applicant for the purpose of this application disclaims "Prototypes" apart from the service mark as shown. Owner of Reg. No. 838,544.
For Engineering, Research and Development, Consultation, and Design Services in the Plastics Field (Int. Cl. 42).
First use 1954.

Class 101 — Advertising and Business

SN 229,784. Sheldon Fredericks Advertising Associates, Inc. New York, N.Y. Filed Oct. 11, 1965.

ROLL-IT DERBY

The word "Derby" is disclaimed.
For Advertising and Promotion of Goods Through Medium of Contests Between Persons (Int. Cl. 35).
First use Aug. 26, 1965.

SN 245,462. Horace E. Delisser, d.b.a. Personal Affairs Institute of America, Freeport, N.Y. Filed May 12, 1966.

**PERSONAL AFFAIRS
MONTH**

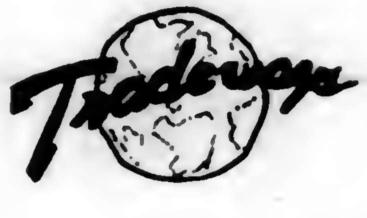
For Furnishing Specially Printed Brochures and Other Publications to Interested Institutions for Further Distribution or Distributing Same for Said Institutions To Encourage Persons To Review Their Personal, Physical, Legal, and Financial Affairs (Int. Cl. 35).
First use at least as early as May 30, 1956.

SN 250,170. Albert J. Moccia, Jr., and Sandra T. Moccia (joint owners), d.b.a. The World Is a Picture, New York, N.Y. Filed July 13, 1966.

THE WORLD IS A PICTURE

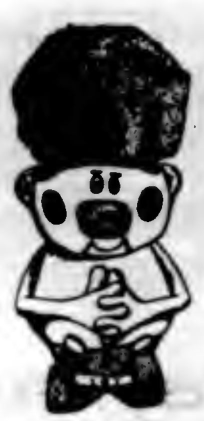
For Undertaking Special Photographic and Writing Assignments for Various Types of Publications (Int. Cl. 35).
First use Jan. 29, 1965.

SN 263,388. Elliot Michael Leban, d.b.a. Tradeways, Baltimore, Md. Filed Jan. 26, 1967.



For Importation and Wholesale Distribution of Giftware Including Ceramics, Chess Sets, Articles of Leather, Palm and Straw, and the Like (Int. Cl. 35).
First use Jan. 1, 1967.

SN 270,489. Leon Shaffer Golnick Advertising, Inc., Baltimore, Md. Filed May 2, 1967.



For Advertising Services—Namely, the Creation of Advertising Campaigns for Use by Automobile Dealers (Int. Cl. 35).
First use at least as early as Sept. 16, 1966.

SN 271,111. American Institute of Kitchen Dealers, Hackettstown, N.J. Filed May 10, 1967.

**KITCHEN INDUSTRY
SHOWCASE**

Applicant disclaims the words "Kitchen Industry" apart from the mark as shown.
For Promoting the Sale of Goods and Services of Others by Arranging and Conducting Annual Exhibitions of Kitchens and Kitchen Equipment by Manufacturers (Int. Cl. 35).
First use Aug. 2, 1966.

SN 272,484. The Fuller Brush Company, East Hartford, Conn. Filed May 26, 1967.

FULLERETTE

Owner of Reg. Nos. 143,340, 759,993, and others.
For Door-To-Door Retail Merchandising Services (Int. Cl. 35).
First use August 1965.

SN 278,687. The H-P Stores, Inc., Mountain Lake Park, Md. Filed Aug. 21, 1967.

H-P

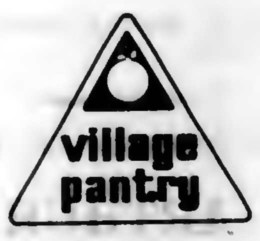
For Retail Variety Store Services (Int. Cl. 35).
First use January 1949.

SN 278,844. Thomas F. Thornton, d.b.a. Dial-A-Gift Co., Old Greenwich, Conn. Filed Aug. 21, 1967.

DIAL-A-BOOK SERVICE

The word "Service" is disclaimed apart from the mark as shown.
For Mail Order Retailing of Books (Int. Cl. 35).
First use June 1, 1967.

SN 279,402. Marsh Supermarkets, Inc., Yorktown, Ind. Filed Aug. 30, 1967.



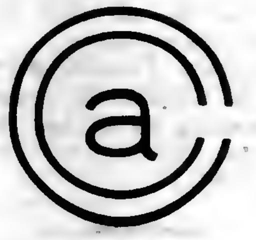
For Retail Grocery Store Services (Int. Cl. 36).
First use Nov. 22, 1966.

SN 282,561. Fanning Personnel Agency, Inc., New York, N.Y. Filed Oct. 16, 1967.

FANNING

For Employment Agency Services (Int. Cl. 35).
First use on or about June 7, 1965.

SN 283,152. The Pillsbury-Occidental Company, Minneapolis, Minn. Filed Oct. 23, 1967.



For Providing Remote Terminal Access to Time-Share Computer Systems and Providing Instruction and Programming Assistance in Connection Therewith (Int. Cl. 35).
First use Sept. 1, 1966.

SN 283,153. The Pillsbury-Occidental Company, Minneapolis, Minn. Filed Oct. 23, 1967.

CALL-A-COMPUTER

For Providing Remote Terminal Access to Time-Share Computer Systems and Providing Instruction and Programming Assistance in Connection Therewith (Int. Cl. 35).
First use Sept. 1, 1966.

SN 284,533. Business Builders International, Inc., Chicago, Ill. Filed Nov. 13, 1967.

BBi

The drawing is lined for blue.
For Arranging Joint Ventures for Others; Negotiating With Foreign Governments for Establishment of United States Companies' Manufacturing Operations Abroad; Arranging License Agreements Between United States Companies and Foreign Companies; and Exporting and Importing for Others. (Int. Cl. 35).
First use October 1962.

SN 291,009. Service Specialists, Ltd., Oklahoma City, Okla. Filed Feb. 14, 1968.

SERVICE SPECIALISTS

For Employment Agency Services (Int. Cl. 35).
First use Jan. 1, 1967.

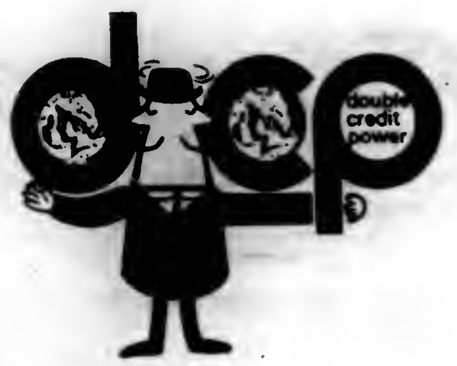
Class 102 — Insurance and Financial

SN 268,318. Lakeside Bank, Chicago, Ill. Filed Apr. 4, 1967.

SCOT FREE

For Checking Account Service (Int. Cl. 36).
First use Mar. 1, 1967.

SN 269,903. Local Loan Co., Chicago, Ill. Filed Apr. 24, 1967.



Applicant disclaims the pictorial representation of the coins apart from the mark as shown.

For General Consumer Finance Service, Including Cash Installment Loans to Individuals Under Consumer Finance Laws, Industrial Banking Laws, and the Purchase of Sales Finance Contracts (Int. Cl. 36).

First use Apr. 17, 1967.

SN 278,975. Manufactures National Bank of Detroit, Detroit, Mich. Filed Aug. 24, 1967.

UNICHECK

For Banking Services (Int. Cl. 36).

First use Aug. 20, 1967.

Class 103 — Construction and Repair

SN 279,387. Fluid Control, Inc., Lafayette, La. Filed Aug. 30, 1967.

FLUCO

For Rental of Drilling Mud Degassing Apparatus (Int. Cl. 37).

First use July 5, 1965.

SN 287,481. Clack Corporation, Madison, Wis. Filed Dec. 26, 1967.

For Replacement and Repair Parts Service for Water Conditioning Equipment Manufactured by Applicant and Others (Int. Cl. 37).

First use Nov. 2, 1967.

Class 105 — Transportation and Storage

SN 280,596. International Travel Advisors Incorporated, St. Louis, Mo. Filed Sept. 18, 1967.

INTRAV

For Travel Agency Services (Int. Cl. 39).

First use Aug. 15, 1965.

SN 281,575. The Greyhound Corporation, Chicago, Ill. Filed Oct. 2, 1967.

AMAZING AMERICA TOURS

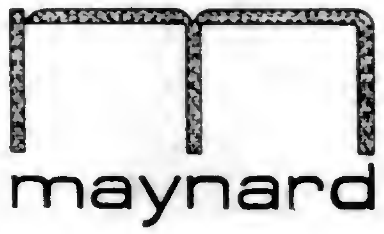
The word "Tours" is disclaimed apart from the mark as shown.

For Tour Services (Int. Cl. 39).

First use in or about December 1953.

Class 107 — Education and Entertainment

SN 265,079. Maynard Research Council Incorporated, Pittsburgh, Pa. Filed Feb. 20, 1967.



The drawing is lined for the color gold. Applicant disclaims the word "Maynard" separate and apart from the mark.

For Operating Schools for Industrial Management (Int. Cl. 41).

First use Sept. 21, 1966.

SN 267,333. Institute for Emotional Education, Inc., New York, N.Y. Filed Mar. 22, 1967.

IFEE

For Organizing and Conducting Group Workshops in Personal Relations (Int. Cl. 41).

First use Feb. 20, 1967.

SN 269,155. American Airlines, Inc., New York, N.Y. Filed Apr. 14, 1967.

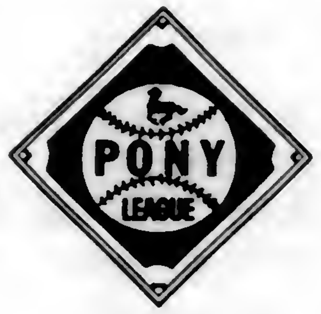
ASTRO-COLOR

Owner of Reg. Nos. 769,311, 807,393, and others.

For Exhibiting Movies In-Flight (Int. Cl. 41).

First use Mar. 10, 1967.

SN 269,972. Boys Baseball, Inc., Washington, Pa. Filed Apr. 25, 1967.



The word "League," the representation of a baseball and of a baseball diamond are disclaimed apart from the mark as shown.

For Organizing Boys' Baseball Activities (Int. Cl. 41).

First use June 1, 1965.

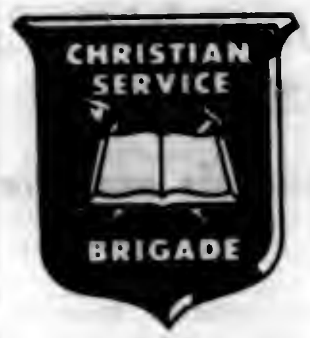
SN 279,161. Arthur Discotheque, Inc., New York, N.Y. Filed Aug. 28, 1967.

ARTHUR

For Discotheque Club Services (Int. Cl. 41).

First use May 5, 1965.

SN 281,158. Christian Service Brigade, Wheaton, Ill. Filed Jan. 16, 1967.



The words "Christian Service" are disclaimed apart from the mark as shown.

For Organizing Christian Boys' Clubs, Maintaining Membership Therein, and Providing Personal Assistance, Literature, and Materials Required To Carry on the Program Thereof (Int. Cl. 41).

First use 1945.

SN 281,285. GLL TV Enterprises, Inc., Roslyn, N.Y. Filed Sept. 27, 1967.

JOURNEY TO ADVENTURE

For Entertainment and Educational Services—Namely, the Presentation of a Television Program (Int. Cl. 41).

First use Aug. 7, 1967.

SN 288,661. The Marine Historical Association, Incorporated, Mystic, Conn. Filed Jan. 12, 1968.

MYSTIC SEAPORT

Owner of Reg. No. 828,022.

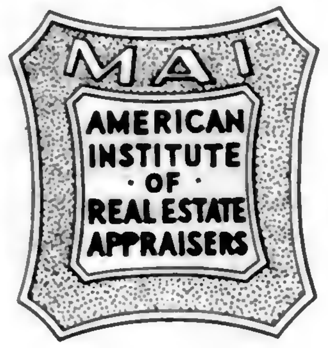
For Museum Services Relating to Marine and Associated Historical Matters (Int. Cl. 41).

First use at least as early as 1946.

COLLECTIVE MEMBERSHIP MARKS

Class 200

SN 270,871. American Institute of Real Estate Appraisers of The National Association of Real Estate Boards, Chicago, Ill. Filed May 8, 1967.



Owner of Reg. Nos. 705,076 and 752,272.

For Indicating Membership in Applicant.

First use on or before June 3, 1963.

TRADEMARK REGISTRATIONS ISSUED

PRINCIPAL REGISTER

Class 1 — Raw or Partly Prepared Materials

850,411. BUILDING ARCH AND TREE (DESIGN). Prince George Pulp and Paper Limited. MULTIPLE CLASS (Classes 1 and 37). SN 258,437. Pub. 3–26–68. Filed 11–14–66.

850,412. GRACON. W. R. Grace & Co. SN 265,898. Pub. 3–26–68. Filed 3–3–67.

850,413. MEOW. Gus Dettelbach, d.b.a. Georgia-Tennessee Mining & Chemical Co. SN 268,715. Pub. 3–26–68. Filed 4–10–67.

850,414. PETRO-TEX NEOPRENE AND DESIGN. Petro-Tex Chemical Corporation. SN 268,893. Pub. 3–26–68. Filed 4–11–67.

850,415. 3M. Minnesota Mining and Manufacturing Company. SN 286,479. Pub. 3–26–68. Filed 12–8–67.

850,416. KOJIN. Kokoku Rayon and Pulp Co., Ltd. MULTIPLE CLASS (Classes 1 and 43). SN 286,787. Pub. 3–26–68. Filed 12–13–67.

Class 2 — Receptacles

850,417. BIN-KANISTER. Speko Products, Inc. SN 234,082. Pub. 3–26–68. Filed 12–6–65.

850,418. SARATOGA TRUNK. Freeman & Gossage, Inc. SN 250,952. Pub. 3–26–68. Filed 7–25–66.

850,419. VERAGLO. American Cyanamid Company. SN 263,243. Pub. 3–26–68. Filed 1–25–67.

850,420. UNI-SPHERE. Universal Tank & Iron Works, Inc. SN 265,856. Pub. 3–26–68. Filed 3–2–67.

850,421. ROYAL GARDEN AND DESIGN. Plantabbs Corporation. SN 274,650. Pub. 3–26–68. Filed 6–23–67.

850,422. SEED KRAFT. The Greif Bros. Cooperage Corporation. SN 276,833. Pub. 3–26–68. Filed 7–26–67.

Class 3 — Baggage, Animal Equipments, Portfolios, and Pocketbooks

850,423. TRAV-L-BAR AND DESIGN. Ever-Wear, Inc. SN 255,790. Pub. 3–26–68. Filed 10–5–66.

850,424. LUCIEN PICCARD AND DESIGN. Lucien Piccard Watch Corp., assignee of Lucien Piccard Sportswear Ltd. SN 267,834. Pub. 3–26–68. Filed 3–29–67.

Class 4 — Abrasives and Polishing Materials

850,425. MIRASHEEN. Armstrong Cork Company. SN 258,663. Pub. 3–26–68. Filed 11–15–66.

850,426. PERMA-SHEEN. Clifton T. Spear, d.b.a. The Diamond Spear Co. SN 262,515. Pub. 3–26–68. Filed 1–13–67.

850,427. STAR RESILITE. Armour and Company, d.b.a. Armour Abrasives Company. SN 272,002. Pub. 3–26–68. Filed 5–22–67.

850,428. SURRENDER. Alberto-Culver Company. SN 283,381. Pub. 3–26–68. Filed 10–26–67.

Class 6 — Chemicals and Chemical Compositions

850,429. ESPI AND DESIGN. Electronic Space Products, Inc. SN 248,190. Pub. 12–12–67. Filed 6–14–66.

850,430. SKOPE. Stiles-Kem Sales Corporation. SN 268,535. Pub. 2–13–68. Filed 4–6–67.

850,431. MISCELLANEOUS DESIGN. Wyrough and Loser, Inc. SN 273,822. Pub. 3–26–68. Filed 6–13–67.

850,432. OV–1. Ohio Valley Specialty Chemical Company. SN 274,643. Pub. 3–26–68. Filed 6–23–67.

850,433. OV–17. Ohio Valley Specialty Chemical Company. SN 274,644. Pub. 3–26–68. Filed 6–23–67.

Class 10 — Fertilizers

850,434. DEEP GREEN. Garden Products, Inc., assignee of Conservation Industries, Inc. SN 241,435. Pub. 1–10–67. Filed 3–21–66.

Class 11 — Inks and Inking Materials

850,435. HI F. Sun Chemical Corporation. SN 270,719. Pub. 2–13–68. Filed 5–4–67.

850,436. CRYSTAL-BRITE. Bowers Printing Ink Company. SN 272,016. Pub. 3–26–68. Filed 5–22–67.

Class 12 — Construction Materials

850,437. CASCADE ETC. AND DESIGN. Allied Engineering Company, Inc. SN 192,346. Pub. 4–5–66. Filed 4–30–64.

850,438. FIRESCREEN. Bird & Son, Inc. SN 220,738. Pub. 11–30–65. Filed 6–9–65.

850,439. LUXALON. Hunter Douglas Limited. SN 250,759. Pub. 1–30–68. Filed 7–21–66.

850,440. BUTLER PANL AND DESIGN. Butler Manufacturing Company. SN 252,811. Pub. 3–26–68. Filed 8–22–66.

850,441. FIRE-KING. Johns-Manville Corporation. SN 258,550. Pub. 3–26–68. Filed 11–14–66.

850,442. FGA. Johns-Manville Corporation. SN 258,551. Pub. 3–26–68. Filed 11–14–66.

850,443. ANOWHITE. Spring Hill Fuel Co., d.b.a. Aluminum Detail Products. SN 261,530. Pub. 3–26–68. Filed 12–27–66.

850,444. SIERRA SUNSET. Featherock, Inc. SN 262,574. Pub. 1–2–68. Filed 1–16–67.

850,445. INDEPENDENCE. Majestic Tile Company. SN 263,930. Pub. 3–26–68. Filed 2–3–67.

850,446. HANDI-SEAL. The Gibson-Homans Company. SN 273,061. Pub. 3–26–68. Filed 6–5–67.

850,447. PORETE. W. R. Grace & Co. SN 273,277. Pub. 3–26–68. Filed 6–7–67.

850,448. GARDOX. W. R. Meadows, Inc. SN 274,638. Pub. 3–26–68. Filed 6–23–67.

850,449. VANFOM. Thermo-Kote of America, Incorporated. SN 287,596. Pub. 3–26–68. Filed 12–26–67.

Class 13 — Hardware and Plumbing and Steam-Fitting Supplies

850,450. HIT-N-GONE. Merlin H. Albers. SN 250,436. Pub. 3–26–68. Filed 7–18–66.

850,451. LOTUS. Cathrineholm A/S. SN 258,211. Pub. 3–26–68. Filed 11–8–66.

850,452. GEO-METRIC. Business Builders International Inc. SN 283,060. Pub. 3–26–68. Filed 10–23–67.

Class 14 — Metals and Metal Castings and Forgings

850,453. XMERAL. Societe Generale du Magnesium. SN 273,425. Pub. 3–26–68. Filed 6–8–67.

Class 15 — Oils and Greases

850,454. MOLYDAG. Acheson Industries, Inc. SN 266,189. Pub. 3–26–68. Filed 3–8–67.

850,455. UNION 76 AND DESIGN. Union Oil Company of California. SN 276,053. Pub. 3–26–68. Filed 7–14–67.

Class 16 — Protective and Decorative Coatings

850,456. EPOXZOL. Bee Chemical Company. SN 254,859. Pub. 1–23–68. Filed 9–21–66.

850,457. PRIME-RITE. The Valspar Corporation. SN 256,022. Pub. 3–26–68. Filed 10–7–66.

850,458. DISPERSYMER. Imperial Chemical Industries Limited. SN 259,118. Pub. 3–26–68. Filed 11–21–66.

Class 17 — Tobacco Products

850,459. DANVILLE. P. Lorillard Company. SN 234,130. Pub. 3–26–68. Filed 12–7–65.

850,460. TRIM. R. J. Reynolds Tobacco Company. SN 261,157. Pub. 3–26–68. Filed 12–20–66.

850,461. BRYANT PARK. R. J. Reynolds Tobacco Company. SN 280,253. Pub. 3–26–68. Filed 9–13–67.

850,462. NEW LOOK. Brown & Williamson Tobacco Corporation. SN 285,789. Pub. 3–26–68. Filed 11–29–67.

850,463. MAXIM. R. J. Reynolds Tobacco Company. SN 288,474. Pub. 3–26–68. Filed 1–10–68.

Class 18 — Medicines and Pharmaceutical Preparations

850,464. KOR-VAL. Spartans Industries, Inc., by change of name from E. J. Korvette, Inc. SN 239,158. Pub. 3–26–68. Filed 2–18–66.

850,465. TAPO. Western Lime Products Co. SN 254,348. Pub. 3–26–68. Filed 9–12–66.

850,466. PANKRODIGEST. Sanabo Fabrik Chemischer und Pharmazeutischer Produkte Dr. Karl und Maria Stosius. SN 255,820. Pub. 3–26–68. Filed 10–5–66.

850,467. SANABOLICUM. Sanabo Fabrik Chemischer und Pharmazeutischer Produkte Dr. Karl und Maria Stosius. SN 255,821. Pub. 3–26–68. Filed 10–5–66.

850,468. FIOGESIC. Sandoz, Inc. SN 266,362. Pub. 3–26–68. Filed 3–9–67.

850,469. EGG-N-RICH. Vita Plus Corporation. SN 267,698. Pub. 3–26–68. Filed 3–27–67.

850,470. NITRO-BID. Marion Laboratories, Inc. SN 268,505. Pub. 3–26–68. Filed 4–6–67.

850,471. NUTRITION SQUARE AND DESIGN. Nutrition Square, Inc. SN 268,891. Pub. 3–26–68. Filed 4–11–67.

850,472. CO-EDECRIN. Merck & Co., Inc. SN 269,550. Pub. 3–26–68. Filed 4–19–67.

850,473. CO-HYDRODIURIL. Merck & Co., Inc. SN 269,552. Pub. 3–26–68. Filed 4–19–67.

850,474. TREVINTIX. Theraplix. SN 270,017. Pub. 3–26–68. Filed 4–25–67.

850,475. CESCAN. Abbott Laboratories. SN 270,331. Pub. 3–26–68. Filed 5–1–67.

850,476. GLOFIL. Abbott Laboratories. SN 270,332. Pub. 3–26–68. Filed 5–1–67.

850,477. ACT I. The Upjohn Company. SN 270,439. Pub. 3–26–68. Filed 5–1–67.

850,478. LINCO 4. The Upjohn Company. SN 270,440. Pub. 3–26–68. Filed 5–1–67.

850,479. LINCO 50. The Upjohn Company. SN 270,441. Pub. 3–26–68. Filed 5–1–67.

850,480. PLEXION. The Upjohn Company. SN 270,442. Pub. 3–26–68. Filed 5–1–67.

850,481. ANIDATE. Ortho Pharmaceutical Corporation. SN 270,701. Pub. 3–26–68. Filed 5–4–67.

850,482. TETAMUNE. American Cyanamid Company. SN 271,020. Pub. 3–26–68. Filed 5–9–67.

850,483. PRO-TET. American Cyanamid Company. SN 271,021. Pub. 3–26–68. Filed 5–9–67.

850,484. FIGHTIN FEENO. Atomic Basic Chemicals Corporation. SN 271,336. Pub. 3–26–68. Filed 5–12–67.

850,485. PROMECO. Europharma International, Inc. SN 271,608. Pub. 3–26–68. Filed 5–16–67.

850,486. HYPER-PHOS. The Kendall Company. SN 272,070. Pub. 3–26–68. Filed 5–22–67.

850,487. RHINOSPAN. USV Pharmaceutical Corporation. SN 272,647. Pub. 3–26–68. Filed 5–29–67.

850,488. VAPOSPAN. USV Pharmaceutical Corporation. SN 272,650. Pub. 3–26–68. Filed 5–29–67.

850,489. HY-FLOW. Flow Laboratories Incorporated. SN 280,222. Pub. 3–26–68. Filed 9–13–67.

850,490. COSANYL-DM. Parke, Davis & Company. SN 287,489. Pub. 3–26–68. Filed 12–26–67.

850,491. PLEASANT DREAMS. American Home Products Corporation. SN 288,571. Pub. 3–26–68. Filed 1–11–68.

Class 19 — Vehicles

850,492. SLAVE SAVER. Remcon Company. SN 230,369. Pub. 3–26–68. Filed 10–18–65.

850,493. NEO-DYNE. S. G. Tilden, Incorporated. SN 249,811. Pub. 3–26–68. Filed 7–7–66.

850,494. AEROTHERM. Universal Oil Products Company. SN 254,336. Pub. 3–26–68. Filed 3–12–66.

850,495. ULTRA. Monroe Auto Equipment Company. SN 258,396. Pub. 3–26–68. Filed 11–10–66.

850,496. GOLD LINE. Travel Industries, Inc. SN 265,570. Pub. 1–9–68. Filed 2–27–67.

850,497. GIDGET. E and E Specialties, Inc. SN 268,389. Pub. 3–26–68. Filed 4–5–67.

850,498. GUARANTY. Donald O. Rehm, d.b.a. Guaranty Cycle Company. SN 287,101. Pub. 3–26–68. Filed 12–18–67.

Class 20 — Linoleum and Oiled Cloth

850,499. TARKETT. Tarkett Aktiebolag, by change of name from Limhamns Träindustri Aktiebolag. SN 259,749. Pub. 11–7–67. Filed 11–30–66.

Class 21 — Electrical Apparatus, Machines, and Supplies

850,500. DATASPEED. American Telephone and Telegraph Company. SN 242,314. Pub. 3–26–68. Filed 3–31–66.

850,501. K9 AND DESIGN. Canine Corps Signal Corporation. SN 254,669. Pub. 3–26–68. Filed 9–19–66.

850,502. WURLITZER. The Wurlitzer Company. MULTIPLE CLASS (Classes 21 and 36). SN 255,147. Pub. 3–26–68. Filed 9–26–66.

850,503. MUSI-CLOUD AND DESIGN. Musi-Cloud, Inc., assignee of Edward J. Murry, d.b.a. The Musi-Cloud Company. SN 256,464. Pub. 3–26–68. Filed 10–14–66.

850,504. HORIZON. Avnet, Inc., assignee of Channel Master Corporation. SN 257,934. Pub. 3–26–68. Filed 11–4–66.

850,505. BL AND DESIGN. Brower Laboratories, Inc. SN 258,037. Pub. 3–26–68. Filed 11–7–66.

850,506. VISTRON. The Standard Oil Company. SN 258,602. Pub. 3–26–68. Filed 11–14–66.

850,507. VBS. The Rucker Company, assignee of Moore Associates, Inc. SN 260,757. Pub. 3–26–68. Filed 12–14–66.

850,508. WINSPEED. UMC Industries, Inc. SN 264,617. Pub. 3–26–68. Filed 2–13–67.

850,509. LIGHTING THE WAY AND DESIGN. C & H Electric Company. SN 264,797. Pub. 3–26–68. Filed 2–16–67.

850,510. CHARGE·ALL. Goodall Manufacturing Corporation. SN 266,878. Pub. 3–26–68. Filed 3–16–67.

850,511. CP6. The Chase-Shawmut Company. SN 267,012. Pub. 3–26–68. Filed 3–17–67.

850,512. SIDAC. Chester Electronics Laboratories, Inc. SN 267,890. Pub. 8–29–67. Filed 3–30–67.

850,513. HAMLIN. Hamlin, Inc. SN 281,846. Pub. 3–26–68. Filed 10–5–67.

Class 22 — Games, Toys, and Sporting Goods

850,514. SLENDERIDE. Hamilton Equipment Corp. SN 254,535. Pub. 3–26–68. Filed 9–15–66.

850,515. ALL PRO AND DESIGN. Glendinning Companies, Inc. SN 259,101. Pub. 3–26–68. Filed 11–21–66.

850,516. KODIAK. Franklin Manufacturing Co., Inc., d.b.a. Hanover Sports. SN 260,420. Pub. 3–26–68. Filed 12–9–66.

850,517. CONFUSION. E. Edgar Handshy and Howard Tharp (joint venture). SN 261,076. Pub. 3–26–68. Filed 12–19–66.

850,518. THE A2000. Wilson Sporting Goods Co., assignee of Wilson Sporting Goods Co. SN 261,544. Pub. 3–26–68. Filed 12–27–66.

850,519. BLUE SUPREME. Brunswick Corporation. SN 263,012. Pub. 3–26–68. Filed 1–23–67.

850,520. J-PAK AND DESIGN. World Toy House, Inc. SN 263,636. Pub. 3–26–68. Filed 1–30–67.

850,521. COMFO. Pflueger Corporation. SN 268,069. Pub. 3–26–68. Filed 3–31–67.

850,522. SCHOOLHOUSE AND DESIGN. Schoolhouse Industries, Inc. SN 270,422. Pub. 3–26–68. Filed 5–1–67.

850,523. PLAYTIME TOYS. House of Huston, Inc. SN 272,276. Pub. 12–26–67. Filed 5–24–67.

850,524. T2000. Wilson Sporting Goods Co., assignee of Wilson Sporting Goods Co. SN 272,656. Pub. 3–26–68. Filed 5–29–67.

850,525. BUSY BODIES. Kohner Bros., Inc. SN 273,292. Pub. 3–26–68. Filed 6–7–67.

850,526. KOBBLER. Atlantic Lures, Inc. SN 273,360. Pub. 3–26–68. Filed 6–8–67.

850,527. TUF. Peter A. Brett. SN 276,096. Pub. 3–26–68. Filed 7–17–67.

850,528. MOON-EYED SHAD. Frank L. Foersehler, d.b.a. Buck Creek Bait Shop. SN 277,996. Pub. 3–26–68. Filed 8–10–67.

850,529. GLOW MASTER. Walter W. Collins, d.b.a. Walt Collins. SN 280,398. Pub. 3–26–68. Filed 9–15–67.

850,530. MARY POPPINS. Aeroplane Tackle Manufacturing Company. SN 281,262. Pub. 3–26–68. Filed 9–27–67.

850,531. BABY TEENIETALK. Mattel, Inc. SN 281,940. Pub. 3–26–68. Filed 10–6–67.

850,532. KEWPIE JOY AND DESIGN. Cameo Doll Products Co., Inc. SN 282,054. Pub. 3–26–68. Filed 10–9–67.

850,533. FINGLES. Mattel, Inc. SN 283,068. Pub. 3–26–68. Filed 10–23–67.

850,534. ESS AND DESIGN. Josef Ess, Allgäuer Skibeschlägefabrik. SN 286,686. Pub. 3–26–68. Filed 12–11–67.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

850,535. STIHL AND DESIGN. Andreas Stihl Maschinenfabrik. SN 231,878. Pub. 3–26–68. Filed 11–1–65.

850,536. K-COUPLING. Acushnet Process Company. SN 249,293. Pub. 3–26–68. Filed 6–30–66.

850,537. ASHBROOK KINETICS AND DESIGN. Ashbrook Corporation. SN 250,127. Pub. 3–26–68. Filed 7–13–66.

850,538. FIESTA-TIME. Serena Industries. SN 250,864. Pub. 3–26–68. Filed 7–22–66.

850,539. MONARCH. Berkeley Pump Company. SN 251,507. Pub. 1–9–68. Filed 8–2–66.

850,540. EGAN AND DESIGN. Frank W. Egan & Company. SN 251,527. Pub. 3–26–68. Filed 8–2–66.

850,541. FLO-BLEND. UMC Industries, Inc. SN 251,669. Pub. 3–26–68. Filed 8–3–66.

850,542. MASTER CRAFT. Mastercraft Engineering Company. SN 254,549. Pub. 3–26–68. Filed 9–15–66.

850,543. DUO-BLOC AND DESIGN. B. Thies K.G. Spezialmaschinenfabrik. SN 255,655. Pub. 3–26–68. Filed 10–3–66.

850,544. DUO-BLOC. B. Thies K.G. Spezialmaschinenfabrik. SN 255,656. Pub. 3–26–68. Filed 10–3–66.

850,545. KASTO AND DESIGN. Anna Stolzer, d.b.a. Firma Karl Stolzer. SN 256,322. Pub. 3–26–68. Filed 10–12–66.

850,546. ELBA AND DESIGN. Elba Werk Ettlinger Baumaschinen- und Hebezeugfabrik GmbH. SN 256,655. Pub. 3–26–68. Filed 10–18–66.

850,547. MUTRATOR. Mono Pumps Limited. SN 257,302. Pub. 3–26–68. Filed 10–26–66.

850,548. POW-R-VAC. Hahn, Inc. SN 257,621. Pub. 3–26–68. Filed 10–31–66.

850,549. GYROZONTAL. Westinghouse Air Brake Company. SN 258,010. Pub. 3–26–68. Filed 11–4–66.

850,550. QUADRIPLEX. Borg-Warner Corporation (Delaware corporation), assignee of Borg-Warner Corporation (Illinois corporation). SN 258,778. Pub. 3–26–68. Filed 11–16–66.

850,551. BILT-RITE AND DESIGN. Bilt-Rite Equipment Co., Inc. SN 262,397. Pub. 3–26–68. Filed 1–12–67.

850,552. MRC TRW. TRW Inc. SN 262,719. Pub. 3–26–68. Filed 1–17–67.

850,553. DRAFTO. Drafto Corporation. SN 262,929. Pub. 3–26–68. Filed 1–20–67.

850,554. DAZEY TWIN AND DESIGN. Dazey Products Company. SN 263,545. Pub. 3–26–68. Filed 1–30–67.

850,555. BIF. General Signal Corporation, by merger from The New York Air Brake Company. SN 263,683. Pub. 3–26–68. Filed 1–31–67.

850,556. MOR-WARE. Mor-Win Products, Inc. SN 265,644. Pub. 3–26–68. Filed 2–28–67.

850,557. OXYCONTACT. Degremont S.A. SN 268,036. Pub. 3–26–68. Filed 3–31–67.

850,558. WEBSTER ZIP–1000. Brother International Corporation. SN 268,570. Pub. 3–26–68. Filed 4–7–67.

850,559. GALVA-MATIC MIF AND DESIGN. MIF Industries, Inc., by change of name from Malleable Iron Fittings Co. SN 268,967. Pub. 3–26–68. Filed 4–12–67.

850,560. SILVER-SWEET. Sweet Manufacturing Company. SN 269,941. Pub. 3–26–68. Filed 4–24–67.

850,561. STRIPALL. Kinetics Corporation of California. SN 270,578. Pub. 3–26–68. Filed 5–3–67.

850,562. PRAWNTO AND DESIGN. Harry Hinde, d.b.a. Prawnto Shrimp Machine Co. SN 272,834. Pub. 3–26–68. Filed 6–1–67.

850,563. HYDRA-TERRAIN. Sargent Engineering Corporation. SN 272,858. Pub. 3–26–68. Filed 6–1–67.

850,564. DRY-O-VATOR. Farm Fans, Inc. SN 280,194. Pub. 3–26–68. Filed 9–13–67.

Class 25 — Locks and Safes

850,565. UNI-VERS AND DESIGN. Sargent & Greenleaf, Inc. SN 269,571. Pub. 3–26–68. Filed 4–19–67.

Class 26 — Measuring and Scientific Appliances

850,566. OLYMPUS QUICKMATIC. Olympus Optical Company Limited. SN 226,274. Pub. 3–26–68. Filed 8–23–65.

850,567. STAPLEX. James J. Oussani, d.b.a. The Staplex Company. SN 238,275. Pub. 3–26–68. Filed 2–7–66.

850,568. CRYORESISTOR. Cryocal, Inc. SN 240,508. Pub. 3–26–68. Filed 3–9–66.

850,569. COLOR LABMASTER. Houston Fearless Corporation. SN 247,924. Pub. 3–26–68. Filed 6–13–66.

850,570. MISCELLANEOUS DESIGN. Braincon Corporation. SN 251,885. Pub. 3–26–68. Filed 8–8–66.

850,571. DIGISCRIBE. Control Data Corporation. SN 253,017. Pub. 3–26–68. Filed 8–24–66.

850,572. KEMLON. Kemlon Products & Development Company. SN 254,294. Pub. 3–26–68. Filed 9–12–66.

850,573. RADEN C. Raden C. Auto-Step Co., Inc. SN 254,890. Pub. 3–26–68. Filed 9–21–66.

850,574. PM AND DESIGN. Pacific Measurements Incorporated. SN 256,230. Pub. 3–26–68. Filed 10–11–66.

850,575. SIPPICAN. The Sippican Corporation. SN 257,725. Pub. 3–26–68. Filed 11–1–66.

850,576. BIF. General Signal Corporation, by merger from The New York Air Brake Company. SN 263,684. Pub. 3–19–68. Filed 1–31–67.

850,577. MISCELLANEOUS DESIGN. Clary Datacomp Systems, Inc., assignee of Clary Corporation. SN 264,030. Pub. 1–2–68. Filed 2–6–67.

850,578. SERO-WASHER. Clay-Adams, Inc. SN 265,176. Pub. 3–26–68. Filed 2–21–67.

850,579. PERMAGRAPH. Elektro-Physik Hans Nix & Dr. Ing. Steingroever K.G. SN 266,316. Pub. 3–26–68. Filed 3–9–67.

850,580. DI-CU. John Rechtfertig, d.b.a. Di-Cu Company. SN 266,919. Pub. 3–26–68. Filed 3–16–67.

850,581. GEM. Paul S. Heitman, d.b.a. Gem-Mounts and Gem-Masks Company. SN 275,850. Pub. 3–26–68. Filed 7–12–67.

850,582. MATEX AND DESIGN. Materiel Experimental Scientifique Matex SA. SN 276,333. Pub. 3–26–68. Filed 7–19–67.

850,583. WOLLENSAK. Minnesota Mining and Manufacturing Company. SN 284,428. Pub. 3–26–68. Filed 11–9–67.

850,584. PATHFINDER. Flex Electric Products Co., Inc. SN 285,886. Pub. 3–26–68. Filed 11–30–67.

Class 27 — Horological Instruments

850,585. TD TRESSA. Tressa Watches Co., Ltd. SN 254,330. Pub. 3–26–68. Filed 9–12–66.

850,586. SEA HUNTER. Bulova Watch Company, Inc. SN 260,646. Pub. 3–26–68. Filed 12–13–66.

Class 28 — Jewelry and Precious-Metal Ware

850,587. PPT. Perks Pearce & Thompson Limited. SN 253,165. Pub. 1–2–68. Filed 11–7–67.

Class 31 — Filters and Refrigerators

850,588. DOUCET AND DESIGN. Charles Pierre Doucet. SN 223,101. Pub. 3–26–68. Filed 7–12–65.

850,589. SP AND CIRCLE DESIGN. Talon, Inc. SN 239,457. Pub. 3–26–68. Filed 2–23–66.

850,590. GUARDIAN. Walker Manufacturing Company. SN 249,690. Pub. 3–26–68. Filed 7–6–66.

850,591. GARRETT AND DESIGN. The Garrett Corporation. SN 255,889. Pub. 3–26–68. Filed 10–6–66.

850,592. CELLUPORE. A. Gusmer, Inc. SN 256,214. Pub. 3–26–68. Filed 10–11–66.

Class 32 — Furniture and Upholstery

850,593. DICO EUROSTYL AND DESIGN. Diks & Coenen N.V. SN 243,967. Pub. 2–6–68. Filed 4–21–66.

850,594. FORT SMITH FOLDING TABLES CHAIRS AND DESIGN. Fort Smith Plywood Company. SN 244,480. Pub. 3–26–68. Filed 4–28–66.

850,595. COLOR MIRROR. Helene Curtis Industries, Inc. SN 255,894. Pub. 3–26–68. Filed 10–6–66.

850,596. CARV/CRAFT. Plastic Industries, Inc. SN 268,894. Pub. 3–26–68. Filed 4–11–67.

Class 34 — Heating, Lighting, and Ventilating Apparatus

850,597. GLASCOTE. Haveg Industries, Inc., assignee of A. O. Smith Corporation. SN 257,097. Pub. 3–26–68. Filed 10–24–66.

850,598. VISTRON. The Standard Oil Company. SN 260,779. Pub. 3–26–68. Filed 12–14–66.

850,599. SOL-DIFUZE. Aztec Industries, Inc., assignee of Reynolds Electrical & Engineering Co., Inc. SN 273,208. Pub. 3–26–68. Filed 6–6–67.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

850,600. RICH-SEAL. Rich Manufacturing Company of California. SN 255,922. Pub. 3–26–68. Filed 10–6–66.

850,601. S (DESIGN). The Firestone Tire & Rubber Company. SN 266,209. Pub. 3–26–68. Filed 3–8–67.

850,602. V10. Pneumatiques, Caoutchouc Manufacture et Plastiques Kleber-Colombes. SN 266,785. Pub. 2–6–68. Filed 3–15–67.

850,603. KWIK-FLEX. Durkee-Atwood Company. SN 268,167. Pub. 3–26–68. Filed 4–3–67.

850,604. REMINGTON UNIVERSAL TRACTION. Dunlop Tire and Rubber Corporation. SN 269,651. Pub. 3–26–68. Filed 4–20–67.

Class 36 – Musical Instruments and Supplies

850,502. (See Class 21 for this trademark.)

850,605. CROWN. Jules Steinman, d.b.a. Crown City Imports. SN 240,035. Pub. 3–26–68. Filed 3–2–66.

850,606. PRINCESS. Balfour Electronics Limited. SN 255,688. Pub. 3–26–68. Filed 10–4–66.

850,607. VSP. Metro-Goldwyn-Mayer Inc. SN 255,810. Pub. 9–12–67. Filed 10–5–66.

850,608. GUITARSVILLE AND DESIGN. Johnny Charles Thompson, d.b.a. Guitarsville Records and Johnny Thompson Guitars and Drums. SN 257,228. Pub. 3–26–68. Filed 10–26–66.

850,609. PAT. Dorcie Vickers. SN 259,607. Pub. 3–26–68. Filed 11–28–66.

850,610. UNI. MCA Inc. SN 266,556. Pub. 3–26–68. Filed 3–13–67.

850,611. UNI (DESIGN). MCA Inc. SN 266,557. Pub. 3–26–68. Filed 3–13–67.

Class 37 – Paper and Stationery

850,411. (See Class 1 for this trademark.)

850,612. COLOR STROKE. American Jet Spray Industries, Inc. SN 253,394. Pub. 3–26–68. Filed 8–29–66.

850,613. REGATTA. The Budd Company. SN 257,928. Pub. 3–26–68. Filed 11–4–66.

850,614. MISTIES. Kimberly-Clark Corporation. SN 262,942. Pub. 3–26–68. Filed 1–20–67.

850,615. FAVORITE. Wilson Jones Company. SN 269,135. Pub. 3–26–68. Filed 4–13–67.

850,616. SCOVILL AND DESIGN. Scovill Manufacturing Company. SN 269,459. Pub. 3–26–68. Filed 4–18–67.

850,617. FINCH PAPER. Finch, Pruyn and Company, Incorporated. SN 269,984. Pub. 3–26–68. Filed 4–25–67.

850,618. ALUMI GARD. Hamersley Paper Mills, Inc. SN 276,662. Pub. 3–26–68. Filed 7–24–67.

Class 38 – Prints and Publications

850,619. VAMP. General Precision Systems Inc., by change of name from General Precision, Inc. SN 258,304. Pub. 3–26–68. Filed 11–9–66.

850,620. AMERICAN OIL MOTOR CLUB AND DESIGN. The American Oil Company. SN 261,023. Pub. 3–26–68. Filed 12–19–66.

850,621. TORCH AND OVAL (DESIGN). The American Oil Company. SN 261,028. Pub. 3–26–68. Filed 12–19–66.

850,622. D & B. Dun & Bradstreet, Inc. SN 261,053. Pub. 3–26–68. Filed 12–19–66.

850,623. SERVICE WORLD. Medalist Publications, Inc. SN 264,326. Pub. 3–26–68. Filed 2–9–67.

850,624. HAND AND BELL DESIGN WITH AN ARROW POINTING TO IT. The Copley Press, Inc. SN 265,611. Pub. 3–26–68. Filed 2–28–67.

850,625. PROFILE OF PEOPLE AND PRODUCTS. Brunswick Corporation. SN 265,975. Pub. 3–26–68. Filed 3–6–67.

850,626. ABACOOS AND DESIGN. William L. Cicciarelli. SN 266,199. Pub. 3–26–68. Filed 3–8–67.

850,627. A MAN'S JUDGMENT IS NO BETTER THAN HIS INFORMATION. United Business Service Company. SN 266,379. Pub. 3–26–68. Filed 3–9–67.

850,628. SANTA'S TOYLANE. Haywood Publishing Company, d.b.a. Oakes Consumer Catalogs. SN 273,501. Pub. 3–26–68. Filed 6–9–67.

850,629. REAL DOUGH. Guaranteed Exposure Inc. SN 284,333. Pub. 3–26–68. Filed 11–8–67.

850,630. PATCH THE PONY ETC. AND DESIGN. Patch the Pony, Inc., assignee of Margaret H. Liles. SN 285,496. Pub. 3–26–68. Filed 11–24–67.

Class 39 – Clothing

850,631. TERRY PIPER. Matsil Brothers, Inc. SN 255,218. Pub. 3–26–68. Filed 9–27–66.

850,632. PETTI-FLOAT. Juliet Lingerie, Inc. SN 258,816. Pub. 3–26–68. Filed 11–16–66.

850,633. 20 GRAND AND DESIGN. Endicott Johnson Corporation. SN 259,821. Pub. 3–26–68. Filed 12–1–66.

850,634. CHEMISE DU ROI. Sportville Mens Wear Inc. SN 260,367. Pub. 3–26–68. Filed 12–8–66.

850,635. FLOWER (DESIGN). Alp Sport, Inc. SN 260,508. Pub. 3–26–68. Filed 12–12–66.

850,636. LOW CALORIE. Sarong, Inc. SN 262,068. Pub. 3–26–68. Filed 1–6–67.

850,637. BODY MOTION. Sarong, Inc. SN 262,533. Pub. 3–26–68. Filed 12–9–66.

850,638. SOFT ANSWERS. Craddock-Terry Shoe Corporation. SN 264,200. Pub. 3–26–68. Filed 2–8–67.

850,639. A JACKIE STUART JUNIOR. Jackie Stuart, Inc. SN 265,928. Pub. 3–26–68. Filed 3–3–67.

850,640. BULL TIGER. Mamiye Brothers Inc. SN 266,342. Pub. 3–5–68. Filed 3–9–67.

850,641. BUDGET BEAUTY. Craft Hosiery, Inc. SN 267,818. Pub. 3–26–68. Filed 3–29–67.

850,642. HALTERNATE AND DESIGN. California Forms, Inc. SN 268,149. Pub. 3–26–68. Filed 4–3–67.

850,643. MR. DEE CEE. Washington Manufacturing Company. SN 270,445. Pub. 3–26–68. Filed 5–1–67.

850,644. MALLCOTT. Miguel Gil, S.A. SN 276,025. Pub. 3–26–68. Filed 7–14–67.

850,645. BRIGHAM YOUNG AND DESIGN. Brigham Young Junior Coats Inc. SN 277,581. Pub. 3–26–68. Filed 8–4–67.

850,646. HONDO PONCHOS. Blue Bell, Inc. SN 278,057. Pub. 3–26–68. Filed 8–11–67.

Class 42 – Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

850,647. LA RONDE. Metropolitan Floor Covering Co. SN 267,171. Pub. 3–26–68. Filed 3–20–67.

850,648. MAKESHIFT. Harry James Carter. SN 269,857. Pub. 3–5–68. Filed 4–24–67.

850,649. CHARL-TEX. Charlton Woolen Company. SN 270,116. Pub. 3–26–68. Filed 4–27–67.

850,650. VELTRIQUE. Lawson Products, Inc. SN 270,586. Pub. 3–26–68. Filed 5–3–67.

850,651. GLAMORVEL. A. Wimpfheimer & Bro., Inc. SN 277,399. Pub. 3–26–68. Filed 8–2–67.

850,652. VELPRIMA. A. Wimpfheimer & Bro., Inc. SN 277,400. Pub. 3–26–68. Filed 8–2–67.

850,653. THE HUGGER. New Haven Quilt & Pad Company Incorporated. SN 277,564. Pub. 3–26–68. Filed 8–4–67.

850,654. TRIQUETTA. Collins & Aikman Corporation. SN 277,629. Pub. 3–26–68. Filed 8–7–67.

850,655. SOIESTAR. Kanegafuchi Boseki Kabushiki Kaisha, d.b.a. Kanegafuchi Spinning Co., Ltd. SN 277,673. Pub. 3–26–68. Filed 8–7–67.

Class 43 – Thread and Yarn

850,416. (See Class 1 for this trademark.)

850,656. LONESTA. Roselon Yarns, Inc. SN 277,707. Pub. 3–26–68. Filed 8–7–67.

850,657. SPINESTA. Roselon Yarns, Inc. SN 277,708. Pub. 3–26–68. Filed 8–7–67.

850,658. NYESTA. Roselon Yarns, Inc. SN 277,709. Pub. 3–26–68. Filed 8–7–67.

Class 44 – Dental, Medical, and Surgical Appliances

850,659. SURE. The Procter & Gamble Company. SN 199,103. Pub. 6–29–65. Filed 8–3–64.

850,660. WHITE TIP. Eugene W. Olsen, d.b.a. Olsen Surgical Service-Repairing. SN 229,117. Pub. 8–9–66. Filed 10–1–65.

850,661. TRIM-TONE. Saml Dodsworth Company. SN 265,339. Pub. 3–19–68. Filed 2–23–67.

850,662. NOBETEC. Aktiebolaget Bofors. SN 278,246. Pub. 3–26–68. Filed 6–7–67.

850,663. E-Z-CATH. Deseret Pharmaceutical Company, Inc. SN 273,613. Pub. 3–26–68. Filed 6–12–67.

850,664. UNIPREP. Parke, Davis & Company. SN 279,990. Pub. 11–14–67. Filed 9–11–67.

850,665. VITALIZER. Cooper's Incorporated. SN 282,889. Pub. 3–26–68. Filed 10–19–67.

Class 45 – Soft Drinks and Carbonated Waters

850,666. TYME FOR PLEASURE AND DESIGN. Nehi Bottling Company of Harlingen, d.b.a. Tyme Bottling Company. SN 279,439. Pub. 2–6–68. Filed 8–31–67.

Class 46 – Foods and Ingredients of Foods

850,667. DOUBLE 007 AND DESIGN. J. R. Norton Co. SN 244,609. Pub. 10–4–66. Filed 4–29–66.

850,668. MISCELLANEOUS DESIGN. S. Parkinson & Son (Doncaster) Limited. SN 245,095. Pub. 3–26–68. Filed 5–6–66.

850,669. MISCELLANEOUS DESIGN. Joseph Gangi & Sons, Inc. SN 245,470. Pub. 3–26–68. Filed 5–12–66.

850,670. CHARIOTS. General Mills, Inc. SN 246,779. Pub. 3–26–68. Filed 5–27–66.

850,671. AJIMATE. Adjinomoto Kabushiki Kaisha, d.b.a. Ajinomoto Co., Inc. SN 250,121. Pub. 3–26–68. Filed 7–13–66.

850,672. EXECUTIVE CHEF. Kadison Laboratories, Inc. SN 253,972. Pub. 3–26–68. Filed 9–7–66.

850,673. PRADO. Suchard Holding Societe Anonyme. SN 255,242. Pub. 3–26–68. Filed 9–27–66.

850,674. SHAKE-A-LUNCH. Foremost-McKesson, Inc., assignee of Foremost Dairies, Inc. SN 257,178. Pub. 3–26–68. Filed 10–25–66.

850,675. BRITE BLOOM. Di Giorgio Corporation, d.b.a. Di Giorgio Fruit Corporation. SN 257,466. Pub. 3–26–68. Filed 10–28–66.

850,676. RED SPOON. General Mills, Inc. SN 257,482. Pub. 3–26–68. Filed 10–28–66.

850,677. WHIMSIES. General Mills, Inc. SN 257,612. Pub. 3–26–68. Filed 10–31–66.

850,678. MIRACURE. Armour and Company. SN 258,351. Pub. 3–26–68. Filed 11–10–66.

850,679. THE LOAF THAT BECAME A LEGEND. Order of St. Benedict. SN 259,461. Pub. 3–26–68. Filed 11–25–66.

850,680. NAVAJO MAID AND DESIGN. Hayden Flour Mills. SN 260,049. Pub. 3–26–68. Filed 12–5–66.

850,681. KNORR-SWISS. Knorr-Nährmittel Aktiengesellschaft. SN 261,590. Pub. 3–26–68. Filed 12–28–66.

850,682. U.F.O. FLYING SAUCER. Balmar, Inc. SN 264,895. Pub. 3–26–68. Filed 2–17–67.

850,683. LA BODEGA. Bonsal Seggerman & Co. SN 264,898. Pub. 3–26–68. Filed 2–17–67.

850,684. WHEET CRACK O'S. General Mills, Inc. SN 265,380. Pub. 10–3–67. Filed 2–24–67.

850,685. COFFEE COMBO. The Borden Company. SN 266,404. Pub. 3–26–68. Filed 3–10–67.

850,686. DESIGN OF A MAN SMOKING A PIPE. Root Company, d.b.a. Old Dutch Co. SN 267,676. Pub. 3–26–68. Filed 3–27–67.

850,687. BANQUET. F. M. Stamper Company, d.b.a. Banquet Canning Company. SN 268,772. Pub. 3–26–68. Filed 4–10–67.

850,688. WHIRLY BIRD. National Biscuit Company. SN 268,889. Pub. 3–26–68. Filed 4–11–67.

850,689. REPRESENTATION OF A DOG'S FACE. R. D. Blackwood & Son (Production) Limited. SN 270,848. Pub. 3–26–68. Filed 5–1–67.

850,690. EP. Hills Bros. Coffee, Inc. SN 270,572. Pub. 3–26–68. Filed 5–3–67.

850,691. SPUTNIK. Chana S. Craig, d.b.a. Chana's Carry Out. SN 271,095. Pub. 3–26–68. Filed 5–10–67.

850,692. SUCHARD EXPRESS AND DESIGN. Suchard Holding Societe Anonyme. SN 271,734. Pub. 3–26–68. Filed 5–17–67.

850,693. COMET ADOLPHUS AND DESIGN. Comet Rice Mills, Inc. SN 271,922. Pub. 3–26–68. Filed 5–19–67.

850,694. PEPPIERMINT. Philip Morris Incorporated, d.b.a. Clark Gum Co. SN 273,715. Pub. 3–26–68. Filed 6–13–67.

850,695. STAIZ. H. C. Brill Company, Inc. SN 274,304. Pub. 3–26–68. Filed 6–20–67.

850,696. MAY-BUD. Purity Cheese Company. SN 274,461. Pub. 3–26–68. Filed 6–21–67.

850,697. CHILI-O. The R. T. French Company. SN 274,512. Pub. 3–26–68. Filed 6–22–67.

850,698. BANANA TWINS. McKee Baking Company. SN 275,862. Pub. 3–26–68. Filed 7–12–67.

850,699. BIG JOHN'S. John Reeves. SN 276,175. Pub. 3–26–68. Filed 7–17–67.

850,700. OUR PRIDE. Haynes Milling Co., Inc. SN 277,169. Pub. 3–26–68. Filed 7–31–67.

850,701. FULL-O-FRUIT. Philip Morris Incorporated, d.b.a. Flavor Tree Co. SN 277,208. Pub. 3–26–68. Filed 7–31–67.

850,702. MISCELLANEOUS DESIGN. Tri-Valley Growers. SN 277,810. Pub. 3–26–68. Filed 8–8–67.

850,703. TOWER/DRI. Tri-Valley Growers. SN 277,811. Pub. 3–26–68. Filed 8–8–67.

850,704. QUALITATE. Seaboard Allied Milling Corporation, d.b.a. George Urban Milling Company. SN 278,248. Pub. 3–26–68. Filed 8–14–67.

850,705. PUCKER-UPS. Forbes Williamsburg Candies Inc. SN 278,800. Pub. 3–26–68. Filed 8–22–67.

850,706. WINE-CHEF. Vie-Del Company. SN 278,835. Pub. 3–26–68. Filed 8–22–67.

850,707. SULTANA. The Great Atlantic & Pacific Tea Company, Inc. SN 279,642. Pub. 3–26–68. Filed 9–5–67.

850,708. "THE HOUSE OF THE KOSHER COW." Best Kosher Sausage Co. SN 280,911. Pub. 3–26–68. Filed 9–22–67.

850,709. VI-PRO-MIN. The Coca-Cola Company. SN 284,132. Pub. 3–26–68. Filed 11–6–67.

850,710. FANS. General Mills, Inc. SN 284,538. Pub. 3–26–68. Filed 11–13–67.

850,711. NUTTY SHELLS. General Mills, Inc. SN 284,870. Pub. 3–26–68. Filed 11–15–67.

850,712. PATISSE. Suchard Holding Societe Anonyme. SN 284,880. Pub. 3–26–68. Filed 11–15–67.

850,713. TRAINING TABLE. General Foods Corporation. SN 284,968. Pub. 2–6–68. Filed 11–16–67.

850,714. VALPAK. Valley Packing Company of California, d.b.a. Valley Pkg. Co. SN 285,178. Pub. 3–26–68. Filed 11–20–67.

850,715. MR. PRO AND DESIGN. House of Frothee, Inc. SN 285,495. Pub. 3–26–68. Filed 11–24–67.

850,716. CREAM CAPADES. National Biscuit Company. SN 285,622. Pub. 3–26–68. Filed 11–27–67.

850,717. DESSERT CHEF. National Biscuit Company. SN 285,625. Pub. 3–26–68. Filed 11–27–67.

850,718. LIFELINE. H. Y. Minami and Sons. SN 285,797. Pub. 3–26–68. Filed 11–29–67.

850,719. CLIMAX. The Pfaffman Company. SN 288,473. Pub. 3–26–68. Filed 1–10–68.

Class 47 — Wines

850,720. THE JUDGE'S SECRET. Llords & Elwood Winery. SN 268,053. Pub. 3–26–68. Filed 3–31–67.

850,721. PINK DUCK. Robin Fils & Cie, Ltd. SN 275,305. Pub. 3–26–68. Filed 7–3–67.

Class 48 — Malt Beverages and Liquors

850,722. BRAUHAUS. Champale, Inc., by change of name from Metropolis Brewery of N.J., Inc. SN 198,065. Pub. 8–30–66. Filed 7–17–64.

Class 49 — Distilled Alcoholic Liquors

850,723. MUSIC CITY U.S.A. B & G Distributing Co. SN 258,033. Pub. 3–26–68. Filed 11–7–66.

850,724. MORITZ THIENELT. Moritz Thienelt, Likörfabrik "Echte Kroatzbeere." SN 259,557. Pub. 3–26–68. Filed 11–28–66.

850,725. SCHUTTBODEN. Moritz Thienelt, Likörfabrik "Echte Kroatzbeere." SN 259,558. Pub. 3–26–68. Filed 11–28–66.

850,726. RABENVATER. Moritz Thienelt, Likörfabrik "Echte Kroatzbeere." SN 259,559. Pub. 3–26–68. Filed 11–28–66.

850,727. RABENVATER AND DESIGN. Moritz Thienelt, Likörfabrik "Echte Kroatzbeere." SN 259,560. Pub. 3–26–68. Filed 11–28–66.

850,728. THIENELT'S SCHUTTBODEN AND DESIGN. Moritz Thienelt, Likörfabrik "Echte Kroatzbeere." SN 259,561. Pub. 3–26–68. Filed 11–28–66.

850,729. LIGHTHOUSE. Heublein, Inc. SN 272,489. Pub. 3–26–68. Filed 5–26–67.

850,730. ANCIENT MEMORIAL. H. C. Macpherson, d.b.a. A. & B. Mackay & Company, and A. & B. Mackay Ltd. SN 288,577. Pub. 3–26–68. Filed 1–11–68.

850,731. PAST MASTER. H. C. Macpherson, d.b.a. Macpherson and Company. SN 288,578. Pub. 3–26–68. Filed 1–11–68.

Class 50 — Merchandise Not Otherwise Classified

850,732. DESIGNER SERIES. Frank P. Mitten, d.b.a. Mitten's Display Letters. SN 245,734. Pub. 3–26–68. Filed 5–16–66.

850,733. BAKING AID. Edanbob Corporation. SN 261,367. Pub. 3–26–68. Filed 12–23–66.

850,734. FLEX NET. L. Marino, Inc. SN 272,289. Pub. 3–26–68. Filed 5–24–67.

Class 51 — Cosmetics and Toilet Preparations

850,735. PICCADILLY. Yardley of London, Inc. SN 232,886. Pub. 7–11–67. Filed 11–17–65.

850,736. BUBBLES OF COLOR. John H. Breck, Inc. SN 236,048. Pub. 3–26–68. Filed 1–10–66.

850,737. COLOR BUBBLES. John H. Breck, Inc. SN 236,049. Pub. 3–26–68. Filed 1–10–66.

850,738. SEMI PERM. Samuel Bonat & Bro., Inc. SN 240,248. Pub. 10–25–66. Filed 3–7–66.

850,739. BIRD, MOUNTAIN AND PINE TREE BRANCH (DESIGN). Charles F. Pentler, d.b.a. C. F. & F. M. Pentler. SN 250,993. Pub. 3–26–68. Filed 7–25–66.

850,740. BRITISH TABAC. Westminster Toiletries Ltd. SN 253,806. Pub. 1–9–68. Filed 9–2–66.

850,741. BELLAIR. Bellair Cosmetics Limited. MULTIPLE CLASS (Classes 51 and 52). SN 256,815. Pub. 3–26–68. Filed 10–20–66.

850,742. MISTY SURF. Clairol Incorporated. SN 258,064. Pub. 3–26–68. Filed 11–7–66.

850,743. MAXAFIL. Texas Pharmacal Company. SN 259,775. Pub. 3–26–68. Filed 11–30–66.

850,744. GLO-ER. Yardley of London, Inc. SN 259,783. Pub. 3–26–68. Filed 11–30–66.

850,745. JUVARE. Juvare, Inc., assignee of L. B. Coulter, d.b.a. L. B. Coulter Company. SN 259,811. Pub. 3–26–68. Filed 12–1–66.

850,746. MISCELLANEOUS DESIGN. John K. Diederichs, d.b.a. House of Crayton. SN 260,733. Pub. 3–26–68. Filed 12–14–66.

850,747. GANTELINE. Societe Anonyme Expanscience. SN 261,327. Pub. 3–26–68. Filed 12–22–66.

850,748. CLOUDLIT BLONDE. Clairol Incorporated. SN 261,638. Pub. 3–26–68. Filed 12–29–66.

850,749. MILLIONS. Springfoot, Inc. SN 261,762. Pub. 3–26–68. Filed 12–30–66.

850,750. SUNSWEPT. Texas Pharmacal Company. SN 265,238. Pub. 3–26–68. Filed 2–23–67.

850,751. MILOPA AND DESIGN. Milopa Ltd. SN 265,317. Pub. 3–26–68. Filed 2–23–67.

850,752. HOLD ME TIGHT ETC. AND DESIGN. Robert J. Leigh, d.b.a. Fashion Fair Company. SN 267,892. Pub. 3–26–68. Filed 3–30–67.

850,753. BETHERE. Clairol Incorporated. SN 269,630. Pub. 3–26–68. Filed 4–20–67.

850,754. BE THERE. Clairol Incorporated. SN 269,633. Pub. 3–26–68. Filed 4–20–67.

850,755. CONSIDERATION. Clairol Incorporated. SN 269,634. Pub. 3–26–68. Filed 4–20–67.

850,756. HAPPY BIRTHDAY. Clairol Incorporated. SN 269,636. Pub. 3–26–68. Filed 4–20–67.

850,757. COVER GIRL "CRAZY STICKS." Noxell Corporation. SN 270,943. Pub. 3–26–68. Filed 5–8–67.

850,758. LACEYS. Yardley of London, Inc. SN 271,875. Pub. 3–26–68. Filed 5–18–67.

850,759. FROST LIME. The J. B. Williams Company, Inc. MULTIPLE CLASS (Classes 51 and 52). SN 277,962. Pub. 3–26–68. Filed 8–10–67.

850,760. COMMAND. Alberto-Culver Company. SN 286,595. Pub. 3–26–68. Filed 12–11–67.

850,761. PATROL. Alberto-Culver Company. SN 286,596. Pub. 3–26–68. Filed 12–11–67.

Class 52 — Detergents and Soaps

850,741. (See Class 51 for this trademark.)

850,759. (See Class 51 for this trademark.)

850,762. BIOTEX. Kortman & Schulte N.V. SN 244,908. Pub. 7–4–67. Filed 5–4–66.

850,763. TRI-GLY. Sybil Ives Incorporated. SN 261,533. Pub. 3–26–68. Filed 12–27–66.

850,764. VAPION. Breier of Amsterdam, Inc., d.b.a. Leather 'n' Suede. SN 268,470. Pub. 3–26–68. Filed 4–6–67.

850,765. TENNANT AND DESIGN. G. H. Tennant Company. SN 275,481. Pub. 3–26–68. Filed 7–6–67.

850,766. HOUBET CLEAR. Mem Company, Inc. SN 284,691. Pub. 3–26–68. Filed 11–13–67.

Service Marks

Class 100 — Miscellaneous

850,767. INSTANT CUME. ARB (American Research Bureau) Inc. SN 243,751. Pub. 3–26–68. Filed 4–19–66.

850,768. OHIO KOTE. The Ohio Corrugating Company. SN 251,453. Pub. 3–26–68. Filed 8–1–66.

850,769. W WILLIAMS BROTHERS AND DESIGN. Williams Brothers Company. MULTIPLE CLASS (Classes 100 and 103). SN 253,388. Pub. 3–26–68. Filed 8–29–66.

850,770. CATER-VEND AND DESIGN. Cater-Vend, Inc. SN 253,847. Pub. 3–26–68. Filed 9–6–66.

850,771. RED DOG INN. Red Dog, Inc. SN 254,720. Pub. 3–26–68. Filed 9–19–66.

850,772. AMERICAN OIL. The American Oil Company. SN 259,704. Pub. 3–26–68. Filed 11–30–66.

850,773. TORCH AND OVAL (DESIGN). The American Oil Company. SN 261,022. Pub. 3–26–68. Filed 12–19–66.

850,774. AMERICAN OIL MOTOR CLUB AND DESIGN. The American Oil Company. SN 261,027. Pub. 3–26–68. Filed 12–19–66.

850,775. ANTICIPATING TOMORROW. Barber-Greene Company. MULTIPLE CLASS (Classes 100 and 103). SN 262,655. Pub. 3–26–68. Filed 1–17–67.

850,776. NATIONAL SHOOTING SPORTS FOUNDATION INC. AND DESIGN. National Shooting Sports Foundation, Inc. SN 271,753. Pub. 3–26–68. Filed 5–18–67.

850,777. COMPASSION. Compassion, Inc. SN 272,917. Pub. 3–26–68. Filed 6–2–67.

850,778. COMPASSION AND DESIGN. Compassion, Inc. SN 275,920. Pub. 3–26–68. Filed 7–13–67.

Class 101 — Advertising and Business

850,779. THE CITY. The City Management Corp. SN 245,292. Pub. 3–26–68. Filed 5–10–66.

850,780. DE LORIS HILL AND DESIGN. De Loris E. Hill, d.b.a. De Loris Hill. SN 247,124. Pub. 3–26–68. Filed 6–2–66.

850,781. DISCO. Super Valu Stores, Inc. SN 265,354. Pub. 3–26–68. Filed 2–23–67.

850,782. HIRSCH'S. Interco Incorporated. SN 266,539. Pub. 3–26–68. Filed 3–13–67.

850,783. MSP CAT AND DESIGN. Donald W. Gapp, d.b.a. Donald W. Gapp and Associates. SN 268,593. Pub. 3–26–68. Filed 4–7–67.

850,784. MISCELLANEOUS DESIGN. Lowe's, Inc. SN 268,748. Pub. 3–26–68. Filed 4–10–67.

850,785. INTERTEXT. International Textbook Company. MULTIPLE CLASS (Classes 101, 106, and 107). SN 281,744. Pub. 3–26–68. Filed 10–4–67.

Class 102 — Insurance and Financial

850,786. AMERICAN OIL. The American Oil Company. SN 259,703. Pub. 3–26–68. Filed 11–30–66.

850,787. TORCH AND OVAL (DESIGN). The American Oil Company. SN 261,025. Pub. 3–26–68. Filed 12–19–66.

850,788. AMERICAN OIL MOTOR CLUB AND DESIGN. The American Oil Company. SN 261,026. Pub. 3–26–68. Filed 12–19–66.

Class 103 — Construction and Repair

850,769. (See Class 100 for this trademark.)

850,775. (See Class 100 for this trademark.)

850,789. SERVICE CORPORATION OF AMERICA. Service Corporation of America. SN 285,590. Pub. 3–26–68. Filed 12–30–65.

850,790. LOPER ELECTRIC, INC. AND DESIGN. Loper Electric, Inc. SN 253,892. Pub. 3–26–68. Filed 9–6–66.

850,791. UNION 76 AND DESIGN. Union Oil Company of California. SN 273,539. Pub. 3–26–68. Filed 6–9–67.

Class 106 — Material Treatment

850,785. (See Class 101 for this trademark.)

850,792. TREMENDOUS COLOR AND DESIGN. Kim Color Corporation, d.b.a. Tremendous Color. SN 266,965. Pub. 10–31–67. Filed 3–2–67.

850,793. THE WHOLE WORLD KNOWS TREMENDOUS PIX AND DESIGN. Kim Color Corporation, d.b.a. Tremendous Color, assignee of Monkey Color, Inc. SN 267,467. Pub. 3–12–68. Filed 3–13–67.

Class 107 — Education and Entertainment

850,785. (See Class 101 for this trademark.)

850,794. EDU-DATA AND DESIGN. Edu-Data Service Center. SN 252,252. Pub. 3–26–68. Filed 8–12–66.

850,795. QUEEN OF THE CHESAPEAKE. Maryland Yacht Club. SN 253,895. Pub. 3–26–68. Filed 9–6–66.

850,796. MUSTACHE STOMPERS. Your Father's Mustache International, Inc., by change of name from Warrenton Restaurant, Inc. SN 255,841. Pub. 3–26–68. Filed 10–5–66.

850,797. MR. AMERICA. Amateur Athletic Union of the United States. SN 260,509. Pub. 1–2–68. Filed 12–12–66.

850,798. THE HOLE-IN-ONE-CLUB. Hollnone, Inc. SN 280,706. Pub. 3–26–68. Filed 9–19–67.

850,799. 76ERS. Riko Enterprises, Inc., d.b.a. Philadelphia 76ers. SN 283,204. Pub. 3–26–68. Filed 10–24–67.

Collective Membership Marks

Class 200

850,800. LAMBDA IOTA TAU AND DESIGN. Lambda Iota Tau, Incorporated. SN 259,942. Pub. 3–26–68. Filed 12–2–66.

850,801. LIT AND DESIGN. Lambda Iota Tau, Incorporated. SN 259,943. Pub. 3–26–68. Filed 12–2–66.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

SECTION 1

(Combined Certificates)

850,804. Royal International Kabushiki Kaisha, d.b.a. Royal International Corporation, Minato-ku, Tokyo-to, Japan. SN 248,848. Filed P.R. 6-23-66; Am. S.R. 4-3-68.

Stevens

Class 21—Electrical Apparatus, Machines, and Supplies

For Radios and Televisions and Parts Thereof (Int. Cl. 9).

Class 36—Musical Instruments and Supplies

For Tape Recorders (Sound Recording and Reproduction Machine Video Tape Recorders and Integral Parts Thereof), Tapes for Tape Recorders, Reels for Tape, and Recorded Tape (Int. Cl. 9).

First use Apr. 7, 1966; in commerce Apr. 7, 1966.

SECTION 2

Class 2 — Receptacles

850,802. Earl Grissmer Company, Inc., Indianapolis, Ind. SN 267,583. Filed P.R. 3-27-67; Am. S.R. 2-23-68.

BLUE LUSTRE

For Disposable Bags for Use With Vacuum Cleaners (Int. Cl. 21).

First use Feb. 24, 1967.

Class 19 — Vehicles

850,803. Unarco Industries, Inc., Chicago, Ill. SN 260,103. Filed P.R. 12-5-66; Am. S.R. 4-4-68.

FULLOAD

For Lading Divider Equipment for Installation in Railway Cars (Int. Cl. 12).

First use Nov. 14, 1966.

Class 21 — Electrical Apparatus, Machines, and Supplies

850,804. See Section 1 (Combined Certificate).

Class 22 — Games, Toys, and Sporting Goods

850,805. Harts Mountain Products Corp., New York, N.Y. SN 280,418. Filed 9-15-67.

SWEET CHEW

For Scented Toy for Animal Pets (Int. 18).

First use Aug. 24, 1966.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

850,806. Parke H. Thompson II, d.b.a. Parke Thompson Associates, Fenton, Mo. SN 262,074. Filed P.R. 1-6-67; Am. S.R. 3-14-68.

THOMPSON
TOTABLE TOOLING

For Utility and Industrial Tooling—Namely, Electric, Air, Gasoline and Hydraulic Driven Portable Capstan Hoists, Wire Stringing Devices, Spray Equipment for Applying a Spray Coating to Insulators and Switches on High Voltage Power Transmission and Distribution Systems, and Cable Pulling Equipment (Int. Cl. 7).

First use Dec. 9, 1966.

850,807. Mack Trucks, Inc. (Delaware corporation), Allentown, Pa., assignee of Mack Trucks, Inc. (New York corporation), Allentown, Pa. SN 269,824. Filed P.R. 4-24-67; Am. S.R. 3-20-68.

TURBO-UNLOADER

For Exhaust-Driven Turbocharger for Use in Removing the Contents of Pressure Tank Trailers (Int. Cl. 7).

First use Mar. 13, 1967.

Class 26 — Measuring and Scientific Appliances

850,808. Corning Glass Works, Corning, N.Y. SN 234,729. Filed P.R. 12-16-65; Am. S.R. 4-8-68.

BESTLITE

For Photochromic Optical Glass and Lenses and Optical and Ophthalmic Applications Made Therefrom (Int. Cl. 9).

First use about Aug. 31, 1965.

850,809. National Instrument Company Inc., Baltimore, Md. SN 273,095. Filed P.R. 6-5-67; Am. S.R. 4-1-68.

DIP-N-READ

For Instrument—Namely, Viscosimeter for Determining the Viscosity of Liquids (Int. Cl. 9).

First use Sept. 1, 1966.

850,810. Sola Basic Industries, Inc., Milwaukee, Wis. SN 286,797. Filed P.R. 12-13-67; Am. S.R. 4-5-68.

IN-WALL

For Electric Transformers (Int. Cl. 9),

First use Apr. 15, 1964.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

850,811. Uniroyal, Inc., New York, N.Y., by change of name from United States Rubber Company, New York, N.Y. SN 242,944. Filed P.R. 4-7-66; Am. S.R. 4-12-68.

COOL

For Inner Tubes for Pneumatic Tires (Int. Cl. 12).

First use Feb. 23, 1966.

Class 36 — Musical Instruments and Supplies

850,804. See Section 1 (Combined Certificate).

Class 37 — Paper and Stationery

850,812. Midwest Publishers Supply Co., Chicago, Ill. SN 260,064. Filed P.R. 12-5-66; Am. S.R. 2-2-68.

GRID-TAPE

For Layout Sheets Used for Printing Make-Up (Int. Cl. 16).

First use Nov. 17, 1966.

Class 38 — Prints and Publications

850,813. Hallmark Cards, Incorporated, Kansas City, Mo. SN 289,301. Filed P.R. 1-22-68; Am. S.R. 4-11-68.

WORDS OF WISDOM

For Memorandum Calendars, Portfolios of Prints, and Greeting Cards (Int. Cl. 16).

First use Mar. 15, 1967, on memorandum calendars.

850,814. Gas Turbine Publications, Inc., Stamford, Conn. SN 293,084. Filed 3-13-68.

GAS TURBINE
INTERNATIONAL

For Bimonthly Trade Magazine Devoted to Matters of Interest to Manufacturers and Users of Turbine Engines and Equipment Powered Therefrom (Int. Cl. 16).

First use January 1967.

Class 44 — Dental, Medical, and Surgical Appliances

850,815. The Birtcher Corporation, Los Angeles, Calif. SN 250,446. Filed P.R. 7-18-66; Am. S.R. 4-4-68.

LOCKONS

For Electrode Holding Seals for Attaching Electrodes to the Body (Int. Cl. 10).

First use June 13, 1966.

Class 50 — Merchandise Not Otherwise Classified

850,816. Cott Corporation, New Haven, Conn. SN 254,779. Filed P.R. 9-20-66; Am. S.R. 2-5-68.

TWIST 'N SEAL

For Closure Caps for Applicant's Soft Drink Bottles (Int. Cl. 6).

First use Aug. 22, 1966.

Service Mark

Class 102 — Insurance and Financial

850,817. Belmont National Bank of Chicago, Chicago, Ill. SN 278,840. Filed P.R. 8-21-67; Am. S.R. 10-18-67.

BELMONT NATIONAL BANK
OF CHICAGO

For Banking Services (Int. Cl. 36).

First use on or about July 1, 1946.

TRADEMARK REGISTRATIONS RENEWED

68,202. BONNEY. Cl. 23 (Int. Cl. 8). 3-17-08.
68,397. NEWMAN. Cl. 27 (Int. Cl. 14). 4-7-08.
68,557. COLITE. Cl. 9 (Int. Cl. 13). 4-14-08.
68,572. TESSAR. Cl. 26 (Int. Cl. 9). 4-14-08.
68,829. MOBILENE. Cl. 35 (Int. Cl. 17). 4-28-08.
69,160. PROPHYLACTIC. Cl. 51 (Int. Cl. 3). 5-19-08.
69,268. "SAWYER'S CRYSTAL BLUE" ETC. AND DESIGN. Cl. 6 (Int. Cl. 3). 6-2-08.
69,438. ALSA. Cl. 43 (Int. Cl. 23). 6-16-08.
69,461. "CHOISA" AND DESIGN. Cl. 46 (Int. Cl. 30). 6-16-08.
69,737. CRYSTAL. Cl. 6 (Int. Cl. 1). 6-30-08.
170,692. LINCOLN. Cl. 19 (Int. Cl. 12). 7-17-23.
234,594. FI-NA-ST. Cl. 46 (Int. Cls. 29, 30, and 31). 11-1-27.
237,174. UNIVERSAL HOIST. Cl. 21 (Int. Cl. 7). 1-3-28.
240,841. H AND H. Cl. 4 (Int. Cl. 3). 4-10-28.
241,711. "GOLD SEAL" AND OVAL DESIGN. Cl. 21 (Int. Cl. 9). 5-8-28.
243,206. BLUE SEAL. Cl. 51 (Int. Cl. 3). 6-12-28.
244,136. SALETO. Cl. 18 (Int. Cl. 5). 7-10-28.
244,145. ACTEROL. Cl. 18 (Int. Cl. 5). 7-10-28.
244,543. ELIZABETH HATS. Cl. 39 (Int. Cl. 25). 7-24-28.
244,587. IMPERIAL. Cl. 15 (Int. Cl. 4). 7-24-28.
244,592. GOLD CRAFT. Cl. 46 (Int. Cl. 30). 7-24-28.
245,262. CON-TRAK-TOR. Cl. 35 (Int. Cl. 12). 8-7-28.
245,368. ELYNOR. Cl. 39 (Int. Cl. 25). 8-14-28.
245,683. PACIFIC PURCHASOR. Cl. 38 (Int. Cl. 16). 8-21-28.
246,347. SAFEX. Cl. 6 (Int. Cl. 1). 9-4-28.
246,413. SUNPROOF. Cl. 6 (Int. Cl. 1). 9-4-28.
246,613. TIGER. Cl. 22 (Int. Cl. 28). 9-11-28.
246,938. IRON DUKE. Cl. 39 (Int. Cl. 25). 9-18-28.
434,418. ARTRA. Cl. 51 (Int. Cl. 3). 11-18-47.
436,166. RED MILL. Cl. 42 (Int. Cl. 24). 1-27-48.
437,638. RESILON. Cl. 1 (Int. Cl. 1). 3-30-48.
437,692. RED HOT OINTMENT. Cl. 18 (Int. Cl. 5). 3-30-48.

437,782. MATILDA'S GRO-QUICK AND DESIGN. Cl. 51 (Int. Cl. 3). 3-30-48.
437,748. SOMETHING TO TALK ABOUT. Cl. 38 (Int. Cl. 16). 3-30-48.
438,305. VICTROMETER. Cl. 26 (Int. Cl. 9). 4-13-48.
438,551. POPTENE. Cl. 46 (Int. Cl. 30). 4-27-48.
439,244. FLEXAGUIDE. Cl. 21 (Int. Cl. 9). 6-8-48.
439,729. HY-TUF. Cl. 14 (Int. Cl. 6). 7-13-48.
439,899. THE SHOE BAG AND DESIGN. Cl. 39 (Int. Cl. 25). 7-27-48.
439,998. GUARDSMAN. Cl. 27 (Int. Cl. 14). 8-3-48.
440,471. TONETEX. Cl. 26 (Int. Cl. 9). 9-7-48.
440,624. SOUTHERN COMFORT ETC. AND DESIGN. Cl. 32 (Int. Cl. 20). 9-14-48.
440,766. PARKO AND DESIGN. Cl. 52 (Int. Cl. 1). 9-28-48.
500,024. CUTLASS. Cl. 52 (Int. Cl. 3). 4-6-48.
500,040. RUBANK AND DESIGN. Cl. 38 (Int. Cl. 16). 4-6-48.
500,067. WILDMERE. Cl. 46 (Int. Cl. 29). 4-13-48.
500,084. TRI-GEL-MA. Cl. 18 (Int. Cl. 5). 4-13-48.
500,086. CHOLALOIDS. Cl. 18 (Int. Cl. 5). 4-13-48.
500,089. EUCAZEST. Cl. 18 (Int. Cl. 5). 4-13-48.
500,090. DORMITOL. Cl. 18 (Int. Cl. 5). 4-13-48.
500,091. TOLUAC. Cl. 18 (Int. Cl. 5). 4-13-48.
500,092. EXDERMA. Cl. 18 (Int. Cl. 5). 4-13-48.
500,110. SAVABRUSH AND DESIGN. Cl. 52 (Int. Cl. 3). 4-20-48.
500,112. NEVABIND. Cl. 39 (Int. Cl. 25). 4-20-48.
500,289. FLAXVALE. Cl. 42 (Int. Cl. 24). 5-11-48.
500,309. ARROW AND DESIGN. Cl. 6 (Int. Cl. 1). 5-11-48.
500,371. SUPER-TREATED. Cl. 11 (Int. Cl. 16). 5-18-48.
500,425. ANATOLE. Cl. 51 (Int. Cl. 3). 5-18-48.
500,623. YOGI. Cl. 46 (Int. Cl. 30). 6-8-48.
500,731. LONALAC. Cl. 18 (Int. Cl. 5). 6-29-48.
500,732. CLEARTEX. Cl. 11 (Int. Cl. 16). 6-29-48.
500,864. SOUTH EASTERN. Cl. 7 (Int. Cls. 22 and 23). 7-6-48.
500,928. SUSPANTS. Cl. 39 (Int. Cl. 25). 7-6-48.
501,033. COMMANDER. Cl. 11 (Int. Cl. 16). 7-13-48.
501,084. TA-NON-KA. Cl. 37 (Int. Cl. 16). 7-20-48.
501,095. NYMO. Cl. 43 (Int. Cl. 23). 7-20-48.
501,140. CASEC. Cl. 18 (Int. Cl. 5). 7-27-48.
501,171. BEVISOL. Cl. 18 (Int. Cl. 5). 7-27-48.
501,190. KISCO AND DESIGN. Cl. 21 (Int. Cl. 11). 7-27-48.
501,246. KANT-STIK. Cl. 11 (Int. Cl. 16). 7-27-48.
501,283. CALUMETAL. Cl. 14 (Int. Cl. 6). 8-3-48.
501,309. PHILADELPHIA. Cl. 49 (Int. Cl. 33). 8-3-48.
501,310. EMBASSY CLUB. Cl. 49 (Int. Cl. 33). 8-3-48.
501,311. DIXIE BELLE AND DESIGN. Cl. 49 (Int. Cl. 33). 8-3-48.
501,408. SHINING HOUR. Cl. 51 (Int. Cl. 3). 8-3-48.
501,618. FLEETWOOD. Cl. 46 (Int. Cl. 30). 8-17-48.
501,681. METALASTIC. Cl. 43 (Int. Cl. 23). 8-17-48.
501,718. TIMING. Cl. 35 (Int. Cl. 7). 8-17-48.
501,855. MAIL POUCH AND DESIGN. Cl. 17 (Int. Cl. 34). 8-24-48.
501,926. UNIVERSAL. Cl. 34 (Int. Cl. 11). 8-31-48.
501,967. FLORAGLOW. Cl. 6 (Int. Cl. 1). 8-31-48.
436,239. FIELDCREST. Cl. 42 (Int. Cl. 24). 1-27-48.
436,369. ETERNO. Cl. 37 (Int. Cl. 16). 2-3-48.
436,573. CAPETTE. Cl. 18 (Int. Cl. 5). 2-10-48.
436,990. SHINING HOUR. Cl. 52 (Int. Cl. 3). 3-2-48.
437,116. VACOSET. Cl. 44 (Int. Cl. 10). 3-9-48.
437,285. UNOLYN. Cl. 7 (Int. Cl. 22). 3-9-48.
437,286. UNOLYN. Cl. 40 (Int. Cl. 26). 3-9-48.
437,358. MYCO VAC. Cl. 21 (Int. Cl. 9). 3-16-48.
437,438. TUMEROL. Cl. 46 (Int. Cl. 30). 3-23-48.
437,607. HEXO. Cl. 13 (Int. Cl. 6). 3-30-48.
502,027. MAIL POUCH. Cl. 17 (Int. Cl. 34). 9-7-48.
502,177. MA-LE-NA. Cl. 18 (Int. Cl. 5). 9-14-48.
502,178. PE-RU-NA. Cl. 18 (Int. Cl. 5). 9-14-48.
502,298. EVAPOTROL. Cl. 13 (Int. Cl. 6). 9-21-48.
502,325. FRITOS. Cl. 46 (Int. Cl. 30). 9-21-48.
502,363. VISCOLD. Cl. 46 (Int. Cl. 30). 9-21-48.
502,429. ANTI-ROLL. Cl. 37 (Int. Cl. 16). 9-21-48.
502,540. INDIAN TANNED AND DESIGN. Cl. 35 (Int. Cl. 7). 9-28-48.
502,541. 20TH CENTURY WATERKING AND DESIGN. Cl. 35 (Int. Cl. 7). 9-28-48.

TRADEMARK REGISTRATIONS CANCELED

Section 7(d)

718,385. CLIFFS DOW AND DESIGN. Cl. 1. 7-18-60.
742,184. CLIFFS DOW AND DESIGN. Cl. 6. 12-18-62.
767,516. VOTRON. Cl. 23. 3-3-64.
785,468. GUNSMITH WITH MONOGRAM GM ON THE ANVIL. Cl. 9. 2-23-65.

Section 8

704,095. REPRESENTATION OF TORCH. Cl. 101. 9-6-60.

The following registrations issued Apr. 24, 1962

730,225. ISLAND CREEK PRECISIONEERED AND DESIGN. Cl. 1.
730,230. 3-PAGODA (DESIGN). Cl. 1.
730,231. GROUND GRIP-R. Cl. 1.
730,236. RAINY DAY SHOPPER AND DESIGN. Cl. 2.
730,239. HAV-A-TRAY. Cl. 2.
730,240. FRESHGARD. Cl. 2.
730,242. KOMMANDOSAC. Cl. 2.
730,243. GUARDWALL. Cl. 2.
730,245. ACCESSO-PAK. Cl. 3.
730,246. CONTESSA AND DESIGN. Cl. 3.
730,249. TUCK TRIO. Cl. 5.
730,252. C-SN. Cl. 6.
730,255. PICTOGRAPH BRAND CHEMICALS AND DESIGN. Cl. 6.
730,258. AROGEN. Cl. 6.
730,259. AROTONE. Cl. 6.
730,262. WITTEX. Cl. 6.
730,270. MATCHIC. Cl. 8.
730,274. EVER-MULCH. Cl. 10.
730,275. STA-MARKER. Cl. 11.
730,276. AFOTERM. Cl. 12.
730,280. SPACIAL SILENCE. Cl. 12.
730,281. C AND DESIGN. Cl. 12.
730,282. REGALWOOD ETC. AND DESIGN. Cl. 12.
730,284. TWIST-TITE. Cl. 13.
730,286. BSIG. Cl. 13.
730,287. ELECTRO-MATIC SINK. Cl. 13.
730,290. C AND DESIGN. Cl. 13.
730,291. B-W BORG-WARNER INGERSOLL PRODUCTS AND DESIGN. Cl. 13.
730,292. TOOLWELD. Cl. 14.
730,296. HUMSOC. Cl. 15.
730,297. C AND DESIGN. Cl. 16.
730,310. ENCOATS. Cl. 18.
730,311. PONKINSEEDS. Cl. 18.
730,312. SUCRIDA. Cl. 18.
730,316. KOZY. Cl. 19.
730,319. CERMAC. Cl. 21.
730,320. VANTUR AND DESIGN. Cl. 21.
730,324. UNI-PAK. Cl. 21.
730,325. THRIFT-O-MATIC. Cl. 21.
730,327. STEMMATRON. Cl. 21.
730,333. HAPPY IONS. Cl. 21.
730,337. LANGEVIN AND DESIGN. Cl. 21.
730,338. A.G.S. Cl. 21.
730,339. CURVE AND ARROWS (DESIGN). Cl. 21.
730,341. MINNO THERM. Cl. 22.
730,342. SCREWBALLS. Cl. 22.
730,344. K. O. WOBBLER. Cl. 22.
730,347. GINGERBREAD HOUSE. Cl. 22.
730,348. THE RED FOX MISSILE. Cl. 22.
730,349. GALAXIE. Cl. 22.
730,350. JUPITER. Cl. 22.
730,352. RIB-BONA-POI. Cl. 22.
730,353. NORSTAN. Cl. 22.
730,357. AUTOSORBER. Cl. 23.
730,362. SUPERLECTRIC. Cl. 23.
730,366. BRAKE-MATE. Cl. 23.
730,372. CH AND DESIGN. Cl. 23.
730,374. VACLIPPER. Cl. 23.
730,375. UNIMIX. Cl. 23.

730,380. REPRESENTATION OF SPARKPLUG AND DESIGN. Cl. 23.
730,381. POROUSFILL. Cl. 23.
730,390. DORYT. Cl. 26.
730,398. GEOMETRIC DESIGN. Cl. 27.
730,400. GEOMETRIC DESIGN. Cl. 27.
730,403. BARJON. Cl. 28.
730,405. FILTREAT. Cl. 31.
730,406. PERM-A-SOFT. Cl. 31.
730,408. BED O'FOAM. Cl. 32.
730,411. MAGIC CIRCLE. Cl. 32.
730,414. INTERPOLE. Cl. 32.
730,416. B-W BORG-WARNER INGERSOLL PRODUCTS AND DESIGN. Cl. 32.
730,423. LANGEVIN AND DESIGN. Cl. 36.
730,425. ALULENE. Cl. 37.
730,430. SPARKLEKOTE. Cl. 37.
730,432. THE EMBLEM OF FINEST QUALITY CZ AND DESIGN. Cl. 37.
730,439. ROCKET ABSTRACTS. Cl. 38.
730,440. NAPOLEON PRINTS. Cl. 38.
730,441. SCRIPTORIUM. Cl. 38.
730,442. PEG PACK. Cl. 38.
730,443. THE NICHOLAS BULLET. Cl. 38.
730,444. ATLAS THE MAGAZINE OF THE WORLD PRESS. Cl. 38.
730,446. SOUTHERN BUILDER AND DESIGN. Cl. 38.
730,447. LET'S TALK BUSINESS. Cl. 38.
730,448. DIAL-A-ROUTE. Cl. 38.
730,451. A HELPING HAND WITH CHARI-CARD AND DESIGN. Cl. 38.
730,454. HOLIDAY INN AND DESIGN. Cl. 38.
730,455. TRU-AC. Cl. 38.
730,457. TIME OF YOUR LIFE. Cl. 38.
730,459. POSTURE + PLUS. Cl. 39.
730,462. JODY LYNN. Cl. 39.
730,464. ESTER-X. Cl. 39.
730,466. BOWLONS. Cl. 39.
730,467. HENRI BERNARD. Cl. 39.
730,468. AN APEX FASHION AND DESIGN. Cl. 39.
730,469. Q TEE ETC. AND DESIGN. Cl. 39.
730,470. NATURALLY YOURS BY SEA NYMPH. Cl. 39.
730,472. TEE N' TIDE. Cl. 39.
730,473. MELLOWOOL. Cl. 39.
730,475. SNASUALS. Cl. 39.
730,478. DURATHANE. Cl. 39.
730,479. CANTROL. Cl. 39.
730,481. SIRTEX. Cl. 39.
730,485. SIRTEX. Cl. 42.
730,489. COPEY. Cl. 43.
730,494. MADERITE. Cl. 44.
730,501. JOHNSON WINDSOR SUGAR THINS AND DESIGN. Cl. 46.
730,502. DOFINO AND DESIGN. Cl. 46.
730,503. GARUDA. Cl. 46.
730,506. PACIFIC FAVOURITE CRACKERS. Cl. 46.
730,512. PLEASURE CHEST OF CHEESE. Cl. 46.
730,514. PRIMAVERA. Cl. 46.
730,521. SNOWMAN ETC. AND DESIGN. Cl. 46.
730,525. BARBARONI. Cl. 46.
730,526. PP AND DESIGN. Cl. 46.
730,528. COFFEE-CAL. Cl. 46.
730,529. CAFE-CAL. Cl. 46.
730,531. KOFFEE-KAL. Cl. 46.
730,533. NORTHERN GROWN. Cl. 46.
730,534. REPRESENTATION OF A SKIING CHICKEN. Cl. 46.
730,536. ANTRADEX. Cl. 46.
730,541. PAMELA. Cl. 46.
730,544. FRUIT CELLAR. Cl. 47.
730,545. EVERGREEN AND DESIGN. Cl. 50.
730,549. FOREST SET. Cl. 51.
730,554. BEAUTY COIN. Cl. 51.
730,555. BIO-RICH. Cl. 51.
730,559. AA ALUMA-FRESH AND DESIGN. Cl. 52.
730,560. HOMART. Cl. 52.
730,561. TERRY ALLEN. Cl. 52.
730,564. FOAMINE. Cl. 52.
730,565. EA. Cl. 100.
730,566. DN AND CADUCEUS DESIGN. Cl. 100.
730,567. CP & SC AND DESIGN. Cl. 100.
730,572. MAN THE GALLEY. Cl. 101.
730,577. FIVE STAR JUBILEE. Cl. 107.
730,589. SAFESKATE. Cl. 22.
730,597. INSTANT ENTREES. Cl. 46.
730,598. TATER-TIPS. Cl. 46.
730,599. MACKIN. Cl. 46.

INDEX OF REGISTRANTS

JUNE 11, 1968

(Registered ; Renewed ; Canceled ; Amended, Disclaimed, Corrected, etc. ; New Certificates ; 12c Publications.)

AEI-Birlec Ltd., London, England. 730,357, canc. Cl. 23.
ARB (American Research Bureau) Inc., Beltsville, Md. 850,767, pub. 3–26–68. Cl. 100.
Abbott Laboratories, North Chicago, Ill. 850,475–6, pub. 3–26–68. Cl. 18.
Acheson Industries, Inc., Port Huron, Mich. 850,454, pub. 3–26–68. Cl. 15.
Acme Tackle Co., Providence, R.I. 730,344, canc. Cl. 22.
Active Process Supply Co., New York, N.Y. 730,262, canc. Cl. 6.
Acushnet Process Co., New Bedford, Mass. 850,536, pub. 3–26–68. Cl. 23.
Admiral Transit, Inc., St. Paul, Minn. 730,448, canc. Cl. 38.
Aeroplane Tackle Mfg. Co., Denver, Colo. 850,530, pub. 3–26–68. Cl. 22.
Aircraft & Airport Services, Inc., Metropolitan, Mich. 730,559, canc. Cl. 52.
Airtron, Inc., Pleasant Plains, N.Y., to Litton Precision Products, Inc., Beverly Hills, Calif. 439,244, ren. 6–11–68. Cl. 21.
Ajinomoto Co., Inc. : *See*—
  Ajinomoto Kabushiki Kaisha.
Ajinomoto Kabushiki Kaisha, d.b.a. Ajinomoto Co., Inc., Tokyo, Japan. 850,671, pub. 3–26–68. Cl. 46.
Aktiebolaget Bofors, Bofors, Sweden. 850,662, pub. 3–26–68. Cl. 44.
Albers, Merlin H., Pender, Nebr. 850,450, pub. 3–26–68. Cl. 13.
Alberto-Culver Co., Melrose Park, Ill. 850,428, pub. 3–26–68. Cl. 4.
Alberto-Culver Co., Melrose Park, Ill. 850,760–1, pub. 3–26–68. Cl. 51.
Alco Controls Corp. : *See*—
  Alco Valve Co.
Alco Valve Co., University City, to Alco Controls Corp., Maryland Heights, Mo. 502,298, ren. 6–11–68. Cl. 13.
All American Aviation, Inc., to All American Engineering Co., Wilmington, Del. 437,285–6, ren. 6–11–68. Cl. 7.
All American Engineering Co. : *See*—
  All American Aviation, Inc.
Allen, Terry : *See*—
  General Products.
Allied Engineering Co., Inc., Atlantic, Iowa. 850,437, pub. 4–5–66. Cl. 12.
Alp Sport, Inc., Boulder, Colo. 850,635, pub. 3–26–68. Cl. 39.
Aluminum Detail Products : *See*—
  Spring Hill Fuel Co.
Amateur Athletic Union of the United States, New York, N.Y. 850,797, pub. 1–2–68. Cl. 107.
American Association of Doctors' Nurses, Washington, D.C. 730,566, canc. Cl. 100.
American Biltrite Rubber Co., Inc., Chelsea, Mass. 730,478, canc. Cl. 39.
American Cyanamid Co., Wayne, N.J. 850,419, pub. 3–26–68. Cl. 2.
American Cyanamid Co., Wayne, N.J. 850,482–3, pub. 3–26–68. Cl. 18.
American General Supply Corp., New York, N.Y. 730,338, canc. Cl. 21.
American Guard-It Mfg. Co., Chicago, Ill. 730,245, canc. Cl. 3.
American Home Products Corp., New York, N.Y. 850,491, pub. 3–26–68. Cl. 18.
American Hospital Supply Corp. : *See*—
  Baxter, Don, Inc.
American Jet Spray Industries, Inc., Lakewood, Colo. 850,612, pub. 3–26–68. Cl. 37.
American Oil Co., The, Chicago, Ill. 850,620–1, pub. 3–26–68. Cl. 38.
American Oil Co., The, Chicago, Ill. 850,772–4, pub. 3–26–68. Cl. 100.
American Oil Co., The, Chicago, Ill. 850,786–8, pub. 3–26–68. Cl. 102.
American Rocket Co. : *See*—
  Zaehringer, Alfred J.
American Telephone & Telegraph Co., New York, N.Y. 850,500, pub. 3–26–68. Cl. 21.
Antradex Co. Ltd. : *See*—
  N.V. Maatschappij Antradex.
Apex Dress Co., Inc., New York, N.Y. 730,468, canc. Cl. 39.
Armour Abrasives Co. : *See*—
  Armour & Co.
Armour & Co., d.b.a. Armour Abrasives Co., Chicago, Ill. 850,427, pub. 3–26–68. Cl. 4.
Armour & Co., Chicago, Ill. 850,678, pub. 3–26–68. Cl. 46.
Armstrong Cork Co., Lancaster, Pa. 850,425, pub. 3–26–68. Cl. 4.
Arnaud Coffee Corp., New Orleans, La. 500,623, ren. 6–11–68. Cl. 46.
Artistic Card Publishing Corp., Elmira, N.Y. 730,440, canc. Cl. 38.
Ashbrook Corp., Houston, Tex. 850,537, pub. 3–26–68. Cl. 23.
Atlantic Lures, Inc., Providence, R.I. 850,526, pub. 3–26–68. Cl. 22.
Atlantic Richfield Co. : *See*—
  Red "C" Oil Co., The.
Atlas Chemical Industries, Inc. : *See*—
  Potts Powder Co., The.
Atomic Basic Chemicals Corp., Eighty Four, Pa. 850,484, pub. 3–26–68. Cl. 18.
Avnet, Inc., New York, from Channel Master Corp., Ellenville, N.Y. 850,504, pub. 3–26–68. Cl. 21.
Aztec Industries, Inc., from Reynolds Electrical & Engineering Co., Santa Fe, N. Mex. 850,599, pub. 3–26–68. Cl. 34.
B & B Business Service, Roosevelt, N.Y. 730,451, canc. Cl. 38.
B & G Distributing Co., Nashville, Tenn. 850,723, pub. 3–26–68. Cl. 49.
Badger Paper Mills, Inc., Peshtigo, Wis. 501,084, ren. 6–11–68. Cl. 37.
Balfour Electronics Ltd., Essex, England. 850,606, pub. 3–26–68. Cl. 36.
Balmar, Inc., Memphis, Tenn. 850,682, pub. 3–26–68. Cl. 46.
Banquet Canning Co. : *See*—
  Stamper, F. M., Co.
Barber-Greene Co., Aurora, Ill. 850,776, pub. 3–26–68. Multiple Class (Classes 100 and 103).
Baxter, Don, Inc., Glendale, Calif., to American Hospital Supply Corp., Evanston, Ill. 437,116, ren. 6–11–68. Cl. 44.
Bay State Belting Co., Salem, Mass. 502,540–1, ren. 6–11–68. Cl. 35.
Beauty Coin Products, Inc., New York, N.Y. 730,554–5, canc. Cl. 51.
Bee Chemical Co., Lansing, Ill. 850,456, pub. 1–23–68. Cl. 16.
Belding Corticelli : *See*—
  Belding Hemingway Co.
Belding Hemingway Co., assor. to Belding Hemingway Co., Inc., to Belding Hemingway Co., Inc., d.b.a. Belding Corticelli, New York, N.Y. 501,095, ren. 6–11–68. Cl. 43.
Belding Hemingway Co., Inc. : *See*—
  Belding Hemingway Co.
Bellair Cosmetics Ltd., Winsford, Cheshire, England. 850,741, pub. 3–26–68. Multiple Class (Classes 51 and 52).
Belmont National Bank of Chicago, Chicago, Ill. 850,817. Cl. 102.
Bergische Stahl-Industrie, Remscheid, Germany, 730,286, canc. Cl. 13.
Berkeley Pump Co., Berkeley, Calif. 850,539, pub. 1–9–68. Cl. 23.
Best Kosher Sausage Co., Chicago, Ill. 850,708, pub. 3–26–68. Cl. 46.
Bestwall Gypsum Co., Ardmore, Pa. 730,280, canc. Cl. 12.
Biddle Trade Publishing Co., d.b.a. Biddle Trade Publishing Co., Los Angeles, Calif. 730,455, canc. Cl. 38.
Bilenker, Eugene N., Elizabeth, N.J. 730,296, canc. Cl. 15.
Bilt-Rite Equipment Co., Inc., West Caldwell, N.J. 850,551, pub. 3–26–68. Cl. 23.
Binney & Smith Co., to Binney & Smith Inc., New York, N.Y. 502,429, ren. 6–11–68. Cl. 37.
Binney & Smith Inc. : *See*—
  Binney & Smith Co.
Bird & Son, Inc., East Walpole, Mass. 850,438, pub. 11–30–65. Cl. 12.
Birtcher Corp., The, Los Angeles, Calif. 850,815. Cl. 44.
Blackstaff Linens, Inc. : *See*—
  McBratney, Robert, & Co., Inc.
Blackwood, R. D., & Son (Production) Ltd., Blackpool, England. 850,689, pub. 3–26–68. Cl. 46.
Bloch Bros. Tobacco Co., The, Wheeling, W. Va. 501,855, ren. 6–11–68. Cl. 17.
Bloch Bros. Tobacco Co., The, Wheeling, W. Va. 502,027, ren. 6–11–68. Cl. 17.
Blue Bell, Inc., Greensboro, N.C. 850,646, pub. 3–26–68. Cl. 39.
Bonat, Samuel, & Bro., Inc., West Paterson, N.J. 850,738, pub. 10–25–68. Cl. 51.
Bonney Vise & Tool Works, Inc., Philadelphia, Pa., to Utica Tool Co., Inc., Orangeburg, S.C. 68,202, ren. 6–11–68. Cl. 23.
Bonsal Seggerman & Co., San Francisco, Calif. 850,683, pub. 3–26–68. Cl. 46.
Borden Co., The, New York, N.Y. 850,685, pub. 3–26–68. Cl. 46.
Borg-Warner Corp., Chicago, Ill. 730,291, canc. Cl. 13.
Borg-Warner Corp., Chicago, Ill. 730,366, canc. Cl. 23.
Borg-Warner Corp., Chicago, Ill. 730,416, canc. Cl. 32.
Borg-Warner Corp., from Borg-Warner Corp., Chicago, Ill. 850,550, pub. 3–26–68. Cl. 23.
Bowers Printing Ink Co., Chicago, Ill. 850,436, pub. 3–26–68. Cl. 11.
Braincon Corp., Marion, Mass. 850,570, pub. 3–26–68. Cl. 26.
Breck, John H., Inc., Springfield, Mass. 850,736–7, pub. 3–26–68. Cl. 51.
Breglia, Arthur F., New York, N.Y. 730,414, canc. Cl. 32.
Breier of Amsterdam, Inc., d.b.a. Leather 'N' Suede, Amsterdam, N.Y. 850,764, pub. 3–26–68. Cl. 52.
Brett, Peter A., Rowayton, Conn. 850,527, pub. 3–26–68. Cl. 22.
Brigham Young Junior Coats Inc., New York, N.Y. 850,645, pub. 3–26–68. Cl. 39.

Brill, H. C., Co., Inc., Cedar Grove, N.J. 850,695, pub. 3-26-68. Cl. 46.
Brother International Corp., New York, N.Y. 850,558, pub. 3-26-68. Cl. 23.
Brower Laboratories, Inc., Westboro, Mass. 850,505, pub. 3-26-68. Cl. 21.
Brown & Williamson Tobacco Corp., Louisville, Ky. 850,462, pub. 3-26-68. Cl. 17.
Brunswick Corp., Chicago, Ill. 850,519, pub. 3-26-68. Cl. 22.
Brunswick Corp., Chicago, Ill. 850,625, pub. 3-26-68. Cl. 38.
Buck Creek Bait Shop: *See*—
Foersehler, Frank L.
Budd Co., The, Philadelphia, Pa. 850,613, pub. 3-26-68. Cl. 37.
Buffington's, Inc., Worcester, Mass., to Crookes-Barnes Laboratories, Inc., Wayne, N.J. 500,084, ren. 6-11-68. Cl. 18.
Buffington's, Inc., Worcester, Mass., to Crookes-Barnes Laboratories, Inc., Wayne, N.J. 500,086, ren. 6-11-68. Cl. 18.
Buffington's, Inc., Worcester, Mass., to Crookes-Barnes Laboratories, Inc., Wayne, N.J. 500,089-92, ren. 6-11-68. Cl. 18.
Bulova Watch Co., Flushing, N.Y. 850,586, pub. 3-26-68. Cl. 27.
Bulova Watch Co., Inc., Flushing, N.Y. 730,398, canc. Cl. 27.
Business Builders International Inc., Chicago, Ill. 850,452, pub. 3-26-68. Cl. 13.
Butler Mfg. Co., Kansas City, Mo. 850,440, pub. 3-26-68. Cl. 12.
C & H Electric Co., Chicago, Ill. 850,509, pub. 3-26-68. Cl. 21.
California Forms, Inc., Culver City, Calif. 850,642, pub. 3-26-68. Cl. 39.
Calumet Steel Castings Corp., Hammond, Ind. 501,283, ren. 6-11-68. Cl. 14.
Cameo Doll Products Co., Inc., Port Allegany, Pa. 850,532, pub. 3-26-68. Cl. 22.
Canine Corps Signal Corp., St. Louis, Mo. 850,501, pub. 3-26-68. Cl. 21.
Carter, Harry J., Wilmington, Del. 850,048, pub. 3-5-68. Cl. 42.
Carter, William, Co., The, Needham Heights, Mass. 500,112, ren. 6-11-68. Cl. 39.
Castle Lumber Corp., Heighstown, N.J. 730,281, canc. Cl. 12.
Castle Lumber Corp., Heightstown, N.J. 730,290, canc. Cl. 13.
Castle Lumber Corp., Heightstown, N.J. 730,297, canc. Cl. 16.
Cater-Vend, Inc., Jacksonville, Ill. 850,770, pub. 3-26-68. Cl. 100.
Cathrineholm A/S, Halden, Norway. 850,451, pub. 3-26-68. Cl. 13.
Champale, Inc., from Metropolis Brewery of N.J., Inc., Trenton, N.J. 850,722, pub. 8-30-66. Cl. 48.
Chana's Carry Out: *See*—
Craig, Chana S.
Channel Master Corp.: *See*—
Avnet, Inc.
Charleston Mattress Mfg. Co., Charleston, S.C. 440,624, ren. 6-11-68. Cl. 32.
Charlton Woolen Co., Charlton City, Mass. 850,649, pub. 3-26-68. Cl. 42.
Chase-Shawmut Co., The, Newburyport, Mass. 850,511, pub. 3-26-68. Cl. 21.
Chesebrough Mfg. Co., Consolidated, to Chesebrough-Pond's Inc., New York, N.Y. 243,206, ren. 6-11-68. Cl. 51.
Chesebrough-Pond's Inc.: *See*—
Chesebrough Mfg. Co., Consolidated.
Chester Electronics Laboratories, Inc., Chester, Conn. 850,512, pub. 8-29-67. Cl. 21.
Chet's Famous Foods, Eugene, Oreg. 730,597, canc. Cl. 46.
Choteborske Kovodelne Zavody, Narodni Podnik, Chotebor, Czechoslovakia. 730,372, canc. Cl. 23.
Cicciarelli, William L., Gray, Pa. 850,626, pub. 3-26-68. Cl. 38.
City Management Corp., The, Orange, Calif. 850,779, pub. 3-26-68. Cl. 101.
Clairol Inc., New York, N.Y. 850,742, pub. 3-26-68. Cl. 51.
Clairol Inc., New York, N.Y. 850,748, pub. 3-26-68. Cl. 51.
Clairol Inc., New York, N.Y. 850,753-6, pub. 3-26-68. Cl. 51.
Clark Knitting Mills, Inc., Union City, N.J. 730,462, canc. Cl. 39.
Clary Corp.: *See*—
Clary Datacomp Systems, Inc.
Clary Datacomp Systems, Inc., from Clary Corp., San Gabriel, Calif. 850,577, pub. 1-2-68. Cl. 26.
Clay-Adams, Inc., New York, N.Y. 850,578, pub. 3-26-68. Cl. 26.
Cleveland Piping & Supply Co., Cleveland, Ohio. 730,567, canc. Cl. 100.
Cliffs Dow Chemical Co., Marquette, Mich. 718,385, canc. Cl. 1.
Cliffs Dow Chemical Co., Marquette, Mich. 742,184, canc. Cl. 6.
Coca-Cola Co., The: *See*—
Fleetwood Coffee Co.
Coca-Cola Co., The, Atlanta, Ga. 850,709, pub. 3-26-68. Cl. 46.
Cochran, Jacqueline, New York, N.Y., to Jacqueline Cochran Inc., Newark, N.J., to Jacqueline Cochran, Inc., New York, N.Y. 436,990, ren. 6-11-68. Cl. 52.
Cochran, Jacqueline, d.b.a. Jacqueline Cochran, and Jacqueline Cochran Cosmetics, to Jacqueline Cochran, Inc., Newark, N.J., to Jacqueline Cochran, Inc., New York, N.Y. 501,408, ren. 6-11-68. Cl. 51.
Cochran, Jacqueline, Cosmetics: *See*—
Cochran, Jacqueline.
Cochran, Jacqueline, Inc.: *See*—
Cochran, Jacqueline.

Codo Mfg. Corp., Coraopolis, Pa., and Chicago, Ill., to Codo Mfg. Corp., Leetsdale, Pa. 500,371, ren. 6-11-68. Cl. 11.
Codo Mfg. Corp., Coraopolis, Pa., and Chicago, Ill., to Codo Mfg. Corp., Leetsdale, Pa. 500,732, ren. 6-11-68. Cl. 11.
Codo Mfg. Corp., Chicago, Ill., and Coraopolis, Pa., to Codo Mfg. Corp., Leetsdale, Pa. 501,246, ren. 6-11-68. Cl. 11.
Cohen, Joseph H., & Sons, Inc., New York, N.Y. 730,479, canc. Cl. 39.
Collins & Aikman Corp., New York, N.Y. 850,654, pub. 3-26-68. Cl. 42.
Collins, Walt: *See*—
Collins, Walter W.
Collins, Walter W., d.b.a. Walt Collins, Broken Arrow, Okla. 850,529, pub. 3-26-68. Cl. 22.
Columbia Ribbon and Carbon Mfg. Co., Inc., Glen Cove, N.Y. 501,033, ren. 6-11-68, Cl. 11.
Comet Rice Mills, Inc., Dallas, Tex. 850,093, pub. 3-26-68. Cl. 46.
Communications Control Corp., Van Nuys, Calif. 730,339, canc. Cl. 21.
Compagnie Francaise Thomson-Houston, Paris, France. 730,327, canc. Cl. 21.
Compassion, Inc., Chicago, Ill. 850,777-8, pub. 3-26-68. Cl. 100.
Conde Nast Publications Inc., The: *See*—
Street & Smith Publications, Inc.
Conservation Industries, Inc.: *See*—
Garden Products, Inc.
Consolidated Foods Corp.: *See*—
Lowe, Joe, Corp.
Consolidated Royal Chemical Corp., Chicago, Ill. 502,177-8, ren. 6-11-68. Cl. 18.
Contessa Handbags, Inc., New Bedford, Mass. 730,246, canc. Cl. 3.
Continental Distilling Corp., Philadelphia, Pa. 501,309-11, ren. 6-11-68. Cl. 49.
Control Data Corp., Minneapolis, Minn. 850,571, pub. 3-26-68. Cl. 26.
Cooper's, Inc., Kenosha, Wis. 850,665, pub. 3-26-68. Cl. 44.
Copley Press, Inc., The, La Jolla, Calif. 850,624, pub. 3-26-68. Cl. 38.
Corn Products Co.: *See*—
Penick, S. B., & Co.
Corning Glass Works, Corning, N.Y. 850,808. Cl. 26.
Cott Corp., New Haven, Conn. 850,816. Cl. 50.
Coulter, L. B.: *See*—
Juvare, Inc.
Coulter, L. B., Co.: *See*—
Juvare, Inc.
Cover, Chalmers F., d.b.a. Cover Lumber & Supply Co., Cortland, Ohio. 730,381, canc. Cl. 23.
Cover Lumber & Supply Co.: *See*—
Cover, Chalmers F.
Craddock-Terry Shoe Corp., Lynchburg, Va. 850,638, pub. 3-26-68. Cl. 39.
Craft Hosiery, Inc., Jackson, Miss. 850,641, pub. 3-26-68. Cl. 39.
Craig, Chana S., d.b.a. Chana's Carry Out, Kokomo, Ind. 850,691, pub. 3-26-68. Cl. 46.
Cramer Chemical Co., The, Gardner, Kans. 437,692, ren. 6-11-68. Cl. 18.
Cribben and Sexton Co., Chicago, Ill., to Waste King Corp., Los Angeles, Calif. 501,926, ren. 6-11-68. Cl. 34.
Crookes-Barnes Laboratories, Inc.: *See*—
Buffington's, Inc.
Crown Zellerbach Corp., San Francisco, Calif. 730,236, canc. Cl. 2.
Crown Zellerbach Corp., San Francisco, Calif. 730,240, canc. Cl. 2.
Crown Zellerbach Corp., San Francisco, Calif. 730,432, canc. Cl. 37.
Crucible Steel Co. of America, Pittsburgh, Pa. 439,729, ren. 6-11-68. Cl. 14.
Cryocal, Inc., Riviera Beach, Fla. 850,568, pub. 3-26-68. Cl. 26.
Curtis, Helene, Industries, Inc., Chicago, Ill. 850,595, pub. 3-26-68. Cl. 32.
Day's Tailor-D Clothing, Inc.: *See*—
Day's Tailor-D Wear, Inc.
Day's Tailor-D Wear, Inc., to Day's Tailor-D Clothing, Inc. Tacoma, Wash. 246,938, ren. 6-11-68. Cl. 39.
Dazey Products Co., Kansas City, Mo. 850,554, pub. 3-26-68. Cl. 23.
De Markoff, Alexandra, Sales Corp.: *See*—
Robbins, Anatole, Inc.
Deering Milliken, Inc., New York, N.Y. 730,466, canc. Cl. 39.
Degremont S.A., Suresnes (Seine), France. 850,557, pub. 3-26-68. Cl. 23.
Deseret Pharmaceutical Co., Inc., Sandy, Utah. 850,663, pub. 3-26-68. Cl. 44.
Detex Corp.: *See*—
Detex Watchclock Corp.
Newman Clock Co.
Detex Watchclock Corp., to Detex Corp., New York, N.Y. 439,998, ren. 6-11-68. Cl. 27.
Dettelbach, Gus, d.b.a. Georgia-Tennessee Mining & Chemical Co., Atlanta, Ga. 850,413, pub. 3-26-68. Cl. 1.
Di Giorgio Corp., d.b.a. Di Giorgio Fruit Corp., San Francisco, Calif. 850,675, pub. 3-26-68. Cl. 46.
Di Giorgio Fruit Corp.: *See*—
Di Giorgio Corp.
Diamond Spear Co., The: *See*—
Spear, Clifton T.
Di-Cu Co.: *See*—
Rechtfertig, John.
Diederichs, John K., d.b.a. House of Crayton, Cicero, Ill. 850,746, pub. 3-26-68. Cl. 51.

Diks & Coenen N.V., Uden, Netherlands. 850,593, pub. 2-6-68. Cl. 32.
Dixon, Joseph, Crucible Co., The, Jersey City, N.J. 436,369, ren. 6-11-68. Cl. 37.
Dodsworth, Saml, Co., Kansas City, Kans. 850,661, pub. 3-19-68. Cl. 44.
Dofo, Danske Ostemejeriers Faellessalg Og Osteeksport, Haderslev, Denmark. 730,502, canc. Cl. 46.
Dollfus-Mieg & Cie, Societe Anonyme, Mulhausen, Germany, to Dollfus-Mieg & Cie, Societe Anonyme, Paris, France. 69,438, ren. 6-11-68. Cl. 43.
Doucet, Charles P., Meyrin-Geneve, Switzerland. 850,588, pub. 3-26-68. Cl. 31.
Drafto Corp., Cochranton, Pa. 850,553, pub. 3-26-68. Cl. 23.
Dressner, Phil, & Co., Inc., to Elizabeth Hat Co., Inc., New York, N.Y. 244,543, ren. 6-11-68. Cl. 39.
Dunn & Bradstreet, Inc., New York, N.Y. 850,622, pub. 3-26-68. Cl. 38.
Dunlop Tire and Rubber Corp., Buffalo, N.Y. 850,604, pub. 3-26-68. Cl. 35.
Durkee-Atwood Co., Minneapolis, Minn. 850,603, pub. 3-26-68. Cl. 35.
E & E Specialties, Inc., Lawrence, Kans. 850,497, pub. 3-26-68. Cl. 19.
Eakins, Jesse W., Co., Detroit, Mich. 730,405, canc. Cl. 31.
Ebner Associates, New York, N.Y. 730,565, canc. Cl. 100.
Edanbob Corp., Chicago, Ill. 850,783, pub. 3-26-68. Cl. 50.
Edu-Data Service Center, Chevy Chase Branch, Washington, D.C. 850,794, pub. 3-26-68. Cl. 107.
Egan, Frank W., & Co., Somerville, N.J. 850,540, pub. 3-26-68. Cl. 23.
Elba Werk Ettlinger Baumaschinen und Hebezeugfabrik G.m.b.H., Ettlingen, Baden, Germany. 850,546, pub. 3-26-68. Cl. 23.
Electronic Space Products, Inc., Los Angeles, Calif. 850,429, pub. 12-12-67. Cl. 6.
Electro-Way Corp., Los Angeles, Calif. 730,287, canc. Cl. 13.
Elektro-Physik Hans Nix & Dr. Ing. Steingro-Ever K.G., Cologne-Niehl, Germany. 850,579, pub. 3-26-68. Cl. 26.
Elizabeth Hat Co., Inc.: *See*—
Dressner, Phil, & Co., Inc.
Endicott Johnson Corp., Endicott, N.Y. 850,633, pub. 3-26-68. Cl. 39.
Enterprise Mfg. Co., The, Akron, Ohio. 730,349-50, canc. Cl. 22.
Ess, Josef, Allgauer Skibeschlagefabrik, Allgau, Germany. 850,534, pub. 3-26-68. Cl. 22.
Europharma International, Inc., Via Espana, Panama. 850,485, pub. 3-26-68. Cl. 18.
Ever-Mulch Co., Louisville, Ky. 730,274, canc. Cl. 10.
Ever-Wear, Inc., Chicago, Ill. 850,423, pub. 3-26-68. Cl. 3.
Faibish Corp., New York, N.Y. 730,503, canc. Cl. 46.
Farm Fans, Inc., Indianapolis, Ind. 850,564, pub. 3-26-68. Cl. 23.
Farmers Produce Co. of Willmar, Minn., Willmar, Minn. 730,533-4, canc. Cl. 46.
Fashion Fair Co.: *See*—
Leigh, Robert J.
Featherock, Inc., Los Angeles, Calif. 850,444, pub. 1-2-68. Cl. 12.
Fieldcrest Mills, Inc.: *See*—
Marshall Field & Co.
Finch, Pruyn and Co., Inc., Glens Falls, N.Y. 850,617, pub. 3-26-68. Cl. 37.
Firestone Tire & Rubber Co., The, Akron, Ohio. 850,601, pub. 3-26-68. Cl. 35.
Firma Gebruder Nerkel & Co. G.m.b.H., Eckernforde, Germany. 785,468, canc. Cl. 9.
First National Stores, Inc., Boston, Mass. 234,594, ren. 6-11-68. Cl. 46.
Flavor Tree Co.: *See*—
Morris, Philip, Inc.
Fleetwood Coffee Co., Chattanooga, Tenn., to The Coca-Cola Co., Atlanta, Ga. 501,018, ren. 6-11-68. Cl. 46.
Flex Electric Products Co., Inc., Long Island City, N.Y. 850,584, pub. 3-26-68. Cl. 26.
Floralife, Inc., Chicago, Ill. 501,967, ren. 6-11-68. Cl. 6.
Flow Laboratories Inc., Rockville, Md. 850,489, pub. 3-26-68. Cl. 18.
Foersehler, Frank L., d.b.a. Buck Creek Bait Shop, Gravois Mills, Mo. 850,528, pub. 3-26-68. Cl. 22.
Forbes Williamsburg Candles Inc., Williamsburg, Va. 850,705, pub. 3-26-68. Cl. 46.
Ford Motor Co.: *See*—
Lincoln Motor Co.
Foremost Dairies, Inc.: *See*—
Foremost-McKesson, Inc.
Foremost-McKesson, Inc., New York, N.Y., from Foremost Dairies, Inc., San Francisco, Calif. 850,674, pub. 3-26-68. Cl. 46.
Fort Smith Plywood Co., South Fort Smith, Ark. 850,594, pub. 3-26-68. Cl. 32.
Franklin Mfg. Co., Inc., d.b.a. Hanover Sports, Brockton, Mass. 850,516, pub. 3-26-68. Cl. 22.
Freeman & Gossage, Inc., San Francisco, Calif. 850,418, pub. 3-26-68. Cl. 2.
French, R. T., Co., The, Rochester, N.Y. 850,097, pub. 3-26-68. Cl. 46.
Frito Co., The, to Frito-Lay, Inc., Dallas, Tex. 502,325, ren. 6-11-68. Cl. 46.
Frito-Lay, Inc.: *See*—
Frito Co., The.
Gangi, Joseph, & Sons, Inc., Lawrence, Mass. 850,069, pub. 3-26-68. Cl. 46.
Gapp, Donald W., d.b.a. Donald W. Gapp and Associates, Meadville, Pa. 850,783, pub. 3-26-68. Cl. 101.

Gapp, Donald W., & Associates: *See*—
Gapp, Donald W.
Garden Products, Inc., South San Francisco, from Conservation Industries, Inc., Santa Cruz, Calif. 850,434, pub. 1-10-67. Cl. 10.
Garrett Corp., The, Los Angeles, Calif. 850,591, pub. 3-26-68. Cl. 31.
Gas Turbine Publications, Inc., Stamford, Conn. 850,814. Cl. 38.
Gem-Mounts and Gem-Masks Co.: *See*—
Heitman, Paul S.
General Foods Corp., White Plains, N.Y. 850,713, pub. 2-6-68. Cl. 46.
General Mills, Inc., Minneapolis, Minn. 850,676-7, pub. 3-26-68. Cl. 46.
General Mills, Inc., Mineapolis, Minn. 850,670, pub. 3-26-68. Cl. 46.
General Mills, Inc., Minneapolis, Minn. 850,684, pub. 10-3-67. Cl. 46.
General Mills, Inc., Minneapolis, Minn. 850,710-11, pub. 3-26-68. Cl. 46.
General Precision, Inc.: *See*—
General Precision Systems Inc.
General Precision Systems Inc., from General Precision, Inc., Binghamton, N.Y. 850,619, pub. 3-26-68. Cl. 38.
General Products, d.b.a. Terry Allen, Chicago, Ill. 730,561, canc. Cl. 52.
General Signal Corp., from The New York Air Brake Co., New York, N.Y. 850,555, pub. 3-26-68. Cl. 23.
General Signal Corp., from The New York Air Brake Co., New York, N.Y. 850,576, pub. 3-19-68. Cl. 20.
Georgia-Tennessee Mining & Chemical Co.: *See*—
Dettelbach, Gus.
Gibson-Homans Co., The, Cleveland, Ohio. 850,446, pub. 3-26-68. Cl. 12.
Gil, Miguel, S.A., Barcelona, Spain. 850,644, pub. 3-26-68. Cl. 39.
Glendinning Companies, Inc., Westport, Conn. 850,515, pub. 3-26-68. Cl. 22.
Glenn, Charles D., d.b.a. Charles Morgan, San Francisco, Calif. 730,572, canc. Cl. 101.
Gold Seal Battery Co., The: *See*—
Merry Co., The.
Goodall Mfg. Corp., Minneapolis, Minn. 850,510, pub. 3-26-68. Cl. 21.
Gould-National Batteries, Inc.: *See*—
Merry Co., The.
Grace, W. R., & Co., New York, N.Y. 850,412, pub. 3-26-68. Cl. 1.
Grace, W. R., & Co., New York, N.Y. 850,447, pub. 3-26-68. Cl. 12.
Great Atlantic & Pacific Tea Co., The, to The Great Atlantic & Pacific Tea Co., Inc., New York, N.Y. 500,067, ren. 6-11-68. Cl. 46.
Great Atlantic & Pacific Tea Co., Inc., The: *See*—
Great Atlantic & Pacific Tea Co., The.
Great Atlantic & Pacific Tea Co., Inc., The, New York, N.Y. 850,707, pub. 3-26-68. Cl. 46.
Greif Bros. Cooperage Corp., The, St. Paul, Minn. 850,422, pub. 3-26-68. Cl. 2.
Grissmer, Earl, Co., Inc., Indianapolis, Ind. 850,802. Cl. 2.
Guaranteed Exposure Inc., Philadelphia, Pa. 850,629, pub. 3-26-68. Cl. 38.
Guaranty Cycle Co.: *See*—
Rehm, Donald O.
Guitarsville Records: *See*—
Thompson, Johnny C.
Gusmer, A., Inc., Hoboken, N.J. 850,592, pub. 3-26-68. Cl. 31.
H & H Cleaner Co., Inc., Des Moines, Iowa. 240,841, ren. 6-11-68. Cl. 4.
Hahn, Inc., Evansville, Ind. 850,548, pub. 3-26-68. Cl. 23.
Hallmark Cards, Inc., Kansas City, Mo. 850,813. Cl. 38.
Hamersley Paper Mills, Inc., Garfield, N.J. 850,618, pub. 3-26-68. Cl. 37.
Hamilton Equipment Corp., Brooklyn, N.Y. 850,514, pub. 3-26-68. Cl. 22.
Hamlin, Inc., Lake Mills, Wis. 850,513, pub. 3-26-68. Cl. 21.
Handshy, E. Edgar, and Howard Tharp, St. Louis, Mo. 850,517, pub. 3-26-68. Cl. 22.
Hanover Sports: *See*—
Franklin Mfg. Co., Inc.
Harris, Joseph P., Berkeley, Calif. 767,516, canc. Cl. 23.
Hartz Mountain Products Corp., New York, N.Y. 850,805. Cl. 22.
Haveg Industries, Inc., Wilmington, Del. 730,239, canc. Cl. 2.
Haveg Industries, Inc., Wilmington, Del., from A. O. Smith Corp. Milwaukee, Wis. 850,597, pub. 3-26-68. Cl. 34.
Hayden Flour Mills, Tempe, Ariz. 850,680, pub. 3-26-68. Cl. 46.
Haynes Milling Co., Inc., Portland, Ind. 850,700, pub. 3-26-68. Cl. 46.
Hays Mfg. Co., Erie, Pa. 437,607, ren. 6-11-68. Cl. 13.
Haywood Publishing Co., d.b.a. Oakes Consumer Catalogs, New York, N.Y. 850,628, pub. 3-26-68. Cl. 38.
Heitman, Paul S., d.b.a. Gem-Mounts and Gem-Masks Co., New York, N.Y. 850,581, pub. 3-26-68. Cl. 26.
Hesmer Foods, Inc., Evansville, Ind. 730,525, canc. Cl. 46.
Heublein, Inc., Hartford, Conn. 850,729, pub. 3-26-68. Cl. 49.
Hill, Deloris: *See*—
Hill, Deloris E.
Hill, Deloris E., d.b.a. Deloris Hill, Fort Lauderdale, Fla. 850,780, pub. 3-26-68. Cl. 101.
Hills Bros. Coffee, Inc., San Francisco, Calif. 850,690, pub. 3-26-68. Cl. 46.

Hinde, Harry, d.b.a. Prawnto Shrimp Machine Co., Los Angeles, Calif. 850,562, pub. 3–26–68. Cl. 23.
Holes, W. W., Mfg. Co., d.b.a. W. W. Holes Mfg. Co., St. Cloud, Minn. 730,411, canc. Cl. 32.
Holiday Inns of America, Inc., Memphis, Tenn. 730,454, canc. Cl. 38.
Hollnone, Inc., New York, N.Y. 850,798, pub. 3–26–68. Cl. 107.
Honeywood, Inc., Salem, Oreg. 730,544, canc. Cl. 47.
House of Crayton: *See*—
Diederichs, John K.
House of Frothee, Inc., Hewlett, N.Y. 850,715, pub. 3–26–68. Cl. 46.
House of Huston, Inc., Spring Valley, N.Y. 850,523, pub. 12–26–67. Cl. 22.
Houston Fearless Corp., Los Angeles, Calif. 850,569, pub. 3–26–68. Cl. 26.
Howard Rotavator Co., Inc., Harvard, Ill. 730,375, canc. Cl. 23.
Huber, J. M., Corp., Borger, Tex. 730,258–9, canc. Cl. 6.
Hubley Mfg. Co., The, Lancaster, Pa. 730,348, canc. Cl. 22.
Humko Co., The, Memphis, Tenn., to National Dairy Products Corp., New York, N.Y. 438,551, ren. 6–11–68. Cl. 46.
Hunter Douglas Ltd., Quebec, Canada. 850,439, pub. 1–30–68. Cl. 12.
Imperial Chemical Industries Ltd., London, England. 850,458, pub. 3–26–68. Cl. 16.
Interco Inc., St. Louis, Mo. 850,782, pub. 3–26–68. Cl. 101.
International Textbook Co., Scranton, Pa. 850,785, pub. 3–26–68. Multiple Class (Classes 101, 106, and 107).
Island Creek Coal Co., Huntington, W. Va. 730,225, canc. Cl. 1.
Ives, Sybil, Inc., White Plains, N.Y. 850,763, pub. 3–26–68. Cl. 52.
Johns-Manville Corp.: *See*—
Johns-Manville, H. W., Co.
Johns-Manville Corp., New York, N.Y. 850,441–2, pub. 3–26–68. Cl. 12.
Johns-Manville, H. W., Co., to Johns-Manville Corp., New York, N.Y. 68,829, ren. 6–11–68. Cl. 35.
Johnston, Robert A., Co., Milwaukee, Wis. 730,501, canc. Cl. 46.
Jordan Mfg. Corp., New York, N.Y. 730,470, canc. Cl. 39.
Juliet, Lingerie, Inc., New York, N.Y. 850,632, pub. 3–26–68. Cl. 39.
Juvare, Inc., from L. B. Coulter, d.b.a. L. B. Coulter Co., Salisbury, N.C. 850,745, pub. 3–26–68. Cl. 51.
Kadison Laboratories, Inc., Chicago, Ill. 850,672, pub. 3–26–68. Cl. 46.
Kanegafuchi Boseki Kabushiki Kaisha, d.b.a. Kanegafuchi Spinning Co., Ltd., Osaka, Japan. 850,655, pub. 3–26–68. Cl. 42.
Kanegafuchi Spinning Co., Ltd.: *See*—
Kanegafuchi Boseki Kabushiki Kaisha.
Kemlon Products & Development Co., Houston, Tex. 850,572, 3–26–68. Cl. 26.
Kendall Co., The, Walpole, Mass. 850,486, pub. 3–26–68. Cl. 18.
Kent, Judy, Inc., New York, N.Y. 730,473, canc. Cl. 39.
Kim Color Corp., d.b.a. Tremendous Color, Hialeah, Fla. 850,792, pub. 10–31–67. Cl. 106.
Kim Color Corp., d.b.a. Tremendous Color, from Monkey Color, Inc., Hialeah, Fla. 850,793, pub. 3–12–68. Cl. 106.
Kimberly-Clark Corp., Neenah, Wis. 850,614, pub. 3–26–68. Cl. 37.
Kinetics Corp. of California, Solana Beach, Calif. 850,561, pub. 3–26–68. Cl. 23.
King Fisher Mattress Co., Portland, Oreg. 730,408, canc. Cl. 32.
Kisco Co., Inc., St. Louis, Mo. 501,190, ren. 6–11–68. Cl. 21.
Knorr-Nahrmittel Aktiengesellschaft, Zurich, Switzerland. 850,681, pub. 3–26–68. Cl. 46.
Kohner Bros., Inc., East Paterson, N.J. 850,525, pub. 3–26–68. Cl. 22.
Kokoku Rayon & Pulp Co., Ltd., Tokyo, Japan. 850,416, pub. 3–26–68. Multiple Class (Classes 1 and 43).
Kortman & Schulte N.V., Rotterdam, Netherlands. 850,762, pub. 7–4–67. Cl. 52.
Korvette, E. J., Inc.: *See*—
Spartans Industries, Inc.
Krone, Burt, Co., Springfield, Mo. 730,311, canc. Cl. 18.
Lambda Iota Tau, Inc., Grand Rapids, Mich. 850,800–1, pub. 3–26–68. Cl. 200.
Lawson Products, Inc., Pawtucket, R.I. 850,650, pub. 3–26–68. Cl. 42.
Leather 'n' Suede: *See*—
Breier of Amsterdam, Inc.
Leigh, Robert J., d.b.a. Fashion Fair Co., Arcadia, Calif. 850,752, pub. 3–26–68. Cl. 51.
Lewis, John E., Phoenix, Ariz. 730,352, canc. Cl. 22.
Liang Seng & Co., Ltd., Bangkok, Thailand. 730,230, canc. Cl. 1.
Lilies, Margaret H.: *See*—
Patch The Pony, Inc.
Limhamns Traindustri Aktiebolag: *See*—
Tarkett Aktiebolag.
Lincoln Electric Co., The, Cleveland, Ohio. 730,292, canc. Cl. 14.
Lincoln Motor Co., Highland Park, to Ford Motor Co., Dearborn, Mich. 170,692, ren. 6–11–68. Cl. 19.
Litton Precision Products, Inc.: *See*—
Airtron, Inc.
Llords & Elwood Winery, Los Angeles, Calif. 850,720, pub. 3–26–68. Cl. 47.
Loper Electric, Inc., Lakewood, Colo. 850,790, pub. 3–26–68. Cl. 103.
Lorillard, P., Co., New York, N.Y. 850,459, pub. 3–26–68. Cl. 17.
Lowe, Joe, Co.: *See*—
Lowe, Joe, Corp.
Lowe, Joe, Corp., New York, N.Y., to Consolidated Foods Corp., d.b.a. Joe Lowe Co., Englewood, N.J. 502,303, ren. 6–11–68. Cl. 46.
Lowe's, Inc., Cassopolis, Mich. 850,784, pub. 3–26–68. Cl. 101.
Ludlow Corp., Needham Heights, Mass. 730,430, canc. Cl. 37.
MCA Inc., Universal City, Calif. 850,610–11, pub. 3–26–68. Cl. 36.
MIF Industries, Inc., from Malleable Iron Fittings Co., Branford, Conn. 850,559, pub. 3–26–68. Cl. 23.
Mack Trucks, Inc., from Mack Trucks, Inc., Allentown, Pa. 850,807. Cl. 23.
Mackay, A. & B., & Co.: *See*—
MacPherson, H. C.
Mackay, A. & B., Ltd.: *See*—
MacPherson, H. C.
MacPherson & Co.: *See*—
MacPherson, H. C.
MacPherson, H. C., d.b.a. A. & B. Mackay & Co., and A. & B. Mackay Ltd., San Francisco, Calif. 850,730, pub. 3–26–68. Cl. 49.
MacPherson, H. C., d.b.a. MacPherson and Co., San Francisco, Calif. 850,731, pub. 3–26–68. Cl. 49.
Majestic Tile Co., Chicago, Ill. 850,445, pub. 3–26–68. Cl. 12.
Mallard, Albert E., to Mallard Inc., Detroit, Mich. 244,136, ren. 6–11–68. Cl. 18.
Mallard Inc.: *See*—
Mallard, Albert E.
Malleable Iron Fittings Co.: *See*—
MIF Industries, Inc.
Mamiye Bros. Inc., New York, N.Y. 850,640, pub. 3–5–68. Cl. 39.
Marilyn Dress Co., from H. B. Cohn, d.b.a. Marilyn Dress Co., Philadelphia, Pa. 730,467, canc. Cl. 39.
Marino, L., Inc., Brooklyn, N.Y. 850,734, pub. 3–26–68. Cl. 50.
Marion Laboratories, Inc., Kansas City, Mo. 850,470, pub. 3–26–68. Cl. 18.
Marshall Field & Co., Chicago, Ill., to Fieldcrest Mills, Inc., Eden, N.C. 436,239, ren. 6–11–68. Cl. 42.
Maryland Yacht Club, Pasadena, Md. 850,795, pub. 3–26–68. Cl. 107.
Massey-Ferguson, Inc., Detroit, Mich. 730,577, canc. Cl. 107.
Mastercraft Engineering Co., Minneapolis, Minn. 850,542, pub. 3–26–68. Cl. 23.
Masury-Columbia Co.: *See*—
Masury-Young Co.
Masury-Young Co., Charlestown, Mass., to Masury-Columbia Co., Melrose Park, Ill. 437,358, ren. 6–11–68. Cl. 21.
Materiel Experimental Scientifique Matex SA, Lausanne, Switzerland. 850,582, pub. 3–26–68. Cl. 26.
Matsil Bros., Inc., New York, N.Y. 850,631, pub. 3–26–68. Cl. 39.
Mattel, Inc., Hawthorne, Calif. 850,531, pub. 3–26–68. Cl. 22.
Mattel, Inc., Hawthorne, Calif. 850,533, pub. 3–26–68. Cl. 22.
McBratney, Robert, & Co., Inc., to Blackstaff Linens, Inc., New York, N.Y. 500,289, ren. 6–11–68. Cl. 42.
McCollum Hoist & Mfg. Co., Downers Grove, Ill. 237,174, ren. 6–11–68. Cl. 21.
McGreevey, Werring & Howell, Inc., New York, N.Y. 245,368, ren. 6–11–68. Cl. 39.
McKay Products Corp., The, New York, N.Y. 500,928, ren. 6–11–68. Cl. 39.
McKee Baking Co., Collegedale, Tenn. 850,698, pub. 3–26–68. Cl. 46.
Mead Johnson & Co.: *See*—
Merrell, Wm. S., Co., The.
Mead Johnson & Co., to Mead Johnson & Co., Evansville, Ind. 244,145, ren. 6–11–68. Cl. 18.
Mead Johnson & Co., to Mead Johnson & Co., Evansville, Ind. 500,731, ren. 6–11–68. Cl. 18.
Mead Johnson & Co., to Mead Johnson & Co., Evansville, Ind. 501,140, ren. 6–11–68. Cl. 18.
Meadows, W. R., Inc., Elgin, Ill. 850,448, pub. 3–26–68. Cl. 12.
Medalist Publications, Inc., Chicago, Ill. 850,623, pub. 3–26–68. Cl. 38.
Melrose Seed Co., Buffalo, N.Y. 730 521, canc. Cl. 46.
Melville Shoe Corp., New York, N.Y. 730,475, canc. Cl. 39.
Mem Co., Inc., Northvale, N.J. 850,766, pub. 3–26–68. Cl. 52.
Merck & Co., Inc., Rahway, N.J. 850,472–3, pub. 3–26–68. Cl. 18.
Merrell, Wm. S., Co., The, Cincinnati, Ohio, to Mead Johnson & Co., Evansville, Ind. 501,171, ren. 6–11–68. Cl. 18.
Merry Co., The, d.b.a. The Gold Seal Battery Co., San Francisco, Calif., to Gould-National Batteries, Inc., St. Paul, Minn. 241,711, ren. 6–11–68. Cl. 21.
Metal & Thermit Corp., Woodbridge Township, Middlesex County, N.J. 730,252, canc. Cl. 6.
Metlon Corp., New York, N.Y. 501,681, ren. 6–11–68. Cl. 43.
Metro-Goldwyn-Mayer Inc., New York, N.Y. 850,607, pub. 9–12–67. Cl. 36.
Metropolis Brewery of N.J., Inc.: *See*—
Champale, Inc.
Metropolitan Floor Covering Co., Los Angeles, Calif. 850,647, pub. 3–26–68. Cl. 42.
Midwest Publishers Supply Co., Chicago, Ill. 850,812. Cl. 37.
Miller, Lillie, Xenia, Ohio. 437,732, ren. 6–11–68. Cl. 51.
Milopa Ltd., St. Gall, Switzerland. 850,751, pub. 3–26–68. Cl. 51.

Minami, H. Y., & Sons, Santa Maria, Calif. 850,718, pub. 3–26–68. Cl. 46.
Minnesota Mining & Mfg. Co., St. Paul, Minn. 850,415, pub. 3–26–68. Cl. 1.
Minnesota Mining and Mfg. Co., St. Paul, Minn. 850,583, pub. 3–26–68. Cl. 26.
Mitten, Frank P., d.b.a. Mitten's Display Letters, Redlands, Calif. 850,732, pub. 3–26–68. Cl. 50.
Mitten's Display Letters: *See*—
Mitten, Frank P.
M'Lady Sportswear, Inc., Reading, Pa. 730,472, canc. Cl. 39.
Monkey Color, Inc.: *See*—
Kim Color Corp.
Mono Pumps Ltd., London, England. 850,547, pub. 3–26–68. Cl. 23.
Monroe Auto Equipment Co., Monroe, Mich. 850,495, pub. 3–26–68. Cl. 19.
Moore Associates, Inc.: *See*—
Rucker Co., The.
Moore, James T., d.b.a. Scriptorium, Bethlehem, Conn. 730,441, canc. Cl. 38.
Morgan, Charles: *See*—
Glenn, Charles D.
Morinaga Confectionery Co., Ltd., Tokyo, Japan. 730,506, canc. Cl. 46.
Morits Thieneit, Likorfabrik "Echte Kroatsbeere," Holzbuettgen, Germany. 850,724–8, pub. 3–26–68. Cl. 49.
Morris, Philip, Inc., New York, N.Y. 850,694, pub. 3–26–68. Cl. 46.
Morris, Philip, Inc., d.b.a. Flavor Tree Co., New York, N.Y. 850,701, pub. 3–26–68. Cl. 46.
Mor-Win Products, Inc., Los Angeles, Calif. 850,556, pub. 3–26–68. Cl. 28.
Moss, Theron V., d.b.a. Southeastern Cordage Co., Cleveland, Ohio. 500,864, ren. 6–11–68. Cl. 7.
Murry, Edward J.: *See*—
Musi-Cloud, Inc.
Musi-Cloud Co., The: *See*—
Musi-Cloud, Inc.
Musi-Cloud, Inc., from Edward J. Murry, d.b.a. The Musi-Cloud Co., Palos Park, Ill. 850,503, pub. 3–26–68. Cl. 21.
N.V. Maatschappij Antradex, d.b.a. Antradex Co. Ltd., Netherlands Antilles. 730,536, canc. Cl. 46.
National Biscuit Co., New York, N.Y. 850,688, pub. 3–26–68. Cl. 46.
National Biscuit Co., New York, N.Y. 850,716–17, pub. 3–26–68. Cl. 46.
National Dairy Products Corp.: *See*—
Humko Co., The.
National Dairy Products Corp., New York, N.Y. 730,243, canc. Cl. 2.
National Instrument Co. Inc., Baltimore, Md. 850,809. Cl. 26.
National Plastic Products Co., from The National Plastic Products Co., Odenton, Md. 730,489, canc. Cl. 43.
National Plastic Products Co., The: *See*—
National Plastic Products Co.
National Research Corp., Cambridge, Mass., from Vaculite Corp., Hamilton, Ohio. 730,425, canc. Cl. 37.
National Shooting Sports Foundation, Inc., Riverside, Conn. 850,776, pub. 3–26–68. Cl. 100.
Naugatuck Chemical Co., The, to Uniroyal, Inc., New York, N.Y. 246,347, ren. 6–11–68. Cl. 6.
Naugatuck Chemical Co., The, to Uniroyal, Inc., New York, N.Y. 246,413, ren. 6–11–68. Cl. 6.
Nehi Bottling Co. of Harlingen, d.b.a. Tyme Bottling Co., Harlingen, Tex. 850,666 pub. 2–6–68. Cl. 45.
New Haven Quilt & Pad Co. Inc., East Haven, Conn. 850,653, pub. 3–26–68. Cl. 42.
New York Air Brake Co., The: *See*—
General Signal Corp.
New York Herald Tribune Inc., New York, N.Y. 730,447, canc. Cl. 38.
Newman Clock Co., Chicago, Ill., to Detex Corp., New York, N.Y. 68,397, ren. 6–11–68. Cl. 27.
Newspaper Enterprise Association, Inc., Cleveland, Ohio. 730,457, canc. Cl. 38.
Nicholas International Ltd., Toronto, Ontario, Canada. 730,443, canc. Cl. 38.
Norstan Research & Development Co., Minneapolis, Minn. 730,353, canc. Cl. 22.
Norton, J. R., Co., Glendale, Ariz. 850,667, pub. 10–4–66. Cl. 46.
Noxell Corp., Baltimore, Md. 850,757, pub. 3–26–68. Cl. 51.
Nutrition Square, Inc., Pittsburgh, Pa. 850,471, pub. 3–26–68. Cl. 18.
Nysco Laboratories, Inc., Long Island City, N.Y. 806,136, canc. Cl. 18.
Oakes Consumer Catalogs: *See*—
Haywood Publishing Co.
Ohio Corrugating Co., The, Warren, Ohio. 850,768, pub. 3–26–68. Cl. 100.
Ohio Valley Specialty Chemical Co., Marietta, Ohio. 850,432–3, pub. 3–26–68. Cl. 6.
Old Dutch Co.: *See*—
Root Co.
Olsen, Eugene W., d.b.a. Olsen Surgical Service-Repairing, Oakland, Calif. 850,660, pub. 8–9–66. Cl. 44.
Olsen Surgical Service-Repairing: *See*—
Olsen, Eugene W.
Olympia State Bank, Chicago Heights, Ill. 704,095, canc. Cl. 101.
Olympus Optical Co. Ltd., Tokyo, Japan. 850,566, pub. 3–26–68. Cl. 26.
Ore-Ida Foods, Inc., from Ore-Ida Potato Products, Inc., Ontario, Oreg. 730,598, canc. Cl. 46.
Ore-Ida Potato Products, Inc.: *See*—
Ore-Ida Foods, Inc.
Ortho Pharmaceutical Corp., Raritan, N.J. 850,481, pub. 3–26–68. Cl. 18.
Oulevay S.A., Morges, Vaud, Switzerland. 730,541, canc. Cl. 46.
Oussani, James J., d.b.a. The Staplex Co., Brooklyn, N.Y. 850,567, pub. 3–26–68. Cl. 26.
Outboard Marine Corp., Waukegan, Ill. 730,380, canc. Cl. 23.
Pacific Measurements Inc., Palo Alto, Calif. 850,574, pub. 3–26–68. Cl. 26.
Pan Pacific Fisheries, Inc., Terminal Island, Calif. 730,526, canc. Cl. 46.
Park Chemical Co., Detroit, Mich. 440,766, ren. 6–11–68. Cl. 52.
Parke, Davis & Co., Detroit, Mich. 850,490, pub. 3–26–68. Cl. 18.
Parke, Davis & Co., Detroit, Mich. 850,664, pub. 11–14–67. Cl. 44.
Parkinson, S., & Son (Doncaster) Ltd., Doncaster, England. 850,608, pub. 3–26–68. Cl. 46.
Patch The Pony, Inc., from M. H. Lilies, Florence, Ala. 850,630, pub. 3–26–68. Cl. 38.
Penick, S. B., & Co., to Corn Products Co., New York, N.Y. 437,488, ren. 6–11–68. Cl. 46.
Pentler, C. F. & F. M.: *See*—
Pentler, Charles F.
Pentler, Charles F., d.b.a. C. F. & F. M. Pentler, Cupertino, Calif. 850,739, pub. 3–26–68. Cl. 51.
Peoples Drug Stores, Inc., to Peoples Drug Stores, Inc., Washington, D.C. 244,592, ren. 6–11–68. Cl. 46.
Perks Pearce & Thompson Ltd., Birmingham, England. 850,587, pub. 1–2–68. Cl. 28.
Perm-A-Soft Co., The, Minneapolis, Minn. 730,406, canc. Cl. 31.
Petro-Tex Chemical Corp., Houston, Tex. 850,414, pub. 3–26–68. Cl. 1.
Pfaffman Co., The, Cleveland, Ohio. 850,719, pub. 3–26–68. Cl. 46.
Pfizer, Chas., & Co., Inc.: *See*—
Wick & Fry, Inc.
Pflueger Corp., Akron, Ohio. 850,521, pub. 3–26–68. Cl. 22.
Pharmaco, Inc.: *See*—
Schering Corp.
Philadelphia 76ers: *See*—
Riko Enterprises, Inc.
Piccard, Lucien, Sportswear Ltd.: *See*—
Piccard, Lucien, Watch Corp.
Piccard, Lucien, Watch Corp., from Lucien Piccard Sportswear Ltd., New York, N.Y. 850,424, pub. 3–26–68. Cl. 3.
Pictape Products Corp., New York, N.Y. 730,589, canc. Cl. 22.
Pictograph Ltd., New Barnet, England. 730,255, canc. Cl. 6.
Pierce, S. S., Co., to S. S. Pierce Co., Boston, Mass. 69,461, ren. 6–11–68. Cl. 46.
Plantabbs Corp., Timonium, Md. 850,421, pub. 3–26–68. Cl. 2.
Plastic Industries, Inc., Athens, Tenn. 850,596, pub. 3–26–68. Cl. 32.
Plastilite Corp., Omaha, Nebr. 730,341, canc. Cl. 22.
Pneumatiques, Caoutchouc Manufacture et Plastiques Kleber-Colombes, Hauts Ee Seine, France. 850,602, pub. 2–6–68. Cl. 35.
Pollak, Julius, & Sons, Inc., Long Island City, N.Y. 730,442, canc. Cl. 38.
Pope, Eddie, & Co.: *See*—
Pope, M. Edward.
Pope, M. Edward, d.b.a. Eddie Pope & Co., Altadena, Calif. 730,403, canc. Cl. 28.
Potts Powder Co., The, Reynolds, Pa., and New York, N.Y., to Atlas Chemical Industries, Inc., Wilmington, Del. 68,557, ren. 6–11–68. Cl. 9.
Prawnto Shrimp Machine Co.: *See*—
Hinde, Harry.
Prince George Pulp & Paper Ltd., Vancouver, British Columbia, Canada. 850,411, pub. 3–26–68. Multiple Class (Classes 1 and 37).
Procter & Gamble Co., The, Cincinnati, Ohio. 850,659, pub. 6–29–65. Cl. 44.
Purchasing Agents Association of Northern California, Inc., San Francisco, Calif. 245,683, ren. 6–11–68. Cl. 38.
Purity Cheese Co., Mayville, Wis. 850,696, pub. 3–26–68. Cl. 46.
Quickee Products, Inc., Yonkers, N.Y. 730,231, canc. Cl. 1.
Raden C. Auto-Step Co., Inc., Kansas City, Mo. 850,573, pub. 3–26–68. Cl. 26.
Radex Corp., Chicago, Ill. 730,333, canc. Cl. 21.
Rechtfertig, John, d.b.a. Di-Cu Co., Fairfax, Calif. 850,580, pub. 3–26–68. Cl. 26.
Red "C" Oil Co., The, Baltimore, Md., to Atlantic Richfield Co., Philadelphia, Pa. 244,587, ren. 6–11–68. Cl. 15.
Red Dog, Inc., Lawrence, Kans. 850,771, pub. 3–26–68. Cl. 100.
Reed, Albert E., & Co. Ltd., London, England. 730,242, canc. Cl. 2.
Reeves, John, Ridgeville, S.C. 850,699, pub. 3–26–68. Cl. 46.
Rehm, Donald O., d.b.a. Guaranty Cycle Co., St. Louis, Mo. 850,498, pub. 3–26–68. Cl. 19.
Remcon Co., El Cajon, Calif. 850,492, pub. 3–26–68. Cl. 19.
Reynolds Electrical & Engineering Co., Inc.: *See*—
Astec Industries, Inc.
Reynolds, R. J., Tobacco Co., Winston-Salem, N.C. 850,460–1, pub. 3–26–68. Cl. 17.
Reynolds, R. J., Tobacco Co., Winston-Salem, N.C. 850,468, pub. 3–26–68. Cl. 17.
Rhein, Lissie E. Van Wyck, New York, N.Y., to Vistron Corp., Cleveland, Ohio. 69,160, ren. 6–11–68. Cl. 51.

Rich Mfg. Co. of California, Corona, Calif. 850,600, pub. 3–26–68. Cl. 35.

Richardson-Merrell Inc., Cincinnati, Ohio. 730,310, canc. Cl. 18.

Riko Enterprises, Inc., d.b.a. Philadelphia 76ers, Philadelphia, Pa. 850,799, pub. 3–26–68. Cl. 107.

Robin Fils & Cie, Ltd., Batavia, N.Y. 850,721, pub. 3–26–68. Cl. 47.

Robbins, Anatole: *See*—
  Robbins, Anatole, Inc.

Robbins, Anatole, Inc., d.b.a. Anatole Robbins, Los Angeles, Calif., to Alexandra de Markoff Sales Corp., New York, N.Y. 500,425, ren. 6–11–68. Cl. 51.

Root Co., d.b.a. Old Dutch Co., Daytona Beach, Fla. 850,686, pub. 3–26–68. Cl. 46.

Roselon Yarns, Inc., Philadelphia, Pa. 850,656–8, pub. 3–26–68. Cl. 43.

Royal International Corp.: *See*—
  Royal International Kabushiki Kaisha.

Royal International Kabushiki Kaisha, d.b.a. Royal International Corp., Tokyo-to, Japan. 850,804. Multiple Class (Classes 21 and 36).

Rubank, Inc., Chicago, Ill. 500,040, ren. 6–11–68. Cl. 38.

Rucker Co., The, Oakland, from Moore Associates, Inc., San Carlos, Calif. 850,507, pub. 3–26–68. Cl. 21.

St. Benedict, Order of, Collegeville, Minn. 850,679, pub. 3–26–68. Cl. 46.

Sanabo Fabrik Chemischer und Pharmazeutischer Produkte Dr. Karl und Maria Stosius, Vienna, Austria. 850,466–7, pub. 3–26–68. Cl. 18.

Sandos, Inc., Hanover, N.J. 850,468, pub. 3–26–68. Cl. 18.

Sargent Engineering Corp., Fort Dodge, Ia. 850,563, pub. 3–26–68. Cl. 23.

Sargent & Greenleaf, Inc., Rochester, N.Y. 850,565, pub. 3–26–68. Cl. 25.

Sarong, Inc., Dover, Del. 850,636–7, pub. 3–26–68. Cl. 39.

Sawyer Crystal Blue Co., The, Boston, to Standard International Corp., Andover, Mass. 69,268, ren. 6–11–68. Cl. 6.

Sawyer Crystal Blue Co., The, Boston, to Standard International Corp., Andover, Mass. 69,737, ren. 6–11–68. Cl. 6.

Schalk Chemical Co., Los Angeles, Calif., to Schalk Chemicals, Inc., Union, N.J. 500,110, ren. 6–11–68. Cl. 52.

Schalk Chemicals, Inc.: *See*—
  Schalk Chemical Co.

Schering Corp., Bloomfield, N.J., to Pharmaco, Inc., Kenilworth, N.J. 434,418 ren. 6–11–68. Cl. 51.

Schoolhouse Industries, Inc., Commack, N.Y. 850,522, pub. 3–26–68. Cl. 22.

Scovill Mfg. Co., Waterbury, Conn. 850,616, pub. 3–26–68. Cl. 37.

Scriptorium: *See*—
  Moore, James T.

Seaboard Allied Milling Corp., d.b.a. George Urban Milling Co., Buffalo, N.Y. 850,704, pub. 3–26–68. Cl. 46.

Seamless Rubber Co., The, New Haven, Conn. 730,494, canc. Cl. 44.

Sears, Roebuck and Co., Chicago, Ill. 730,560, canc. Cl. 52.

Sel-Set Machinery Corp., Salem, Ore. 730,324–5, canc. Cl. 21.

Serena Industries, Chicago, Ill. 850,538, pub. 3–26–68. Cl. 23.

Service Corp. of America, Los Angeles, Calif. 850,789, pub. 3–26–68. Cl. 103.

Sexton, John, & Co., Chicago, Ill. 730,599, canc. Cl. 46.

Seymour, Earl F., d.b.a. Seymour's, New York, N.Y. 730,390, canc. Cl. 26.

Seymour's: *See*—
  Seymour, Earl F.

Shaw Instrument Corp., Latrobe, Pa. 730,319, canc. Cl. 21.

Shoecraft, Inc., New York, N.Y. 439,899, ren. 6–11–68. Cl. 39.

Shuron Optical Co., Inc., Geneva, to Textron Inc., Rochester, N.Y. 440,471, ren. 6–11–68. Cl. 26.

Sippican Corp., The, Marion, Mass. 850,575, pub. 3–26–68. Cl. 26.

Smith, A. O., Corp.: *See*—
  Haveg Industries, Inc.

Societa Applicasioni Gomma Antivibranti "Saga" S.p.A., Milan, Italy. 730,276, canc. Cl. 12.

Societe Anonyme Expanscience, Marchand, Courbevoie (Seine), France. 850.747, pub. 3–26–68. Cl. 51.

Societe Des Anciens Etablissements Duverdrey & Bloquel, Seine Maritime, France. 730,400, canc. Cl. 27.

Societe Generale du Magnesium, Paris, France. 850,453, pub. 3–26–68. Cl. 14.

Sol Cafe Mfg. Corp., Jamaica, N.Y. 730,528–9, canc. Cl. 46.

Sol Cafe Mfg. Corp., Jamaica, N.Y. 730,531, canc. Cl. 46.

Sola Basic Industries, Inc., Milwaukee, Wis. 850,810. Cl. 26.

Sonotec, Inc., Santa Ana, Calif. 730,337, canc. Cl. 21.

Sonotec, Inc., Santa Ana, Calif. 730,423, canc. Cl. 36.

Southeastern Cordage Co.: *See*—
  Moss, Theron V.

Southern Publishing Co., College Park, Ga. 730,446, canc. Cl. 38.

Sparks, Martha, Denver, Colo. 730,549, canc. Cl. 51.

Spartans Industries, Inc., from E. J. Korvette, Inc., New York, N.Y. 850,464, pub. 3–26–68. Cl. 18.

Spear, Clifton T., d.b.a. The Diamond Spear Co., Texarkana, Tex. 850,426, pub. 3–26–68. Cl. 4.

Speko Products, Inc., Chicago, Ill. 850,417, pub. 3–26–68. Cl. 2.

Sport Specialty Shoemakers Co., from Sport Specialty Shoemakers, Inc., St. Louis, Mo. 730,469, canc. Cl. 39.

Sport Specialty Shoemakers, Inc.: *See*—
  Sport Specialty Shoemakers Co.

Sportville Mens Wear Inc., New York, N.Y. 850,634, pub. 3–26–68. Cl. 39.

Spring Hill Fuel Co., d.b.a. Aluminum Detail Products, Seattle, Wash. 850,443, pub. 3–26–68. Cl. 12.

Springfoot, Inc., Charleston, W. Va. 850,749, pub. 3–26–68. Cl. 51.

Stachon, Joseph A., d.b.a. Vaclipper Co., Napa, Calif. 730,374, canc. Cl. 23.

Stamper, F. M., Co., d.b.a. Banquet Canning Co., St. Louis, Mo. 850,687, pub. 3–26–68. Cl. 46.

Standard International Corp.: *See*—
  Sawyer Crystal Blue Co., The.

Standard Oil Co., The, Cleveland, Ohio. 850,506, pub. 3–26–68. Cl. 21.

Standard Oil Co., The, Cleveland, Ohio. 850,598, pub. 3–26–68. Cl. 34.

Staplex Co., The: *See*—
  Oussani, James J.

Stark Co., Philadelphia, Pa. 730,275, canc. Cl. 11.

Stauffer Chemical Co., San Francisco, Calif., to Stauffer Chemical Co., New York, N.Y. 500,309, ren. 6–11–68. Cl. 6.

Steinman, Jules, Pasadena, Calif. 850,605, pub. 3–26–68. Cl. 36.

Sterling Drug Inc., New York, N.Y. 730,312, canc. Cl. 18.

Stetson, John B., Co., Philadelphia, Pa. 730,481, canc. Cl. 39.

Stetson, John B., Co., Philadelphia, Pa. 730,485, canc. Cl. 42.

Stiftung, Carl-Zeiss: *See*—
  Zeiss, Carl.

Stihl, Andreas, Maschinenfabrik, Waiblingen-Neustadt, Germany. 850,535, pub. 3–26–68. Cl. 23.

Stiles-Kem Sales Corp., Waukegan, Ill. 850,430, pub. 2–13–68. Cl. 6.

Stock Yards Packing Co., Inc., Chicago, Ill. 730,512, canc. Cl. 46.

Stolzer, Anna, d.b.a. Firma Karl Stolzer, Achern, Baden, Germany. 850,545, pub. 3–26–68. Cl. 23.

Stolzer, Karl, Firma: *See*—
  Stolzer, Anna.

Stover Plywood Corp., New York, N.Y. 730.282, canc. Cl. 12.

Strauss, Levi, & Co., San Francisco, Calif. 730,464, canc. Cl. 39.

Street & Smith Publications, Inc., to The Conde Nast Publications Inc., New York, N.Y. 437,748, ren. 6–11–68. Cl. 38.

Stuart, Jackie, Inc., New York, N.Y. 850,639, pub. 3–26–68. Cl. 39.

Suchard Holding Societe Anonyme, Lausanne, Switzerland. 850,673, pub. 3–26–68. Cl. 46.

Suchard Holding Societe Anonyme, Lausanne, Switzerland. 850,692, pub. 3–26–68. Cl. 46.

Suchard Holding Societe Anonyme, Lausanne, Switzerland. 850.712, pub. 3–26–68. Cl. 46.

Sun Chemical Corp., New York, N.Y. 850,435, pub. 2–13–68. Cl. 11.

Super Valu Stores, Inc., Hopkins, Minn. 850,781, pub. 3–26–68, Cl. 101.

Superior Electric Products Corp., Cape Girardeau, Mo. 730,362, canc. Cl. 23.

Sweet Mfg. Co., Springfield, Ohio. 850,560, pub. 3–26–68. Cl. 23.

TRW, Inc., Euclid, Ohio. 850,552. pub. 3–26–68. Cl. 23.

Talon, Inc., Meadville, Pa. 850,589, pub. 3–26–68. Cl. 31.

Tarkett Aktiebolag, from Limhamns Traindustri Aktiebolag, Malmo, Sweden. 850,499, pub. 11–7–67. Cl. 20.

Technical Tape Corp., New Rochelle, N.Y. 730,249, canc. Cl. 5.

Tennant, G. H., Co., Minneapolis, Minn. 850,765, pub. 3–26–68. Cl. 52.

Texas Pharmacal Co., San Antonio, Tex. 850,743, pub. 3–26–68. Cl. 51.

Texas Pharmacal Co., San Antonio, Tex. 850,750, pub. 3–26–68. Cl. 51.

Textron Inc.: *See*—
  Shuron Optical Co., Inc.

Theraplix, Paris, France. 850,474, pub. 3–26–68. Cl. 18.

Thermo-Kote of America, Inc., Bluffton, Ind. 850,449, pub. 3–26–68. Cl. 12.

Thies, B., K.G. Spezialmaschinenfabrik, Westphalia, Germany. 850,543–4. pub. 3–26–68. Cl. 23.

Thompson, Johnny C., d.b.a. Guitarsville Records, and Johnny Thompson Guitars and Drums, Monterey Park, Calif. 850,608, pub. 3–26–68. Cl. 36.

Thompson, Johnny, Guitars and Drums: *See*—
  Thompson, Johnny C.

Thompson, Parke, Associates: *See*—
  Thompson, Parke H.

Thompson, Parke H., II, d.b.a. Parke Thompson Associates, Fenton, Mo. 850,806. Cl. 23.

Thorn, W. G., & Co.: *See*—
  Thorn, William G.

Thorn, William G., d.b.a. W. G. Thorn & Co., San Francisco, Calif. 730,284, canc. Cl. 13.

Tilden, S. G., Inc., Garden City, N.Y. 850,493, pub. 3–26–68. Cl. 19.

Tip-Top Brush Co., Inc., New York, N.Y. 640,316, canc. Cl. 29.

Toymaker Inc., Chicago, Ill. 730,342, canc. Cl. 22.

Travel Industries, Inc., Oswego, Kans. 850,496, pub. 1–9–68. Cl. 19.

Tremendous Color: *See*—
  Kim Color Corp.

Tressa Watches Co., Ltd., Bienne, Switzerland. 850,585, pub. 3–26–68. Cl. 27.

Tri-Valley Growers, San Francisco, Calif. 850,702–3, pub. 3–26–68. Cl. 46.

Turner Halsey Co., Inc.: *See*—
  Turner Halsey Export Corp.

Turner Halsey Export Corp., to Turner Halsey Co. Inc., New York, N.Y. 436,166, ren. 6–11–68. Cl. 42.

Tyme Bottling Co.: *See*—
  Nehi Bottling Co. of Harlingen.

UMC Industries, Inc., St. Louis, Mo. 850,508, pub. 3–26–68. Cl. 21.

UMC Industries, Inc., St. Louis, Mo. 850,541, pub. 3–26–68. Cl. 23.

USV Pharmaceutical Corp., New York, N.Y. 850,487–8, pub. 3–26–68. Cl. 18.

Unarco Industries, Inc., Chicago, Ill. 850,803. Cl. 19.

Union Handels-Gesellschaft A.G., Basel, Switzerland. 730,514, canc. Cl. 46.

Union Oil Co. of California, Los Angeles, Calif. 850,455, pub. 3–26–68. Cl. 15.

Union Oil Co. of California, Los Angeles, Calif. 850,791, pub. 3–26–68. Cl. 103.

Uniroyal, Inc.: *See*—
  Naugatuck Chemical Co., The.
  United States Rubber Co.

Uniroyal, Inc., from United States Rubber Co., New York, N.Y. 850,811. Cl. 35.

United Business Service Co., Boston, Mass. 850,627, pub. 3–26–68. Cl. 38.

United States Rubber Co., to Uniroyal, Inc., New York, N.Y. 245 262, ren. 6–11–68. Cl. 35.

United States Rubber Co., to Uniroyal, Inc., New York, N.Y. 246,613, ren. 6–11–68. Cl. 22.

United States Rubber Co., to Uniroyal, Inc., New York, N.Y. 501,718, ren. 6–11–68. Cl. 35.

United States Stoneware Co., The, Akron, to U.S. Stoneware, Inc., Tallmadge, Ohio. 437,638, ren. 6–11–68. Cl. 1.

U.S. Stoneware. Inc.: *See*—
  United States Stoneware Co., The.

Universal Oil Products Co., Des Plaines, Ill. 850,494, pub. 3–26–68. Cl. 19.

Universal Tank & Iron Works, Inc., Indianapolis, Ind. 850,420, pub. 3–26–68. Cl. 2.

Upjohn Co., The, Kalamazoo, Mich. 850,477–80, pub. 3–26–68. Cl. 18.

Urban, George, Milling Co.: *See*—
  Seaboard Allied Milling Corp.

Utica Tool Co., Inc.: *See*—
  Bonney Vise & Tool Works, Inc.

Vaclipper Co.: *See*—
  Stachon, Joseph A.

Vaculite Corp.: *See*—
  National Research Corp.

Valley Pkg. Co.: *See*—
  Valley Packing Co. of Calif.

Valley Packing Co. of Calif., d.b.a. Valley Pkg. Co., Salinas, Calif. 850,714, pub. 3–26–68. Cl. 46.

Valspar Corp., The, Rockford, Ill. 850,457, pub. 3–26–68. Cl. 16.

Vantur Electronics, Inc., Decatur, Ga. 730,320, canc. Cl. 21.

Vickers, Dorcie, Cambridge City, Ind. 850,609, pub. 3–26–68. Cl. 36.

Victor Equipment Co., San Francisco, Calif. 438,305, ren. 6–11–68. Cl. 26.

Vie-Del Co., Fresno, Calif. 850,706, pub. 3–26–68. Cl. 46.

Vistron Corp.: *See*—
  Rhein, Lizzie E. Van Wyck.

Vita Plus Corp., Madison, Wis. 850,469, pub. 3–26–68. Cl. 18.

Vought Industries, Inc., Dallas, Tex. 730,316, canc. Cl. 19.

Walker Mfg. Co., Racine, Wis. 850,590, pub. 3–26–68. Cl. 31.

Waltz Mfg. Corp., Dayton, Ohio. 730,347, canc. Cl. 22.

Warner-Lambert Pharmaceutical Co.: *See*—
  Webb, John M.

Warrenton Restaurant, Inc.: *See*—
  Your Father's Mustache International, Inc.

Washington Mfg. Co., Nashville, Tenn. 850,643, pub. 3–26–68. Cl. 39.

Waste King Corp.: *See*—
  Cribben and Sexton Co.

Webb, John M., d.b.a. John McD. Webb Associates, Minneapolis, Minn., to Warner-Lambert Pharmaceutical Co., Morris Plains, N.J. 500,024, ren. 6–11–68. Cl. 52.

Webb, John McD., Associates: *See*—
  Webb, John M.

Western Lime Products Co., Pasadena, Calif. 850,465, pub. 3–26–68. Cl. 18.

Westinghouse Air Brake Co., Chicago, Ill. 850,549, pub. 3–26–68. Cl. 23.

Westminster Toiletries Ltd., New York, N.Y. 850,740, pub. 1–9–68. Cl. 51.

Wick & Fry, Inc., Cumberland, Ind., to Chas. Pfizer & Co., Inc., New York, N.Y. 436,573, ren. 6–11–68. Cl. 18.

Williams Bros. Co., Tulsa, Okla. 850,769, pub. 3–26–68. Multiple Class (Classes 100 and 103).

Williams, Helene K., Washington, D.C. 730,459, canc. Cl. 39.

Williams, J. B., Co., The, New York, N.Y. 850,759, pub. 3–26–68. Multiple Class (Classes 51 and 52).

Wilson Jones Co., Niles. Ill. 850,615, pub. 3–26–68. Cl. 37.

Wilson Sporting Goods Co., from Wilson Sporting Goods Co., River Grove, Ill. 850,518, pub. 3–26–68. Cl. 22.

Wilson Sporting Goods Co., from Wilson Sporting Goods Co., River Grove, Ill. 850,524, pub. 3–26–68. Cl. 22.

Wimpfheimer, A., & Bro., Inc., Stonington, Conn. 850,651–2, pub. 3–26–68. Cl. 42.

Wolke, Henry, Woodbury, Conn. 730,545, canc. Cl. 50.

World Toy House, Inc., St. Paul, Minn. 850,520, pub. 3–26–68. Cl. 22.

Worley Publishing Co., Inc., New York, N.Y. 730,444, canc. Cl. 38.

Wurlitzer Co., The, Chicago, Ill. 850,502, pub. 3–26–68. Multiple Class (Classes 21 and 36).

Wyrough & Loser, Inc., Trenton, N.J. 850,431, pub. 3–26–68. Cl. 6.

Yackira, Alan I., New York, N.Y. 730,270, canc. Cl. 8.

Yardley & Co. Ltd., London, England. 730,564, canc. Cl. 52.

Yardley of London, Inc., Totowa, N.J. 850,735, pub. 7–11–67. Cl. 51.

Yardley of London, Inc., Totowa, N.J. 850,744, pub. 3–26–68. Cl. 51.

Yardley of London, Inc., Totowa, N.J. 850,758, pub. 3–26–68. Cl. 51.

Your Father's Mustache International, Inc., from Warrenton Restaurant, Inc., New Haven, Conn. 850,796, pub. 3–26–68. Cl. 107.

Zaehringer, Alfred J., d.b.a. American Rocket Co., Wyandotte, Mich. 730,439, canc. Cl. 38.

Zeiss, Carl, Jena, to Carl-Zeiss Stiftung, d.b.a. Carl Zeiss, Wuerttemberg, Germany. 68,572, ren. 6–11–68. Cl. 26.

U.S. GOVERNMENT PRINTING OFFICE: O—1968

U.S. DEPARTMENT OF COMMERCE

OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE

June 18, 1968 Volume 851 Number 3

PATENTS

NOTICES

Board of Appeals Decisions Rendered in the Month of April 1968

Examiner affirmed	168
Examiner affirmed in part	28
Examiner reversed	35
Total	281

Private Law 90–211

90th CONGRESS, H.R. 11254

April 12, 1968

AN ACT

For the relief of Jack L. Good

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That, notwithstanding the provisions of section 151, title 35, United States Code, or any provision of existing law, the Commissioner of Patents is authorized and directed to accept the late payment of the final fee (prescribed in section 41(a), title 35, United States Code), in the application for United States Letters Patent of Jack L. Good of Palestine, Arkansas, serial number 381,830, filed July 10, 1964, and allowed July 28, 1966, for a stump pulverizing apparatus, as though no abandonment or lapse had ever occurred: *Provided,* That such final fee is paid within three months of the date this Act is approved. Upon payment of such fee, the Commissioner is authorized to issue to the said Jack L. Good the patent for which application was so made. No patent granted on said application shall be held invalid on the ground that the final fee was not paid within the period specified in title 35, United States Code.

Approved April 12, 1968.

Dedication

2,662,578.—*Daniel Belcher,* Minneapolis, Minn., and *Russell J. Williams,* Richmond Heights, and *Milton J. Holmes,* Lemay, Mo. MANUFACTURE OF WINDOW BAGS. Patent dated Dec. 15, 1953. Dedication filed Apr. 26, 1968, by the assignee, *Bemis Company, Inc.*

Hereby dedicates to the Public the entire remaining portion of the term of said patent.

Disclaimer

2,916,486.—*John C. Babcock,* Portage Township, *J Allan Campbell* and *John A. Hogg,* Kalamazoo Township, Kalamazoo County, Mich. 6-FLUORO STEROIDS AND INTERMEDIATES THEREFOR. Patent dated Dec. 8, 1959. Disclaimer filed Apr. 19, 1968, by the inventors; the assignee, *The Upjohn Company,* assenting.

Hereby enter this disclaimer to claims 1, 2, 3, 4, 5, 6, 8, 10, 11 and 13 of said patent.

New Applications Received During April 1968

Patents	8060
Designs	494
Plant Patents	6
Reissues	34
Total	8594

Issue—June 18, 1968

Patents	1000—No. 3,388,405 to No. 3,389,404, incl.
Designs	58—No. 211,445 to No. 211,502, incl.
Total	1058

PATENT EXAMINING CORPS

R. A. WAHL, Assistant Commissioner

CONDITION OF PATENT APPLICATIONS AS OF MAY 20, 1968

PATENT EXAMINING OPERATIONS AND GROUPS	Actual Filing Date of Oldest Case Awaiting Action	
* Denotes date of oldest application for each Operation.	New	Amended
CHEMICAL EXAMINING OPERATION—I. MARCUS, Director.		
GENERAL CHEMISTRY AND PETROLEUM CHEMISTRY, GROUP 110—R. L. CAMPBELL, Manager Inorganic Compounds; Inorganic Compositions; Organo-Metal and Organo-Metalloid Chemistry; Metallurgy; Metal Stock; Electro Chemistry; Batteries; Hydrocarbons; Mineral Oil Technology; Lubricating Compositions; Gaseous Compositions; Fuel and Igniting Devices.	9- 7-65	4-26-63
GENERAL ORGANIC CHEMISTRY, GROUP 120—M. STERMAN, Manager Heterocyclic; Amides; Alkaloids; Azo; Sulfur; Misc. Esters; Carbohydrates; Herbicides; Poisons; Medicines; Cosmetics; Steroids; Oxo and Oxy; Quinones; Acids; Carboxylic Acid Esters; Acid Anhdrides; Acid Halides.	10- 1-65	*12-28-62
HIGH POLYMER CHEMISTRY, PLASTICS AND MOLDING; GROUP 140—L. J. BERCOVITZ, Manager Synthetic Resins; Rubber; Proteins; Macromolecular Carbohydrates; Mixed Synthetic Resin Compositions; Synthetic Resins With Natural Polymers and Resins; Natural Resins; Reclaiming; Pore-Forming; Compositions (Part) e.g.: Coating; Molding; Ink; Adhesive and Abrading Compositions; Molding, Shaping, and Treating Processes.	10-20-65	1- 6-64
COATING AND LAMINATING, BLEACHING, DYEING AND PHOTOGRAPHY, GROUP 160—J. R. LIBERMAN, Manager Coating; Processes and Misc. Products; Laminating Methods and Apparatus; Stock Materials; Adhesive Bonding; Special Chemical Manufactures; Special Utility Compositions; Bleaching; Dyeing and Photography.	*4- 9-65	2-18-63
SPECIALIZED CHEMICAL INDUSTRIES AND CHEMICAL ENGINEERING, GROUP 170—W. B. KNIGHT, Manager Fertilizers; Foods; Fermentation; Analytical Chemistry; Reactors; Sugar and Starch; Paper Making; Glass Manufacture; Gas; Heating and Illuminating; Cleaning Processes; Liquid Purification; Distillation; Preserving; Liquid and Solid Separation; Gas and Liquid Contact Apparatus; Refrigeration; Concentrative Evaporators; Mineral Oils Apparatus; Misc. Physical Processes.	9- 7-65	1-29-64
ELECTRICAL EXAMINING OPERATION—N. H. EVANS, Director.		
INDUSTRIAL ELECTRONICS AND RELATED ELEMENTS, GROUP 210—J. F. COUCH, Acting Manager Generation and Utilization; General Applications; Conversion and Distribution; Heating and Related Art Conductors; Switches; Miscellaneous.	1- 4-66	2-14-64
SECURITY, GROUP 220—S. BOYD, Manager Ordnance, Firearms and Ammunition; Radar, Underwater Signalling, Directional Radio, Torpedoes, Seismic Exploring, Radio-Active Batteries; Nuclear Reactors, Powder Metallurgy, Rocket Fuels; Radio-Active Material.	1-13-67	11-17-64
INFORMATION TRANSMISSION, STORAGE AND RETRIEVAL, GROUP 230—M. L. LEVY, Manager Communications; Multiplexing Techniques; Facsimile; Data Processing, Computation and Conversion; Storage Devices and Related Arts.	*2-24-65	*6-18-62
ELECTRONIC COMPONENT SYSTEMS AND DEVICES, GROUP 250—W. L. CARLSON, Manager Semi-Conductor and Space Discharge Systems and Devices; Electronic Component Circuits; Wave Transmission Lines and Networks; Optics; Radiant Energy; Measuring.	3- 2-65	8-15-62
PHYSICS, GROUP 280—R. L. EVANS, Manager Photography; Sound and Lighting; Indicators and Optics; Measuring and Testing; Geometrical Instruments.	2-14-66	3-22-65
DESIGNS, GROUP 290—S. BOYD, Manager Industrial Arts; Household, Personal and Fine Arts.	8-16-67	7- 5-66
MECHANICAL EXAMINING OPERATION—F. H. BRONAUGH, Director.		
HANDLING AND TRANSPORTING MEDIA, GROUP 310—A. BERLIN, Manager Conveyors; Hoists; Elevators; Article Handling Implements; Store Service; Sheet and Web Feeding; Dispensing; Fluid Sprinkling; Fire Extinguishers; Coin Handling; Check Controlled Apparatus; Classifying and Assorting Solids; Boats; Ships; Aeronautics; Motor and Land Vehicles and Appurtenances; Railways and Railway Equipment; Brakes; Rigid Flexible and Special Receptacles and Packages.	11-25-66	5- 7-66
MATERIAL SHAPING, ARTICLE MANUFACTURING, TOOLS, GROUP 320—N. BERGER, Manager Manufacturing Processes, Assembling, Combined Machines, Special Article Making; Metal Deforming; Sheet Metal and Wire Working; Metal Fusion—Bonding, Metal Founding; Metallurgical Apparatus; Plastics Working Apparatus; Plastic Block and Earthenware Apparatus; Machine Tools for Shaping or Dividing; Work and Tool Holders Woodworking; Tools; Cutlery; Jacks.	5-23-66	1-15-64
AMUSEMENT, HUSBANDRY, PERSONAL TREATMENT, INFORMATION, GROUP 330—A. RUEGG, Manager Amusement and Exercising Devices; Projectors; Animal and Plant Husbandry; Butchering; Earth Working and Excavating; Fishing, etc.; Tobacco; Artificial Body Members; Dentistry; Jewelry; Surgery; Toiletry; Printing; Typewriters; Stationery; Information Dissemination.	*4-22-66	5-14-64
HEAT AND POWER ENGINEERING, GROUP 340—C. F. GAREAU, Manager Power Plants; Combustion Engines; Fluid Motors; Pumps; Turbines; Heat Generation and Exchange; Refrigeration; Ventilation; Drying; Vaporizing; Temperature and Humidity Regulation; Machine Elements; Power Transmission.	3- 1-67	1-21-66
FIXED CONSTRUCTIONS, SUPPORTS, AND HARDWARE, GROUP 350—T. J. HICKEY, Manager Joints; Fasteners; Rod, Pipe and Electrical Connectors; Miscellaneous Hardware; Locks; Building Structures; Closure Operators; Bridges; Closures; Earth Engineering; Drilling; Mining; Furniture; Receptacles; Supports; Cabinet Structures.	11-30-66	12- 8-64
TEXTILES, CLEANING AND FLUID HANDLING, GROUP 360—W. S. COLE, Manager Fluid Handling, including Valves; Conduits; Filling Receptacles; Lubrication; Joint Packing; Bathroom Fixtures; Centrifugal Separators; Cleaning; Coating; Pressing; Agitating; Foods; Textiles; Apparel and Shoes and their Manufacture; Sewing Machines; Winding and Reeling.	5- 9-66	*5-29-63

Total number of pending applications (excluding Designs) 193,096
Total number of Design applications pending 3,486

Expiration of patents: The patents within the range of numbers indicated below expire during June 1968, except those which may have been extended under the provisions of the Veterans Patent Extension Act (64 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 690. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1953.*

Patents .... Numbers 2,555,300 to 2,558,715, inclusive
Plant Patents .... Numbers 1,013 to 1,018, inclusive

DECISIONS IN PATENT AND TRADEMARK CASES

U.S. Court of Customs and Patent Appeals

LOY W. SOCKMAN AND ELLIOTT W. BRADY
v.
ROBERT C. SWITZER AND RICHARD A. WARD

No. 7796. Decided June 22, 1967

[54 CCPA —; 379 F.2d 996; 154 USPQ 105]

1. INTERFERENCE—CONSTRUCTION OF COUNT—PATENT AND APPLICATION—RIGHT TO MAKE.

On the question of the construction to be placed on counts in an interference between an application and a patent in connection with the right to make the counts, *Held* that "In determining the meaning of this language in resolving the issue here, we shall give initial consideration to its meaning in the context of the Sockman patent in which it originated."

2. SAME—SAME—SAME—SAME.

"While we recognize the frequent statement in the cases that the patent specification in which counts originate will not be referred to unless the counts are ambiguous, it frequently is the case, as here, that ambiguity does not reside in a word or phrase per se but instead arises from the context in which such word or phrase is used."

3. SAME—PATENT AND APPLICATION—RIGHT TO MAKE—BURDEN ON APPLICANT.

"Switzer, having copied the claims from the Sockman patent, has the burden of proving his right to make the claims. *Segall* v. *Sims*, 47 CCPA 886, 276 F.2d 661, 125 USPQ 394; *Smith* v. *Wehn*, 50 CCPA 1544, 318 F.2d 325, 138 USPQ 52. A similiar burden of proof applies where one relies on an earlier application for support in order to obtain the benefit of its filing date. See *Guyer* v. *Cramer*, 50 CCPA 1386, 318 F.2d 757, 138 USPQ 125. For a construction of an application which meets a count to be acceptable, it must be the 'necessary and only reasonable' construction. *Binstead* v. *Littman*, 44 CCPA 839, 242 F.2d 766, 113 USPQ 279; *Guyer* v. *Cramer*, supra."

4. SAME—SAME—SAME—RES JUDICATA.

"The application of those principles [on the right to make claims copied from a patent] in the present case must be made in the light of the decision of the district court in *Switzer* v. *Watson*, supra, in which the court found that the Switzer Application 606 supports the claims which are the counts in this interference."

5. SAME—CONSTRUCTION OF COUNT—PATENT AND APPLICATION—RIGHT TO MAKE.

"The question whether Switzer 606 supports the counts first arose in a motion by Switzer to shift the burden of proof. Under the rules of the Patent Office (Rules 258(b) and (c)), matters so raised may be reviewed at final hearing and the prior art of record in the patent file may be referred to in construing the issue. There is a clear issue between the parties as to the meaning of 'relatively non-volatile liquid consisting essentially of an oxygen-containing organic liquid.' Specifically, the language is such that there is a question whether it requires a *liquid* compound which *contains* oxygen as part of its chemical structure or whether it is satisfied by a solid oxygen-containing compound which is *included in* a hydrocarbon liquid. It is the context in which it is used which imparts the particular meaning to it. It is clear that language capable of such diverse interpretations is ambiguous. Thus resort to the Sockman patent to construe it is both proper and necessary. See *Smith* v. *Wehn*, supra; *Rajchman* v. *Lockhart*, 52 CCPA 853, 339 F.2d 233, 144 USPQ 34."

6. SAME—SAME—SAME.

"The designation of the relatively non-volatile liquid as 'consisting essentially of an oxygen-containing organic liquid' [in the counts of an interference between the Sockman patent and the Switzer application] is here used in the

> context that it means the liquid *contains* oxygen in the chemical sense of having the molecules of the liquid contain atoms of oxygen. The specification contains a clear exclusion of low volatility liquids that may contain hydrocarbon oils. This clearly indicates that the term in question means compounds *chemically containing oxygen* rather than compounds *in which oxygen is physically mixed*. That meaning, along with the further statement that the liquids may be characterized as being 'oil free,' also indicates that Sockman required that the liquids must be liquids, not solids which are made liquid by reason of the addition of oils or hydrocarbons. These conclusions are further supported by the fact, demonstrated by the file history, that the language in question was selected by Sockman and agreed to by the Examiner as the basis for distinguishing from the liquids containing hydrocarbons which are disclosed in Ward Patent No. 2,405,078 and the Ward Canadian patent."

Appeal from the Patent Office. Interference No. 87,474

REVERSED.

Foster York (*Benton Baker*, of counsel) for appellants.

Albert L. Ely, Jr., for appellees.

Before WORLEY, *Chief Judge*, and RICH, SMITH and ALMOND, *Associate Judges*

SMITH, *J.*, delivered the opinion of the court.

This appeal is from a decision of the Board of Patent Interferences, one member dissenting, awarding priority to Switzer and Ward, hereafter Switzer. The interference involves Switzer application Serial No. 484,319 [484] filed January 26, 1955, as a continuation-in-part of Serial No. 606,708 [606] filed July 23, 1945.[1] In issue are five counts copied from Patent No. 2,667,070 to Sockman and Brady, hereafter Sockman, issued January 26, 1954, on an application filed March 26, 1949. Switzer was made senior party on the basis of the filing date of the parent 606 application. Since neither party presented evidence to show conception or reduction to practice prior to their respective filing dates, Switzer was awarded priority.

The controlling issue on appeal is whether the Switzer 606 application supports the counts. This issue turns on a question of semantics, i.e., the meaning to be ascribed to "a relatively non-volatile liquid consisting essentially of an oxygen-containing organic liquid," which originated in the Sockman patent and was copied therefrom by Switzer.

[1] In determining the meaning of this language in resolving the issue here, we shall give initial consideration to its meaning in the context of the Sockman patent in which it originated. Cf. *Liebscher* v. *Boothroyd*, 46 CCPA 701, 258 F.2d 948, 119 USPQ 133; *Rajchman* v. *Lockhart*, 52 CCPA 853, 339 F.2d 233, 144 USPQ 34.

As stated in the *Liebscher* case, 46 CCPA at 705, 119 USPQ at 135:

> * * * the words in which a claim is couched may not be read in a vacuum. One need not arbitrarily pick and choose from the various accepted definitions of a word to decide which meaning was intended as the word is used in a given claim. The subject matter, the context, etc., will more often than not lead to the correct conclusion. * * *

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[1] The 606 application was before this court in *In re Ward*, 43 CCPA 1007, 236 F.2d 428, 111 USPQ 101. Therein the rejection of appealed claims based on "double patenting" in view of Ward U.S. Patent No. 2,405,078 was affirmed. The Ward patent was part of the prior art considered by the Patent Office during the ex parte prosecution of the Sockman claims here in issue, discussed infra.

Switzer urges that we should have recourse to the Sockman patent only if the meaning of the claim is ambiguous.[2] We think a sufficient answer to this position is to be found in the various meanings assigned to this language in the present controversy as will be apparent from the following discussion.

Background

The controversy between the parties is entering its thirteenth year. The interference was first declared on May 23, 1955 but was dissolved by the Board of Patent Interferences on the grounds that the 606 application did not support the counts; and further, that a Canadian patent corresponding to the Sockman patent issued more than one year prior to the filing of the Switzer application 484 and was a statutory bar to the latter application.[3] Upon resuming ex parte prosecution the Examiner's rejection of the 484 application on the above grounds was affirmed by the Board of Appeals. Switzer then brought an action in the District Court for the District of Columbia under 35 U.S.C. 145. That court, in *Switzer* v. *Watson*, 183 F. Supp. 467, 125 USPQ 48, overruled the Board and held on the evidence presented by Switzer that the 606 application did support the counts. As a result of this decision, the interference was redeclared with Switzer designated senior party. The Board of Patent Interferences subsequently awarded priority to Sockman on the ground that Switzer's filing of the 484 application with claims corresponding to the counts was not timely under the provisions of 35 U.S.C. 135(b).

In *Switzer* v. *Sockman*, 52 CCPA 759, 333 F.2d 935, 142 USPQ 226, this court reversed the Board, finding that the 484 application was timely filed. The court also noted that Sockman had presented evidence and arguments on the issue of whether the disclosure of the 606 application supports the counts, stating, 52 CCPA at 769, 142 USPQ at 232:

> We think * * * that the Board, in discharging its duty of determining priority here, has the responsibility of expressly determining whether the earlier application of Switzer et al., Serial No. 606,708, supports the counts. While that deter-

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[2] [2] While we recognize the frequent statement in the cases that the patent specification in which counts originate will not be referred to unless the counts are ambiguous, it frequently is the case, as here, that ambiguity does not reside in a word or phrase per se but instead arises from the context in which such word or phrase is used. As S. I. Hayakawa in his "Language in Thought and Action" (1949) points out,

> * * * "It is clear, then, that the ignoring of contexts in any act of interpretation is at best a stupid practice" (p. 62).

The meaning of words and phrases employed in a patent may vary with context and circumstances. 69 CJS 666. Sloane in his work "Words and Their Ways" (1961) illustrates context at work as affecting the meaning of the commonly used word "touch," about which there would appear to be little or no ambiguity. However, as Sloane considers it in various contexts we find:

(1) He touched the stove and got burnt (literal fact).
(2) He touched the stove and got burnt (brief parable or allegory).
(3) Touch is an organ of the body.
(4) He is touched (emotionally moved).
(5) He is touched (crazy).
(6) He is touched (selected for membership in a fraternity).
(7) He is touched (asked for a contribution).
(8) He (a traveler) touched many points.
(9) He (a speaker) touched on many points.
(10) He touched up the picture.
(11) The tangent touches the circle. (Naturally! "Tangent" is from *tango*, to touch. The sentence says, "The circle-touching line touches the circle.")
(12) The cloud is touched with rose.
(13) He touched on blasphemy.
(14) This touches my pride.
(15) The jockey touched the horse.
(16) It was touch and go.
(17) *Touchee!*

[3] Canadian Patent No. 490,080, issued January 27, 1953. The 484 application, filed 9½ years after the 606 application, includes additional disclosure.

> mination must be made in the light of the district court's decision, recognition that Sockman et al. had no opportunity to participate in the trial before that court requires that the Board also shall consider such arguments and additional evidence as are now properly presented by Sockman et al.

On remand, the Board awarded priority to Switzer and this appeal followed.

The Counts

The counts in issue relate to a method of detecting flaws in bodies, such as metal parts for machines. The method involves a sequence of steps, the first of which is coating the body with a penetrant liquid containing a dye. This liquid flows into the flaws. The liquid remaining on the surface of the body is then removed leaving the penetrant liquid in the flaws. Thereafter a developer, which may be in the form of chalk in suspension in a volatile liquid, such as ethyl alcohol, is then applied to the surface and the volatile liquid is allowed to evaporate leaving an absorbent chalk film on the surface. This film absorbs the colored penetrant liquid which was previously trapped in any flaws and the resultant colored area in the chalk film reveals the presence of the underlying flaws.

Count 1, which corresponds to Sockman's claim 4 is representative of the counts in issue and is most clearly understood when broken into its component parts as follows:

> 1. The method of inspecting a part for surface defects which comprises
> (1) applying to a surface of said part a solution of a dye in
>   a penetrant liquid consisting of
>   (*a*) a volatile liquid and
>   (*b*) a relatively non-volatile liquid
>   (*i*) having a higher surface tension than said volatile liquid,
>   (*ii*) said relatively non-volatile liquid consisting essentially of an oxygen-containing organic liquid,
> (2) removing penetrant liquid from the surface to permit evaporation of part of the volatile liquid from the penetrant liquid remaining in the defect whereby there is an increase in the surface tension of the liquid in said defect, and
> (3) depositing on said surface a layer of finely divided penetrant liquid absorbing material of a color contrasting with that of said dye whereby penetrant liquid will be absorbed in said deposit to form a visible trace.

It is apparent from the record that the novelty of the invention in issue does not lie in the manipulative steps of the method per se but resides instead in the composition of the penetrant liquid dye solution. Referring to par. (1) of the above count, it will be seen that the dye solution is made up of three materials: (1) a dye, (2) a volatile liquid, and (3) a relatively non-volatile liquid. The non-volatile liquid is further defined as having a higher surface tension than the volatile liquid and as "consisting essentially of an oxygen containing organic liquid." The penetrant liquid consists of the volatile and relatively non-volatile portions. As the volatile liquid evaporates from a flaw, it will tend to leave a higher proportion of the non-volatile liquid in the remaining penetrant and increase its surface tension with the result that it will more readily exude from the flaw in the subsequent treatment defined in par. (3) of the above count.

[3] Switzer, having copied the claims from the Sockman patent, has the burden of proving his right to make the claims. *Segall* v. *Sims*, 47 CCPA 886, 276 F.2d 661, 125 USPQ 394; *Smith* v. *Wehn*, 50 CCPA 1544, 318 F.2d 325, 138 USPQ 52. A similar burden of proof applies where one relies on an earlier application for support in order to obtain the benefit of its filing date. See *Guyer* v. *Cramer*, 50 CCPA 1386, 318 F.2d 757, 138 USPQ 125. For a construction of an application which meets a count to be acceptable, it must be the "necessary and only reasonable" construction. *Binstead* v. *Littmann*, 44 CCPA 839, 242 F.2d 766, 113 USPQ 279; *Guyer* v. *Cramer*, supra.

[4] The application of those principles in the present case must be made in the light of the decision of the district court in *Switzer* v. *Watson*, supra, in which the court found that the Switzer application 606 supports the claims which are the counts in this interference. The situation is adequately summed up in our instructions to the Board on remand, quoted supra.

The Opinions Below

In the presently appealed decision each of the members of the Board of Patent Interferences wrote a separate opinion. Two of these opinions hold that the 606 application supports the counts. The third and dissenting opinion holds that it does not. The majority members considered that the language of the 5 counts, while broad, was not ambiguous. Thus they did not resort to the Sockman patent, in which they originated, to construe them. The dissenting member, on the other hand, found it necessary to resort to the filed history of the patent in order to determine the meaning of the term in issue from the context in which it originated. He, therefore, construed the counts in the light of the Sockman specification and the prosecution of the application which resulted in the issuance of the Sockman patent. He also discussed and relied upon the substantial amount of evidence which Sockman had introduced in the interference and which was not before the district court in *Switzer* v. *Watson*. Analyzing that evidence at length and comparing it with the evidence before the district court, the dissenting member concluded that the present record presented an entirely different picture than was before the district court and that this compelled a finding that the Switzer 606 application does not support the counts.

Our consideration of the record leads us to conclude, on the basis of the evidence, that the dissenting Board member was correct and the decision below must be reversed.

[5] The question whether Switzer 606 supports the counts first arose in a motion by Switzer to shift the burden of proof. Under the rules of the Patent Office (Rules 258(b) and (c)), matters so raised may be reviewed at final hearing and the prior art of record in the patent file may be referred to in construing the issue. There is a clear issue between the parties as to the meaning of "relatively non-volatile liquid consisting essentially of an oxygen-containing organic liquid." Specifically, the language is such that there is a question whether it requires a *liquid* compound which *contains* oxygen as part of its chemical structure or whether it is satisfied by a solid oxygen-containing compound which is *included in* a hydrocarbon liquid. It is the context in which it is used which imparts the particular meaning to it. It is clear that language capable of such diverse interpretations is ambiguous. Thus resort to the Sockman patent to construe it is both proper and necessary. See *Smith* v. *Wehn*, supra; *Rajchman* v. *Lockhart*, 52 CCPA 853, 339 F.2d 233, 144 USPQ 34.

While the language in question first appears in claims in the Sockman application, the specification does not use the specific language "oxygen-containing organic liquid." However, it does specify the inclusion in the penetrant liquid, along with the dye and a volatile solvent of low surface tension, of one or more of the relatively non-volatile, high surface tension liquids exemplified by plasticizers in the plastics art. Dibutyl phthalate is disclosed as a preferred compound. The specification further states:

> As examples of high surface tension, low volatility liquids that have been tested experimentally and found satisfactory for flaw inspection, we have used benzyl alcohol, amyl, di-amyl, butyl, dibutyl, ethyl, di-ethyl, methyl and di-methyl, acetates, butyrates, citrates, cinnamates, ethers, salicylates, glycolates, phthalates, maleates, sebacates, succinates and propionates, *excluding however low volatility liquids that may contain hydrocarbon oils. The satisfactory low volatility liquids may thus be characterized as being oil free.* [Emphasis added.]

In interpreting the counts, the dissenting Board member considered the disclosure in the specification in the light of the prosecution of the application which resulted in the allowance of the Sockman claims which became the counts here. As a result of that consideration, he concluded that:

> * * * Sockman et al. used the words oxygen-containing organic liquid in the sense that the liquid chemically contained oxygen as well [as] carbon. To read them on a liquid chemically containing carbon, which liquid has a compound containing oxygen mixed with it, is to give the language another meaning making the reason for allowance of the claims a nullity, and rendering the claims in issue invalid in the patent of their origin.

The conclusion of the dissenting Board member is supported by the file history of the Sockman patent. The claims in the Sockman patent were initially rejected on Ward Patent No. 2,405,078 and Ward and Switzer Canadian Patent No. 476,342, issued August 21, 1951. The specification of the Canadian patent is the same as that of the Switzer 606 application in all material respects. The Canadian patent refers to a filing date in the United States of July 23, 1945, which is the filing date of the 606 application. It was further observed by the dissenting member that the Examiner, in rejecting certain claims of Sockman applied a claim to an example given in the Ward Canadian patent.[4] The Examiner further stated that the use of the term "plasticizer" in the specification was misleading and suggested that the specification and claims be clarified by adopting terminology directed to the thickening or evaporation retarding properties of the ingredient so designated.

The subsequent prosecution of Sockman is described by the dissenting Board member, his emphasis, as follows:

> The next amendment * * * presented the claims that became counts 1 to 4 * * *. Each of them included in their language a "relatively non-volatile liquid (or portion) consisting essentially of an oxygen-containing organic liquid." The remarks accompanying the amendment state:
>
>> The newly added claims 42–45 define the invention both in terms of relative physical characteristics and also the relatively non-volatile liquid formerly referred to as plasticizer is defined as being *an oxygen-containing organic liquid, thus distinguishing over hydrocarbon oils* which, according to the specification on page 5, lines 23–24, are not satisfactory. The essential difference in the added claims 42–45 and the non-allowed claims previously in the case is this bringing out in the claims that the high surface tension, relatively non-volatile liquid (formerly called plasticizer) consists essentially of *an oxygen-containing organic liquid.* This makes the claims more definite and also clearly distinguishes over the prior art cited by the Examiner, as will be hereinafter explained.
>
> After referring to an affidavit submitted with the amendment the remarks continue:
>
>> * * * it is also important that the remaining relatively non-volatile liquid in the defect have not only a higher surface tension as compared to the volatile portion, but it should have a high surface tension in and of itself, which characteristic is obtained by the use of *dibutyl phthalate and other oxygen-containing organic liquids* as set forth in applicant's specification. It is respectfully submitted that the references cited by the Examiner do not show or teach of a penetrant liquid having a volatile low surface tension liquid mixed with *an oxygen-containing organic liquid of low volatility* (relatively non-volatile) and higher surface tension.
>>
>> The second reason that Blum does not anticipate applicants' invention, of course, is that the relatively non-volatile liquid consists of *a hydrocarbon oil and not an oxygen-containing organic liquid, as is called for in applicant's claims.*
>>
>> The non-volatile liquid of Ward, that is, Texaco penetrant oil, is *not an oxygen-containing organic liquid as set forth in applicant's claims*, and is just the type of material applicant states should be avoided in his specification on page 5 lines 22–24, and also as set forth in the accompanying affidavit.
>>
>> The other examples given in the Ward patent also do not anticipate the invention defined in applicant's claims either because the relatively non-volatile portion is a hydrocarbon oil or * * *. The above statements also apply to Ward U.S. Patent 2,405,078.
>
> The application was then passed to issue on April 30, 1953. In an amendment under Rule 312 (paper 19) reference to "creep out" was canceled in the claims and claim 47 was presented. It contained the language "a relatively non-volatile portion consisting essentially of an oxygen-containing organic liquid," became claim 9 of the patent in interference, and is now count 5. * * *

Opinion

[6] The designation of the relatively non-volatile liquid as "consisting essentially of an oxygen-containing organic liquid," is here used in the context that it means the liquid *contains* oxygen in the chemical sense of having the molecule of the liquid contain atoms of oxygen. The specification contains a clear exclusion of low volatility liquids that may contain hydrocarbon oils. This clearly indicates that the term in question means compounds *chemically containing oxygen* rather than compounds *in which oxygen is physically mixed.* That meaning, along with the further statement that the liquids may be characterized as being "oil free," also indicates that Sockman required that the liquids must be liquids, not solids which are made liquid by reason of the addition of oils or hydrocarbons. These conclusions are further supported by the fact, demonstrated by the file history, that the language in question was selected by Sockman and agreed to by the Examiner as the basis for distinguishing from the liquids containing hydrocarbons which are disclosed in Ward Patent No. 2,405,078 and the Ward Canadian patent.

In using the above language, Sockman was but exercising his privilege to "be his own lexicographer." As such all he need do is "to convey his thoughts, in his own language, but somehow to make his invention clear." See *Chicago Steel Foundry Co.* v. *Burnside Steel Foundry Co.*, 132 F.2d 812, 814 (7th Cir. 1943). See also *In re Rohrbacher*, 48, CCPA 749, 284 F.2d 531, 128 USPQ 117. There is no evidence that this interpretation of the language which Sockman relied upon in the specification to distinguish his invention over the invention of the Ward and Switzer Canadian reference patent is not reasonable.

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[4] In doing so, the Examiner observed that the Canadian patent was effective as a publication on its issue date, which was subsequent to the Sockman filing date. However, he stated: "* * * it is believed common knowledge in the art that the Ward process has been practiced in this country from the approximate date of his United States application cited in the Canadian patent."

In approaching the resolution of this issue we have borne in mind the admonition of Mr. Justice Holmes in *Towne* v. *Eisner* 245 U.S. 418 at 425 (1918) that:

> * * * A word is not a crystal, transparent and unchanged, it is the skin of a living thought and may vary greatly in color and content according to the circumstances and the time in which it is used. * * *

The district court in *Switzer* v. *Watson*, supra, appears to have considered the claims not to be so limited as we find here. We have considered these district court proceedings and it does not appear that the argument here made by Sockman with regard to the meaning of the counts as limited by the Sockman specification and the file history was considered by that court. It is also particularly important to note that the district court, on the record before it, regarded the matter of the meaning of this critical term in the claims as "a minor matter," in finding that the 606 application supported the claims in issue. The basis for such finding was in effect that the emulsifying agent in all the specific examples in the 606 application, seven in number, met the requirements of the claims even if they were construed in the narrowest sense which Sockman urged in the previously dissolved interference.

The seven specific examples of the 606 application each list three items as components, the items being the "penetrant" agent or first component, the dye, and the emulsifier. In Example 3, the emulsifier is item 2 and in all other examples it is item 3. The emulsifiers are listed with example numbers in the Switzer brief as follows:

Naphthenic acid soap (molecular weight about 350)	(Ex. 1 and 6).
Octylaminoethanol soap of tetradecyl sulfuric acid	(Ex. 2).
Tri-(diethylene glycol ether) of sorbitol trioleate	(Ex. 3).
Sodium salts of mahogany acid	(Ex. 4).
Sodium dodecyl benzene sulphonate dissolved in cyclohexanol	(Ex. 5).
Refined sulphonated aromatic petroleum fractions (approximate empirical formula: C_nH_{2n}—SO_3Na: approximate molecular weight: 430)	(Ex. 7).

The district court found the evidence before it to demonstrate that "the limitation of the appealed claims calling for an oxygen-containing liquid as a constituent of the penetrant liquid is fully supported in parent specification Serial No. 606,708," 125 USPQ at 52. It described that evidence as follows:

> At the trial in this suit, to refute the Board's unsupported assertion that "all the emulsifying agents * * * are not liquids," plaintiffs put a chemist on the stand who described the foregoing agents, introduced samples of each, testified that each was a liquid, demonstrated that each was a liquid, stated their surface tensions and that each is organic and oxygen-containing. This testimony was not contradicted during the trail. The six different liquids used as emulsifiers in the seven examples vary considerably in viscosity, from that of common mineral oil to the consistency of mayonnaise but clearly none is a solid and I hold that all are liquids by common as well as technical definitions of the term "liquid." [Ibid.]

The factual record before us in the present interference is decidedly different. There is here a mass of evidence which contradicts that offered in the district court. The evidence upon which the present decision is predicated includes the testimony of six witnesses and a number of documentary exhibits introduced by Sockman. Switzer also called three witnesses. One of them was Gray, who was the sole witness at the trial in the district court and is house counsel for the assignee of Switzer.

The dissenting Board member carefully analyzed all this evidence in detail, and in doing so considered separately each of the seven examples of the 606 application. *He concluded from the new evidence that none of the examples complied with the requirements of the counts* with respect to the recitation of the relatively non-volatile liquid. The two majority Board members considered the counts were unambiguous and did not exclude hydrocarbon oil from the low-volatility component of the penetrant composition and did not discuss this evidence in any detail. However, one of them, with whose views the other concurred, stated:

> * * * *If this* [the expression "consisting essentially of an oxygen-containing organic liquid"] *does exclude hydrocarbon oil* from the low volatile component of the penetrant *Switzer cannot support the counts in 606* because the oil soluble soaps of commerce that the latter specifies in his examples owe their "liquidity" to the oil and water content with which they are ordinarily sold and used, as the record brings out. * * * [Emphasis added.]

Illustrative of the differences in the evidence before us and that before the district court is the situation with respect to the emulsifier of Switzer Example 1, Naphthenic acid soap (molecular weight about 350). Here, Gray testified as follows:

> Q82. * * * one point in your testimony that at the trial [in the district court], in referring to the sodium soap of naphthenic acid, you were asked if the sample that you had before the Court was a *pure salt*, and I believe you answered yes. Referring to that in context, what did you mean by pure salt under those circumstances? * * *
>
> Q83. Will you answer? A. I was looking upon the naphthenic acid soap *which was contained in the material* as being a pure compound, and that it was not that the naphthenic acid soap *in the liquid form* as I had there, which *included some oil and probably a small amount of water*, did not have other salts present such as the sodium sulfates which one will very often find present in the petroleum sulfonates. [Emphasis added.]

It is thus apparent that the sample of naphthenic acid soap shown to the district court was not the pure compound as represented to that court but instead was a sample of the naphthentic acid soap dissolved in oil and water.

Also, Sockman here introduced in evidence as Exhibits 11 and 12, respectively, Book No. 251 published in 1939 by Socony-Vacuum on "Naphthenic Acids" and Technical Bulletin Form A–2897, 5M 9–53, published by Sun Oil Company. Exhibit 11 states that the sodium salt of naphthenic acids is a plastic water soluble solid. Exhibit 12 identifies "Sunaptic Acids" as naphthenic acids and states that dehydrated sodium and potassium Sunaptates "when completely oil-free are friable solids with a marked tendency to absorb moisture."

Pollack, a witness for Sockman, and a chemist qualified in the present art, testified that his work in connection with the interference involved "approximately six months of laboratory tests," including "literature study and other related items," and that the number of man hours spent on the work involved "six months times three men per week." Concerning the part of his work relating to naphthenic acid soap, this witness testified that he made the naphthenic acid soap product, that it is a solid and that, so far as he knew, all naphthenic acid soaps having a molecular weight of about 350 would be solids.

Dr. Plaut, a chemist qualified in the chemical art involved here, also testified on behalf of Sockman with respect to naphthenic acid soaps. He stated that such soaps, free of water and oil, were obtainable at the time the 606 application was filed. He further testified that he made such soaps of all the naphthenic acids within the molecular range of from 150 through 1000. He testified that sodium soaps of all naphthenic acids below a molecular weight of 500 were solids.

Mooney, president of a chemical company and a witness called by Switzer, testified that sodium soap of naphthenic acid was sold as a liquid including a hydrocarbon oil. He stated that he did not know whether such salts, in dehydrated condition and free of oil, were solids.

Application 606 does not describe the naphthenic acid soap as a liquid. Unlike the evidence before the district court, the preponderance of the evidence here clearly indicates that naphthenic acid soap is not necessarily a liquid. Being neither disclosed as a liquid nor necessarily or inherently a liquid, the soap disclosed as the emulsifier of Examples 1 and 6 cannot support the limitation in question.

The emulsifier of Example 2 of the 606 application, octylaminoethanol soap of tetradecyl sulfate, is made from octylaminoethanol and tetradecyl sulfuric acid, compounds which have many isomers. Dr. Plaut testified that, using normal forms of those reactants, he obtained n-octylaminoethanol tetradecyl sulfate, which was a solid. In contrast, Gray testified here that the sample of the compound which he produced at the trial was made from a branch-chain reactant. It was the opinion of Dr. Plaut that the term "octylaminoethanol soap of tetradecyl sulfuric acid" could not mean the branch-chain compound identified by Gray because "when no additional information is given" in chemical terminology, "it is conventional to recognize the normal compound as the one being referred to."

Without relying on the latter comment of Dr. Plaut, we think it is established by the evidence before us that one skilled in the art would not regard the emulsifier of Example 2 necessarily as being a liquid.

As to the tri(diethylene glycol ether) of sorbitol trioleate of Switzer Example 3, Gray testified in this interference that such material was not available under that name or any trade name of which he knew. However, the witness did supply a "technical grade product" obtained from Moretex Chemical Corporation. Davis, plant manager of that corporation, was called as a rebuttal witness by Sockman. His testimony indicates that several reaction products were possible in the process used to produce the material supplied and that there was no analytical basis for concluding that the material contained any of the compound specified. Dr. Plaut and Dr. Goldsmith, another witness for Sockman, testified here that the named compound was available only in a mixture with other compounds.

Gray's inability to produce isolated tri(diethylene glycol ether) of sorbitol trioleate at the time of taking testimony in this interference leads to the conclusion that the material he showed the district court was that compound mixed with other compounds. From the present evidence, it is concluded the emulsifier of Switzer Example 3 does not establish that application 606 discloses *a liquid* chemically containing oxygen and carbon as we find to be required by the counts.

The testimony before us indicates that the sodium salt of mahogany acid, the emulsifier of Switzer Example 4, is sold containing oil and water. The witness Pollack cited a patent granted in 1933[5] which states that salts of mahogany acids are "brittle and resin like" with the oil removed. He also referred to an article in Industrial Enginering Chemistry[6] as indicating such salts are obtained as a powder.

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[5] Ramayya. No. 1,930,488.

[6] May 1948, pp. 490-491.

Dr. Plaut testified that a solid salt of mahogany acid free of water was obtainable prior to 1945. He also stated:

> * * * we sprayed dried extracted purified sodium salts of mahogany acid, and a goodly number of them were solid. Equally a number of them were resinous.

In the light of the total evidence before us, we do not think that a person skilled in the art would conclude that the emulsifier of Example 4 of the 606 application is necessarily a liquid chemically containing oxygen.

The emulsifier of Switzer Example 5 is a combination of sodium dodecyl benzene sulphonate and cyclohexanol. The dissenting Board member concluded from the evidence that the combination of the two might reasonably be found to be a liquid and we will proceed on the basis that such a conclusion is correct. However, the witness Pollack testified that cyclohexanol is more volatile than ordinary kerosene, the latter being the first or volatile liquid component of the Example 5 material. That testimony is not controverted by Switzer. It is thus not apparent that the mixture of sodium dodecyl benzene sulphonate and cyclohexanol in the disclosed proportions, which are 18% and 27%, respectively, can be considered as necessarily being less volatile than the kerosene. It follows that one would not be satisfied that the mixture constitutes a relatively non-volatile liquid as required by the counts.

The emulsifier of Example 7 of the Switzer 606 application is described as having an approximate empirical formula which Switzer admits has an error in that it does not correspond to the molecular weight given. That error was brought out in the interference testimony and there is nothing to demonstrate that it was known to the district court. It is not seen that a compound not correctly identified can ordinarily furnish inherent support for a property when the compound is not specifically disclosed as having that property. Additionally, the emulsifier of Example 7 was regarded in the evidence here as similar to the sodium salt designated as the emulsifier of Example 4. The latter compound has already been found not necessarily to be a liquid chemically containing oxygen.

We think, for the above reasons, that the evidence before us but not before the district court requires the conclusion that the "oxygen-containing organic liquid" required by the counts is neither explicitly nor inherently disclosed in the Switzer 606 application. With respect to Example 5, we do not think that the emulsifier, even if it is an oxygen containing liquid, has been shown to be "relatively non-volatile" as further required by the counts. In reaching those conclusions, we have found ourselves in substantial agreement throughout with the analysis of the evidence by the dissenting Board member. Since the majority Board members did not expressly discuss the evidence as to the properties of the Switzer emulsifiers or disagree with the dissenter's analysis thereof, it is apparent that such analysis represents the only ruling of any tribunal on the evidence here of record.

Sockman also claims to be entitled to an award of priority on the grounds that the party Switzer is barred from making the counts on the basis of laches and estoppel. It is stated that Switzer made no claim to the invention of the counts until continuation-in-part application 484 was filed on January 26, 1955, which is 9½ years after Switzer first allegedly disclosed the invention in the 606 application. Sockman also points to the facts that (1) a rejection of the 606 application on double patenting based on the Ward patent was affirmed by this court and (2) the claims corresponding to the counts were introduced in the 484 application with its expanded specification rather than in the 606 application. Those circumstances are said to show that Switzer "exhausted all rights to make the counts." Those questions, decided adversely to Sockman by the Board, are moot here because of our decision that Sockman should prevail for reasons above stated.

Switzer point out that much of the record considered here, including the testimony, appears in two volumes printed in the previous appeal to this court at the expense of Switzer and was not required to be reprinted for the present appeal. Switzer here urges that Sockman should be taxed the cost of that printing. The payment of printing costs in the previous appeal is a closed matter, see *Switzer* v. *Sockman*, supra, and no further action is deemed appropriate here.

The decision of the Board is reversed.

REVERSED.

RICH, *J.*, took no part in the decision of this case.

PATENT SUITS

Notices under 35 U.S.C. 290; Patent Act of 1952

2,604,313, F. W. Grantham, DRYERS; **2,643,463**, same, LAUNDRY APPARATUS; **3,067,986**, same, **filed** Oct. 21, 1966, D.C., N.D. Ill. (Chicago), Doc. 66c1912, *Paulette Grantham et al.* v. *Norman Control Company, Inc.* By agreement, dismissed with prejudice, Nov. 29, 1967.

2,643,463. (See 2,604,313.)

2,690,518, Fyler and Rowe, COLOR PICTURE TUBE, **filed** Mar. 8, 1968, D.C., S.D.N.Y., Doc. 68–C–990, *Zenith Radio Corporation* v. *Columbia Broadcasting Systems, Inc.*

2,690,518, Fyler and Rowe, COLOR PICTURE TUBE; **3,179,836**, J. Giuffrida, COMPENSATOR FOR EARTH'S MAGNETIC FIELD BY COLOR DOT DISPLACEMENT; **3,222,172**, same, METHOD FOR MAKING COLOR TELEVISION PICTURE TUBES, **filed** Mar. 29, 1968, D.C., N.D. Ill. (Chicago), Doc. 68c578, *Admiral Corporation* v. *Columbia Broadcasting System, Inc.* **Same, filed** Feb. 12, 1968, D.C. Mass. (Boston), Doc. 68–131–C, *Columbia Broadcasting System* v. *Tremont T.V., Inc.* **Same, filed** Feb. 12, 1968, D.C. Mass. (Boston) Doc. 68–132–C, *Columbia Broadcasting System* v. *Allied Appliance Company*. **Same, filed** Mar. 11, 1968, D.C., S.D.N.Y., Doc. 68–C–1018, *The Rauland Corporation* v. *Columbia Broadcasting System.*

2,697,586, D. O. Talley, EARTH UNDERREAMER, **filed** Mar. 27, 1968, D.C., S.D. Tex. (Houston), Doc. 68–H–275, *Bell Bottom Foundation Co. et al.* v. *Farmer Foundation Co., Inc. et ano.*

2,779,374, C. E. Clark, GOLF CLUB COVER; **D. 179,591**, same, **filed** Aug. 8, 1967, D.C., S.D.N.Y., Doc. 67–C–3027, *Clarence E. Clark* v. *Castle Sporting Goods, Inc.* Stipulation and order of dismissal with prejudice, Jan. 25, 1968.

2,908,021, J. F. Fulton, PLAYYARD, **filed** Feb. 28, 1964, D.C., S.D.N.Y., Doc. 64–C–637, *Trimble Products, Inc.* v. *W. T. Grant Co. and Sears, Roebuck & Co.* Opinion found patent invalid and infringed by defendants, Mar. 21, 1968.

3,036,928, J. A. Poole, RETROREFLECTIVE COMPOSITION AND METHOD OF APPLYING SAME, **filed** Nov. 15, 1962, D.C.N.J. (Newark), Doc. C–941–62, *Cataphote Corporation* v. *Crystalex Manufacturing Co., Inc. and Crystalex, Inc.* Judgment declaring defendants have infringed certain claims of patent and for permanent injunction, Mar. 25, 1968.

3,067,986. (See 2,604,313.)

3,078,650, Anderson and Wolff, AIR CLEANER, **filed** Aug. 28, 1967, D.C., N.D. Ill. (Chicago), Doc. 67c1478, *Donaldson Company, Inc.* v. *Fram Corporation.* By agreement suit dismissed without prejudice, Mar. 25, 1968.

3,102,875, H. L. Heiss, POLYURETHANE REACTION PRODUCT AND METHOD FOR MAKING SAME, **filed** Mar. 26, 1968, D.C., S.D.N.Y., Doc. 68–C–1227, *The General Tire and Rubber Company* v. *Jefferson Chemical Company, Inc.*

3,159,316, O'Donnell and Steiman, ATOMIZER PUMP; **3,216,624**, D. F. Corsette, DISPENSER WITH STROKE RESTRICTING OVERCAP, **filed** Dec. 11, 1967, D.C., N.D. Ill. (Chicago), Doc. 67c2120, *Valve Corporation of America* v. *Diamond International Corp. et al.*

3,179,836. (See 2,690,518.)

3,216,624. (See 3,159,316.)

3,222,172. (See 2,690,518.)

3,257,332, Ziegler, Breil, Holzkamp and Martin, POLYMERIZATION OF ETHYLENE, **filed** Sept. 6, 1967, D.C., N.D. Tex. (Dallas), Doc. CA–3–2225, *Karl Ziegler* v. *Phillips Petroleum Company.*

3,323,312, M. P. Banjavich, DIVING BELL AND DECOMPRESSION VESSEL COMBINATION AND IMPROVED METHOD FOR HANDLING DIVING PERSONNEL, **filed** May 31, 1966, D.C. Md. (Baltimore), Doc. 17339, *Mark P. Banjavich and Taylor Diving & Salvage Co.* v. *Westinghouse Electric Corporation* (*Underseas Division*).

3,326,406, A. G. Ringlen, PLASTIC BOX CONTAINER, **filed** Jan. 17, 1968, D.C., S.D.N.Y., Doc. 68–C–215, *Logistics Industries Corporation* v. *Rutgers Pressure Co., Inc.*

3,356,226, Miller, Masaschi and Miller, INTEGRALLY WOUND FILTER TUBE, **filed** Apr. 2, 1968, D.C. Md. (Baltimore), Doc. 19366–C, *Filterite Corporation* v. *Tate Engineering, Inc.*

3,366,557, Foulke, Kardos and Koretzky, ELECTRODEPOSITION OF NICKEL, **filed** Mar. 28, 1968, D.C., E.D. Mich. (Detroit), Doc. 31081, *The Udylite Corporation* v. *M & T Chemicals, Inc.*

D. 179,591. (See 2,779,374.)

D. 205,869, J. G. Hahn, DISPLAY BOX, **filed** Mar. 27, 1968, D.C., S.D.N.Y., Doc. 68–C–1239, *Jacoby-Bender, Inc.* v. *Jacques Kreisler Mfg. Corp.*

D. 206,350, M. H. Cheris, PLASTIC RUNNER, **filed** Sept. 14, 1967, D.C., N.D. Ill. (Chicago), Doc. 67c1578, *Tenex Corporation* v. *General Felt Industries, Inc. and Carlyle Vinyl Products.* Plaintiff's first cause of action dismissed on motion of plaintiff; second cause dismissed for want of jurisdiction over the subject matter, Mar. 27, 1968. Defendants' counterclaims dismissed without prejudice, Mar. 19, 1968.

PATENTS

GRANTED JUNE 18, 1968

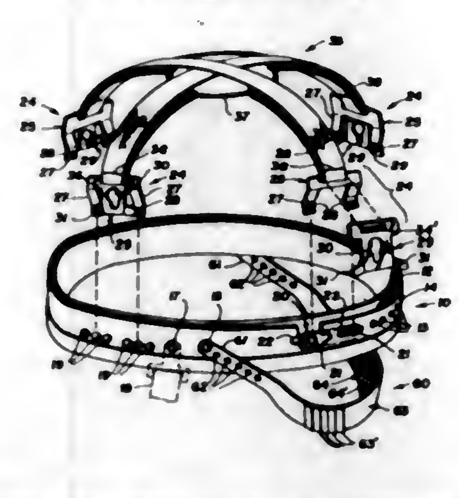
GENERAL AND MECHANICAL

3,388,405
SUSPENSION FOR SAFETY HEADGEAR

Jack N. Simpson and William R. Bohner, Reading, Pa., assignors to ESB Incorporated, a corporation of Delaware

Continuation-in-part of application Ser. No. 438,491, Mar. 10, 1965. This application June 8, 1966, Ser. No. 556,067

4 Claims. (Cl. 2—3)



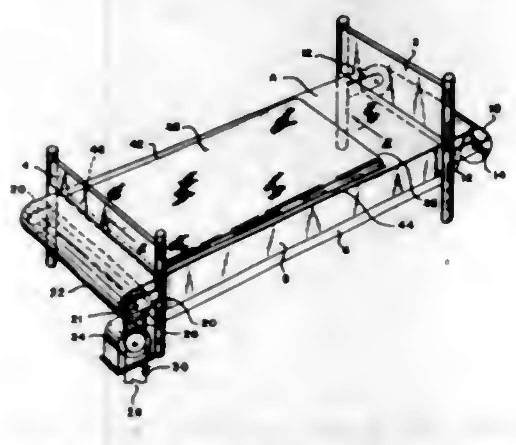
1. In a headband suspension for safety hats and caps comprising two separate cross-straps having loops, a clip of substantially inverted U-shape at the end of each cross strap, each clip having a slot in the center through which said loop extends, a fastening element depending from said slot and supported by said loop, the legs of said clips being offset laterally with respect to the main portion of said clip and terminating in holes, a headband having a plurality of groups of collar button-like projections for different head sizes, selected ones of said button-like projections extending through said holes to selectively fasten said headband to said clip.

3,388,406
BEDMAKING APPARATUS AND SHEET MATERIAL

John W. Scrivener, Washington, D.C. (515 Oakland Park Ave., Apt. 111, Columbus, Ohio 43214)

Filed May 4, 1966, Ser. No. 554,252

1 Claim. (Cl. 5—317)



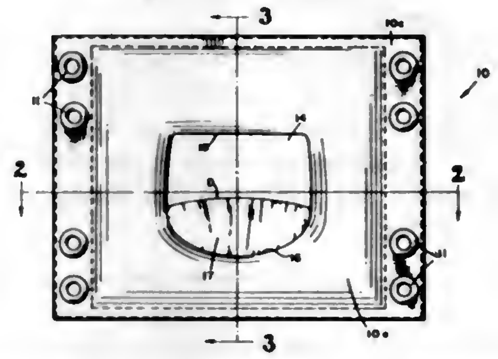
Power actuated apparatus for withdrawing a soiled sheet from a bed and applying a clean sheet thereto, in which the sheet material is a continuous strip substantially the width of the mattress and supplied from a roll at one end of the bed, the sheet material extending therefrom over and along the mattress to a power operated take-up roll at the other end of the bed, thus providing the lower sheet. The upper sheet is provided by open-ended pockets spaced longitudinally of the sheet material and within which the sleeper positions himself.

3,388,407
HEADREST FOR STRYKER FRAME

Lawrence C. Harris, Marion County, Ind. (917 W. 25th St., Indianapolis, Ind. 46208)

Filed Oct. 31, 1966, Ser. No. 590,887

4 Claims. (Cl. 5—327)



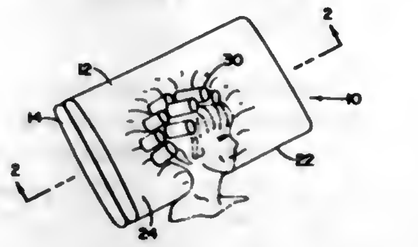
This invention involves a patient's headrest for a Stryker frame. The headrest comprises a resilient pad to be removably secured across an opening in the frame and has a central window, from the lower margin of which window a slack, flexible support extends to receive and support the patient's chin and locate the patient's forehead to rest on a marginal portion of the pad extending above the upper window margin opposite the chin support and have his nose and mouth freely available through the pad window.

3,388,408
CURLER ACCOMMODATING PILLOW

Kermit B. Blaney, 401 Running Ave., Fort Benning, Ga. 31905

Filed Oct. 12, 1966, Ser. No. 586,290

1 Claim. (Cl. 5—338)



A pillow having a central cavity to permit a person having curlers on their head to rest comfortably on the pillow.

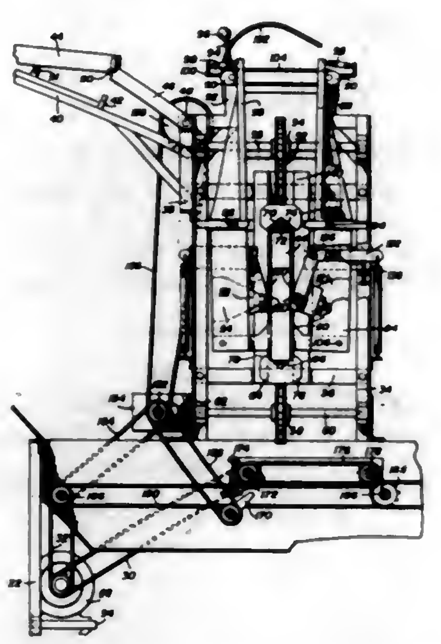
3,388,409
HONEYCOMB UNCAPPING MACHINE

William R. Hettrick, 310 Daly Ave., Hamilton, Mont. 59840

Filed Feb. 11, 1966, Ser. No. 526,822

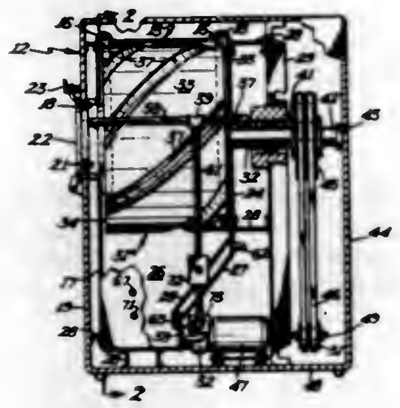
8 Claims. (Cl. 6—12)

A machine for uncapping honeycombs including a supply hopper for the honeycombs, means for picking up and feeding the honeycombs between a pair of opposed vertically oriented conveyor chains which have gripping blocks thereon for engaging the honeycombs and moving them downwardly between a pair of reciprocating knives disposed alongside of the path of travel of the honeycombs. An offbearing conveyor is provided at the bottom of the machine for receiving the honeycombs from the conveyor chains.



3,388,410
CLEANING APPARATUS AND METHOD

Donald E. Marshall, Edina, Minn.
(4904 Sunnyside Road, Minneapolis, Minn. 55424)
Continuation-in-part of application Ser. No. 586,918, Sept. 22, 1966, which is a continuation-in-part of application Ser. No. 552,807, May 25, 1966. This application Sept. 11, 1967, Ser. No. 666,780
35 Claims. (Cl. 8—158)

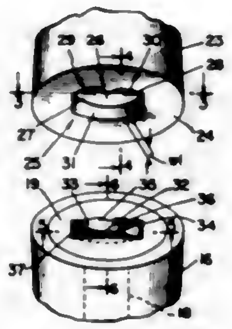


An improved machine and method for cleaning clothes in which conventional dry cleaning solutions or solutions of wash water and soap or detergent may be used for cleaning. In the machine, a cleaning chamber is rotated at a relatively high speed so that the clothes and cleaning solution form and maintain an annular layer in the chamber about the axis of rotation of the chamber. Periodically, during the cleaning operation, the rotational speed of the chamber is abruptly reduced to below that required to maintain the annular layer of the clothes and cleaning solution whereby a large portion of the clothes and cleaning solution falls away from the peripheral wall of the rotating chamber and is cast down on the clothes and the cleaning solution in the lower segment of the rotating chamber. During the cleaning operation, cleaning solution is recirculated at a high gate of flow through and across the clothes in the rotating chamber.

The cleaning chamber of the machine has a plurality of holes formed in its end walls. These holes are spaced radially inwardly from the periphery of the chamber so that a predetermined volume of cleaning solution is maintained within the chamber during the cleaning operation. The chamber also includes a plurality of radially inwardly directed ridges that assist in the rearranging of the clothes during the speed changes of the chamber. In addition, the chamber has a shroud positioned about it so as to minimize "suds drag" when wash water is utilized in the machine.

3,388,411
METHOD AND APPARATUS FOR FORMING UNDERCUT SCREW HEAD SLOTS

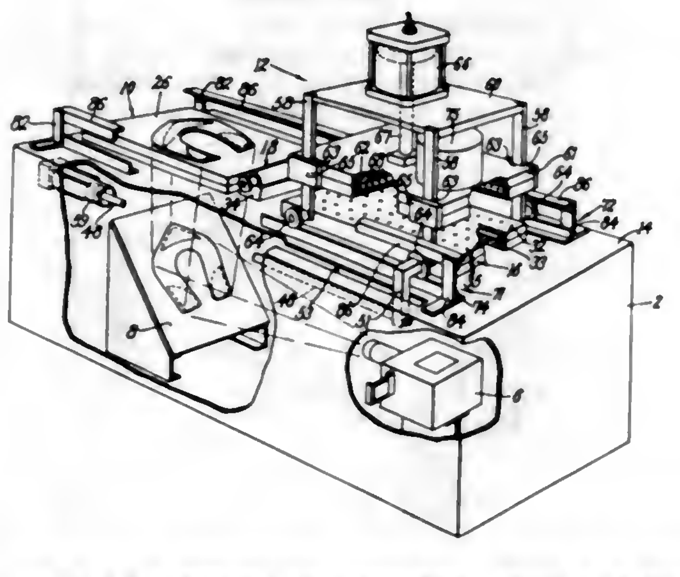
Rudolph M. Vaughn, 2172 Saltair Drive, Santa Ana, Calif. 92705
Filed Jan. 14, 1966, Ser. No. 520,727
1 Claim. (Cl. 10—10)



A method is provided for forming an undercut slot in the head of a screw. This is accomplished by forming the screw head with raised portions bordering on a modified diverging slot structure formed in the head and then flattening the top surface of the head to cause the raised portions to expand laterally and thereby define the desired undercut slot with diverging side wall.

3,388,412
METHOD AND APPARATUS FOR ASSEMBLING MULTI-PART WORKPIECES

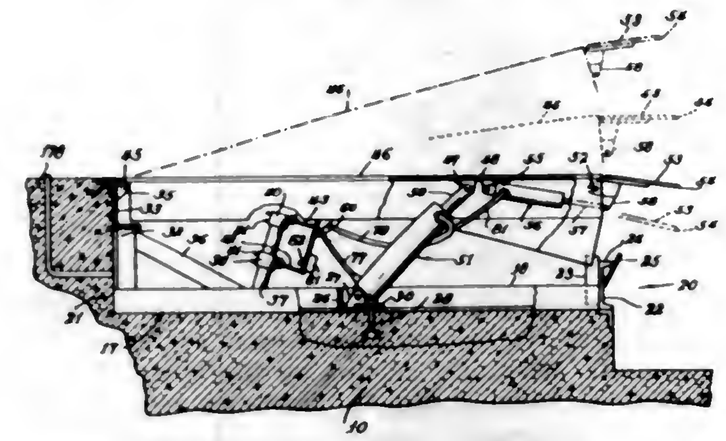
Raymond Hanson and Harry Mellors, Leicester, England, assignors to United Shoe Machinery Corporation, Flemington, N.J., and Boston, Mass., a corporation of New Jersey
Filed Dec. 2, 1966, Ser. No. 598,863
Claims priority, application Great Britain, Dec. 11, 1965, 52,689/65
12 Claims. (Cl. 12—146)



A method for assembling component parts of a shoe upper comprising orienting the parts on an image projected on a screen, transferring the parts from the screen and into superposed and oriented relation on a platen, applying adhesive to selected parts, and pressing the superposed parts together to form an assembled upper. A shoe upper assembling machine comprising a screen having a projected image for orienting separate parts of the upper and a suction mechanism for transferring the oriented parts to a platen where the parts are bonded together by pressure to form an assembled upper.

3,388,413
HYDRAULIC DOCK RAMP CONTROLS

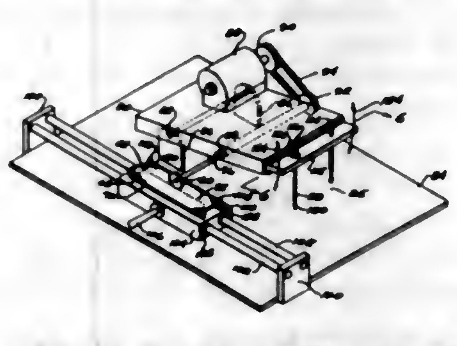
Jesse E. Clarke, Hinsdale, Ill., assignor to Autoquip Corporation, Chicago, Ill., a corporation of Illinois
Filed Apr. 11, 1966, Ser. No. 541,626
9 Claims. (Cl. 14—71)



Control apparatus is provided for a dock ramp having a first hydraulic cylinder to raise and lower the ramp and a second hydraulic cylinder to pivotally position a ramp lip with respect to the ramp. The hydraulic fluid supply motor is actuated by a manual switch and in response to the supply of hydraulic fluid a control valve assembly directs hydraulic fluid to the ramp cylinder. When the ramp cylinder has reached the end of its stroke and hydraulic pressure commences building up in the line leading thereto the relief valve opens to direct the flow of hydraulic fluid to the lip cylinder. When the lip cylinder reaches the end of its stroke and the motor switch is opened the hydraulic control valve assembly drains the hydraulic fluid from the ramp cylinder permitting the ramp to settle so that the lip rests on the truck bed. When the truck pulls away the ramp cylinder continues to drain until the ramp settles to a below normal position, at which time an electrical switch again turns the hydraulic pump motor on to raise the ramp. As this is occurring the lip cylinder drains and after the ramp cylinder reaches a predetermined extension it in turn drains so that the ramp and lowered lip return to the normal position.

3,388,414
GROOVING APPARATUS FOR PREPARING CORROSION TEST SAMPLE

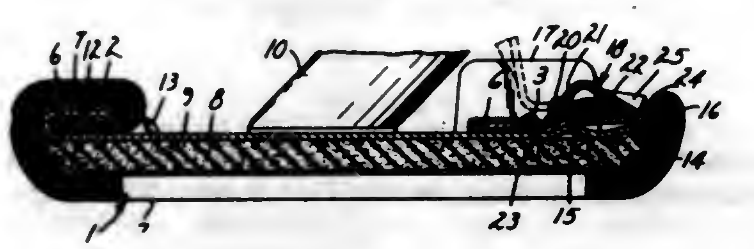
Lloyd W. Hilty, Allegheny Township, Westmoreland County, and Robert W. Maier, Oakmont, Pa., assignors to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware
Filed Mar. 24, 1965, Ser. No. 442,260
2 Claims. (Cl. 15—93)



A device for producing a uniform shallow cut or scratch through a relatively soft coating, such as paint, on a hard base material, such as steel, without injuring or scratching the hard base. The cutting means is gravity biased towards the material being cut and is provided with spring means to cooperate with said gravity bias in urging the cutting means towards the material during the cutting operation so that no external downward force is required on said apparatus. The resiliency provided by the spring means permits the cutting means to penetrate through a shallow layer of paint on a steel surface without scratching even upwardly projecting peaks on said steel surface.

3,388,415
APPLICATOR FOR PAINT AND THE LIKE

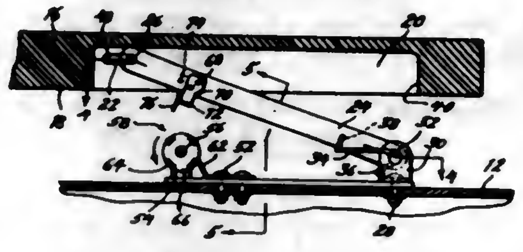
Frederick P. Warner and Yoshimi Matsuura, Minneapolis, Minn., assignors to Warner Manufacturing Company, Minneapolis, Minn., a corporation of Minnesota
Filed June 2, 1967, Ser. No. 643,264
14 Claims. (Cl. 15—233)



An applicator for paint, varnish and the like, utilizing an applicator sheet of fabric having a work surface engaging carpet-like pile of upstanding filaments or threads, a resilient cushion backing on the fabric sheet, a holder for the sheet, and means on the holder for removably anchoring the applicator sheet and cushion on the holder.

3,388,416
HANDLE WITH PUSH-PUSH RATCHET TYPE SPRING CATCH

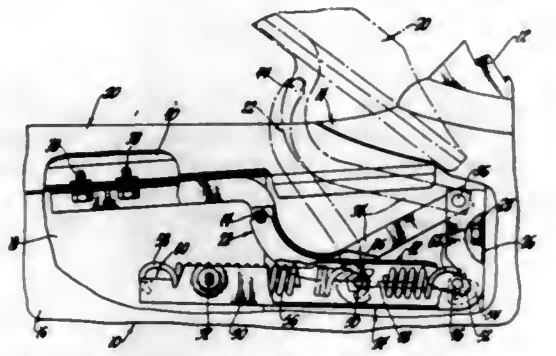
Marton Szabo, Broomall, Pa., assignor to Philadelphia Handle Company, Inc., Camden, N.J., a corporation of New Jersey
Filed Sept. 29, 1966, Ser. No. 582,819
5 Claims. (Cl. 16—115)



A collapsible handle for use in transporting carrying cases and the like having a member mounted for rotation on the wall of the case including ratchet teeth and spaced keeper lugs, a pawl and a latch bar carried by the handgrip, the mechanism being such that when a push is exerted on the handgrip towards the case, the pawl will engage the ratchet teeth to rotate the member until the lip of the latch bar passes between adjacent keeper lugs and rotation continues until a slight release of the pressure will cause the lip to engage beneath a keeper lug and releasably hold the handle in its collapsed position, and a reapplication of a push on the handgrip in the same direction towards the case will cause the pawl to again rotate the member until the latch bar lip clears the space between adjacent keeper lugs to allow the handgrip to assume a raised carrying position.

3,388,417
CLOSURE HINGE

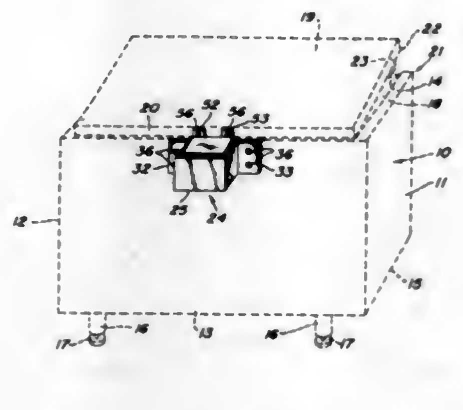
Joseph D. Upchurch, Warren, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed June 28, 1965, Ser. No. 467,331
6 Claims. (Cl. 16—128.1)



A closure hinge for use on vehicle bodies which includes a mounting member of L-shape in elevation and channel shape in cross section. The channel hinge member is pivoted to one leg of the mounting member and a channel shaped link is pivoted intermediate the ends of the hinge member. A pin extends between the side walls of the link member at the other end thereof and a shoe is pivoted on this pin. The other end of the link member and the shoe are received between the side walls of the other leg of the mounting member, with the shoe riding on the base wall of this other leg and the free ends of the pin riding on edges of the side walls of the other leg. A coil tension spring is hooked between the shoe and the front end of the other leg of the mounting member to bias the shoe along the base wall of the other leg. The juncture between the legs of the mounting member provides a stop for the shoe in the folded position of the link member and hinge member and the engagement of the free ends of the shoe pin with notches in the side walls of the other leg provide a stop in the unfolded position of the link member and hinge member.

3,388,418
MAGNETIC HINGE

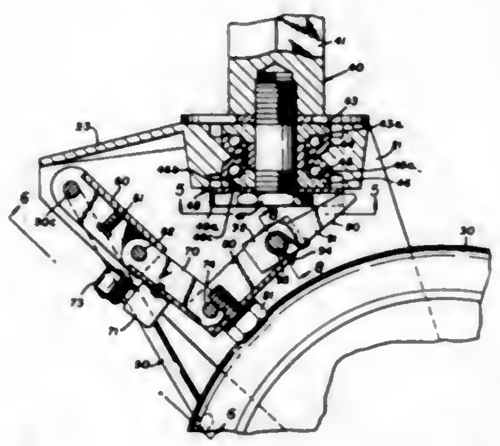
Ahmet K. Bey, Chicago, Ill., assignor to Monarch Tool & Machinery Company, Chicago, Ill., a corporation of Illinois
Filed July 27, 1965, Ser. No. 475,147
6 Claims. (Cl. 16—139)



Pivotally connected first and second hinge members respectively carry first and second magnets in sliding engagement with each other so that first and second parts to which said hinge members are secured can be magnetically held at all angular aspects.

3,388,419
CASTER LOCKING MEANS

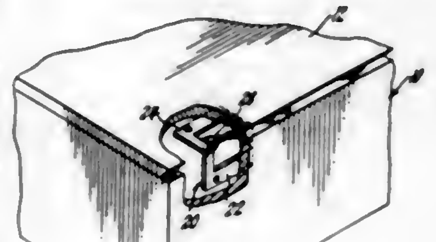
Thomas A. Crawford, 606 Nome Ave., Akron, Ohio 44320
Filed Sept. 27, 1965, Ser. No. 490,214
6 Claims. (Cl. 16—35)



A locking assembly for a caster including a U-shaped handle carried by the caster yoke, and connected to a series of link arms also carried by the yoke. The link arms carrying brake members which are movable into and out of locking engagement with the pintle of the caster, the wheel or both to provide a three position locking assembly.

3,388,420
INTEGRAL HINGE AND HINGE BIAS STRUCTURE

David B. Ballantyne, Southfield, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Sept. 15, 1966, Ser. No. 579,651
4 Claims. (Cl. 16—150)

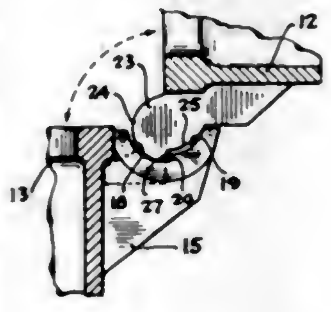


1. In an integral hinge of the type constructed of flexible plastic material and including a pair of hinge leaf portions swingably interconnected by a necked-down integral hinge portion for substantially free swinging movement of one relative to the other between first and second positions, the improvement comprising an integrally formed elongated biasing portion connected between said leaf portions, said biasing portion having its axis of elongation arranged relative to the hinge line of said integral hinge portion to be repeatedly resiliently deformable upon repeated relative movement of said one leaf portion from said first to said second position thereof, said biasing portion biasing said one leaf portion from said second to said first position thereof.

3,388,421
HINGE STRUCTURE

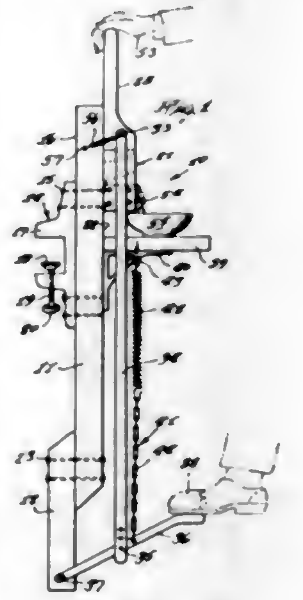
Walter Koziol, Russell, Ill., assignor to Charmglow Manufacturing Co., Antioch, Ill., a corporation of Illinois
Filed May 9, 1966, Ser. No. 548,653
10 Claims. (Cl. 16—171)

A two-part hinge structure having no hinge pin wherein an upper convex member pivots in a lower supporting concave member, the upper member carrying a flange to engage a stop surface to limit the opening of a cover and the concave member having an engagement surface for contact with another engagement surface on the upper member to prevent the upper member from closing by a dropping of the engagement surface on the convex member into contact with the engagement surface of the concave member.



3,388,422
CRAB PRESS

Forrest Benoit, 3506 Monrow St., Lake Charles, La. 70601
Filed May 4, 1966, Ser. No. 547,505
4 Claims. (Cl. 17—2)

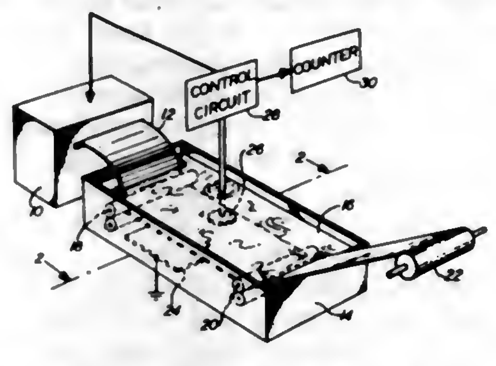


A press for pressing crabmeats, the press including a seat upon which the crabmeat is placed, the press arm that is vertically pulled downward by an operator's foot so to bear against the upper side the meat, and the press arm having a hand operated handle so to allow the press arm to be pivoted and to roll over the meat so to squeeze out the juice therefrom.

3,388,423
METHODS AND APPARATUS FOR MEASURING CHARACTERISTICS OF AN INSULATING SHEET IN AN ELECTROCONDUCTIVE FLUID

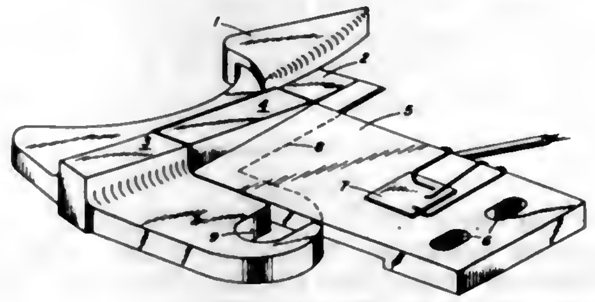
Merle C. Biskeborn, Chatham, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Aug. 28, 1964, Ser. No. 392,853
15 Claims. (Cl. 18—2)

5. Apparatus for measuring characteristics of an insulating sheet having opposite faces, comprising liquid container means having therein an electroconductive liquid surrounding at least a portion of said sheet, electrical means for establishing in the liquid two equal electric fields both passing through the sheet with one field surrounding the other so as to confine the other, and circuit means including a portion of said electrical means for measuring an impedance component of the impedance encountered by currents along the inner one of the fields.



3,388,424
INSTRUMENTED EJECTION CAM

James G. Vincent, Jr., West Nyack, and Paul Eugene Wray, Monroe, N.Y., assignors to American Cyanamid Company, Stamford, Conn., a corporation of Maine
Filed Apr. 1, 1966, Ser. No. 539,553
4 Claims. (Cl. 18—2)



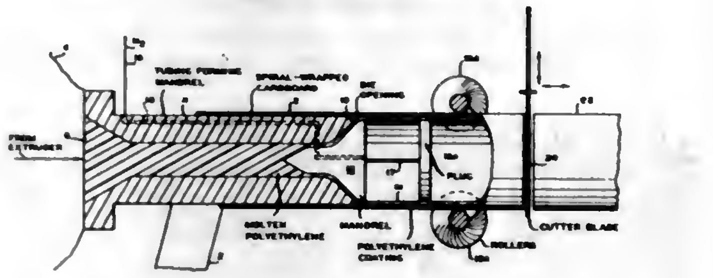
1. In a rotary tabletting machine in which tablets are ejected by moving lower punches over an inclined cam track, the improvement which comprises:

(a) an interrupted ejection cam track having at least one segment capable of movement with respect to the remainder of the track, and

(b) means associated with said movable segment of said cam tract for producing a signal readout proportional to the force exerted on said movable segment, whereby the ejection force is accurately measured and continuously monitored for each individual punch.

3,388,425
APPARATUS FOR COATING THE INTERIOR SURFACES OF HOLLOW SHAPED ARTICLES

Clyde V. Detter, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Nov. 14, 1963, Ser. No. 323,754
1 Claim. (Cl. 18—13)



1. Apparatus for continuously lining the interior surface of an elongated tubular article of cardboard, metal, and the like, with a thermoplastic material and cutting the

thus-lined tubular article into lengths suitable for making containers comprising:

(a) an extruder;

(b) a tube forming mandrel positioned at the discharge terminus of said extruder, said mandrel having an axial passageway and a die head with an annular opening through which thermoplastic material is extruded in the form of a hollow tube;

(c) means for spirally wrapping cardboard, metal and the like around and in slidable relationship with said mandrel to form a tubular article concentric with said annular die opening and said hollow tube of extruded thermoplastic material;

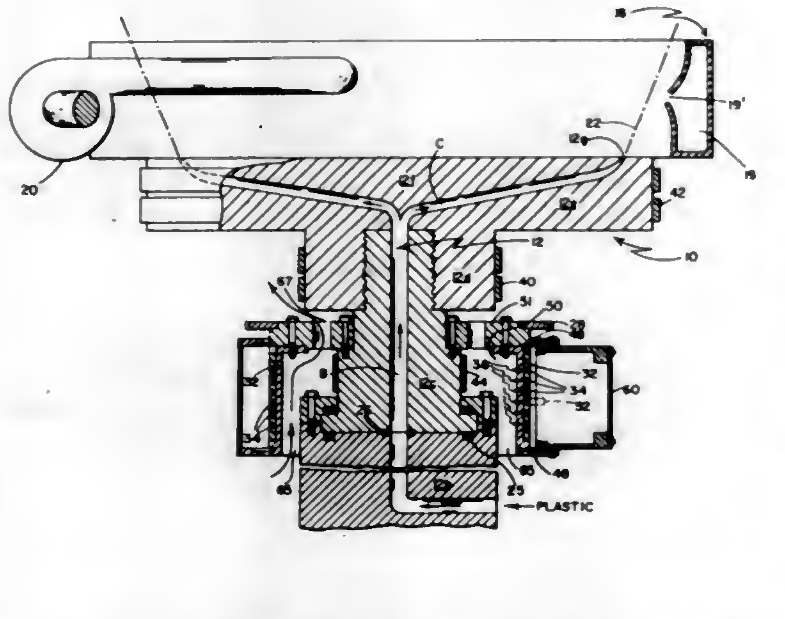
(d) roller means for continuously moving said tubular article concentric with and in the direction of flow of the extruded thermoplastic material;

(e) conduit means disposed in said mandrel in communication with an opening through said die head for introducing a pressurized, inert gas into the interior of said hollow tube of extruded thermoplastic material to impress said thermoplastic material against the interior surfaces of said tubular article thereby forming a lining for said tubular article;

(f) a circular plug member attached to said die head by a flexible, elongated member and axially positioned downstream of said die head within said hollow tubular extruded material, said plug member being shaped to closely fit the interior surface of the lined tubular article so as to prevent the passage of any substantial portion of said gas thereby; and

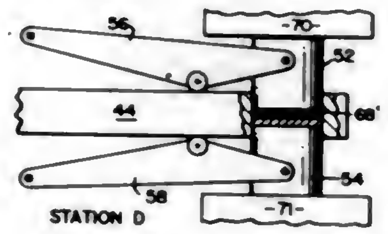
(g) cutting means located downstream of said plug member for continuously cutting the lined tubular article into desired lengths for containers.

3,388,426
BLOWN FILM DIE APPARATUS
Charles M. Schott, Jr., Gloucester, Mass., assignor to Gloucester Engineering Co. Inc., Gloucester, Mass., a corporation of Massachusetts
Filed June 9, 1966, Ser. No. 556,346
5 Claims. (Cl. 18—14)



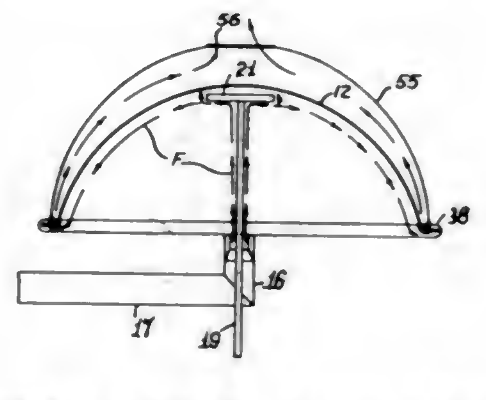
Compact rotatable die ring assembly for plastic film. The collector for electrical power to the rotating assembly surrounds but is spaced from the conduit for molten plastic, defining an air space therebetween. Disclosed also are provisions for air flow through the space, blowers on the compact rotating assembly, the die assembly formed by a hollow spindle which supports the die, conduits the molten plastic and is surrounded by the collector-slip ring assembly, and the collector formed by a cylinder mounted on an apertured disc.

3,388,427
APPARATUS FOR PREPARING SAMPLES FOR X-RAY ANALYSIS
Allan H. Smallbone, La Crescenta, Calif., assignor to Applied Research Laboratories, Inc., Glendale, Calif., a corporation of Delaware
Filed Nov. 19, 1964, Ser. No. 412,489
4 Claims. (Cl. 18—16.5)



A briquetting machine including a central hub rotatable about a vertical axis and carrying a radial arm with a vertical bore at its outer end. Pistons are reciprocatable on the arm into and out of the bore, and into and out of coaxial alignment with the bore. A cam and connecting rod arrangement drives the pistons in response to rotation of the central hub.

3,388,428
APPARATUS FOR FORMING PLASTIC SHEET MATERIAL
Kent E. Buchholz, Villa Park, Ill.
(105 Cedar Circle, Streamwood, Ill. 60103)
Filed Sept. 2, 1965, Ser. No. 484,549
4 Claims. (Cl. 18—19)



Apparatus and method for forming a dome from a sheet of plastic material by means of the inflow of hot air beneath a sheet held by perimeter clamps and including means to direct the air stream under and over the sheet during the forming operation.

3,388,429
THERMODYNAMIC CASTING MACHINE
Louis H. Barnett and Henry P. Horton, Fort Worth, Tex., assignors, by mesne assignments, to Vistron Corporation, Cleveland, Ohio, a corporation of Ohio
Filed Nov. 27, 1963, Ser. No. 326,561
6 Claims. (Cl. 18—26)

1. Apparatus for manufacturing molded articles comprising in combination:

(a) a frame mounted rotatably about a horizontal axis on a first pair of oppositely and linearly disposed shafts each of said first pair of shafts having at least two fluid conducting passages;

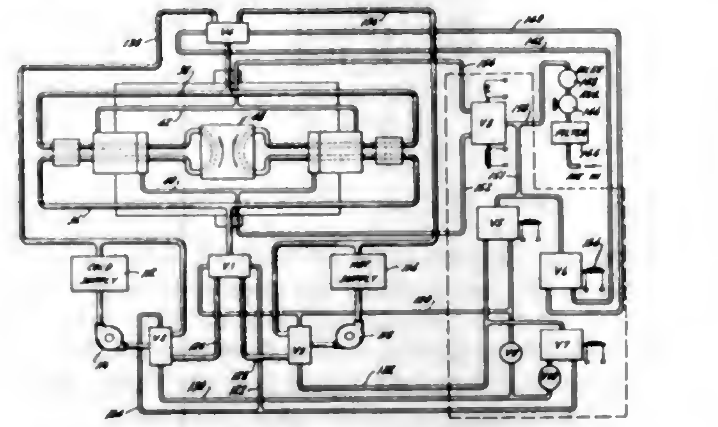
(b) a sectional jacketed mold comprising a first section and a second section, demountably disposed on a second pair of rotatable, oppositely and linearly disposed shafts, each of said second pair of shafts having two fluid-conducting passages, said mold being rotatable about an axis substantially normal to said horizontal axis;

(c) at least one fluid-activated piston and cylinder assembly disposed on said frame to provide reciprocal motion to at least one shaft of said second pair of shafts;

(d) said jacketed mold including a chamber embracing substantially each entire mold section, said chamber having an inlet and an outlet for heat transfer fluid;

(e) means for circulating a single heat transfer fluid within said chamber to alternately heat and cool said mold sections;

(f) means for providing fluid to said piston and cylinder assembly alternately to displace said one shaft of said second pair of shafts into a mold-closing position and into a mold-opening position;



(g) valving means for controlling the flow of both hot and cold heat transfer fluid within said chamber;

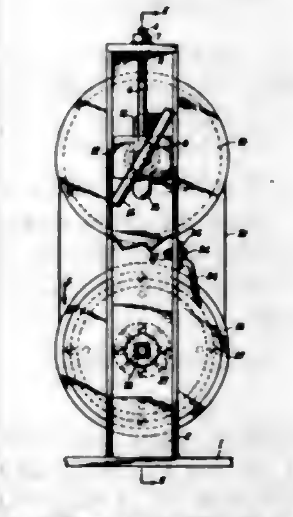
(h) temperature-sensitive means coacting with said valving means to direct hot heat transfer fluid into a hot-fluid circulation system and relatively cool heat transfer fluid into a cold-fluid circulation system;

(i) motor means for rotating said frame;

(j) motor means disposed upon said frame for rotating said mold, and

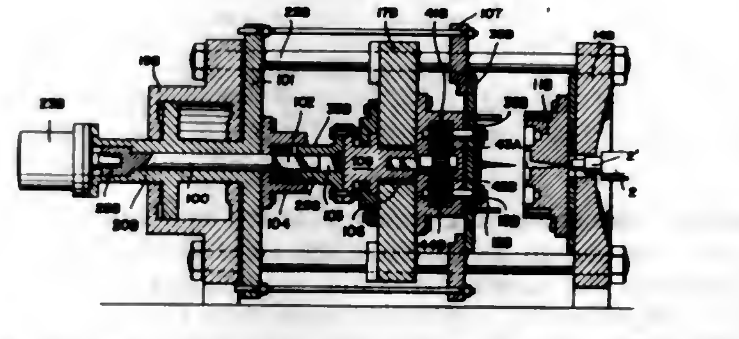
(k) means for indexing said frame in a mold-loading position at the start of each cycle and in a mold-stripping position at the end of each cycle.

3,388,430
METHODS OF AND MACHINES FOR CONTINUOUSLY MOULDING AND/OR POLYMERISING ARTICLES MADE FROM PLASTICS MATERIAL
Jean Georges Ferrand, Billieres, France, assignor to Societe Anonyme dite: Societe Nationale des Petroles d'Aquitaine, a corporation of France
Filed May 5, 1965, Ser. No. 453,383
Claims priority, application France, May 6, 1964, 973,466
5 Claims. (Cl. 18—26)



A machine for molding a continuous article of plastic, having a frame with a rotatable molding drum mounted therein. A peripheral cavity is formed on the lateral surface, and is closed over part of its length by an endless band passing over the drum in contact with at least two toric sealing elements mounted on the drum on either side of the cavity. Guiding and returning means are provided for the band and an intake for fluid material to be molded is provided in the vicinity of the meeting point of the band with the drum. The drum is chambered for circulating heating fluid therethrough and a blade for removing the molded article is disposed in the cavity on the opposite side of the drum from the intake for the material to be molded.

3,388,431
INJECTION MOLDING MACHINE
Katashi Aoki, 6037 Oaza Minamijo, Sakaki-machi, Nagano-ken, Hanishina-gun, Japan
Filed May 11, 1965, Ser. No. 454,831
Claims priority, application Japan, May 16, 1964, 39/37,746; Dec. 4, 1964, 39/93,322; Dec. 18, 1964, 39/70,997
2 Claims. (Cl. 18—42)

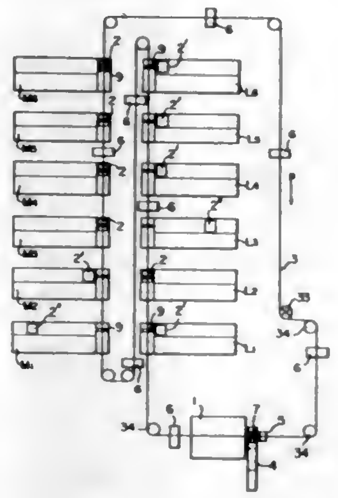


A mold and a mold control device for use with an injection molding machine, comprising, in combination a stationary mold incorporating at least one female mold, at least one rotating core having male screw-threads around its outer periphery and aligned with said female mold for engagement with said female mold, an ejector plate around said rotating core, a single control screw member directly coupled to said rotating core and theadedly coupled to said ejector plate, a motor coupled to said control screw member for rotating said control screw member and said core and advancing said ejector plate in synchronism with the rotation of said control screw member and core in one direction and retracting said ejector plate with the rotation of control screw member and said core in the other direction, said ejector plate being adapted to knock the molded product out of said core.

3,388,432
APPARATUS FOR AUTOMATICALLY TRANSPORTING AND SUPPLYING LAPS FROM A LAP MACHINE
Toshihiko Saikawa, Takatsuki-shi, Hisashi Kinoshita, Moriguchi-shi, and Akira Ando, Ikeda-shi, Japan, assignors to Kureha Spinning Co., Ltd. and Fuji Iron Works Co., Ltd., Osaka, Japan, both corporations of Japan
Filed Oct. 12, 1964, Ser. No. 405,327
Claims priority, application Japan, Oct. 11, 1963, 38/54,340; Mar. 27, 1964, 39/16,754; Mar. 28, 1964, 39/17,039
5 Claims. (Cl. 19—65)

1. An apparatus for automatically transporting and supplying laps from a lap machine having an automatic lap doffing apparatus associated therewith to a gang of side by side combers, said apparatus comprising, in combination, a lap receiving apparatus disposed on the output side of said automatic doffing apparatus and movable horizontally and transversely to the lap-doffing direction, said lap receiving apparatus having lap carrying cradle plates detachably mounted thereon, a lap lifting apparatus disposed on the opposite side of the lap receiving

apparatus from said lap machine and including means to lift the cradle plates of said lap receiving apparatus one at a time, an endless overhead rail disposed in a closed loop passing above said lifting apparatus and thence along and on the intake side and above the gang of combers, a plurality of lap carriers hung from and movable along said overhead rail at intervals and each having a pair of hooked arms depending therefrom for grasping a lap, said arm being movable between a spread and a lap grasping position, carrier driving means for driving said carriers along said rail, means actuated by a carrier without a lap therein approaching the point above the lifting apparatus for raising the cradle plate lifting means, and an arm actuating apparatus positioned above said lap lifting apparatus and straddling the rail along which the lap carriers travel, said arm actuating means including means engaged by said hooked arms when they are in the spread position and moving them to the lap grasping position as said carrier moves along said rail immediately over a raised lap.



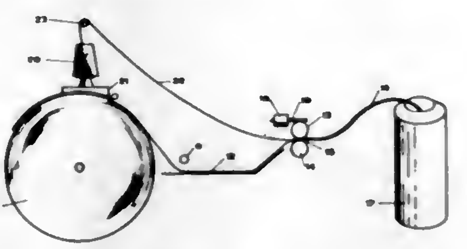
3,388,433

PROCESS FOR PRODUCING NOVELTY YARNS

Virgel O. Roberson, Jr., Greenville, S.C., assignor to United Merchants and Manufacturers, Inc., New York, N.Y., a corporation of Delaware

Filed June 16, 1965, Ser. No. 464,333

1 Claim. (Cl. 19—145.5)



Slub or nep effects or the like in yarns and fabrics are obtained by simultaneously running a fibrous carded web and yarn through the nip of rotating crush rolls and adjusting the relative surface pressure at said nip sufficiently to break the yarn into segments and inject such segments into the body of the fibrous web at intervals therealong.

3,388,434

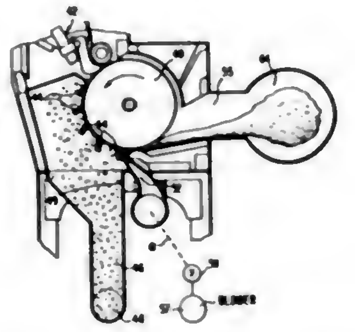
LINT CLEANER

William Lawrence Calhoun, Jr., 406 W. Spencer St., Rayville, La. 71269

Filed Aug. 19, 1965, Ser. No. 481,045

4 Claims. (Cl. 19—203)

A lint cleaner which has grid bars, a trash chamber and an elongated opening for the lint on the saw cylinder to leave the trash chamber, the wall means which forms with the saw cylinder the elongated opening having the additional function of a grid bar, and a nozzle for directing a stream of air into the lint on the saw cylinder after it has passed through the elongated opening, the stream of air from the nozzle having a direction, mass and velocity such as to prevent trash from being carried with the lint from the trash collection chamber but not such as to doff an objectionable amount of fibers of usable length from the lint passing the nozzle means. An additional wall portion closely adjacent to but spaced from the saw cylinder, extends in the direction of lint movement from the elongated opening, the nozzle opening into the slot contiguous to the elongated opening.



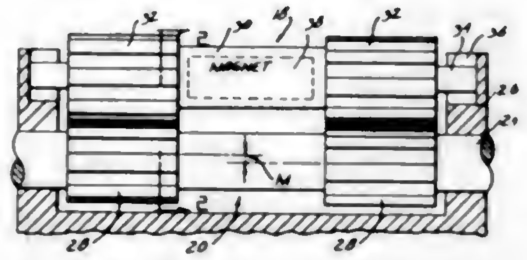
3,388,435

DRAFTING MECHANISM WITH INTERMESHING FLUTED ROLLS

Philip B. Tarbox, Clemson, S.C., assignor to Maremont Corporation, Chicago, Ill., a corporation of Illinois

Filed Sept. 25, 1964, Ser. No. 399,484

2 Claims. (Cl. 19—266)



1. In a drafting mechanism, the combination of a pair of rolls between which material to be drafted is adapted to be passed,
  one of said rolls having a plurality of fluted processing means with unfluted roll portions between adjacent fiber processing means, the flutes of one of said fiber processing means being angularly displaced with respect to the flutes of an adjacent processing means,
  the other of said rolls having a pair of fluted fiber processing means for intermeshing engagement with the fluted processing means of the first mentioned roll,
  one of the processing means of said other roll being independently rotatable with respect to the other processing means, whereby the fluted processing means of said rolls may be aligned and intermesh with one another.

3,388,436

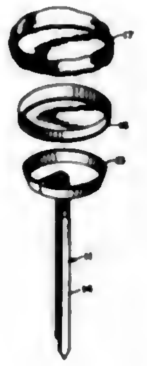
UPHOLSTERY BUTTON

Leslie N. Bennett, Chicago, Ill., assignor to Maxant Button & Supply Co., Chicago, Ill., a corporation of Illinois

Filed Sept. 7, 1967, Ser. No. 679,583

2 Claims. (Cl. 24—94)

The essential concept of this invention involves the conversion of a predetermined length of a strip of material into a button component, by a series of related deformations, to provide a head-element with an integrated pair of axially disposed prongs for use with a cap and a piece of fabric to form an upholstery button unit.



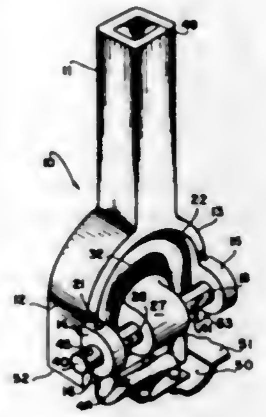
3,388,437

CONNECTING APPARATUS

David F. Stoddard, Marietta, Ga., assignor to Lockheed Aircraft Corporation, Burbank, Calif.

Filed Apr. 29, 1965, Ser. No. 451,931

9 Claims. (Cl. 24—230)



A connecting ring engaging apparatus including a body having a receptacle for receiving a locking ring such as a D-ring. A resilient pad is provided in the receptacle, and the locking member includes a shaft which slides into place over the receptacle to retain the locking ring in place and which has a cam portion to press firmly the locking ring against the resilient pad.

3,388,438

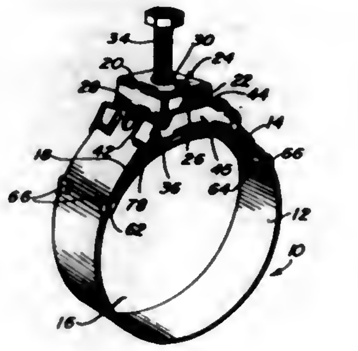
HOSE CLAMP WITH LOAD DISTRIBUTING MEMBER

Clarence C. Tetzlaff, River Forest, Ill., assignor to Wittek Manufacturing Co., Chicago, Ill., a corporation of Illinois

Filed Apr. 9, 1965, Ser. No. 447,014

7 Claims. (Cl. 24—278)

1. A hose clamp comprising a looped metal band having overlapped U-bends at the ends thereof forming a radially extending housing, a nut confined in the housing and a radial screw engaging the nut and extending outward through the U-bends and adapted upon take up to pull the nut radially outward to lengthen the housing, a relatively stiff arcuate bridge engaged upon the band across the radially inner end of the housing and having guide means for permitting sliding movement of the band while the screw is being taken up, and a load-distributing member of arcuate length substantially greater than that of the bridge and slidably secured at its ends to said band to be disposed beneath said bridge and adapted to diffuse the radial force applied by said bridge over an area greater than that of the bridge.



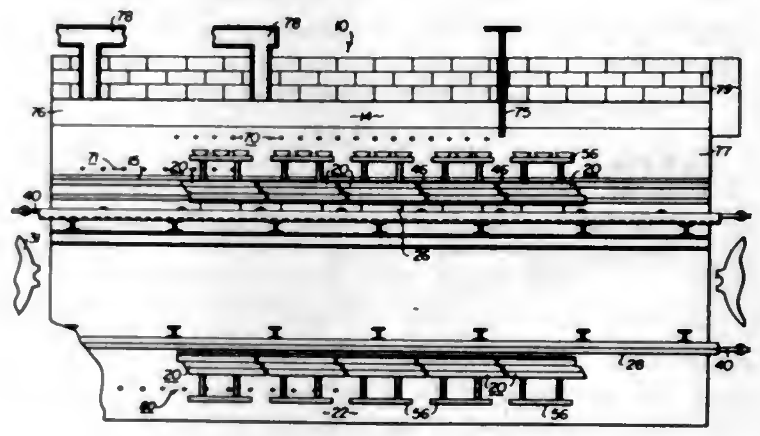
3,388,439

TUNNEL KILN

David E. Tomkins, New Castle, Pa., assignor to Shenango China, Inc., New Castle, Pa., a corporation of Pennsylvania

Original application Mar. 13, 1961, Ser. No. 95,192, now Patent No. 3,271,487. Divided and this application Sept. 2, 1966, Ser. No. 590,132

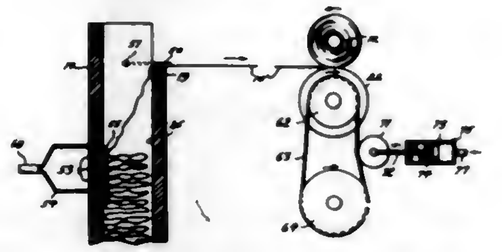
11 Claims. (Cl. 25—142)



1. An apparatus for firing ceramic articles comprising a kiln in the form of a straight tunnel, a slot along the bottom of the tunnel, an endless train of tunnel cars, means guiding said cars for movement in an upright position along said slot and in an inverted position along a return reach immediately below said slot, said cars each having a base portion extending across said slot when the car is in said slot to form a radiant heat shield, cooperating means on the ends of adjoining cars forming a radiant heat shield, kiln furniture on each car projecting upwardly into said tunnel when the car is in said slot, the furniture comprising a plurality of ceramic hollow columns, a ceramic platform at the top of the columns, said platform having a hollowed-out lower surface and an upper surface formed with raised ridges, tie rods extending through the columns and engaged with the platform, the lower ends of the tie rods extending through to the base portion of the associated car and being tied thereto by spring means for maintaining said rods of a spring-loaded tension, a baffle in said tunnel for dividing the tunnel into a heating section and a cooling section, heating means in said heating section situated above and below said platform when said cars are in said slot, said heating means being arranged to divide said heating section into a plurality of temperature zones whereby ware positioned on said platform may be uniformly heated and fired by radiant heat and by convection and conduction, and a blower at one end of said cooling section for continuously forcing a draft of air toward said heating section.

3,388,440
STRAND WINDUP TREATMENT APPARATUS

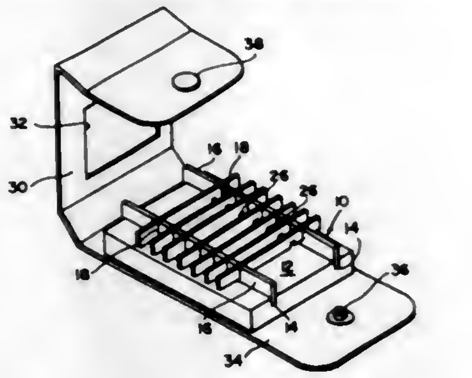
Robert K. Stanley, Media, Pa., assignor to Techniservice Corporation, Lester, Pa., a corporation of Pennsylvania
Application Oct. 22, 1965, Ser. No. 501,897, now Patent No. 3,280,444, dated Oct. 25, 1966, which is a continuation-in-part of application Ser. No. 294,035, July 10, 1963. Divided and this application Apr. 18, 1966, Ser. No. 543,129
15 Claims. (Cl. 28—1)



1. In strand-crimping apparatus including a stuffer-crimper having a passage for strand therethrough and at least partially intercepted by strand-impeding means, whereupon a compact mass of crimped strand accumulates temporarily therein, the improvement comprising strand-sensing means located along the passage and downstream from the strand-impeding means, with respect to the direction of movement of strand through the passage, the strand-sensing means being separate from the strand-impeding means and, independently thereof, responsive to presence of a compact mass of crimped strand there adjacent, the stuffer-crimper being essentially free of strand-impeding means at and downstream from the strand-sensing means.

3,388,441
TEXTILE WEAVE SIMULATOR AND METHOD

John M. Snyder, New York, N.Y., assignor to Commercial Carpet Corporation, New York, N.Y., a corporation of New York
Filed Jan. 4, 1966, Ser. No. 518,647
8 Claims. (Cl. 28—1)

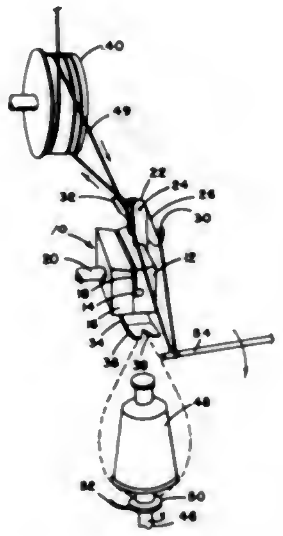


This invention relates to design planning devices, and in particular, a textile weave simulator in which various designs for textiles, and particularly carpeting, can be visualized by the use of the device and the method of the invention. Yarn is wound around yarn holders which are held in spaced parallel relationship on notched hangers on the frame of the invention. By this means, the selected yarns are held in a design relationship, as if actually woven, to present a surface simulating a finished design.

3,388,442
LACING DEVICE FOR YARN TREATING APPARATUS

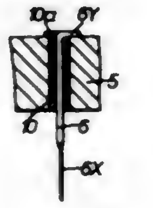
Randell S. Shumaker, Saegertown, Pa., assignor to FMC Corporation, Philadelphia, Pa., a corporation of Delaware
Filed July 27, 1967, Ser. No. 656,457
4 Claims. (Cl. 28—1)

For use in a system wherein a yarn strand running from a godet to a winding apparatus is subjected to treatment in a tube-like passageway which has a lacing slot communicating therewith, a pivotally mounted lacing guide is provided for holding the yarn out of the lacing slot during start-up of the winding apparatus and for directing the yarn into the lacing slot when the winding apparatus puts full tension on the yarn.



3,388,443
MOUNTING OF NEEDLES IN THE NEEDLE BOARDS OF WEB PUNCHING OR NEEDLING MACHINES

Brendan O'Byrne, Batley, York, England, assignor to William Bywater Limited, Leeds, England
Filed Dec. 27, 1965, Ser. No. 516,580
Claims priority, application Great Britain, Aug. 11, 1965, 34,277/65
5 Claims. (Cl. 28—4)

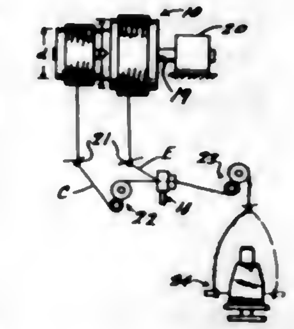


A needle assembly in a needle board of a web punching machine and method of making consisting of making the part of the needle board in which the needles are mounted to form an unyielding, wear-resistant part providing holes for the needles in said part, which holes are of larger cross section than the needle shanks, fitting compressible, semi-rigid plastic liners or bushes into the holes and inserting and force fitting the needles through the liners of the holes so that the needle shanks are forced against the bushes in a tight fit to compress the material of the bushes against the inner rigid walls of the holes.

3,388,444
APPARATUS AND PROCESS FOR MAKING BULKY YARN

Gustav E. Benson, Greenville, R.I., assignor to Owens-Corning Fiberglas Corporation, a corporation of Delaware
Filed Dec. 17, 1965, Ser. No. 514,544
5 Claims. (Cl. 28—72)

A method of producing a fluid bulked composite glass fiber yarn from a plurality of yarn sources which includes the steps of attenuating streams of molten glass issuing from a bushing into continuous filament glass fibers, collecting the fibers into at least two separate strands, winding the strands on a tube comprised of at least two integral sections of different diameters with one strand to a section, positioning the tube relative to a yarn bulking device whereby strands unwound therefrom may be supplied to the device, rotating the tube to unwind the strands from each of the tube sections at linear rates proportional to the diameters of the tube sections, feeding the strands to said yarn bulking device, forming a composite bulked yarn in the device, and collecting the composite bulked yarn from the bulking device.



Also disclosed is an apparatus for feeding a plurality of yarns at different speeds from a single rotating tube.

3,388,445
METHOD OF MAKING CREASE- AND WRINKLE-RESISTANT FABRICS

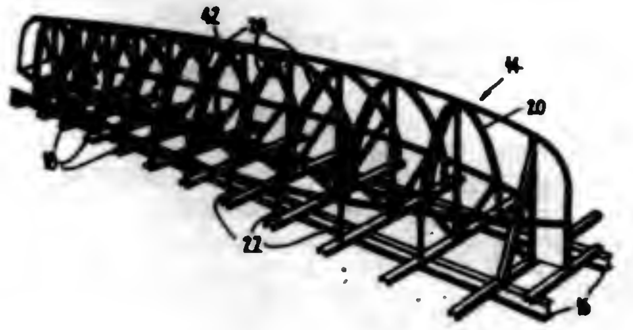
Corrado Mazzolini and Francesco Denti, Mestre, Venezia, Italy, assignors to A.C.S.A. Applicazioni Chimiche S.p.A., Milan, Italy, a corporation of Italy
No Drawing. Filed June 12, 1964, Ser. No. 374,803
Claims priority, application Italy, June 20, 1963, 12,746/63
4 Claims. (Cl. 28—76)

A method of making crease- and wrinkle-resistant fabrics in which fibers are spun from polyvinyl chloride of a high syndiotactic index as produced by polymerization at temperatures from −10° to −60° C. and are then twisted into yarns and woven into fabric alone or with a minor proportion of yarn of some other fiber (e. g., wool), the woven fabric being then stretched and subjected to temperatures of 110° C. to 140° C. for 10 seconds to 30 minutes (preferably 130° C. to 135° C. for 1 to 10 minutes).

3,388,446
METHOD OF FORMING METAL SHEETS INTO SHAPES INVOLVING COMPOUND CURVATURES, AND METAL SHEETS SO FORMED

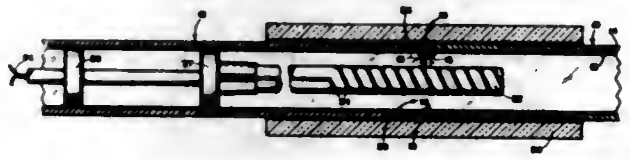
Rex S. Phillips, West Ryde, New South Wales, Australia, assignor to Comalco Industries Pty. Limited, a corporation of Australia
Filed Nov. 8, 1965, Ser. No. 506,689
5 Claims. (Cl. 29—155)

For aid in forming sheet metal into shapes involving compound curvatures there is used a frame having the desired over-all shape of the article to be formed, and the metal sheet is cut to a size which, in at least one dimension, is larger than the corresponding dimension of the finished article. The frame is provided with marking elements of grooving lines at predetermined positions thereabout. The metal sheet is placed against the frame, and the grooving line elements are transferred from frame to sheet, whereafter the grooving lines on the sheet are completed by joining the elements thereof and longitudinal grooves are formed in the sheet along said grooving lines. The desired compound curvature is induced—so as to conform the sheet to the shape of the frame—by altering the width of at least one of said grooves over at least a part of its length.



3,388,447
METHOD FOR MAKING JOINED GLASS LINED PIPES

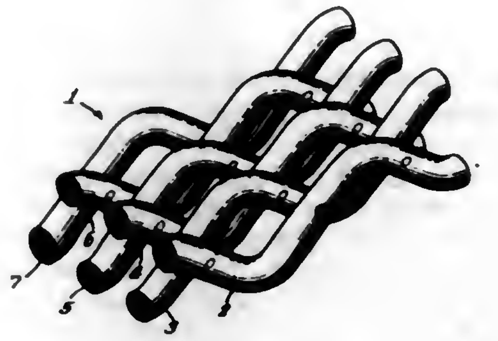
Glenn R. Bange, Pittsford, and Herbert F. Young, Rochester, N.Y., assignor to Ritter Pfaudler Corporation, a corporation of New York
Continuation of application Ser. No. 217,915, Aug. 20, 1962. This application Nov. 25, 1966, Ser. No. 597,168
14 Claims. (Cl. 29—470)



A method of joining glass lined pipes 10 and 12 or other articles having substantially abutting surfaces formed at open ends thereof. The method is to first rigidly join the open ends of the pipes by welding 18 and thereafter fusing the entire periphery of the glass lining at the abutting surfaces by internally heating the glass lining by means of an internally received heating element 22.

3,388,448
METHOD OF MAKING FILTER MEDIA

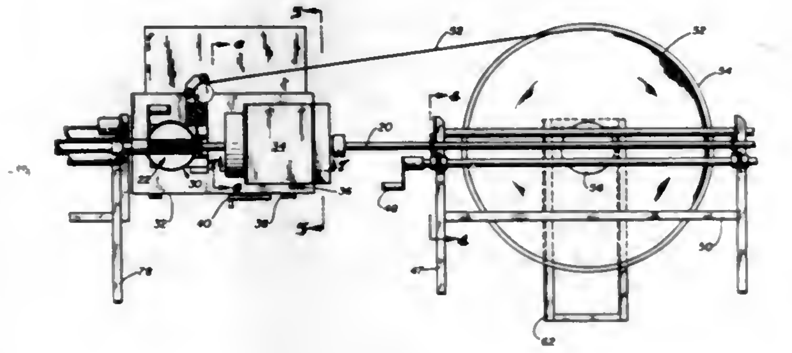
Richard E. Lovett, Longmeadow, Mass., assignor to National-Standard Company, Niles, Mich., a corporation of Delaware
Original application Mar. 5, 1965, Ser. No. 437,452. Divided and this application June 2, 1967, Ser. No. 643,276
9 Claims. (Cl. 29—163.5)



Method of making filter media from a fabric having first and second sets of crossing filaments in which adjacent filaments of one set of filaments are joined at contacting portions thereof, and in which the filaments of the other set of filaments are removed from the fabric.

3,388,449
APPARATUS FOR FORMING INTEGRALLY FINNED TUBING

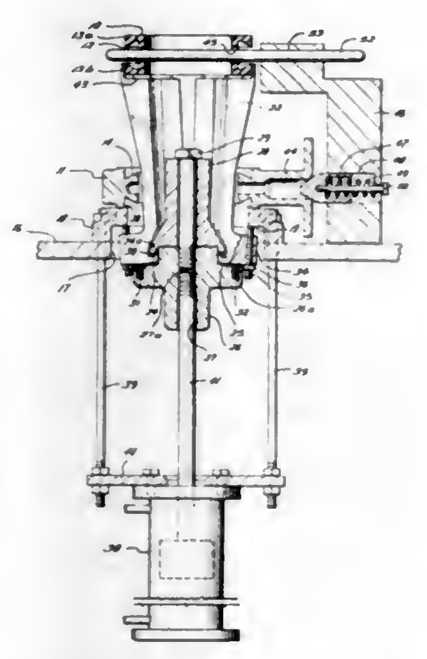
Arthur H. McElroy, 2789 E. 45th Place,
Tulsa, Okla. 74105
Filed Sept. 16, 1965, Ser. No. 487,857
3 Claims. (Cl. 29—202)



An L-shaped fin stock is helically wound about tubing such that the foot portion is directed towards the bare tubing or upstream side and caused to sealably overlap the adjacent downstream applied fin foot.

3,388,450
TOOL FOR INSERTING A VALVE SEAT INTO A VALVE BODY

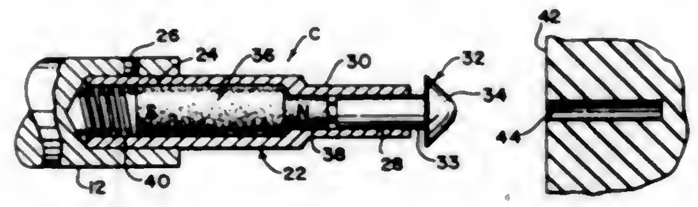
Earl R. Forsman, Houston, Tex., assignor to Keystone Valve Corporation, Houston, Tex.
Filed Apr. 7, 1967, Ser. No. 629,259
5 Claims. (Cl. 29—213)



A valve seat inserting tool is provided with a plurality of circumferentially arranged fingers for extending through the opening in the valve body. The fingers are pivotally mounted at one end so their free end can pivot toward and away from the longitudinal axis of the opening in the valve body. The fingers are mounted on a piston rod that extends the fingers through the valve body a predetermined distance. An adjustable stop is carried by each finger to pivot the finger outwardly, when the finger is extending through the opening. By adjusting the stop, the fingers can be arranged to receive various sized valve seats. The valve seat is placed in the nest of fingers and the fingers pulled back through the valve body. Cam surfaces on the fingers engage the valve body as the fingers are pulled through it forcing the fingers inwardly to compress the seat sufficiently for it to be pulled into position in the valve body. Before being pulled through the valve body, the valve opening in the seat is aligned with the valve stem opening in the body by two pins in vertical alignment. The pins can extend into the valve stem opening in the body and the valve stem opening in the seat, when the openings are in alignment.

3,388,451
TOOL FOR INSERTING TIRE STUDS

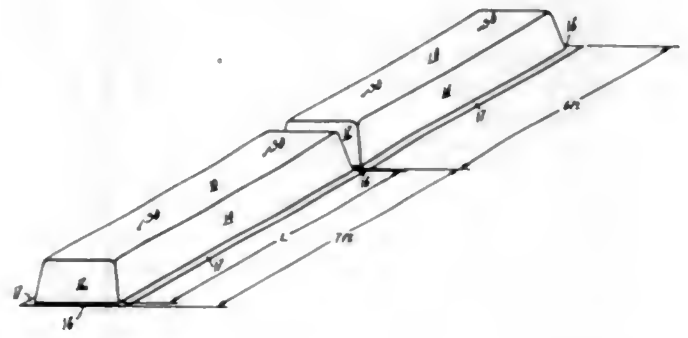
Lorrain A. Holder, Willoughby Hills, Ohio (% The Die Cast Finishing Co., 4150 Hough Ave., Cleveland Ohio 44103)
Filed Dec. 28, 1966, Ser. No. 605,359
10 Claims. (Cl. 29—235)



1. In a tool for inserting studs of the type having an elongated shank and an enlarged head portion into pre-formed openings in vehicle tires, said tool including an elongated stud receiving end portion having an inwardly extending opening with a bottom wall at a depth greater than the length of said stud shank and a cross-sectional configuration to closely receive the shank of said stud, and with the outer periphery of said end portion being of a lesser size than the enlarged head portion of said stud, the improvement comprising: stud holding means positioned within said inwardly extending opening for releasably maintaining a stud therein, said means including a stud contacting end inwardly spaced from the outer end of said opening a distance less than the length of the shank of said stud, and second means for permitting said inwardly spaced end to move inwardly of said opening when force is applied longitudinally of said stud in a direction toward the bottom of said opening.

3,388,452
METHOD FOR CEILING CONSTRUCTION

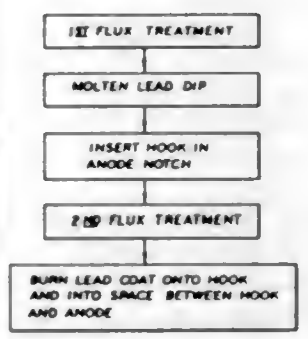
William Henry Connolly, 22 Wagonwheel Road, Sudbury, Mass. 01776
Continuation-in-part of application Ser. No. 425,197, Jan. 13, 1965. This application Feb. 8, 1966, Ser. No. 525,924
4 Claims. (Cl. 29—428)



Preparing for construction of one-way ribbed concrete ceilings by using a single collection of rib forming domes for substantially any span length, the collection having domes of at least three lengths between five and nine feet and differing by one foot, a combination of domes being chosen for each ceiling and assembled on temporary supporting framework in parallel rows, the end-to-end bodies of the domes being spaced to form bridging ribs running transverse to carrying ribs, the combinations being chosen so that whenever domes of a single length cannot span the ceiling domes of exactly two lengths differing by one foot are used.

3,388,453
COVERING ANODE HOOK WITH LEAD, ETC.

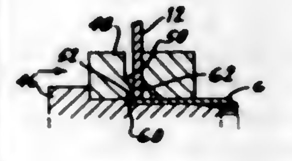
Clarence F. Leiblinger, Cleveland, Ohio, assignor to Republic Lead Equipment Company, Cleveland, Ohio, a corporation of Ohio
Filed Jan. 27, 1966, Ser. No. 523,404
7 Claims. (Cl. 29—492)


1ST FLUX TREATMENT
MOLTEN LEAD DIP
INSERT HOOK IN ANODE NOTCH
2ND FLUX TREATMENT
BURN LEAD COAT ONTO HOOK AND INTO SPACE BETWEEN HOOK AND ANODE

The notched end of a lead anode is united to the hook of a metal more conductive than lead by treating both with a lead flux, dipping the treated hook into molten lead to form a skin coat of lead on its surface, then placing an end of the hook within the notch of the anode, applying a lead flux over the skin coat and then burning a lead covering over the portion of the hook within the notch and burning lead into the space between the hook and the anode and thus substantially filling said space with lead and thereby bonding the anode to the hook.

3,388,454
METHOD OF FORMING METAL LADDER STRUCTURES AND THE LIKE

Eldrich J. Willis, Bridgeville, Pa., assignor to Aluminum Company of America, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Feb. 5, 1965, Ser. No. 430,538
3 Claims. (Cl. 29—523)



1. In the fabrication of metallic ladder type structures by interconnection of stringer webs to the ends of tubular rung members, the steps of

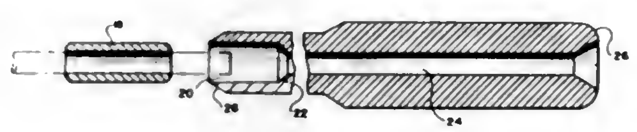
locating the terminal end of an undeformed tubular rung member in a rung member receiving aperture in a stringer web,

fixedly positioning the portion of said stringer web disposed in remote surrounding relation to said rung member receiving aperture therein relative to said rung member, selectively displacing the terminal end portion of said rung member relative to the remainder thereof to progressively form a first upset bead exteriorly of said rung member receiving aperture in said stringer web and a second upset bead interiorly of said stringer web and

selectively displacing the portion of said stringer web disposed in immediate surrounding relation to said rung member receiving aperture therein relative to the remainder thereof conjointly with the formation of said second upset bead.

3,388,455
METHOD FOR PRESS FITTING OF MINIATURE TUBING OF VARYING DIAMETERS

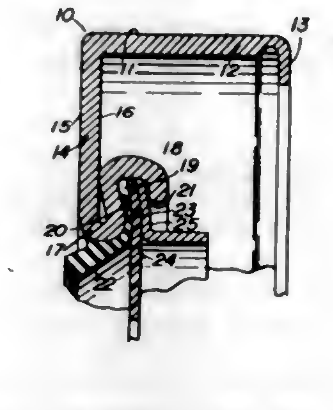
Franz Wieland, Bethlehem, Pa., and Joseph J. Ciol, Parlen, N.J., assignors to Rapidograph, Inc., Bloomsbury, N.J., a corporation of New Jersey
Filed Ang. 17, 1967, Ser. No. 661,311
9 Claims. (Cl. 29—525)



Method of press fitting miniature tubing in coaxial alignment, particularly assembling metallic points such as tungsten carbide in stainless steel holders as used in stylographic writing instruments, the diameters of said metallic points being in the range 0.006–0.052 of an inch.

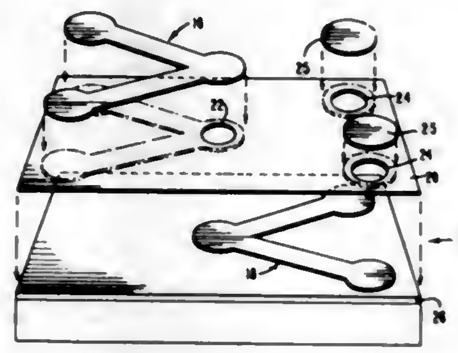
3,388,456
LIP SEALS

Robert McKinven, Jr., Detroit, Mich., assignor to Chicago Rawhide Manufacturing Co., Chicago, Ill., a corporation of Illinois
Application Jan. 8, 1964, Ser. No. 336,532, now Patent No. 3,276,783, dated Oct. 4, 1966, which is a continuation-in-part of application Ser. No. 178,390, Mar. 8, 1962. Divided and this application Mar. 8, 1966, Ser. No. 555,946
6 Claims. (Cl. 29—528)



1. The method of forming a seal comprising the steps of forming a metal annulus which is generally L-shaped in section having an axially extending abbreviated flange, curling said flange in a radially outward direction so as to be substantially parallel to one leg of said L-shaped section, and further curling said flange in an axial direction thereby defining a seal mounting flange, inserting said annulus in a charged two part mold having a seal forming cavity therein, positioning the axially extending portion of said seal mounting flange in snug circumferential engagement with one part of said mold, thereby placing the curled portion within the mold cavity, closing said mold parts to engage said L-shaped annulus on one side and said portion of said seal mounting flange on the other to deform a portion of said seal mounting flange towards one leg of said L-shaped annulus while simultaneously molding a sealing lip about said seal mounting flange.

3,388,457
INTERFACE RESISTANCE MONITOR
Paul A. Totta, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, Armonk, N.Y., a corporation of New York
Filed May 31, 1966, Ser. No. 553,900
14 Claims. (Cl. 29—574)

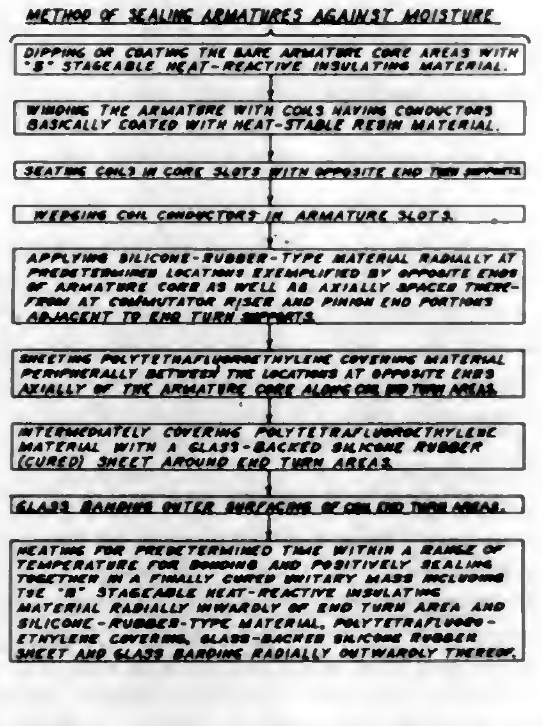


1. In a process of fabricating an integrated circuit assembly comprising a semiconductor substrate having a protective insulating coating on one surface of the substrate and a plurality of active device regions formed within said substrate with metal conductors interconnecting said regions,

the technique of forming concomitantly a test specimen for testing interface resistances between conductive layers existing at different levels of said assembly,

comprising forming two conductive layers which make contact to each other through an opening in an insulator, making probe contacts to the extremities of one of the two legs formed by each of said conductive layers.

3,388,458
INSULATION MEANS AND MOISTURE SEALING OF ARMATURES
John L. Logan, Western Springs, Ill., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed June 3, 1964, Ser. No. 372,293
8 Claims. (Cl. 29—596)


METHOD OF SEALING ARMATURES AGAINST MOISTURE
DIPPING OR COATING THE BARE ARMATURE CORE AREAS WITH "B" STAGEABLE HEAT-REACTIVE INSULATING MATERIAL.
WINDING THE ARMATURE WITH COILS HAVING CONDUCTORS BASICALLY COATED WITH HEAT-STABLE RESIN MATERIAL.
SEATING COILS IN CORE SLOTS WITH OPPOSITE END TURN SUPPORTS.
WEDGING COIL CONDUCTORS IN ARMATURE SLOTS.
APPLYING SILICONE-RUBBER-TYPE MATERIAL RADIALLY AT PREDETERMINED LOCATIONS EXEMPLIFIED BY OPPOSITE ENDS OF ARMATURE CORE AS WELL AS AXIALLY SPACED THEREFROM AT COMMUTATOR RISER AND PINION END PORTIONS ADJACENT TO END TURN SUPPORTS.
SHEETING POLYTETRAFLUOROETHYLENE COVERING MATERIAL PERIPHERALLY BETWEEN THE LOCATIONS AT OPPOSITE ENDS AXIALLY OF THE ARMATURE CORE ALONG COIL END TURN AREAS.
INTERMEDIATELY COVERING POLYTETRAFLUOROETHYLENE MATERIAL WITH A GLASS-BACKED SILICONE RUBBER (CURED) SHEET AROUND END TURN AREAS.
GLASS BANDING OUTER SURFACING OF COIL END TURN AREAS.
HEATING FOR PREDETERMINED TIME WITHIN A RANGE OF TEMPERATURE FOR BONDING AND POSITIVELY SEALING TOGETHER IN A FINALLY CURED UNITARY MASS INCLUDING THE "B" STAGEABLE HEAT-REACTIVE INSULATING MATERIAL RADIALLY INWARDLY OF END TURN AREA AND SILICONE-RUBBER-TYPE MATERIAL, POLYTETRAFLUOROETHYLENE COVERING, GLASS-BACKED SILICONE RUBBER SHEET AND GLASS BANDING RADIALLY OUTWARDLY THEREOF.

This invention relates to a method for moisture sealing direct current armatures comprising the steps of:

(a) Dipping or coating the bare armature core areas with a "B" stageable heat-reactive insulating varnish.

(b) Winding the armature with coils having the conductors basically coated with "Pyre ML" polymer, or any other designated heat-stable resin coating. Coils are also insulated with a conventional insulation system.

(c) After winding, coils are seated in core slots.

(d) Armature is wedged.

(e) Armature is prepared for application of commutator end and pinion end bands.

(f) Bands are applied in the following sequence:

(1) A silicone rubber compound is applied to the following areas:

Back of commutator riser.
Pockets adjacent to core—both commutator end and pinion end diamond areas.
Adjacent to pinion end bell (motors).

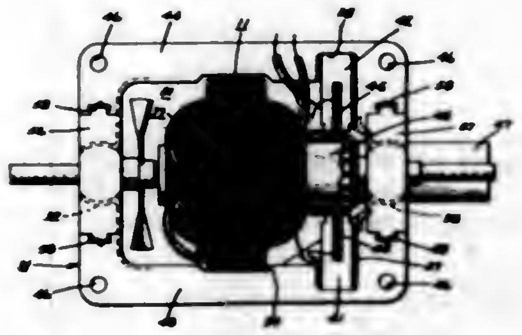
(2) Apply "Teflon" sheet—covering entire commutator end and pinion end diamond areas.

(3) Apply glass-backed silicone rubber (cured)sheet—covering entire commutator end and pinion end diamond areas.

(4) Apply glass bands—covering entire commutator end and pinion end diamond areas.

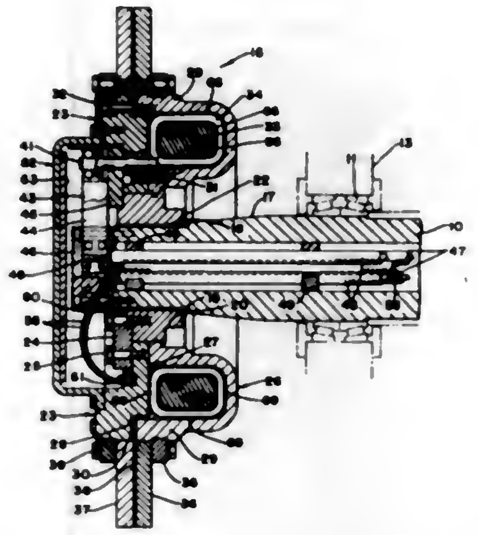
(5) Cure bands—bake armature minimum of six (6) hours at 160 to 170 degrees C.

3,388,459
METHOD OF FABRICATING SMALL ELECTRIC MOTORS
Richard W. Dochterman, Fort Wayne, Ind., assignor to General Electric Company, a corporation of New York
Filed Oct. 22, 1965, Ser. No. 501,556
4 Claims. (Cl. 29—596)



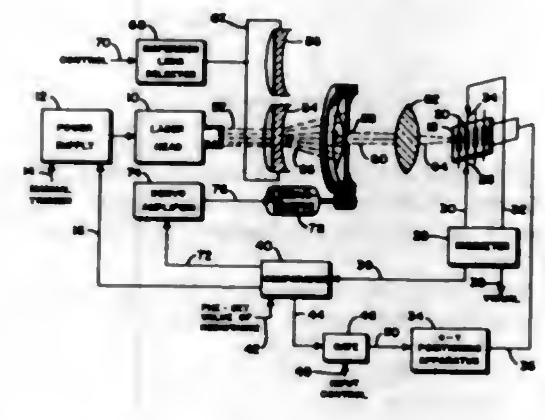
In the fabrication of machines having rotatable components, in particular small and fractional horsepower size electric motors having spaced apart self-aligning sleeve type bearings, the stator and rotatable assemblies are initially held together as a single unit with the shaft of the unit being received in the bores of self-aligning type bearings which are in turn received in complementary seats of a frame. The bearings and shaft are aligned by initially supporting the stator and rotatable assembly unit on the bearings, with the stator being in non-engaging and unsupported relation relative to the frame, and while this relation exists, securing the bearings in their frame seats. In this way, the weight of both the stator and rotatable assemblies may be used to effect alignment of the self-aligning bearings before the stator is secured to the frame, especially desirable in small motors having frames formed of single-piece relatively thin sheet material. Moreover, proper alignment between the bearings and shaft, and a proper air gap dimension between the stator and rotatable assembly may be consistently achieved on a mass production basis even though individual components of the motor are quite small and self-aligning type bearings are employed.

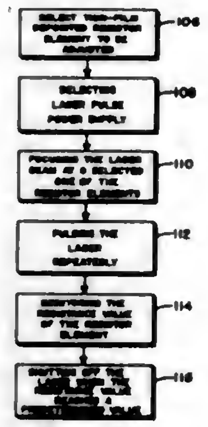
3,388,460
WELDING TRANSFORMER
Kenneth R. Keska, Bay Village, Ohio, assignor to The Yoder Company, Cleveland, Ohio, a corporation of Ohio
Application Dec. 6, 1961, Ser. No. 157,456, now Patent No. 3,146,332, dated Aug. 25, 1964, which is a continuation-in-part of application Ser. No. 109,599, May 12, 1961, now Patent No. 3,130,291, dated Apr. 21, 1964. Divided and this application July 2, 1964, Ser. No. 379,827
2 Claims. (Cl. 29—605)



Producing a rotary welding transformer by wrapping the primary winding on an annular core, filling the spaces between the turns with insulation and wrapping the filled coil with glass tape. This primary assembly is vacuum impregnated with an epoxy resin and, without curing, placed within an annular secondary case of U-shape or channel shape at a spacing of about .070 inch. A closure ring or cover is applied to the case contacting one edge on the latter but insulated from the other to form a single turn secondary to which a pair of rotary electrodes are attached respectively at the ring and the edge insulated from the former.

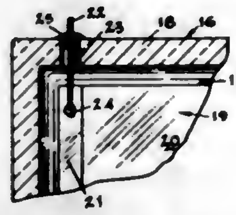
3,388,461
PRECISION ELECTRICAL COMPONENT ADJUSTMENT METHOD
Stanley J. Lins, Minneapolis, Minn., assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Filed Jan. 26, 1965, Ser. No. 428,117
1 Claim. (Cl. 29—610)




106
SELECTING LASER PULSE POWER SUPPLY
108
110
PULSING THE LASER REPEATEDLY
112
114
116

A method for trimming or tailoring the parameter values of electrical circuit components by applying energy pulses from a laser source to the component material to thereby change its parameter value in discrete steps, monitoring the change and terminating the application of the energy pulses when a desired parameter value is reached.

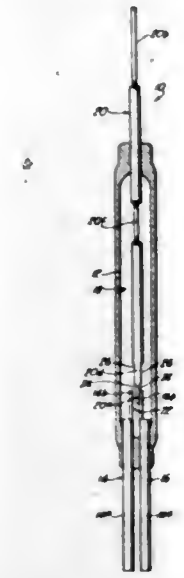
3,388,462
METHOD OF PRODUCING MULTIPLE GLASS SHEET GLAZING UNITS
Charles R. Boicey, Toledo, Ohio, assignor to Libbey-Owens-Ford Glass Company, Toledo, Ohio, a corporation of Ohio
Application Mar. 29, 1965, Ser. No. 443,342, which is a continuation-in-part of application Ser. No. 195,888, May 18, 1962. Divided and this application Oct. 18, 1965, Ser. No. 515,272
3 Claims. (Cl. 29—611)



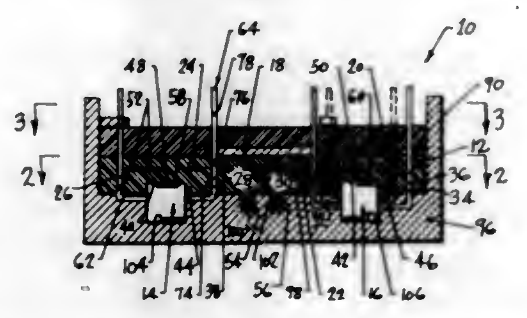
1. In a method of producing all-glass multiple sheet glazing units, the steps of, applying a transparent electrically conductive film to a surface on a first glass sheet, supporting a second glass sheet in spaced face-to-face relation to said surface on said first glass sheet, heating the marginal edge portions of said sheets to the fusion temperature of glass, positioning a tubular metallic insert between said heated portions, urging the heated edge portions toward one another and into fusion contact to form a peripheral edge wall enclosing an air space between the sheets and to seal said insert in the edge wall, inserting one end of a wire conductor through said insert and into contact with said film effecting a solder joint between said one end of said conductor and said film by heating said film and said conductor through one of said glass sheets by induction, and closing said insert around said conductor to hermetically seal said air space.

3,388,463
PROCESS OF SEALED SWITCH MANUFACTURE
Norman Insley, Nanuet, N.Y., assignor to C. P. Clare & Company, Chicago, Ill., a corporation of Delaware
Filed May 3, 1965, Ser. No. 452,725
7 Claims. (Cl. 29—622)

Sealed magnetic reed switches are made by a method in which the operating gap between the contact structures is set by a gauge portion formed on one of the contact structures. The contact structures are inserted into a glass housing and moved to an adjusting portion determined by the engagement of the contact structures along the gauge portion. This sets the operating gap. The contact structures are then shifted to an operating position in which the contact areas of the contact structures are aligned with each other by relative movement in a direction that maintains the preset gap setting in the operating position, the gauged portion is not in engagement. The contact structures are sealed in the glass housing in the operating position.



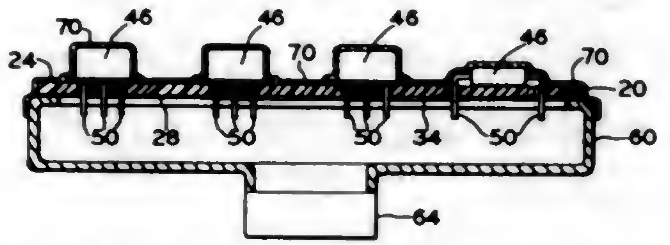
3,388,464
CIRCUIT BOARD
Arthur J. Pretty, Fayson Lakes, N.J., assignor to General Precision Systems Inc., a corporation of Delaware
Filed Dec. 9, 1965, Ser. No. 512,718
1 Claim. (Cl. 29—627)



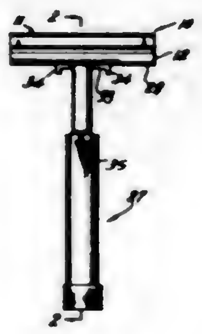
Method of making a circuit board by placing electrical components in component recesses of a mold bed with component leads extending upwards, pouring a first hardenable electrical insulation layer having thermal conduction material dispersed therethrough over said mold bed and between said components applying a layer of conductor strips over said first insulation layer between said components in a circuit pattern, pouring a second layer of insulating material over said conductive strips and said first layer and again applying conductor strips in a circuit pattern.

3,388,465
ELECTRONIC ASSEMBLY SOLDERING PROCESS
Arthur Johnston, Bound Brook, N.J., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed Mar. 1, 1965, Ser. No. 436,043
1 Claim. (Cl. 29—626)

The disclosure is of a method of preparing an electronic module which comprises preparing a printed circuit board having conductive runs and holes for receiving component leads, loosely mounting components on the board with their leads extending through holes in the board, applying a sheet of heat-sealable material over the components and securing the sheet to the board to hold the components in place, and then soldering the components to the board. The disclosure is also of apparatus prepared by this method.



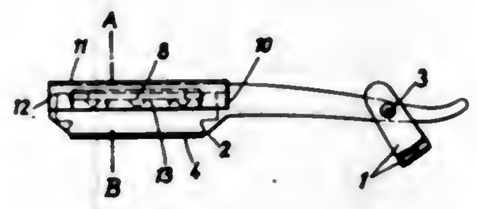
3,388,466
SAFETY RAZOR WITH A DISPOSABLE CASSETTE HEAD
Herbert Rosengren, Woodcliff Lake, N.J. 07635
Filed Oct. 20, 1965, Ser. No. 498,550
21 Claims. (Cl. 30—40)



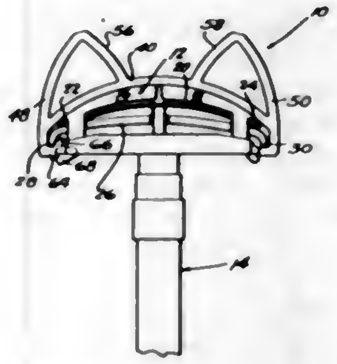
A safety razor is provided which comprises a cassette as the razor head as well as new and used razor blade storage unit. A handle engages the cassette and provides for advancing of the unused blades in the cassette to a use position intermediate to the new and used blade storage position. The cassette is generally of two concave shells with at least one slot between the two shells. The slot is the only opening which exposes the sharp blade edges. New blades which are generally asymmetrical are stored in flexed condition conforming generally to the interior contour of one of the shells. Used blades are stored in their flexed condition conforming generally to the interior contour of the outer shell. The new blades are advanced, one at a time, to the use position. The old blades are removed from the use position for capture in the storage position to be stored therein, again, under their flexed conditions. A mechanism in the razor handle communicating with the cassette and with the blades is provided. This mechanism in the handle advances, positions, and disposes the blades by coacting with the cassette and the specific asymmetrical shape of the blade or specific adaptors for conventional blades. Various handle mechanims are provided for this purpose as well as various blade shapes. The cassette is conveniently disposable after use.

3,388,467
OPEN RAZOR-TYPE SHAVING IMPLEMENT
Werner Martin, Solingen-Ohligs, Germany, assignor to Tuckmantel & Martin, Solingen-Ohligs, Germany, a German firm
Filed May 18, 1966, Ser. No. 551,139
Claims priority, application Germany, June 24, 1965, T 28,868
1 Claim. (Cl. 30—53)

An open razor-type shaving implement comprising of four parts, a handle, a razor-blade holder, a single edged razor blade carried by the razor-blade holder, and a pressure plate fitted over the holder in the area of the razor-blade, characterized by the design of the holder which is formed to accept the frustrated half of a double-edged conventional razor blade and without special adjustment position the razor blade so that only its cutting edge extends below the holder.

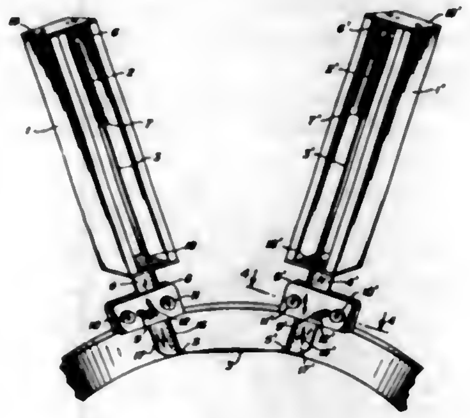


3,388,468
PROTECTIVE DEVICE
James P. Hamill, 4111 Connecticut Ave. NW., Washington, D.C. 20008
Filed Apr. 20, 1967, Ser. No. 632,235
1 Claim. (Cl. 30—90)



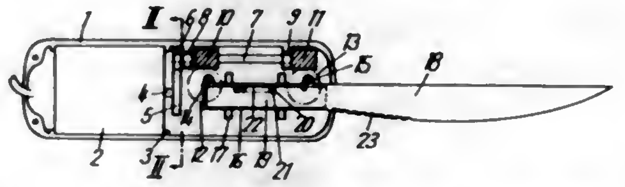
A cover for a safety razor, the cover being constructed of flexible material, including means for removable attachment to a safety razor and having means inter-engageable with a portion of the razor.

3,388,469
MEANS FOR REMOVING OR SLICING LAYERS OF BAKED GOODS FROM CONTAINERS
George W. Neiiendam, 473 E. 16th Place, Costa Mesa, Calif. 92627
Filed July 8, 1965, Ser. No. 470,483
4 Claims. (Cl. 30—116)



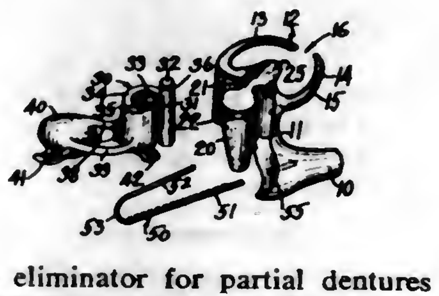
A mechanical device is provided for unsticking baked goods and other selected materials from the bottom of walled containers such as cake pans. The same device is also used to slice even layers of selected material of any desired thickness while the material remains within its container. The device consists of two knives with hollow handles, each handle containing an extension spring. Attached to each spring and connecting the two knives is a thin cutting strand. The strand is threaded through guides at the extreme tip of each of the knife blades. A depth gauge is attached to each knife blade to control the depth of penetration of the blades and cutting strand within the container. The gauges are adapted to allow for mounting of the device on the container rim. By mounting the device with the knife blades along the inside wall of the container and tracing the perimeter of the container with one or both knives, the cutting strand can be made to pass under the material in the container or through it at any desired depth.

3,388,470
POWER KNIFE
Willy Ufer, 23 Schutzenstrasse, 5903 Geisweid, Kreis Siegen, Germany
Filed Apr. 5, 1966, Ser. No. 540,225
Claims priority, application Germany, Apr. 7, 1965, U 11,601; Mar. 8, 1966, U 5,152
1 Claim. (Cl. 30—272)



This invention relates to a power knife and, more particularly, to apparatus for the cutting of meats and the like, wherein two cutting blades are arranged in side-by-side relationship and reciprocated in a predetermined fashion.

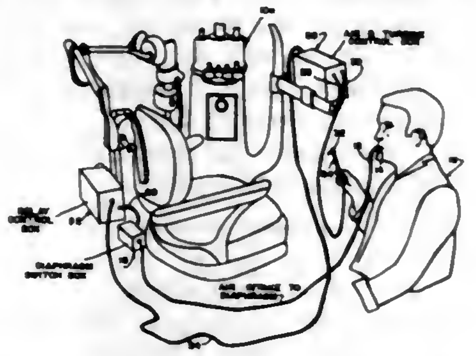
3,388,471
STRESS ELIMINATOR FOR PARTIAL DENTURES
William C. Thompson, 15548 Los Altos, Hacienda Heights, Calif. 91745
Filed July 28, 1965, Ser. No. 475,429
4 Claims. (Cl. 32—7)



The stress eliminator for partial dentures is in three units. The first unit comprises a lingual bar carrying at each end a vertical post having a clasp for engagement with an abutment tooth and a tapered dowel spaced from the vertical post. The second unit which cooperates with the first unit comprises a split socket for receiving the dowel of the first unit, the second unit having a framework including two hooks one of which is attached to the framework and the other hook attached to the split socket. The second unit is adapted to be embedded within the saddle which holds the artificial teeth, the relationship being such that the proximal end of the saddle abuts the distal end of the post when the dowel is received within the socket of the second unit. The third unit comprises a U-shaped cantilever spring which interconnects the first and second units in such a manner as to permit the denture to move vertically under occlusial pressure.

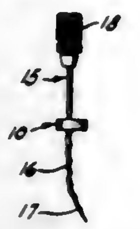
3,388,472
DENTAL DRILL CONTROL
Nathan Price Baker, 1311A Quarrier St., Charleston, W. Va. 25301
Filed Oct. 1, 1965, Ser. No. 492,082
13 Claims. (Cl. 32—23)

A control for a turbine type dental drill is provided in which the operator by means of a mouth held controller connected to a diaphragm switch which through relays and solenoid valves selectively controls the supply of air and water to the drill. Parallel foot actuated con-



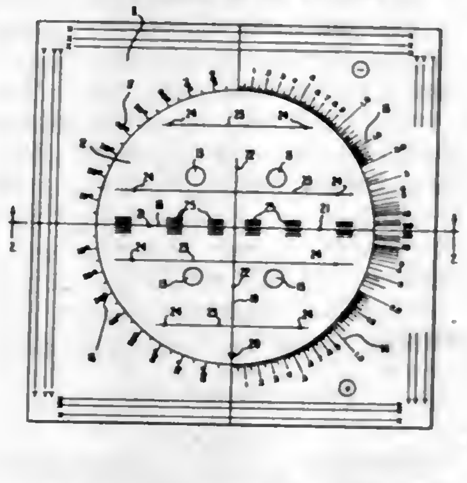
trols are also provided for conventional operation of the drill.

3,388,473
DEPTH CONTROL AND DIRECTION INDICATING DEVICE FOR ENDODONTIC OPERATIONS
William Loran, 112 Janes St., Mill Valley, Calif. 94941
Filed Sept. 20, 1965, Ser. No. 488,706
6 Claims. (Cl. 32—57)



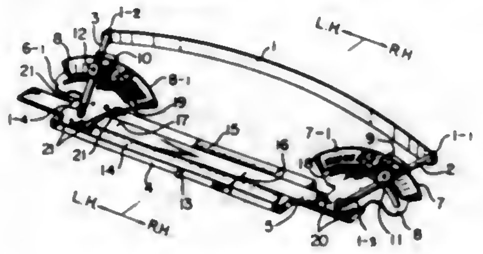
A depth control and direction indicating device for an endodontic instrument to control the depth of penetration thereof into a dental or pulpal canal and to indicate any angular displacement imparted to such instrument during its penetration. The device constitutes a thin wafer of resilient material penetrated by the instrument and frictionally gripping the same so as to maintain itself in any position of adjustment therealong. The undersurface of such wafer constitutes a stop limiting the depth of penetration of the instrument, and the wafer has a perimetric contour forming an indicator pointer at one location therealong to serve as an index of any angular displacement imparted to the instrument.

3,388,474
GEOMETRICAL INSTRUMENT
Lloyd K. Rosenvold and Robert J. Rosenvold, both of 1101 Main St., Montrose, Colo. 81401
Filed Nov. 30, 1964, Ser. No. 414,599
1 Claim. (Cl. 33—1)



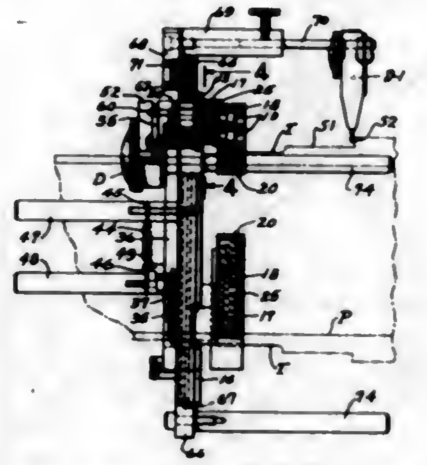
A geometrical instrument for measuring the slope of a curve at any point, for locating and drawing a tangent to a curve at any point, and for measuring the slope of a secant intersecting a curve at two or more points, said instrument comprising a transparent planar case member having a rotable circular member in a circular opening in the base, indicia on said circular member and base for indicating tangent values and slope values upon manipulation of the instrument and unevenly spaced lines on the base member and interrupted parallel lines on the circular member enabling the instrument to be precisely located over a particular point on a curve.

3,388,475
CENTERLESS UNIVERSAL ARC RULER
Toshio Yoshioka, Tokyo, Japan, assignor of sixty percent to Shigeo Tunashima, Nerima-ku, Tokyo, Japan
Filed Jan. 18, 1967, Ser. No. 610,165
1 Claim. (Cl. 33—177)



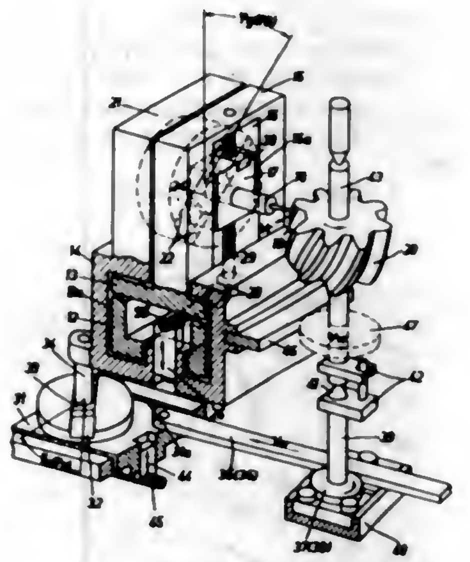
A rule for drawing circular arcs without having to lay out the center of curvature, comprising a flexible ruler member, two arms, one secured to each end of said flexible ruler member, the other ends of said arms being pivoted on arc-shaped discs, two relatively slideable members, one secured to each of said arc-shaped discs, one of said slideable members having two scales thereon adjacent the other slideable member for different radii of curvature, one scale being for convex arcs and the other being for concave arc, an index on the other slideable member for concave curves adjacent the scale on the one slideable member for concave curves and an index on the other slideable member for convex curves adjacent the scale on the one slideable member for convex curves, means on one slideable member for temporarily fixing one slideable member relative to the other, two arc-shaped scales on each disc, one for concave curves and one for convex curves and each having graduations corresponding to different radii of curvature and to the graduations on said one slideable member, index means on each arm cooperable with said arc-shaped scales, and means on said arms for temporarily fixing the arms relative to said discs.

3,388,476
DIAMETRICAL DIMENSIONAL GAGE WITH ROTATABLE CAMMING MEANS
Lowell C. Johnson, Granby, Conn., assignor to Johnson Gage Company, Bloomfield, Conn., a corporation of Connecticut
Filed Aug. 5, 1966, Ser. No. 570,595
12 Claims. (Cl. 33—178)



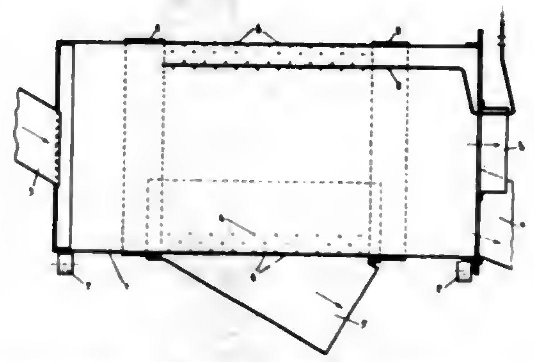
The diametrical dimensional gage described includes a ring frame having gaging elements which are propelled radially by spring means. For an external gage, the gaging surface of the gaging element projects inwardly beyond the inner dimension of any gage part. A circular cam ring has a cam surface for each gaging element which cam surface propels its element radially so that the gage can be moved axially with respect to the test part or surface and upon release of the cam ring, each gaging element moves radially into contact with the test surface. The gage preferably includes a rotatable ring mounted on the ring frame which ring carries one or more indicators to test the centricity and/or squareness of another surface or surfaces with respect to the cylindrical surface of the test part. The cam ring is mounted for rotation on the gaging elements or a part thereof.

3,388,477
APPARATUS FOR CHECKING TOOTH FLANKS, ESPECIALLY OF INVOLUTE STRAIGHT AND HELICAL SPUR GEARS
Willi Hemmert, Wipperfurth, Germany, assignor to W. Ferd. Klingelnberg Söhne, Remscheid, Germany
Filed Sept. 20, 1965, Ser. No. 488,519
Claims priority, application Germany, Sept. 19, 1964, K 54,040
10 Claims. (Cl. 33—179.5)



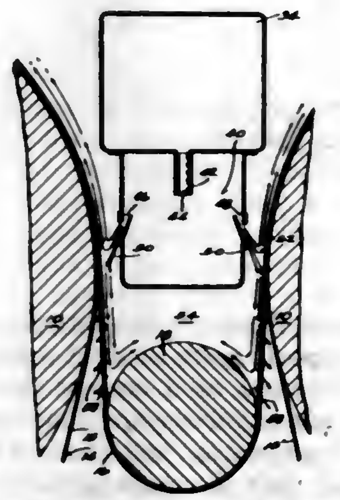
1. An apparatus for checking the tooth flanks of straight and helical gears with involute teeth comprising; gear support means for supporting a gear to be checked on a predetermined axis, a carriage moveable in a direction perpendicular to said axis and having feeler means thereon for engagement with the flank of a gear tooth of a gear on said gear support means, a ruler means, means operatively connecting said ruler means to said carriage for movement therewith also in a direction perpendicular to said axis, disc-like rolling cylinder means fixed to said gear support means on said axis, means for effecting substantially slip-free frictional engagement of said ruler means with said cylinder means to cause rotation of a gear on said gear support means simultaneously with movement of said carriage in its said direction, said ruler means comprising a first ruler member fixed to the carriage so as to take the same movement as the carriage and at least second and third ruler members, said means operatively connecting said ruler means to said carriage including motion transmitting means connecting the carriage to said second and third ruler members and adjustable for varying the amount of movement of the second and third ruler members for each unit of movement of the carriage, said cylinder means comprising a cylinder member for engagement by each said ruler member, and means for effecting selective engagement of the ruler members with their respective cylinder members, at least the cylinder members engageable by said second and third ruler members being of respectively different diameters.

3,388,478
METHOD FOR COOLING CASTINGS
Herbert Vissers, Nieuw Vennep, Netherlands, assignor to Landbouwwerktuigen- en Machinefabriek H. Vissers, N.V., Nieuw Vennep, Netherlands, a company of the Netherlands
Filed Sept. 23, 1965, Ser. No. 489,714
Claims priority, application Netherlands, Oct. 9, 1964, 6,411,744
4 Claims. (Cl. 34—13)



The mold sand and cast metal contents of the mold flask are dumped into a horizontal drum wherein these contents are tumbled into intimate contact to simultaneously cool the cast metal and to dry the mold sand. The drum has an imperforate inlet section wherein the cooling and drying mainly takes place and beyond this is a perforate section from which the dry mold sand is discharged. A sleeve around the drum and longitudinally adjustable thereon may be positioned to block off part of the perforate section.

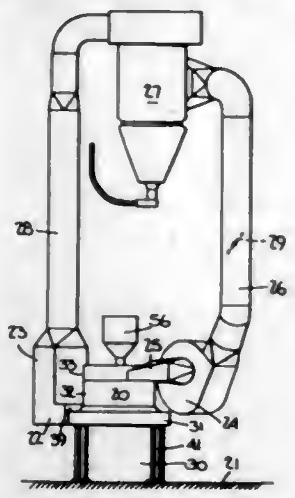
3,388,479
POCKET VENTILATOR FOR WEB DRYING EQUIPMENT
Thomas A. Gardner, 513 Clark St., Neenah, Wis. 54956
Continuation-in-part of abandoned application Ser. No. 486,760, Sept. 13, 1965. This application Apr. 20, 1967, Ser. No. 632,315
15 Claims. (Cl. 34—15)



Drying gas is supplied to the space between dryer cylinders and a felt roll by a manifold substantially equal in length to the width of the web to be dried. Pressure adequate to force the gas through the felt or such web and into the pocket is developed by directing the discharge from the manifold at an acute angle to the felt or web at or near the points of tangency to the respective cylinders, all parts of the manifold being spaced from the felt or web with sufficient clearance to avoid contact in the event of irregularities in the web to be dried, the pressure maintaining seal being effected by requiring some of the gas to reverse its direction between the manifold and the dryer cylinders.

3,388,480
FLUIDIZING APPARATUS FOR ROASTING

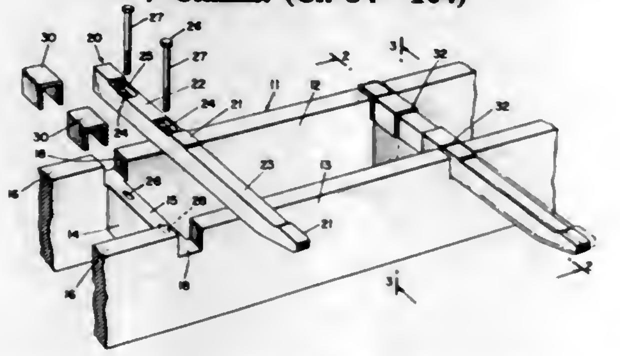
Joseph L. Smith, Jr., Concord, and Joseph H. Keenan, Belmont, Mass., assignors to Blaw-Knox Company, Pittsburgh, Pa., a corporation of Delaware
Filed Aug. 25, 1964, Ser. No. 392,004
9 Claims. (Cl. 34—57)



An organic food granule treating apparatus has a circular treating chamber with a perforated shelf passing treating gases to fluidize the granules in a dense phase, and has sets of horizontal parallel vanes curved to the vertical positioned above the shelf and within the dense phase of the granules. The vanes of adjacent sets are at an angle to horizontally circulate the granules around the treating chamber to provide a uniform treatment of the granules. The shelf is formed in sections rotatably mounted and actuated between a closed treating position and an open discharge position.

3,388,481
GRATE SUPPORT FRAME FOR CLINKER COOLER

William J. Gillman, 15800 Rim Rock Road, Apple Valley, Calif. 92307
Filed Mar. 13, 1967, Ser. No. 622,722
7 Claims. (Cl. 34—164)

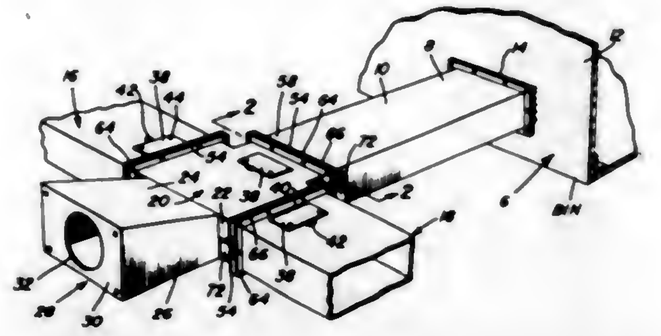


A fabricated metal frame means with forwardly extending fingers for supporting the several grate plates which form the grate structure of a cement clinker cooler, in which the fingers are angularly and longitudinally adjustable, separately replaceable, and made of higher heat-resisting alloy steel than the main portion of the support frames, which steel is fabricated into fingers by casting.

3,388,482
AIRFLOW CONTROL SYSTEM FOR GRAIN DRYING

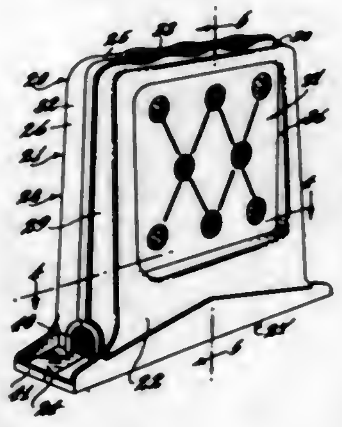
Peter A. Rotenberger, R.R. 4, Box 63, Hilltop Trailer Court, Iowa City, Iowa 52240
Filed May 18, 1966, Ser. No. 550,974
5 Claims. (Cl. 34—210)

The grain drying means disclosed comprehends a box-like duct assembling and uniting header providing an airtight distributing chamber. A coplanar inlet unit is rigidly communicatively connected wtih a marginal wall of the header. This unit is funnel-like in construction and has an apertured wall to accommodate an applicable and removable centrifugal blower fan. At least one duct (usually several ducts) has an air intake end rigidly communicatively joined by airtight connecting means to the header. The discharge end of the duct is communicatively joined to a coplanar stationary bin. Manually regulable valving means is provided to control the flow of drying air through the duct from the header to the bin.



3,388,483
COMPUTER-TYPE GAME AND TEACHING AID

Joseph A. Weisbecker, 1220 Wayne Ave., Cherry Hill, N.J. 08034
Continuation-in-part of application Ser. No. 462,349, June 8, 1965. This application July 21, 1966, Ser. No. 566,881
3 Claims. (Cl. 35—30)

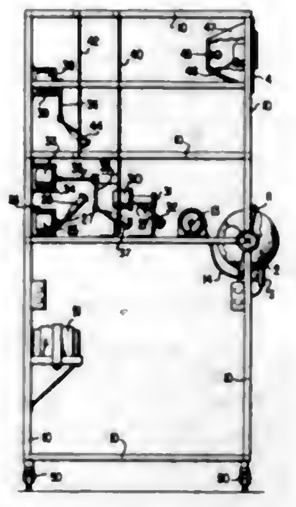


This invention relates essentially to an instruction and play device of the computer type wherein an enclosure is provided to receive checks, which serve to produce computer effects upon gravitational movement through the enclosure.

3,388,484
DYNAMIC ORBITAL TRAINER

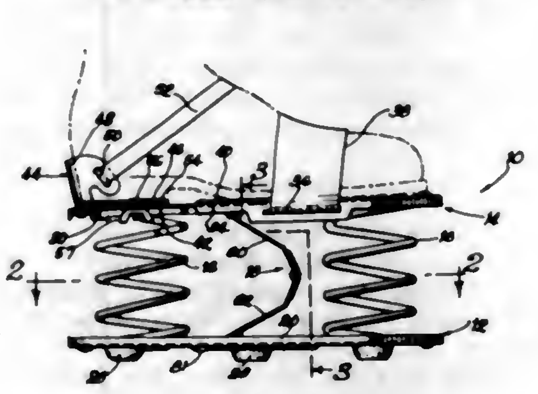
Donald C. Kipfer, 3449 S. Court St., Montgomery, Ala. 36105
Filed Sept. 10, 1964, Ser. No. 395,499
6 Claims. (Cl. 35—47)

1. A training device for providing visual representation of orbital satellite techniques comprising:
a screen responsive to illumination for providing visible indications,
a sphere carrying the representations of the earth's geography mounted for rotation within the plane of said screen,
at least one lamp directed toward said screen for projecting a spot of light simulating a satellite thereon,
motor means drivingly connected by means of a pivoted connection to said lamp for driving said lamp at a substantially constant angular speed of rotation about an axis directed substantially through said sphere, and
control means for guiding said lamp along a path to produce movement of said spot of light on said screen in a closed elliptical pattern at a continuously varying velocity about said sphere, said control means consisting solely of a template having a guide and means for causing said lamp to follow said guide for determining the path of movement of said lamp rotated by said motor means, which guide presents an elliptical pattern in the plane perpendicular to said axis of rotation which passes through one focus of said pattern, said lamp pivoting on said motor means during rotation along said path.



3,388,485
JUMPING SHOES

George Pierce, Chicago, Ill., assignor to Rapaport Brothers, Inc., a corporation of Illinois
Filed Sept. 1, 1966, Ser. No. 576,742
3 Claims. (Cl. 36—7.8)

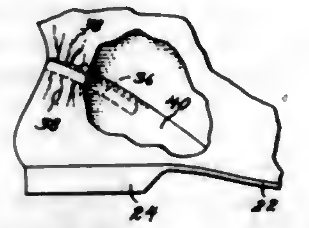


A jumping shoe having a base member and a foot support member with coil springs therebetween at the toe and heel, and stabilizing means which permits relative highwise movement between the base member and the support member but prevents sidewise movement of the foot support member relative to the base member. The stabilizing means consists of two angular members, of the same width as the base and support members, hinged to each other at one end and to the base and support members, respectively, at the other ends.

3,388,486
FOOT COVERING

Frederick J. Diamant, % Desco Shoe Corporation, 209 W. 33rd St., New York, N.Y. 10001
Filed Aug. 2, 1965, Ser. No. 476,440
1 Claim. (Cl. 36—58.5)

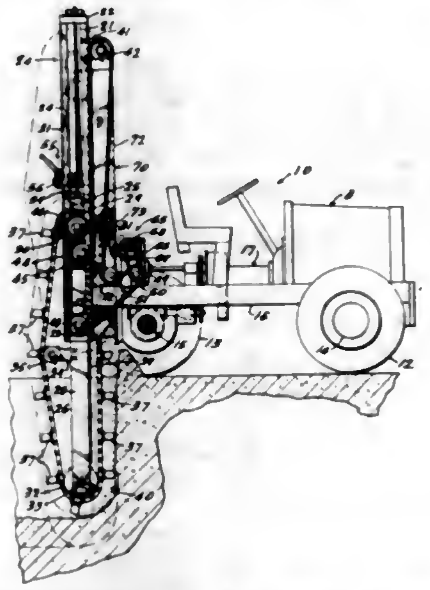
The disclosure describes an article of footwear where an elastic goring is substituted for a reinforced counter by attaching an elastic strip, under sufficient tension to form gathers in the material of the rear quarter and the upper, to the upper adjacent the top of a counter liner whose topmost edge extends upwardly from a point on the footwear adjacent the shank of the sole, around the rear of the footwear at the height above the heel of a normal counter and then downward to a corresponding point adjacent the shank of the sole on the opposite side, the goring being positioned between the counter liner and the rear quarter.



This invention relates to a foot covering and a method of making the same. More particularly, this invention relates to a foot covering having a novel goring secured to the quarter portion thereof.

3,388,487
TRENCHING APPARATUS

Raymond B. Peck, Rte. 1, Holgate, Ohio 43527
Filed July 16, 1965, Ser. No. 472,610
10 Claims. (Cl. 37—90)



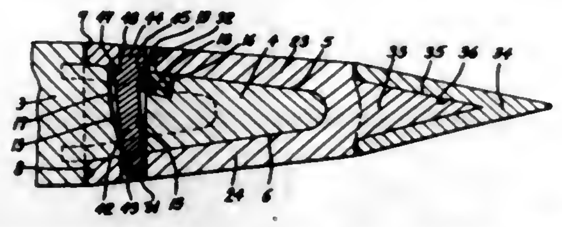
Trenching apparatus for use with a self-propelled vehicle. The trenching apparatus includes a support adjacent the rear of the vehicle. The support mounts a digger assembly for movement along a generally vertical guide path. The digger assembly includes a chain support member and a closed loop digging chain. An earth backboard member is mounted interiorly of the chain loop and a shielding member is spaced forwardly of the backboard member. A portion of the earth backboard member and the shielding member define a passageway for excavated earth. Earth removal mechanism is mounted adjacent the vehicle and forwardly of the chain loop. The apparatus also includes chain driving means and means for adjustably positioning the digger assembly along the guide path.

3,388,488
BUCKET AND ADAPTOR ASSEMBLY FOR DIGGING TEETH

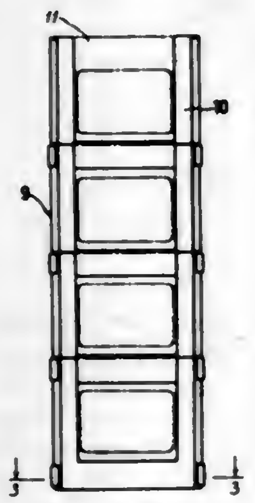
Gérard Duplessis, 10806 St. Denis St., Montreal, Quebec, Canada
Filed Nov. 29, 1965, Ser. No. 510,221
6 Claims. (Cl. 37—142)

1. A digging bucket lip and tooth adaptor removably carried thereby, said lip having a working edge and a plurality of adaptor-receiving forwardly tapered noses formed on said working edge at spaced locations there-

along, each of said noses having a central slot, each of said noses further having a pair of transverse holes extending therethrough, a tooth adaptor removably fitted on said nose, said adaptor comprising a pair of diverging walls joined together at their forward ends, a tooth-receiving forwardly tapered nose protruding from said joined ends of said walls, a web centrally interconnecting said walls along substantially their entire lengths, said walls removably fitted over said adaptor-receiving nose with said adaptor web engaging said slot, said wall having apertures made therethrough on each side of said web, registering with said transverse holes of said adaptor-receiving nose, and locking pins removably inserted in said registering apertures and holes to lock said adaptor on said adaptor-receiving nose, and resilient blocks inserted in said holes and disposed forwardly of said pins and between said pins and adaptor-receiving nose to urge said pins and adaptor towards said lip.



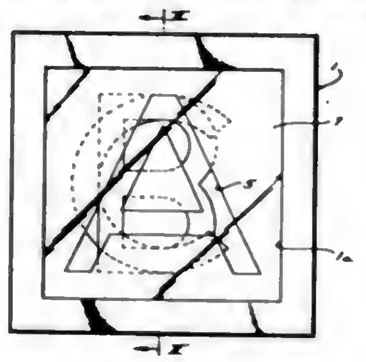
3,388,489
DISPLAY DEVICE FOR TRANSPARENCIES
Jan Ehn, 9 Mastergatan, Osterbybruk, Sweden
Filed June 7, 1966, Ser. No. 555,906
Claims priority, application Sweden, June 10, 1965, 7,622/65
3 Claims. (Cl. 40—106.1)



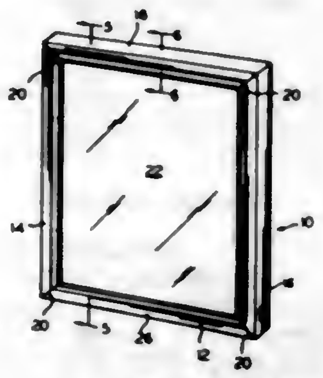
A display device for transparencies has a series of interlinked frames wherein each frame is slideable relative to its adjacent front frame between an aligned position in which all the frames are stacked and fit into a storage box and, respectively, an extended chain position wherein all the frames are off-set from each other so that all the transparencies thereof are exposed to view simultaneously.

3,388,490
SIGN WITH COLORED FLUID
Ernst Stechemesser, Gottingen, Germany, assignor to Gatag Limited, Zug, Switzerland
Filed Nov. 17, 1965, Ser. No. 508,241
Claims priority, application Germany, Nov. 28, 1964, G 42,134
16 Claims. (Cl. 40—106.21)

A sign including transparent panel means provided with a plurality of sealed channels each representing a symbol in which colored fluid may be individually fed to make the respective symbol visible and which in turn will become again invisible when the colored fluid is discharged from the respective channel.

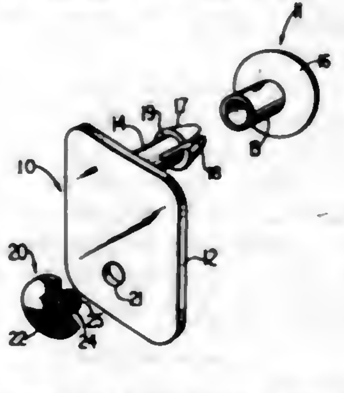


3,388,491
LARGE WIDTH METAL PICTURE FRAMES AND CORNER JOINT THEREFOR
Maurice Spertus, Highland Park, Ill., assignor to Metalcraft Corp., Chicago, Ill.
Filed Apr. 15, 1966, Ser. No. 542,901
5 Claims. (Cl. 40—152)



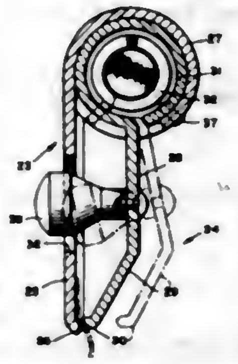
A picture frame moulding and picture frame made thereof has a ledge formed by crimping an intermediate portion of the front wall of the moulding, said ledge abuts the marginal edges of the picture thereby limiting the distance the picture and glass protrude into the moulding frame sides.

3,388,492
ANIMAL EAR TAG
Harley E. Nichols, Jr., Hardwick, Vt., assignor to C. H. Dana Co. Inc., Hyde Park, Vt., a corporation of New Hampshire
Filed July 12, 1966, Ser. No. 564,674
4 Claims. (Cl. 40—301)



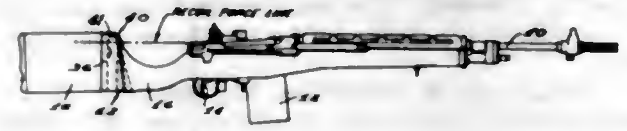
An animal ear tag for identifying domestic cattle such as sheep, cows, etc. including a tag member which is freely swiveled in a bushing member extending through a hole in the ear so that the hole will not be enlarged. The tag member has a post on one side with a tapered, yieldable enlargement at the free end for engagement with a flange on the bushing member. Provision is made for growth in the thickness of the ear. The tag member has an aperture in the lower end and a symbol member is snap fitted into the aperture.

3,388,493
CLAMPING DEVICE COMBINED WITH A SHOPPING BASKET
James M. Greenwell, 3063 Wailani Road, Honolulu, Hawaii 96813
Filed Oct. 5, 1966, Ser. No. 584,388
9 Claims. (Cl. 40—308)



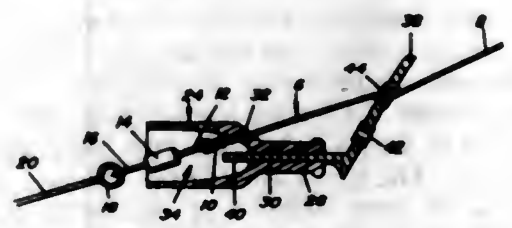
1. In a shopping cart having a horizontal tubular handle in combination, clamping means for sheet material, said clamping means including a fixed jaw having a horizontally elongated gripping portion and a movable jaw having a horizontally elongated gripping portion, said movable jaw being mounted within the tubular handle for limited rotation about an axis parallel with the axis of the handle, and resilient means for urging the gripping portion of the movable jaw into coacting engagement with the gripping portion of the fixed jaw.

3,388,494
GUNSTOCK OF TWO SECTIONS PIVOTAL RELATIVE TO EACH OTHER
John W. Kimball, 1216 Garden Road, Milford, Mich. 48042
Filed Mar. 25, 1966, Ser. No. 537,353
19 Claims. (Cl. 42—74)



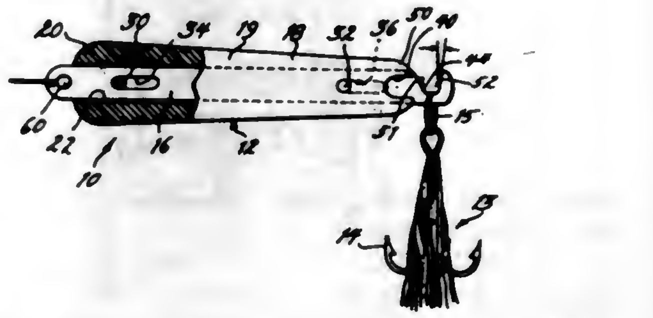
This invention relates to improvements in a gunstock construction and more particularly to a device which substantially reduces both the recoil and the tendency of the gun to move upward or jerk when it is fired. The stock is formed with two sections having a flexible strap interposed between the sections adjacent to the top of the stock and a spring between the sections below the strap so that the two sections can rotate in a segment of an arc relative to each other and to the top of the stock. This structure creates a moment arm or couple which opposes the tendency of the gun to move upward when it is fired.

3,388,495
LEADER WITH COMPOSITE SLIDING LURE
William D. Minser, R.F.D. 1, Port Angeles, Wash. 98362
Filed Aug. 24, 1966, Ser. No. 574,725
7 Claims. (Cl. 43—42.05)



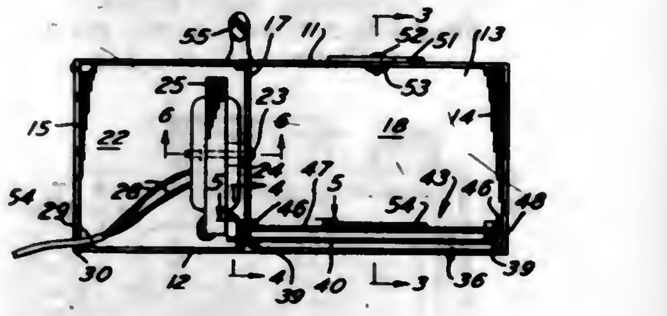
6. A composite lure capable of being slidingly threaded on a hook-equipped fishing line leader comprising, in combination, a first component part having the shape of a cigar holder embodying a hollow cup-like body portion open at a rearward end and substantially closed at its forward end and merging into a reduced forward and terminal portion having a restricted axial bore, a second component part complemental to said first component part and embodying a shank fitted telescopingly, frictionally and retentively into said bore, said shank provided at its leading end with an integral lure deflecting and animating oblique angled baffle-type vane, the closed end of said cup-like body portion having a restricted off-center aperture providing a guide opening, said vane having at least one guide opening orientated and aligned with said first-named guide opening.

3,388,496
FISH LURE
Fred C. Good, 809 Gilbert Road, Cheltenham, Pa. 19012
Continuation-in-part of application Ser. No. 370,183, May 26, 1964. This application Jan. 14, 1966, Ser. No. 532,488
3 Claims. (Cl. 43—42.08)



A fish lure having an elongated body comprising two elongated sheaths. One of the sheaths has an open ended slot closed on one side by the other sheath and an elongated bar slidable in the slot. A fastening means for securing the sheaths together and retaining the bar in the slot. The bar having line attaching means at one end and a hook attaching means at the other end. The bar being of resilient material and initially bowed so as to be under tension when assembled between the sheaths.

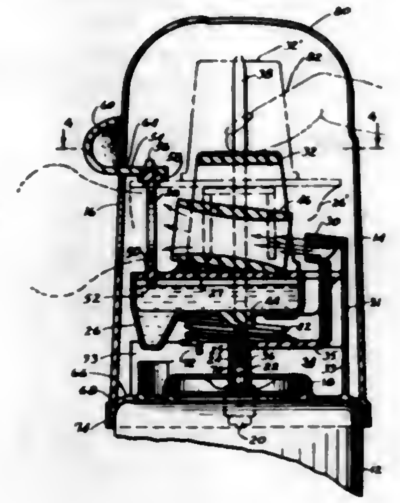
3,388,497
RODENT EXTERMINATORS
Irving Levine, Ventnor, N.J., assignor to Castle Tool Specialty Company, Inc., Lansdowne, Pa., a corporation of Pennsylvania
Filed Jan. 25, 1966, Ser. No. 522,963
8 Claims. (Cl. 43—98)



1. A rodent exterminator comprising
a casing having bottom, rear, side and top walls,
an interior partition wall separating the interior of the casing into a plurality of spaces, one of which is an open front rodent access space,
a lower horizontally disposed grill member in said rodent access space,
an upper horizontally disposed grill member in said rodent access space insulated from but closely spaced with respect to said lower grill member,

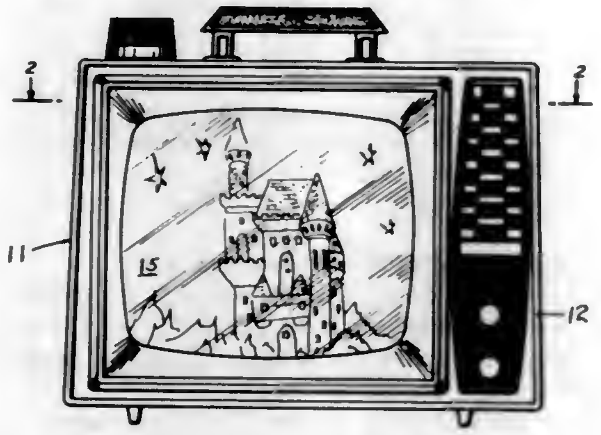
means connecting said grill members at one end to said partition wall,
said grill members providing electrodes for simultaneous contact by a rodent,
electric current supply means in said casing having output connections respectively connected to said grill members to impose a voltage differential thereon, and
a bait receiving platform in said rodent access space spaced from said open front.

3,388,498
BUBBLE MAKING TOY
Norman A. Greene, 154 Highridge Road,
New Rochelle, N.Y. 10804
Filed Jan. 5, 1966, Ser. No. 518,850
12 Claims. (Cl. 46—8)



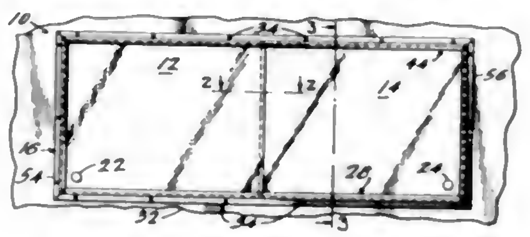
1. A bubble making toy comprising a can of pressurized gas, a valve at the top of said can, a manually operable finger piece, a hollow cap secured on top of said can, said hollow cap enclosing a reservoir of bubble liquid, a bubble forming loop, means mounting said loop and reservoir for relative movement to immerse and withdraw the loop from the bubble liquid in the reservoir, and a nozzle receiving gas from said valve and directing it toward the loop, said cap being open for the escape of bubbles, said manually operable finger piece separating said loop and reservoir and opening said valve to blow a bubble.

3,388,499
SIMULATED TELEVISION SET INCLUDING DIORAMA AND MUSIC BOX
John Mercorelli, 441 Summer Ave.,
Newark, N.J. 07104
Filed July 2, 1965, Ser. No. 469,295
5 Claims. (Cl. 46—14)



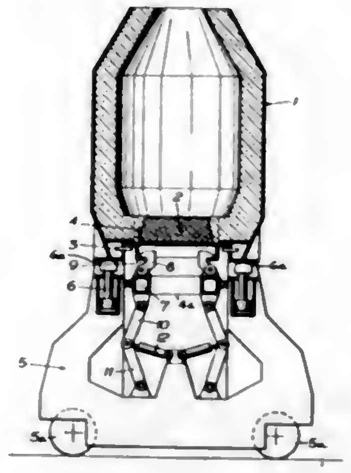
A toy simulated television set providing a feed spool and a take-up spool for a diorama display that may be rolled from one spool to the other; the take-up spool is driven by a music box which is rewound by drawing the diorama from the take-up spool back onto the feed spool.

3,388,500
SLIDING PANEL ASSEMBLY
Robert D. MacDonald, Tecumseh, Mich., assignor to Cardinal of Adrian, Inc., Adrian, Mich., a corporation of Michigan
Filed Mar. 7, 1966, Ser. No. 540,444
10 Claims. (Cl. 49—130)



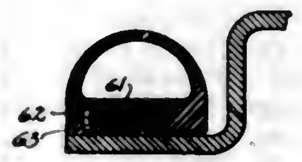
A low-cost sliding winding for a travel trailer includes lightweight, shatter-proof plastic panels and a lightweight, low-cost extruded plastic frame. One of the panels has ridges extending longitudinally thereof at the upper and lower edges to space the adjacent surfaces of the panels and prevent scratching. The edges of the panels are beveled and, when closed, are in contact throughout their lengths to provide a substantially transparent yet reasonably tight joint. The track arrangement for the panels includes extruded, plastic elements, the lower one of which has a resilient, integral track flange which urges the transparent panels toward a common plane.

3,388,501
APPARATUS FOR REMOVING AND INSTALLING CRUCIBLE OR CONVERTER BOTTOMS
Othmar Puhringer and Ronald Spannlang, Linz, Austria, assignors to Vereinigte Osterreichische Eisen- und Stahlwerke Aktiengesellschaft, Linz, Austria, a company of Austria
Filed Apr. 5, 1966, Ser. No. 540,267
Claims priority, application Austria, Apr. 21, 1965, A 3,648/65
6 Claims. (Cl. 49—324)



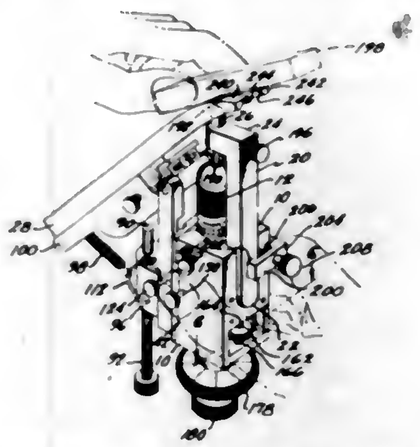
Devices for removing the bottom from a metal-refining vessel in which a carrier for the bottom is attached thereto by hooks and keepers and the bottom is severed and withdrawn from the vessel shell by the flexing by hydraulic runs of toggle linkages having upper ends coupled to the carrier. The lower ends of the linkages are coupled to a frame in turn coupled by hydraulic props to the vessel shell so as to convert the pulling force on the bottom into a pushing force on the shell. The frame may be provided by a wheeled support carriage.

3,388,502
SEALING STRUCTURE
Alfons W. Ceyer, Berwyn, and Leonidas Jaras, Chicago, Ill., assignors, by mesne assignments, to Evans Products Company, Plymouth, Mich., a corporation of Delaware
Filed Sept. 27, 1965, Ser. No. 490,255
8 Claims. (Cl. 49—493)



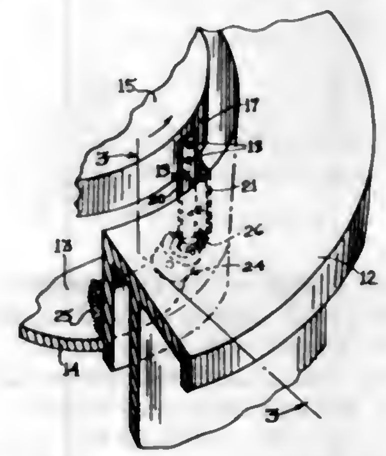
A sealing arrangement for a railway car side door including several embodiments of flexible seals and attaching members supported around the periphery of the door and adapted to engage the car side wall structure.

3,388,503
TOOL TIP SHARPENING DEVICE
Gene Uberti, Duarte, Calif.
(652 King St., Monrovia, Calif. 91016)
Filed Mar. 15, 1965, Ser. No. 439,675
9 Claims. (Cl. 51—33)



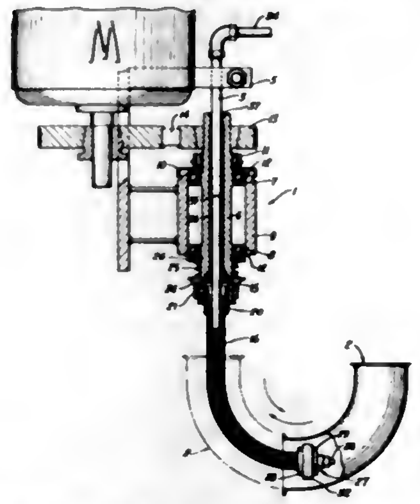
A tool tip sharpening jig having means for supporting a work tool to be sharpened in selected longitudinal and angular positions of adjustment along and about its axis, and means for supporting a sharpening tool in selected longitudinal, lateral, and angular positions of adjustment relative to the work tool.

3,388,504
BRUSH OR WIPER ATTACHMENT FOR ROTATABLE LAP PLATES OF A LAPPING MACHINE
Lawrence Day, Chicago, Ill., assignor to Spitfire Tool and Machine Company, Inc., Chicago, Ill., a corporation of Illinois
Filed July 23, 1965, Ser. No. 474,349
5 Claims. (Cl. 51—129)



A wiper brush attachment for a rotating lap plate of a lapping machine which is removably connected to the peripheral edge of the plate and extends downwardly therefrom into a well which houses the lap plate and in contact with the floor of the well to sweep contaminations off the floor and into a suitable drain.

3,388,505
POLISHING APPARATUS
Peter M. Dreiling, Sheboygan, Wis., assignor to Hi-Lite Polishing Machine Company, Inc., Sheboygan, Wis., a corporation of Wisconsin
Filed Jan. 12, 1965, Ser. No. 424,909
10 Claims. (Cl. 51—134.5)

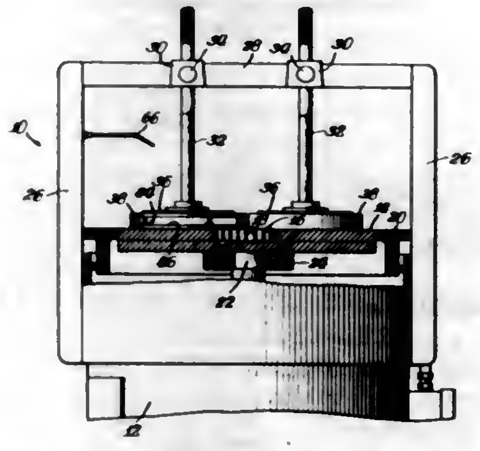


A polishing apparatus including a fixed, non-rotating core shaped to the configuration of the part to be polished. A spring assembly, which includes at least two helical coil springs wound in opposite directions, is disposed around the fixed core. One end of the spring assembly is connected to a drive mechanism and the other end of the spring assembly carries an abrasive member which is adapted to polish the surface of the workpiece.

The core is secured to a fixed support and the spring assembly provides a positive drive to rotate the abrasive member while the non-rotating core maintains alignment of the abrasive member with the workpiece.

In addition, the central non-rotating core is provided with a longitudinal passage and a lubricating medium is introduced into the passage and is discharged through a series of radial ports to lubricate the spring assembly as well as the workpiece.

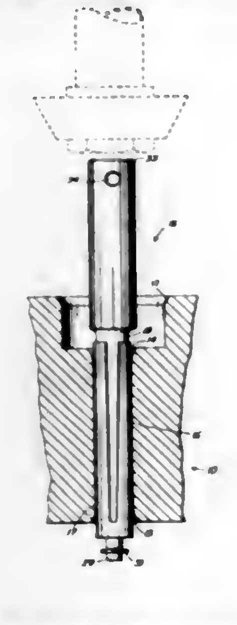
3,388,506
LAP LIMITING FIXTURE MEANS
Stephen A. Boettcher, Deerfield, Ill., assignor to Speedlap Corporation, Skokie, Ill., a corporation of Illinois
Filed Nov. 16, 1964, Ser. No. 411,225
16 Claims. (Cl. 51—129)



1. For use in a lapping machine for predetermining the extent of lapping of workpieces positioned on a rotating lapping disc within a truing and retaining ring and beneath a pressure plate having a lower surface in a

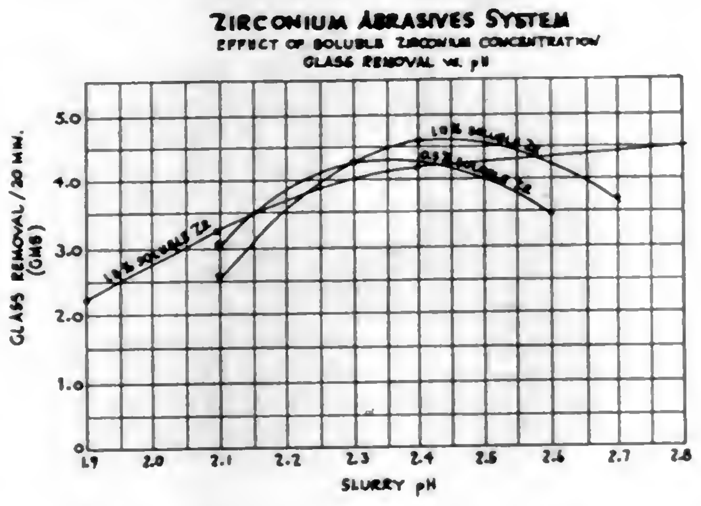
single plane engageable with the workpieces, means independent of the pressure plate resting on the lapping disc within the truing and retaining ring and being engageable by the lower surface of the pressure plate for arresting downward movement thereof, and the overall vertical extent of said last-named means coinciding with the desired ultimate vertical extent of the workpieces.

3,388,507
SELF-CENTERING GUIDE
Marvin H. Humbert, Cedar Rapids, Iowa, assignor to The Cedar Rapids Engineering Co., Inc., Cedar Rapids, Iowa, a corporation of Iowa
Filed July 23, 1965, Ser. No. 474,336
5 Claims. (Cl. 51—262)



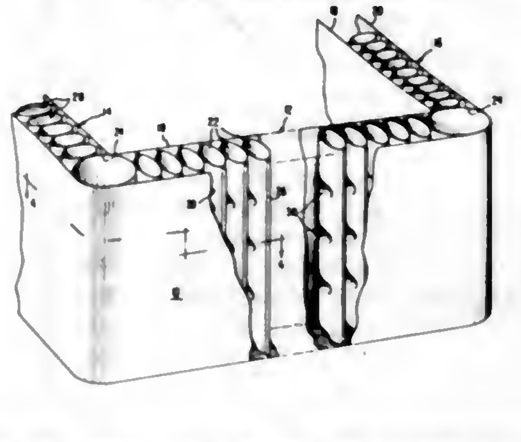
A guide for a valve seat grinder which centers in the least worn portion of the valve guide and which has a sleeve with a slow external taper and a faster internal taper and a tapered pin received in the sleeve to expand it and lock it into the valve guide.

3,388,508
GLASS POLISHING COMPOSITION CONTAINING DISSOLVED ZIRCONIUM AND ZIRCONIUM OXIDE
John S. Sieger, Allison Park, Pa., and Donald E. Cox, Corpus Christi, Tex., assignors to Pittsburgh Plate Glass Company, Pittsburgh, Pa., a corporation of Pennsylvania
Continuation-in-part of application Ser. No. 403,980, Oct. 15, 1964. This application Aug. 23, 1967, Ser. No. 662,772
12 Claims. (Cl. 51—284)



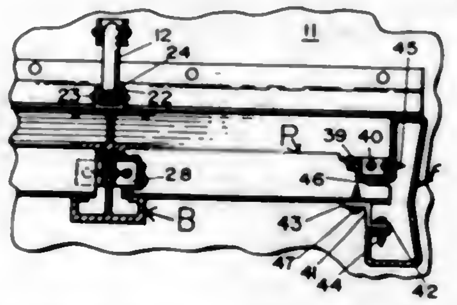
A glass polishing composition is disclosed which is an aqueous slurry containing dissolved zirconium and ZrO_2 in solid form, and having a pH in the range of 1.5 to 4.5. Methods of polishing glass using the dissolved slurry are described. Dissolved zirconium is present in amount of at least 0.05 percent by weight. Dispersed ZrO_2 is present in amounts of at least 0.25 percent by weight. During polishing with this composition, pH control is described.

3,388,509
INFLATABLE CONSTRUCTION PANELS AND METHOD OF MAKING SAME
Raul L. Mora, 3230 SW. 23rd Court, Fort Lauderdale, Fla. 33312
Filed Mar. 9, 1965, Ser. No. 438,337
16 Claims. (Cl. 52—2)



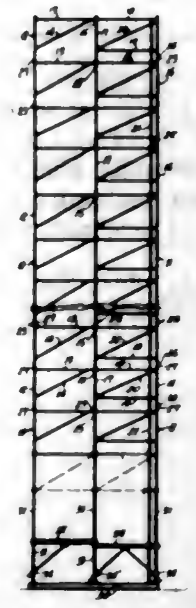
3. An enclosure skin for making a constructional panel or the like comprising a pair of transversely spaced flexible facing skins, a plurality of inflatable tubular members located between said facing skins and fixed thereto to impart a predetermined shape to said facing skins upon inflation, said tubular members being arranged in generally parallel and side by side relationship substantially throughout the extent of said facing skins, means connecting the opposite sides of each of said tubular members to said facing skins respectively, said tubular members being constructed and arranged such that upon inflation sufficient to tension said facing skins, longitudinal side portions of adjacent tubular members will be compressive contact with each other wherein opposite sides of each tubular member are provided with a number of recesses forming transverse passages with corresponding recesses formed in adjacent tubular members upon inflation of the tubular members.

3,388,510
ROOF STRUCTURE
Edward C. Smith and Hubert P. Graham, both of 627 SW. 27th Ave., Miami, Fla. 33135
Filed Oct. 18, 1965, Ser. No. 496,912
4 Claims. (Cl. 52—15)



A roof structure having a plurality of spaced and parallel beams, corrugated panels extending between the beams and supported at their edge portions, and fascia members mounted about the roof structure, the beams forming a trough for collecting and disposing rain flowing from the corrugated panels and the fascia members defining a chamber for receiving the ends of the corrugated panels and forming a trough for receiving the rain water from the troughs of the beams.

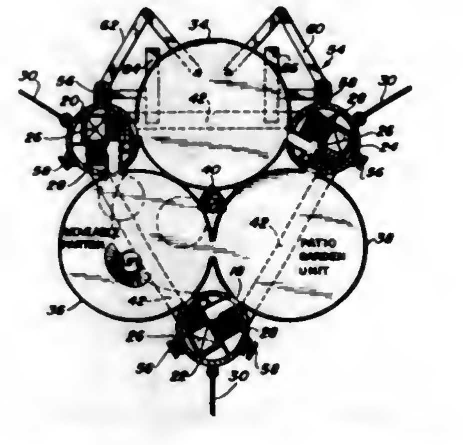
3,388,511
MULTIPLE SHAFT TOWER CONSTRUCTION
Frederic A. Davidson, Jr., New Rochelle, and Roger D. Schalge, Brooklyn, N.Y., assignors to Harsco Corporation, Wormleysburg, Pa., a corporation of Delaware
Continuation-in-part of application Ser. No. 518,052, Jan. 3, 1966. This application Nov. 29, 1966, Ser. No. 597,717
5 Claims. (Cl. 52—30)



1. A multiple shaft hoisting tower of skeleton construction including a vertical array of superimposed vertically interconnected sections, each said section being peripherally defined by structural elements including an integral panel at each side thereof, an integral end panel releasably connected at one end to one of said side panels, and an integral end panel connected at one end to said first named end panel at its opposite end to one of said side panels, said end panels extending across and defining one end of said section, an integral intershaft panel connected at one end to the interconnected end portions of said end panels and extending therefrom toward the opposite end of the section and in a plane substantially parallel to said side panels thereof, each of said side and intershaft panels including a tubular upright post, a horizontal girt secured thereto, a diagonal brace operatively connected between the post and a free end portion of the girt, and panel connecting means at the outer end of said girt arranged with its vertical axis substantially parallel with the post axis, and connecting pins each comprising a shank and a peripheral laterally extending bearing intermediate the ends of said shank, said panels of each section being interconnected with like panels of vertically adjoining sections by said pins, each of which pins is positioned with the end of its shank below said bearing extending into the upper end of a coaxially positioned post and with said bearing resting on the top edge thereof, and with the end of the shank above said bearing extending into the bottom end of a coaxially positioned post in a vertically adjoining upper section of the array, whereby said side and intershaft panels are releasably connected with said end panels to form an end, two sides and a partition of the multiple shaft tower.

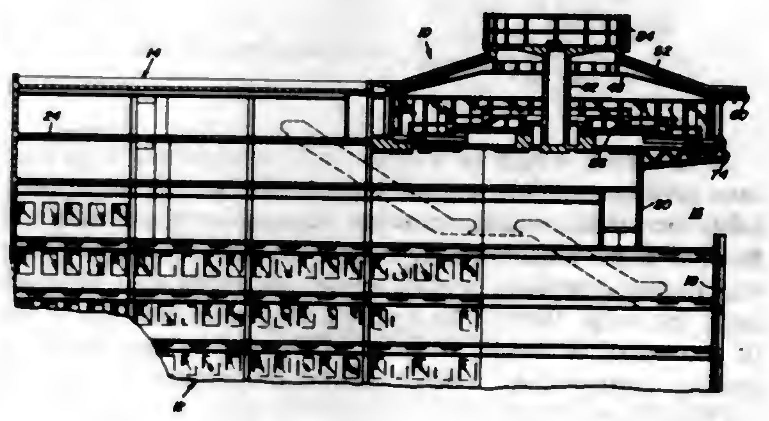
3,388,512
MULTILEVEL MODULAR BUILDING
Harry Newman, 2231 E. 67th St., Chicago, Ill. 60649
Filed Apr. 2, 1965, Ser. No. 445,223
5 Claims. (Cl. 52—64)

1. A building construction comprising three triangularly spaced hollow columns designed to carry utilities therein, supplementary supports for said columns, a central core member located within the area formed by said columns, a plurality of longitudinally spaced horizontally extending support means secured to said columns, living units secured to said columns and located on said support



means in spaced relationship, said living units being aerodynamically shaped to reduce wind resistance, and means for securing said units to said columns and core support.

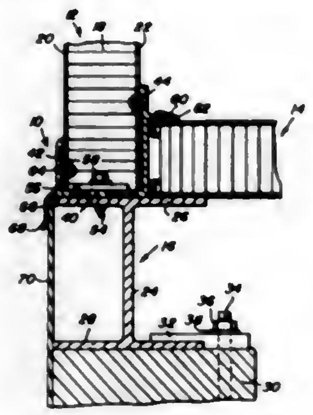
3,388,513
REVOLVING RESTAURANT
Edwin L. Bauer, Honolulu, Hawaii, assignor to William K. H. Mau, Honolulu, Hawaii
Filed June 14, 1965, Ser. No. 463,842
1 Claim. (Cl. 52—65)



A restaurant disposed adjacent the uppermost story of a multi-story building and including a rotating floor disposed interiorly of a stationary peripheral wall having a substantial transparent area to enable occupant's of the rotating floor to observe areas exteriorly of the wall. The multi-story building includes a floor substantially aligned with the rotating floor with an access opening communicating the interior of the restaurant with the floor of the building which also includes a kitchen and access means. A support mechanism and drive mechanism are provided for the rotating floor.

3,388,514
FLOOR, WALL AND BASE PLATE CONNECTOR
William F. Archinal, Miami, and Harry M. Brazener, Miami Beach, Fla., assignors to Panelfab Products, Inc., a corporation of Florida
Filed Oct. 18, 1966, Ser. No. 587,562
2 Claims. (Cl. 52—97)

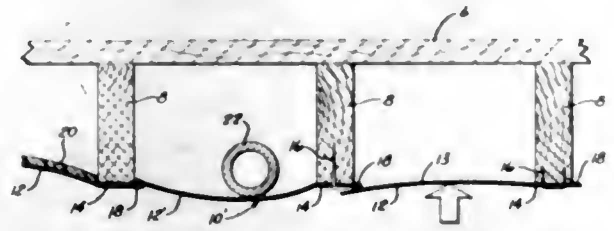
A channel-shaped connector for assembling a honeycomb wall panel and a honeycomb floor panel to a supporting sill beam mounted on a supporting wall such as a footing or the like. The connector has a relatively long inner flange with a laterally projecting flange extending into overlying relation to the floor panel for securing the floor panel, supporting beam and wall panel together. A drip flange is provided on the connector for extending downwardly into overlapping relation to the edge of the sill beam and to engage the top edge of a skirt panel



which extends alongside of the sill beam and the supporting wall.

3,388,515
SURFACE COVERING AND METHOD OF APPLYING SAME

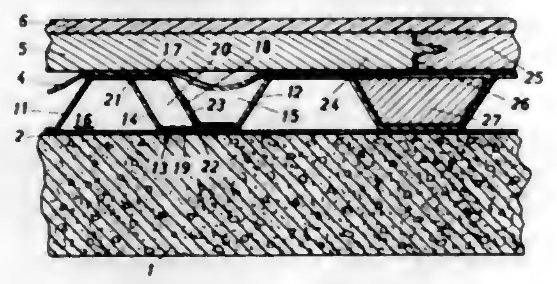
Jack Eaton Gruettner, 1635 Woodside Lane,
Elm Grove, Wis. 53122
Filed Feb. 9, 1966, Ser. No. 537,252
6 Claims. (Cl. 52—222)



A covering which is adapted for application to a surface having exposed supporting members such as beams, joists or studs, which covering comprises a plurality of flexible panels whose length exceeds the spacing of the supporting members and wherein each panel is secured near one edge thereof to a supporting member, the body of the panel is flexed and the other end is snapped into seating engagement with a projecting edge of a panel previously installed.

3,388,516
FLOOR CONSTRUCTION

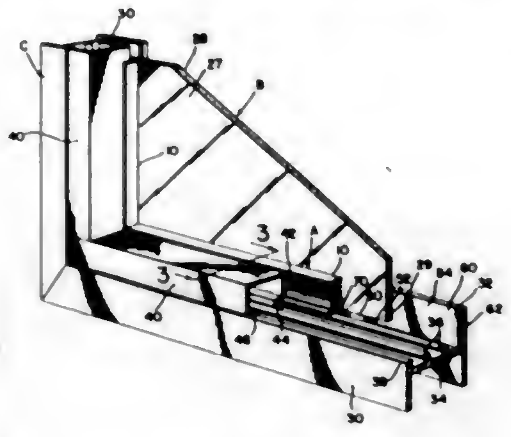
Heinz Gustav Wilhelm Thielen, Kungalv, Sweden, assignor to Linoleum Aktiebolaget Forshaga, Goteborg, Sweden
Filed Oct. 11, 1965, Ser. No. 594,747
Claims priority, application Sweden, Oct. 9, 1964, 12,133/64; June 8, 1965, 7,458/65
2 Claims. (Cl. 52—393)



A floor construction wherein a concrete slab provides the groundwork. A bed is positioned on such groundwork and a resilient element such as a corrugated sheet is placed thereon. An insulating layer is provided on the resilient element and a carrying layer is provided on the insulating layer. A floor covering is positioned on the carrying layer. The corrugated sheet is in sections with the borders extending parallel to the corrugations overlapping each other. Each of the sheet sections with its substantially vertically extending portion of its broader corrugation engaging the border edge of the other sheet section so that the free end of the vertical portion on the other sheet sections is placed against the bottom and the top respectively of the border corrugation on the other sheet section. The joint between the border of one of the sheet sections and the bottom of the border corrugation of the other sheet section being tightened by a tape.

3,388,517
GASKET FOR SEALING A WINDOWPANE AND METHOD FOR INSTALLING THE SAME

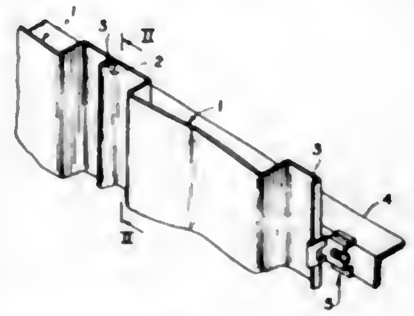
Sanford M. Wohl, University Heights, and Leigh Carter, Shaker Heights, Ohio, assignors to The Tremco Manufacturing Company, Cleveland, Ohio, a corporation of Ohio
Filed Apr. 14, 1966, Ser. No. 542,681
14 Claims. (Cl. 52—403)



There is provided a resilient sealing strip for use between a windowpane and its support structure. This strip includes a flange which extends into a space between the pane and the support structure to form a friction seal with these members. In addition, a lower blade-like element is formed onto the sealing strip so that this element can form a wet seal with a mastic material at the bottom of the aforementioned space.

3,388,518
CURTAIN WALL ASSEMBLY CLIP

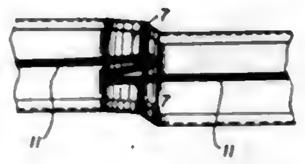
Harley D. Scott, Wexford, Pa., assignor to Elwin G. Smith & Co., Inc., Pittsburgh, Pa.
Filed Jan. 19, 1967, Ser. No. 610,356
2 Claims. (Cl. 52—478)



The invention relates to assembly clips for fastening interlocking panels of a wall construction to existing structural frames. More specifically, it relates to a clip construction having a recessed portion which is attached to the frame member, a bent flanged portion which holds the interlocking panels together and to the frame member, and flanged portions which are supported by the frame member in such a way as to prevent the clip (and the panels) from rotating or shifting.

3,388,519
CONTROLLED EXPANSION STRUCTURAL BEAM AND GRID

Lucien R. Downing, Jr., Avon Lake, Ohio, assignor to Donn Products, Inc., a corporation of Ohio
Continuation-in-part of application Ser. No. 407,203, Oct. 28, 1964. This application Mar. 11, 1966, Ser. No. 533,643
12 Claims. (Cl. 52—495)

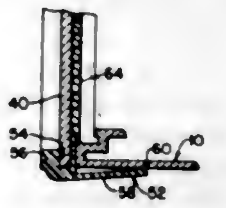


1. A self-supporting, unitary controlled expansion thermally responsive structural beam comprising:

(a) a web having spaced parallel marginal edges;
(b) a flange disposed along at least one of the marginal edges;
(c) a portion of the web, adjacent the flange, having cut therein a plurality of deflection directing notches angularly disposed to the flange, the notches being connected at one extremity, and having their other extremities extending to the plane of the flanges, the remaining portion of the web adjacent the other marginal edge, spanning the notches.

3,388,520
AIR CONDITIONER CLOSURE PANEL

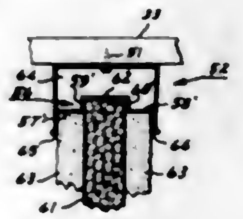
Robert P. Perry, Greenville, Mich., assignor to White Consolidated Industries, Inc., a corporation of Delaware
Filed June 11, 1965, Ser. No. 463,287
1 Claim. (Cl. 52—511)



A removable winter cover for the front of a window air conditioner, the cover being detachably secured to the air conditioner by spring clips.

3,388,521
CONSTRUCTION

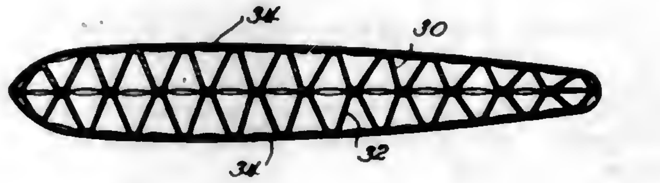
Paul W. Tillisch, George E. Meyer, and Rocco Papalia, Antioch, Calif., assignors to Kaiser Gypsum Company, Inc., Oakland, Calif., a corporation of Washington
Original application Dec. 28, 1962, Ser. No. 247,976. Divided and this application Nov. 18, 1965, Ser. No. 527,623
1 Claim. (Cl. 52—573)



1. Ceiling track for wall construction to yieldably support a wallboard comprising in combination an external channel runner having a web and a pair of arms extending generally perpendicularly to said web, each of said arms terminating in an outwardly curving edge, an internal channel member disposed within said external channel runner, said internal channel member having a web and two arms extending generally perpendicularly to said second-mentioned web and in the same direction as said first-mentioned pair of arms and adapted to abut the top and upper side faces of a later-installed wallboard and to grip the same, said second-mentioned pair of arms each terminating in a single horizontally outwardly extending flange frictionally engaging the interior surface of each of said external channel runner intermediate said first-mentioned web and said outwardly curving edge, said interior channel member being adapted to slide vertically relative to said external channel under deflection of a ceiling when installed, said web of said internal channel member being spaced from said web of said external channel, and said arms of both of said channels when in normal position being sprung inwardly.

3,388,522
AIRCRAFT STIFFENING SECTION

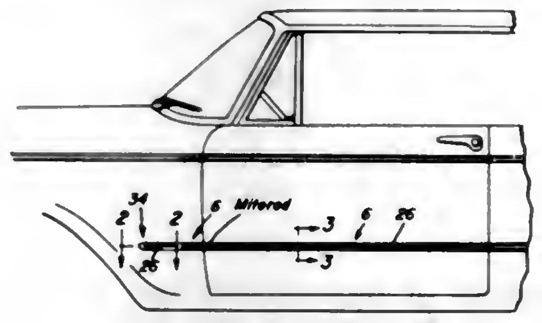
Frederick J. Lowes, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Substituted for abandoned application Ser. No. 172,666, Feb. 12, 1962. This application Oct. 11, 1965, Ser. No. 507,597
3 Claims. (Cl. 52—618)



This invention concerns stiffening sheet members having no straight lines of weakness and which can take varying cross-sectional forms. For example, such a sheet member can form the core of an air foil structure.

3,388,523
VEHICLE TRIM STRIP WITH BUMPER INSERT

James D. Evans, 11835 SW. 81st Road,
Miami, Fla. 33156
Filed May 29, 1967, Ser. No. 641,799
3 Claims. (Cl. 52—717)



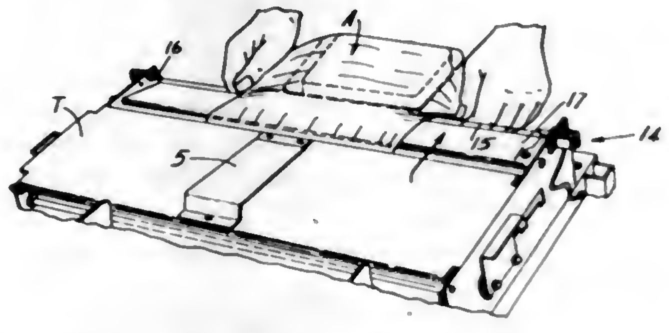
The disclosed trim molding comprises a polished aluminum strip having an open ended channel whose walls carry sloping ornamental flanges. A compressibly resilient insert has a wedge-shaped component anchored in the channel by ribs which are keyed in keyways. The semicircular projection provides a bumper which resists and attenuates shock of collision. At least one substantially rigid end cap serves as a closure and has retaining prongs projecting into auxiliary channels defined by the spaced divergent flanges.

3,388,524
METHOD FOR WRAPPING WITH FLEXIBLE HEAT SEALABLE MATERIAL

Phillip J. Fellner, and Edward S. Mickiewicz, Racine, Wis., assignors to Sturtevant Industries, Inc., Sturtevant, Wis., a corporation of Wisconsin

Original application May 25, 1967, Ser. No. 641,232, now Patent No. 3,358,420, dated Dec. 19, 1967. Divided and this application Nov. 13, 1967, Ser. No. 682,331

3 Claims. (Cl. 53—33)



A method of wrapping an article to permit the soft, flexible wrapping material to be pulled tightly and completely around all sides of the article and also underneath the article and tightly against the bottom thereof, all with one general sweeping motion in a matter of a few seconds.

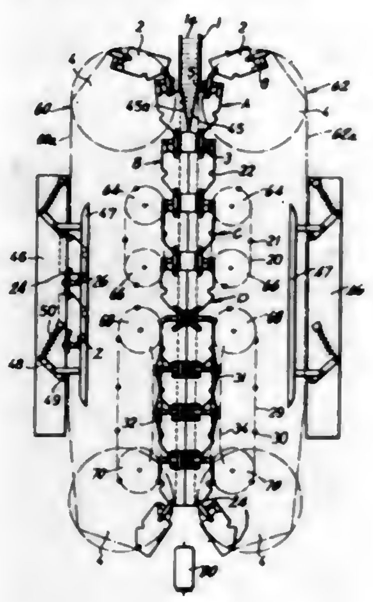
3,388,525
METHOD AND APPARATUS FOR FORMING AND SEALING A CONTAINER

Georg Thesing, Dortmund-Schonau, and Heinrich Risse, Dortmund-Brechten, Germany, assignors to Holstein & Kappert, Maschinenfabrik Phonix G.m.b.H., Dortmund, Germany

Filed Mar. 1, 1966, Ser. No. 530,999

Claims priority, application Germany, Apr. 2, 1965, H 55,686

32 Claims. (Cl. 53—39)



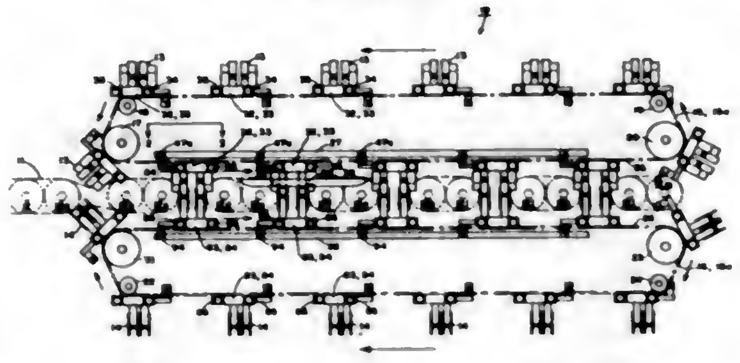
27. A method of forming individual parallelepiped containers using an elongated tube filled with liquids comprising directing a series of spaced mold sets each formed of two mold elements which are fed together against opposite sides of the tube to engage and frictionally hold the tube and to move it downwardly with the mold sets, engaging the opposite sides of the tube between spaced mold sets by means disposed parallel to the tube walls, gradually reducing the spacing between mold sets and simultaneously directing the opposite walls of the tube between adjacent mold sets by moving the engaging means inwardly while the area of engagement is maintained in the original engaging plane parallel to the tube wall before it is formed to form a central flat sealing flap and flattened end walls, and thereafter sealing the sealing flap and severing the tube across the flap to separate an individual container element.

3,388,526
SEALING JAWS

Alson R. Harm, Springfield Township, Hamilton County, and Virgil E. Gex, Wyoming, Ohio, assignors to The Procter & Gamble Company, Cincinnati, Ohio, a corporation of Ohio

Filed Sept. 17, 1964, Ser. No. 397,163

5 Claims. (Cl. 53—182)



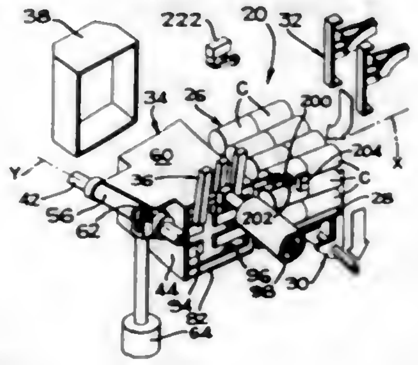
1. In a machine for sealing a tube-shaped wrapper between articles disposed at spaced intervals therein, the combination comprising upper and lower sealing members, means for moving said upper and lower sealing members into engagement between said articles disposed at spaced intervals, said upper and lower sealing members comprising a first set of sealing jaws and a second set of sealing jaws, means for moving said second set of sealing jaws laterally with respect to said first set of sealing jaws so that said first and second set of sealing jaws are spread apart, said spreading action eliminating slack material from adjoining packages being formed around the articles at spaced intervals in said wrapper, means associated with said first and second set of sealing jaws for severing and sealing the wrapper along two parallel spaced-apart lines, said severing and sealing means comprising a slot formed in one of each of said first and second sets of sealing jaws, a clearance slot in the mating sealing jaw of each of said first and second sets of sealing jaws, a sealing wire normally suspended longitudinally in said first mentioned slot of each set of sealing jaws, and means for moving each of said sealing wires from its original position through the wrapper and into the clearance slot of its mating sealing jaw.

3,388,527
CASE FILLING MACHINE

Leslie Vadas, Los Gatos, Calif., assignor to FMC Corporation, San Jose, Calif., a corporation of Delaware

Filed June 28, 1965, Ser. No. 467,602

11 Claims. (Cl. 53—247)



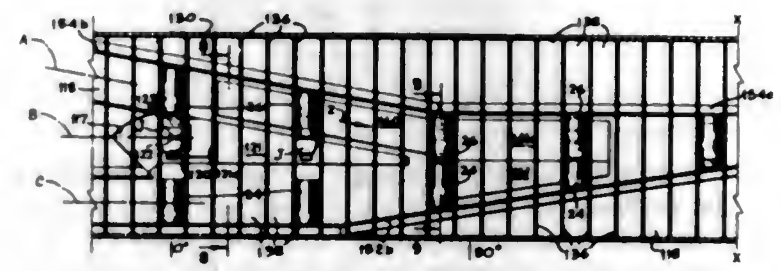
Cases are end-filled by transversely pushing articles into a U-shaped carrier while on its side, turning the carrier 90°, and pushing articles out through the end of the carrier, with the lower wall of the carrier being upwardly inclined. The carrier loading pusher acts perpendicularly to the opposed wall of the carrier U, when the latter is on its side.

3,388,528
ENCAPSULATING AND LOADING APPARATUS

Milton L. Croall, Los Gatos, and Sherman H. Creed and Raymond J. Bell, San Jose, Calif., assignors to FMC Corporation, San Jose, Calif., a corporation of Delaware

Filed July 19, 1965, Ser. No. 472,969

9 Claims. (Cl. 53—253)



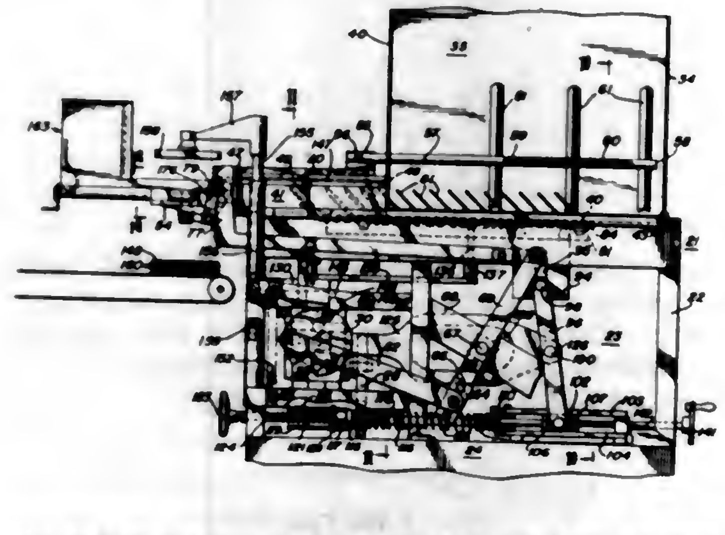
An apparatus for encapsulating a container in a capsule defined by a tubular cartridge and carrier each having one end open to accommodate a container and one end closed to container passage. The apparatus includes a driven reel having elongated guide tracks for receiving the cartridge, carrier and container with the container disposed between the cartridge and the carrier. Guide rails are provided to move the cartridge and the carrier into telescoping engagement with the container, and cam means are provided and are responsive to the axial movement of the cartridge and carrier to assure alignment of the cartridge with the carrier. The apparatus additionally includes means for spacing the containers an equal distance apart and for shifting the containers between a vertical and a horizontal position before entry into the elongated guide tracks.

3,388,529
SEPARATOR FEEDER

Harry H. Holly, Olympia Fields, Ill., assignor to Hollymatic Corporation, a corporation of Illinois

Original application Dec. 31, 1964, Ser. No. 422,672, now Patent No. 3,293,688, dated Dec. 27, 1966. Divided and this application Apr. 20, 1966, Ser. No. 553,597

7 Claims. (Cl. 53—389)



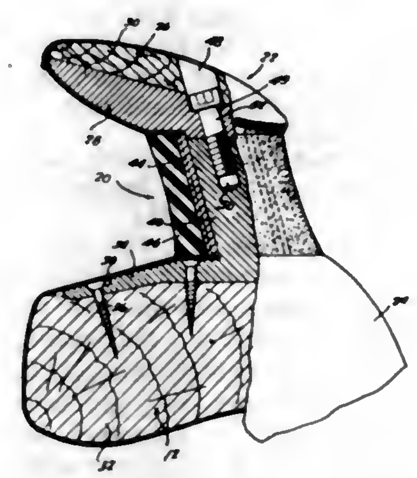
An article shaping device such as a machine for molding patties of food material and having an apparatus for applying a flexible sheet such as a sheet of separator paper to the successive patties, the apparatus including means for propelling the article after it is shaped in a path through space and through the opening in a frame so as to pick up the sheet that has been previously placed in the frame. In a preferred construction the sheet is held in the frame in bowed condition. In another preferred construction a movable carrier is provided for carrying a sheet from a stack retaining means to the frame that is spaced from the stack retaining means.

3,388,530
ROPING SADDLE HORN ASSEMBLY

Eugene F. Parker, 805 Stanton, Richland, Wash. 99352

Filed Jan. 28, 1966, Ser. No. 523,597

7 Claims. (Cl. 54—44)



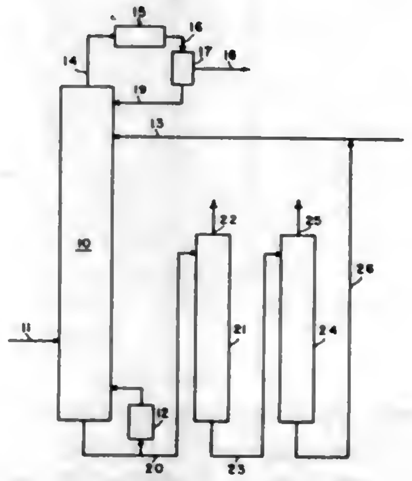
A saddle horn assembly provided with an exposed, rubber surface for frictionally gripping a rope wrapped thereabout. The horn assembly includes a hexagonally-shaped metallic core removably secured to the saddle pommel. A rubber sleeve is telescoped over the core, and includes a plurality of keyways for receiving keys integrally secured to vertices of the hexagonal core, thereby preventing relative rotation between the core and sleeve. A head is secured to the core and further clamps the sleeve securely, between it and the pommel. The rubber sleeve can be replaced, when worn, by removing the head and sliding the sleeve off the core. Individual parts of the horn assembly are also interchangeable.

3,388,531
PURIFICATION OF HYDROCARBONS

William L. Bolles, Seabrook, and George D. Chappell and Walter H. Stanton, Texas City, Tex., assignors to Monsanto Company, a corporation of Delaware

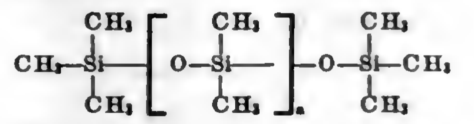
Filed Jan. 3, 1964, Ser. No. 335,593

16 Claims. (Cl. 55—64)



1. A process for separating a hydrocarbon mixture comprised of at least two different hydrocarbons of different degrees of unsaturation, said process comprising subjecting said mixture to extractive distillation with a

solvent system comprising a mixture of an N,N-dialkylacylamide and at least 10 to 1000 p.p.m. of a polydimethyl siloxane of the formula



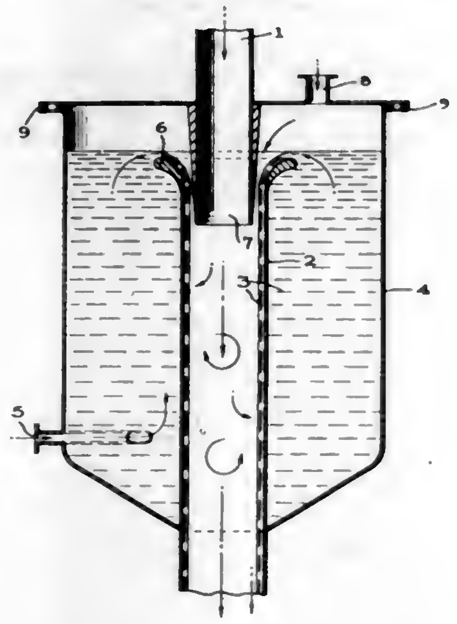
$$\mathrm{CH_3{-}\underset{CH_3}{\overset{CH_3}{Si}}{-}\left[O{-}\underset{CH_3}{\overset{CH_3}{Si}}{-}\right]_n{-}O{-}\underset{CH_3}{\overset{CH_3}{Si}}{-}CH_3}$$

wherein *n* is an integer resulting in a compound having a viscosity of at least 40 centistokes at 25° C. and a specific gravity at 77° F. of at least 0.96.

3,388,532
PROCESS FOR THE PRETREATMENT OF GASES
Taiseki Kunugi and Takaaki Tamura, Tokyo, Japan, assignors to Kogyokaihatsu Kenkyujo, Tokyo, Japan, a body corporate of Japan
No Drawing. Filed Dec. 21, 1965, Ser. No. 515,478
Claims priority, application Japan, Dec. 25, 1964, 39/73,284
2 Claims. (Cl. 55—76)

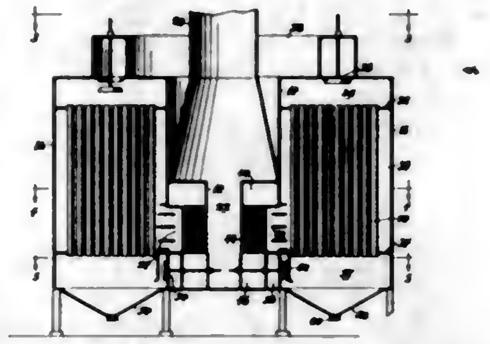
1. In a process for recovering desired components from a raw gas mixture containing the said components by a continuous adsorption method, the improvement wherein the raw gas mixture is passed through a layer of coaly active carbon thereby removing undesired components which cause deterioration of adsorbent in the continuous adsorption system proper, and subsequently contacting said gas with woody active carbon in the continuous adsorption system.

3,388,533
PROCESS FOR THE PREPARATION OF MELAMINE
Ferdinand Weinrotter, Linz, Walter Müller, Leonding, near Linz, and Alfred Schmidt, Walter Böhler, Johann Schweighofer, and Wilfried Krulla, Linz, Austria, assignors to Osterreichische Stickstoffwerke Aktiengesellschaft, Linz, Austria
Filed Jan. 11, 1965, Ser. No. 424,716
Claims priority, application Austria, Jan. 14, 1964, A 236/64
2 Claims. (Cl. 55—82)



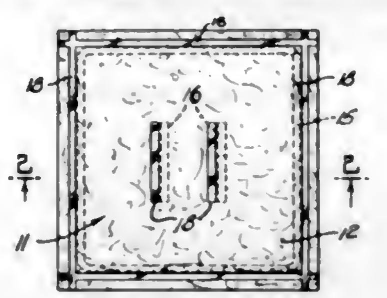
Pure melamine is recovered directly and without the necessity of recrystallization, from the hot reaction gas from a catalytic melamine synthesis at normal pressure, by contacting the hot reaction gas mixture directly and exclusively with the continuously renewed surface of a flowing film of aqueous absorbent cooling liquid (e.g. aqueous melamine suspension), and recovering the melamine from the resultant aqueous suspension thereof.

3,388,534
BAG FILTER ARRANGEMENT
Robert M. Jensen, Wellsville, N.Y., assignor to The Air Preheater Company, Inc., New York, N.Y., a corporation of Delaware
Filed June 3, 1965, Ser. No. 460,959
2 Claims. (Cl. 55—269)



1. Gas treatment apparatus for filtering a heating gas and utilizing the heat content of said gas to preheat a gas to be heated comprising fixed concentric walls that define inner, middle and outer gas chambers, radial walls dividing the outer chamber into a series of similar compartments, axially spaced inlet and outlet duct means connected to each of said compartments for the supply and exhaust of a heating gas, a series of porous filter tubes in each of said compartments intermediate the inlet and outlet ducts, heat exchange means in the middle chamber receiving hot gas from the outlet ducts in said compartments and exhausting it to said inner chamber, a source of gas to be heated, independent inlet and outlet passageways directing the gas to be heated through said heat exchange means in heat exchange relation with the heating gas, valve means in the inlet and outlet duct means of each compartment regulating the flow of heating gas therethrough, a source of deflation gas under negative pressure, and means directing the deflation gas into said filter tubes to deflate said tubes and release particulate matter therefrom.

3,388,535
SELF-SUPPORTED FILTER
Lawrence M. Nash, East Brunswick, N.J., assignor to Johnson & Johnson, a corporation of New Jersey
Filed Feb. 16, 1965, Ser. No. 433,130
6 Claims. (Cl. 55—492)

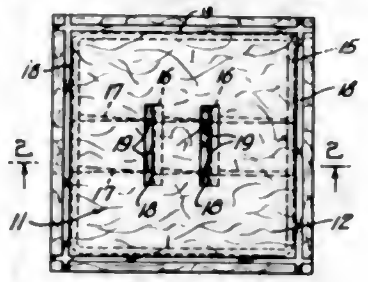


An improved self-supporting fibrous filter product comprising at least two layers of a fibrous material with a support frame between the layers. The frame comprises a peripheral portion and a second or inner portion. The layers are sealed together along the peripheral frame portion and at the inner portion.

3,388,536
STABILIZED SELF-SUPPORTED FILTER
Lawrence M. Nash, East Brunswick, N.J., assignor to Johnson & Johnson, a corporation of New Jersey
Filed Sept. 16, 1966, Ser. No. 580,042
4 Claims. (Cl. 55—492)

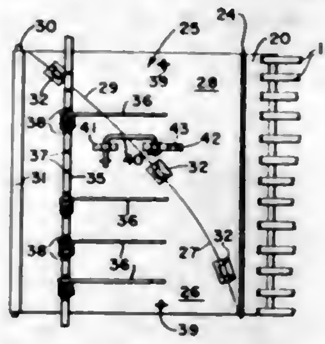
A self-supported filter having at least two layers of filter material and a support frame between the layers.

The layers of the same size and shape and the frame is positioned between the layers and is substantially rectangular in shape and extends adjacent the entire periphery of the layers. The second portions of the frame is disposed within the area defined by the first portion.



There is a resilient third portion of at least one string extending from one side of the rectangular first portion to the opposite side. The layers are secured together along the outer periphery of the first portion of the frame and the layers and the resilient third portion are secured at the second portion of the frame.

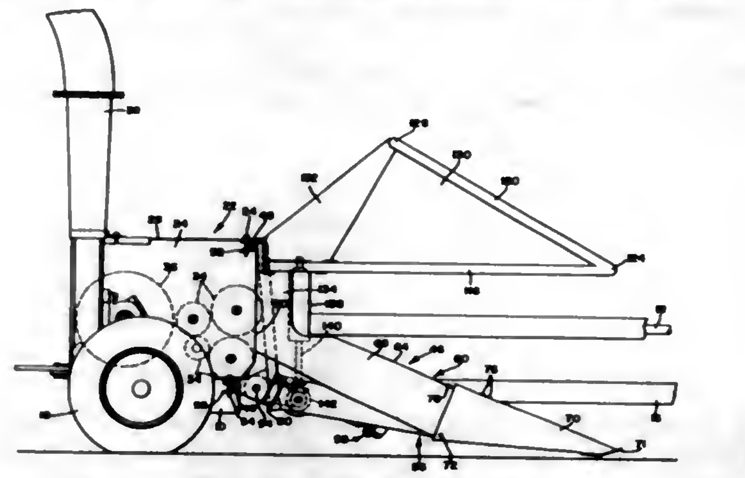
3,388,537
COTTON HARVESTER
Arthur L. Hubbard, Des Moines, Iowa, assignor to Deere & Company, Moline, Ill., a corporation of Delaware
Filed Sept. 10, 1965, Ser. No. 486,330
19 Claims. (Cl. 56—44)



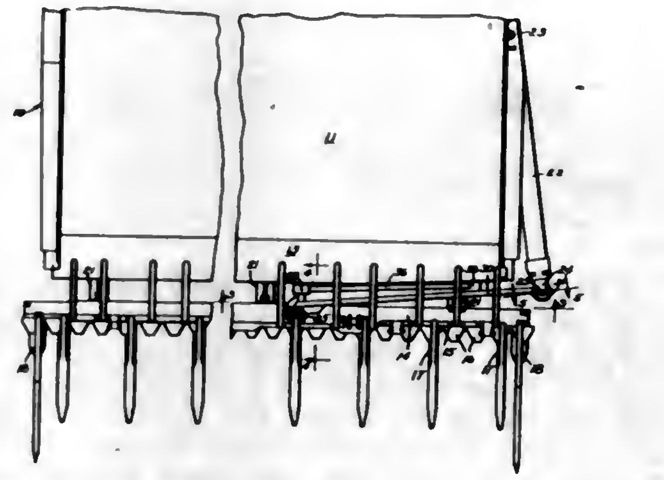
1. A pressure plate structure for a cotton harvester housing having a plant passage comprising: a vertical pivot on the housing at the forward end of the passage; upright rectangular plate means supported on and extending rearwardly from the pivot and defining one side of the passage, the plate means including a pair of vertically complementary plates interjoined at a diagonal juncture inclined downwardly and rearwardly from an upper forward end; hinge means pivotally interconnecting the plates across the diagonal juncture; means on the housing behind the plate means for biasing the plate above the diagonal juncture against movement outwardly in respect to the plate below the diagonal juncture and for biasing the plate means against movement away from the passage; and latch means between the plates for locking the plates against relative movement about the hinge means.

3,388,538
HARVESTING APPARATUS
David R. Markham, Ottumwa, Iowa, assignor to Deere & Company, Moline, Ill., a corporation of Delaware
Filed June 9, 1965, Ser. No. 462,569
9 Claims. (Cl. 56—98)

A pull-type ensilage harvester having a detachable forwardly disposed single row crop harvesting unit including a plurality of forwardly and downwardly extending gathering members which define at least one fore-and-aft crop-receiving passage, and a pair of forwardly diverging guide members disposed above the outside gathering members. A reciprocating cutter is mounted below each passage for severing the crop from the field, and a rotating upright roller extends upwardly from the rearward end of at least one of the outside gathering members to facilitate the rearward movement of crops draped over the gathering member.



3,388,539
FLOATING CUTTER BAR MOUNT AND SICKLE DRIVE
Byron M. Novak, Mendota, Ill., assignor to Hart-Carter Company, Chicago, Ill., a corporation of Delaware
Filed May 3, 1965, Ser. No. 452,469
8 Claims. (Cl. 56—257)

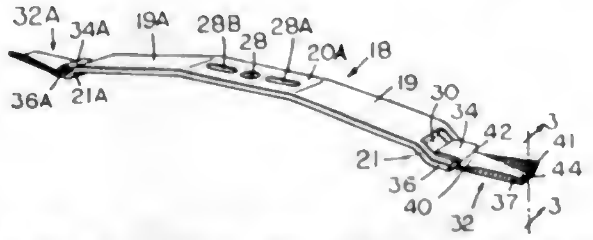


A floating cutter bar mount and sickle drive are described for better accommodating the motion required of the cutter bar and sickle due to irregular variations in ground contour. A cutter bar and corresponding sickle are mounted transversely in front of a mobile framework for elevational movement. A pitman interconnects an oscillating drive means and the sickle. A stabilizer bar is mounted transversely in front of the framework interconnecting the stabilizer bar and the framework. The ends of the stabilizer bar are pivotally connected to the cutter bar and framework respectively through resilient bushings that permit vertical pivotal movement and limited twisting of the stabilizer bar. Likewise the ends of the pitman are pivotally connected to the oscillating drive means and the sickle through resilient bushing assemblies that permit horizontal pivotal movement and limited twisting of the pitman.

3,388,540
ROTARY LAWN MOWER CUTTING APPARATUS
Ernest Dennis Michaud, R.F.D., Saunderstown, R.I. 02874
Filed Oct. 18, 1965, Ser. No. 497,216
3 Claims. (Cl. 56—295)

1. A rotary lawn mower cutting apparatus having a rotary shaft, that improvement therein comprising an elongated cutter bar having two blade receiving end portions,

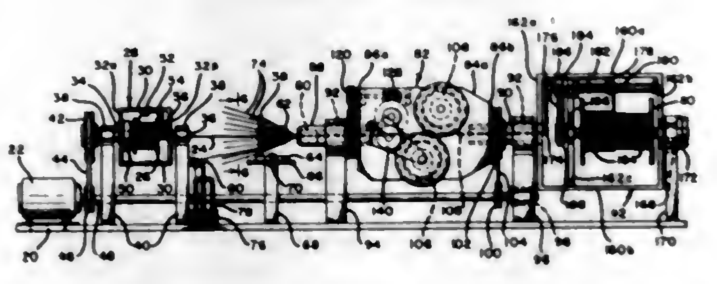
each end portion provided with an opening, said elongated cutter bar having a longitudinal axis, each opening being parallel to said longitudinal axis, means mounting said cutter bar to said rotary shaft, two detachable grass cutting blades, each blade consisting of a horizontally projecting body member having one end folded upon itself to form a spring member, said body member having a cutting edge provided in one side, a projecting wing located in the opposite side, and the spring member of each blade removably attaching said grass cutting blades, respectively, to said blade receiving end portions through the openings.



3,388,541

METHOD AND APPARATUS FOR STRANDING WIRES, OR THE LIKE

Albert A. Biagini, 362 Naples St.,
San Francisco, Calif. 94112
Filed Mar. 4, 1966, Ser. No. 531,693
15 Claims. (Cl. 57—9)



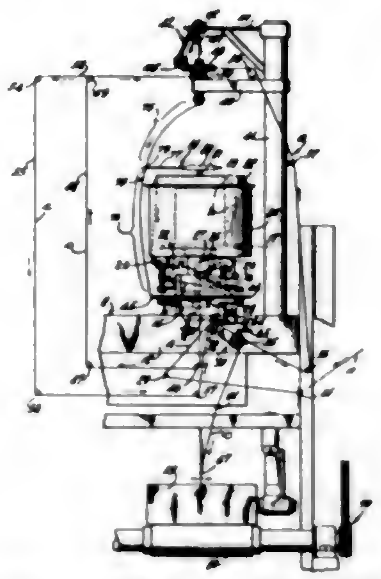
A stranding machine in which wires are pulled through a die and twisted thereat by a combination pulling and twisting unit. The twisting and pulling unit includes a rotatable frame which carries a rotatable capstan, or the like, for pulling the strand. The capstan is coupled to the frame for rotation thereof upon rotation of the frame. A single motor for driving the frame provides both the twisting and pulling power. A preforming head which includes a plurality of tubes is positioned upstream of the die through which tubes the outer wires of the strand are passed for changing the unstressed condition of the wires. The tubes are carried by ball-like members which are releasably clamped to a mounting plate whereby the adjustment of the angular position of the tubes is possible when the members are released.

3,388,542

APPARATUS FOR AND METHOD OF TWISTING AND PLYING STRANDS

Alfred W. Vibber, 630 5th Ave., New York, N.Y. 10020
Filed Aug. 29, 1967, Ser. No. 664,135
17 Claims. (Cl. 57—58.3)

Apparatus for and method of combining two singles strands to form a wrapped strand product by the strand wrapping or skip twisting process. In the illustrated embodiment, the apparatus forms cords by plying together equal lengths of two singles strands. In such apparatus, one singles strand is ballooned about a source of supply of another singles strand, such two strands being combined under substantially equal tensions at a plying point beyond the balloon. The apparatus includes a balloon apex guide adjusted by variations in the relative tensions of the two singles strands approaching the plying point; the guide, which is adjusted in accordance with the difference in the tensions in the two singles strands, acts to maintain the substantial equality of such two tensions.

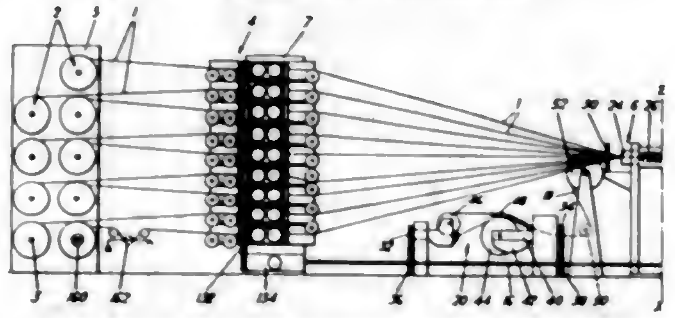


The cord is pulled away from the plying point under tension, and preferably at substantially constant speed.

3,388,543

MANUFACTURE OF WIRE STRANDS

John Malcolm Downton, Bessecarr, Doncaster, England, assignor to British Ropes Limited, Doncaster, England, a British company
Filed Dec. 13, 1965, Ser. No. 513,220
Claims priority, application Great Britain, Dec. 22, 1964, 51,983/64; June 2, 1965, 23,558/65
14 Claims. (Cl. 57—58.52)



1. A method of manufacturing a wire strand, comprising supporting a plurality of supply packages of round wire on means in stationary attitudes, leading wires from respective supply packages along respective paths to a playing point, pulling a resultant plied strand away from the plying point while the strand rotates, restraining rotation of each wire at a first point between the respective packages and the plying point, and positively rotating each wire about its own axis at a second point between the respective first point and the plying point at a speed so related to the speed of rotation of the strand at the plying point, and the rate of pulling of strand away from the plying point, that each wire undergoes elastic and plastic torsional deformation on passing the first point, and undergoes at least partial elastic recovery on passing the second point.

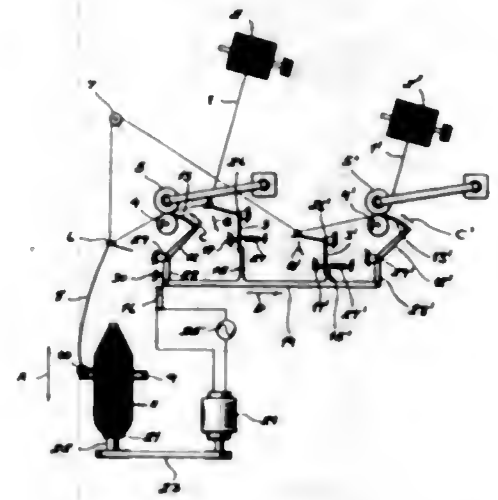
3,388,544

MULTIPLE-THREAD MONITOR FOR BOBBIN-BUILDING MECHANISM AND THE LIKE

Edmund Hamel, Romanshorn, Thurgau, Switzerland, assignor to Hamel Projektierungs- und Verwaltungs AG., Horn, Thurgau, Switzerland, a corporation of Switzerland
Filed Mar. 27, 1967, Ser. No. 626,088
Claims priority, application Germany, Apr. 6, 1966, H 59,053
8 Claims. (Cl. 57—81)

Device for simultaneously monitoring the tension in two or more threads delivered by separate feeders to a

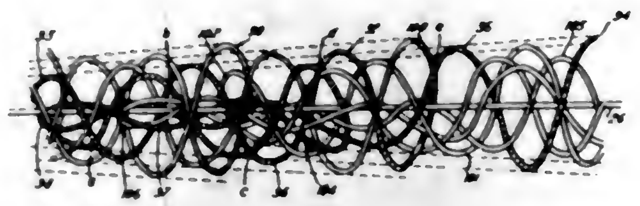
twisting station, e.g., preparatorily to the winding of the resulting yarn onto a bobbin, each feeder having associated with it a separate thread guard in the form of a biased switch arm engaging the respective thread; upon rupture of any thread, the corresponding switch arm shifts a common control member into an off-normal position to deactivate all the feeders and, preferably, to arrest the bobbin-winding mechanism. With at least one thread guard disposed between its feeder and the twisting station, a rupture of the twisted yarn will slacken the thread associated with that guard, thereby allowing the switch arm thereof to occupy its off-normal position.



3,388,545

CORE YARNS AND A PROCESS AND APPARATUS ASSEMBLY FOR MAKING THEM

Cyril George Cannon, Usk, Barrie Linton Davies, Langstone, Alan Selwood, Llanyravon, Cwmbran, and Roy Alan Williams, Llansapley, England, assignors to British Nylon Spinners, Limited, Pontypool, England, a corporation of Great Britain
Filed Dec. 23, 1965, Ser. No. 515,879
Claims priority, application Great Britain, Dec. 24, 1964, 52,523/64, 52,524/64
2 Claims. (Cl. 57—140)



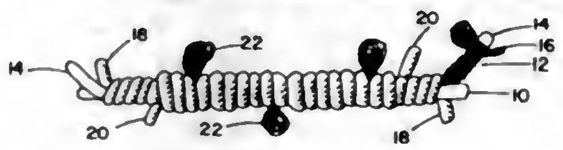
A core yarn and apparatus and method for making the same, the yarn comprising a core strand and a wrapping component provided by one or more continuous filaments in the form of random, serially-connected, axially-extending variable length loops arranged so that they progressively advance along and twist around the core strand.

3,388,546

NUBBED ELASTIC YARN AND METHOD OF MAKING SAME

Donald J. McCarthy, South Easton, and Preston F. Marshall, Walpole, Mass., assignors to The Kendall Company, Boston, Mass., a corporation of Massachusetts
Filed Nov. 16, 1966, Ser. No. 594,746
7 Claims. (Cl. 57—152)

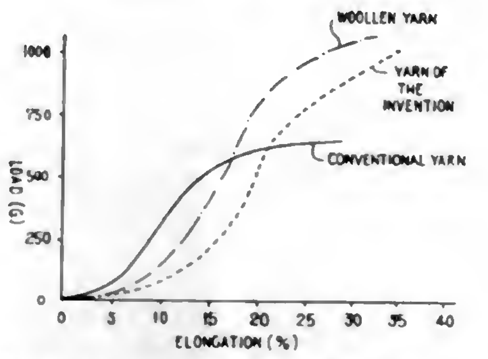
A novelty yarn having an elastomeric core strand in parallel arrangement with a nubbed yarn and said elastomeric core strand and said nubbed yarn being wrapped with a covering strand. The said nubbed yarn formed by wrapping a core with wrapping strand disposed to form double-back loops on said core.



3,388,547

METHOD FOR PRODUCING WOOL-LIKE SYNTHETIC YARN

Shiro Koga, Toyonaka, and Yoshiaki Miyagawa, Sumiyoshi-ku, Osaka, Japan, assignors to Toyo Boseki Kabushiki Kaisha, Osaka, Japan
Filed Aug. 18, 1964, Ser. No. 390,783
5 Claims. (Cl. 57—157)

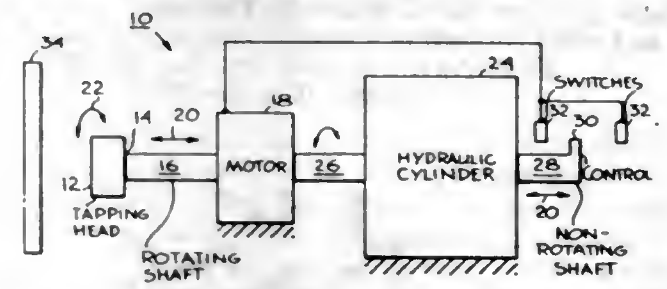


1. A method of producing wool-like yarn which comprises blending high shrinking thermoplastic synthetic fibers having a hot water shrinkage of 15–35% and low or non-shrinking thermoplastic synthetic fibers, the high shrinking fibers being present in an amount of 15–85% of the total fiber blend, heat-treating the blend in the form of fibrous strands selected from the group consisting of sliver, untwisted strands and rovings and having sufficient interfiber friction to enable the high shrinking fibers to crimp when heat-treated, said heat-treating step being performed prior to spinning to produce crimps therein, setting the crimps so produced, and then spinning the same into yarn.

3,388,548

ROTATING AND RECIPROCATING TOOL ARRANGEMENT

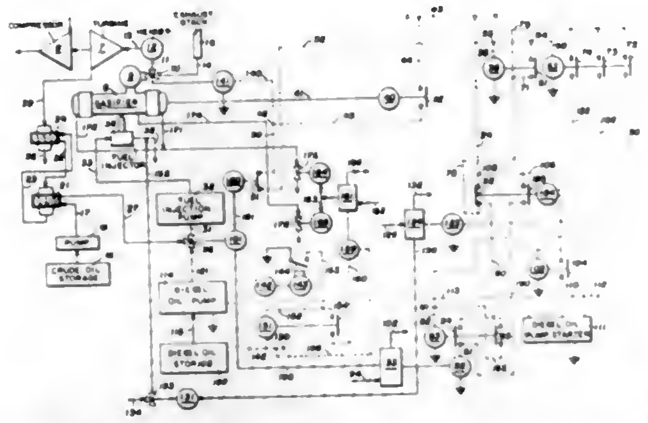
Alman H. Vieths, 227 S. Ave. 59,
Los Angeles, Calif. 90042
Filed Aug. 2, 1966, Ser. No. 569,724
10 Claims. (Cl. 60—6)



There is disclosed herein an improve rotating and reciprocating tool arrangement for providing a substantially constant axial force and substantially constant axial feed. This is achieved in applicant's invention herein by providing a rotating shaft splined to a motor such as an electric motor that provides the rotary motion to the shaft. The spline connection allows reciprocating movement of the shaft with respect to the motor. At least a portion of the rotating shaft extends into a hydraulic cylinder and a hydraulic pump means is coupled to the rotating shaft within the cylinder. The pump means provides the axial movement for the rotating shaft and a tool bit is coupled to one end of the rotating shaft so that rotation of the shaft by the motor means rotates the tool bit and also rotates the pump means within the hydraulic cylinder. Rotation of the pump means within the hydraulic cylinder moves hydraulic fluid from one face of the piston to the other, depending upon the direction of rotation, and this movement of the fluid provides a pressure differential across the piston to move the rotating shaft in axial directions.

3,388,549
FUEL SYSTEM PURGE

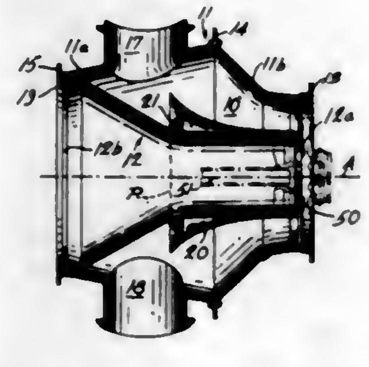
William C. Spencer and Arthur V. Barnett, Bakersfield, Calif., assignors to Mobil Oil Corporation, a corporation of New York
Filed May 31, 1966, Ser. No. 554,035
19 Claims. (Cl. 60—13)



This specification discloses a method and apparatus for purging the fuel system of a power generator upon stoppage thereof, the generator being fueled by a liquid fuel which is highly viscous and, in order that it can be used in the system, is heated by heat derived from the generator to reduce its viscosity. Upon stoppage of the power generator, a signal is generated which discontinues the supply of the liquid fuel to the generator and passes a purge liquid through the fuel system to remove the liquid fuel before the liquid fuel cools and thickens. A purge gas additionally to the purge liquid can be passed through the system in response to the signal. Further, in response to the signal, the output from the power generator can be disconnected from the means operated by the generator.

3,388,550
TURBINE ENGINE EXHAUST DUCT

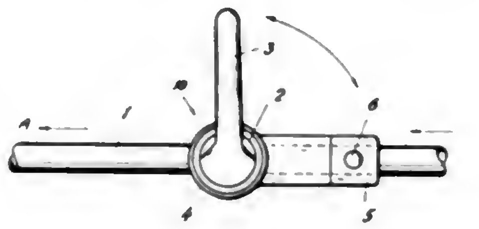
John Sylvester Binek, Montreal, Quebec, Canada, assignor to United Aircraft of Canada Limited, Quebec, Canada
Filed Nov. 14, 1966, Ser. No. 593,952
11 Claims. (Cl. 60—39.5)



An improved exhaust system for reducing back pressure on a gas turbine engine comprising an exhaust duct having an upstream end aligned with the turbine casing and a downstream portion having lateral, peripherally distributed outlets.

3,388,551
SAFETY DEVICE FOR AIRCRAFT CONSTRUCTION

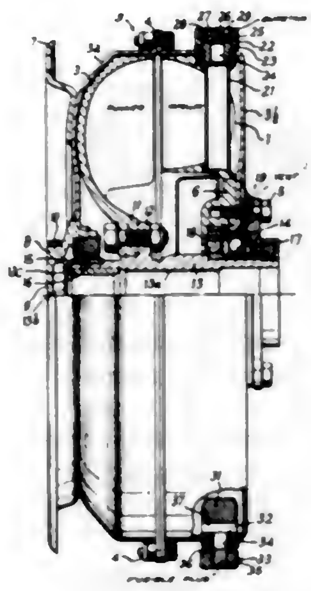
Josef Spateneder, Machendorf, near Simbach, Germany
Filed Apr. 4, 1967, Ser. No. 628,359
4 Claims. (Cl. 60—39.14)



The invention discloses a safety arrangement for preventing the inadvertent starting of aircraft engines when the fuel valve of the fuel line is closed. The actuating means for the fuel valve are interrelated with the starter circuit of the engine so that the starter circuit is always in open position when the fuel line is closed by the fuel valve. When the fuel valve is in the open position, the actuating means or handle for the fuel valve either automatically moves a switch or contact element of the starter circuit into a position in which the starter circuit can be actuated or it causes an associated disk element having a hole to move into a position in which the starter circuit can be actuated.

3,388,552
HYDRAULIC TURBO COUPLINGS

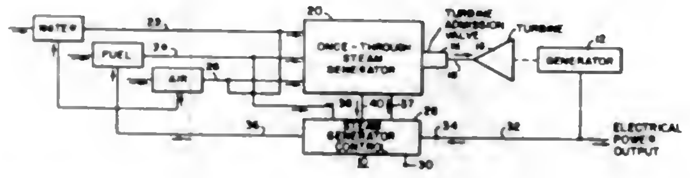
John Bilton, Middlesex, England, assignor to Fluidrive Engineering Company Limited, Middlesex, England
Filed Aug. 15, 1966, Ser. No. 572,447
Claims priority, application Great Britain, Aug. 16, 1965, 35,101/65
3 Claims. (Cl. 60—54)



A hydraulic turbo-coupling filled with water or a mixture of oil and water for use under hazardous conditions has a bursting disc arranged to rupture as a result of excessive pressure rise on overload and a further safety device of a different nature also arranged to yield on overload. The operator is provided with spares for the safety device intended to yield first. If this device is tampered with or otherwise thwarted, the coupling and driving motor are still protected against overload and attention is drawn to such tampering. The further safety devices may be a fusible plug which may melt either before or after the bursting disc had burst or it may be a fluid seal in the coupling.

3,388,553
CONTROL SYSTEM FOR A TURBOGENERATOR AND ONCE-THROUGH STEAM GENERATOR PLANT

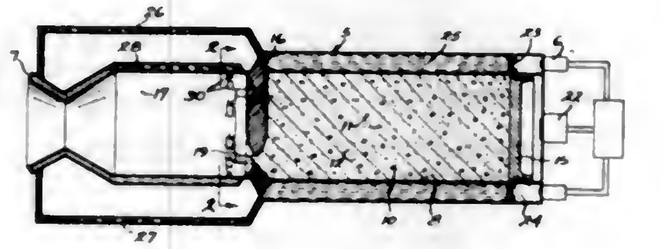
George R. Anderson, Mount Lebanon, Pittsburgh, Pa., assignor, by mesne assignments, to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Oct. 20, 1965, Ser. No. 498,920
5 Claims. (Cl. 60—105)



A once-through steam generator is controlled within input flow constraints to produce outlet working fluid at flow, temperature and pressure conditions required for meeting electrical load demand. The control system includes a constraint control feedback loop which responds to actual input water, fuel and air flows, compares the measured input flow values with known current minimum and maximum flow values, and automatically overrides electrical load demand requirements by advancing or cutting back (1) the input flows to hold them within constraints and (2) the outlet steam flow to hold it in step with the input flows.

3,388,554
ORGANIC FUSIBLE SOLID FUEL BINDERS AND STABILIZERS AND METHOD OF EXTRUDING AND BURNING

James E. Hodgson, Cleveland, Ohio, assignor to Solid Fuels Corporation, Cleveland, Ohio, a corporation of Ohio
Filed Nov. 2, 1959, Ser. No. 850,489
8 Claims. (Cl. 60—217)

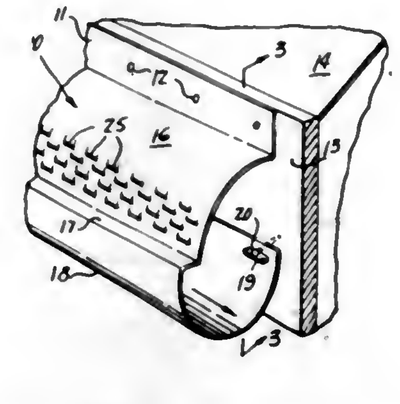


2. A method of extruding a fuel into a combustion chamber for rocket propulsion comprising the steps of melting to a flowable state a solid fuel comprising a mixture of about 80 parts by weight of lithium hydride dispersed in about 20 parts by weight of petroleum jelly as a binder therefor, extruding the resultant mixture into a chamber, and thereafter vaporizing, decomposing and superheating said fuel mixture, oxidizing at least some of said decomposed and superheated products to obtain additional energy for propulsion, and then exhausting said oxidized and decomposed products through a nozzle for rocket propulsion.

3,388,555
SELF-STRAINING EAVES TROUGH

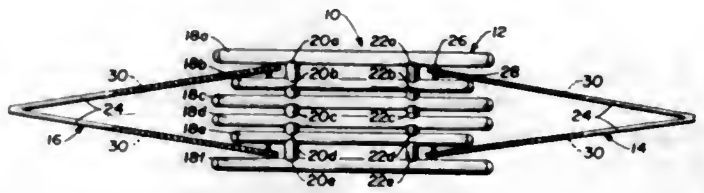
Rex E. Foster, 2415 Garland Ave., Sylvan Lake, Pontiac, Mich. 48053
Filed Oct. 22, 1965, Ser. No. 501,513
6 Claims. (Cl. 61—15)

An elongated water conveying conduit having a concave-convex configuration with the concave side opening upwardly; the conduit further including a concave-convex section integrally connected with the aforementioned portion in vertically spaced relationship relative thereto and with the concavities of the portion and section being disposed in confronting relation relative to one another; the portion and section having means at a common side thereof affording connection to a side of a building; and the section having a plurality of openings formed therein extending transversely therethrough to prevent twigs, leaves and other accumulated debris entrained with roof drainage water from entering the conduit and to clog the same.



3,388,556
MARINE STORAGE STRUCTURE

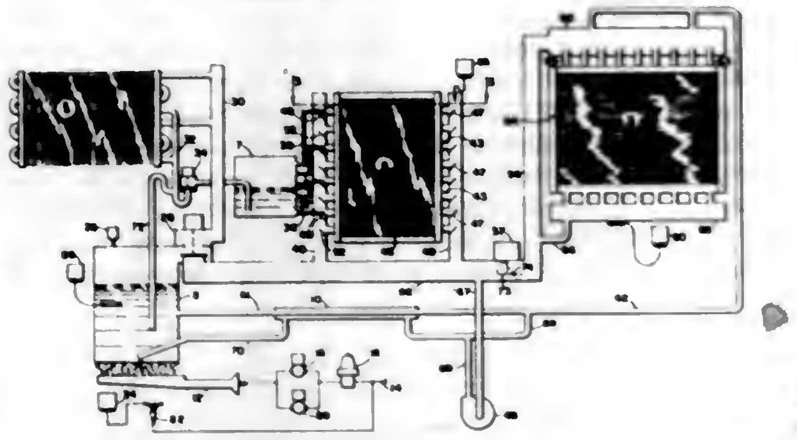
William F. Manning, Dallas, Tex., assignor to Mobil Oil Corporation, a corporation of New York
Filed Oct. 10, 1966, Ser. No. 585,544
7 Claims. (Cl. 61—46.5)



This specification and the accompanying drawings disclose an articulated marine storage structure capable of floating substantially horizontally on the surface of a body of water for towing purposes. When installed at a marine site, a storage section thereof is supported on the marine bottom and a pair of support sections, connected to the storage section on spaced, hinged, or pivotal axes, converge above the storage section. Piles are driven through legs, or caissons, of the support section to anchor the structure, and a deck is mounted over the converged support sections, over the storage section, at least near the surface of the body of water. The storage section is disclosed as a plurality of parallel tubes interconnected by intersecting tubular sections. Also illustrated and described is a specific method for installing the structure at a site by selective flooding of the various components thereof.

3,388,557
ABSORPTION REFRIGERATION SYSTEMS, METHODS, AND ABSORBENT COMPOSITIONS

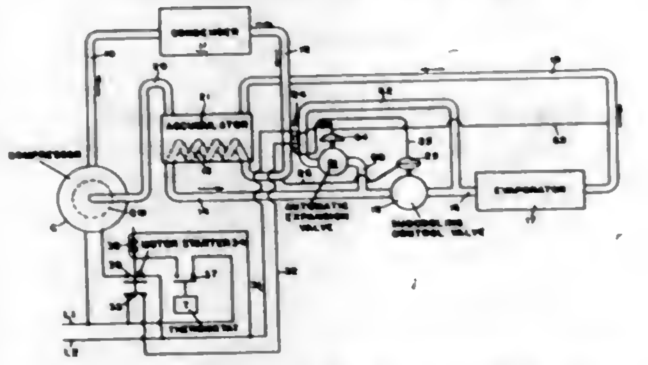
Robert J. Modahl, Galesville, and Paul J. Lynch, La Crosse, Wis., assignors to The Trane Company, La Crosse, Wis., a corporation of Wisconsin
Continuation-in-part of application Ser. No. 404,732, Oct. 19, 1964. This application Apr. 3, 1967, Ser. No. 627,753
7 Claims. (Cl. 62—112)



Absorption refrigeration systems and processes employing an absorbent comprised of lithium iodide, ethylene glycol and water for operation with a high temperature heat sink such as air.

3,388,558
REFRIGERATION SYSTEMS EMPLOYING SUBCOOLING CONTROL MEANS

James R. Harnish, Staunton, Va., assignor to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed July 28, 1966, Ser. No. 568,438
4 Claims. (Cl. 62—196)

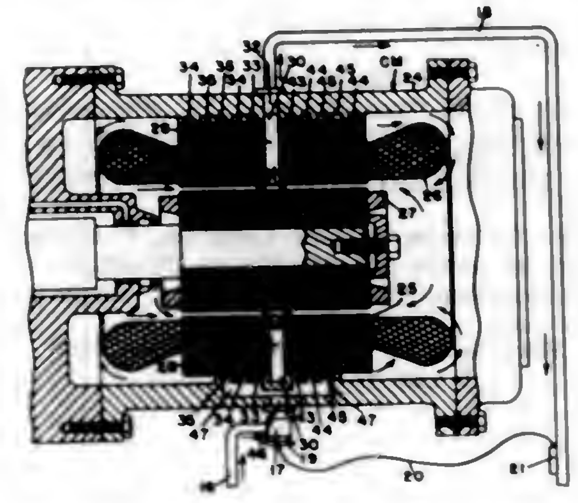


A refrigeration system has an expansion valve responsive through a thermal bulb to the temperature of the refrigerant liquid, and responsive to the pressure of the refrigerant liquid. An increase in the temperature of the liquid without a corresponding increase in its pressure causes the valve to adjust towards closed position, and a decrease in the temperature of the liquid without a corresponding decrease in its pressure causes the valve to adjust towards open position. A heater is provided for the thermal bulb, and when energized, acts to close the valve. Refrigerant from the system supplied in heat exchange contact with the thermal bulb acts to open the valve.

3,388,559
ELECTRIC MOTORS COOLED WITH REFRIGERANTS

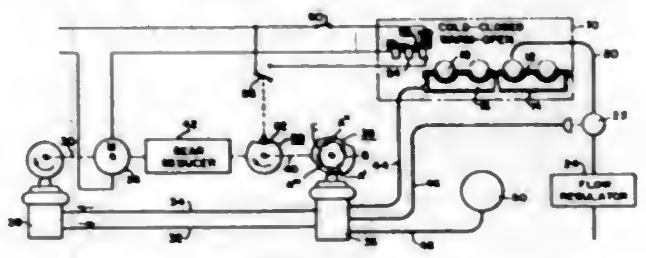
John G. Johnson, Waynesboro, Va., assignor to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Dec. 13, 1966, Ser. No. 601,359
15 Claims. (Cl. 62—224)

The internal surface of the casing of an electric motor has passages therein between it and the stator of the motor in which a refrigerant is expanded. The refrigerant is discharged from the passages towards the ends of the motor, and flows through the space between the stator and the rotor of the motor into a radially and circumferentially extending passage in the center of the stator, and then through an annular passage in the inner surface of the casing, aligned with the passage in the center of the stator, into a refrigerant outlet opening in the casing.



3,388,560
AUTOMATIC ICEMAKER

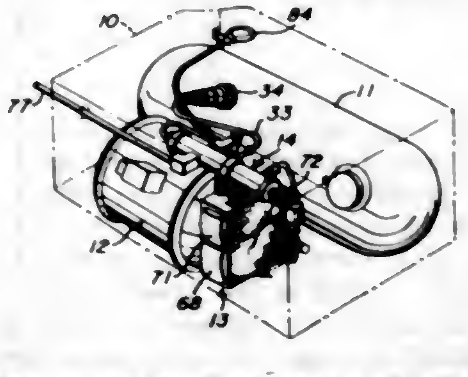
William C. Moreland II, Export, Pa., assignor to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed May 9, 1967, Ser. No. 637,232
6 Claims. (Cl. 62—353)



Ice cube making apparatus of the character in which ice cube pockets in a flexible wall liner are inverted by pressurizing the space underlying the liner to eject frozen cubes therefrom, and having a gas pumping system operable to obtain pre-release of the cubes from the pockets by drawing the pockets down out of adherence with the cubes prior to inversion of the pockets.

3,388,561
RECIRCULATED AIR COOLING APPARATUS

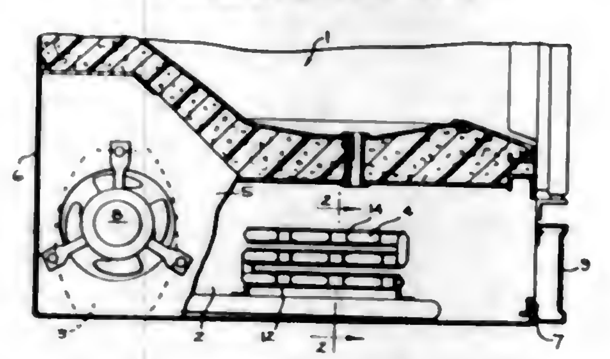
Delbert R. Parrott, Englewood, Ohio, assignor to United Aircraft Products, Inc., Dayton, Ohio, a corporation of Ohio
Filed Jan. 9, 1967, Ser. No. 608,074
10 Claims. (Cl. 62—467)



A unitary assembly of an evaporative liquid storage tank, an evaporator to which liquid from the tank is supplied, a fan-motor combination for recirculating air through the evaporator in heat transfer relation to the liquid, and valve controls, the assembly comprising a unitary package installed in a compartment of cool recirculated compartment air during a variety of heat loads, liquid coolant after passing through the evaporator being discharged out of such compartment and the controls featuring means accessible from outside the compartment to vent the tank independently of the evaporator outside the compartment.

3,388,562
REFRIGERATION SYSTEM INCLUDING COATED CONDENSER

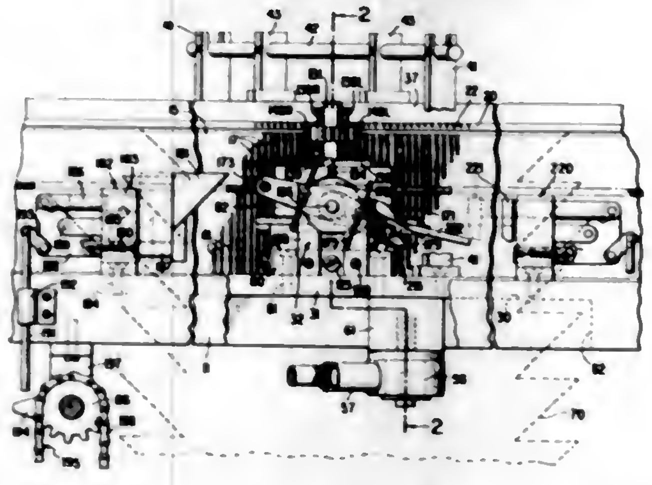
Harold P. Harle, Louisville, Ky., Assignor to General Electric Company, a corporation of New York
Filed Sept. 22, 1966, Ser. No. 581,320
3 Claims. (Cl. 62—507)



A refrigerator including a machinery compartment having a condenser therein. The condenser is coated with material which resists adhesion thereto of foreign substances.

3,388,563
AUTOMATIC CAM SECTION FOR KNITTING MACHINES

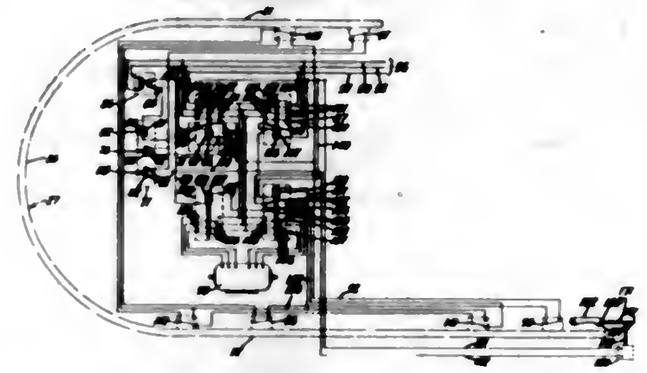
Sam Mishcon, Belle Harbor, N.Y., assignor to The Singer Company, New York, N.Y., a corporation of New Jersey
Filed June 1, 1965, Ser. No. 460,085
7 Claims. (Cl. 66—27)



An oscillatory circular knitting machine for making a simulated full fashioned article such as a shirt collar is diclosed. The needle cylinder of the machine is held stationary, and an adjustable cam block is oscillated relative to such cylinder. The cam block is so designed that after a predetermined number of courses during the knitting of the article, the stitch cam of the cam block gets indexed to a new position. Then, after a second predetermined number of courses of the article, the stitch cam is indexed again. This is repeated so that successively tighter and tighter (or looser and looser, as the case may be) courses are discretely provided in the article.

3,388,564
CONVEYOR MECHANISM FOR STRAIGHT BAR KNITTING MACHINES

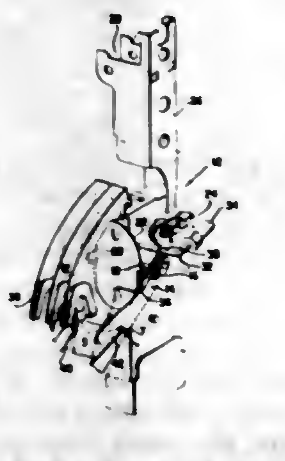
Robert M. Sanders, Reading, Pa., assignor to Textile Machine Works, Wyomissing, Pa., a corporation of Pennsylvania
Filed Apr. 4, 1966, Ser. No. 540,008
7 Claims. (Cl. 66—148)



1. In a multisection knitting machine having fabricating means for fabricating flat selvaged fabric blanks to preformed welts after transfer to said fabricating means, means for conveying said welts to a position for transfer to said fabricating means including a transfer bar for a welt for each of said knitting sections, a train of carriages on which said transfer bars are mounted, a loading station at the front of said machine adjacent one end thereof, a track on which said train of carriages are mounted for movement from a loading position, in which a leading carriage of said train is at said loading station to receive a welt and a trailing carriage of said train is at a position at the back of said machine remote from said loading station, and a transfer position in which said welts are transferred from said transfer bars to said fabricating means, means for moving said train of carriages between said loading and transfer positions during which each of said transfer bars on said carriages receives a welt at said loading station, fixed means engageable with said leading carriage for stopping said train of carriages in said transfer position, and latch means for holding said train of carriages in said transfer position during transfer of said welts from said transfer bars to said fabricating means.

3,388,565
STOP MOTION WITH BUILT-IN SLUB CATCHER

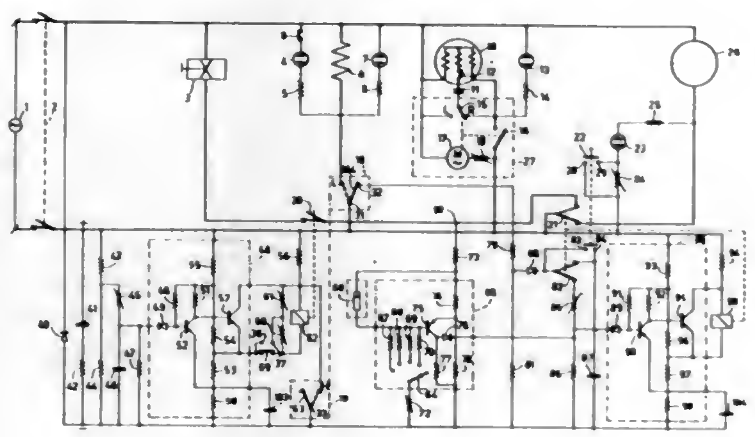
Lester Mishcon, Miami Beach, Fla., assignor to The Singer Company, New York, N.Y., a corporation of New Jersey
Continuation-in-part of application Ser. No. 544,951, Apr. 25, 1966. This application Jan. 30, 1967, Ser. No. 612,411
2 Claims. (Cl. 66—161)



A stop motion device for a circular knitting machine is described as embodying a slub catcher in the nature of a pivotal arm of the stop motion device. The slub catcher in one form of the invention takes the form of an elongated open ended slot, and as presently preferred, the dimensions of such slot are adjustable to accommodate various and sundry forms of yarns.

3,388,566
WASHING MACHINE

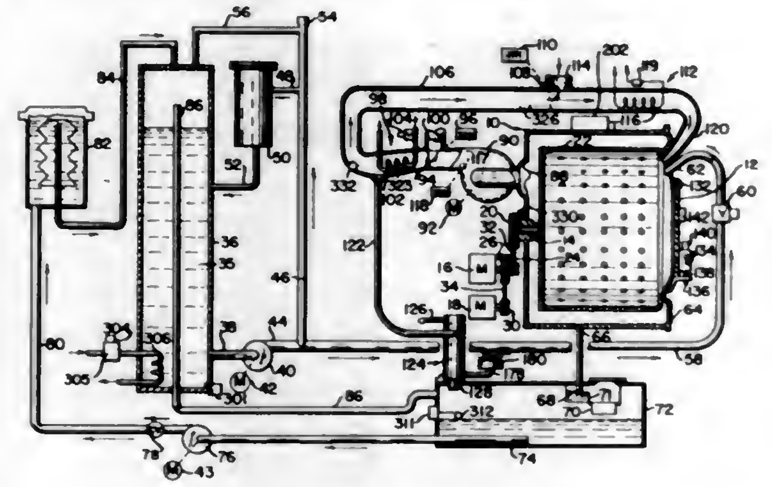
Arjen Kaper and Peter Verdenius, Oliemolenstraat, Drachten, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Continuation of application Ser. No. 521,305, Jan. 18, 1966. This application Oct. 6, 1967, Ser. No. 673,522
Claims priority, application Netherlands, Feb. 9, 1965, 6,501,560
17 Claims. (Cl. 68—12)



A washing machine program controller including means for automatically switching the machine into the rinse cycle upon completion of the wash cycle.

3,388,567
DRY CLEANING APPARATUS

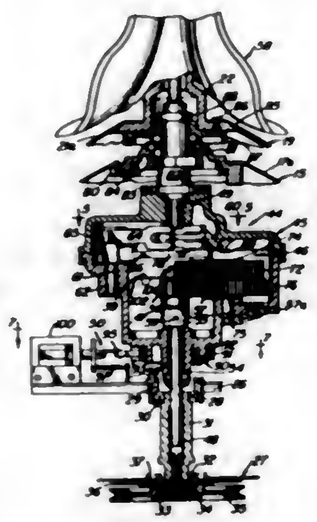
Joseph F. Oles, Richmond Heights, Ohio, assignor to White Consolidated Industries Inc., a corporation of Delaware
Original application Dec. 24, 1963, Ser. No. 333,033, now Patent No. 3,246,493, dated Apr. 19, 1966. Divided and this application Apr. 14, 1966, Ser. No. 562,983
3 Claims. (Cl. 68—18)



Automatic safety controls for dry cleaning machines in which cleaning fluid or solvent is circulated through a rotating clothes drum, the safety controls initiating an automatic shutdown and alarm sequence when any of several conditions are detected which indicate failure of the solvent recovery to progress normally or upon failure of the drum to rotate at proper speed.

3,388,568
WASHING MACHINE DRIVE ARRANGEMENT

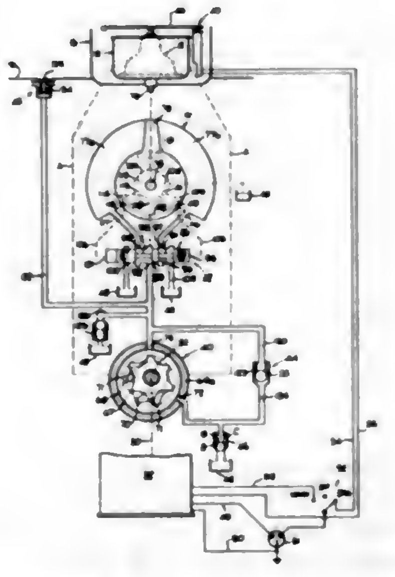
Robert B. Beare, Herrin, and Curtis R. Hartley, West Frankfort, Ill., assignors to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Filed July 1, 1966, Ser. No. 566,449
17 Claims. (Cl. 68—23)



A washing machine drive having a reversible motor-driven shaft; an agitator-operating gear set including a drive gear, and a driven gear rotatable on a support connected to a clothes container; a motor-controlled latch rotatable with the drive gear and engageable with the driven gear to lock the gears together for unitary rotation of the support and clothes container; a helical spring clutch on the shaft and providing a positive drive to the gear set during shaft rotation and providing a slipping friction drive to operate the latch to lock the gears for container rotation during reversal of shaft rotation.

3,388,569
HYDRAULIC TRANSMISSION FOR FABRIC-TREATING MACHINE

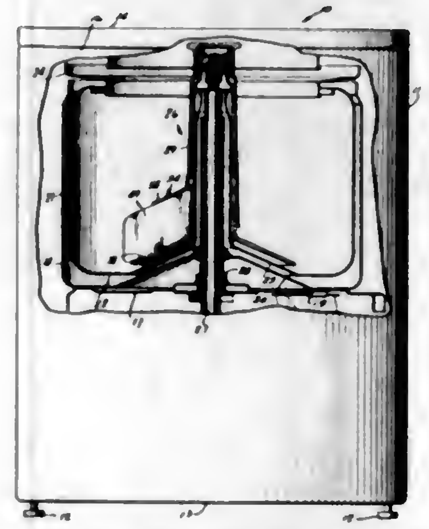
Curtis E. Kurtz, Arlington Heights, Ill., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Continuation of application Ser. No. 548,787, May 9, 1966. This application Aug. 8, 1967, Ser. No. 661,760
44 Claims. (Cl. 68—23)



A fabric-treating machine having a tub, a rotatable fabric container in the tub, and an agitator in the container, and a hydraulic transmission for oscillating the agitator for a washing operation and for rotating the container for an extract-spin operation, the transmission having a pump assembly including a pumping member, and a housing therefor and connected to the container, the housing being held stationary when the pumping member is rotated in one direction to provide fluid under pressure to effect agitator oscillation, subsequent release of the pump housing when the pumping member is rotated in a reverse direction, hydraulically coupling the pumping member and housing to rotate the pump assembly and thereby the container.

3,388,570
WASHING MACHINE AGITATOR WITH ADJUSTABLE VANES

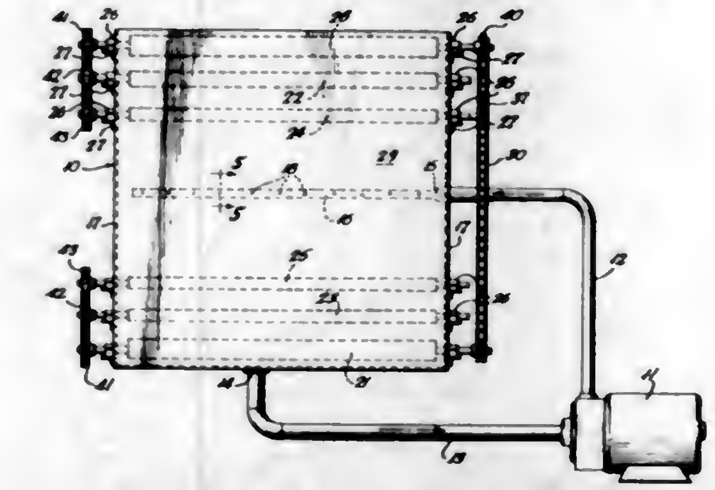
Clifton A. Cobb, St. Joseph, Clark I. Platt, Benton Harbor, and Keith D. Salisbury, St. Joseph, Mich., assignors to Whirlpool Corporation, Benton Harbor, Mich., a corporation of Delaware
Filed Oct. 10, 1966, Ser. No. 585,689
13 Claims. (Cl. 68—134)



An adjustable vane agitator including a center post, a skirt and one or more radially extensible vanes supported thereby. The radial extension of the vanes may be selectively adjusted and positively locked by manipulation of a center post-mounted control to vary the degree of washing action caused by oscillatory movement of the agitator.

3,388,571
FABRIC DYEING APPARATUS

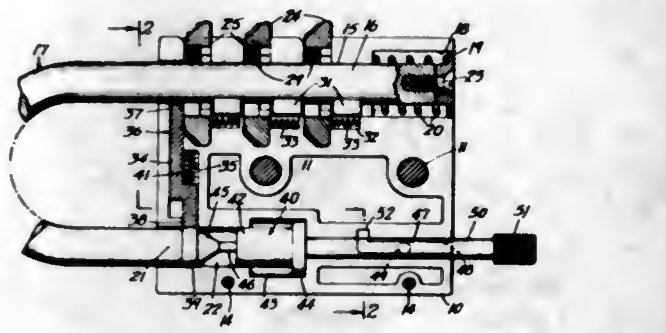
Frank C. Wardlaw, 511 3rd St., Cheraw, S.C. 29520
Filed July 25, 1966, Ser. No. 567,429
3 Claims. (Cl. 68—184)



A very compact high capacity fluid treatment apparatus for an endless fabric tow which is spread out to its full width in a substantially taut condition while moving lengthwise of the tow completely immersed in a liquid bath within a fluid treatment tank. Reversible drive means for the endless tow is provided, together with a fluid circulating means including pipes which spray liquid under pressure on the running webs of the tow.

3,388,572
COMBINATION LOCKS WITH CONCEALED RESETTABLE CONTROL

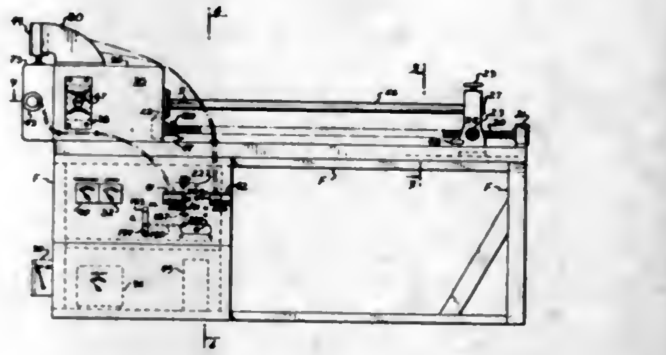
Louis H. Morin, Bronx, N.Y., assignor to Coats & Clark Inc., New York, N.Y., a corporation of Delaware
Continuation-in-part of application Ser. No. 601,446, Dec. 13, 1966. This application Dec. 13, 1966, Ser. No. 601,447
6 Claims. (Cl. 70—315)



A combination lock employing resettable insignia wheels, wherein a control for changing the combination of the lock is concealed within the casing of the lock and actuated by key means facilitating the change of the lock combination and, wherein, said control normally retains the lock in operation with a predetermined combination setting of the wheels.

3,388,573
TUBE BENDING METHOD AND MACHINE

Ned H. Presley, Jr., 3124 Lorman Drive, Jacksonville, Fla. 32217
Filed Sept. 20, 1965, Ser. No. 488,445
20 Claims. (Cl. 72—7)

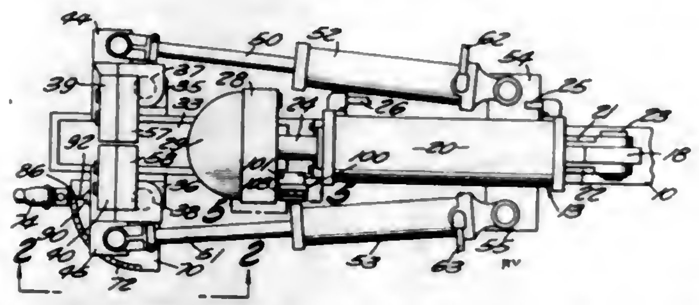


1. A tube bending machine for bending tube stock and the like comprising a bending head assembly including a stationary housing and a movable housing, a sleeve member mounted in said stationary housing and having a passageway therethrough for the reception therein of the tube stock, a stationary roller block mounted to said stationary housing having an opening therethrough in alignment with said passageway and communicating therewith for receiving the tube stock therethrough, attaching means for connecting said movable housing to said stationary housing adjacent said stationary roller block, a roller block connected to said movable housing and having an opening therethrough in alignment with said opening in said stationary roller block and said passageway, means for moving said movable housing to selected positions whereby tube stock passing therethrough is bent, and means for forcibly feeding the tube stock through said sleeve passageway and through said opening in said stationary roller block and out through said opening in said roller block attached to said movable housing.

3,388,574

ATTACHMENT FOR A TUBING BENDER FOR CONTROLLING THE DEPTH OF BEND OF TUBING

Vincent Ignoffo, 6336 W. Belmont Ave.,
Chicago, Ill. 60634
Filed Mar. 3, 1966, Ser. No. 531,524
9 Claims. (Cl. 72—22)



1. In an apparatus having die means and shoe means for bending tubing, hydraulic ram means operable for advancing said die means from a normal position to engage and bend said tubing and for returning said die means to said normal position, hydraulic control means coupled with said shoe means for restricting the movement thereof during bending of said tubing and for returning said shoe means to a normal position, depth of bend control means comprising

control means coupled to said shoe means for movement therewith as said tubing is bent upon operation of said hydraulic ram means,

depth of bend indicator means,

manually movable depth of bend setting means mounted for movement with respect to said indicator means for selecting a desired degree of bend of said tubing,

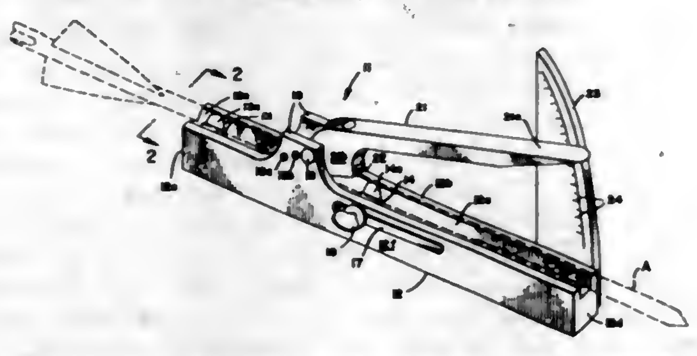
first switch means mounted on one of said control means and said setting means, said first switch means being actuated upon engagement with the other of said control means and setting means in response to movement of said shoe means to a position corresponding to said selected degree of bend, and

circuit means coupled with said first switch means and including start switch means for activating valve means operatively associated with said hydraulic ram means to operate said ram means and advance said die means into bending engagement with said tubing, said circuit means being responsive to actuation of said first switch means for deactivating said valve means to terminate the die means-advancing operation of said hydraulic ram means.

3,388,575

ALIGNMENT INDICATING AND CORRECTING TOOL

Robert Jean Fuzere, 715 Lakehaven Drive,
Sunnyvale, Calif. 94086
Filed Oct. 21, 1965, Ser. No. 499,638
2 Claims. (Cl. 72—35)



1. An arrow indicating and correcting tool comprising:

a cradle,

a first supporting block on said cradle,

a second supporting block slidably mounted on said cradle, and coacting with said first block to form a line of support for an arrow,

adjustable tightening means for fixing the location of said second block on said cradle relative to said first block,

means on said cradle providing a plurality of pivot locations, each location being at a different distance from the line of support,

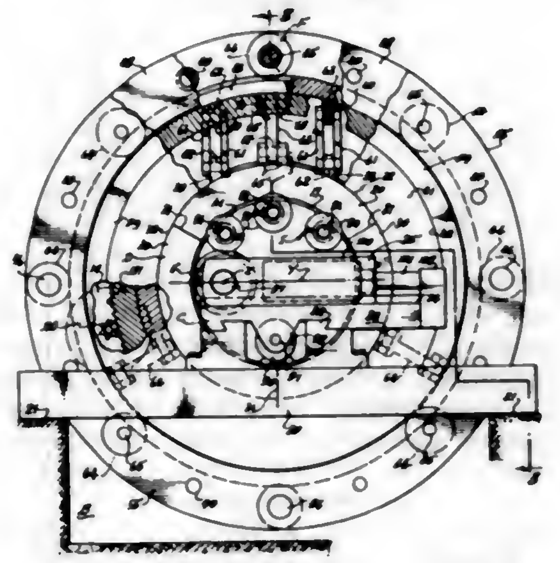
an indicating arm pivotally mounted to said cradle at one of said pivot locations for applying mechanical force to the arrow between said blocks, and

a scale on said cradle for coacting with said arm to indicate the deviation of a portion of an arrow between said blocks from the line of support.

3,388,576

METHOD AND APPARATUS FOR EXTRUSIVE ROLLING OF ANNULAR MEMBERS

Adolph W. Ernestus, Los Angeles, Calif., assignor to N.T.W. Missile Engineering, Inc., Los Angeles, Calif., a corporation of California
Filed Oct. 21, 1965, Ser. No. 500,108
10 Claims. (Cl. 72—81)



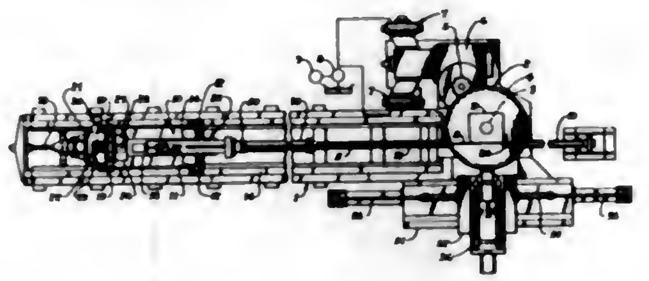
1. A method of internal rolling of an annular part, comprising the following steps: inserting an annular work piece into a female die having an internal die wall with oppositely flared areas at respective ends thereof conforming to an external configuration required in said part; rotating the die and transmitting the rotation thereof to the work piece; inserting a pair of work rollers into the space within the work piece; pressing said rollers radially outwardly against the work piece and simultaneously moving them axially away from one another and radially outwardly so as to shape respective ends of said ring against the oppositely flaring areas of said die wall, with the axial drag of each roller on the work piece being balanced against that of the other.

3,388,577

METAL FORMING MACHINE, TRAVERSING WIPE SHOE AND CONTROL THEREFOR

Stanley M. Dolney, Parma, Ohio, assignor to The Cyril Bath Company, Cleveland, Ohio, a corporation of Ohio
Filed Aug. 13, 1965, Ser. No. 479,574
5 Claims. (Cl. 72—151)

The preferred embodiment of the invention is a wipe forming machine having a turntable rotatable about an upright axis and carrying a side face die; a traversing wipe shoe is driven by a reversible traversing piston and cylinder assemblage. A shoe carrier mounted on the support for movement toward and away from the table for applying the shoe to a workpiece laid against the face of the die. The shoe is carried on a rocker which is mounted on the carrier for rocking about an upright axis. A pair of power applied wipe forming piston and cylinder assemblages are connected to the rocker at opposite sides of the axis for moving the rocker and shoe support toward and away from the table while permitting rocking of the shoe support in the event of unbalanced reactionary forces applied to the shoe face.

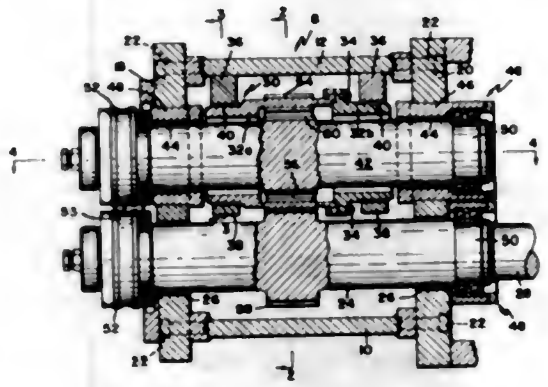


Control switches operating reversing hydraulic valves are arranged on the carrier so as to be operated by the rocker in relation to the rocked position of the rocker thereby to control the traversing power means so as to traverse the shoe carriage to maintain the reactionary thrust between the shoe and workpiece on the die directly through the rocking axis of the shoe at all times.

3,388,578

ROLL STAND FOR A ROLLING MILL

Robert D. Wykes, Worcester, Mass., assignor to Morgan Construction Company, Worcester, Mass., a corporation of Massachusetts
Filed Jan. 28, 1966, Ser. No. 523,659
7 Claims. (Cl. 72—240)

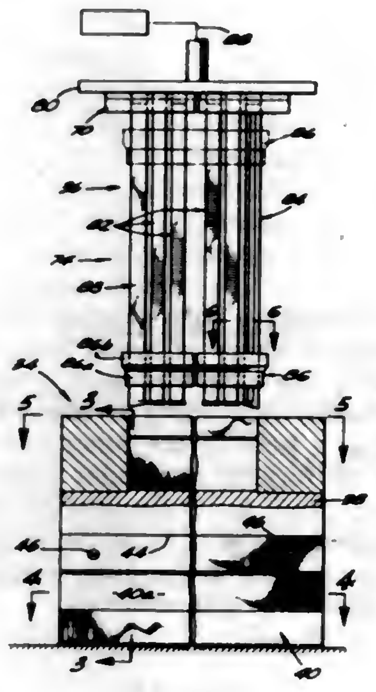


A roll stand for a rolling mill including a housing supporting first and second roll shafts for rotation about spaced parallel axes. The first roll shaft is rotatable about a fixed axis and is driven by conventional means exterior of the housing. The second roll shaft extends axially through a cylindrical gear element which is also rotatable about a fixed axis parallel to the axes of said roll shafts. The cylindrical gear element is provided with inner and outer gear teeth forming respectively inner and outer idlers, the inner idler being meshed with a driven gear on the second roll shaft and the outer idler being meshed with a drive gear on the first roll shaft. The bearings for the second roll shaft are provided with eccentric sleeves which when rotated, impart a lateral adjustment to the second roll shaft without adversely affecting the meshed relationship between the inner idler on the cylindrical gear element and the driven gear on the second roll shaft.

3,388,579

METHOD AND APPARATUS FOR FABRICATING CELLULAR LOAD BEARING PLANKS INVOLVING IMPACT EXTRUSION OF FLAT CELLULAR SLABS

Ralph W. Hilton, Torrance, Calif., assignor to Harvey Aluminum (Incorporated), Torrance, Calif., a corporation of California
Filed Oct. 18, 1965, Ser. No. 496,935
8 Claims. (Cl. 72—256)

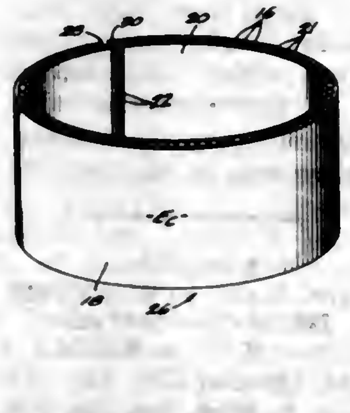


Load bearing planks are fabricated from a billet of extrusible material by first forming an undercut connector means along the bottom edge of billet, inserting said bottom edge in contact with a portion of the closed end of an extrusion die cavity, inserting intermediate the said connecting means of the billet and the closed end of the die cavity a forming bar to prevent distortion of the undercut connector means during the subsequent backward extrusion of the billet.

3,388,580

METHOD AND APPARATUS FOR FABRICATING CELLULAR LOAD BEARING PLANKS INVOLVING IMPACT EXTRUSION OF CYLINDRICAL CELLULAR SLABS

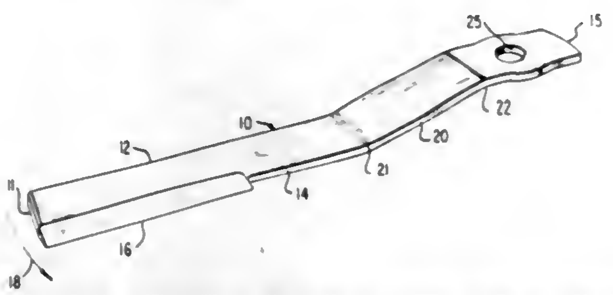
Ralph W. Hilton, Torrance, Calif., assignor to Harvey Aluminum (Incorporated), Torrance, Calif., a corporation of California
Filed Oct. 18, 1965, Ser. No. 496,934
7 Claims. (Cl. 72—266)



Load bearing planks are fabricated by placing an annular billet of extrusible material into an annular extrusion die cavity, moving a plurality of circumferentially spaced punches into the die cavity to form a cylindrical extrusion, and unrolling the extrusion to form a flat load bearing plank.

3,388,581
METHOD OF FORMING A ROTARY CUTTER BLADE

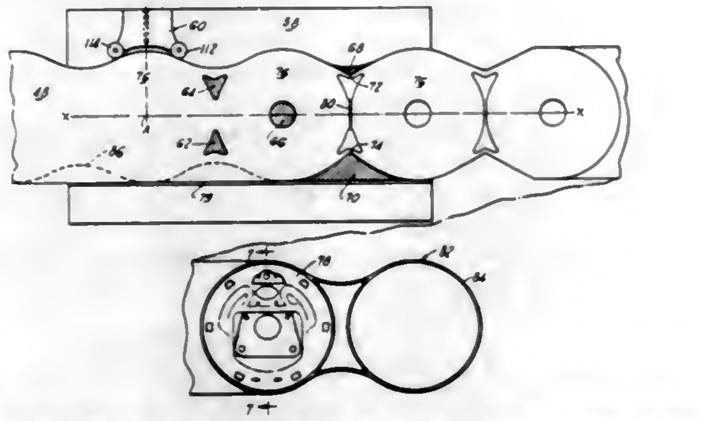
Julian P. Mercer, Jr., 2914 Macon Road,
Columbus, Ga. 31906
Filed Aug. 23, 1965, Ser. No. 481,744
4 Claims. (Cl. 72—324)



A method of forming a rotary cutter blade comprising cutting a plurality of straps of metal from a larger piece of metal, bending the straps at two positions to form parallel end portions, sharpening an edge of one end portion and forming a hole in the other end portion. The hole is formed by forging a circular area of the metal which is displaced from the end and edges of the strap to reduce the thickness in the area of the strap and enlarge the width of the strap about the area. The metal remaining in the area after forging is removed.

3,388,582
APPARATUS FOR SLITTING SHEET METAL AND METHOD OF FORMING CIRCULAR MEMBERS THEREFROM

Alfred Westrom, Frederick R. Fischer, Robert L. Skinner, and Eugene J. Zilkowski, South Bend, Ind., and Wilbur E. Sanders, Jr., Tucson, Ariz., assignors to The Bendix Corporation, a corporation of Delaware
Filed Sept. 27, 1965, Ser. No. 490,190
7 Claims. (Cl. 72—335)

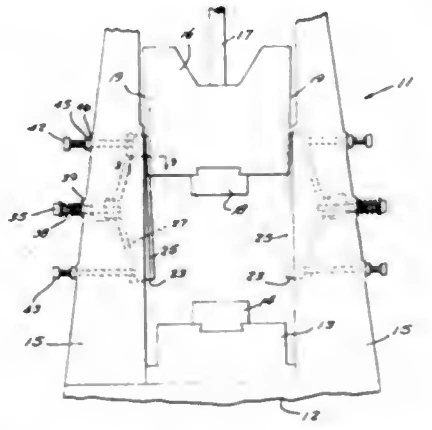


Apparatus for and method of slitting a continuous sheet of relatively heavy gauge sheet metal into a plurality of narrower strips having longitudinally extending serpentine edge portions from which tangential circular blanks partially outline by the serpentine edge portions are stamped to thereby maximize the number of blanks obtainable from a given area of sheet metal.

3,388,583
PRECISION RAM STRUCTURE FOR DROP HAMMERS

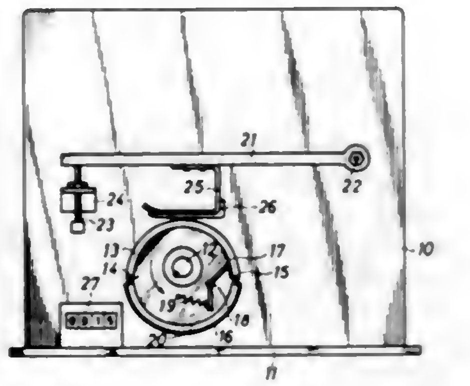
Maximilian K. Nye, Fombell, Pa.
(Box 224, Ellwood City, Pa. 11607)
Filed Feb. 8, 1966, Ser. No. 525,939
10 Claims. (Cl. 72—456)

A drop hammer assembly consisting of a frame with a horizontal base portion on which a bottom die is secured and having upstanding side arms. A reciprocatory ram provided with a downwardly-facing top die is carried by a vertical piston rod extending between the side arms. The ram has downwardly-convergent sides formed with V-shaped guide grooves. Correspondingly downwardly-convergent serrated side blocks are adjustably-mounted in the side arms, nesting with the side edges of the ram, the adjustments thereof providing substantially snug engagement of the ram with the side blocks at the bottom end of the stroke of the ram, with maximum clearance when the ram is elevated to its uppermost position. The V-shaped guide grooves are provided with additional inner vent grooves at their apex portions.



3,388,584
DEVICE FOR THE DETERMINATION OF THE RESISTANCE TO FRICTION

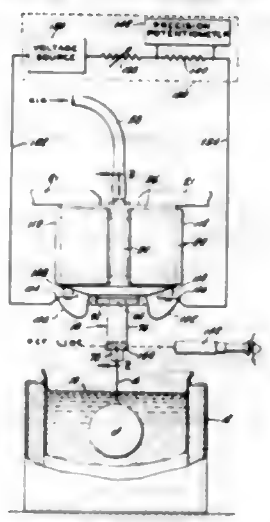
René Marie Van de Velde, Edegem, Belgium, assignor to Gevaert-Agfa N.V., Mortsel, Belgium, a Belgian company
Filed Oct. 27, 1965, Ser. No. 505,339
Claims priority, application Belgium, Nov. 4, 1964, 44,070, Patent 655,226
6 Claims. (Cl. 73—7)



1. Device for determining the resistance to friction of a strip of test material, which comprises a support for said strip having an arcuate peripheral surface portion on which said strip is mounted, means for rotating said support about an axis of rotation having an eccentric relation with the curvature of said arcuate surface portion, the length of the radii of said surface at the ends of said strip being less than the radius of said surface intermediate said strip ends, a friction element for cyclically contacting said test strip as the same revolves with said strip support, a friction element support movable towards and away from said rotation axis, said element support being biased toward said axis, and stop means for limiting the movement of said element support towards said axis to maintain a clearance therebetween in excess of the radii of said strip supporting surface at said strip ends.

3,388,585
FLUID DENSITY MEASURING APPARATUS

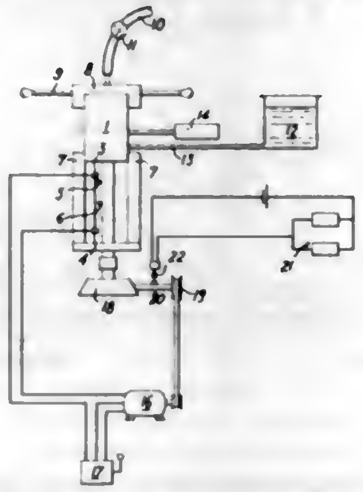
Charles W. Hargens III, Philadelphia, Pa., assignor to The Franklin Institute, Philadelphia, Pa., a corporation of Pennsylvania
Filed Apr. 30, 1965, Ser. No. 452,247
3 Claims. (Cl. 73—32)



An apparatus for balancing forces including a core member supported by a frame and having a bore and a plurality of gas passages therethrough, and a force-responsive member supported for movement along the core and having means for receiving an axial force, such as a plummet which may be immersed in a liquid for measuring density thereof. Gas is supplied through the passages for gas-supporting the force-responsive member for substantially frictionless movement relative to the core. A magnet is provided supported by one of the members for producing a magnetic field and a coil is supported by the other of the members within the field of the magnet. A direct current is supplied to the coil in a predetermined manner to produce an increasing force coacting with the magnetic force of the magnet to bias the force-responsive member axially to balance any force, and the value of the current is measured to give indication of the applied force. A reference position of the force-responsive member relative to the core may be provided for calibration.

3,388,586
POROSIMETER

Maurice Golmard, Dijon, and Michel Zanni, Bandol, France, assignors to Commissariat à l'Energie Atomique, Paris, France
Filed Jan. 5, 1965, Ser. No. 423,564
Claims priority, application France, Jan. 14, 1964, 960,225
1 Claim. (Cl. 73—38)



This invention relates to a porosimeter for measuring the size distribution of the pores of a sample material. Particularly, the invention relates to a method and apparatus for determining the open pore volume of a sample by measuring the volume of a non-wetting liquid, such as mercury, which is required to fill the pores.

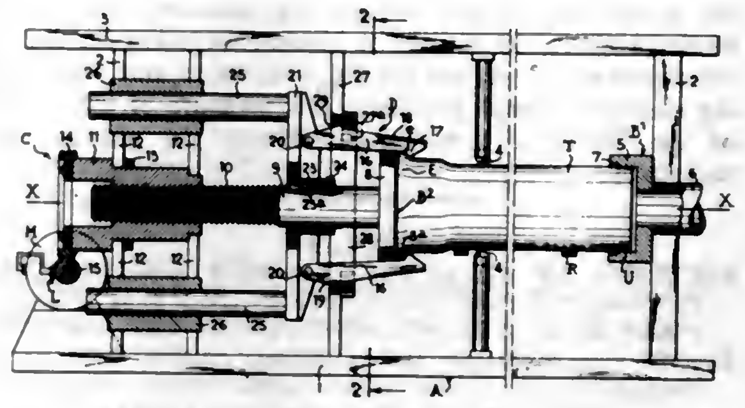
3,388,587
METHOD AND COMPOSITIONS FOR INSPECTING LEAKAGE WITH GAS PRESSURE TESTING

Torakichi Hara, Nobuyoshi Hirota, and Yoshio Onoshima, Nagasaki, Japan, assignors to Mitsubishi Jukogyo Kabushiki Kaisha, Tokyo, Japan
No Drawing. Filed July 7, 1965, Ser. No. 470,202
Claims priority, application Japan, July 10, 1964, 39/39,624
8 Claims. (Cl. 73—40)

A leakage inspection method which comprises applying gas pressure to a structure and thereafter checking for leaking defective parts, the area to be checked for leakage being covered with an adherent film containing an adhesion agent mixed with a foaming agent in a solvent so that a long-sustaining solid spongy foam mass is formed in said film at leakage points.

3,388,588
PRESS FOR THE HYDRAULIC TESTING OF PIPES

Raymond Albert Vincenot, Pont-a-Mousson, France, assignor to Centre de Recherches de Pont-a-Mousson, Pont-a-Mousson, France, a French body corporate
Filed July 20, 1966, Ser. No. 566,513
Claims priority, application France, Aug. 6, 1965, 27,487
11 Claims. (Cl. 73—49.6)

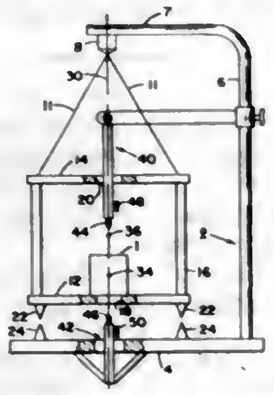


A press for hydraulically testing a pipe having a socket, the press having at one end a fixed cylindrical element which fits around and seals the pipe end remote from the socket and, at the other end, pipe-closing means which axial thrust means apply against the entrance end of the socket, a counter-support device fixed relative to the stand of the press being engageable behind a shoulder on the socket of the pipe to hold the latter axially stationary when the pipe-closing means is applied against the entrance end of the socket.

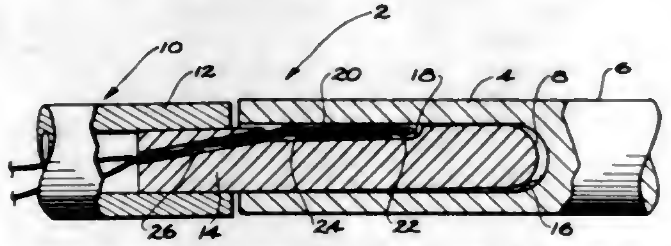
3,388,589
METHOD AND APPARATUS FOR DETERMINING THE CENTER OF GRAVITY

Albert S. Campbell, Las Cruces, N. Mex., assignor to the United States of America as represented by the Secretary of the Army
Filed Dec. 17, 1964, Ser. No. 419,253
14 Claims. (Cl. 73—65)

A center of gravity determining device which has a platform that is balanced in a horizontal position with a specimen thereon such that a vertical imaginary line passes through the center of gravity of the specimen and the platform so that marking means can be used to mark the upper and lower surfaces of the sample where the imaginary line passes through the specimen center of gravity.

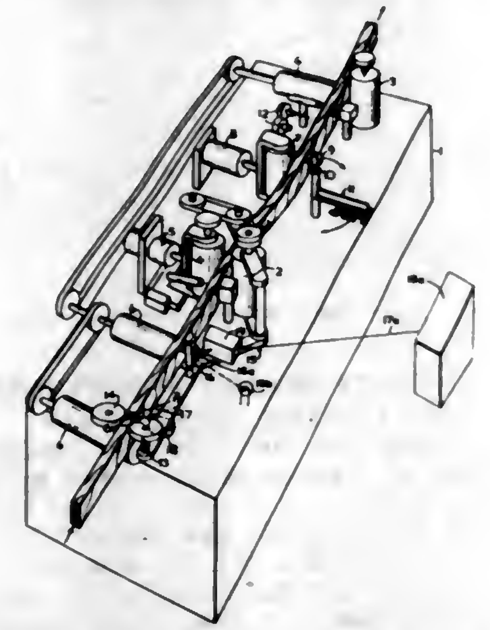


3,388,590
CONNECTOR INTERNAL FORCE GAUGE
Hugh L. Dryden, Deputy Administrator of the National Aeronautics and Space Administration, with respect to an invention of William W. Bond, Alhambra, Calif.
Filed Nov. 29, 1965, Ser. No. 510,475
6 Claims. (Cl. 73—88.5)



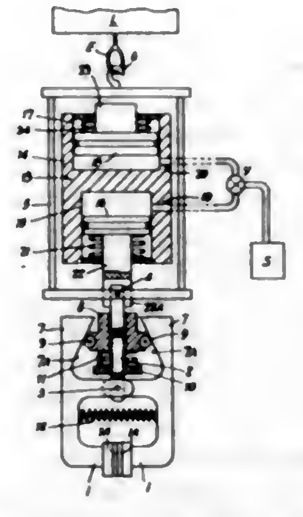
A strain sensing transducer is attached to a connector pin positioned within a female connector receptacle. The strain produced in the pin by biasing means in the wall of the receptacle is sensed by the transducer and the resulting electrical signal produced is a measure of the quality of the electrical connection between the pin and the receptacle.

3,388,591
METHOD OF GRADING TIMBER AND TIMBER PRODUCTS FOR STRENGTH AND EQUIPMENT FOR USE IN ACCORDANCE WITH THE METHOD
Harold Ernest Booth and Anthony Anton, both of 96 Harrington St., Sydney, New South Wales, Australia
Filed Mar. 10, 1965, Ser. No. 438,614
Claims priority, application Australia, Mar. 11, 1964, 41,919/64
3 Claims. (Cl. 73—100)



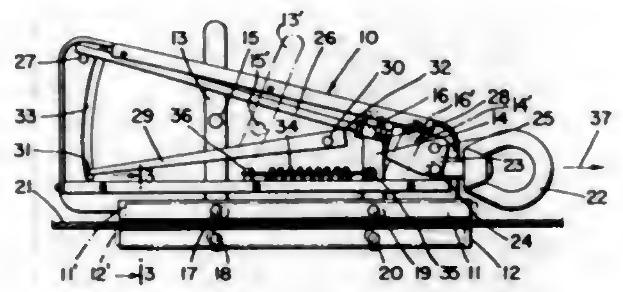
An apparatus and a method for grading lumber by subjecting sticks of timber to a lateral force sufficient to deflect the timber, repeating the application of such force at predetermined intervals spaced over the length of the stick, and marking the timber with a code denoting its strength as determined by the measurement of such deflections. The invention additionally includes means whereby curvature or inequalities in thickness of the timber are initially measured, such initial measurement and the subsequent deflection measurements being integrated whereby true deflection and accordingly true timber strength are recorded.

3,388,592
TENSILE TESTING MACHINES
John Harvey Griffiths, Aylesbury, England, assignor to Instron Limited, High Wycombe, England, a British company
Filed Dec. 7, 1965, Ser. No. 512,047
Claims priority, application Great Britain, Dec. 23, 1964, 52,356/64
6 Claims. (Cl. 73—103)



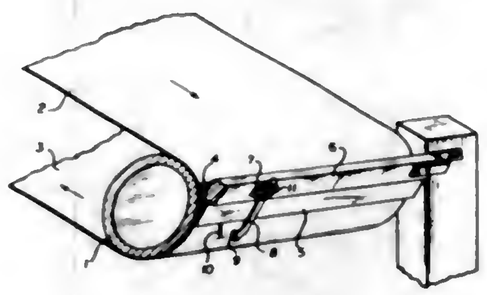
For use with a tensile testing machine, apparatus comprising jaws for gripping a test specimen, a carrier supporting the jaws for transmitting load on the specimen to load-measuring equipment, urging means urging the jaws to their closed position, and a controlling mechanism for rendering the carrier ineffective to apply load to the load-measuring equipment and for overcoming the effect of the urging means.

3,388,593
WIRE TENSIONING DEVICE
Irvin L. Glerum, Sherman Oaks, Calif., assignor to W. C. Dillon & Company, Inc., a corporation of California
Filed June 4, 1965, Ser. No. 461,425
7 Claims. (Cl. 73—143)



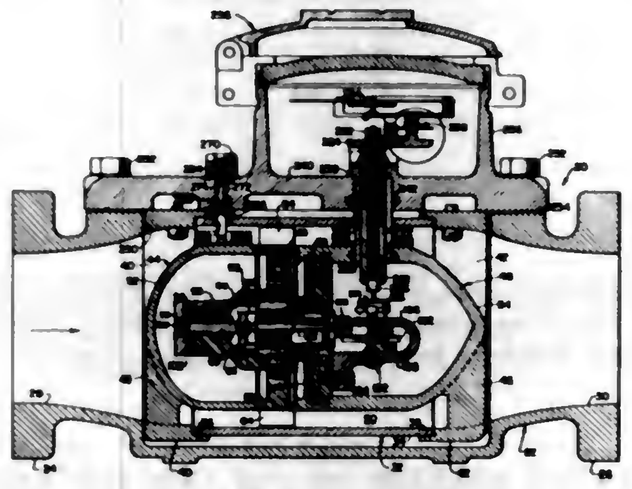
This disclosure relates to a wire gripping and tensioning device including parallel jaw members arranged in a parallelogram configuration for collapsing on opposite sides of a wire to grip the same. An indicator is provided which is secured to the frame structure and will indicate the tension force exerted when pulling a wire by the gripping jaws.

3,388,594
APPARATUS FOR MEASURING THE DRYING LENGTH OF COATING MATERIALS
Gordon Totty, Lunenburg, Mass., assignor to The Borden Company, New York, N.Y., a corporation of New Jersey
Filed Nov. 9, 1966, Ser. No. 593,174
5 Claims. (Cl. 73—150)



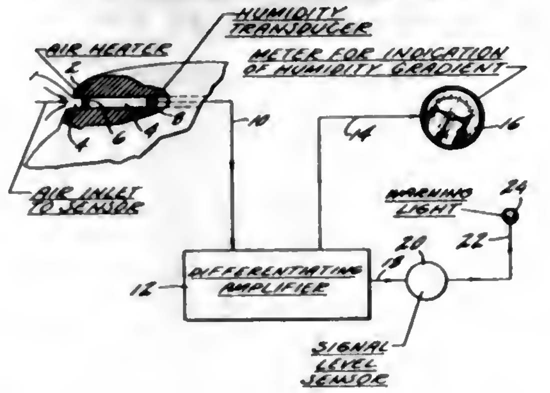
The present invention relates to a liquid-holding power measuring apparatus for measuring the drying length of coating materials applied to moving substrates, such as paper or the like, and comprises an adjustably mounted arm which has at the free end thereof a rider member which engages the moving substrate which has been coated. The arm is maintained in engagement with the moving substrate and the distance between the portion where the liquid is applied to the substrate and the point where the rider member engages the substrate is measured and compared with the rate of movement of the substrate to calculate the drying length of the coating material.

3,388,595
FLOW METER
Bernard Last and George D. Anderson, Uniontown, Pa., assignors to Rockwell Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Dec. 27, 1965, Ser. No. 517,403
7 Claims. (Cl. 73—231)



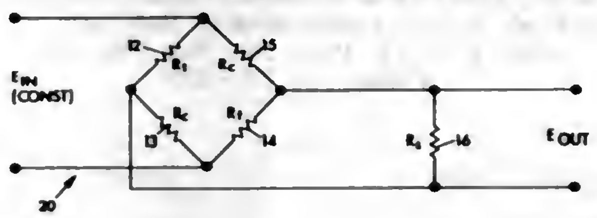
An axial flow meter having a rotatable metering rotor driven by fluid flow through the meter housing and drive connected to a register or the like by a radial gap type magnetic coupling. The drive magnet of the coupling is fixed to the rotor, and the driven magnet is connected to the register by a drive train. The drive train comprises a pinion and crown gear connection which is arranged to permit sufficient relative axial play between the drive and driven magnets that they are self aligning under the influence of their magnetic interaction.

3,388,596
AIRBORNE HUMIDITY GRADIENT SENSOR
William M. Foley, Glastonbury, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed June 30, 1967, Ser. No. 650,532
3 Claims. (Cl. 73—336.5)



A heater provides a uniform temperature to air injected at an inlet on an aircraft, and a humidity transducer provides a signal indicating the vapor content of the air, the humidity signal being monitored on a meter and capable of providing a warning when exceeding a given level.

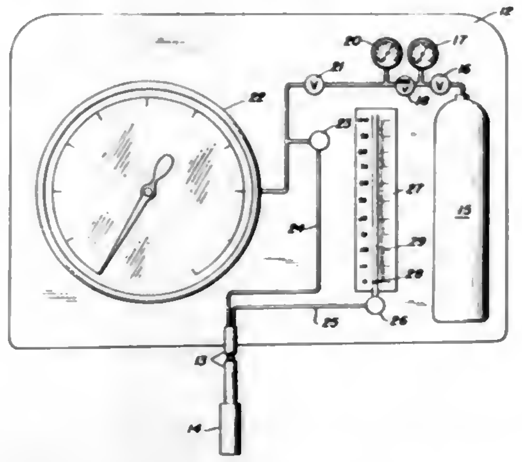
3,388,597
MEASURING AND COMPUTING DEVICE AND METHOD
David W. Bargen and Joseph C. Sanchez, Pasadena, Calif., assignors, by mesne assignments, to Whittaker Corporation, Los Angeles, Calif.
Filed Oct. 5, 1965, Ser. No. 493,085
12 Claims. (Cl. 73—398)



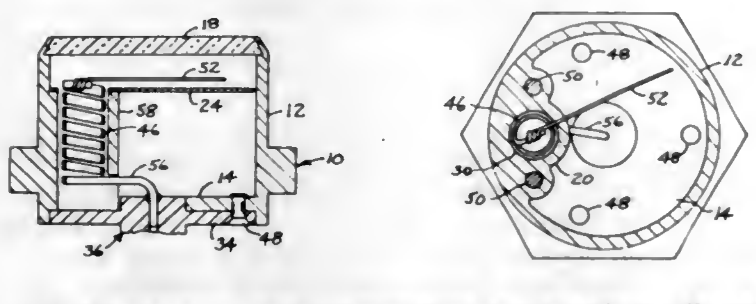
A transducer providing voltage output which is directly proportional to the ratio of a selected variable, such as pressure, to only a selected positive power of absolute temperature, such as one. Preferably the transducer involves a bridge circuit (1) whose four resistances are semiconductor strain gage bodies which are subject to the selected variable and temperature being measured with one opposing pair of strain gage bodies being subjected to a first strain and the other opposing pair being subjected to a second substantially different strain, (2) whose power supply is a constant voltage source, and (3) whose output has a shunt resistance adapted to compensate for the temperature function so that the voltage output is directly proportional to the ratio of the selected variable to only a selected positive power of absolute temperature.

3,388,598
PRESSURE MEASURING DEVICE
Earl B. Hall, 163 Corte Ramon, Greenbrae, Calif. 94901
Continuation-in-part of application Ser. No. 527,359, Feb. 14, 1966. This application May 2, 1967, Ser. No. 641,409
20 Claims. (Cl. 73—406)

This pressure measuring system has a pressure sensing cell with a bearing wall, into which two spaced-apart passages open. A diaphragm is normally seated against the bearing wall, being urged there by the pressure being sensed. Connected to the passages are an inlet conduit and an outlet conduit which lead to a terminal console for control of the cell and measurement of the sensed pressure. At the terminal console is a supply of gas under pressure greater than the sensed pressure and a valve for varying the flow rate and pressure of the gas supplied to the inlet conduit. A pressure gauge is also connected to the inlet conduit, and a gas flow meter is connected to the outlet from the outlet conduit, so that when gas from the supply passes through the inlet conduit to the diaphragm at pressure and amount sufficient to unseat the diaphragm a predetermined amount from the bearing wall, a predetermined flow rate will be indicated by the flow meter, and the pressure gauge then indicates the pressure against the diaphragm.

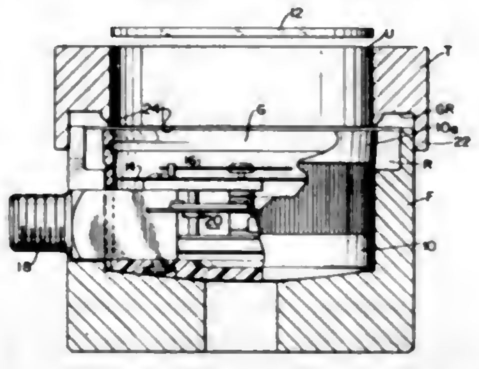


3,388,599
PRESSURE GAGE
Donald Robert Mitchell, Glendora, Calif., assignor to American Radiator & Standard Sanitary Corporation, New York, N.Y., a corporation of Delaware
Filed Sept. 11, 1964, Ser. No. 395,770
1 Claim. (Cl. 73—418)



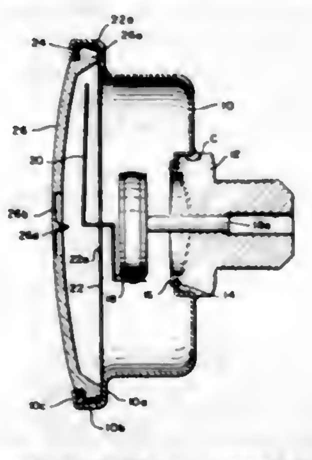
1. A pressure gage comprising a one-piece die-cast housing having a tubular side wall, an end wall extending inwardly from said side wall at one end thereof to form an end face for the housing, and a hollow boss formed integrally with said side wall; said boss defining a cylindrically contoured cavity extending parallel to, but offset from the housing axis; a one-piece fitting comprising a flange portion positioned flatwise against the housing end face and rigidly affixed thereto, and a tubular portion extending outwardly from said flange portion in alignment with the housing axis; a helical Bourdon tube having a helical coil disposed within the cylindrical cavity defined by the boss, one end portion of said tube terminating within the outline of the opening in said boss, the other end having a hollow anchoring portion extending from the coil into the fitting whereby pressure within the fitting is applied to the interior of the coil to unwind same about its axis; a view window disposed in the end of the housing remote from the fitting; the aforementioned boss terminating inwardly of said window to define a shoulder; a dial plate disposed on said shoulder and secured thereto; and an indicator arm affixed to said one end portion of the helical coil to overlie the dial plate and move thereacross during winding and unwinding movements of the coil; the interior wall surface defined by the cavity being located adjacent the outer surfaces of the coil whereby to constitute means for stabilizing the coil against vibrational movements crosswise of its axis; said hollow boss being completely closed about its periphery for substantially its entire axial dimension whereby the interior cavity wall surface completely surrounds the coil.

3,388,600
GAUGE CONSTRUCTION
Joseph E. Gorgens and Michael Jankura, Stratford, Conn., assignors to Dresser Industries, Inc., Stratford, Conn., a corporation of Delaware
Filed Feb. 26, 1965, Ser. No. 435,575
7 Claims. (Cl. 73—431)



An instrument housing formed of an integral cup-shaped case of resilient material containing a front mounted crystal secured sealed in position by the resilient compression of the casing against the periphery of the crystal.

3,388,601
PRESSURE GAUGE SAFETY CONSTRUCTION
Robert Joseph Ingham, Fairfield, Conn., assignor to Dresser Industries, Inc., Stratford, Conn., a corporation of Delaware
Filed Apr. 9, 1965, Ser. No. 446,896
6 Claims. (Cl. 73—431)

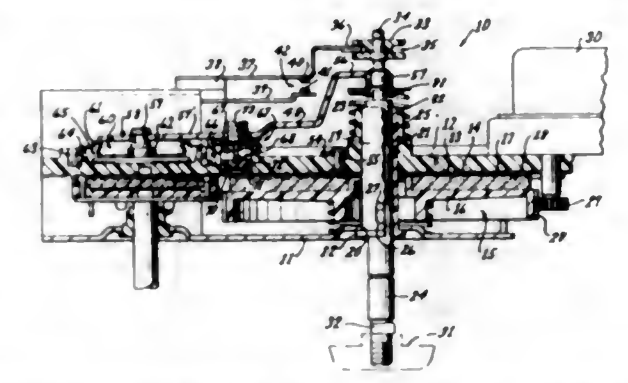


A fluid pressure gauge with a crystal having a central area providing increased fracture susceptibility at relatively lower pressures than the remaining areas thereof.

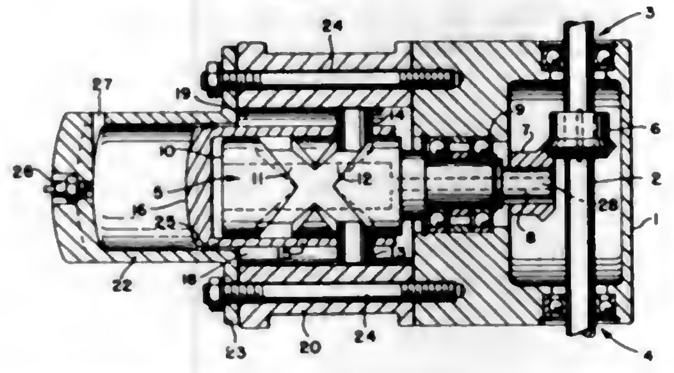
3,388,602
LATCH RELEASE MEANS AND THE LIKE
Harvey J. Shopsky, Latrobe, Pa., assignor to Robertshaw Controls Company, Richmond, Va., a corporation of Delaware
Filed June 15, 1966, Ser. No. 557,675
18 Claims. (Cl. 74—3.5)

This disclosure relates to latching means for a "on-off" member of a movable program member wherein the "on-off" member is axially movable relative to a frame means carrying the rotatable program member and when moved to its "on" position, a pair of latch members cooperate together to hold the "on-off" member in its "on" position to actuate a timer motor for continuously moving the program member as long as the "on-off" member is in

its "on" position whereby the "on-off" member can be moved to its "off" position by either manually moving the "on-off" member to its "off" position to unlatch the latch members thereof or by having one of the latch members automatically moved to its "off" position by an actuator controlled by the program member at its end of cycle position so that suitable spring means cooperates with the "on-off" member to move it to its "off" position.

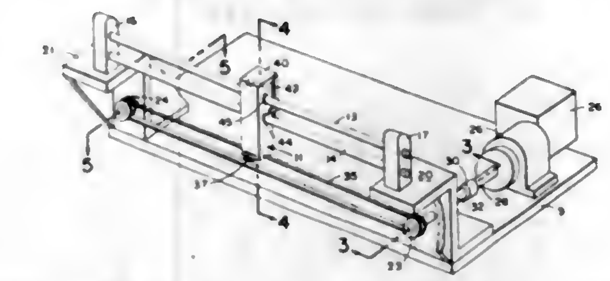


3,388,603
ENGINE
Harry S. Clark, Rte. 3, Delaware, Ohio 43015
Filed Dec. 6, 1965, Ser. No. 511,840
7 Claims. (Cl. 74—57)



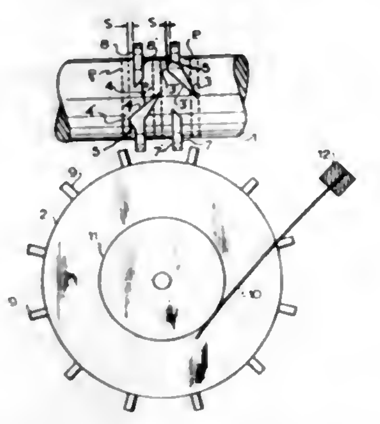
An engine, pump or the like comprising a cylinder having a cylindrically elongated piston reciprocally mounted therein, a cylindrically elongated axially fixed rotor in close telescopic relation with said piston, and cylindrical cam drive means interconnecting the rotor and piston operative to rotate the rotor on reciprocation of the piston or vice versa; several forms of the invention utilizing a hollow rotor with a vent passage at the inner end thereof, some extending axially of the rotor into a gear case.

3,388,604
TRAVELING TARGET
John W. McFarland, Lexington, and Richard E. Lawson, Arlington, Mass., assignors to the United States of America as represented by the Secretary of the Army
Filed Feb. 1, 1966, Ser. No. 524,357
8 Claims. (Cl. 74—89.22)



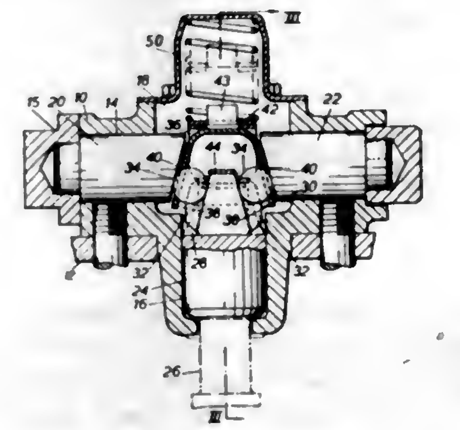
A traveling target device having a motor drive means which allows a target source to move smoothly at 1°/sec. over two rods for a desired distance and rate in either direction in the yaw and pitch planes of a missile so as to measure radar error voltages.

3,388,605
STEPPING DEVICE FOR DIRECTLY DRIVEN OSCILLATORY SYSTEM
Eberhard Schäfer, Bad Durrheim, Germany, assignor to Kienzle Uhrenfabriken G.m.b.H., Schwenningen am Neckar, Germany, a limited-liability company of Germany
Continuation-in-part of application Ser. No. 350,858, Mar. 10, 1964. This application Feb. 8, 1966, Ser. No. 525,907
5 Claims. (Cl. 74—88)



The invention is a stepping device for converting oscillatory motion of a staff or spindle to unidirectional motion of a toothed wheel which may, in turn, be used to drive a clockwork. Cams on the spindle have trailing edges offset in the axial direction from a partial circumferential safety flank so that normally the cams will push a tooth clear of the surface of the safety flank against the tooth during the major part of half a cycle of the spindle. Excessive reverse moments on the toothed wheel, however, do force a tooth back against the safety flank to stop the wheel.

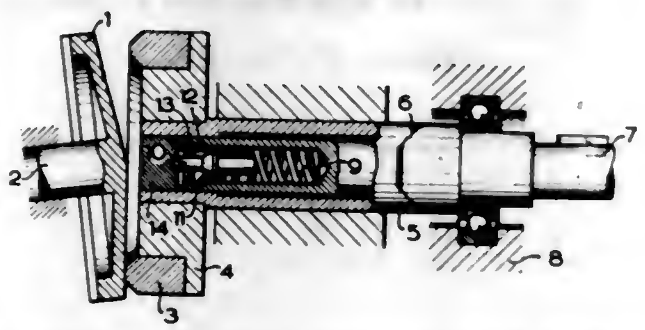
3,388,606
WEDGE TYPE ACTUATORS FOR VEHICLE BRAKES
Albert Charles Hill, Birmingham, England, assignor to Girling Limited, Birmingham, England
Filed June 8, 1966, Ser. No. 556,179
Claims priority, application Great Britain, June 9, 1965, 24,334/65; July 8, 1965, 28,911/65
10 Claims. (Cl. 74—110)



The invention provides a wedge type expander assembly for vehicle brakes. The wedge member in the expander assembly acts on a pair of laterally opposed tappets through two rolling elements interposed between the wedge and the tappet ends. A cage is provided to retain the rolling elements in correct alignment with the wedge and tappets and the cage is prevented from any movement except in line with and perpendicular to the direction of movement of the tappets.

3,388,607
FRICTION WHEEL TRANSMISSION

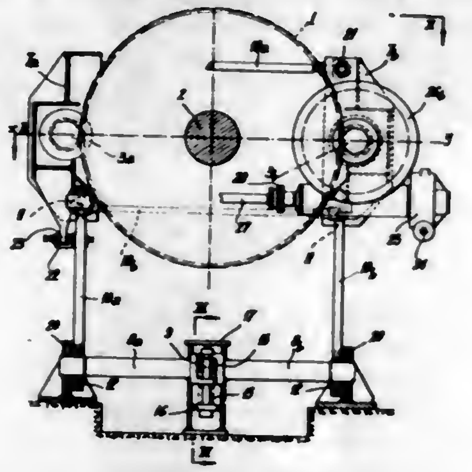
Paul Stöber and Wilhelm Stöber, both of
Kieselbronnerstr. 12, Pforzheim, Germany
Filed Oct. 29, 1965, Ser. No. 505,648
Claims priority, application Germany, Sept. 11, 1965,
St 24,384
8 Claims. (Cl. 74—191)



A friction transmission having an input shaft axially fixed and rotatably mounted in a housing, an intermediate shaft axially movable and rotatably mounted in the housing and an output shaft axially nonmovable and rotatably mounted in the housing, coupled to the intermediate shaft, a friction cone being secured to the input shaft and engaging a conical friction ring detachably secured to the intermediate shaft, a prestressed compression spring means being mounted in the housing to urge the friction ring against the cone and adapted to extend in response to wear of the friction ring, and stop means mounted in the housing and arranged to limit the extension of the spring means to a value corresponding to the maximum allowable axial wear of the friction ring, and to hold the spring means in the position of limited extension.

3,388,608
DEVICE FOR TRANSMITTING MOTION TO A GEAR

François Durand, 108 Blvd. Carnot,
Le Vesinet, Seine-et-Oise, France
Filed Mar. 21, 1967, Ser. No. 624,827
3 Claims. (Cl. 74—410)

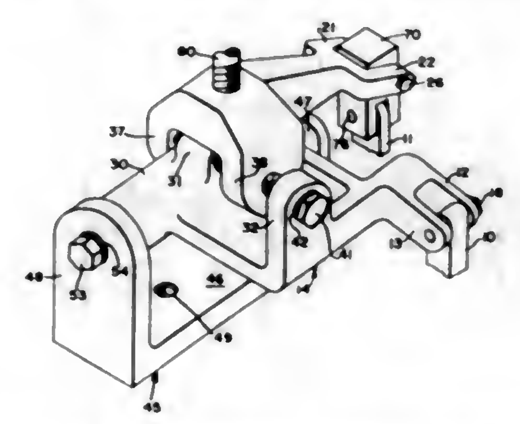


A transmission having two input pinions in mesh with an output gear has movable support means for each pinion. The pinion support means are interconnected by mechanism which equalize the loads applied to each pinion.

3,388,609
SINGLE LEVER CONTROL MECHANISM

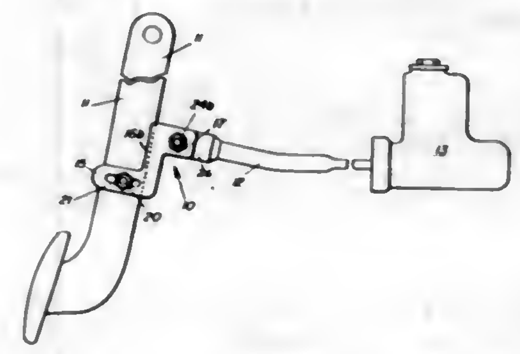
James Anton Miller, Rock Island, Ill., assignor to Deere & Company, Moline, Ill., a corporation of Delaware
Filed Mar. 22, 1967, Ser. No. 625,050
6 Claims. (Cl. 74—471)

A single lever valve control mechanism for operating a plurality of control elements that includes first and second control arms extending to spaced apart control elements, the arms being interconnected to swivel about an axis formed by a threaded bolt extending through tapped openings in the respective arms with one of the arms being supported on a main support frame to pivot about an axis, substantially at right angles to the aforementioned axis, and formed by a threaded stud extending through tapped openings in the one arm and the support frame.



3,388,610
BRAKE PEDAL LINKAGE

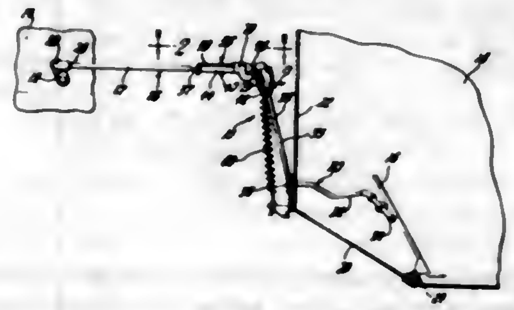
Val R. Pyle, 4263 Chegwidden Lane 84107, and Richard A. Conrad, 4156 Olive Circle 84117, both of Salt Lake City, Utah
Filed May 31, 1966, Ser. No. 553,980
3 Claims. (Cl. 74—512)



Brake pedal linkage for vehicles having hydraulic brake systems utilizing a master cylinder, whereby the brakes can be effectively actuated with less manual pressure by the operator on the customary foot pedal. This linkage includes a special leverage adaptor and pushrod that can be easily substituted for corresponding parts in conventional brake pedal linkage.

3,388,611
CONTROL LINKAGE

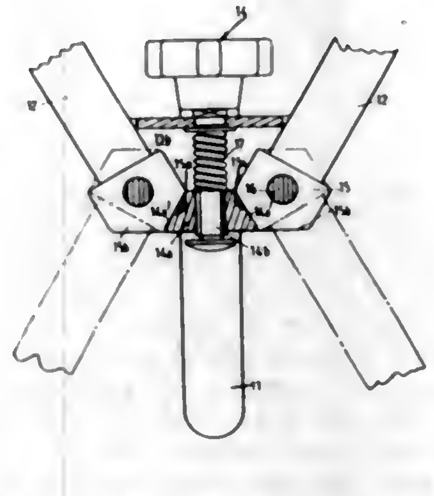
Edward L. Clary and Ronald L. Harris, Fenton, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Jan. 25, 1966, Ser. No. 522,899
8 Claims. (Cl. 74—513)



A hinge connector for a control linkage wherein a plastic connector member having tubular end portions receiving the free ends of a link and a lever has a reduced intermediate section forming a flexible hinge that permits relative pivotal movement between the links upon actuation of the linkage.

3,388,612
HANDLEBARS

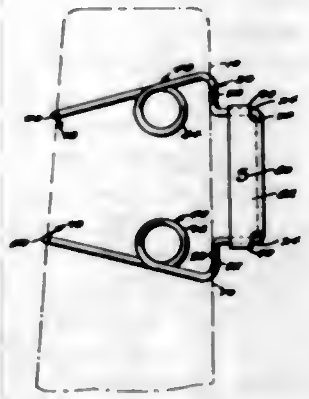
Alan Philip Oakley, Beeston, Nottingham, and John McGregor Gordon, Nuthall, Nottingham, England, assignors to Raleigh Industries Limited, a corporation of the United Kingdom
Filed Mar. 18, 1966, Ser. No. 535,387
Claims priority, application Great Britain, July 17, 1965,
30,473/65
7 Claims. (Cl. 74—551.4)



A pair of handlebars are each mounted on a pivotable block having a pair of flat surfaces thereon. A spring biased member having coacting surfaces thereon can be urged against or toward the blocks, whereby the handlebars can be adjusted to and maintained in an operative position.

3,388,613
PEDAL FOOT RETAINER

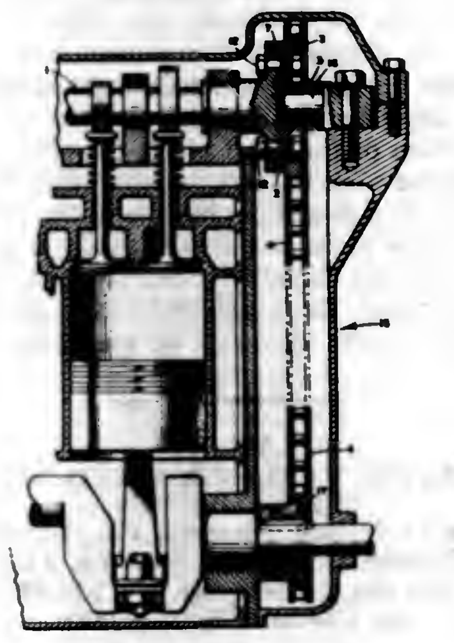
Basil E. Seward, 801 S. 52nd St., Apt. 1605,
Omaha, Nebr. 68106
Filed July 18, 1966, Ser. No. 565,958
5 Claims. (Cl. 74—562)



1. A foot retainer for attachment to an accelerator pedal comprising: two generally upwardly extending portions adapted to be disposed above one side of an accelerator pedal for engaging the edge of the shoe of an operator, means connecting said upwardly extending portions to form a unit, an attachment means connected to said unit on a lower portion of said unit and extending transverse to said upwardly extending portions for extending under an accelerator pedal, said attachment means having upwardly extending grip portions disposed in positions horizontally spaced from said upwardly extending shoe retaining portions whereby they are adapted to grip the opposite side of said pedal, said attachment means further having pressing portions serving to draw said grip portions toward said shoe retaining portions for clamping said accelerator pedal therebetween.

3,388,614
MOUNTING OF THE CAMSHAFT IN AN OVERHEAD CAMSHAFT ENGINE

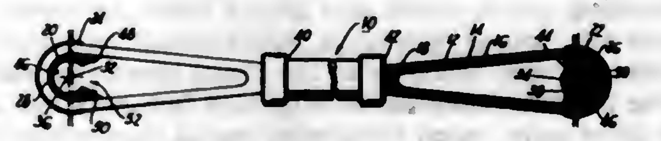
Gaëtan de Coye de Castelet, Billancourt, France, assignor to Regie Nationale des Usines Renault, Billancourt, Seine, France
Filed Oct. 7, 1965, Ser. No. 493,671
Claims priority, application France, Jan. 4, 1965,
710, Patent 1,428,547
3 Claims. (Cl. 74—567)



A camshaft for an internal combustion engine having an overhead mounted camshaft. The camshaft permits valve clearance regulation without adjustment of either the camshaft drive means or the setting of the timing gear. The camshaft is formed in two interlocking portions, one portion of which bears the cams and the other portion of which is the drive. The drive portion is rotatably secured in the engine and the cam portion is detachable from the drive portion to make the necessary adjustments.

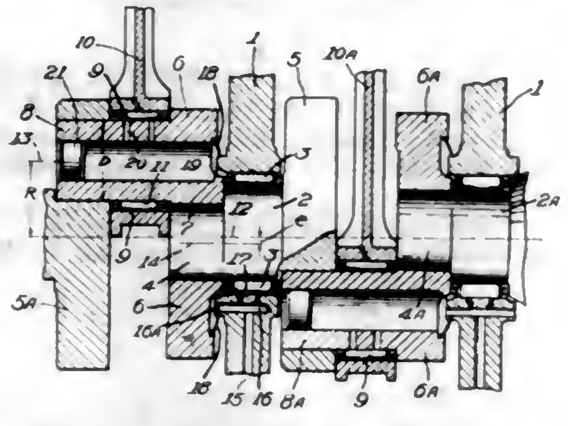
3,388,615
BUSHINGS FOR TIE-BARS

Richard J. Ditlinger, South Bend, Ind., assignor to The Bendix Corporation, a corporation of Delaware
Filed Apr. 6, 1967, Ser. No. 629,020
10 Claims. (Cl. 74—579)



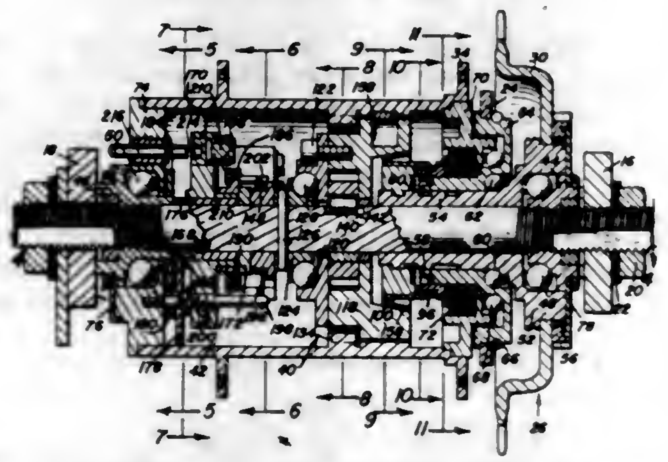
A bushing or end fitting for a closed loop type of connecting device such as a tie-bar comprised of flexibly integrated filaments formed as bands and laminated around at least two such end fittings, which end fittings are provided with a load bearing surface that is eccentrically formed about the axis of the tie-bar with respect to an aperture of the bushing in which pin means are utilized to unite the coupling thus formed to surrounding structure.

3,388,616
COMPOSITE CRANKSHAFT
Tadashi Kume, Tokyo, Japan, assignor to Kabushiki Kaisha Honda Gijutsu Kenkyusho, Yamato-machi, Kiiaadachi-gun Saitama-ken, Japan
Filed Oct. 26, 1965, Ser. No. 505,268
7 Claims. (Cl. 74—597)



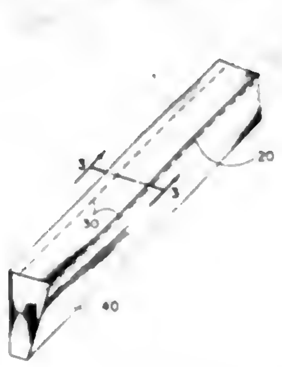
A composite crankshaft which includes shaft and crank pieces fitted together through the medium of an integral axial pin portion of the shaft piece, the axial pin portion being decentered with an axis radially offset from that of the crankshaft in a direction opposite to the crankpin portion of the crank piece and thus is made in an increased diameter to enhance the solidity and strength of the fitting connection between the shaft and crank pieces without reducing the effective diameter of the crankpin portion of the latter.

3,388,617
AUTOMATIC VARIABLE SPEED BICYCLE TRANSMISSION
William O. Nelson, Sarasota, Fla., assignor to Blanche G. Nelson, Sarasota, Fla.
Filed Oct. 4, 1962, Ser. No. 228,402
23 Claims. (Cl. 74—752)



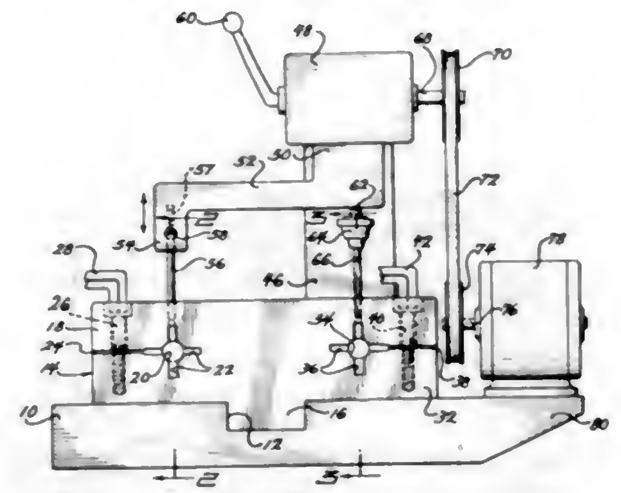
1. An automatic variable speed transmission for bicycles or the like having a driven hub rotatably mounted on a stationary axle which also carries a drive sprocket assembly, and a back-pedaling coaster brake for the hub comprising, plural speed gear means drivingly connected to said hub, torque responsive means operatively connecting said sprocket assembly to the plural speed gear means in one direction only for driving said hub at a low and high drive ratio, speed responsive means operatively connected to the hub for preventing establishment of said high drive ratio below a predetermined speed condition of the hub to maintain said low drive ratio, and drive ratio control means operatively connected to the speed responsive means to condition the plural speed gear means for operation at said low drive ratio in response to removal or reversal of driving torque on the sprocket gear assembly, whereby drive may be resumed at the low drive ratio when the speed of the hub declines below said predetermined speed condition.

3,388,618
METHOD OF MAKING A HIGH SPEED TOOL STEEL BAR
Ernest Andrew Evancic, Fitchburg, and Kenneth Eugene Campbell, Ashburnham, Mass., assignors to Simonds Saw and Steel Company, Fitchburg, Mass., a corporation of Massachusetts
Filed June 30, 1966, Ser. No. 561,955
4 Claims. (Cl. 76—101)



1. That method of forming a high speed tool steel bar having a selected heat-hardened zone longitudinally embracing an edge of said bar which includes the steps of heating the top of an oversize bar of high speed tool steel progressively lengthwise of the bar to melt the bar to a controlled depth progressively along a zone lying between and spaced inwardly from the side walls of said bar while maintaining said side walls unmelted, cooling the melted stock progressively lengthwise of the stock to resolidify the stock in said zone and thereafter removing marginal side wall portions of said stock to form a newly exposed side wall surface having a top edge lying within the confines of said resolidified zone.

3,388,619
METHOD FOR CUTTING KEYS
Joseph Schreiber, 18507 Forrer, and George Schreiber, 18493 Winthrop, both of Detroit, Mich. 48235, assignors of ninety percent to said Joseph Schreiber and ten percent to said George Schreiber
Continuation of application Ser. No. 447,781, Apr. 13, 1965, now Patent No. 3,276,328, dated Oct. 4, 1966. This application June 30, 1966, Ser. No. 561,875
5 Claims. (Cl. 76—110)



1. A method for cutting keys having a shank provided with depressions whose depths vary according to a predetermined code, said method comprising:

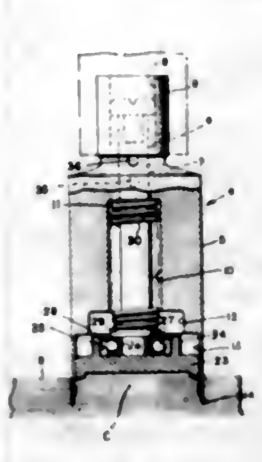
holding a key blank in a predetermined angular position;

rectilinearly indexing the shank of said key blank with respect to a cutting means so as to cut spaced depressions on said shank at predetermined distances from each other;

angularly indexing said shank so as to cut said depressions at various angular positions;

and limiting the depth of cut of each individual depression according to said predetermined code.

3,388,620
DRILLING BIT FOR STACKED SHEETS OF PAPER AND THE LIKE
Frederic A. Rudolph, 3115 NW. 24th St., Oklahoma City, Okla. 73107
Filed Aug. 4, 1966, Ser. No. 570,211
6 Claims. (Cl. 77—69)



1. A cutting tool for drilling a hole in a stack of sheets of paper stock comprising:

an outer member having at its upper end a shank portion and at its lower end a hollow cylindrical lower portion of enlarged outer diameter terminating in a circular cutting edge,

said outer member having axial bore means formed continuously through it comprising an upper counterbore in said shank portion which is open to the upper end of the member and comprising also a counterbore in said lower cylindrical portion whereby an upper shoulder is formed at the junction of the upper counterbore and the adjacent portion of the axial bore means and a lower shoulder is formed at the junction of the lower counterbore and the adjacent portion of the axial bore means,

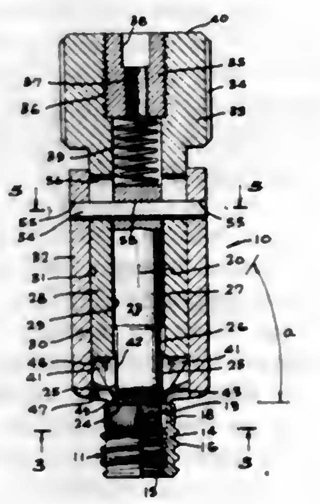
in combination with an inner member comprising a stem snugly fitting the axial bore means between said shoulders for relative rotary movement in said bore means and having a cap of enlarged diameter removable on its upper end positioned in the upper counterbore and engageable with the upper shoulder for limiting axial movement of the stem downwardly in said bore means,

said inner member terminating at its lower end in a follower head rotatably mounted on the stem by anti-friction means and snugly fitting the hollow cylindrical lower portion of the outer member,

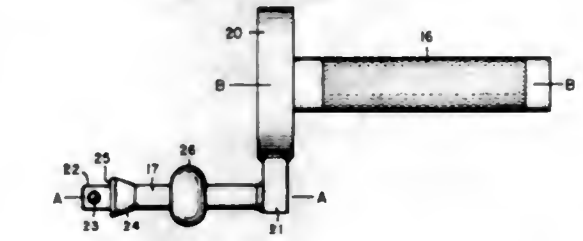
and a coil spring compressed between said follower head and said lower shoulder for biasing the head downwardly to the limit permitted by engagement of the stem cap with said upper shoulder and yieldable to permit limited movement of the head axially up into the outer member as the outer member rotates and the cutting edge penetrates the paper stock and cut-out discs thereof push up into the hollow lower cylindrical portion of the outer member, said antifriction means including ball bearing means interposed between the follower head and the lower end of the stem and comprising inner and outer races connected to the stem and head respectively and a plurality of balls operatively mounted between said races.

3,388,621
INSERT INSTALLING AND LOCKING TOOL
Robert Neuschotz, 1162 Angelo Drive, Beverly Hills, Calif. 90210
Filed Sept. 21, 1965, Ser. No. 489,026
11 Claims. (Cl. 81—3)

A tool for installing an internally and externally threaded insert within a carrier part, and including a first section having an end portion with external mounting threads onto which the insert is to be screwed, a second section disposed about the first section and carrying localized projections for deforming a tubular locking portion of the insert locally in a manner locking the insert against unscrewing removal from the carrier part, and an outer tubular part disposed about the second section and connected to the first section for movement therewith, with the outer part carrying two shoulder surfaces or surface areas, one of which engages the insert in a relation limiting the extent to which the insert can be screwed onto the threads of the first section, and the other of which surfaces engages the carrier part in a relation limiting the extent to which the insert can be screwed into the carrier part. The localized deforming shoulders preferably extend radially inwardly at least as far as the major diameter of the mounting threads of the first section, and for best results beyond that major diameter, to engage the locking portion of the insert in a manner deflecting it radially outwardly.



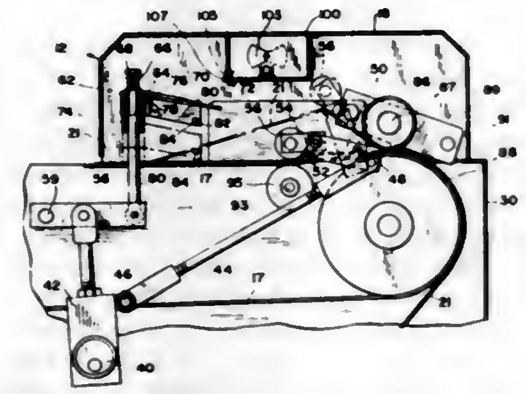
3,388,622
SPEED WRENCH
Leon R. Klang, Hickman Ave., Fulton, Mo. 65251
Filed Oct. 3, 1966, Ser. No. 583,555
2 Claims. (Cl. 81—177)



The speed wrench includes a pair of concentric, rotatively connected members. A handle is fixed to the inner member and a work-engaging arm, radially offset from the common axis of concentricity, is fixed to the outer member so that cranking of the handle rotates the work-engaging arm.

3,388,623
FILM-LIKE SHEET MATERIAL FEEDING AND CUTTING DEVICE

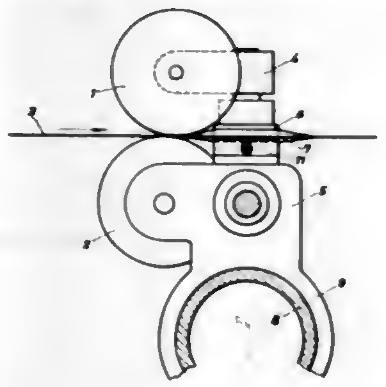
Ben J. Rosenthal, Skokie, Ill., assignor to Harry Rosenthal, Chicago, Ill.
Filed Aug. 29, 1966, Ser. No. 575,767
10 Claims. (Cl. 83—98)



1. In a machine for automatically feeding and cutting film-like material which has conveyor means adapted to support and draw the material, raising means for lifting the material from the conveyor means, and a cutting wire which is engageable with the raised material for cutting the same, the combination including, actuating means for moving the raising means to lift the material from the conveyor into engagement with the cutting wire, and means for returning to the conveyor means the portion of the film material from which a portion is cut, said means including a roller spaced intermediate the raising means and cutting wire and engaging the film material to press the same onto said conveyor means, said roller being coupled to and moved by said actuating means from engagement with the film, with the raising means lifting the film material from the conveyor means into engagement with the cutting wire, and said actuating means moving said roller into engagement with the film material to return to the conveyor means the portion of the film material from which a portion is cut.

3,388,624
APPARATUS FOR LONGITUDINALLY CUTTING MOVING WEBS OF MATERIAL, SUCH AS PAPER, CARDBOARD AND THE LIKE AND INCLUDING MEANS TO REMOVE THE CUTTING DUST

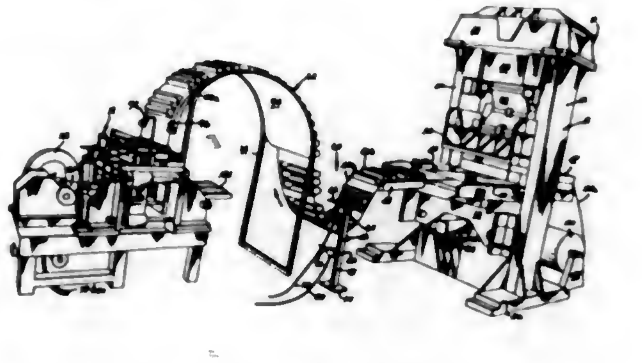
Horst Baucke, Solingen-Ohligs, Germany, assignor to Jagenberg-Werke AG, Dusseldorf, Germany
Filed June 27, 1966, Ser. No. 560,589
Claims priority, application Germany, July 23, 1965, J 28,641
5 Claims. (Cl. 83—168)



1. An apparatus for longitudinally cutting moving webs of material such as paper, cardboard and the like, comprising upper and lower knives between which knives the web is adapted to move, a yoke interconnecting said upper and lower knives extending through the gap formed in the web by the knives, and said yoke being constituted by a hollow body having suction openings therein so that when suction is applied to the hollow body any dust developed during cutting is drawn into the body through the suction openings.

3,388,625
SHEET-FORMING AND POST-FORMING TRIM METHOD AND APPARATUS

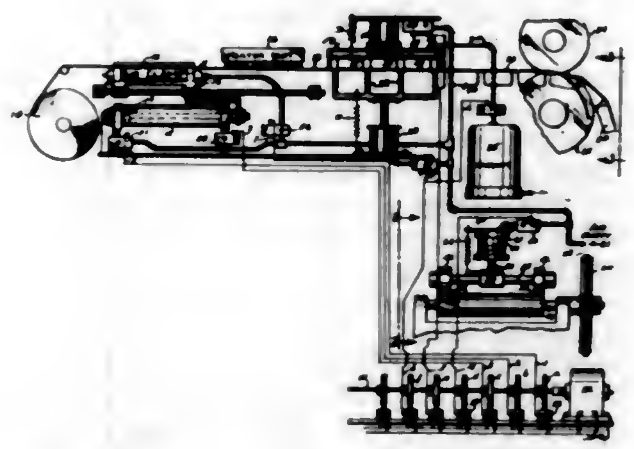
Robert E. O'Brien, Dietrich K. Roth, and Edward C. Markowski, Grand Rapids, Mich., assignors to Kirkhof Manufacturing Corporation, Grand Rapids, Mich., a corporation of Michigan
Original application July 15, 1965, Ser. No. 472,135, now Patent No. 3,329,995, dated July 11, 1967. Divided and this application May 4, 1967, Ser. No. 651,334
3 Claims. (Cl. 83—238)



A trim process for three dimensional articles is a web in repeat spaced patterns of a plurality of articles, having web advancing means causing repeat normal stroke advancement and a periodic different stroke advancement.

3,388,626
APPARATUS FOR INTERMITTENTLY SHREDDING PLASTIC SHEET SELVAGES

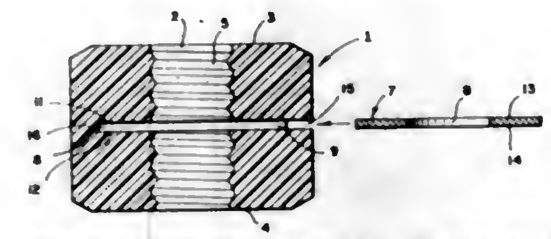
Robert L. Larson, Auburn, Mass., assignor to Parker Metal Goods Company, Worcester, Mass., a corporation of Massachusetts
Filed Sept. 10, 1965, Ser. No. 486,466
5 Claims. (Cl. 83—261)



1. Shredding apparatus comprising a continuously revolving cutter knife and an associated stationary knife arranged to cut a plastic strip into short segments and power mechanism to feed said strip intermittently in a start and stop motion into engagement with said knives for shredding the strip, said power mechanism comprising a driven roll, a pressure roll movable toward and from the driven roll which causes the strip to be fed to the knives, a cam, a micro-switch and an associated power circuit governed by the cam and mechanism governed by said circuit which moves said pressure roll and causes the strip to be fed to the knives intermittently.

3,388,627
COMPOSITE FASTENER ASSEMBLY

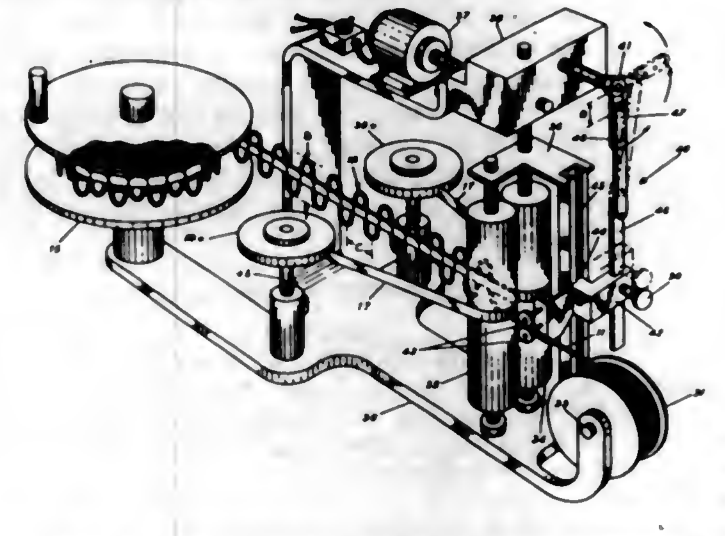
George A. Tinnerman, 17864 Beach Road, Lakewood, Ohio 44107
Original application May 13, 1966, Ser. No. 549,880. Divided and this application Jan. 5, 1967, Ser. No. 607,415
2 Claims. (Cl. 85—32)



A composite fastener assembly of separately formed, synthetic resinous plastic and metallic components, the metal element being inserted within the plastic body, the elements having an opening therethrough for a stud on which the fastener may be threaded.

3,388,628
SEISMIC SOURCE, METHOD AND APPARATUS FOR FORMING SAME

Alan J. Blayney, Calgary, Alberta, Canada, assignor to Chevron Research Company, a corporation of Delaware
Original application Jan. 8, 1965, Ser. No. 424,305, now Patent No. 3,323,611, dated June 6, 1967. Divided and this application Sept. 26, 1966, Ser. No. 598,533
8 Claims. (Cl. 86—1)

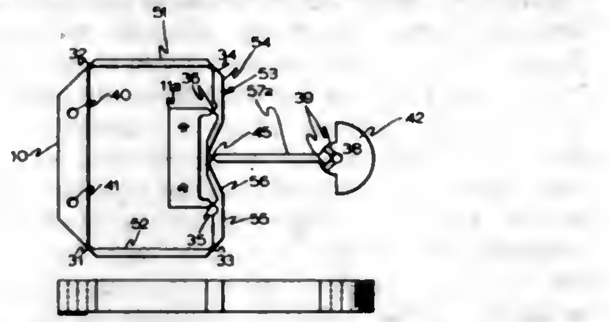


A method and apparatus for forming a sinusoidally patterned seismic source for generating velocity controlled artificial seismic waves in an earth formation, the source being formed using a pair of rollers in tangential line contact with each other for advancing an unconformed length of explosive material therebetween and oscillating means for varying the point of first contact between the pair of rollers and the explosive material so as to thereby form a sinusoidal pattern along the explosive material. A pair of adhesive tapes are positioned in operative contact with the pair of rollers, being so located on the pair of rollers so as to continuously unite in touching relationship with either each other or the formed explosive so as to permanently maintain the explosive in a sinusoidal shape.

3,388,629
DETECTION MEANS FOR STAR TRACKER

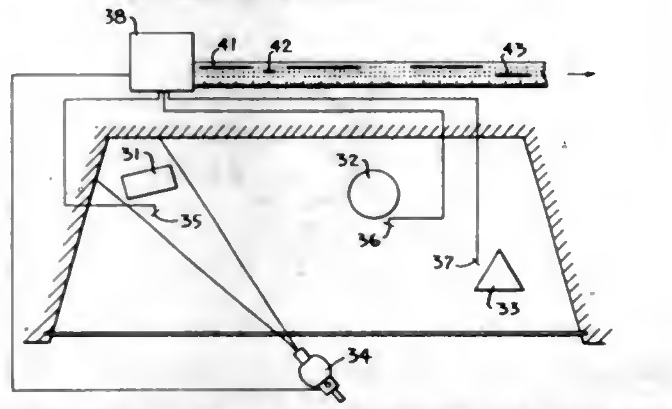
Irving R. Brenholdt, Montclair, and Waclaw Wojtulewicz, Paterson, N.J., assignors to General Precision Inc., Little Falls, N.J., a corporation of Delaware
Filed Nov. 7, 1963, Ser. No. 322,135
3 Claims. (Cl. 88—1)

A sensing panel having V-slit or double V-slit sensing means is moved in a rectilinear scanning motion at right angles to a focused star image. The output of the sensing means is fed to an encoder and a logic system which provides the location of the star image in azimuth and elevation. If a double V-slit is used, a center tap is provided between each pair of slits and a time delay arrangement adds the output from each slit. The double V-slit arrangement increases the signal to noise ratio by doubling the signal while the noise increases only by a factor corresponding to about the square root of two.



3,388,630
METHOD AND APPARATUS FOR INVESTIGATING A VIEWER'S INTEREST

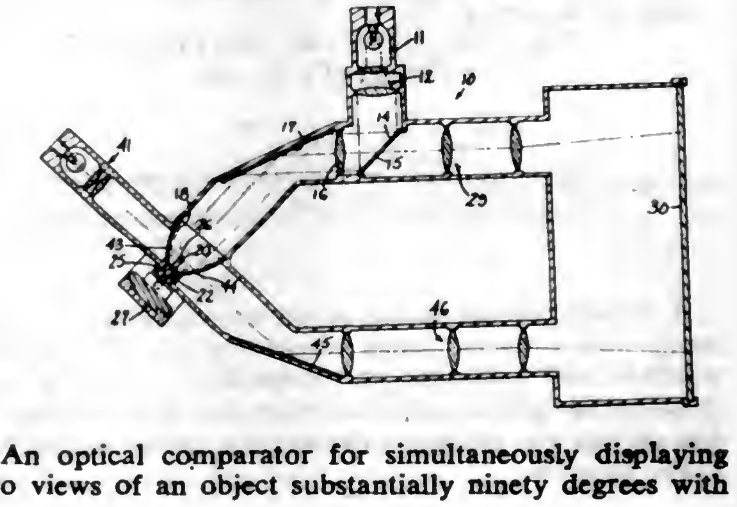
Sebastian Leitner, 2 Muthgasse XIX, Vienna, Austria
Filed Apr. 7, 1964, Ser. No. 358,043
Claims priority, application Austria, Apr. 10, 1963, A 2,924/63; Aug. 27, 1963, A 6,884/63
17 claims. (Cl. 88—24)



Apparatus and method for investigating and recording a viewer's interest in details of an object. The apparatus provides for parts manipulatable relative to each other to bring selected details into the viewer's field of vision, and records the relative movements of the parts. The method provides for recording of approximately the periods of time spent by the viewer on each selected view.

3,388,631
OPTICAL INSPECTION SYSTEM

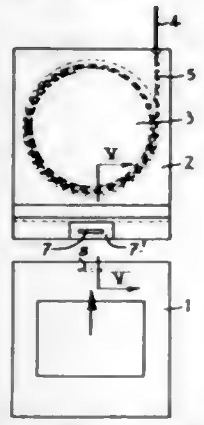
Michael Glowa, Springfield, Vt., assignor to Textron, Inc., Providence, R.I., a corporation of Rhode Island
Filed Feb. 21, 1966, Ser. No. 529,039
9 Claims. (Cl. 88—24)



An optical comparator for simultaneously displaying two views of an object substantially ninety degrees with respect to each other. The comparator consists of a cavity reflector having an inner reflecting surface whereby illumination from a first lamphouse may be directed at a workpiece being inspected, an opening in the rear of the reflector for insertion of the workpiece, and two openings formed in the side of the reflector for passage of light from a second lamphouse. Light from the first lamphouse is directed to the workpiece though a first lens system and the resulting image is reflected by the inner reflecting surface of the reflector back through the first lens system onto a screen, thereby producing a first image of the workpiece. Light from the second lamphouse is directed into the interior of the reflector through one of the openings in the side of the reflector and onto the workpiece. The light rays continue on and pass through the other opening in the side of the reflector through a second lens system and onto the screen, thereby producing a second image of the workpiece substantially ninety degrees with respect to the first image.

3,388,632
CASSETTE FOR STORING SOUND SUPPORT TAPE

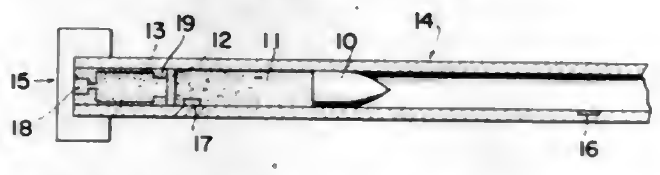
Marcel Jules Helene Staar, Rhode-Saint-Genese, Belgium, assignor to Usines Gustave Staar Societe Anonyme, Brussels, Belgium
Continuation of application Ser. No. 454,355, May 10, 1965. This application Aug. 21, 1967, Ser. No. 662,189
Claims priority, application Belgium, May 11, 1964, 647,747/64
12 Claims. (Cl. 88—28)



The combination of a standard slide transparency and a cassette having a hollow support for a sound tape. The slide transparency and the cassette being removably connected directly to one another either temporarily by means of a rib molded on the cassette and engageable in an aperture in the slide transparency or permanently by adhesive means applied to the slide transparency and/or the cassette.

3,388,633
MULTI-STAGED BALLISTIC DEVICE

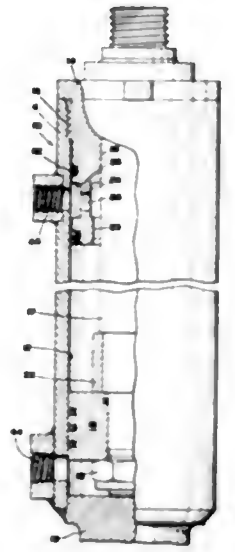
Howard A. Kirshner, Levittown, Pa., assignor to the United States of America as represented by the Secretary of the Army
Filed Feb. 1, 1967, Ser. No. 613,978
6 Claims. (Cl. 89—8)



A ballistic device having a first stage containing a projectile and a second stage containing a piston element which is fired subsequent to the ignition of the first stage to compress and control the expanding gas accelerating and driving the projectile through the barrel of the projectile launcher.

3,388,634
CUSHIONING MEANS FOR FLUID PRESSURE MOTOR

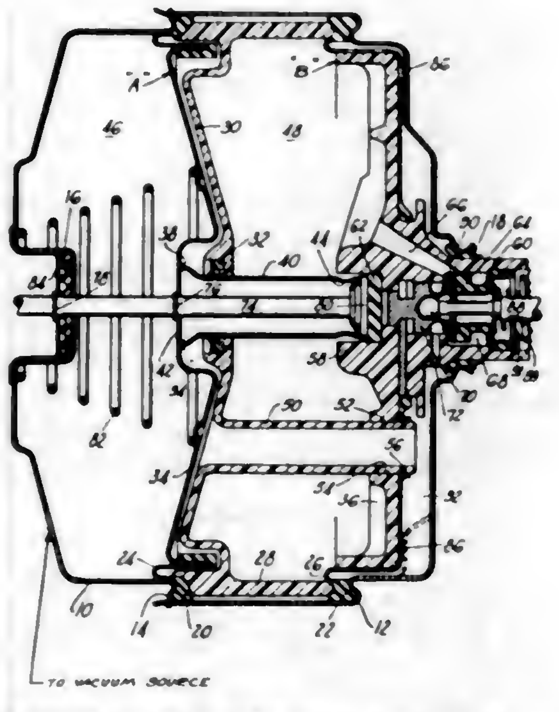
Rolf A. Madland, Arlington Heights, Ill., assignor to Parker-Hannifin Corporation, Cleveland, Ohio, a corporation of Ohio
Filed Apr. 8, 1966, Ser. No. 541,281
3 Claims. (Cl. 91—26)



1. In a fluid pressure motor, a cylinder having a bore therein, a piston reciprocable within the bore, cooperating means on the piston and cylinder forming a cushioning chamber when the piston nears one end of the cylinder, a port in the cylinder for admitting and exhausting fluid to and from said cylinder, an annular passage defined in part by the wall of the cylinder bore and connecting the port to the cushioning chamber, a ring-shaped check valve in said annular passage axially movable by fluid pressure in one direction for closing the passage and in another direction for opening the passage, the outer diameter of the check valve ring having a close sliding fit with said bore wall so as to substantially prevent flow of fluid therebetween.

3,388,635
FLUID PRESSURE MOTOR

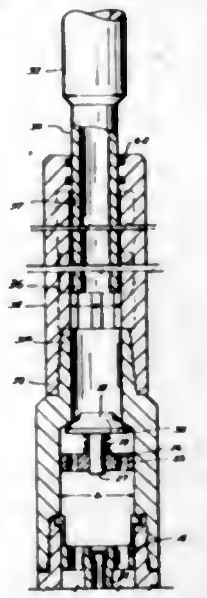
Robert R. Hager, South Bend, Ind., assignor to The Bendix Corporation, a corporation of Delaware
Filed May 2, 1966, Ser. No. 546,872
7 Claims. (Cl. 91—170)



A fluid pressure motor construction having at least two movable walls arranged therein to be relatively movable, which fluid pressure motor may also comprise a partition member having provisions therewith for internally communicating the control chambers behind the movable walls and to communicate chambers in front of the movable walls so as to segregate the chambers internally of the motor without utilizing exterior conduits or passageways between a radially located axial flange of the partition and the housing of the motor.

3,388,636
PERCUSSION DRILLING TOOL

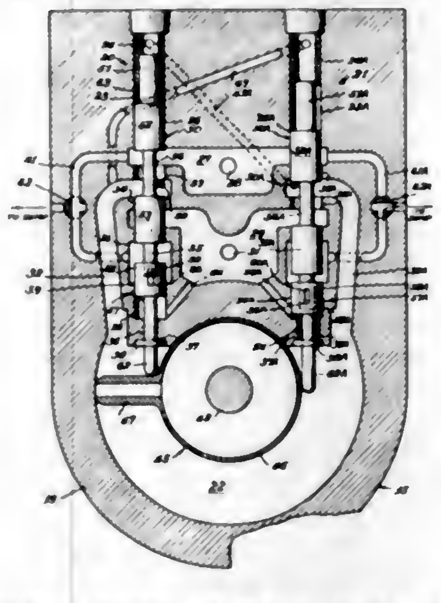
Samuel L. Collier, Houston, Tex., assignor to Mission Manufacturing Company, Houston, Tex., a corporation of Texas
Filed Oct. 18, 1965, Ser. No. 497,404
2 Claims. (Cl. 91—234)



A downhole type of percussion drilling tool is supported by telescoped members in the drill string so that the percussion tool may be relieved of the entire weight of the drill string and thus may rely solely upon the percussion force in its drilling action. This enables the use of very high drilling pressures with consequent high drill pipe weights applying such reactive weight to the drill.

3,388,637
VARIABLE STROKE MECHANISM

Ronald H. Haas, Lansing, Mich., and Herbert N. Underwood, Chicago, Ill., assignors to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Filed Dec. 27, 1966, Ser. No. 604,938
6 Claims. (Cl. 91—251)



1. A variable stroke oscillator motor for oscillating an element of a system and controlling the length of the oscillatory stroke comprising:

(A) a housing defining a chamber;

(B) an output shaft extending through said chamber;

(C) a rotary actuator journaled for rotation within said chamber and connected to said output shaft, said rotary actuator including a vane dividing said chamber into high and low pressure portions;

(D) valve means for alternately communicating fluid pressure to each side of said vane including;

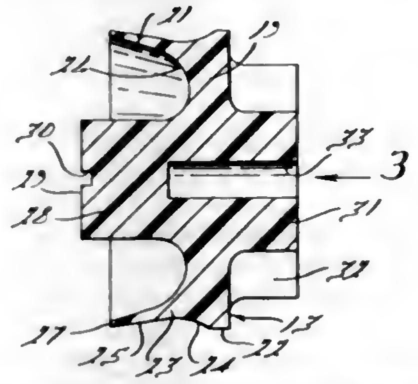
 (1) a pair of slidable spool valves mounted within said housing,

 (2) a pair of valve extensions in contact with said spool valves, said extensions protruding into said chamber and adapted to actuate said spool valves when contacted by said vane, at least one of said valve extensions adapted to move relative to said spool valve upon the application of pressure to said valve extension,

(E) means to selectively communicate fluid pressure to said extension to change the effective length of the combination of said extension and said spool valve whereby the stroke of said actuator may be varied.

3,388,638
PISTON

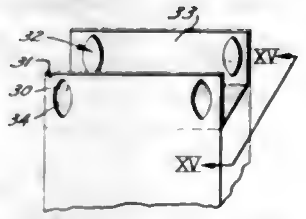
Edwin P. Brinkel, Royal Oak, Mich., assignor to Ross Operating Valve Company, Detroit, Mich., a corporation of Michigan
Filed Mar. 2, 1966, Ser. No. 531,128
7 Claims. (Cl. 92—245)



An integrally formed plastic piston having a cylindrical body and a flared lip with a slight interference fit.

3,388,639
METHOD FOR SEALING HEAT SEALABLE CONTAINERS

George G. Rumberger, Kalamazoo, Mich., assignor, by mesne assignments, to Brown Company, a corporation of Delaware
Original application Nov. 5, 1963, Ser. No. 321,471, now Patent No. 3,286,906, dated Nov. 22, 1966. Divided and this application Jan. 24, 1966, Ser. No. 522,561
7 Claims. (Cl. 93—36)



1. A method for heat sealing a carton which comprises affixing an adhesive patch to a flap of said carton, said patch comprising a web having an adhesive coating on one surface for bonding to said carton and a coating of a thermoplastic adhesive on the other surface thereof, folding said flap to place said adhesive in contact engagement with another flap and activating said thermoplastic adhesive by applying heat thereto in either order, and setting said adhesive to bond said first flap to said second flap.

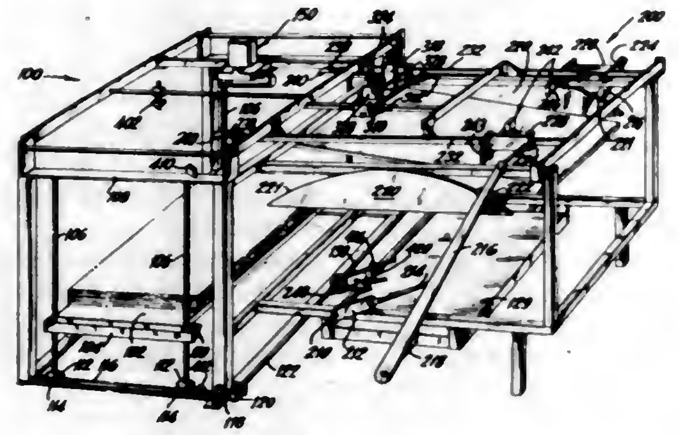
3,388,640

METHOD AND APPARATUS FOR INSERTING A LINER INTO A CARTON

Harris Giannella, Leonia, N.J., assignor to Polyliner Corp., New Hyde Park, N.Y., a corporation of New York

Filed June 20, 1966, Ser. No. 558,912

40 Claims. (Cl. 93—36.6)



1. Apparatus for securing a plastic liner to the inside surface of a carton, said apparatus comprising:

(a) a frame member;

(b) carton elevator means vertically movable in two opposite directions with respect to said frame member, said elevator means being arranged to carry a supply of unfolded cartons in a vertical stack;

(c) adhesive-applying means mounted on said frame member and responsive to the upward movement of said elevator means;

(d) support means for a pile of plastic liners, said support means being located remotely from said elevator;

(e) reciprocating carton transfer means arranged to act on the top carton in the stack, said transfer means being movable between said elevator means and the area of said liner support means;

(f) lifting means arranged to pick up the top liner on said support means in timed relation to the transfer of the top carton, the top liner being held in an elevated position whereby the top carton is placed therebelow with the glued surface in contact with the underside of the top liner; and

(g) ejection means to remove the assembled liner and carton.

3,388,641

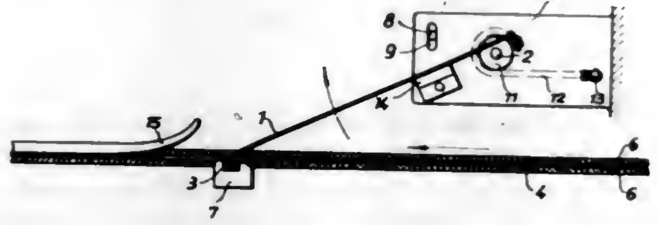
APPARATUS FOR RAISING THE BOTTOM COMPONENTS OF BLANKS FOR FORMING FOLDING BOXES

Hans Gobel, Dusseldorf, Germany, assignor to Jagenberg-Werke AG, Dusseldorf, Germany

Filed Nov. 15, 1965, Ser. No. 507,910

Claims priority, application Germany, Dec. 15, 1964, J 27,121

7 Claims. (Cl. 93—49)



Apparatus for raising and folding over the leading flaps of successively fed, flat foldable box or carton-forming blanks in which such blanks are advanced with the flaps which form the bottom of the carton in a leading relation and including folding means having a shank portion and a hook-shaped portion mounted to oscillate into and out of a position below the leading edge of an advancing flap, to be engaged by such edge to be lifted by such flap, and resilient means normally urging such folding means to such position and frictionless holding means, such as magnetic means in the path of movement of such shank portion at a position spaced from said hook-shaped portion to hold the folding means in such position until engaged by the next succeeding flap.

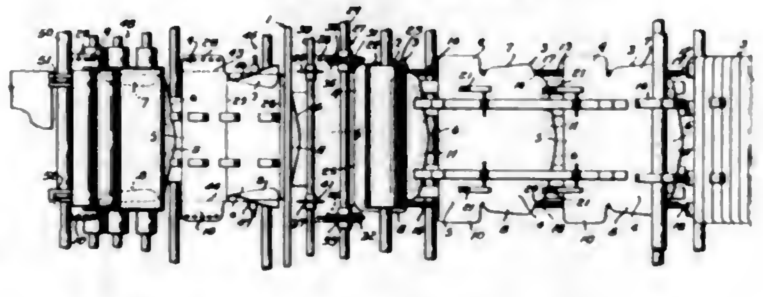
3,388,642

ENVELOPE MAKING MACHINE FOR MAKING INDIVIDUAL ENVELOPES FOR USE IN TABULATORS, COMPUTERS, COMPUTER PRINTERS, AND LIKE BUSINESS MACHINES

Eugene B. Berkley, Shawnee Mission, Kans., assignor to Tension Envelope Corporation, Kansas City, Mo., a corporation of Delaware

Filed May 20, 1966, Ser. No. 551,662

9 Claims. (Cl. 93—62)



1. An envelope making machine for making individual envelopes for use in tabulators, computers, computer printers and like business machines, which envelopes are characterized by a detachable extension projecting from one or both side edges and said extensions having a series of holes to coact with the envelope holding, timing and conveying assemblages of such business machines, said envelope making machine including

means for moving envelope blanks in a fixed path through the machine,

sets of mechanisms along said path of blanks, each performing an operation on said blanks,

means for registering the blanks with respect to one set of said mechanisms, and

means in the path of the registered blanks for punching holes in said extensions.

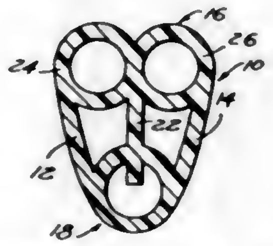
3,388,643

SEALING STRIP

Elmer J. Webb, Syracuse, N.Y., assignor to The Brewer-Titchener Corporation, Cortland, N.Y., a corporation of New York

Filed June 13, 1966, Ser. No. 557,112

3 Claims. (Cl. 94—18)



A strip of elastomeric material used in concrete highway construction for sealing the predetermined spaced transverse contraction joints. The strip is in the form of an integral body and generally heart-shaped in configuration having a pair of outwardly convex side walls joined at both top and bottom and a plurality of internal substantially tubular truss members to provide, when the strip is compressed, increased outward force to form a tight seal between the concrete fascia and the strip walls.

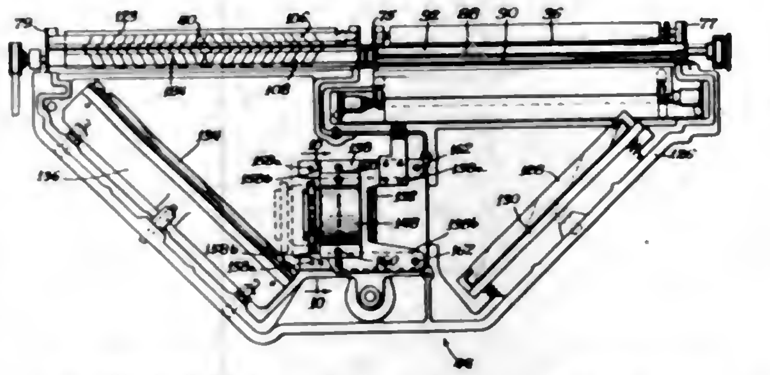
3,388,644

PHOTOELECTROSTATIC COPYING MACHINE

Daniel B. Granzow, Arlington Heights, George K. Lux, Wheeling, and Stanley A. Gawron, Mount Prospect, Ill., assignors to Addressograph-Multigraph Corporation, Mount Prospect, Ill., a corporation of Delaware

Filed Mar. 16, 1965, Ser. No. 440,178

8 Claims. (Cl. 95—1.7)



An automatic photoelectrostatic copying machine includes drive rollers for moving a graphic original sheet past an illuminating station while other drive rollers move a charged, photoconductive copy sheet past an exposure station where it is exposed by reflected light from the original. The graphic original is driven faster than the copy sheet so that a reduced size copy is produced. The photoconductive copy sheet is electrostatically charged prior to exposure by a corona discharge unit including adjustable shields for preventing charging of non-image regions of the copy sheet. An adjustable drive control holds the copy sheet stationary for a period of time while the graphic original is moving in order to position the copy image at a selected position on the copy sheet.

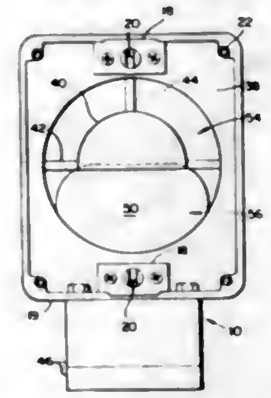
3,388,645

PHOTOGRAPHIC DEVICE

Robert T. Sullivan, Norwood, Mass., assignor to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware

Filed Dec. 30, 1965, Ser. No. 517,541

5 Claims. (Cl. 95—11)



1. A reflective device for dental usage when incorporated with a short-range camera enabling a rapid sequential photographing of both upper and lower human intra-oral areas by said camera so as to permit the reflection of both said upper and lower areas on a single sheet of photographic film carried by said camera, the camera embodying an electronic-flash ring-light generally surrounding its lens aperture, said device comprising a rigid plate-like supporting element, engaging means mounted on said plate-like element for releasably engaging complementary means of said camera to hold said device mounted on said camera, means forming a generally circular aperture in said plate-like element, an opaque semi-spherical light-shielding member of a relative size and so mounted within a given half of said circular aperture as to obstruct substantially one-half of the lens aperture of said camera when said device is mounted thereon and to provide an annular space between said light-shielding member and said given half of said circular aperture, whereby light rays from said ring-light are permitted to pass through said annular space and through the other half of said circular aperture which is unobstructed by said light-shielding member, and reflector means so attached to said plate-like element as to extend outwardly at an acute angle therefrom and to be optically aligned with at least said unobstructed half of said circular aperture, said reflector means serving both to reflect said light rays so as to illuminate said intra-oral areas and to reflect said intra-oral areas for photographic recording by said camera.

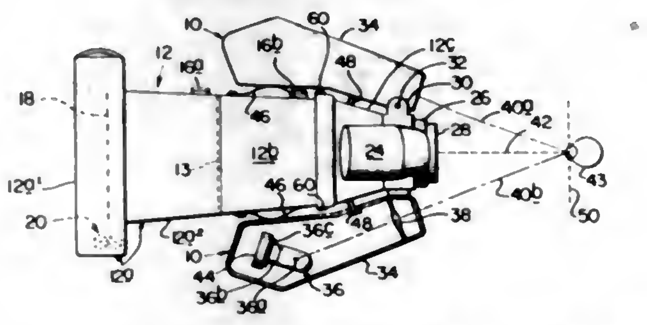
3,388,646

PHOTOGRAPHIC DEVICE

Robert T. Sullivan, Norwood, Mass, assignor to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware

Filed Feb. 2, 1966, Ser. No. 524,592

10 Claims. (Cl. 95—11)



1. A focusing device for use in opthalmic photography when incorporated with a short-range knockdown camera including a plurality of selectively interchangeable sections, said device establishing a choice of correct distances between said camera and a photographic subject in conformance with any of various assemblages of said camera sections which are identified with various magnifications of said subject and comprising a pair of housing units pivotally mounted on a separable front section of said camera at left- and right-hand sides thereof for pivotal movement in a horizontal plane, light-projecting means including a light source and a positive lens mounted within each of said housing units for projecting convergent beams of light forwardly of said camera at substantially identical acute angles relative to a vertical plane which includes the optical axis of the camera, a plurality of spring means biasing said housing units for pivotal movement in opposite directions, the prevailing direction of said movement being determined by the then-existing assemblage of camera sections, and a plurality of limit stop means mounted on said camera front section for limiting said pivotal movement in opposite directions according to said direction of movement and assemblage of camera sections, thereby to produce joining of said convergent beams at various given locations forwardly of said camera which define said correct distances between said camera and said photographic subject.

3,388,647

OBJECTIVE LENS MOUNT

Kinpei Yajima, Tokyo-to, Japan, assignor to Asahi Kogaku Kogyo Kabushiki Kaisha, Tokyo-to, Japan

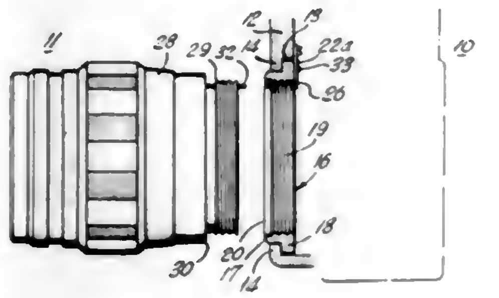
Filed July 1, 1966, Ser. No. 562,265

Claims priority, application Japan, Aug. 11, 1965, 40/65,480

9 Claims. (Cl. 95—11)

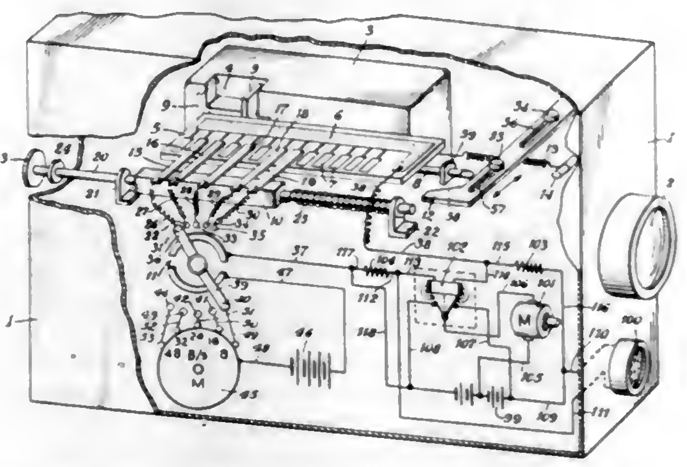
1. A photographic camera, comprising a camera body member, a coupling ring rotatably mounted to said body member and provided with a peripheral thread, means inhibiting the rotation of said coupling ring and releasable at a predetermined torque on said coupling ring, a lens

barrel provided with a peripheral thread matably engageable with said coupling ring thread, and releasably engageable indexing means positioned on said body member and lens barrel.



3,388,648
PHOTOGRAPHIC CAMERA WITH EXPOSURE METER OR EXPOSURE CONTROL DEVICE

Heinz Thiele, Leinfelden, near Stuttgart, and Horst Rockstroh, Stuttgart-Mohringen, Germany, assignors to Zeiss Ikon Aktiengesellschaft, Stuttgart, Germany
Filed June 25, 1965, Ser. No. 466,938
Claims priority, application Germany, July 16, 1964, Z 10,970
4 Claims. (Cl. 95—11)

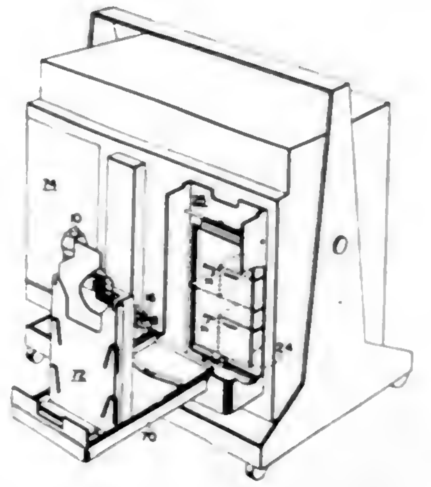


A photographic camera is provided with an exposure determining device, and a device for the scanning of one or several marks introduced with the insertion of a film magazine into the camera, which marks are releated to the exposure characteristics of the film. A selector switch and an actuating member are provided which introduce other exposure factors independently of the film, such as the exposure time, bad-weather correction or the like, into the exposure determining device of the camera. The entire servicing manipulation of the camera is concentrated at a predetermined place of the camera casing.

3,388,649
RECIPROCATORY MOUNT FOR SECURITY SEAL

Milton S. Dietz, Lexington, Mass., assignor to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware
Filed Dec. 30, 1965, Ser. No. 517,735
7 Claims. (Cl. 95—36)

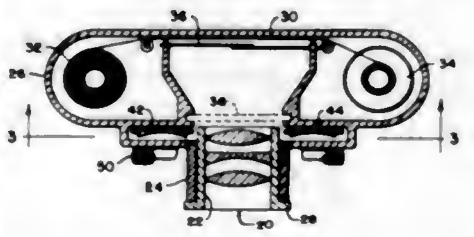
1. A photographic camera comprising:
an optical system for forming an image at a focal plane within said camera;
means to support a sheet of photosensitive material at said focal plane for exposure to said image and to permit said material to be transported traversely along said focal plane;
shutter means for controlling exposures through said optical system;
manually operable actuating means for actuating said shutter means;
light-attenuating mask means of preselected configuration;
means mounting said mask means within said camera for movement into and out of engagement with said photosensitive material to intercept portions of said image; and



coupling means automatically responsive to operation of said actuating means for displacing said mask means into engagement with said photosensitive material during exposure thereof to cause the configuration of said mask means to be recorded sharply on said photosensitive material during exposure.

3,388,650
MULTIFOCAL CAMERA

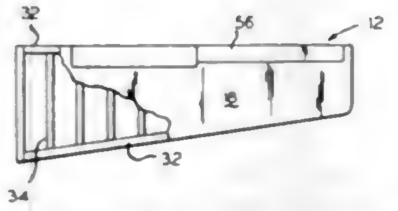
Leonard F. Westphalen, 5329 Kimbark Ave., Chicago, Ill. 60615
Continuation-in-part of application Ser. No. 216,674, Aug. 13, 1962. This application Dec. 7, 1964, Ser. No. 416,510
The portion of the term of the patent subsequent to May 25, 1982, has been disclaimed
7 Claims. (Cl. 95—44)



1. For use with a camera having means detachably securing its objective in a position useful to focus an image of a viewed object on the film plane of the camera, an accessory device comprising, in combination, at least one negative lens, a supporting member having an attachment end by which it is securable to the camera in the place of the camera objective, a lens group of positive focus, and means forwardly of said attachment end for mounting said lens group within said supporting member so as to be axially movable therealong as a unit between a position adjacent to and a position remote from the attachment end of the supporting member, said lens group being adapted of itself alone when at said adjacent position and the supporting member is properly secured to the camera to focus an image of a viewed object on the film plane of the camera, said supporting member further having an entrance in a sidewall thereof in front of its attachment end through which the negative lens may be removably inserted behind the lens group in axial alignment therewith when said group is at its remote position, said axially movable lens group mounting means inhibiting the insertion of said negative lens when the lens group is at its said adjacent position, and closure means over said entrance which inhibit the entrance of light into the interior of the lens group supporting member, said negative lens being adapted to change the effective focal length of the lens group when so aligned therewith in order to permit focusing an image of the viewed object at the film plane of the camera which is magnified over that focused by the lens group when used alone.

3,388,651
COVERING FOR AIRPLANES AND METHOD FOR APPLYING SAME

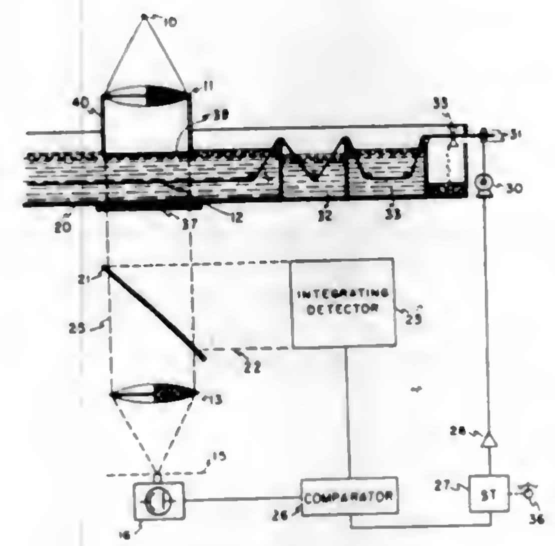
Sidney Axelrod, Chicago, Ill., assignor to Top Flite Models, Inc., Chicago, Ill.
Filed Jan. 28, 1966, Ser. No. 523,599
5 Claims. (Cl. 46—76)



A covering for airplane frames wherein a layer of plastic film has a layer of adhesive bonded thereto for applying the plastic material to the frame. In addition, the adhesive may be colored to impart said color to the airplane while the coloring itself is protected by the plastic. There is also disclosed a method for applying the film with the adhesive bonded thereto by adhering and shrinking the same to the frame through the application of heat and resultant cooling.

3,388,652
PHOTOGRAPHIC PROCESSING CONTROL

George B. Parrent, Jr., Carlisle, Mass., assignor to Technical Operations, Incorporated, Burlington, Mass., a corporation of Delaware
Filed May 27, 1965, Ser. No. 459,162
15 Claims. (Cl. 95—89)

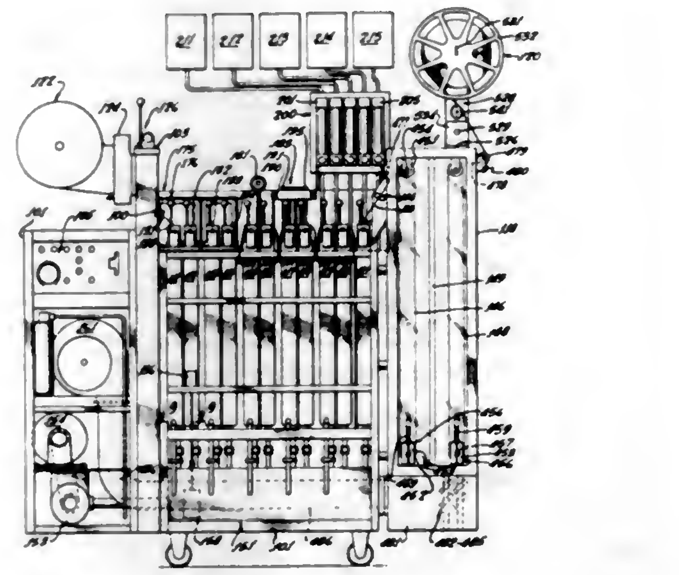


5. A method of controlling photographic development by examining the buildup of the silver image comprising:
(a) immersing a frame of photographic material bearing a latent image in a developer;
(b) coherently illuminating said frame with a beam of collimated nonactinic light;
(c) intercepting light passing from said frame and dividing it into a first beam and a second beam;
(d) detecting the integrated intensity of the light in said first beam;
(e) passing the light in said second beam through a transforming lens to produce a Fourier transform of the light from said frame in a transform plane;
(f) detecting the light intensity in a circular area centered at and including the central maxima of the Fourier transform;
(g) comparing the detected light intensities from said two beams to find their difference; and,
(h) removing said frame from said developer to a fixer when said difference reaches a predetermined level.

7. A method of controlling photographic development in accordance with claim 5 wherein said light intensities are detected as electrical signals and said removing said frame from the developer is controlled by a threshold sensitive device, a motor control amplifier responsive to said device and a motor responsive to said amplifier operable to move said frame through a sequence of processing positions, said threshold sensitive device activated by said difference reaching said predetermined level.

3,388,653
FILM PROCESSING APPARATUS

William C. Mayfield, 107 N. Hidalgo Ave., Alhambra, Calif. 91801
Filed July 1, 1965, Ser. No. 472,075
5 Claims. (Cl. 95—89)

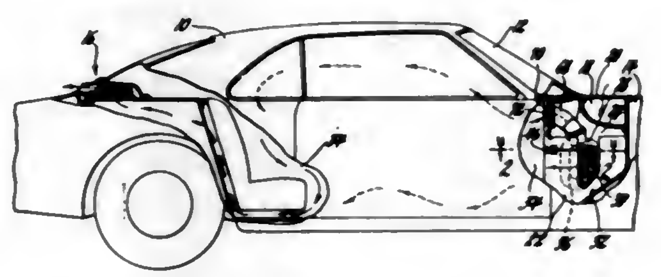


Apparatus for the continuous reversal processing of a film. The apparatus includes an adjustable feed loop rack which has a plurality of rotatable film rollers mounted in spaced relation thereon. The rack is removably mounted in an accumulator cabinet in light-tight relation therewith. The apparatus includes a series of chemical and rinse tanks supported in line on a frame adjacent the accumulator cabinet. These tanks contain either chemicals or rinse water. Each of the chemical tanks is part of a dual conducting wall with a rinse tank. The apparatus is provided with a device for mixing the liquid in each tank by agitation and for replenishing the quantities of chemicals in the chemical tank and water in the rinse tank.

3,388,654
AUTOMOBILE AIR ADMISSION SYSTEM

William L. Aldrich, Jr., Clarkston, and William J. De Beaubien, Birmingham, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Aug. 17, 1966, Ser. No. 572,986
5 Claims. (Cl. 98—2)

A system for admitting air to an automobile passenger compartment from which air discharge may be conventional but the air admission being directed rearwardly and from windshield base height to lower levels at one or both sides of the compartment with a simple and convenient damper control for effecting a selective diffusion of air flow thereby promoting passenger comfort.

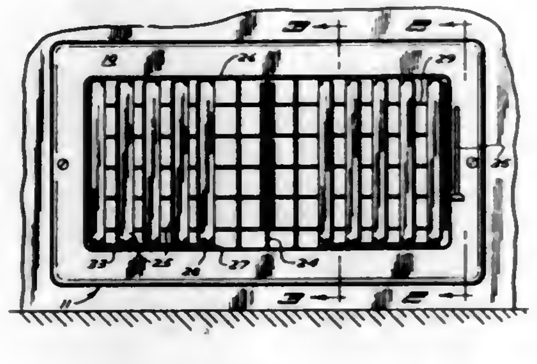


3,388,655
AIR DIFFUSER

Donald I. Dennis, 69 Dennis Road, Jacksonville, Tex. 75766, and James H. Michael, 142 N. Mississippi River Blvd., St. Paul, Minn. 55104

Filed Aug. 8, 1966, Ser. No. 571,039

4 Claims. (Cl. 98—40)



An air diffuser to be installed over outlets in a conditioned air circulation system. A frame member of generally rectangular shape is provided with a plurality of rearwardly extending flanges. The flanges are provided with opposed registering notches that serve to rotatably receive end portions of vanes that are adjustably, rotatably disposed therein. One set of vanes are adapted to be adjusted in unison and to provide a complete closure of the diffuser when in one extreme position. Other sets, or set, of vanes are disposed substantially perpendicularly to the first set and may be adjusted in unison. The inner ends of the flanges are shaped to receive complementary shaped locking strips which serve to removably, lockably, frictionally engage the end portions of each of the individual vanes.

3,388,656
DEVICE FOR THE INTRODUCTION OF POWDERED OR GRAINY SOLIDS INTO PRESSURE VESSELS OR THEIR REMOVAL THEREFROM

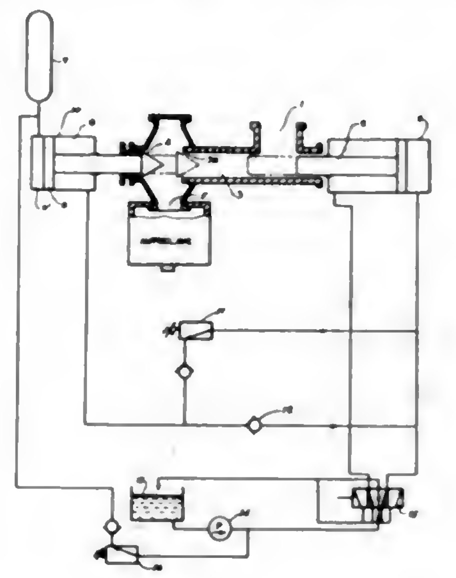
Günter Goossens, Domat-Ems, Grisons, Switzerland, assignor to Inventa A.G. fur Forschung und Patentverwertung, Zurich, Switzerland

Filed Nov. 24, 1964, Ser. No. 413,450

Claims priority, application Switzerland, Nov. 29, 1963, 14,623/63

1 Claim. (Cl. 100—50)

An extruder for charging comminuted solids into pressure vessels. These solids are pressed into the form of a plug which crumbles upon discharge. The salient feature of the device is a direct hydraulic connection between the pressure cylinder and the molding cylinder. This direct connection is provided with a pressure limiting valve and a relief valve and provides a pressure equilibrium, also preventing jamming of the plug in the mold chamber.

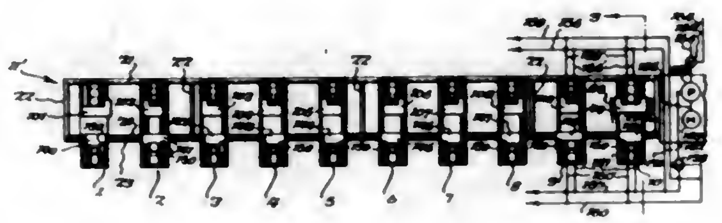


3,388,657
FLAT TRUSS PRESS

John Calvin Jureit, Miami, Fla., assignor to Automated Building Components, Inc., Miami, Fla., a corporation of Florida

Filed Mar. 2, 1966, Ser. No. 531,132

4 Claims. (Cl. 100—208)



The flat truss press comprises a plurality of longitudinally spaced press units, each comprising transversely spaced press head. The press units are adjustably mounted on a longitudinally extending base at selected positions therealong. The press heads are mounted on a frame for movement toward and away from each other whereby various sizes and arrangements of trusses can be placed on the frame below the press platens of the press heads. Press actuation and relative transverse movement between the press heads is accomplished by fluid actuated cylinders, while adjustable longitudinal movement of each press unit along the base is accomplished by means of a sprocket journaled in each press unit and engaging a chain fixed to the base.

3,388,658
METHOD FOR DECORATING POTTERY

Howard B. Cummings, New Castle, Pa., assignor to Shenango Ceramics, Inc., New Castle, Pa., a corporation of Delaware

Filed Feb. 4, 1964, Ser. No. 342,560

2 Claims. (Cl. 101—38)

1. In a method of decorating ware having a decoration surface,

the steps of

moving a silk screen into adjacent, printing relationship with the decoration surface of a piece of ware,

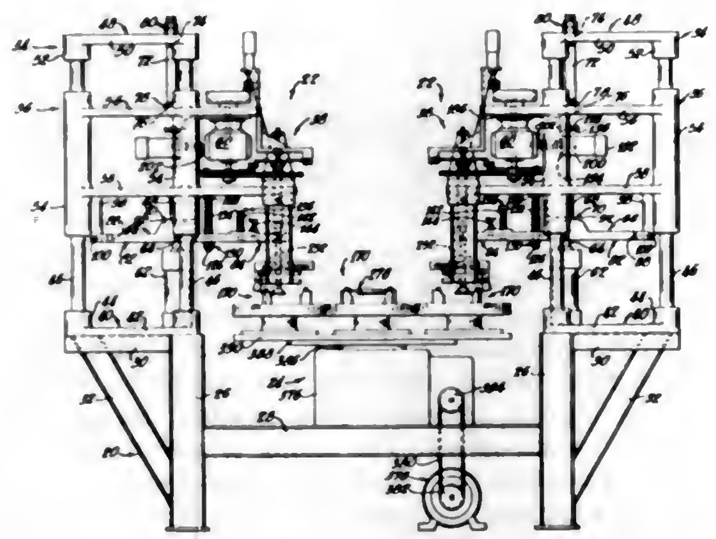
moving a squeegee and daub of color into ready position relative to the opposite surface of the screen,

starting the squeegee moving in a circular path relative to the surface of the ware,

while moving the squeegee, bringing it into printing contact with the screen to force the screen into printing contact with the surface of the ware and infuse the color through the screen onto the ware as a circular pattern,

continuing such contacting movement of the squeegee over the screen for exactly 360° of circular movement,

and while moving the squeegee, lifting it from the screen.

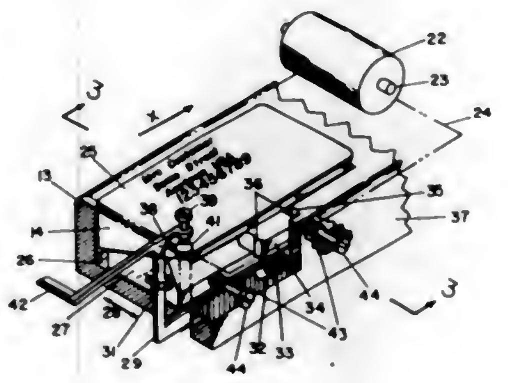


3,388,659
BED AND CYLINDER PRINTING MECHANISM WITH ADJUSTABLE ANVIL

Yow-Jiun Hu, Alexandria, Va., assignor to Farrington Business Machines Corporation, Springfield, Va., a corporation of Massachusetts

Filed Mar. 10, 1965, Ser. No. 438,485

2 Claims. (Cl. 101—269)



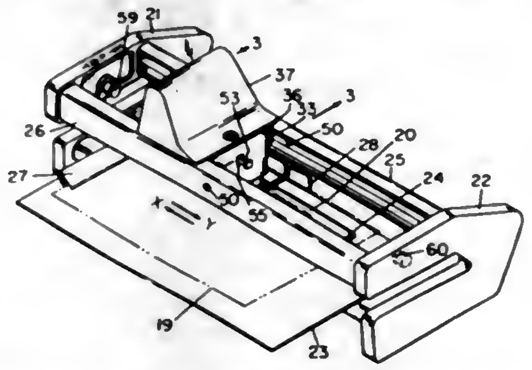
An apparatus in a printing machine utilizing portable printing plates. A printing bed upon which the printing plate is seated to obtain optimum printing pressure when the platen of the printing machine is pressed against a document overlying the printing plate. The printing bed is in the form of an anvil and is adjusted to accommodate the particular printing plate and/or document thickness employed for a printing operation. A sensing finger determines the thickness of the printing plate while seated on the anvil in accordance with the thickness thus sensed. The sensing finger causes a spacer to be moved which spacer indirectly causes the anvil to be adjusted.

3,388,660
PRINTING MACHINE HAVING MEANS FOR LOCKING PLATEN ASSEMBLY FROM ONE POSITION TO ANOTHER DEPENDING ON DIRECTION OF TRAVEL

William A. Wight, Vienna, Va., assignor to Farrington Business Machines Corporation, Springfield, Va., a corporation of Massachusetts

Filed Aug. 24, 1965, Ser. No. 482,086

9 Claims. (Cl. 101—269)



A printing machine having a platen assembly which is rockable from one position to another depending on the direction of travel of the platen assembly is disclosed. In a first direction of travel over the printing bed of the machine, the platen assembly is held in one position by an elongated bar, the platen assembly engaging in a first detent on the bar. At the completion of the movement of the platen over the printing bed in the first direction, the elongated bar engages a stop thereby moving the bar to a second position and rocking the platen assembly to engage a second detent on the elongated bar, which corresponds to the second position of the platen assembly. Thus, when the platen assembly is moved back across the printing bed, there is no engagement of the platen assembly with the printing bed thereby preventing any overprints during the return movement of the platen assembly.

3,388,661
IDENTIFICATION AND PRINTING DEVICES

Donald N. Decof, Annandale, Va., assignor to Farrington Business Machine Corporation, Springfield, Va., a corporation of Massachusetts

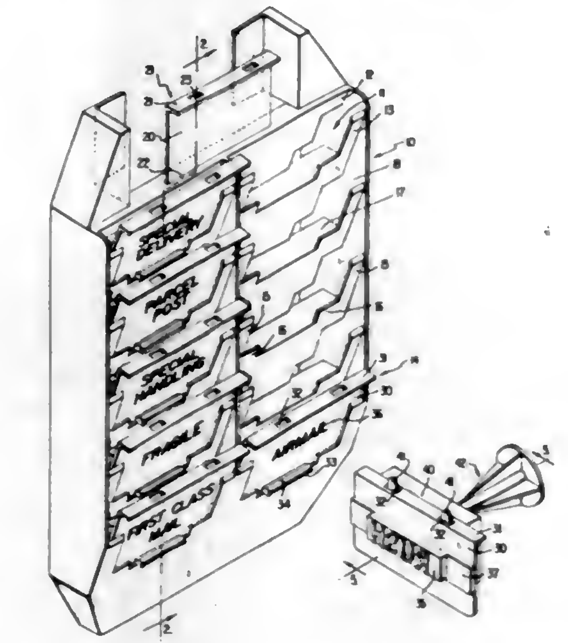
Filed Dec. 3, 1964, Ser. No. 415,576

12 Claims. (Cl. 101—369)

A tamperproof, counterfeit deterring identification card is disclosed wherein a transparent, substantially planar rectangular base member has embossed on the planar surface thereof data identifying the owner of the identification card. A rectangular partially translucent, substantially planar, rectangular panel is sealed to three edges of the rectangular base member to thereby define a substantially planar sealed area along the three edges. The sealed area has embossed on the planar surface thereof a distinctive pattern which usually identifies the organization issuing the identification card. The sealed area defines a pocket into which is inserted an identification sheet bearing typically a picture of the owner of the card together with other identifying information, which is related to the above mentioned information embossed on the rectangular base member. After the identification sheet has been inserted into the pocket, the fourth edges of the rectangular base member and panel are sealed together and then embossed in the above mentioned distinctive pattern. The four edges are also sealed at a second area which is disposed adjacent to and outwardly from the above mentioned sealed area which contains the distinctive pattern. The planar surface of this second sealed area is disposed at a level different from the planar surface of the first-mentioned sealed area to thereby further enhance the tamperproof, counterfeit-deterring characteristics of the identification card.

3,388,662
HAND-STAMP KIT WITH DETACHABLE STAMP HANDLE

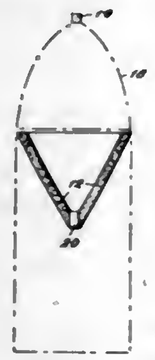
Fred A. Ravreby, Framingham, Mass., assignor to Leonard J. Gross, Scotch Plains, N.J.
Filed Dec. 23, 1964, Ser. No. 420,695
3 Claims. (Cl. 101—405)



A hand-stamp kit having a rack for storing a plurality of stamp carrying plates and a handle. The handle is selectively attachable to and removable from the plates while stored in the rack in such a manner that a desired plate is selected, removed, utilized and returned to the rack through the medium of a single handle interchangeable between each of the plates.

3,388,663
SHAPED CHARGE LINERS

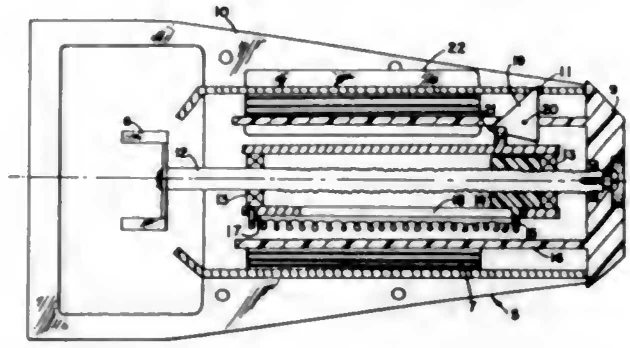
Le Roy Linwood Wyman, Sr., Bethesda, John C. Everts, Bowie, Md., and Rolla Estus Pollard, deceased, late of Kensington, Md., by Mabel Pollard, executrix, Kensington, Md., assignors to the United States of America as represented by the Secretary of the Army
Filed Apr. 30, 1964, Ser. No. 364,891
2 Claims. (Cl. 102—24)



1. An explosive device comprising in combination, a projectile, a hollow shaped charge disposed therein, a liner conforming to said shaped charge, said liner consisting a hollow cone shell made of sintered compressed binderless powdered refractory metal densified with 3 to 25% of a ductile metal of lower melting point.

3,388,664
EXTENSIBLE FUSE EXTENDER

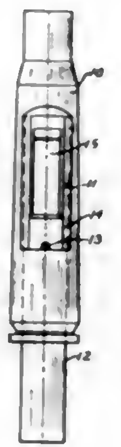
Russell J. Kelly, Nashua, N.H., Charles L. Shirley, Jr., Peabody, Mass., and Harold Rosen, Nashua, N.H., assignors to Sanders Associates, Inc., Nashua, N.H., a corporation of Delaware
Filed Sept. 28, 1965, Ser. No. 491,512
5 Claims. (Cl. 102—7.4)



The present invention pertains to free-falling devices and other projectiles, such as aerial bombs, which are to be actuated immediately prior to contact with the earth or some other object, and more particularly to an aerial bomb having an extensible fuse extender assembly including a volute spring. The spring is maintained in its contracted position until a predetermined free fall, whereupon wind pressure activates a release mechanism connected to said spring to release the same to permit it to extend itself after which it is locked in its extended position by locking means connected thereto. Impact of said extended spring member with the earth or some other object is transmitted to the fuse to cause detonation of the bomb.

3,388,665
CARTRIDGE ADAPTERS FOR HIGH-POWERED FIREARMS

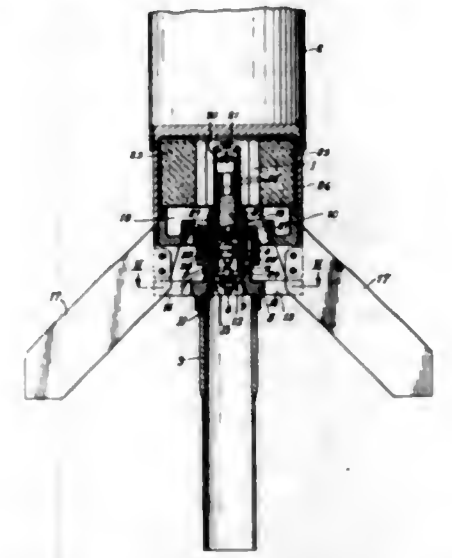
Gordon T. Koehler, 421 Acorn Drive, Dayton, Ohio 45419
Filed Apr. 13, 1966, Ser. No. 550,075
3 Claims. (Cl. 102—41)



An adapter cartridge shaped to fit the firing chamber of a high-powered firearm and having a central bore therethrough which is enlarged at its upper end to receive a projectile, and restricted beneath the projectile to form a chamber to receive a low-powered cartridge. Openings in the sidewall of the adapter give access to the chamber for the insertion and removal of the low-powered cartridge. A plunger is freely supported in the central bore beneath the chamber and carries a firing pin which forms an operating connection between the low-powered cartridge and the firing mechanism of the firearm.

3,388,666
RIFLE GRENADE

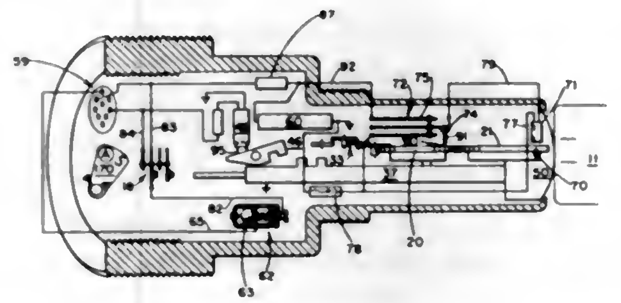
Willi Walther, Johlingen, Baden, Germany, assignor to Industrie-Werke Karlsruhe Aktiengesellschaft, Karlsruhe, Germany, a corporation of Germany
Filed Mar. 15, 1967, Ser. No. 623,303
Claims priority, application Germany, Mar. 22, 1966, J 30,404
8 Claims. (Cl. 102—49.7)



A rifle grenade adapted to be propelled from a rifle by supplementary propulsive cartridge charges arranged in a propulsion unit disposed between a warhead and the customary tail sleeve inserted into the muzzle of the rifle. The improvement comprises the arrangement of a destructible link in the grenade for separating at the instant of firing the tail sleeve from the warhead, so that the tail sleeve is dropped while the grenade is caused to travel toward the target without any dead weight.

3,388,667
CONTACT FUZE

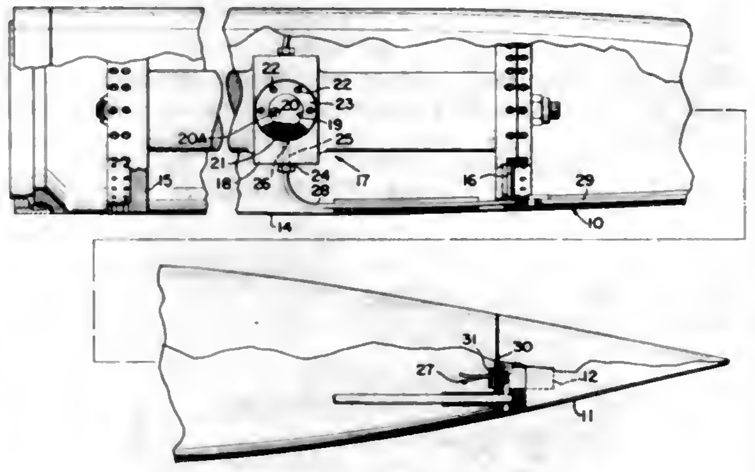
Louis Volda, Canoga Park, Donald H. Wilke, Woodland Hills, and Robert E. Tafel, Riverside, Calif., assignors, by direct and mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Mar. 27, 1959, Ser. No. 802,586
1 Claims. (Cl. 102—70.2)



1. A contact fuze for missiles having longitudinal and lateral acceleration forces due to steering of the missile in flight including a firing circuit, a safety and arming means comprising a set back weight responsive to acceleration forces along the longitudinal axis of said missile and a pair of eccentrically weighted geared together rotors adapted to rotate in opposite directions about their pivots in response to acceleration forces along the longitudinal axis of said missile and tending to rotate about said pivots in the same direction in response to lateral acceleration forces, an explosive element mounted in one of said rotors for movement from an unarmed to an armed position and an impact responsive means operably connecting said firing circuit and said explosive for detonating said explosive element when in said armed position upon target acquisition, said firing circuit comprising a mutual inductance means including a primary and a secondary coil; said primary coil being center-tapped and having one-half thereof wound in opposition to the other half thereof, electrical conducting means connecting said secondary coil across said explosive element, a DC power supply having one terminal thereof connected to the center-tap of said primary coil, said impact responsive means including a ball contact switch separately connecting said DC power supply from its other terminal across each half of said primary coil such that the relative current flow in each half of said primary coil will be in opposite directions and one condenser connected from said other terminal to one end of said primary coil and a second condenser connected from said other terminal to the other end of said primary coil, whereby a current is generated in said secondary coil to detonate said explosive element when upon target impact said ball contact moves from contact with any connection to said primary coil and DC power supply.

3,388,668
TEST FIRING MISSILE

Kurt F. Garoutte, Minneapolis, Minn., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Army
Filed Apr. 6, 1967, Ser. No. 629,871
2 Claims. (Cl. 102—87)

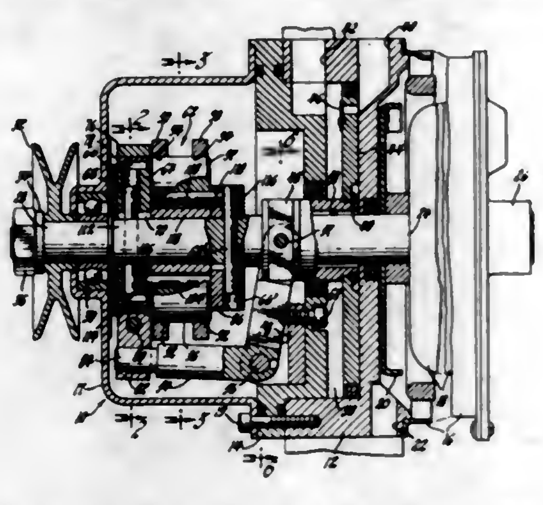


As an abstract of the disclosure, the invention is directed to a test firing missile having optimum flight characteristics including stability. It has a forward nose portion containing fuze means, rearwardly positioned means for securing missile launching media, and an intermediate body portion having longitudinally spaced transverse walls extending thereacross. A warhead simulating ballast mechanism extends lengthwise of and is secured to the spaced walls. A flash-smoke cartridge charge containing a predetermined warhead center of gravity, is seated in a central portion of the ballast mechanism and in communication with receptacle means positioned on the ballast central portion, and conduit means communicatively interconnects the fuze means with the receptacle means.

3,388,669
POWER TRANSMISSION

Donald W. Carlson, Belleville, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed June 1, 1966, Ser. No. 554,528
4 Claims. (Cl. 103—38)

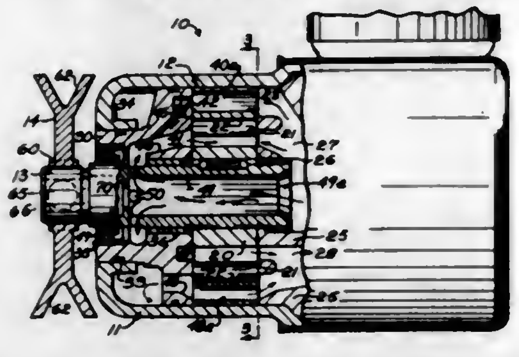
A pump piston is reciprocated by a bellcrank that is driven through a power transmission by a rotary shaft driven by a vehicle fan belt. The transmission includes a drive member connected through a yoke to the bellcrank. The drive member is mounted for radial movement rel-



ative to the drive shaft between eccentric and concentric positions by a control mechanism including a support member journalled on the drive shaft, a control member pivoted thereto at a spaced point and having a centrifugally operated weight attached thereto, and an eccentric pin mounted on the control member and engaging the drive member. Increasing shaft speed will cause the weight to rotate the control member to vary the eccentricity of the drive member and thus vary the stroke of the pump piston. A balance member similar to the drive member is provided for movement in a direction diametrically opposite that of the drive member for balancing purposes.

3,388,670
PUMP

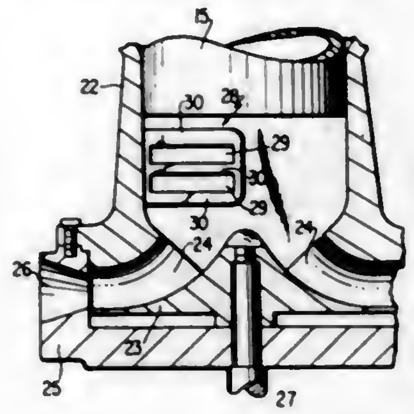
La Vern R. Connelly, Marshall, Mich., assignor to Eaton Yale & Towne Inc., Cleveland, Ohio, a corporation of Ohio
Filed Sept. 16, 1966, Ser. No. 580,087
10 Claims. (Cl. 103—205)



1. An apparatus comprising pumping means, shaft means for driving said pumping means, a drive transmitting member having an opening defined by an inner surface surrounding an end portion of said shaft means and drivingly connected therewith to effect rotation of said shaft means upon rotation of said member, said shaft means having an opening in said end portion, and means providing said driving connection between said shaft means and said drive transmitting member including a member located in said opening and expanding the outer periphery of said shaft means into tight engagement with said inner surface of said drive transmitting member to effect said driving connection therebetween.

3,388,671
CENTRIFUGAL PUMP

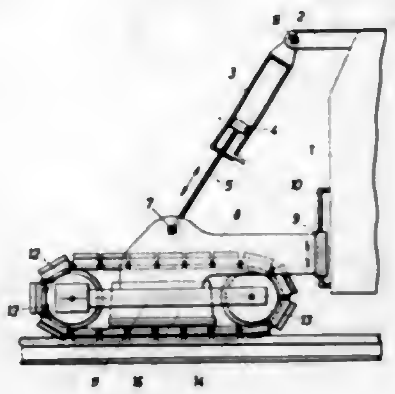
Charles W. Stokes and Emory D. Mattix, Lake Charles, La., assignors to Cities Service Research and Development Company, New York, N.Y., a corporation of Delaware
Filed July 15, 1965, Ser. No. 472,153
4 Claims. (Cl. 103—111)



1. In a substantially vertical elongated reactor for carrying out liquid phase reactions, said reactor having an internal conduit forming a first liquid path within said conduit and a second liquid path outside of said conduit between the upper part of said reactor and the lower part of said reactor, a pump at the lower part of said reactor having an inlet in communication with one of said liquid paths and adapted to receive a liquid mixture from said path and to discharge in said other path and a baffle positioned in said inlet so as to inhibit pre-rotation of liquid in said inlet, the improvement which comprises providing said baffle with an opening adapted to inhibit stagnation of liquid adjacent the lee face of said baffle, so as to prevent the formation of deposits on the lee face of said baffle which would result in obstruction of said pump.

3,388,672
APPARATUS FOR LIFTING A TRACK RAIL

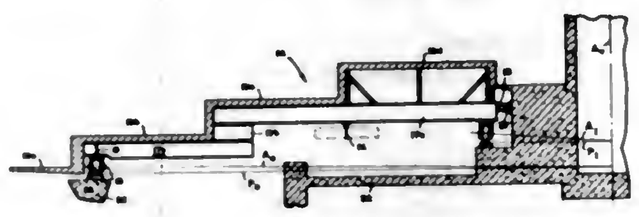
Franz Plasser and Josef Theurer
both of Johannesgasse 3, Vienna, Austria
Filed Jan. 6, 1965, Ser. No. 423,728
Claims priority, application Austria, Jan. 14, 1964, A 254/64
7 Claims. (Cl. 104—7)



A track grading apparatus wherein the means for lifting the track rails is magnetic.

3,388,673
ROTATABLE PLATFORM AND DRIVE MECHANISM THEREFOR

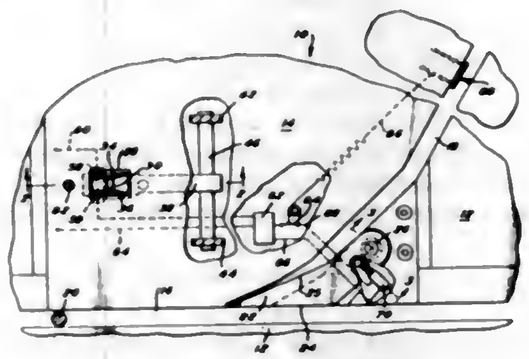
Houghton Sawyer, Jr., 948 Spencer St. 96822, and George M. Kogawara, 1601 Quincy Place 96816, both of Honolulu, Hawaii
Filed Aug. 23, 1965, Ser. No. 481,743
15 Claims. (Cl. 104—36)



A rotatable platform which includes a horizontal member having a vertical cylindrical surface and being rotatable about the vertical axis of the cylindrical surface, a supporting surface under the horizontal member and defining a horizontal plane, means for engaging the cylindrical surface and fixing the intersection of the vertical axis with the horizontal plane of the supporting surface, a number of rollers secured about the circumference of the horizontally disposed member and adapted to engage with the supporting member and rotate about an axis which intersects the intersection of the vertical axis with the horizontal plane, and means for rotating the platform about the vertical axis.

3,388,674
TOW TRUCK SYSTEM

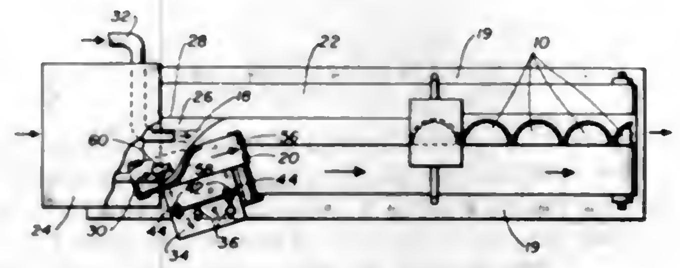
John G. Dorrance, Phillipsburg, N.J., assignor to SI Handling Systems, Inc., Easton, Pa., a corporation of Pennsylvania
Filed Sept. 9, 1965, Ser. No. 486,182
9 Claims. (Cl. 104—88)



An electrical control for tow trucks is described utilizing a floor mounted control actuating means adapted to be operated by the movement of a portion of the truck over such means. When operated the control actuating means initiates electrical circuitry containing components for controlling further movements and operations involving the tow truck.

3,388,675
PASTRY FORMING MACHINE

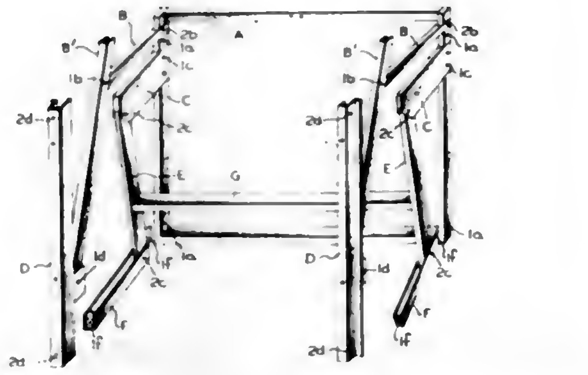
Paul W. Marshall, 3507 E. 21st St. 74114, and Floyd L. Lankford, 2743 E. 53rd St. 74105, both of Tulsa, Okla.
Filed Oct. 20, 1965, Ser. No. 498,777
9 Claims. (Cl. 107—1)



Pastry products such as fried pies are formed from a continuous dough sheet which is folded upon itself by a secondary canted conveyor contiguous to a primary conveyor. A cutting and crimping mechanism oscillates in timed motion with the primary conveyor to form the individual products.

3,388,676
CONSTRUCTION OF CUPBOARDS CONVERTIBLE INTO TABLES

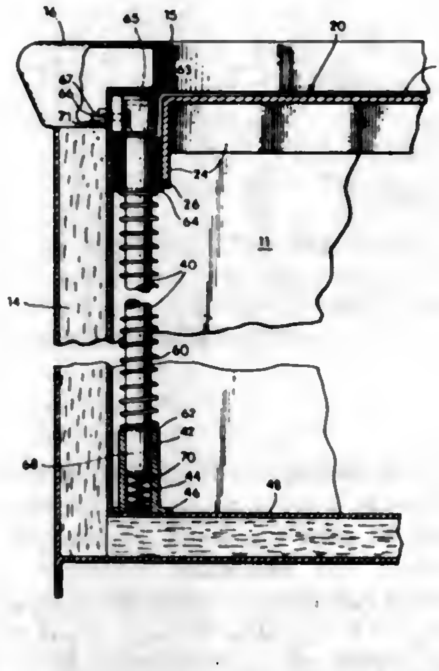
José Vega Urdanoz, Urnieta, Spain, assignor to Manufacturing Vega S.A., Urnieta, Spain
Filed Oct. 3, 1966, Ser. No. 583,735
7 Claims. (Cl. 108—38)



A cupboard wherein a frame is provided with a door closing the front thereof. A framework to which said door is fastened is mounted within said frame so that it may pivot upon horizontal axes. The framework comprises arms and bars pivotally connected to the door framework and frame so that when the door is moved outwardly to form a table it is spaced away from the frame of the cupboard and is also unobstructed underneath the door.

3,388,677
DISPENSING APPARATUS

Robert H. MacKay, Fort Wayne, Ind., assignor to Lincoln Manufacturing Co., Inc., Fort Wayne, Ind., a corporation of Indiana
Filed Oct. 24, 1965, Ser. No. 504,574
2 Claims. (Cl. 108—136)



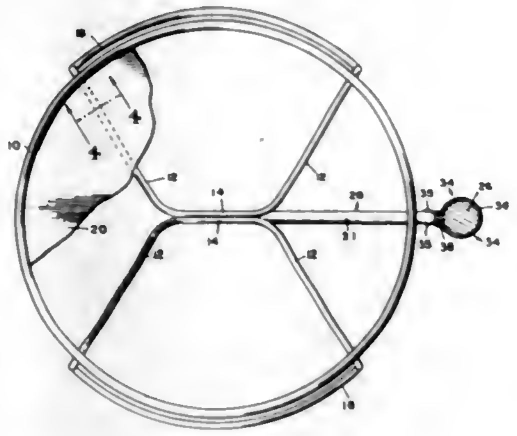
A platform is supported by a cylindrical bearing which surrounds a fixed vertical post at each of four corners so that the platform can move vertically but cannot tilt or cant. A spring surrounds each post and urges the platform upward.

3,388,678
SHELF STRUCTURE

Jerry A. Brown, Columbus, Ind., assignor to Hamilton Cosco, Inc., Columbus, Ind., a corporation of Indiana

Filed Jan. 9, 1967, Ser. No. 608,181

7 Claims. (Cl. 108—157)



A shelf structure having a supporting frame and removable shelf in which said shelf provides a supporting surface and said frame provides a support for said shelf and a means for supporting other objects.

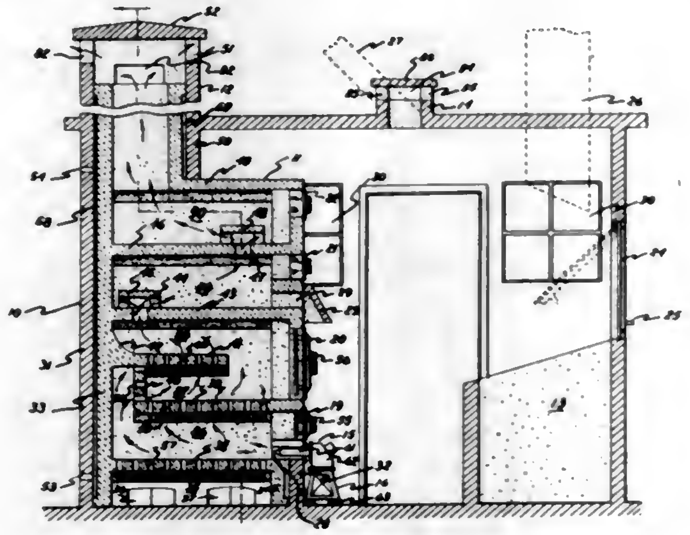
3,388,679
GARBAGE INCINERATOR

Ernesto Villarreal Pantoja, Rio Nilo 23–A, Mexico City, Mexico

Filed Jan. 6, 1967, Ser. No. 607,754

Claims priority, application Mexico, Jan. 14, 1966, 86,630; Jan. 2, 1967, 93,200

10 Claims. (Cl. 110—12)



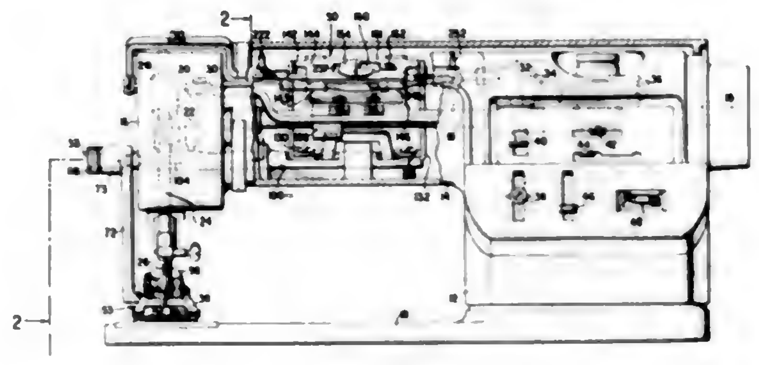
A garbage incinerator comprising a unitary housing with double walls leaving a gap for introducing cool air by convection to cool the walls. A plurality of plates is provided within the enclosure arranged to allow the sweeping of the combustion gases through all the surface of the garbage. A plurality of ash separating chambers is placed on top of the plates and one or more hoods connect these chambers with the atmosphere, to absorb the gases which might escape through the doors of the incinerator. The chimney can be provided with inclined parallel baffles with their free ends overlapped to avoid the entrance of rain water into the incinerator.

3,388,680
BUILT-IN AUTOMATIC BUTTONHOLING DEVICES

Russell A. Fritts, Boonton Township, and Stanley J. Ketterer, Morris Plains, N.J., assignors to The Singer Company, New York, N.Y., a corporation of New Jersey

Filed Apr. 7, 1966, Ser. No. 540,936

4 Claims. (Cl. 112—73)



Apparatus for forming buttonholes including work shifting mechanism mounted in the bracket arm of a sewing machine and a work engaging foot unit carried externally of the bracket arm and detachably connected to the work shifting mechanism. The work shifting mechanism includes a rock shaft journaled in the bracket arm for oscillation about its longitudinal axis and for longitudinal movement, which rock shaft is detachably connected to the work engaging foot unit. The work shifting mechanism further includes apparatus for imparting endwise and oscillatory movements to the rock shaft in a predetermined sequence to drive the work engaging foot unit along a closed path parallel to the bed of the sewing machine.

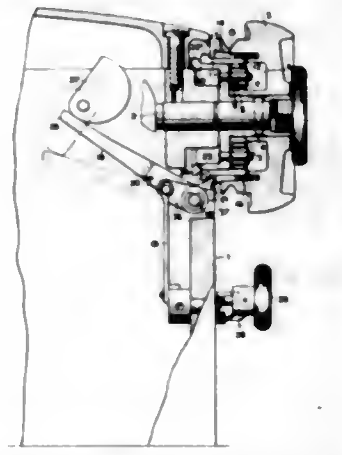
3,388,681
SPEED CHANGE MECHANISM OF A SEWING MACHINE

Kiyoshi Fujita, Kariya, Japan, assignor to Aisin Seiki Kabushiki Kaisha, Kariya, Aichi Prefecture, Japan

Filed Jan. 28, 1966, Ser. No. 523,662

Claims priority, application Japan, Feb. 5, 1965, 40/6,383

3 Claims. (Cl. 112—220)



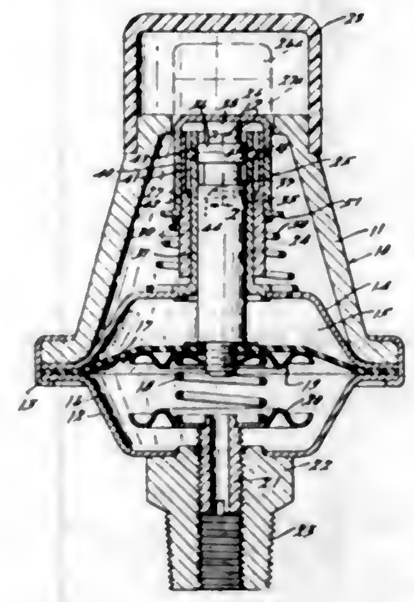
A speed change mechanism for a motor driven sewing machine comprising a planetary gear system provided with a driving pulley having a cone clutch device, wherein a manually actuatable control device is provided for holding the internal gear of the planetary gear system against rotation, while declutching said clutch device, to keep the speed of the machine low at the start of the driving of the pulley, and also there is provided a bobbin winder assembly which is adapted when in use to cooperate with said control device to lock the planet pinion carrier drum in a non-rotatable position, while declutching said clutch so as to obtain free rotation of the driving pulley for bobbin winding.

3,388,682
VACUUM RESPONSIVE DEVICE

James C. Whiting, Royal Oak, Mich., assignor to Michigan-Dynamics, Inc., Detroit, Mich., a corporation of Michigan

Filed Mar. 4, 1965, Ser. No. 437,130

5 Claims. (Cl. 116—70)



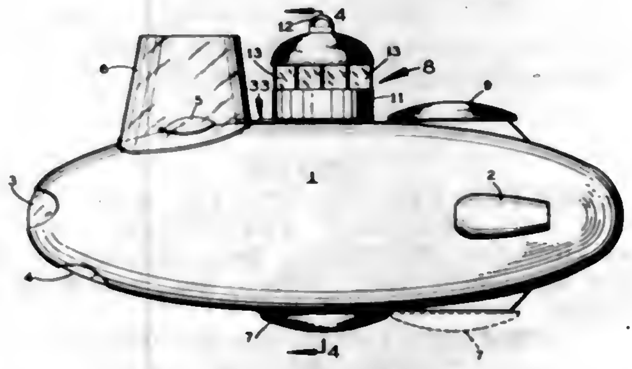
A vacuum responsive device of the type in which a diaphragm is exposed to atmospheric pressure on one side thereof and subatmospheric pressure on its other side. The diaphragm carries a slidable stem that serves as a latch for ball detents. The ball detents lock a spring biased signal member. When the diaphragm has moved a given amount in response to a first level of subatmospheric pressure, the stem will permit movement of a first pair of ball detents out of alignment with a shoulder on the signal member so that the signal member can be moved by its spring to a first indicating position. Further movement of the diaphragm will unlatch a second pair of ball detents to permit the signal member to be biased to a second indicating position. The two indicating positions may be indicative of an incipient clog filter conditon and a completely clogged condition, respectively.

3,388,683
SUBMERSIBLE HULL INCLUDING A DETACHABLE MAN-CARRYING CAPSULE

Burl B. Barhite, 6821 SW. 1st St. 33144, and Paul Arnold, 3338A SW. 25th Terrace 33133, both of Miami, Fla.

Filed Jan. 17, 1967, Ser. No. 609,834

4 Claims. (Cl. 114—16)



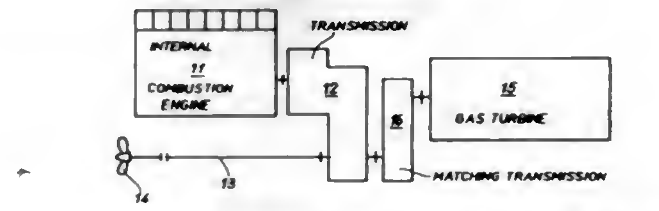
A hermetically sealed submersible vehicle for carrying and ejecting therefrom a man-carrying capsule.

3,388,684
DRIVE INSTALLATION FOR HYDROPLANES OR AIRFOIL WING BOATS

Hermann Gros, Friedrichshafen, and Walter Schweizer, Immenstaad (Bodensee), Germany, assignors to Maybach Mercedes-Benz Motorenbau Gesellschaft mit beschrankter Haftung, Friedrichshafen, Germany

Filed Dec. 20, 1965, Ser. No. 514,993

19 Claims. (Cl. 115—34)



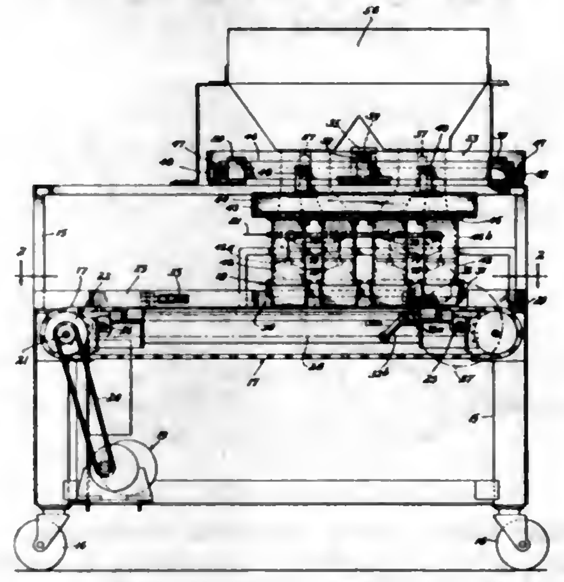
A drive installation for boats having a hull and hydrodynamic surfaces for lifting the hull substantially clear of the water within a predetermined speed range, such as hydrofoils and hydroplanes, having an internal combustion engine, preferably a Diesel engine, drivingly connected to the propeller shaft by means of parallelly connected hydrodynamic torque converter and direct drive friction clutch. A reversing gear or reversing guide vane for the torque converter may be provided for backing the boat.

3,388,685
APPARATUS FOR GREASING BAKING PANS

Richard D. Price, Green Lane, Pa., assignor to Hascolube Research & Manufacturing Corp., Philadelphia, Pa., a corporation of Pennsylvania

Filed June 9, 1964, Ser. No. 373,737

12 Claims. (Cl. 118—2)



Apparatus for applying a lubricant or depanning agent in powdered form to the interior of baking pans, including a nonconductive hood configured to enter the top of the pan, powdered lubricant supply means, means for developing a cloud of the powder within the hood, electrostatic means for directing the powder to the surface of the pan, and mechanism providing for separation of the hood from the pan after the powder supply has been terminated.

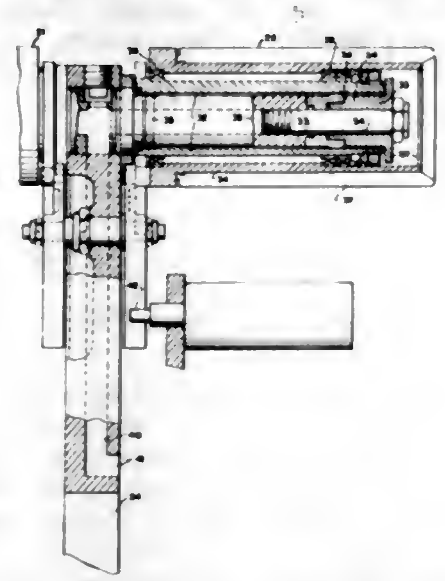
3,388,686
DUAL FINISHING APPARATUS FOR CYLINDRICAL CONTAINERS

Alvin M. Cohan, Englewood, N.J., assignor to American Production Machine Company, Union City, N.J., a corporation of New Jersey

Filed Oct. 31, 1966, Ser. No. 590,672

9 Claims. (Cl. 118—4)

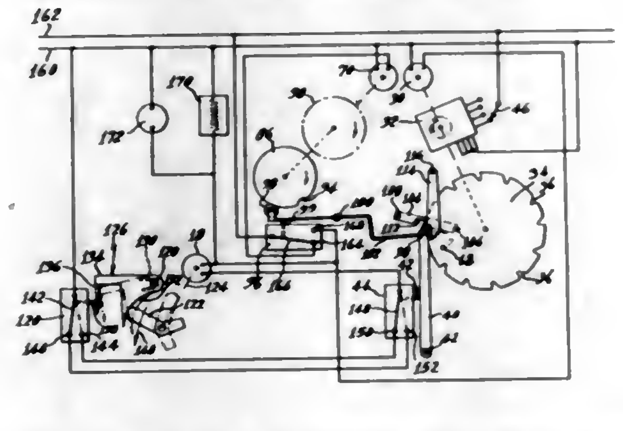
An apparatus for applying a finish simultaneously to the exterior surfaces of two cylindrical containers is shown. The apparatus includes a rotatable disk having rotatable mandrels on either side upon which containers are placed. Means for detecting whether a mandrel has a container upon it and means for retracting an empty mandrel from contact with a finishing surface are also provided. In a preferred embodiment each mandrel is provided with an eccentric inner sleeve which can be rotated to a position at which no part of the empty mandrel surface contacts the finishing surface.



3,388,687

TIMING DEVICE

Nelson G. Kling, Ringwood, N.J., assignor to Technicon Corporation, a corporation of New York
Filed Nov. 12, 1964, Ser. No. 410,597
4 Claims. (Cl. 118—9)



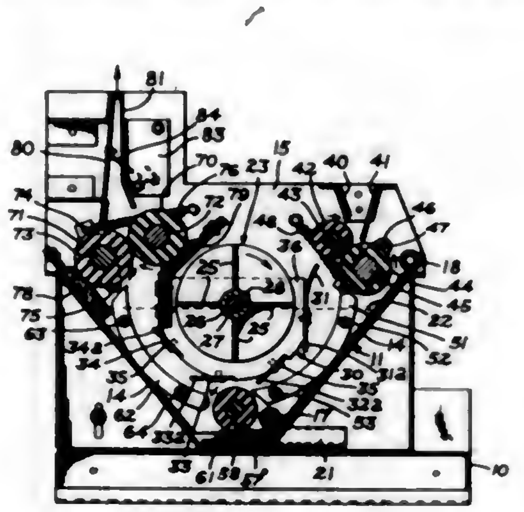
A time device for a sequential immersion device has a conveyor for sequentially immersing a material container during an operating cycle in each of a plurality of liquid containers under the control of a first clock and multiple dwell cam assembly, and a second clock and cam assembly for controlling the start of the immersion operating cycle.

3,388,688

ELECTROPHOTOGRAPHIC APPARATUS

Arthur J. Stanton, Warrensville Heights, Ohio, assignor to Harris-Intertype Corporation, Cleveland, Ohio, a corporation of Delaware
Filed June 30, 1966, Ser. No. 561,849
8 Claims. (Cl. 118—637)

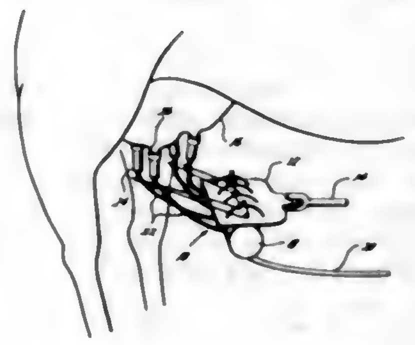
A developer unit for use with an electrophotographic apparatus wherein a sheet bearing an electrostatic image on one side is directed downwardly by guide elements into a liquid developer and then undergoes a change in direction so that the sheet leaves the developer traveling in a generally upwardly direction. No relative movement occurs between the image side of the sheet and any surface or component of the developer unit. Those surfaces in contact with the image side of the sheet are electrically insulating and are moved at the same velocity as the sheet to prevent distortion of the electrostatic image. Only the leading and trailing edges of the sheet are allowed in sliding contact with the stationary guide elements within the developer unit.



3,388,689

ADJUSTABLE MILKING CLAW SUPPORT FOR TEAT CUPS

Lewis D. Patrick, Rte. 1, Box 165,
Pleasant Hill, La. 71065
Filed July 19, 1966, Ser. No. 566,338
10 Claims. (Cl. 119—14.13)



1. An improved adjustable milking claw apparatus for vacuum operation with cups adaptable to the teats of an udder, including,
   a support member,
   a reservoir tank secured to said support member and having inlet and outlet means,
   at least one tubing member for fluid communication between a teat cup and the tank, and
   spring means mounted on the support member secured on said tubing member adjacent the teat cup and constituting a means for yieldingly urging the cup downwardly away from the teats subsequent to substantial drainage of milk therefrom.

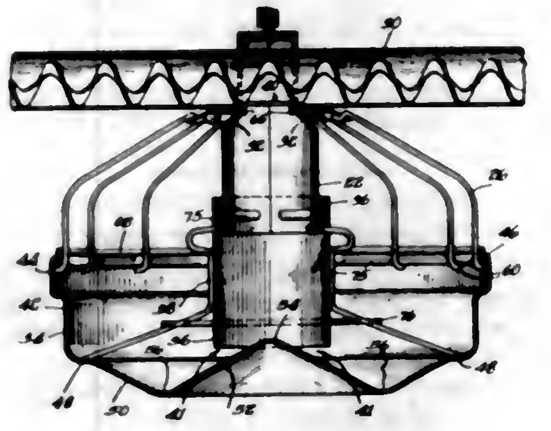
3,388,690

POULTRY FEEDER SYSTEM AND PAN ASSEMBLY THEREFOR

Eldon Hostetler, Middlebury, Ind., assignor to Chore-Time Equipment, Inc., Milford, Ind., a corporation of Indiana
Filed Oct. 22, 1965, Ser. No. 500,569
7 Claims. (Cl. 119—53)

A poultry feeder system comprising a feed source, a feed pan, and means for conducting feed from said source to said pan. The feed pan includes a substantially vertical

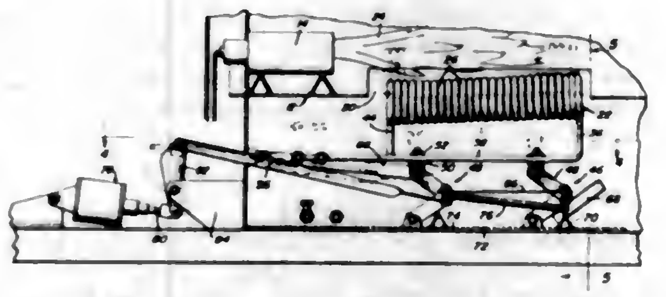
side portion, a radially inward extending ledge connected to the bottom of said side portion, a downwardly sloping surface connected to said ledge, and a conical surface connected to said downwardly sloping surface. An adjustable feed control cylinder having a single series of indexing holes and a plurality of indexing slots is supported on the ledge of the bottom portion of the pan by means of support legs. The cylinder is adjusted relative to the conical portion of the feed pan depending upon into which indexing holes and slots the support legs are fitted, and the amount of feed delivered to the pan is correspondingly varied. The side portions of the feed pan have an annularly outwardly extending protuberance and an inwardly projecting bead at the uppermost edge of the protuberance. The feed pan is supported by means of a frame having a plurality of radially extending support spokes connected to a spoke retention ring which resiliently urges the support spokes radially outwardly. This ring is discontinuous with an opening between two of the support spokes so that by compressing the ring at that point the ends of the support spokes may be placed within the feed pan and upon the release of said ring will engage the pan beneath the bead with the spoke retention ring above the bead so as to secure the pan to the support frame. The pan may be released by reversing the above procedure.



3,388,691

HEATER WITH SELECTIVELY INTRODUCIBLE STEAM COIL

Ernest R. Muckelrath, Tioga, N. Dak., assignor, by mesne assignments, of forty percent to Ernest R. Muckelrath, thirty percent to Robert F. Mowdy, and thirty percent to W. S. Raymond
Filed Feb. 6, 1967, Ser. No. 614,135
15 Claims. (Cl. 122—20)

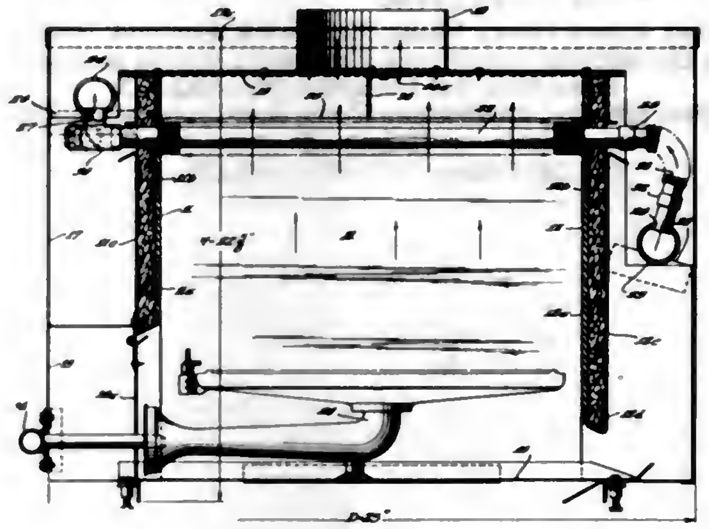


A heat exchange unit comprising an elongated steam coil selectively introducible into a fire chamber immediately adjacent the heat source for the production of steam. The steam coil is mounted on a jack which is automatically controlled for effecting a selective introduction and removal of the steam coil from the fire chamber in response to changing temperature and pressure conditions.

3,388,692

MODULAR BOILER

William A. Hale, 4503 N. Knoxville Ave.,
Peoria, Ill. 61614
Filed Sept. 29, 1966, Ser. No. 582,820
13 Claims. (Cl. 122—367)

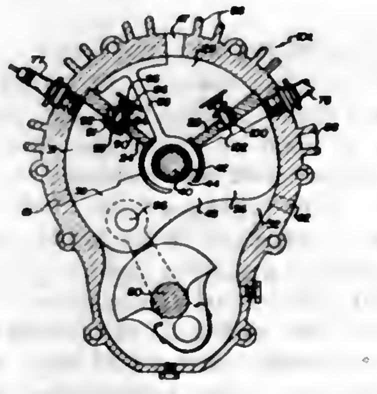


A hot-water boiler construction is provided in which the water tubes and burner element are proportioned to permit a modular construction of varying sizes of boiler units. Water tube passes forming individual heat exchanger units are employed to correspond to single burner units and the combustion chamber wall, are constructed in accordance with multiples of a single combustion width to thereby simplify design and construction of multiple burner boiler systems. The water tubes of the boiler are provided with connections external of the combustion chamber and separability of the boiler is provided along lines passing through the water tubes so that servicing of the heat exchanger units is greatly simplified. Safety features including utilization of a thermostatic element within the heat exchanger unit and within the combustion chamber is also provided.

3,388,693

TWO-CYCLE ENGINE WITH CHARGE PUMP THEREIN

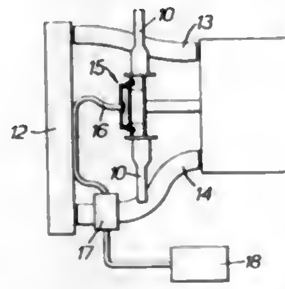
Richard James, 5025 Granville St., Vancouver, British Columbia, Canada
Filed Mar. 15, 1967, Ser. No. 623,412
18 Claims. (Cl. 123—18)



The two-cycle engine has a cylinder therein for alternately pumping fuel charges into two power cylinders so that the base of the engine can be used for lubricating purposes only. Three cylinders curved about a common axis receive three pistons, a pump piston and two power pistons, which pistons are integrally united for oscillation about the axis. Ports or valves are provided for connecting the ends of the double acting scavenging pump cylinder to the two power cylinders.

3,388,694
ADJUSTABLE-PITCH ENGINE COOLING FAN AND SERVOCONTROL MECHANISM THEREFOR

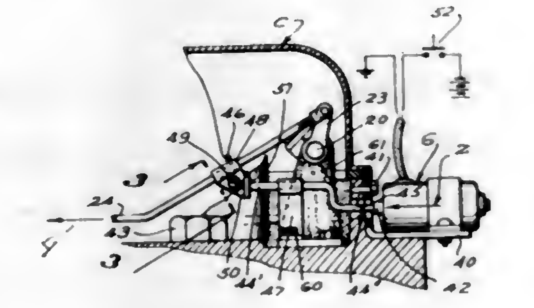
Arthur Ernest Henry Elmer, Painswick, England, assignor to Dynair Limited, Stroud, England, a British company
Filed May 24, 1966, Ser. No. 552,503
Claims priority, application Great Britain, May 28, 1965, 22,861/65
4 Claims. (Cl. 123—41.12)



An adjustable pitch cooling fan for a water cooled engine, the fan hub including a pneumatic piston secured to a drive shaft and a ram cylinder sliding over the piston and arranged to cause twisting of the fan blades against torsion springs, compressed air to actuate the ram being supplied through a central rotary cylinder in the end wall of the ram cylinder and controlled by a thermal valve in the water circuit.

3,388,695
SAFETY SHUT-DOWN FOR DIESEL ENGINES

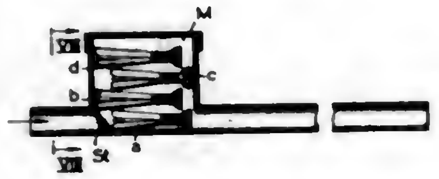
James J. O'Donnell, 2113 Rose Marie Drive, Bakersfield, Calif. 93304
Filed Feb. 17, 1967, Ser. No. 616,985
6 Claims. (Cl. 123—198)



In a diesel engine having a governor, a plurality of fuel injector units with gear and rack operated metering valves and operating means coupled with and between the racks and governor to open and close the valves and including a rotatable control rack shaft related to the plurality of injector units, drive cranks on the shaft and operatively coupled with the racks, a drive crank on the shaft and a drive rod between the drive crank and a differential link of the control linkage of the governor; an electrically operated shut down means to selectively rotate the shaft to close the metering valves and stop the flow of fuel through the injector units independent of the governor and including a solenoid fixed to the engine and having an axially shiftable drive rod opposing and normally spaced from a stop part on the operating means and operable, when energized, to urge said operating means to that position where the valves of the injector units are fully closed and manually operable switch means remote from the engine to selectively energize the solenoid.

3,388,696
MAGAZINE AND BLOWPIPE FOR PROJECTING ELONGATED PROJECTILES

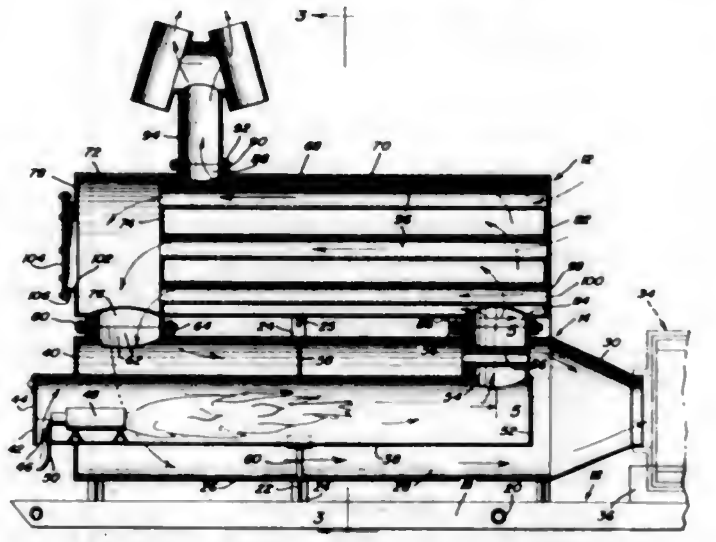
Aloys Hoverath and Ingetraut Hoverath, nee Reichert, both of 15 Hans Bocklerstrasse, Bottrop, Westphalia, Germany
Filed Jan. 5, 1965, Ser. No. 423,518
3 Claims. (Cl. 124—12)



Blowgun comprising a pipe with a magazine opening into the pipe from above near the mouthpiece end and with an inclined wall in the pipe near the mouthpiece end of the magazine to guide the projectiles feeding from the magazine into the pipe along an inclined path from the magazine into shooting position in the pipe.

3,388,697
INDIRECT AIR HEATER

Ernest R. Muckelrath, Tioga, N. Dak., assignor, by mesne assignments, of forty percent to Ernest R. Muckelrath, thirty percent to Robert F. Mowdy, and thirty percent to W. S. Raymond
Filed Dec. 8, 1966, Ser. No. 600,133
13 Claims. (Cl. 126—110)

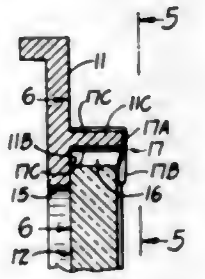


An enlarged air heater for discharging large volumes of heated air toward outdoor work areas and the like comprising upper and lower tubular members within which bypassing non-communicating combustion and air passages are defined for progressively heating the air from the intake end to the discharge thereof. The combustion passage includes a fire tube and an exhaust chamber while the air passage includes a preheating chamber generally coextensive with the exhaust chamber and a final heating chamber generally coextensive with the fire tube.

3,388,698
CLOSURE FOR AN OPENING IN AN OVEN OR THE LIKE

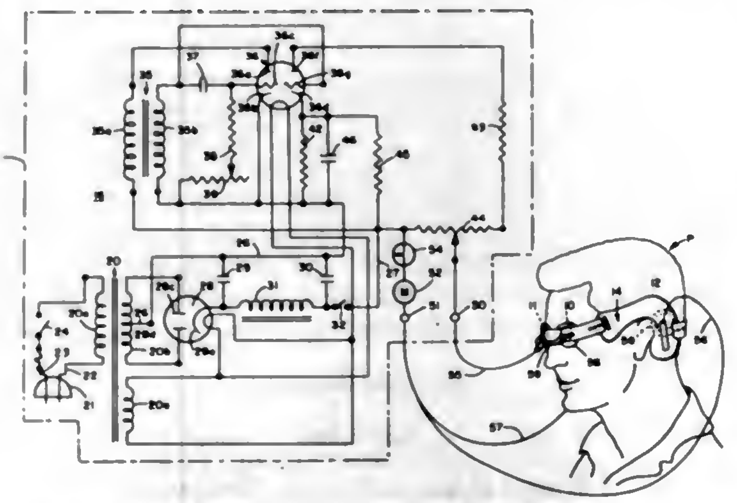
Bruno Satkunas, Lexington, Ohio, assignor to Dominion Electric Corporation, a corporation of Ohio
Filed Mar. 24, 1967, Ser. No. 625,787
9 Claims. (Cl. 126—200)

A closure such as a window or door providing a view therethrough for an oven or the like subject to marked changes in temperature, the closure including a frame having an opening therethrough, the frame being of a metal having one coefficient of expansion and contraction upon changes in temperature and a transparent panel member carried by the frame to cover the opening therein, the panel member having a second and markedly different coefficient of expansion and contraction upon corresponding changes in the temperature, to which the frame and panel member are subjected, the panel member being disposed on a shoulder portion of the frame around the opening and intermediate a metal ridge portion of the frame, the ridge portion and frame being integral, there being space between the edges of the panel member and the ridge portion to accommodate for differences in the coefficients in expansion and contraction of the frame and panel member, and clip members mounted on the ridge portion at spaced intervals around the panel member, the clip members being of harder metal than the frame and having portions that dig into the ridge portion to resist removal of the clip members from the ridge portion, and the clip members having finger portions respectively for overlying the panel member adjacent an edge thereof to hold it against the shoulder of the frame, the finger portions having such resiliency as to firmly urge the panel member against the frame shoulder and also to allow the panel member to shift for accommodating the variations in the frame and panel arising from such differences in their said respective coefficients of expansion and contraction.



3,388,699
METHOD AND APPARATUS FOR INDUCING LETHARGIC RELAXATION OR SLEEP

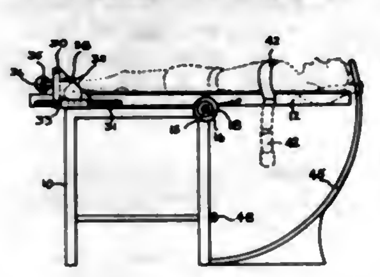
Marvin W. Webb, Redington Beach, and Gulden W. Yoder, Largo, Fla., assignors to Professional Bionics, Inc., Largo, Fla.
Continuation-in-part of application Ser. No. 377,925, June 25, 1964. This application Feb. 2, 1966, Ser. No. 534,595
4 Claims. (Cl. 128—1)



1. In a device for inducing lethargic relaxation or sleep in a subject wherein electrical impulses are generated by electrical means and applied to the subject's cerebrum by electrodes attached in near contact with the subject's eyelids and mastoid processes, the improvement in said electrical means, comprising means for generating voltages which, in a predetermined period of time, said predetermined period of time being in the range of 0.3 to 0.7 millisecond, increase substantially instantaneously from a reference level to a maximum magnitude, said maximum magnitude being in the range of 25 to 100 volts, in a small portion of said period of time change to a magnitude intermediate the maximum and reference levels, in substantially the remaining portion of said period of time change to a magnitude between said intermediate and refrence levels and then substantially instantaneously return to said reference level.

3,388,700
MEANS AND PROCESS FOR EFFECTING PERIODIC BODY INVERSION

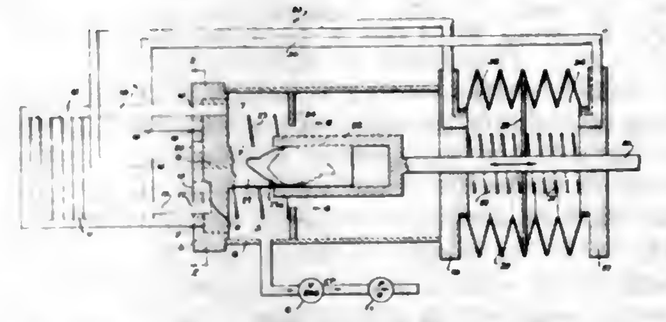
Forrest Kindle Mountz, 22609 Garfield, St. Clair Shores, Mich. 48082
Filed Aug. 27, 1964, Ser. No. 392,659
15 Claims. (Cl. 128—24)



Means and process for effecting inversion of one's own body having a pivotally supported table and rail means at the head end of the table by which one can lie upon the table and walk the head end of the table downwardly by grasping the rail means.

3,388,701
VALVE FOR AIR MATTRESS

Peter Schreiber and Hans Georg Breiling, Lubeck, Germany, assignors to Otto H. Drager, Lubeck, Germany
Filed Nov. 12, 1965, Ser. No. 507,478
Claims priority, application Germany, Dec. 24, 1964, D 46,136
9 Claims. (Cl. 128—33)



An air valve for inflating and collapsing alternate groups of cells in a mattress has four control settings for (a) supplying air to a first group of cells while being closed against a second set of cells, (b) supplying air to both groups of cells at the same time, (c) closed to the first and opened to the second group of cells, and (d) supplying air to both groups of cells. This keeps the patient lying at the same level on the mattress.

3,388,702
DRESSING FOR A CORN AND THE LIKE

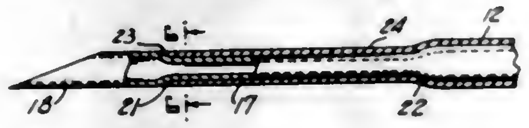
Bertram L. Steel, 2345 Casa Grande, Pasadena, Calif. 91104
Filed Feb. 21, 1966, Ser. No. 528,873
15 Claims. (Cl. 128—153)

1. A sterile dressing comprising a flexible base having an obverse side and a reverse side, a sterile pad sized to cover an area of the body of selected size secured to the

base substantially centrally of the base, a protective pad fabricated of a deformable material having limited compressibility mounted to the base adjacent the sterile pad for protecting a body area overlaid by the sterile pad from pressure by a shoe and the like, a layer of adhesive material disposed over the observe side of the base at least adjacent the sterile pad, protective sheet means releasably adhered to the adhesive material over the extent of said material, and a sealed package housing the above-mentioned components of the dressing in a condition of sterility until use of the dressing.

3,388,703
INTRAVENOUS CANNULA ASSEMBLY UNIT

Donald R. Bowes, Fanwood, N.J., assignor to Johnson & Johnson, a corporation of New Jersey
Filed Mar. 22, 1966, Ser. No. 536,376
7 Claims. (Cl. 128—214.4)



An intravenous cannula assembly unit comprising a rigid hypodermic needle and a flexible cannula fitted over the needle and shrunk into intimate contact with the shank of the needle and in particular, with a reduced diameter portion of the needle located between the head and the shank of the needle. As a result, the combined needle-cannula diameter just rearwardly of the needle point is no greater than the normal diameter of the needle shank, thereby reducing the likelihood of trauma in inserting the unit.

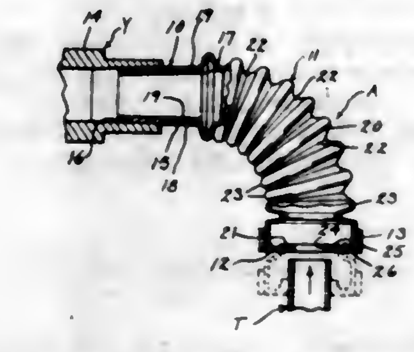
3,388,704
MICROBIOCIDAL SUTURES CONTAINING QUATERNARY AMMONIUM COMPOUNDS AND METHOD FOR MAKING

Leonard D. Kurtz, Woodmere, N.Y., assignor to Sutures, Inc., Coventry, Conn., a corporation of New York
No Drawing. Filed Oct. 2, 1964, Ser. No. 401,257
10 Claims. (Cl. 128—335.5)

A surgical suture having sustained microbiocidal activity is provided by incorporating a microbiocidal quaternary ammonium compound substantially uniformly throughout the body of the suture. The salt is provided in the body of the suture material by utilizing a solvent which swells the suture to permit the salt to penetrate throughout the suture body. On removal of the solvent, the suture returns to its original size.

3,388,705
UNIVERSAL ENDOTRACHEAL TUBE COUPLING OR ADAPTOR

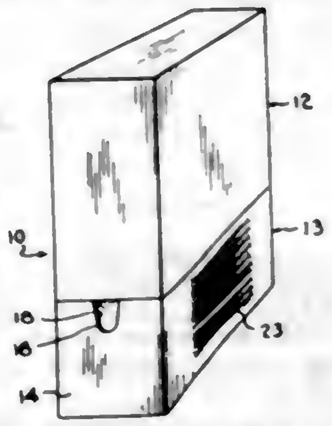
Stanley L. Grosshandler, Hales Corners, Wis., assignor, by mesne assignments, to The Foregger Company, Inc., Roslyn Heights, N.Y., a corporation of New York
Filed Apr. 8, 1965, Ser. No. 446,650
7 Claims. (Cl. 128—351)



An adaptor for attaching endotracheal tubes to anesthesia machines. The adaptor has a molded tubular body having a tapered metal sleeve on one end adapted to be sealingly engaged within a female connector on the chimney of an anesthesia machine. The other end of the body is provided with a flexible diaphragm integral therewith, the diaphragm being provided with an axial opening of a smaller diameter than the diameter of the smallest endotracheal tube to be inserted thereinto, and a rigid reinforcing ring bonded to the outer periphery of the body adjacent said other end, the diaphragm being provided with arcuate peripheral walls of a thicker dimension about the opening therethrough. In a first illustrative embodiment, the body is of a flexible bellows-like shape having radially inner and outer convolutions. In a second illustrative embodiment, the body is molded with a right angle bend. The convoluted wall of the body of the first embodiment prevents the closing off of the endotracheal tube, even if the body should be bent to engage the inner end of the endotracheal tube. In the second embodiment ribs are molded on the inner surface of the body at the curve therein for the same purpose.

3,388,706
CIGARETTE CASE WITH DETACHABLE ASH TRAY

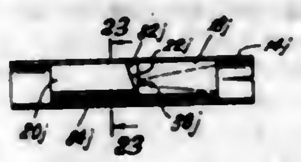
Ralph E. Muirheid, 803 W. Market St., Akron, Ohio 44303
Filed Feb. 15, 1966, Ser. No. 527,466
6 Claims. (Cl. 131—238)



A three part container comprising a case having an open upper end and adapted to receive a package of cigarettes, a closure for the upper end of the case having walls which telescope over the upper end of the walls of the case and a cap which telescopes over the lower end of case, the walls of which have upper edge portions which abut the lower edge portions of the upper closure. Opposite end walls of the lower cap have notches in the upper edge portions adapted to support a cigarette, and the lower end portion of the side walls of the case and the side walls of the lower cap have serpentine formations therein for locking and holding the cap on the case, the formations being so located that the cap can be locked and held on the case only after the notches in the end walls of the cap are substantially closed by the end walls of the case.

3,388,707
TOBACCO SMOKE FILTER

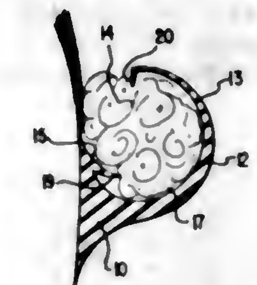
Walter Harris, 1843 Fox Hill Drive, Los Angeles, Calif. 90025
Filed May 17, 1965, Ser. No. 456,285
3 Claims. (Cl. 131—261)



This disclosure describes a filter for filtering tobacco smoke which includes a first filter and a second filter. The two filters have disaligned filter passages extending therethrough and a radial passage is provided for connecting the two smoke passages.

3,388,708
HEADBAND ASSEMBLY

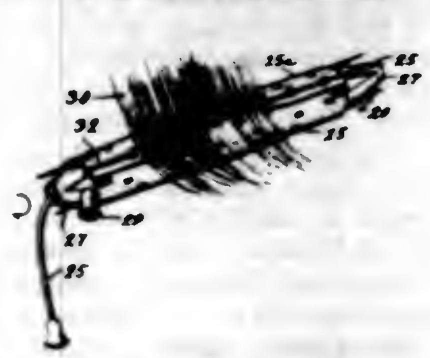
Sivey Stark Hudson, Rte. 2, King George, Va. 22485
Filed Jan. 4, 1965, Ser. No. 422,948
1 Claim. (Cl. 132—9)



A headband assembly for collecting excess hair treating liquid. The headband has a backing element which supports a ring of filler material closely adjacent the head of the subject. The backing element is formed of a flexible material, so that the wall portion may be readily flexed to replace the filler material.

3,388,709
EXPENDIBLE HAIR CURLER

Ruth Davis Morris, Quarters 5723, Apt. D, Fort Carson, Colo. 80913
Filed Apr. 2, 1965, Ser. No. 445,052
2 Claims. (Cl. 132—42)

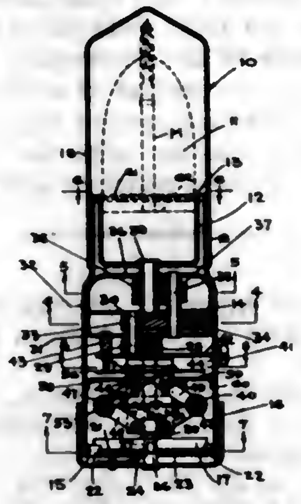


The present invention describes a disposable hair curler constructed by rolling a prepared blank into the shape of a cylindrical tube, which tube has tapered ends and through which tube is extended an elastic member projecting from both ends, the said elastic member being disposed to overlap the hair and attach to projecting ears on the ends of the tube.

3,388,710
ROTARY LIPSTICK DEVICE

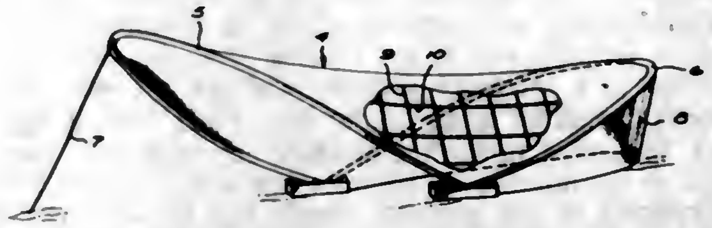
Mary Burke, Tampico, and Arthur C. Haggstrom, Rockford, Ill., assignors to Mary Burke, Sterling, Ill.
Filed Oct. 18, 1965, Ser. No. 497,127
7 Claims. (Cl. 132—85)

1. A rotary lipstick device comprising an elongated tubular handle, a holder for lipstick rotatably mounted on one end of said handle on an axis extending longitudinally thereof, drive means housed in said handle, reduction gearing also housed in said handle drivingly connecting the drive means with said holder, and manually controlled clutch means controlling the starting and stopping of the holder, the drive means comprising a spiral spring housed in said handle at the end remote from the lipstick holder, and a knob rotatable relative to the last named end of said handle attached to one end of said spring to wind the same by rotation of said knob relative to said handle, the other end of said spring being operatively connected with the reduction gearing.



3,388,711
PORTABLE STRUCTURE

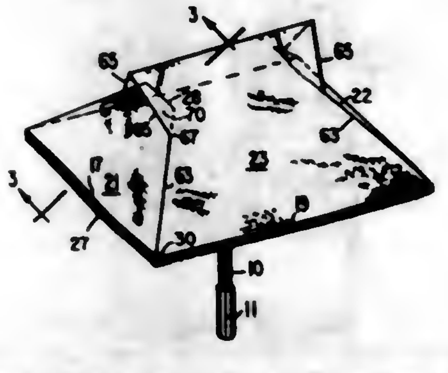
Carl F. Huddle, 3 Kemberton Drive, Pleasant Ridge, Mich. 48069
Original application Aug. 29, 1963, Ser. No. 305,483, now Patent No. 3,215,153, dated Nov. 2, 1965. Divided and this application Oct. 15, 1965, Ser. No. 496,559
10 Claims. (Cl. 135—1)



1. A portable, semi-rigid structure comprising a plurality of arches with formed bight sections, means for pivoting said arches, said arches being inclined from a common base and pivotably tilted outward about said pivot means from each other, a flexible membrane attached to said arches and stretched between them in such a manner as to form a warped surface for the roof of the structure, and means for anchoring said arches to said base for restraining said flexible membrane in tension.

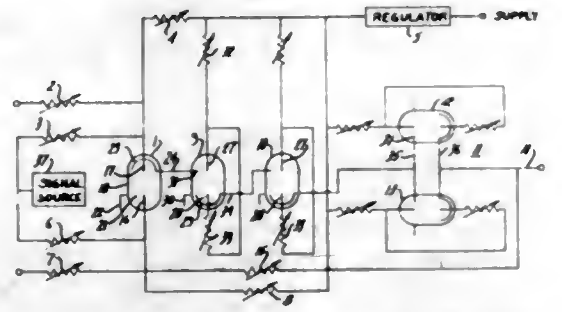
3,388,712
PARASOL TYPE SHELTER

Willard H. Taylor, Gloversville, N.Y., assignor to N. A. Taylor Co. Inc., Gloversville, N.Y., a corporation of New York
Filed Apr. 14, 1967, Ser. No. 630,913
2 Claims. (Cl. 135—2)



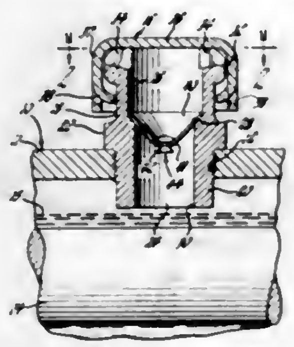
A cover of sheet material overlies a supporting ridge pole and consists of inclined side panels having side edges converging upwardly throughout the major portion of their length and merging with side edges diverging outwardly to the ends of the ridge pole. End panels of trapezoidal form are fixed throughout the major portion of their side edges to the converging side edges of the side panels. The upper portion of each end panel extends upwardly between the side panels and is yieldingly maintained in coplanar relation with the remainder of the end panels by a resilient member, such as a spring.

3,388,713
PURE FLUID SUMMING IMPACT MODULATOR AND UNIVERSAL AMPLIFIERS CONSTRUCTED THEREWITH
Bjorn Gerhard Bjornsen, Milwaukee, Wis., assignor to Johnson Service Company, Milwaukee, Wis., a corporation of Wisconsin
Filed Jan. 25, 1965, Ser. No. 427,589
18 Claims. (Cl. 137—81.5)



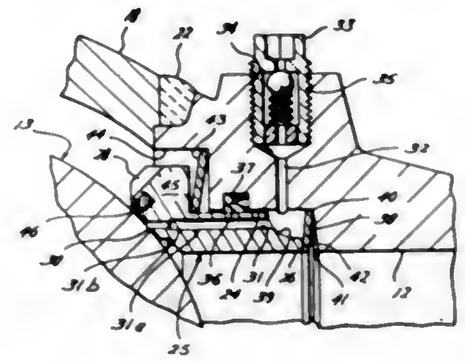
A universal fluid amplifier includes a summing input impact modulator including a pair of opposing nozzles secured to the opposite sides of an enclosure having a central orifice wall defining a pair of chambers each of which includes one of the nozzles. One chamber is connected to a reference pressure and the opposite chamber is connected to an output line. Fluid control signals are connected through individual corresponding restrictors to the nozzles. To subtract, the signal restrictors are connected to the opposite nozzle and to add, they are connected in parallel to the one nozzle. The output chamber connection is to multiple stage transverse impact modulators each including opposed nozzles with an intermediate orifice wall defining a reference chamber to one side and a pressure or output chamber to the opposite side. The input to the summing impact modulator is amplified through the cascaded modulators. A feedback restrictor connects the output of the amplifying section to one of the two input nozzles of the summing impact modulator. A conventional pneumatic relay may be connected to the output of the amplifying stage.

3,388,714
VENT ASSEMBLY
John C. Rau, Rochester, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Oct. 24, 1965, Ser. No. 504,302
1 Claim. (Cl. 137—202)



A vent assembly for a motor vehicle rear axle housing characterized by a frusto-conical float valve that shifts upwardly into surface-to-surface sealing engagement with a similarly tapered valve seat upon a surge of liquid within the valve body. The float valve remains seated until the liquid pressure is relieved at which time it falls under its own weight to a normally open position.

3,388,715
LUBRICATED VALVE WITH SPRING MEANS FOR RELIEVING EXCESSIVE SEALANT PRESSURE
Frank V. Ellis, Houston, Tex., assignor to Cameron Iron Works, Inc., Houston, Tex.
Filed June 9, 1967, Ser. No. 644,909
4 Claims. (Cl. 137—246.22)

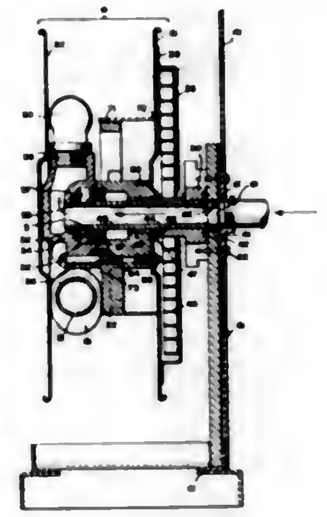


A valve comprising a valve body having a flowway through it and a closure member mounted within the valve body for movement between flowway opening and closing positions. A valve seat mounted within the flowway on each side of the closure member includes an annular body having a groove about its inner end opposite its respective side of the closure member, and a seal ring surrounds the outer circumference of the seat body to seal between it and the flowway. A washer-type spring engages at its opposite ends with the flowway and the outer end of the seat body near its inner circumference to enclose a chamber about the seat body intermediate the spring and seal ring and to urge the inner end of the seat body against the closure member. A passageway in the valve body connects its exterior with the chamber to permit introduction of lubricant into the chamber, and passageways in the seat body connect the chamber with the groove to conduct lubricant in the chamber to the groove. The end of the spring which engages the seat is disengageable from it to relieve lubricant within the chamber when the pressure of the lubricant reaches a predetermined level.

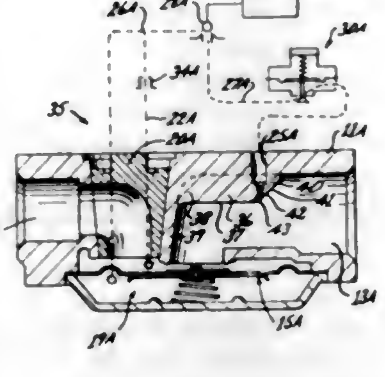
3,388,716
HOSE REEL
Ronald M. Wilson, Ambler, Pa., assignor to William M. Wilson's Sons, Inc., Lansdale, Pa., a corporation of Pennsylvania
Filed Nov. 16, 1965, Ser. No. 508,086
7 Claims. (Cl. 137—355.22)

A hose reel having a support on which a ratchet wheel is mounted with a liquid inlet opening in the ratchet wheel communicating with a pintle mounted on the ratchet wheel and in communication with the liquid inlet opening and extending inwardly of the support. A rotatable hub is journaled on the pintle and a discharge head is mounted on the hub. A front flange is mounted on the discharge head and a rear flange is mounted on the hub. Adjacent the rear flange at one end is a drum which is mounted on the hub and which is substantially spaced away from the front flange at its other end. A discharge hose is connected to the discharge head. Hose guide means are provided having an opening which receives the discharge hose. A spring casing is mounted on the rear flange having a spring mounted in the casing and anchored at one

end on the ratchet wheel, and at the other end on the spring casing. A ratchet pawl is pivotally mounted on the spring casing in operational relation with the ratchet wheel. A hose reel is thereby provided for use in dispensing liquids in which the hose may be held in a desired position for delivery of fluid and then be automatically wound onto the reel after use.

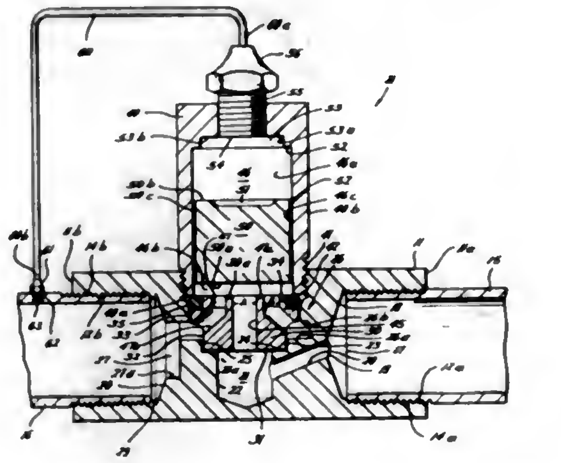


3,88,717
CONTROL MEANS HAVING OUTLET PRESSURE SENSING MEANS
Samuel T. Kelly, Torrance, Calif., assignor to Robertshaw Controls Company, Richmond, Va., a corporation of Delaware
Filed Feb. 12, 1964, Ser. No. 344,470
4 Claims. (Cl. 137—484.2)



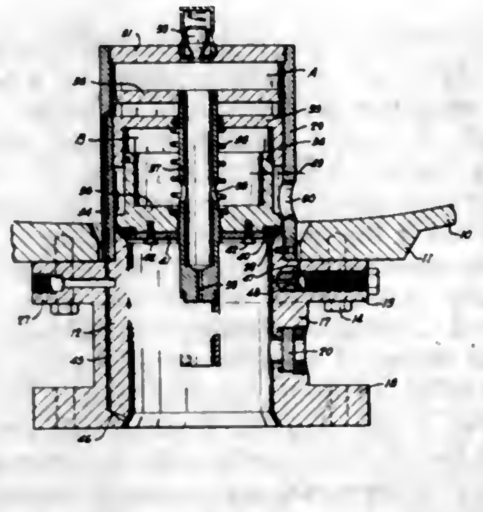
1. In combination, an inlet passage means, an outlet passage means having a fin projecting toward the center of said outlet passage means, a pressure regulator means controlling the flow of fluid from said inlet passage means to said outlet passage means and having a chamber, bleed line passage means leading from said inlet passage means to said chamber, branch passage means leading from said bleed line passage means to a bleed line outlet means and passage means provided in said fin with the longitudinal axis of said bleed line passage means in said fin being substantially perpendicular to the fluid flow in said outlet passage means whereby said bleed line outlet means and passage means senses the pressure in said outlet passage means adjacent the center thereof, and a sensing regulator disposed in said branch passage means to control the fluid flow therethrough in response to the pressure sensed at said bleed line outlet means.

3,388,718
CONTROL VALVE
Edward L. Moragne, 4723 Nenana Drive, Houston, Tex. 77035
Filed Oct. 10, 1966, Ser. No. 585,566
7 Claims. (Cl. 137—494)



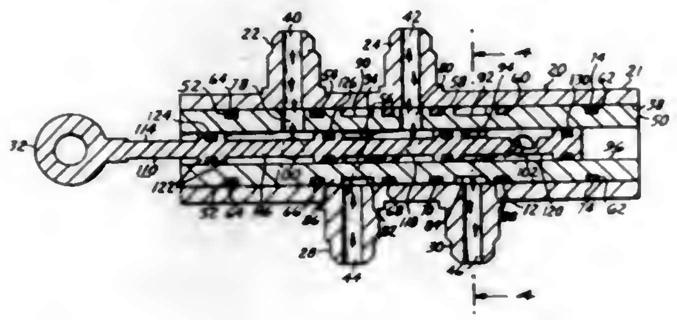
A valve positioned between an upstream and downstream tubular member for regulating fluid flow through the tubular members utilizing a valve body with a valve seat member positioned therein having first and second channels communicating with one of each of the upstream and downstream tubular members, respectively. A piston chamber having a piston cylinder positioned in the chamber is adapted to move longitudinally in the chamber in response to fluid pressure and is loose fitting, laterally, in the chamber. A tube line is mounted with the downstream tubular member and communicates with the piston chamber above the piston member such that an increase in downstream pressure causes an increase in pressure in the portion of the piston chamber above the piston cylinder to force the cylinder downwardly to seat on the seat member to prevent communication between the first and second channels in the seat member which thereby prevents fluid communication between the tubular members.

3,388,719
INTERNAL TANK VALVES
Francis Maginnis, P.O. Box 368, Norman, Okla. 73070
Filed July 5, 1966, Ser. No. 562,562
10 Claims. (Cl. 137—565)



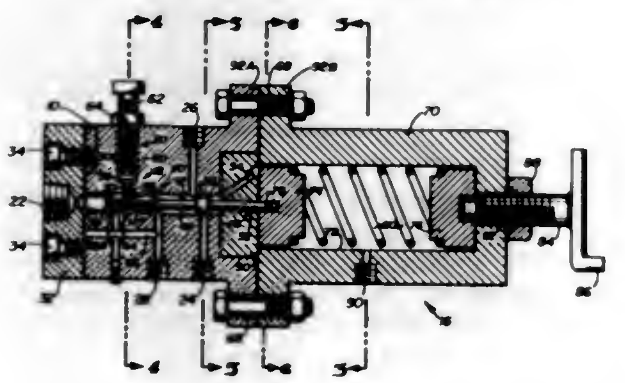
This application has to do with valves mounted in tanks which are used to transport fluid in bulk, such as truck tanks. The present invention has the valve so designed that it can not be opened manually. It can be opened only by a fluid pressure system connected to a pump and remains closed unless the pump is operating. If the pump fails, the valve closes.

3,388,720
FOUR-WAY VALVE
Edward L. Parr, El Cajon, Calif., assignor to Wendell L. Thompson, Burbank, Calif.
Filed Sept. 13, 1965, Ser. No. 486,614
2 Claims. (Cl. 137—625.48)



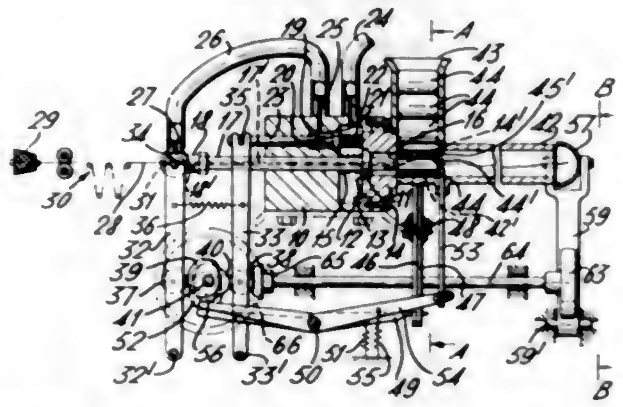
A spool type valve having slits in an elongated sleeve, which slits are elongated and extend longitudinally of the bore in the sleeve, together with a reciprocating valve in the bore which is sealed by O-rings which are adapted to move to both ends of the elongated slits.

3,388,721
HYDRAULIC SIGNAL CONTROL VALVE
James A. Caywood, Birmingham, Mich., and Dean M. De Moss, Ernest C. Fitch, Jr., and Ronald F. Osborn, Stillwater, Okla., assignors to Oklahoma State University of Agriculture & Applied Science, Stillwater, Okla., a corporation of Oklahoma
Filed Aug. 26, 1965, Ser. No. 482,829
8 Claims. (Cl. 137—625.66)



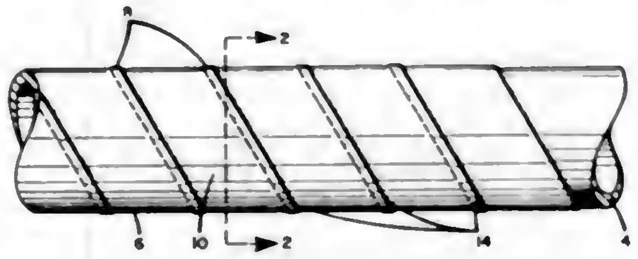
This invention relates to a hydraulic signal valve. More particularly, the invention relates to a hydraulic signal valve including a body member having a spool therethrough, a supply pressure port and signal port intersecting the spool opening, one end of the spool having a pilot port therein, a longitudinally displaceable spool positioned in the spool opening forming a piston displaceable by pressure at the pilot port, the spool being longitudinally positionable between a nonactuated and an actuated position, and spring biasing means compressibly biasing the spool towards the pilot port, the spool being movable by hydraulic pressure at the pilot port against the bias to the actuated position, the spring bias being adjustable by means externally of the valve so that the pressure at the signal port required to move the spool to the actuated position is thereby adjustable. The valve further includes detent means to insure that the valve spool, when moved from the nonactuated to the actuated position and vice-versa, moves quickly from one position to the other.

3,388,722
SHUTTLELESS LOOM PROVIDED WITH WEFT THREAD STORING MEANS
Toemon Sakamoto, 299 Hirosawa-cho, Shizuoka-ken, Hamamatsu-shi, Japan
Filed Mar. 4, 1966, Ser. No. 531,931
Claims priority, application Japan, Mar. 11, 1965, 40/14,326
10 Claims. (Cl. 139—125)



A shuttleless loom of a type wherein a weft thread carrying bullet is shot through the shed forming area of the loom. Means which is disposed at one side of the shed forming area and operable before a shed is formed, is adapted to temporarily store a weft thread that has been drawn up from a cone and projected by a first blast of air through an axial bore provided in a bullet. Upon the forming of a shed, a second blast of air is employed to shoot the bullet through the shed; the weft thread being carried through the shed by means of sliding frictional contact between the bullet and the thread.

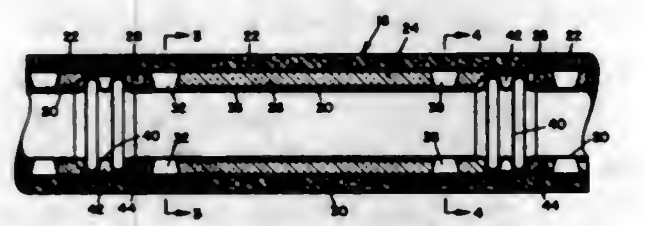
3,388,723
PIPE COVERED WITH LAMINATED ELASTIC PROTECTIVE WRAPPING
Frank E. McNulty, Tulsa, Okla., assignor to Nee & McNulty, Inc., a corporation of Oklahoma
Filed Apr. 20, 1964, Ser. No. 361,078
6 Claims. (Cl. 138—144)



The invention comprises essentially an elastic mesh material coated on at least one side thereof with a bituminous waterproofing composition. Such wrapping material may be applied directly to a cold pipe surface with or without the use of a primer. As the pipe is wrapped, the tar or similar material tends to squeeze through the mesh backing and also at the overlaps as tension is applied. This provides a cold flow or bonding action at the overlaps which tar-plastic continuous or imperforate film laminates are incapable of doing.

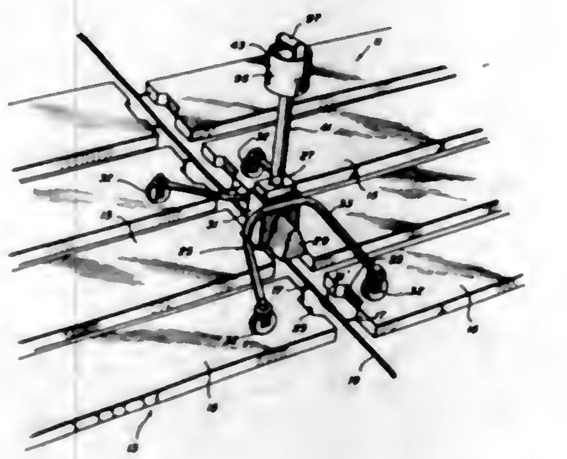
3,388,724
SUBMARINE INSULATED LNG PIPELINE
Roger W. Mowell, West Caldwell, and John Mascenik, Mount Tabor, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
Filed Apr. 5, 1965, Ser. No. 445,551
7 Claims. (Cl. 138—149)

The pipeline of this disclosure includes a rigid insulation material applied to the interior surface of an outer casing pipe. A gap is left between said insulation and the exterior of an inner conduit which is maintained in coaxial spaced relationship with said outer casing pipe. Each section of the inner conduit is independently mechanically supported from the adjacent section of the casing pipe.



One end of each inner conduit section is fixed securely to the casing pipe while the opposite end of each inner conduit section is free to expand and contract independently of the surrounding insulation and independent of the adjacent inner conduit sections.

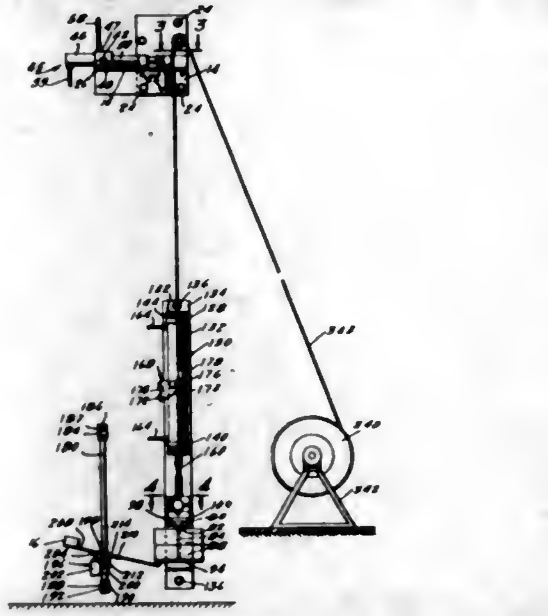
3,388,725
WIRE WINDING DEVICE
Randel E. Richardson, 4822 Holt Drive, Memphis, Tenn. 38116
Filed Oct. 19, 1966, Ser. No. 587,878
9 Claims. (Cl. 140—93)



1. A device for winding pieces of the tire wire having legs in the construction of an articulated concrete mattress comprising a carriage including an outer housing, an inner housing slidably mounted in said outer housing for upward and downward movement therein, a pair of side by side wire winding elements rotatably mounted in said inner housing for rotation about a horizontal axis, said elements each having a substantially radially extending tie wire engaging face defining one side of a tie wire receiving notch in the element, said elements being normally positioned in a first position in which said notches are aligned with one another and are facing downwardly, and means operably coupled to said elements for rotating one of said elements in one direction from said first position and for rotating the other of said elements in the opposite direction to cause said tire wire engaging faces to urge the legs of the tire wires in opposite directions for the winding thereof.

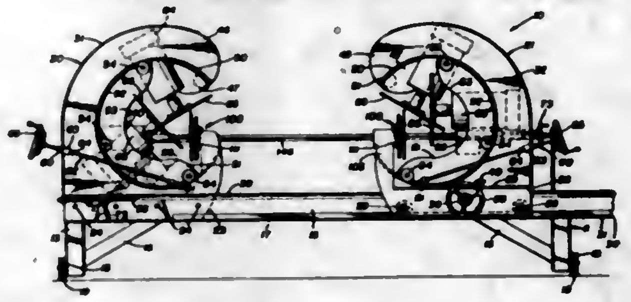
3,388,726
WIRE STRETCHER AND STRAIGHTENER
John H. Bent, Fullerton, Calif., assignor to Hamilton Company, Inc., Whittier, Calif., a corporation of California
Filed June 26, 1964, Ser. No. 378,317
15 Claims. (Cl. 140—147)

6. In wire stretching and straightening apparatus:
(A) a fixed wire clamping means;
(B) a weight attachable to a length of wire clamped in said wire clamping means;
(C) means for operably moving said weight relative to said fixed clamping means for exerting a predetermined longitudinal pull of said wire;



(D) electrical means for supplying electrical power to said lenght of wire to heat same to a temperature whereat said wire will stretch under the influence of said weight;
(E) and means limiting the amount said wire is stretched.

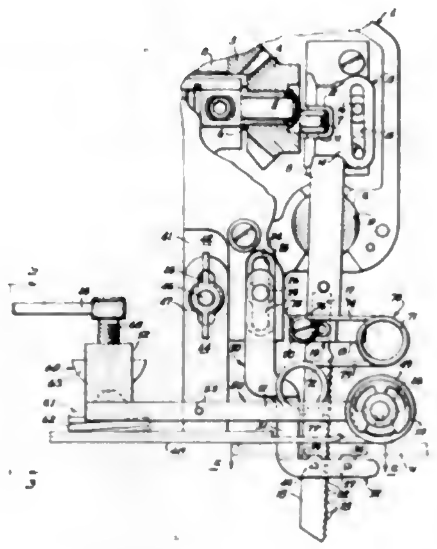
3,388,727
MULTIPLE-CUT APPARATUS
Claudius F. Kotila, Mansfield, Ohio, assignor to Good-Ko Industries, Inc., Flint, Mich., a corporation of Michigan
Filed July 9, 1965, Ser. No. 470,795
13 Claims. (Cl. 143—36)



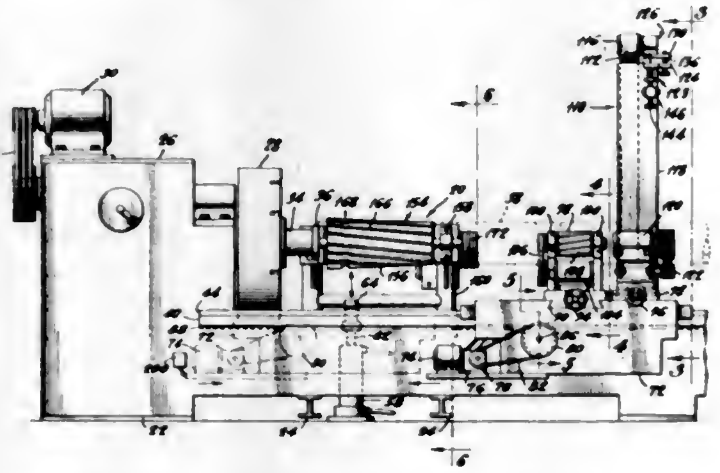
A multiple-cut sawing apparatus which includes a base frame, and a pair of plural head saw carriages attached to a frame. At least one of the carriages is adjustable toward and away from the other of the carriages on the frame; a pair of saw assemblies is associated with each of the carriages and each saw is separately and selectively rotatable whereby the angle of the cut made by a pair of saws is adjustable in relation to woodstock passing between the carriages. One of the saws in each pair is lineally extendable and retractable so that the position of the apex of the cut is adjustable. Ways deliver the stock between the spaced apart carriage stations.

3,388,728
PORTABLE POWER TOOLS
Robert H. Riley, Jr., Towson, Richard F. Koen, Lutherville, and Hubert A. Ziegler and Allen E. Holmes, Baltimore, Md.; said Holmes assignor to Martin-Marietta Corporation, New York, N.Y., a corporation of Maryland, and said Riley, Koen, and Ziegler assignors to The Black and Decker Manufacturing Company, Towson, Md., a corporation of Maryland
Filed Apr. 15, 1966, Ser. No. 542,855
15 Claims. (Cl. 143—68)

A self-feeding, minimum reaction power tool, such as a reciprocating saw, is provided wherein a work engaging device, such as a friction roller, is driven incrementally in timed relation to reciprocation of the saw blade or other tool element in such fashion that a positive increment of the feed motion is provided during each working stroke of the tool element. Driving means for the work engaging device is connected directly to the tool element holder and converts the reciprocatory motion of the tool element holder into incremental movement of the work engaging device.

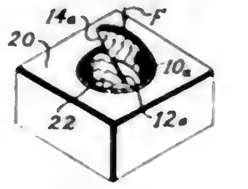


3,388,729
APPARATUS FOR PRODUCING DECORATIVE WOODEN COLUMN SHAFTS
Walter R. Edwards, 919 Murphree St.,
Troy, Ala. 36081
Continuation-in-part of abandoned application Ser. No. 523,346, Jan. 27, 1966. This application Feb. 21, 1966, Ser. No. 528,724
8 Claims. (Cl. 144—47)



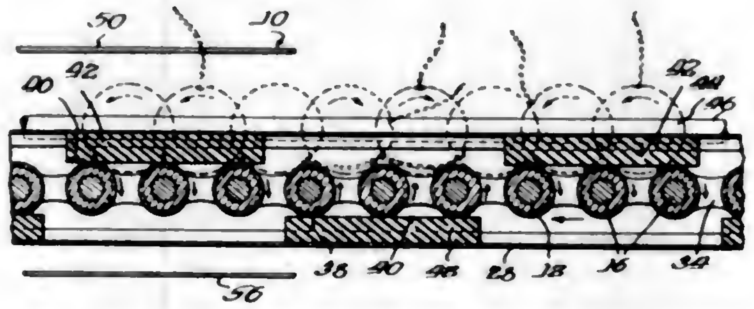
1. A lathe for shaping and finishing wooden column shafts comprising:
- a base;
- means mounted on the base for rotatably supporting a workpiece;
- means operatively coupled to said workpiece supporting means for rotating the workpiece;
- a cutter assembly movably connected to the base and including a cutter and means for selectively moving said cutter assembly with respect to the base for periodically placing said cutter into engagement with the workpiece;
- a movable carriage assembly operably connected to the base and including a plurality of independently movable cross-feed mechanisms and means for moving said carriage assembly with respect to the base;
- a cutter head mounted on one of said plurality of cross-feed mechanisms, whereby said one cross-feed mechanism may be selectively positioned to place the cutter head into engagement with the workpiece;
- a sander mounted on another one of said plurality of cross-feed mechanisms, whereby said other cross-feed mechanism may be selectively positioned to place the sander into engagement with the workpiece; and
- means for controlling the simultaneous operation of the workpiece rotating means, the cutter assembly, the cutter head and the sander, whereby the workpiece is shaped and finished to the desired column shaft configuration by the simultaneous operation of the cutter assembly, the cutter head and the sander upon manipulation of said control means.

3,388,730
METHOD OF FORMING LAMINATED HOLLOW ARTICLES
Roland J. Moore, 104—23 113th St.,
Richmond Hill, N.Y. 11418
Filed May 11, 1966, Ser. No. 549,277
8 Claims. (Cl. 144—317)



A method is provided for forming laminated plywood into cylinders using a simple forming die.

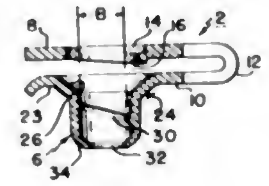
3,388,731
FRUIT STEM REMOVAL
Lawrence B. Reisterer, Dee Bruce Ranger, and Alan E. Weber, Kalamazoo, Mich., assignors to Libby, McNeill & Libby, Chicago, Ill., a corporation of Maine
Filed Feb. 17, 1966, Ser. No. 528,183
8 Claims. (Cl. 146—238)



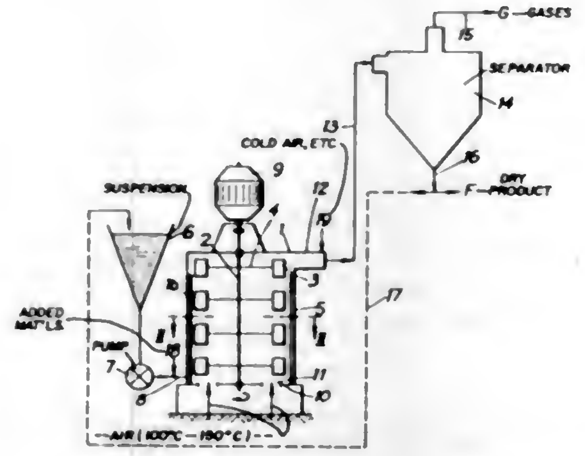
Apparatus having an endless conveyor with a plurality of parallel elongated rollers which are axially rotated periodically in opposite directions for rotating stem-containing fruit thereon, and a member driven to traverse the rollers for removing the fruit stems by impact therewith. Also, a method of removing fruit stems by rotating stem-containing fruit in a plane while allowing the fruit stems to become oriented in this plane, and pulling the stems out from the fruit.

3,388,732
SELF-THREADING FASTENING DEVICE
Robert J. Holton, Rocky River, Ohio, assignor to Timmerman Products, Inc., Cleveland, Ohio, a corporation of Ohio
Filed July 31, 1967, Ser. No. 657,242
13 Claims. (Cl. 151—41.75)

A self-threading fastening device for use with a threaded member including a head having an opening and a tubular hub extending from the head with a bore disposed in alignment with the opening in the head for receiving a threaded member therein. A deformable pilot member projecting into the bore of the hub for self-threading deformation upon turning movement of the threaded member, and a shoulder member adjacent the open end of the hub for interlocking engagement with the threaded member in the applied fastening position of the device.



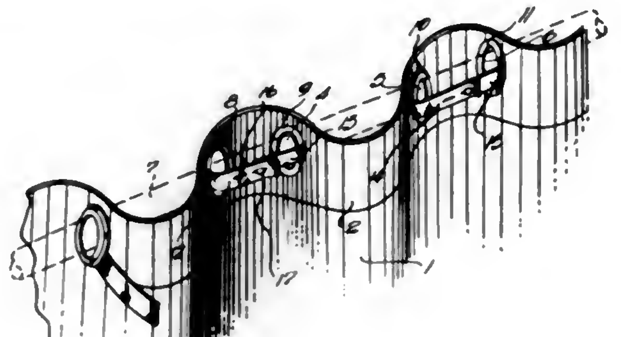
3,388,733
PROCESS AND APPARATUS FOR THE SEPARATION OF SUSPENSIONS
Günter Jäckering, Vorsterhauserweg 22d,
Hamm in Westphalia, Germany
Filed June 17, 1963, Ser. No. 288,213
1 Claim. (Cl. 159—4)



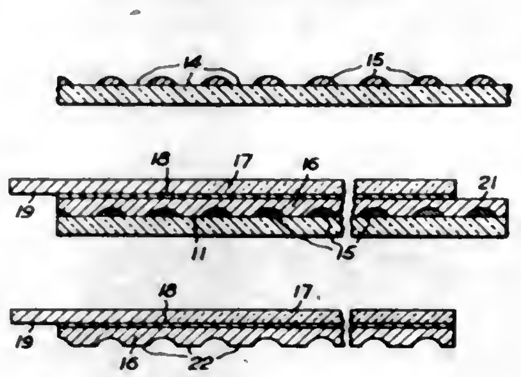
For separating solid particles suspended in a liquid, the process provides for breaking up the suspension in a gaseous vortex into solid particles with liquid film adhering thereto, and flash heating the particles to evaporate the film therefrom; the apparatus provides a closed container that surrounds a bladed rotor generating the vortices, inlets and outlets for the gases and the suspending liquid, and for withdrawing the gases and solid particles.

3,388,734
DEVICES FOR HANGING AND GATHERING SLIDABLE CURTAINS
Sabino Silvestre, Rio de Janeiro 106,
Buenos Aires, Argentina
Filed Apr. 27, 1965, Ser. No. 451,151
4 Claims. (Cl. 160—348)

The present device is for hanging and gathering slidable curtains and for this purpose includes a border attached to the top marginal end of the curtain material and which is provided with a plurality of aligned holes to be engaged by a supporting bar such as a curtain rod, a plurality of eyelets are each fixedly mounted through one of said holes and have a tongue extending therefrom with the tongues of each adjacent pair of eyelets extending diametrically opposite from one another and have fastening means whereby the free ends of the tongues of each adjacent pair of eyelets can be detachably connected for drawing the eyelets towards one another providing the gathering of the curtain material when hung from a supporting bar.



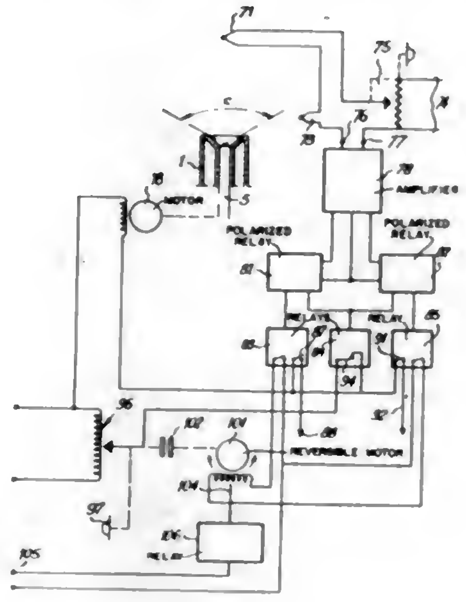
3,388,735
GRAZING INCIDENCE DIFFRACTION GRATINGS
Leonard A. Sayce, Glasgow, Scotland, assignor to National Research Development Corporation, London, England, a British body corporate
Filed Mar. 25, 1964, Ser. No. 355,151
Claims priority, application Great Britain, Mar. 28, 1963, 12,406/63
6 Claims. (Cl. 164—47)



Preparing grazing incidence diffraction gratings for "soft" X-rays by providing a support having an optically finished surface with a series of firmly adherent solid parallel strips alternating with exposed strips of the optically finished surface between them at the desired line spacing to thereby produce a structure presenting a surface pattern in relief, and thereafter making negative casts of said pattern using the structure as a mold to produce the grazing incidence diffraction gratings.

3,388,736
FURNACE FOR MANUFACTURING INGOTS OR BARS OF METAL OR ALLOYS, PARTICULARLY BARS OF URANIUM CARBIDE
André Accary and André Treillou, Paris, and Jean Trouvé, Versailles, France, assignors to Commissariat à l'Energie Atomique, Paris, France
Filed Dec. 7, 1964, Ser. No. 416,546
Claims priority, application France, Dec. 9, 1963, 956,480
10 Claims. (Cl. 164—154)

A furnace for continuously manufacturing ingots from molten metal in an enclosure under vacuum. A bottomless crucible holding the molten metal is subjected to the heating action of an electron gun and has a vertically movable head which comprises the base of the crucible. The speed of the movement of the head is controlled by thermocouple means located in the enclosure near the crucible so as to keep the level of the molten metal in the crucible at a constant height notwithstanding the amount of granular metal, to be melted, which is added to the crucible by a supply system.



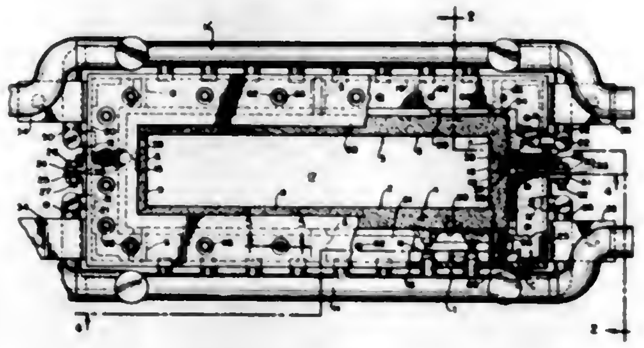
3,388,737

APPARATUS FOR CONTINUOUS CASTING

David J. Buckwalter, Ontonagon, and David Mukavitz and George T. Spolarich, White Pine, Mich., assignors to Copper Range Company, New York, N.Y., a corporation of Michigan

Filed May 10, 1966, Ser. No. 548,982

8 Claims. (Cl. 164—283)



1. Apparatus for the continuous casting of metal which comprises a graphite mold having an upright cavity open at the top and bottom, a casing surrounding and spaced from the mold to provide a spray chamber at the sides and ends of the mold, a plurality of springs interposed between the sides of the casing and the mold sides and applying pressure against the sides of the mold, means closing the top and bottom of the spray chamber, and a plurality of spray nozzles secured to the casing for spraying cooling water into the spray chamber to cool the springs and mold.

3,388,738

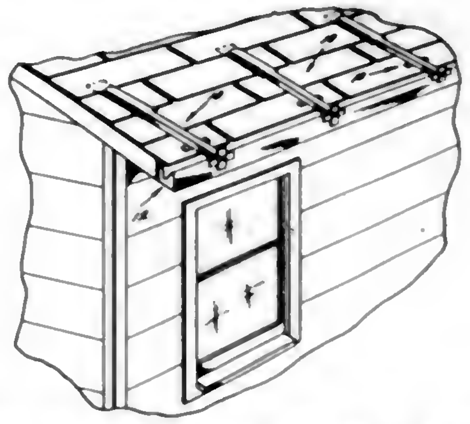
ROOF DE-ICER

Robert A. Dery, Johnnycake Lane,
New Hartford, Conn. 06057

Filed May 23, 1966, Ser. No. 552,233

9 Claims. (Cl. 165—47)

A device for use on an inclined roof to melt ice thereon and including an upper section of concave contour to trap heat from an underlying attic defining portion of the roof. A lower section of the device is hollow and overlies an eave-defining roof portion. Tabs at the lowermost end portion of the lower section absorb solar heat energy so that the device can melt a passageway through ice formations on the roof.



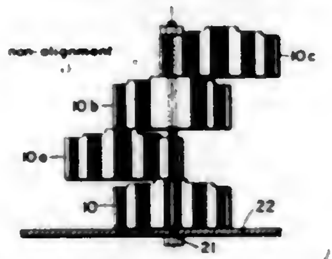
3,388,739

HEAT DISSIPATOR

Donald M. Olson, 613 Pinon Drive, P.O. Box 2165, and Gordon O. Vene Klasen, 205 Williams, P.O. Box 321, both of Santa Fe County, N. Mex. 87501

Filed Sept. 7, 1965, Ser. No. 485,363

3 Claims. (Cl. 165—80)



Stack of staggered, high-mass-to-volume, aluminum elements, each having an accessible cavity at one end, stepped-down annular surfaces at the other end, shallow grooves at its sides, and a radial slot to enable flexing for inserting and holding a transistor in the cavity.

3,388,740

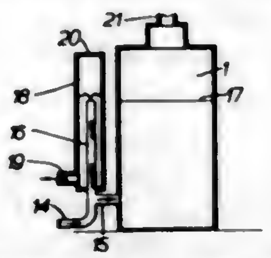
COOLING SYSTEMS FOR ELECTRON DISCHARGE TUBES

Cian Noel O'Loughlin, Essex, England, assignor to English Electric Valve Company Limited, London, England, a British company

Filed Nov. 21, 1966, Ser. No. 595,669

Claims priority, application Great Britain, Nov. 24, 1965, 50,004/65

7 Claims. (Cl. 165—105)



An electron discharge tube cooling system including a boiler into which is inserted a portion of a discharge tube to be cooled is disclosed herein. The boiler includes a vapor outlet in communication with a condenser which returns condensed coolant to a coolant supply reservoir. Suitable fluid supply provisions are included for supplying coolant to the boiler and a boiler coolant level maintaining device is mounted externally of the boiler for maintaining a predetermined coolant level within the boiler. The coolant level maintaining device includes an internal weir having an overflow level at the level of coolant to be maintained within the boiler.

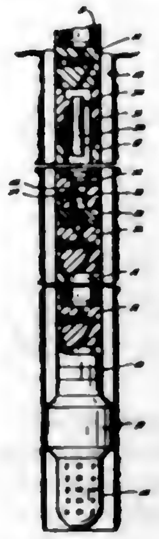
3,388,741

METHODS FOR DRILL STEM TESTING

Lloyd Jensen, Calgary, Alberta, Canada, assignor, by mesne assignments, to Schlumberger Technology Corporation, New York, N.Y., a corporation of Texas

Original application June 21, 1965, Ser. No. 465,482, now Patent No. 3,351,135, dated Nov. 7, 1967. Divided and this application July 5, 1967, Ser. No. 660,852

3 Claims. (Cl. 166—3)



The particular method described herein as illustrative of one mode of the invention, utilizes, in a closed chamber testing technique, upper and lower sample receiving chambers separated by a one-way check valve for permitting the flow of formation fluids from a test valve upwardly through the lower sample chamber and check valve into the upper sample chamber while preventing flow in the opposite direction. Valves having external control means are positioned at the upper end of the upper chamber and the lower end of the lower chamber and adapted to permit the removal of fluids therefrom into a closed receptacle. A reversing valve in the upper chamber is operated by a drop bar located within the upper chamber.

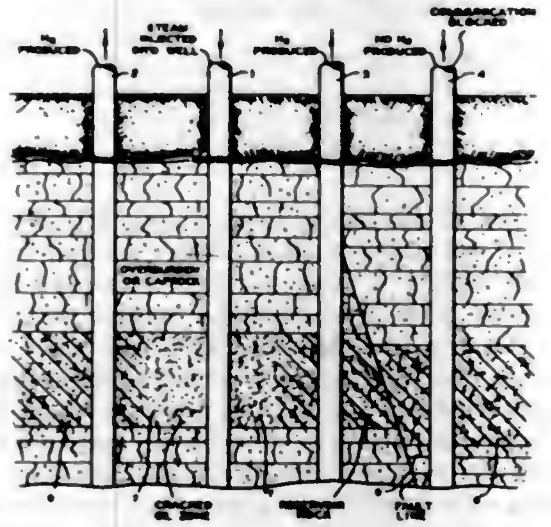
3,388,742

TRACING SUBTERRANEAN COMMUNICATION PATHS

Jerald L. Oaks, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Filed Apr. 22, 1965, Ser. No. 449,976

4 Claims. (Cl. 166—4)



Subterranean communication paths are established between wells communicating with a common oil-bearing strata by injecting into one well steam at a temperature and pressure sufficient to crack the crude within the strata and form hydrogen and thereafter detecting the presence of this hydrogen within another well in this oil-bearing strata.

3,388,743

METHOD OF CONSOLIDATING AN UNCONSOLIDATED OIL SAND

Charles J. Engle, Bartlesville, Okla., and Melcon Santourian, Meshed, Iran, assignors to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed Jan. 18, 1966, Ser. No. 521,416

9 Claims. (Cl. 166—11)

An unconsolidated sand is consolidated in an annulus adjacent a production well penetrating an oil stratum by depositing a slug of an autoignitable oil in said annulus, injecting a stream of oxidant gas (air) through an offset well and through said stratum to said annulus at a rate sufficient to ignite oil therein, leave a coke residue in said annulus, and start an inverse burning combustion zone in said stratum.

3,388,744

TREATMENT OF OIL WELLS

Dorsey R. Fincher and James L. Williams, Houston, Tex., assignors, by mesne assignments, to Getty Oil Company, Los Angeles, Calif., a corporation of Delaware

No Drawing. Filed Mar. 28, 1966, Ser. No. 537,657

12 Claims. (Cl. 166—40)

A process for the treatment of wells to enhance their producing characteristics is provided. The process includes preheating the formation; preparing a hot aqueous solution of hydrochloric acid having an acid concentration of 8 to 15 percent by weight; injecting the hot aqueous solution into the formation to react with calcium sulfate deposits to form a reaction product; injecting water to dilute the solution sufficiently such that the concentration of the acid is less than about 6 percent by weight; and, removing the dilute solution from the formation. The reaction product is soluble in the hot medium; addition of the water serves to hold the reaction product in solution upon cooling, until such reaction product can be removed from the formation.

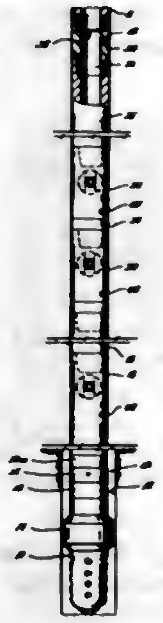
3,388,745

DRILL STEM TESTING APPARATUS

Thomas W. Cole, Bakersfield, Calif., assignor, by mesne assignments, to Schlumberger Technology Corporation, Houston, Tex., a corporation of Texas

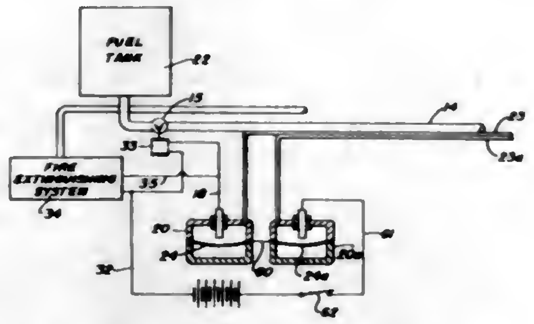
Original application June 21, 1965, Ser. No. 465,490. Divided and this application Aug. 25, 1967, Ser. No. 677,815

3 Claims. (Cl. 166—152)



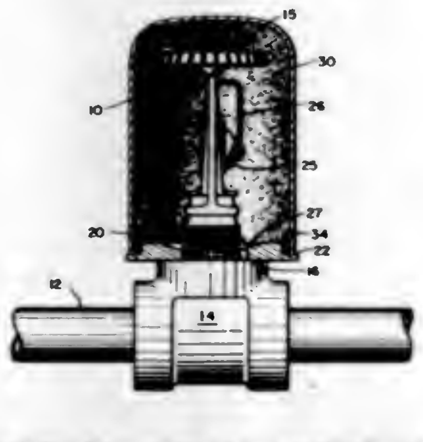
The particular apparatus described herein as illustrative of one form of the invention concerns the retrieval of a closed chamber formation tester which may become stuck in a well bore. Full opening valves separate sections of the chamber. A frangible disc closes the upper end of the chamber and is adaptable to be broken in case the tool becomes stuck in order to provide, along with the valves, a full opening through the apparatus to permit stuck-point locating and joint-releasing devices to be lowered into the apparatus.

3,388,746
AIRCRAFT FIRE PREVENTION SYSTEM
John E. Lindberg, 1211 Upper Happy Valley Road, Lafayette, Calif. 94549
Continuation-in-part of application Ser. No. 528,879, Feb. 21, 1966. This application Sept. 26, 1966, Ser. No. 584,630
13 Claims. (Cl. 169—2)



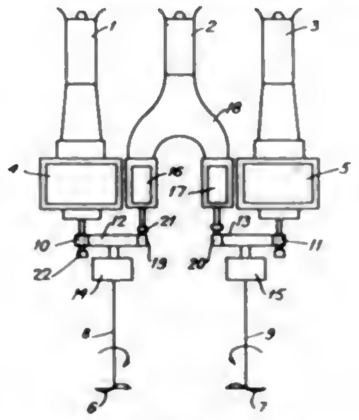
A system for detecting structural overstressing and for giving warning or producing remedial action. A plurality of sensors are used, each being a pneumatic tube located along a path generally coaxial with the axis of the structural overstressing to be detected, the sensors being arranged in parallel with each other to give substantially duplicate paths. Each sensor has a pressure-actuated means actuated by the relief of pressure which results when the sensor tube is broken. These pressure-actuated means are connected in series for operation of a warning or remedial device only when all the pressure-actuated means in a series are actuated by relief of pressure from their respective sensors, so that the likelihood of a false warning or accidental actuation is very small.

3,388,747
FUSIBLE APPARATUS FOR PROTECTING AUTOMATIC SPRINKLERS
Robert M. Hodnett, Providence, R.I., assignor to Grinnell Corporation, Providence, R.I., a corporation of Delaware
Filed Apr. 8, 1966, Ser. No. 541,275
1 Claim. (Cl. 169—39)



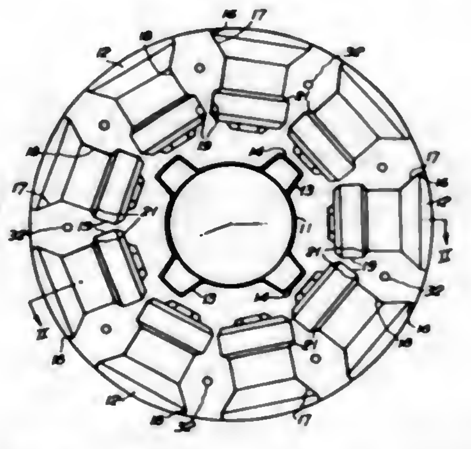
For an upright fire protection sprinkler head installed in a "clean" room a fusible solder cover which encloses the sprinkler and has its open end frictionally engaged on a base, which forms with this base exterior surfaces relatively free of crevices and therefore easily wiped off during periodic cleanings and which melts before the sprinkler head is actuated by the heat from a fire.

3,388,748
APPARATUS FOR OPERATING PROPELLERS
Ingvar Karl Einar Jung, Finspang, Sweden, assignor to Stal-Laval Turbin AB, Finspang, Sweden
Filed Sept. 16, 1966, Ser. No. 580,126
Claims priority, application Sweden, June 15, 1966, 8,141/66
5 Claims. (Cl. 170—135.2)



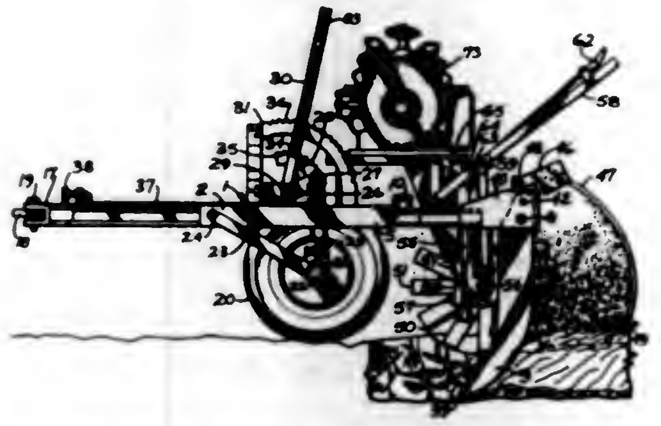
1. An apparatus for operating a plurality of propellers arranged in parallel, comprising an engine to which each propeller is operatively coupled for full-speed operation, an engine used for cruising speed, at least one of the engines being a gas turbine, at least two of the engines being served by a common gas generator, which generator includes a compressor, a combustor and a turbine for operating the compressor.

3,388,749
FAN IMPELLERS
Geoffrey Woods and William Kenneth Peyto, both of Peartree Road, Colchester, England
Filed Feb. 28, 1966, Ser. No. 530,430
Claims priority, application Great Britain, Feb. 26, 1965, 8,465/65
2 Claims. (Cl. 170—159)



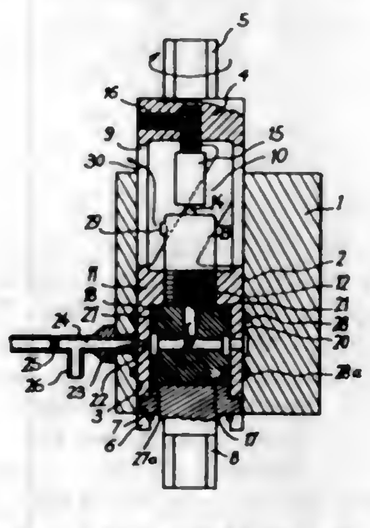
1. A method of constructing a fan impeller from a plurality of premanufactured blade and hub parts, each blade part having a root portion contoured to permit establishment of a predetermined stagger angle of such blade in the fan impeller, and said hub parts including at least one dish-shaped part having recesses therein for the reception of the root portions of said blade parts and also including a plurality of keypieces each contoured to coact with the contour of a blade root portion and with a recess in said dish-shaped part, said method comprising positioning one said dish-shaped hub part, locating each of said blade parts with the root portion thereof and one of said keypieces in a recess in said dish-shaped hub part so that the blade assumes a desired stagger angle, and securing a further dish-shaped hub part to said first mentioned dish-shaped hub part to entrap said root portions and keypieces immovably within the hub formed by said two dish-shaped hub parts so that the blade assumes a desired stagger angle, and securing a further dish-shaped hub part to said first mentioned dish-shaped hub part to entrap said root portions and keypieces immovably within the hub formed by said two dish-shaped hub parts with the blades fixed in the stagger angle determined by the keypieces.

3,388,750
GROUND PREPARING APPARATUS
Norman R. Hamm, P.O. Box 107, Perry, Kans. 66073
Filed Sept. 14, 1964, Ser. No. 396,259
7 Claims. (Cl. 172—45)



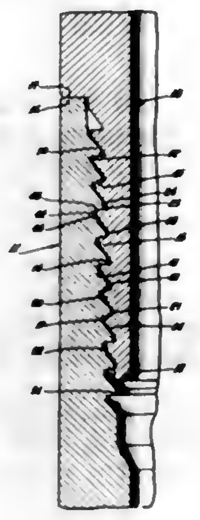
A ground preparing apparatus for clearing and working soil to prepare a seed bed. The apparatus has a mobile frame designed to be connected to a tractor, a plurality of laterally spaced shanks mounted thereon and depending therefrom, a rotor supporting a plurality of sets of pivotally mounted flail hammer blades, and power means operatively connected to the rotor to rotate same said hammer blades moving between said shanks. The shanks have a forwardly curved portion terminating in a point which penetrates the ground, whereby the soil is lifted upwardly along the curved edges of the shanks where the hammer blades crush the soil. An arcuate hood is pivotally mounted in a trailing relation to said apparatus and has one edge thereof which engages the worked soil and grades and levels same. The rotor is vertically adjustable relative to the ground and the frame.

3,388,751
TORQUE CONTROL AND MEASURING DEVICE
Henri G. Bernaux, Maule, France, assignor to Societe Anonyme dite: Societe des Automobiles SIMCA, Paris, France
Filed Jan. 26, 1966, Ser. No. 523,173
Claims priority, application France, Jan. 28, 1965, 3,516; Dec. 16, 1965, 42,636
10 Claims. (Cl. 173—12)



A torque control and measuring device for a screw-tightening machine comprising, a driven member connected to a driving member by the intermediary of a movement transmission member which comprises a tubular spindle having an apertured wall. Adjacent sides of the aperture define deformable blades which connect two non-deformable end portions of the spindle and which move towards and away from one another when the blades are deformed under the action of a torque. One of the end portions acts on a pressure sensitive member to thereby measure the torque applied to the device.

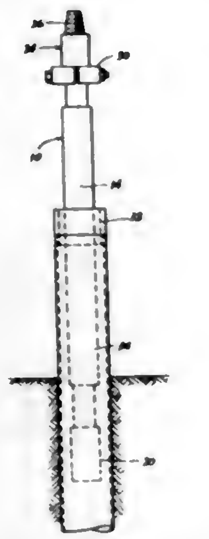
3,388,752
COMBINATION PILEDRIVER AND DRIVABLE THREADED PIPE SECTIONS
James W. E. Hanes and Carl F. Huntsinger, Ventura, Calif., assignors to Ventura Tool Company, Ventura, Calif., a corporation of California
Filed July 25, 1966, Ser. No. 567,718
8 Claims. (Cl. 173—131)



6. In a tool joint for connecting pipe sections together: a box member provided with an internal tapered thread of generally trapezoidal form; a pin member provided with an external tapered thread of generally trapezoidal form companion to and adapted to mesh with said internal tapered thread; said pin member having a drive shoulder engaging the outer end of said box member when said pin member is fully tightened within said box member, said shoulder and end being normal to the common axis of said pin member and box member; said pin member thread having a drive face normal to the axis of said pin member, a back face inclined to said drive face and a flat crest between said faces substantially parallel to said pin member axis; said box member thread having a drive face normal to the axis of said box member, a back face inclined to said drive face of said box member and a flat crest between said faces of said box member substantially parallel to said box axis; said drive faces engaging each other when said pin member shoulder and the box member end engage each other, said inclined back faces being free from contact with each other when said pin member shoulder and box member end are coengaged; the crest of said pin member thread and box member thread having clearance with the roots of said box member thread and pin member thread, respectively.

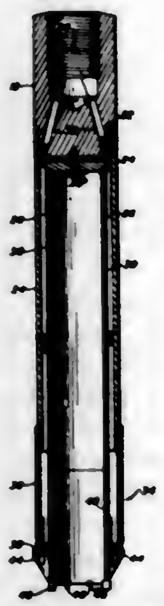
3,388,753
DRIVING TOOL
Allen E. Bardwell, East Brunswick, N.J., assignor to Trident Industries, Inc., Princeton, N.J., a corporation of Delaware
Filed June 16, 1965, Ser. No. 464,499
8 Claims. (Cl. 173—139)

A gravity drop driving tool constructed to increase the effectiveness thereof with less damage per operating cycle thereto and to driven items comprising an elongated casing, a heavy elongated bar member mounted in said casing for limited reciprocative movement, cushioning



means at each end of said bar limiting movement, but having appreciable compression, a lifting member at one end of the casing, and tool holder at the other end of the casing.

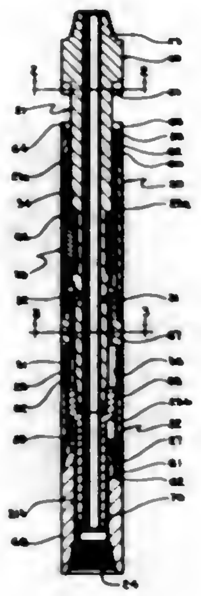
3,388,754
CORE BIT
John S. Barton, Sandersville, Ga., assignor to Thiele Kaolin Company, Sandersville, Ga., a corporation of Georgia
Filed Feb. 25, 1966, Ser. No. 530,104
7 Claims. (Cl. 175—244)



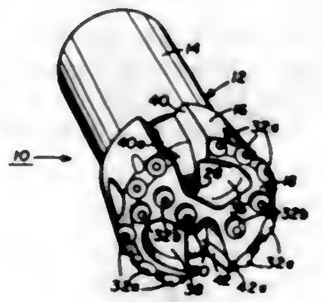
A core bit which is useful in rotary drilling for obtaining core samples. The bit includes an outer cylinder, which is tapered inwardly at the bottom; an inner cylinder the upper portion of which is within and concentric to the outer cylinder; a perforated spacer between the cylinders; cutting teeth on the bottom of and offset inwardly of the inner cylinder; and radial cutting blades extending from the inner cylinder to beyond the outer cylinder.

3,388,755
COMBINATION SHOCK ABSORBER AND JAR
Derrel D. Webb, Houston, Tex., assignor to Houston Engineers, Inc., Houston, Tex.
Filed May 2, 1966, Ser. No. 546,772
16 Claims. (Cl. 175—297)

A pair of tubular members are connectible in a pipe string and arranged telescopically of one another for relative longitudinal and rotational movement. The inner of said members has unequal outer diameter portions, and there are seals between the outer of said members and the unequal diameter portions of the inner member to provide a fluid chamber which is compressed upon relative movement of the members in one longitudinal direction. A fluid transfer means within the chamber urges the members in the one longitudinal direction in response to rotation of the members in one direction relative to the other. There is a means for dampening the relative longitudinal movement of the members by limiting fluid flow within the chamber during only the final portion of such movement. The members have opposed impact surfaces which engage upon relative movement between them in the outer longitudinal direction and beyond the operable range of the means for limiting flow within the chamber.

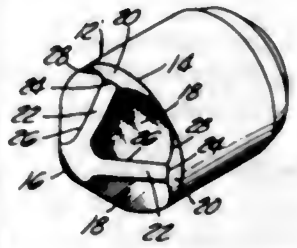


3,388,756
PERCUSSION BIT
Daniel W. Varel, Charles L. Bronson, and Darvin D. Shields, Dallas, Tex., assignors to Varel Manufacturing Company, Dallas, Tex., a corporation of Texas
Filed Mar. 29, 1965, Ser. No. 443,511
18 Claims. (Cl. 175—410)



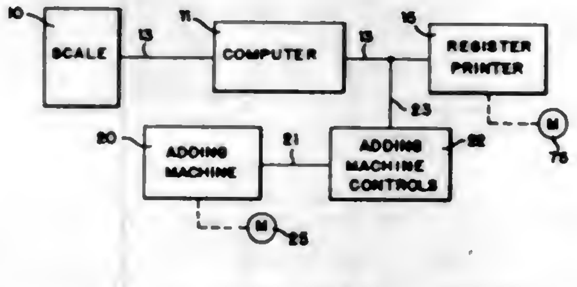
In a carbide insert percussion bit for earth boring, the major portion of the inserts are positioned on the outward facing periphery of the bit, while a smaller number of the inserts are positioned on the bit face. The peripheral inserts are oriented at an angle greater than about 35° to the longitudinal axis of the bit. Fluid passageways are directed onto the bottom of the borehole through the body of the bit. A recess of enlarged area central to the bit face provides a standoff cavity communicating with the downward passageways and return fluid courses, which return courses are formed by grooving in the periphery of the bit or by passages through the bit body.

3,388,757
HARDENED INSERTS FOR DRILL BITS
Joseph W. Flittinger, Redondo Beach, Calif., assignor to Smith Industries International, Inc., Compton, Calif., a corporation of California
Filed Mar. 23, 1967, Ser. No. 625,397
8 Claims. (Cl. 175—410)



The invention relates to rock bits having inserted teeth in the form of anchored plugs extending from the bit body and having crests convergent toward the tip, the crests defining and being defined by spaced relieved portions, certain of which converge in the direction of the tip with a divergent angularity than those of adjacent spaced relieved portions.

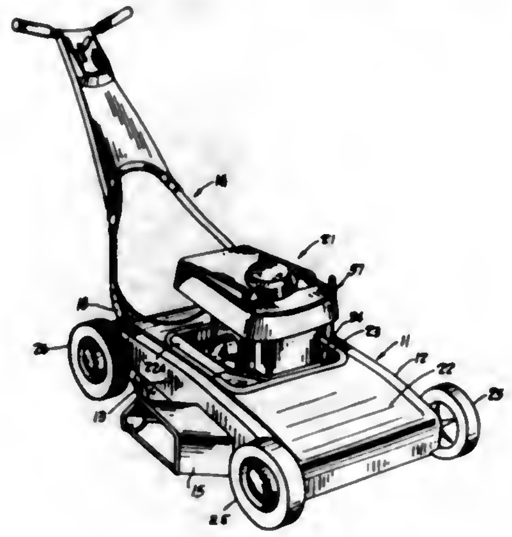
3,388,758
AUTOMATIC WEIGHING SCALES WITH RECORDING AND TOTALING APPARATUS
Kenneth C. Allen and Edwin E. Boshinski, Dayton, Ohio, assignors to The Hobart Manufacturing Company, Troy, Ohio, a corporation of Ohio
Filed Sept. 26, 1966, Ser. No. 582,101
17 Claims. (Cl. 177—4)



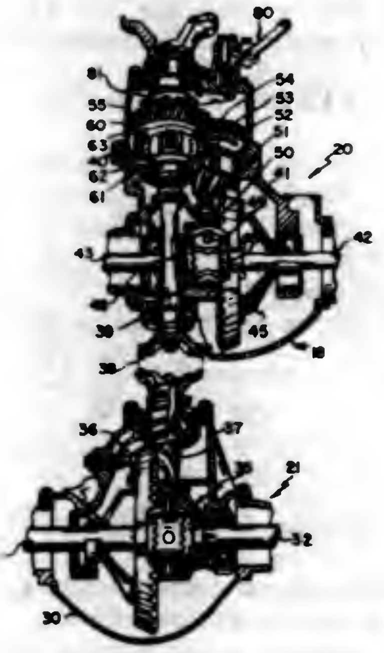
A scale for weighing, a computer for reading out the weight of each weighed load and computing the value thereof at a preset unit price, a register-printer for printing and issuing a label containing information concerning the weight, unit price and value, and an adding machine for totalling information such as weight and/or value of any desired number of loads.

3,388,759
SELF-PROPELLED MOWER
Gerhard R. Plamper and Günter F. Plamper, Cleveland, Ohio, assignors to The M. T. & D. Company, a corporation of Ohio
Filed Feb. 10, 1966, Ser. No. 526,417
6 Claims. (Cl. 180—19)

A self-propelled mower having a power-take-off pulley, a driven pulley operatively connected to a wheel of the mower for driving the mower, a belt reeved around the pulleys, an extension member extending at an angle from the lower end of the mower handle pivoted to the mower so as to be raised when the handle is lowered and lowered when the handle is raised, a belt tensioning device pivotally carried by the mower in the general plane of, and on one side of, the belt for loosening and tightening the same, the tensioning device having an opening in which is located an abutting member carried by the end of the extension member, the opening having diverging sides alternately abuttable by the abutting member to move the tensioning member in opposite directions, the diverging sides being joined by an arcuate side disposed in a curve generated at the apex of the diverging sides, the arcuate side confining the abutting member within the opening and permitting it to swing in an arc in its movement between the diverging sides.

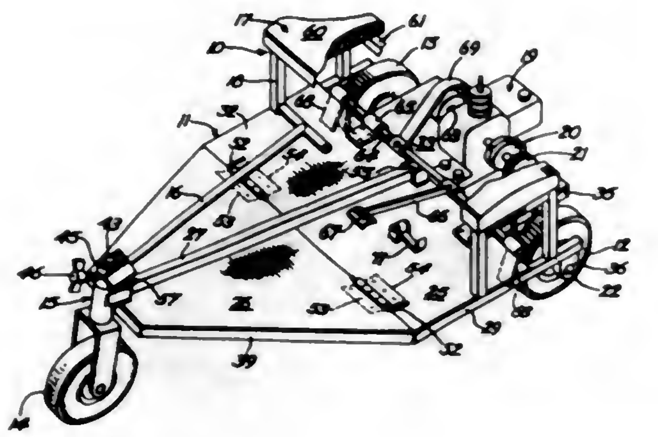


3,388,760
TANDEM AXLE MECHANISM WITH LOCKING TYPE DIFFERENTIAL
Chester D. Christie, Shaker Heights, Ohio, assignor to Eaton Yale & Towne Inc., a corporation of Ohio
Filed Dec. 6, 1965, Ser. No. 512,589
12 Claims. (Cl. 180—22)



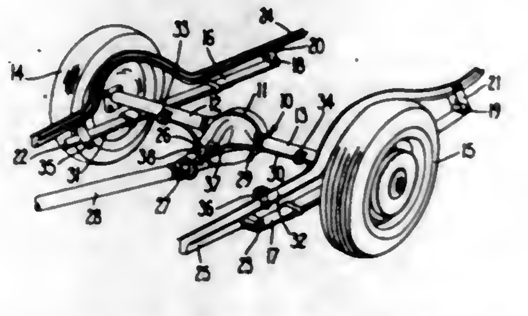
A vehicle axle mechanism comprises a pair of driving axles with an interaxle differential connected therebetween. One of the axles includes a non-locking type of differential which is operable to transmit substantially equal torque to the traction wheels of the vehicle associated with the axle. A second axle includes a locking type of differential which is operable to disconnect one of the traction wheels supported by the second axle when one of the traction wheels of the second axle rotates relative to the other of the traction wheels. The interaxle diffferential is lubricated by means which includes drive elements which drivingly connect the interaxle differential with the non-locking differential so that the interaxle differential is continuously lubricated upon relative rotation of the wheels of the second axle.

3,388,761
COLLAPSIBLE MOTOR CART
Paul Arpin, 1740 Almaden Road,
San Jose, Calif. 95125
Filed Mar. 21, 1966, Ser. No. 536,075
4 Claims. (Cl. 180—27)



A collapsible frame for a vehicle in which a wheeled platform supporting a motor, clutch and drive as well as a seat is detachably joined to a forward wheeled steering carriage by hinge pin connections and means for limiting swinging movement between them to provide a footrest; the limiting means consisting of a strut having bearing relation between such platform and footrest.

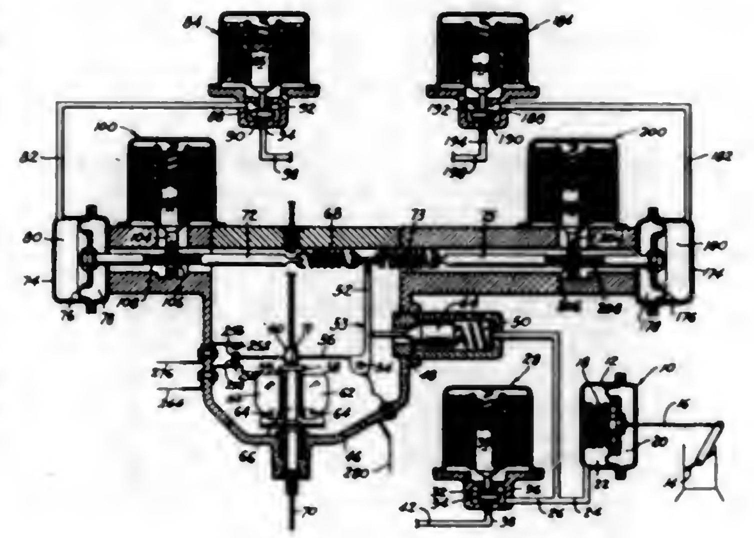
3,388,762
REAR WHEEL SUSPENSIONS FOR MOTOR VEHICLES
Paul Bausch, Burggraben, Germany, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Mar. 4, 1966, Ser. No. 531,691
Claims priority, application Germany, Mar. 26, 1965, O 10,741
6 Claims. (Cl. 180—73)



A one-piece torsional roll stabilizer of the type including a torsionally active transverse portion rotatably connected to a vehicle axle and longitudinally extending free end portions pivotally connected to the vehicle chassis in which the torsionally active portion includes laterally spaced aligned portions and an arched central portion with the aligned portions connected to the vehicle axle by spaced bearings defining a common axis and the arched portion connected to the axle by a bearing spaced from the common axis so that axle wind-up in either direction is resisted by torsional deflection of the torsionally active portion.

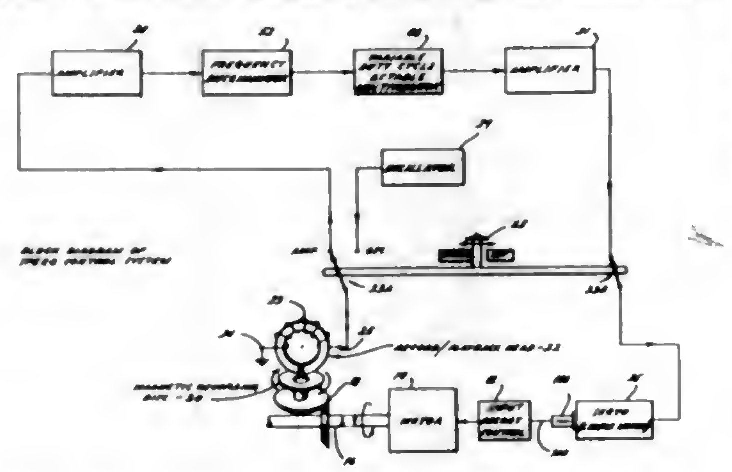
3,388,763
AUTOMOTIVE CRUISE CONTROL
Robert E. Reichard, South Bend, Ind., assignor to The Bendix Corporation, a corporation of Delaware
Filed Oct. 3, 1966, Ser. No. 583,833
10 Claims. (Cl. 180—108)

1. In a cruise control system for an automotive vehicle having an engine, a driver operated throttle control member for controlling the fuel supply to the engine, and a non-pedal actuated braking system for retarding the speed of the vehicle at a predetermined deceleration, a power unit having a pressure responsive element located therein, said pressure responsive element being operatively connected to said throttle control member for controlling movement thereof, fluid pressure means for causing movement of said pressure responsive element, modulating valve means operatively connected to said power unit for regulating and controlling the application of said fluid pressure to said pressure responsive element, speed responsive means operatively connected to said modulating valve means for controlling movement thereof at predetermined speeds, said speed responsive means including variable force means for determining the vehicle speed at which movement of said modulating valve means occurs, first manually operable actuating means for rendering said cruise control system operable at a desired first cruise control speed, first control means operatively connected to said variable force means and said first actuating means for varying and setting the effective force of said variable force means to that value which is necessary for automatic maintenance of vehicle speed at the speed occurring during actuation of said first manually operable means, means for retarding the speed of the vehicle to a second lower speed without rendering said cruise control system inoperable, second manually operable actuating means for rendering said cruise control system operable at a desired second cruise control speed, second control means operatively connected to said variable force means and said second actuating means for reducing and setting the effective force of said variable force means to that lower value which is necessary for automatic maintenance of vehicle speed at said second lower speed occurring during actuation of said second manually operable means, and means for deactivating said second actuating means to permit automatic control of said vehicle speed by said cruise control system at said first cruise control speed.

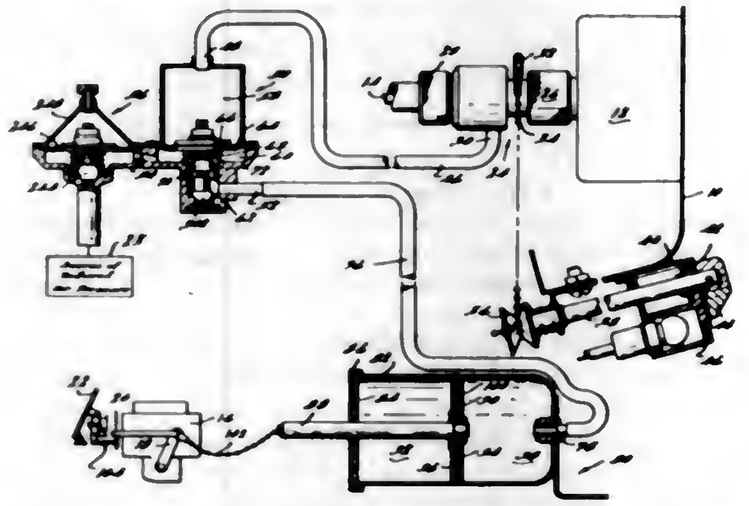


3,388,764
ELECTRONIC VEHICLE SPEED MAINTAINING SYSTEM AND ASSOCIATED CONTROL CIRCUITRY
Richard F. Wood, Marlton, N.J., assignor to Philco-Ford Corporation, Philadelphia, Pa., a corporation of Delaware
Filed Sept. 22, 1965, Ser. No. 489,215
19 Claims. (Cl. 180—105)

Motor vehicle speed maintaining system employing magnetic head for continuous recording of fixed-frequency signal on endless track driven according to vehicle's speed, with engage switch for connecting head to supply last-recorded signal to a servo for controlling throttle position. Servo control employs frequency discriminator to control duty cycle of astable multivibrator which regulates vacuum level in throttle-positioning linear motor.



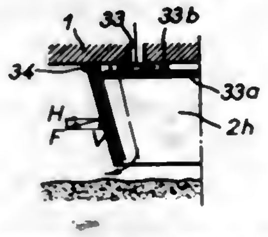
3,388,765
SPEED GOVERNING SYSTEM
William L. Sheppard, 36655 Romulus Road, Romulus, Mich. 48174
Continuation-in-part of applications Ser. No. 74,833, and Ser. No. 74,834, Dec. 9, 1960, which is a continuation-in-part of application Ser. No. 632,541, Jan. 4, 1957. This application May 13, 1964, Ser. No. 370,393
6 Claims. (Cl. 180—108)



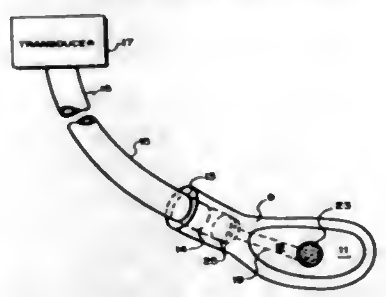
1. In a speed-controlling system for association with a throttle lever linked to an accelerator pedal, the combination of a rotatable controlled arm rotatable about an axis and connected both to the throttle lever and accelerator pedal, a spring anchor arm rotatable about said axis, a return spring for the accelerator pedal extending between said controlled arm and said anchor arm and connected to each of said arms at points remote from said axis, and speed-controlled driving means for rotating said controlled arm relative to said anchor arm for moving the throttle lever and for changing the effective force exerted by said spring by changing the distance between the effective longitudinal axis thereof and said axis.

3,388,766
FLUID CUSHION DEVICE FOR GROUND EFFECT VEHICLES AND THE LIKE
Jean H. Bertin, Neuilly-sur-Seine, France, assignor to Societe Bertin & Cie, Paris, France, a company of France
Original application Jan. 11, 1962, Ser. No. 165,634, now Patent No. 3,263,764, dated Aug. 2, 1966. Divided and this application Oct. 20, 1965, Ser. No. 498,250
Claims priority, application France, June 30, 1961, 866,604, Patent 80,047
8 Claims. (Cl. 180—127)

3. A movable body of the ground effect type comprising a support frame spaced from a surface along which said body is designed to move, and a fluid pressurizable skirt fitted to said frame and designed, in operation, for laterally bounding a fluid cushion formed against said surface, said skirt being made of thin, flaccid, fluidtight material and ending with an orifice designed, in operation, to move adjacent to and opposite said surface, wherein the improvement comprises a tapering end portion for said skirt extending over a substantial fraction of the overall length measured from said frame to said orifice, of frustoconical revolution shape having an inclined rectilinear generatrix defined by two points spaced apart from each other a distance whereby said points define a straight line of substantial length, and a circular end rim bounding said orifice and forming the smaller base of said frustoconical shape.

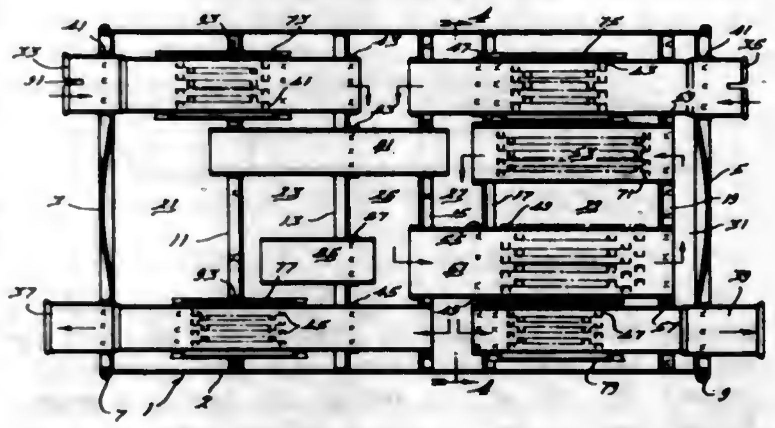


3,388,767
ACOUSTIC NOISE ATTENUATING APPARATUS
Donald R. Wilson, Santa Cruz, Calif., assignor to Pacific Plantronics, Inc., Santa Cruz, Calif., a corporation of California
Filed Mar. 31, 1966, Ser. No. 539,092
2 Claims. (Cl. 181—31)



A noise-reducing adapter for an acoustic tube is disposed to couple acoustic energy from a source to a remote acoustic transducer and includes an acoustic attenuator for reducing the level of background noise and increased voice signal to the level of voice signal coupled to the acoustic tube in the absence of the adapter.

3,388,768
MUFFLER WITH DUAL INLETS AND DUAL OUTLETS
Robert A. Heath and Arthur E. Slagle, Jackson, Mich., assignors to Walker Manufacturing Company, Racine, Wis., a corporation of Delaware
Filed Mar. 16, 1966, Ser. No. 534,735
10 Claims. (Cl. 181—54)



1. A dual inlet-dual outlet muffler for silencing exhaust gas or the like comprising an elongated housing, partition

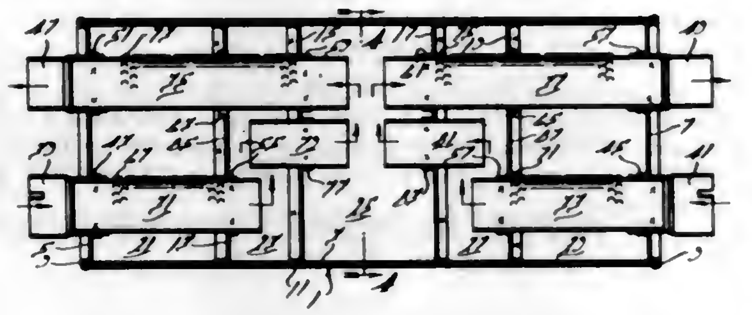
means defining an inlet chamber in the housing, an inlet tube at each end of the housing emptying into said inlet chamber, partition means defining an outlet chamber in the housing separated from the inlet chamber, an outlet tube at each end of the housing opening into and receiving gas from said outlet chamber, partition means defining a transverse cross over chamber in said housing, first gas passage means connecting the inlet chamber to the cross over chamber, and second gas passage means connecting the cross over chamber to the outlet chamber, said first and second gas passage means and said cross over chamber forming a triflow gas pattern for gas to flow from said inlet to said outlet chamber.

3,388,769
DUAL INLET AND OUTLET MUFFLER

Ronald J. Martois, Jackson, Mich., assignor to Walker Manufacturing Company, Racine, Wis., a corporation of Delaware

Filed Aug. 4, 1966, Ser. No. 570,228

12 Claims. (Cl. 181—56)



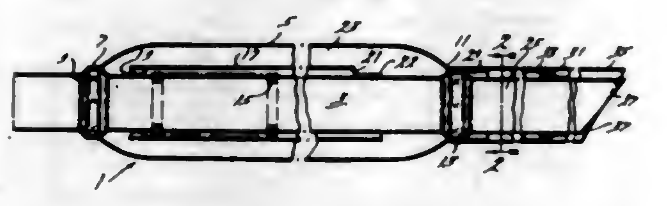
1. A dual inlet-dual outlet muffler for silencing exhaust gases or the like comprising an elongated tubular housing, partition means in the housing defining a central outlet chamber and a pair of inlet chambers one located on each side of the outlet chamber, a pair of inlet tubes supported in the housing and emptying respectively into said inlet chambers, a pair of outlet tubes supported in the housing and opening into said outlet chamber, gas passage means connecting said inlet chambers to said outlet chambers, said partition means forming an additional pair of silencing chambers in said housing one located on each side of the outlet chamber, and means acoustically connecting said silencing chambers with gas flowing through the muffler.

3,388,770
COMBINED MUFFLER AND TAIL SPOUT

Eldred G. Straw, Grass Lake, Mich., assignor to Walker Manufacturing Company, Racine, Wis., a corporation of Delaware

Filed June 27, 1966, Ser. No. 560,685

4 Claims. (Cl. 181—72)



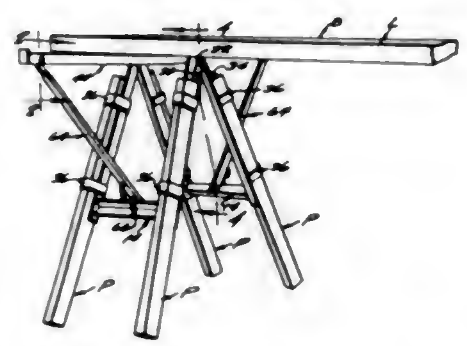
1. A combined muffler and tail spout comprising a housing having gas silencing structure and an outlet pipe for gas, said outlet pipe extending a substantial distance beyond the end of the muffler and having a support bracket secured thereto, and a tailpipe spout secured at one end on said housing and surrounding said outlet pipe and at another portion on said bracket.

3,388,771
SCAFFOLD STRUCTURES

Leonard O. Cornelliusen, % Prairie Industries, Inc., Terry, Mont. 59349

Filed July 1, 1966, Ser. No. 562,180

7 Claims. (Cl. 182—153)



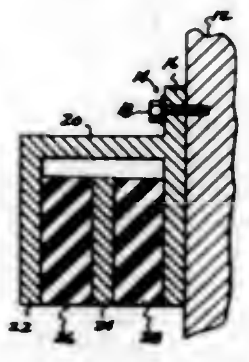
A scaffold jack comprising a vertical standing frame including a pair of spaced side bars, an upper pivot bar connecting the side bars, a cross-member adjacent to and connecting the lower ends of said side bars, and vertically spaced loop means on each side bar adapted to slidably receive a lumber plank for extending the length of each side bar, a prop frame secured at its upper end to the pivot bar, and a prop pivoted at one end on the lower end of the prop frame and having longitudinally spaced hooks at its free end selectively engageable with said cross-member, said jack being collapsible to fold into one plane and being erectable to support one end of a scaffold with the prop frame pivoted to a substantially horizontal position and said prop bracing the free end of the prop frame from said lower cross-arm.

3,388,772
VIBRATION ABSORBER

Francis X. Marsh, Grosse Pointe Woods, and Theodore Pasch, North Muskegon, Mich., assignors to Continental Motors Corporation, Muskegon, Mich., a corporation of Virginia

Filed June 16, 1966, Ser. No. 558,119

3 Claims. (Cl. 188—1)



A vibration damper for internal combustion engines comprising a substantially U-shaped member having two spaced side members forming an opening, a heavy member mounted in the opening by means of rubber-like material adhering to each of the members and with one of the side members being mounted to the block of an engine.

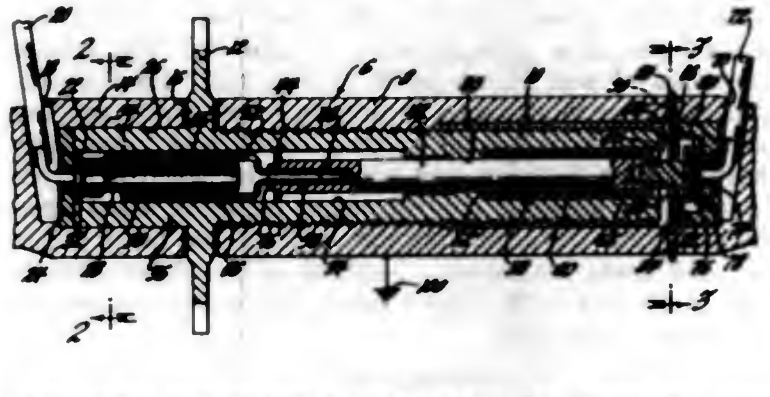
3,388,773
VEHICLE BRAKE LINING WEAR INDICATING DEVICE

Clark E. Quinn, Rochester, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Nov. 3, 1966, Ser. No. 591,842

6 Claims. (Cl. 188—1)

A brake lining wear indicating device including a modified automatic brake shoe adjuster which varies a resistance in a circuit to an electrical indicator. The indicator can be read at any stage of brake lining wear. The modified automatic adjuster also includes switch contacts that are closed to energize a signal when the linings are completely worn.

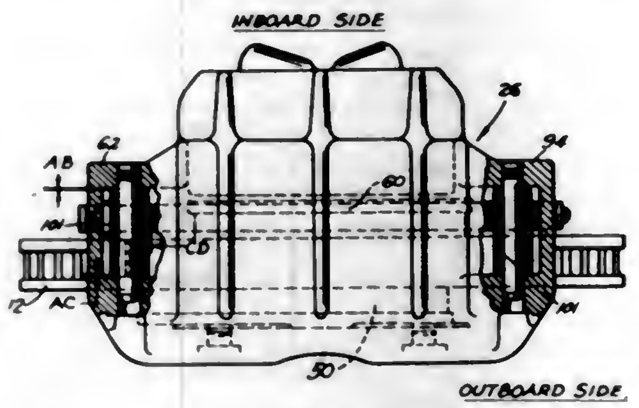


3,388,774
ADJUSTABLE BEARING MEANS FOR A DISC BRAKE

Richard T. Burnett, South Bend, Ind., assignor to The Bendix Corporation, a corporation of Delaware

Filed Sept. 1, 1966, Ser. No. 576,653

5 Claims. (Cl. 188—73)



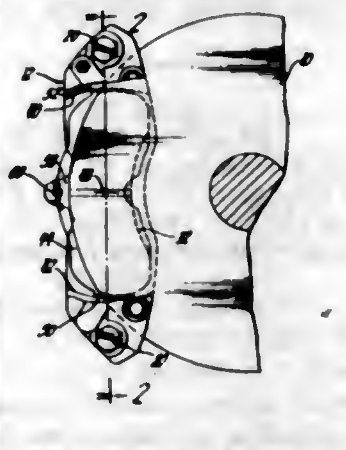
A disc brake wherein a housing which straddles a rotor is slidingly and floatingly carried by a support member with the friction lining members being closely maintained adjacent the rotor surfaces. A bearing assembly operates with the housing and support member to adjust said housing upon friction pad wear or other causes of lateral displacement of the housing. Anti-rattle springs engage the bearing assembly to inhibit free sliding action thereof.

3,388,775
DISC BRAKE WITH POCKETED QUICK CHANGE SHOE ASSEMBLY

Gene P. Baynes, Kettering, and Gerald B. Jacoby, Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Oct. 21, 1966, Ser. No. 588,390

1 Claim. (Cl. 188—73)



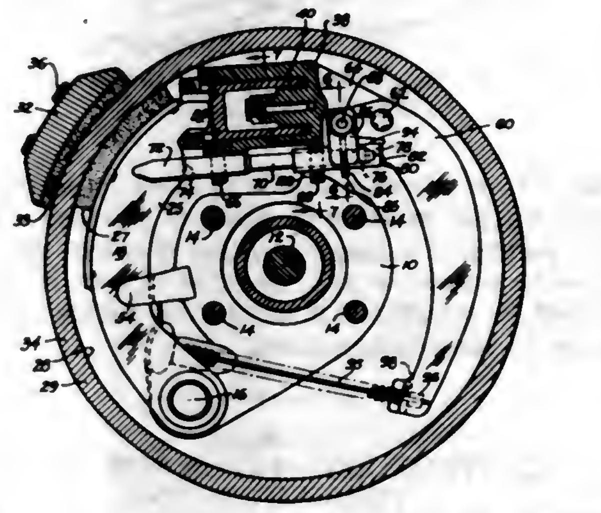
The invention relates to disc brake mechanisms and more particularly to a disc brake cylinder assembly in which the brake shoe or shoes can be quickly removed and replaced. Arcuate abutments are formed on both the shoes and caliper with an aperture in said caliper of length less than the length of said shoes but greater than the shoes' width to receive said shoes therein. Pin means extend through aligned apertures in said shoes and caliper to prevent withdrawal of the shoes from the caliper and for pivoting movement of the shoes to ensure area contact of adjacent abutment faces on the shoes and caliper.

3,388,776
TRANSVERSELY MOVABLE, OPPOSING, RIM GRIP BRAKE

Richard T. Burnett, South Bend, Ind., assignor to The Bendix Corporation, South Bend, Ind., a corporation of Delaware

Filed Dec. 23, 1963, Ser. No. 332,522

15 Claims. (Cl. 188—76)



1. In a brake having a drum rotatable about an axis: said drum comprising an annular rim having inner and outer opposed friction surfaces, a fixed support member, said support member having anchor means thereon, a pair of brake shoes having friction material thereon, one of said brake shoes being arranged to engage its respective friction material with said inner friction surface and the other of said brake shoes being arranged to engage its respective friction material with said outer friction surface, each of said brake shoes being individually pivotally mounted on said anchor means, a lever pivotally secured to one of said brake shoes and a strut interconnecting the other of said brake shoes with said lever, whereby upon actuation of said lever, said lever will apply said last named other brake shoe into engagement with said drum and then fulcrum upon said strut to engage said last named one shoe into engagement with said drum, said strut comprising a pair of relatively rotatable members for adjusting the length of said strut, a toothed wheel secured to one of said rotatable members, a pawl secured to said lever and having a portion biased into engagement with the toothed portion of said wheel, whereby upon rotation of said lever in one direction, said pawl will turn said wheel to adjust the length of said strut to compensate for wear of said brake shoes.

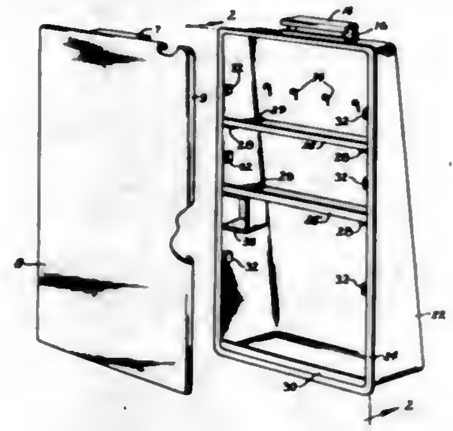
3,388,777
TRAVELING CASE OF MONOCOQUE STRUCTURE

William D. Nolan, 3102 Grant St., Wichita Falls, Tex. 76308

Filed Feb. 28, 1966, Ser. No. 530,519

12 Claims. (Cl. 190—51)

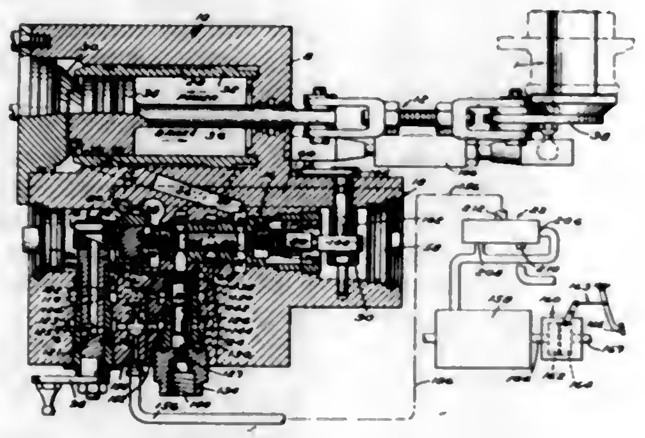
A traveling case of monocoque construction, which is durable rigid, light in weight, and which is made of metal or plastic. The case is closed by a sliding lid which has opposed, inturned lips on three sides to interengage outturned flanges on two traveling case compartments to hold these in fixed relation, whereby the divider strip or liquid may be removed to enable each component of the case to be handled separately. Provision is made for shelves and compartments within each unit of the traveling case, which shelves and compartments are closed by the sliding lid. A movable handle is fitted on an upstanding handle bracket member in position to receive the horizontal portion of a garment hanger to enable the traveling case to be supported by a garment hanger. A fastener is provided to selectively maintain the sliding lid in fixed relation to the compartments.



3,388,778
CONTROL APPARATUS FOR A GAS TURBINE ENGINE

Arthur F. McLean, Livonia, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware

Filed Nov. 14, 1966, Ser. No. 594,117
7 Claims. (Cl. 192—.049)

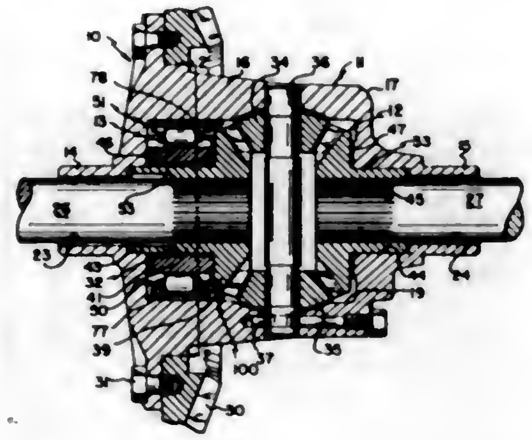


1. A multi-shaft speed control for synchronizing the speeds of rotation of a transmission power input shaft and a gas turbine engine power output shaft coupled to said transmission, said output shaft being operably connected to and driven by a power output turbine of said engine, comprising, clutch means normally operable to couple said shafts for unitary rotation and movable to an inoperable position uncoupling said shafts, operator controlled clutch pedal means movable between first and second positions for rendering said clutch means operable or inoperable, braking means operably associated with said turbine when operable braking rotation of said turbine and power output shaft, speed responsive force generating means connected to said output shaft providing an actuating force that changes as a function of the change in speed of said output shaft, movable control means operbly connecting said force to said braking means for rendering said braking means operable to brake said output shaft, means connecting said clutch pedal means and said movable control means for movement of said movable means by said clutch pedal means between first and second positions corresponding to said first and second positions of said clutch pedal means, said first and second positions blocking or permitting respectively, application of said force to said braking means, and force regulating means between and connected to said force generating and movable control means operably acted upon by said force for regulating the value of said force acting on said brake means as a function of the differential in speeds of said output shaft when coupled or uncoupled from said input shaft.

3,388,779
DRIVE DIFFERENTIAL WITH TWO-WAY OVERRUNNING CLUTCH AND TEMPERATURE COMPENSATING OPERATOR

Daniel W. Roper, Rochester, Mich., assignor to Eaton Yale & Towne Inc., Cleveland, Ohio, a corporation of Ohio

Filed Mar. 15, 1966, Ser. No. 534,342
15 Claims. (Cl. 192—44)



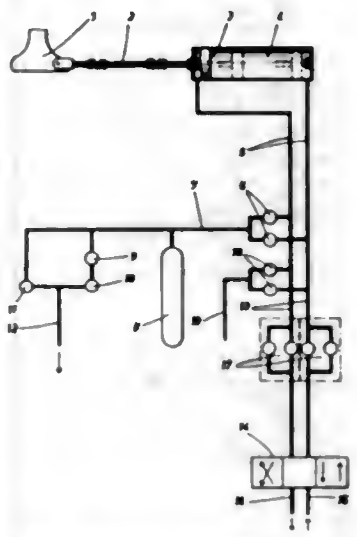
A drive mechanism comprises clutch means located between driving and driven members and movable between an engaged position drivingly connecting the members and a disengaged position providing for relative rotation between the driving and driven members. An actuating means is operable to move the clutch means to its disengaged position at a predetermined slip speed between the driving and driven members, and temperature compensating means is operatively associated with the clutch means and urges the clutch means to its disengaged position with a force which varies with changes in temperature. The temperature compensation is such that the clutch means is moved to its engaged position at approximately the same predetermined slip speed between the driving and driven members regardless of temperature.

3,388,780
BUFFER DEVICE

Franz Sedlacek, Haiderstrasse 19, and Karl Winkler, Salzburger Reichsstr. 241, both of Linz, Austria

Filed Oct. 25, 1966, Ser. No. 589,378
Claims priority, application Austria, Nov. 9, 1965, A 10,082/65
8 Claims. (Cl. 193—35)

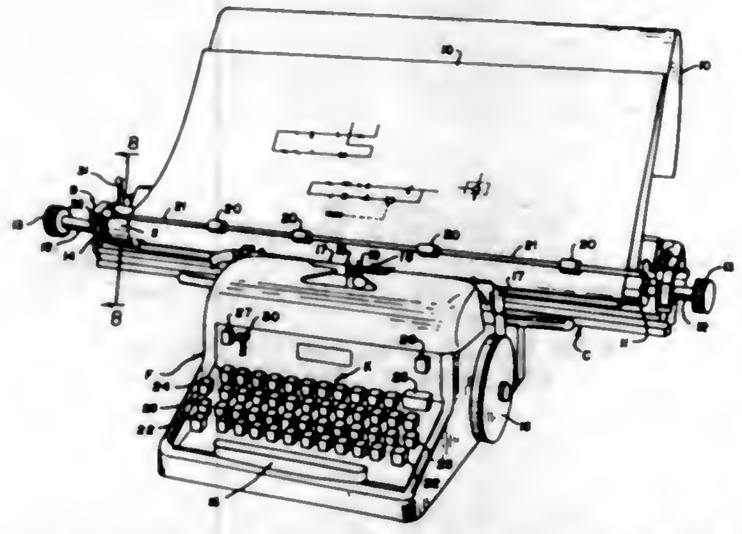
A yieldable stop for gently braking stock moving on a conveyor, which is connected to the piston of a hydraulic shock absorber. A take-up conduit is connected to that end of the shock absorber cylinder toward which the piston moves in response to an impact, a pressure limiting valve is connected to the conduit, a throttle is positioned in the conduit between the cylinder and the pressure limiting valve, a check valve is positioned in the conduit between the cylinder and the throttle, and a pressure accumulator is connected to the conduit between the check valve and the pressure limiting valve.



3,388,781
DIAGRAM TYPEWRITER

Cecil S. Effinger, 435 College Ave., Boulder, Colo. 80302

Filed Aug. 5, 1966, Ser. No. 570,546
9 Claims. (Cl. 197—1)



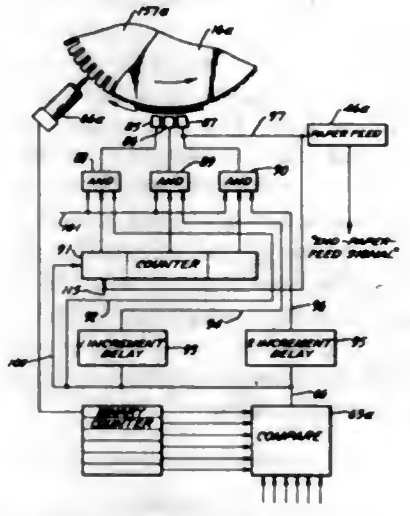
A typewriter or similar device for making industrial diagrams, such as electrical and electronic circuit diagrams, piping diagrams, heat flow diagrams, liquid flow diagrams, plant process diagrams, schematic drawings, highway diagrams, weather diagrams, and the like, including a printing assembly having a plurality of type bars or type faces which are provided with symbols or parts thereof representing elements to be shown in the diagram, and other type faces provided with portions of lines, including horizontal, vertical and angular line portions, the lines made by such portions of lines representing the relationship between or structure connecting the elements. Some of the line portions may be used, in certain instances, to form a part of the representation of structural elements. In the typewriter embodiment of the device, the platen is normally rotatable in definite increments of distance and the escapement mechanism normally moves the carriage in definite increments of distance, with the preferred ratio between the carriage increments and the platen increments being optionally 1:1 and 2:1, so that a rectangular grid may be established, in each square or rectangle of which a similar part of the symbol may be printed, as well as a line portion. The angular lines of the type faces thus include the opposite diagonals of a square, as well as the opposite diagonals of a rectangle formed as half of the square. A printing point indicator is also provided, so that the symbols and lines may be more accurately placed, while the escapement mechanism, which is normally actuated when a key is struck, may be rendered inoperative by a special key or lever, to permit a space bar alone to actuate the escapement mechanism.

The type faces or type bars also include alphabetical and numerical characters for printing legends on the diagram, while the alphabetical and numerical characters are placed on the diagram by moving a shift key, which is preferably connected so that the escapement mechanism will be rendered inoperative when a shifted key is struck.

3,388,782
SERIAL DATA PRINTER HAVING PLURAL HAMMERS ACTUATED IN SEQUENCE

Fred N. Schwend, Arcadia, Calif., assignor to Clary Corporation, San Gabriel, Calif., a corporation of California

Continuation of application Ser. No. 548,981, May 10, 1966. This application June 5, 1967, Ser. No. 645,538
6 Claims. (Cl. 197—49)

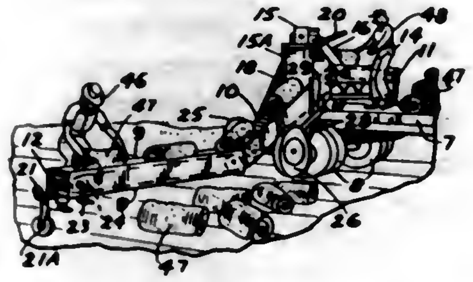


A data printer having a continuously rotating type wheel with two print hammers spaced apart a distance equal to the spacing between adjacent type characters on the print wheel and arranged so that the hammers are operated in sequence.

3,388,783
TRUCK LOADING CONVEYOR

Robert C. Daymon, 7450 Weller Road, Gregory, Mich. 48137

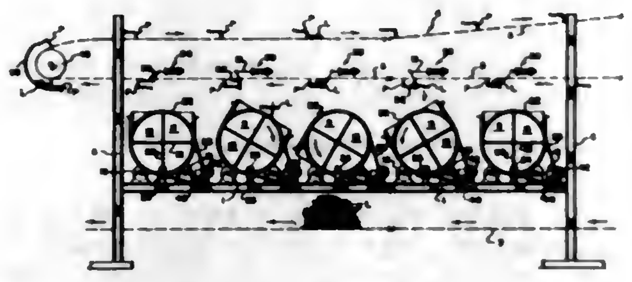
Filed Nov. 21, 1966, Ser. No. 595,987
5 Claims. (Cl. 198—11)



This application discloses a portable truck loading conveyor which is mounted on a pair of wheels whereby the conveyor may be moved longitudinally, or laterally, with respect to a truck. One section of the conveyor is also provided with support wheels to enable the device to be moved from end to end of the truck bed, means to attach the conveyor to the truck and means to adjust the height of the conveyor relative to the truck.

3,388,784
LUMBER RECEIVING APPARATUS

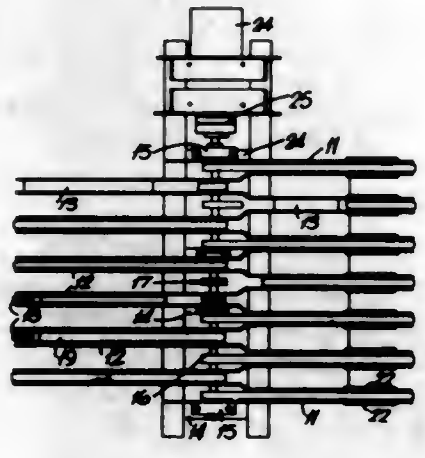
Frank Gartner, North Vancouver, British Columbia, Canada, assignor to Rayonier Incorporated, New York, N.Y., a corporation of Delaware
Filed Aug. 30, 1966, Ser. No. 576,100
9 Claims. (Cl. 198—35)



A system is disclosed for receiving boards and planks of sawn lumber of various sizes, sorting and accumulating in individual accumulator bins boards and planks of the same size, aligning in neat compact loads the boards and planks of the same size accumulated in each bin, and periodically dumping the compact loads of boards and planks of the same size for delivery to ultimate users. A feature of the system is the individual accumulator bins of a size suitable for receiving boards of sawn lumber of a specified size, each bin being rotatably mounted for rotation about its generally horizontally disposed longitudinal axis and having an open top and a curved bottom wall. Power-driven means are provided to oscillate the accumulator bin through an arc of about 10° to 50° to arrange the boards and planks dropped into the bin into compact parallel-ordered loads, and power-driven means are provided to rotate the accumulator bin through an arc of at least about 180° to dump the accumulated load as a compact parallel-ordered mass.

3,388,785
CONVEYOR LOADERS

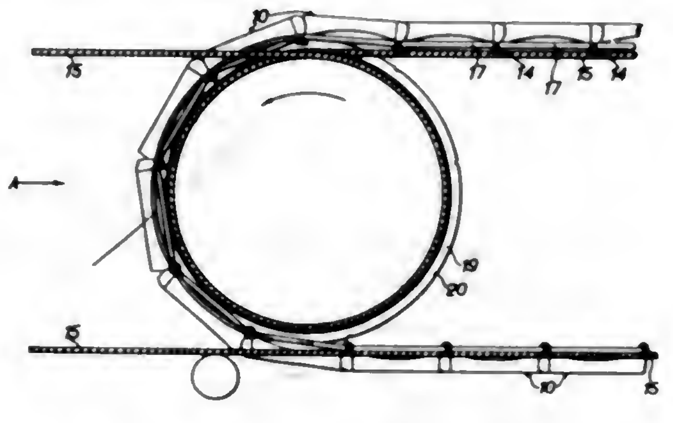
Harold George Mothershaw, Hilton, England, assignor to George Orton Sons and Spooner Limited, Victoria, Crescent, Burton-on-Trent, England, a British company
Filed Dec. 8, 1966, Ser. No. 600,120
Claims priority, application Great Britain, Dec. 30, 1965, 55,187/65
6 Claims. (Cl. 198—190)



A conveyor loader for effecting transfer of articles between a vertically movable conveyor having spaced forked load carrying platforms and a substantially horizontal conveyor, the loader having a plurality of endless flexible load supporting members extending on opposite sides of a base member of the loader, the load supporting members being capable of passing between the forks of the platforms of the vertical movable conveyor and the conveyor loader being movable vertically and also horizontally to effect loading and unloading of articles onto the conveyors.

3,388,786
PLATE CONVEYOR BELT

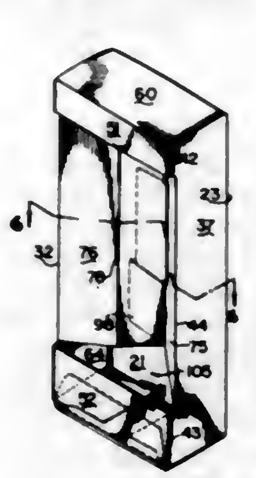
Charles Thomson, Esher, England, assignor to Solar Thomson Engineering Company Limited
Filed Nov. 14, 1966, Ser. No. 594,038
Claims priority, application Great Britain, Nov. 15, 1965, 48,485/65
20 Claims. (Cl. 198—196)



An endless plate conveyor belt including a plurality of overlapping carrier plates carrying cable-engaging means, rigid links each pivotally connected adjacent its ends to cross-rods formed on adjoining plates, and resilient means between each link and at least one cross-rod to which it is pivotally connected whereby the distance between the center points of adjacent plates can vary.

3,388,787
SHADOW BOXES

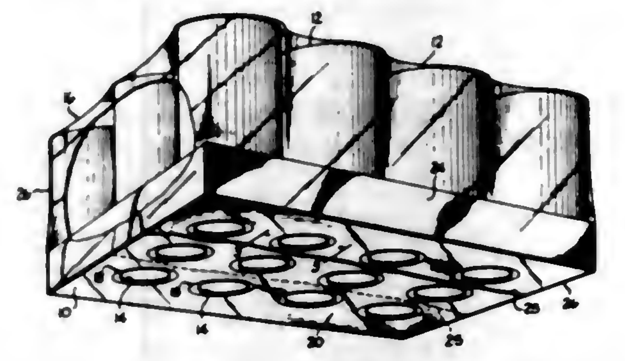
Lawrence J. Growney, Pearl River, N.Y., assignor to Continental Can Company, Inc., New York, N.Y., a corporation of New York
Filed Oct. 22, 1965, Ser. No. 501,379
21 Claims. (Cl. 206—45.14)



This invention relates to shadow boxes which are readily folded to a generally flat planar configuration for purposes of shipment and storage and are equally readily unfolded to a generally tubular configuration for receiving and displaying products packaged therein. This is achieved by securing a terminal end portion of a front panel to a rear wall of the carton and forming therewith a slot which slidably receives a projecting tongue of another front panel. Due to this sliding arrangement the carton can be readily folded, and when unfolded the front panels are automatically disposed relative to each other at an angle no greater than 180 degrees.

3,388,788
PACKAGE

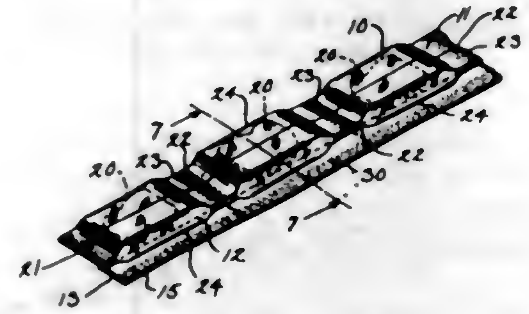
Robert P. Hellem, Medinah, Ill., assignor to National Dairy Products Corporation, New York, N.Y., a corporation of Delaware
Filed Sept. 17, 1965, Ser. No. 488,069
10 Claims. (Cl. 206—45.33)



A package has a base member which receives items to be packaged and has apertures therein exposing surface portions of the items. An overwrap is secured about the base and the items to form an enclosure, and has apertures therein communicating with those in the base to provide accessibility to the exposed surface portions of the items.

3,388,789
COMPARTMENTED PACKAGE

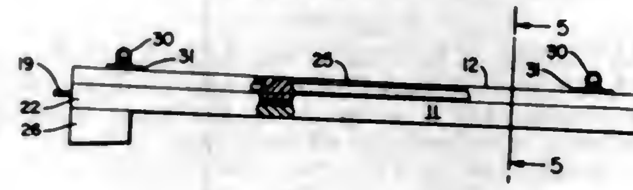
Ned W. Simandl, Brown Deer, and Walter J. Yakich, Oak Creek, Wis., assignors to Milprint, Inc., Milwaukee, Wis., a corporation of Delaware
Filed May 5, 1967, Ser. No. 636,339
10 Claims. (Cl. 206—56)



A package having a plurality of independent but separable commodity-holding compartments each of which has a tear zone extending across it to provide an access opening and in which the film from which the package is made includes a portion that can be extended over the tear zone to close an access opening formed by rupture along the tear zone, thus providing a reclosable package after initial opening of the compartment along the tear zone.

3,388,790
SUTURE HOLDER

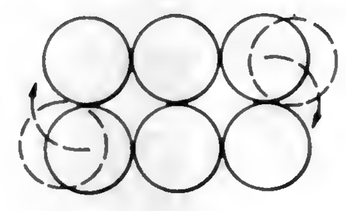
Cecelia M. Slomczewski, 1360 Norton St., Rochester, N.Y. 14621
Filed Sept. 8, 1966, Ser. No. 577,945
13 Claims. (Cl. 206—63.3)



A suture holder formed of a base having grooves to receive bundles of sutures with both ends of the bundles overhanging the ends of the base. A hinged cover is provided to close the grooves and a resilient retainer is provide to hold the sutures at one end to allow removal of a single suture from the other end of the holder.

3,388,791
PACKAGES

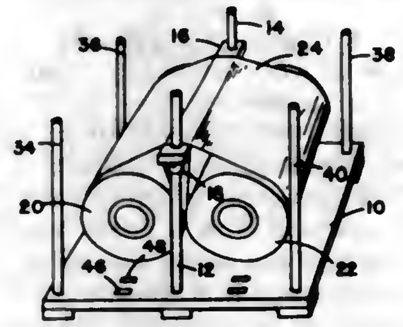
John E. Walsh, Beverly, Mass., assignor to United Shoe Machinery Corporation, Flemington, N.J., and Boston, Mass., a corporation of New Jersey
Filed Jan. 14, 1966, Ser. No. 520,739
2 Claims. (Cl. 206—65)



A multiple container or cluster package comprising at least two rows of containers in alined side by side relation. The top and bottom portions of each container in the cluster are adhesively bonded to at least one other container in the cluster and at least one container is secured to a plurality of other containers. The adhesive bonds located at the top and bottom portions of the containers are arranged in complementary patterns.

3,388,792
SHIPPING PACKAGE

Allen P. Jones, Fredericksburg, Va., assignor to FMC Corporation, Philadelphia, Pa., a corporation of Delaware
Filed Oct. 24, 1966, Ser. No. 589,036
5 Claims. (Cl. 206—65)

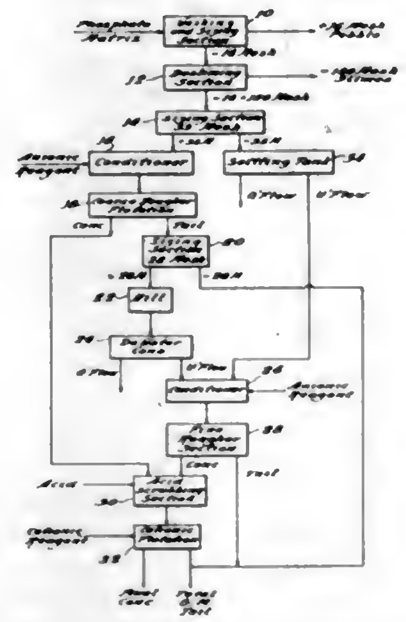


A shipping package for hollow cylindrical articles includes an endless sling extending about the peripheries of a pair of articles and draped over a support whereby the articles are suspended in the sling out of contact with the main body of the package.

3,388,793
BENEFICIATION OF PHOSPHATE ORES

Merton F. Dibble, Lakeland, Fla., assignor to International Minerals & Chemical Corporation, a corporation of New York
Filed Nov. 26, 1965, Ser. No. 509,934
12 Claims. (Cl. 209—3)

A deslimed liberated phosphate ore is beneficiated by a process which includes first classifying the same at about 14 to 42 mesh to produce a fine fraction and a coarse fraction. The coarse fraction is subjected to a coarse rougher flotation operation in the presence of an anionic reagent to produce a coarse rougher concentrate and a coarse rougher tail. The coarse rougher tail is classified at about 24 to 28 mesh to produce a discard second fine fraction and a second coarse fraction, which is comminuted and subjected to fine rougher flotation operation in the presence of an anionic reagent to produce a fine rougher concentrate and a discard fine rougher tail. The fine rougher concentrate and coarse rougher concentrate



are finally scrubbed with an acid and subjected to a flotation operation in the presence of a cationic reagent to yield a discard cationic tail and a final cationic concentrate.

3,388,794
ELECTROSTATIC SEPARATION PROCESS AND CONDITIONING COMPOSITIONS THEREFOR

Gerd Karl Peuschel, Ronnenberg, Germany, assignor to Kali-Chemie Aktiengesellschaft, Hannover, Germany, a corporation of Germany

No Drawing. Filed Apr. 14, 1964, Ser. No. 359,785
Claims priority, application Germany, Apr. 19, 1963, K 49,514
8 Claims. (Cl. 209—9)

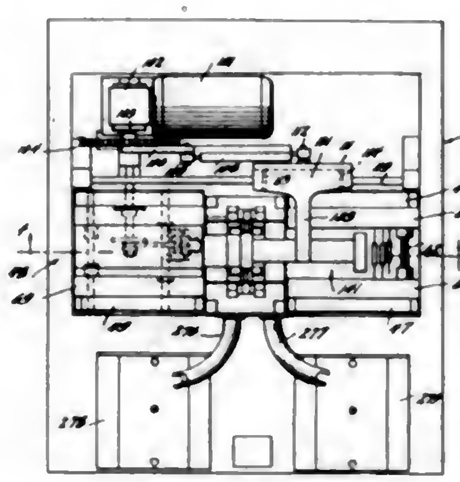
1. In a process of electrostatically separating the components of solid granular mixtures by treating the mixture to be separated with a conditioning agent and subjecting the thus preconditioned mixture to electrostatic separation, the improvement which consists in mixing the mixture to be separated with a finely comminuted solid conditioning composition composed of an organic conditioning agent changing the surface properties of the particles of the mixture to be separated and creating different electric charges on said particles, said conditioning agent being deposited on a solid carrier material with a specific surface area of at least 10 sq. m./g., selected from the group consisting of silicic acids, silicates, aluminum oxide, activated charcoal, starch and cellulose the amount of the carrier material in said composition being at least twice the amount of the conditioning agent therein, thereby well distributing said conditioning composition in the mixture to be separated.

3,388,795
METHODS OF AND APPARATUS FOR SELECTIVELY REMOVING AND SORTING COMPONENTS FROM A MASS OF SPATIALLY SUSPENDED COMPONENTS

John E. Beroset, Flemington, N.J., and Donald M. Large, Temple, Pa., assignors to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York

Filed Mar. 10, 1966, Ser. No. 533,330
20 Claims. (Cl. 209—73)

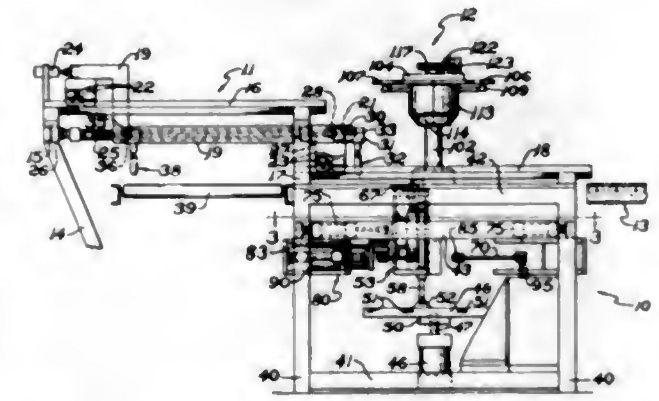
Methods of and apparatus for storing a mass of elongated, paramagnetic articles between a pair of parallel, upstanding walls, spaced apart a distance slightly greater than the length of the articles. Magnets within each wall establish horizontal lines of flux so that the articles are suspended in generally parallel relationship along the lines of flux density. A pickup member having a pair of magnetized poles on one end thereof is moved into the magnetic field to attract and hold a predetermined number of articles from the mass of articles, whereafter the pickup member is moved out of the field with the predetermined number of articles held thereagainst. The articles are released from the pickup member, tested and then sorted in accordance with the test characteristics.



3,388,796
TIRE PIERCING APPARATUS

Leroy S. Roberts, Miami, Okla., assignor to The B. F. Goodrich Company, New York, N.Y., a corporation of New York

Filed Sept. 16, 1965, Ser. No. 487,817
14 Claims. (Cl. 209—82)



A tire piercing apparatus having a support cooperative with a centering mechanism which preconditions a sorting device and centers tires of different sizes for clamping onto a table support, such that a plurality of tire sidewall piercing means are cooperative with the clamping means to pierce the sidewall portions of the tire to controlled depth. Thereafter, the tire is conveyed away and sorted according to size.

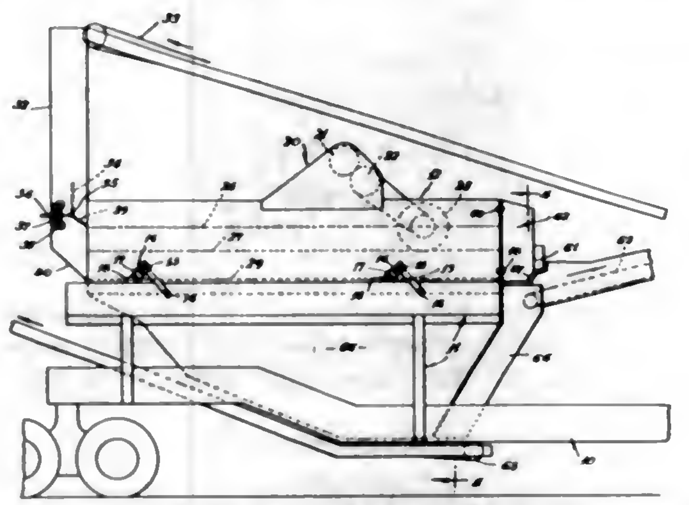
3,388,797
MATERIAL CLASSIFYING APPARATUS

Donald E. Herman, Albert B. Hanse, and Paul R. Vifian, Cedar Rapids, Iowa, assignors to Pettibone Mulliken Corporation, a corporation of Delaware

Filed May 24, 1965, Ser. No. 457,989
6 Claims. (Cl. 209—241)

A material classifying apparatus is provided. There are three superposed classifying screens. The top and bottom screens have a relatively coarse mesh as compared to that of the intermediate screen. The screens are all mounted on a frame which vibrates so that the material on the

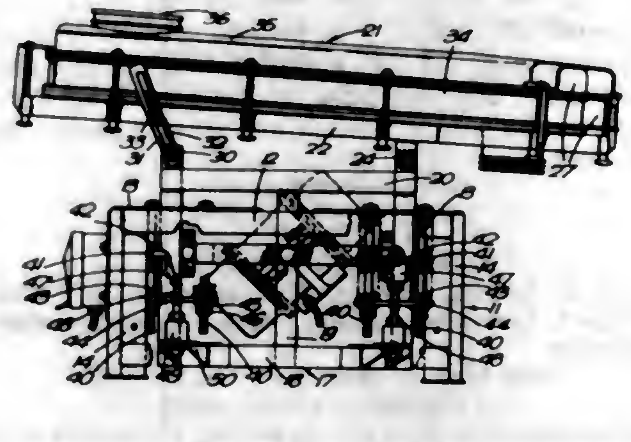
screen moves from one end of the screens to the other. The feed stock is all delivered to a chute at the entrance end of the screens. From the chute the feed stock is delivered to the top and bottom screens in some predetermined proportion determined by a movable feed gate in the chute. At the discharge end of the screens is a triplex hopper which extends across the discharge end of the screens. It has upper, intermediate and lower intake levels in juxtaposition with the discharge end of the three screens respectively. In the hopper a central chute extends from the upper to the lower level with the hopper defining a first discharge opening at the lower level, side chutes at opposite sides of the central chute and separated therefrom which side chutes have intake openings at each side of the intermediate level and discharge openings below the lower level, and plow means at the intermediate level and on the screen side of the central chute to direct the material flow from the intermediate screen into the intake openings of the two side chutes. The central chute feeds a rework conveyor going back to the crusher. A discharge conveyor is positioned below the lower screen and there is a chute to guide material from underneath the lower screen onto the discharge conveyor. The side chutes of the triplex hopper also feed the discharge conveyor.



3,388,798
VIBRATING SCREENS WITH UNBALANCED WEIGHT

William Henry Westbrook, London, England, assignor to Russell Constructions Limited, London, England, a British company

Filed Mar. 31, 1965, Ser. No. 444,340
Claims priority, application Great Britain, Apr. 2, 1964, 13,601/64
10 Claims. (Cl. 209—325)

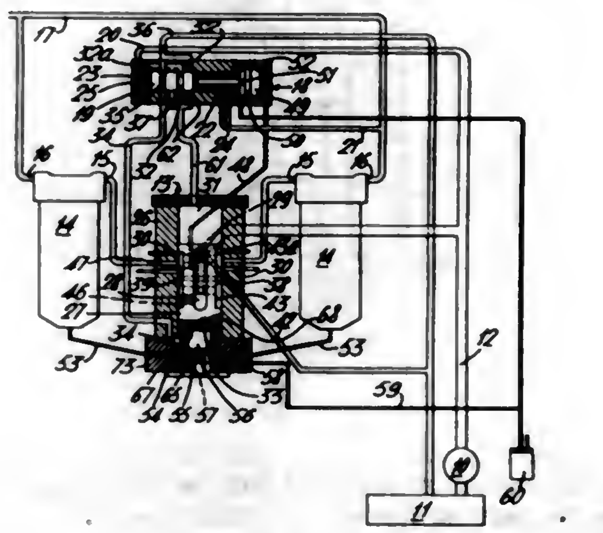


A machine for sifting or straining purposes which includes a stationary frame, and a vibratory frame elastically supported from the stationary frame by means which permits up and down motion and lateral motion in any direction.

3,388,799
FILTER FOR FLUIDS

Jesse T. Rymer, Brockley House, Nailsworth, Gloucestershire, England

Filed June 24, 1966, Ser. No. 560,133
Claims priority, application Great Britain, June 24, 1965, 26,724/65
4 Claims. (Cl. 210—102)

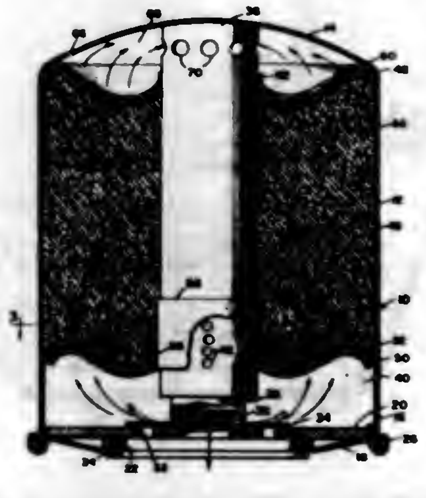


Self-cleansing fluid filter in which a number of filter elements are grouped around a distributor valve through which unfiltered fluid is pumped to the elements. A pressure-sensitive valve influenced by the pressure drop across the filter elements actuates the distributer valve to backflush each filter element in turn when the pressure drop reaches a predetermined value, without interrupting the flow of filtered fluid.

3,388,800
AXIAL FLOW, COMPRESSIBLE ELEMENT, FILTER UNIT WITH BYPASS MEANS

Robert A. MacGregor, Olney, Ill., assignor to Champion Laboratories, Inc., West Salem, Ill., a corporation of Connecticut

Filed Dec. 2, 1965, Ser. No. 511,585
9 Claims. (Cl. 210—131)



A spin-on throwaway type filter in which is disposed an annular filter mass between end caps with one of the end caps being slidable on a center tube so as to uncover bypass port means when the filter becomes clogged to progressively increase bypassing of the oil past the filter mass.

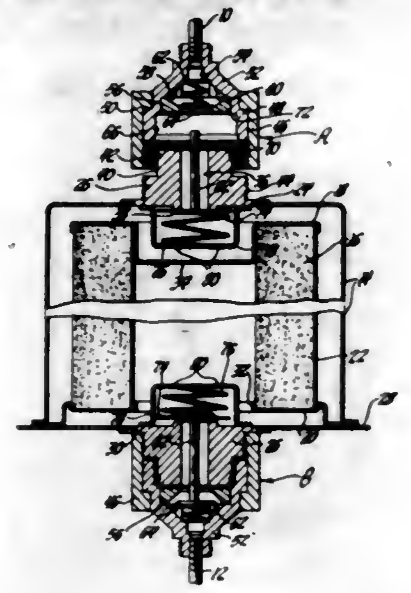
3,388,801

SPILL PROOF COUPLING AND FILTER UNIT

Richard W. Boyd, Flint, and Russell K. Welch, Davison, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Mar. 19, 1965, Ser. No. 441,198

1 Claim. (Cl. 210—234)



A detachable, in-line fluid filter which has special couplings to prevent spillage of fluid from either the filter casing or the flow line on detachment. The couplings operate independently of the filter element itself and consist of two members, each said member having a valve located therein. When the members are attached a stem mounted on a first valve operates to sequentially open first the valve of the complementary member and then the first valve itself.

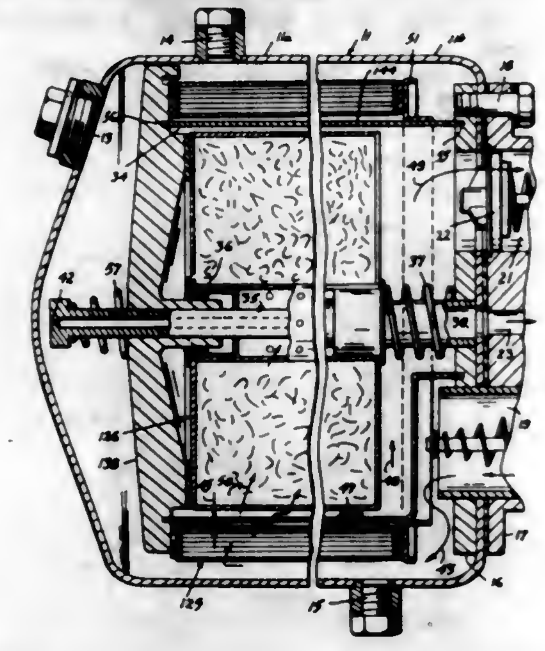
3,388,802

FILTER ELEMENT SUPPORT MEANS

James W. Wilkinson, Hastings, Mich., assignor to Hastings Manufacturing Company, Hastings, Mich., a corporation of Michigan

Filed Oct. 21, 1965, Ser. No. 499,243

18 Claims. (Cl. 210—315)



A filter assembly comprising a housing having one or more removable filter cartridges therein, the one or more cartridges having foraminous inner and outer walls with a filtering medium therebetween, the housing further having a foraminous tubular support member mounted therein in closely spaced relation to a cartridge inner wall and in independent relation to the one or more filter cartridges.

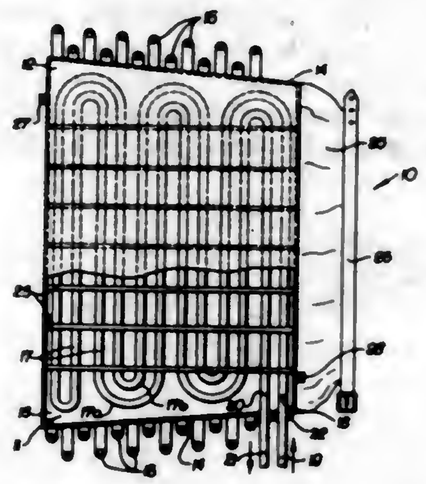
3,388,803

WEARABLE DIALYSIS APPARATUS

Robert D. Scott, Los Angeles, Calif., assignor to Applied Biological Sciences Laboratory, Inc., Glendale, Calif., a corporation of California

Filed Apr. 16, 1965, Ser. No. 448,713

14 Claims. (Cl. 210—321)



A dialysis chamber conforming to the shape of a portion of the human body, removably attached thereto, and having a tubular, repeatedly deflected membrane therein.

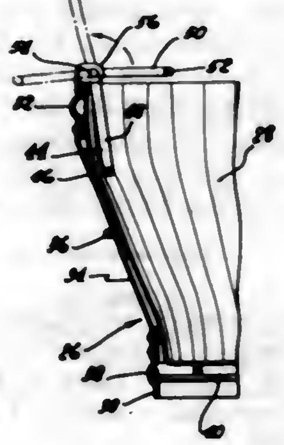
3,388,804

BEVERAGE BREWING BASKET

John P. Hester, Lakewood, Calif., assignor to Wilbur Curtis Co., Inc., Los Angeles, Calif., a corporation of California

Filed Feb. 2, 1966, Ser. No. 524,578

3 Claims. (Cl. 210—470)



A beverage brewing basket having a cupped sheet filter element supported therein for holding coffee grounds or the like through which hot water is to be poured for brewing coffee or the like, wherein the filter element is supported by a plurality of pivoted retainer units regularly spaced about the side wall of the basket. The pivoted retainer units are normally weight-biased against the filter element to hold it in place, and provide handle means for the basket.

3,388,805

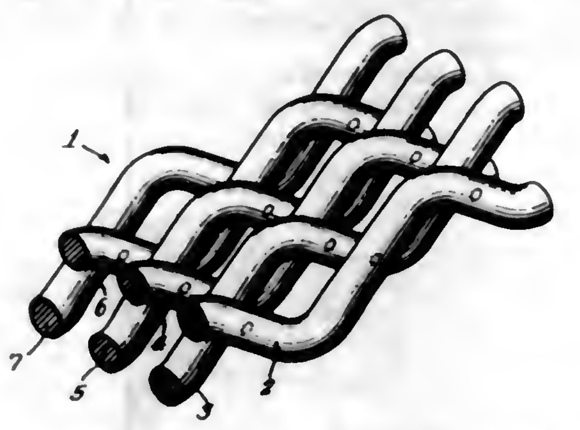
WIRE FILTER MEDIA

Richard E. Lovett, Corbin, Ky., assignor to National-Standard Company, Niles, Mich., a corporation of Delaware

Filed Mar. 5, 1965, Ser. No. 437,452

2 Claims. (Cl. 210—499)

A warp free wire filter media having a plurality of weft wires of substantially sinusoidal configuration lying in successive adjoining parallel planes in the lengthwise directions of the weft wires, in which the sinusoidal configurations of adjacent weft wires are substantially 180° out of phase with respect to each other, and wherein adjacent weft wires are joined at their crossing portions to each other.



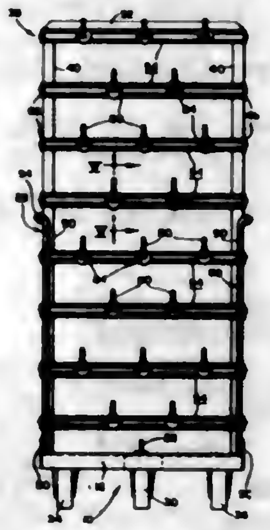
3,388,806

TEXTILE YARN PACKAGE TRUCK

Hoyt Cunningham, Jr., and William L. Schmidt, Gastonia, N.C., assignors to Cocker Machine & Foundry Company, Gastonia, N.C., a corporation of North Carolina

Filed July 15, 1966, Ser. No. 565,595

6 Claims. (Cl. 211—13)



The upper end portions of laterally spaced posts are interconnected by a horizontally extending member to form a framework of inverted U-shape carried by a mobile base. Pin rail assemblies span the posts. Each pin rail assembly includes a pair of pin rails interconnected at each end of the assembly by a plate. The pin rails and the plates may be quickly assembled for being mounted upon the framework and quickly disassembled for removal from the framework.

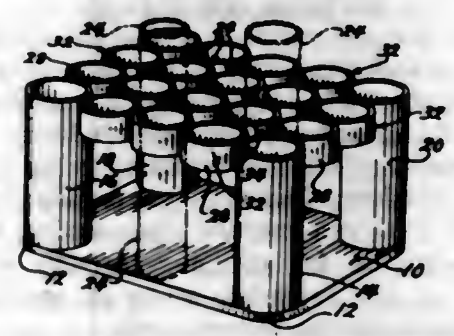
3,388,807

TEST TUBE HOLDER

Ronald W. Emmitt, 28367 Ridgebrook, Farmington, Mich. 48024

Filed Sept. 14, 1966, Ser. No. 579,369

7 Claims. (Cl. 211—74)



A holder for test tubes and the like comprising a base having a support column at each corner thereof, and a plurality of test tube supporting members regularly arrayed in parallel rows. The array is in the form of outer rows between the columns with inner rows extending between opposite outer rows.

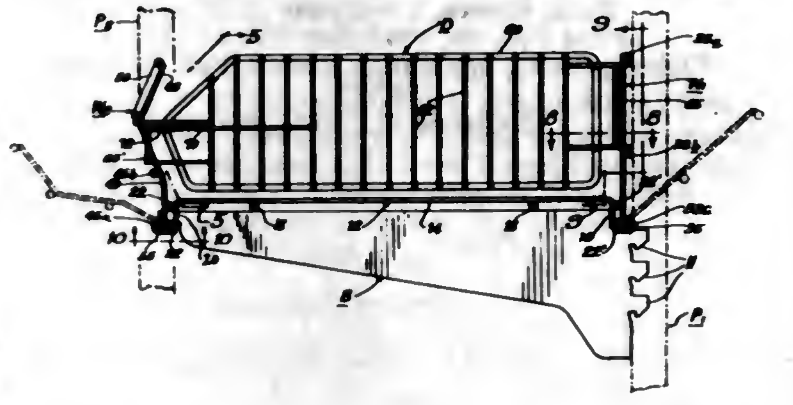
3,388,808

COLLAPSIBLE DISPLAY TRAY

John R. Radek, Hinsdale, Ill., assignor to Ready Metal Mfg. Co., Chicago, Ill., a corporation of Illinois

Filed Mar. 23, 1966, Ser. No. 536,809

7 Claims. (Cl. 211—132)



A collapsible merchandise display rack of rugged construction, which may be knocked down to a compact state for shipment, formed mainly of wire, which may be supported by a modular post system, and which consists essentially of a horizontal shelf portion formed with depending flanges at the front and back thereof. Front and back walls are hingedly mounted to the free edges of the flanges to permit the walls to be set up and locked in upstanding position by detachable and adjustably positioned dividers of the type disclosed in applicant's earlier Patent No. 3,015,399. Thereby, a rigid container with compartments of any desired width are attainable. Alternatively, the walls may be swung through an arc of approximately 270° to nest below the horizontal shelf portion and in the space between the flanges, to permit packing the display tray in a minimum amount of space.

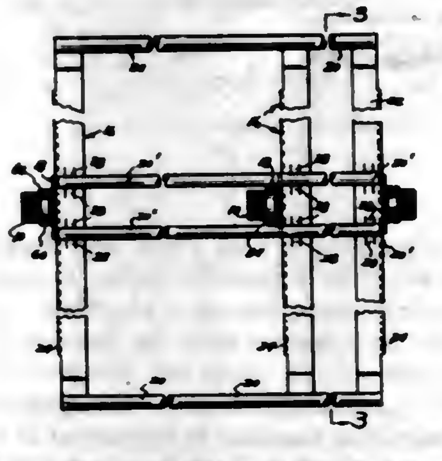
3,388,809

STORAGE RACK

Elwood Irish, Wayne, Mich., assignor to Unistrut Corporation, Wayne, Mich., a corporation of Michigan

Filed June 15, 1966, Ser. No. 557,814

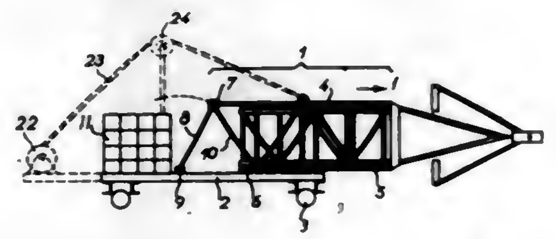
10 Claims. (Cl. 211—176)



A storage rack especially suitable for supporting garment hangers or the like and including upright channel support members, bracket members adjustably mounted to the support members and in turn supporting rod or tubular members for holding the garment hangers. The bracket members are formed to permit the hangers to be slid off the ends of the rods without encountering an obstruction and the means for adjustably mounting the bracket members to the support members includes a connector having a pair of spaced lugs and an aperture therebetween with the lugs adapted to register in apertures in the support member and the aperture in the connector receiving a bolt to lock each of the bracket members in the desired position.

3,388,810
DEVICE FOR EXTENDING AND FOLDING BACK MASTS OR TOWERS APPLICABLE TO CRANES AND THE LIKE

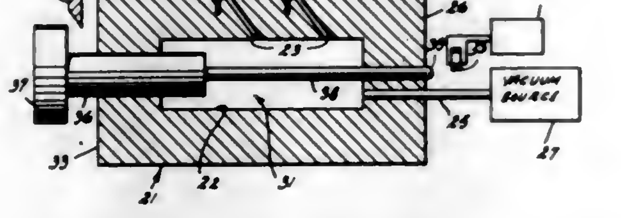
Pierre Durand, Lyon, Rhone, France, assignor to Richier, Paris, France, a company of France
Filed Feb. 20, 1967, Ser. No. 617,266
Claims priority, application France, Feb. 24, 1966, 50,977
3 Claims. (Cl. 212—46)



A hoisting appliance having an erectable mast transported reclining on a platform and made of two telescoped sections, one of which has one of its sides pivotally connected to the platform about a horizontal axis, while the other has its opposite side pivotally connected to the end of a link member hingedly connected to the platform, whereby bodily pivoting the telescoped sections about the hinge axis of the first section on the platform causes translation of the two sections relatively to each other.

3,388,811
MEMORY DEVICE FOR DETECTING THE LOCATION OF AN ARTICLE

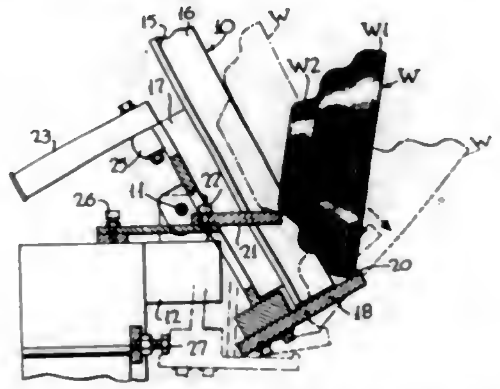
George T. Kuwayama, Scotch Plains, and Frank Wahl, North Bergen, N.J., assignors to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Oct. 19, 1965, Ser. No. 498,033
12 Claims. (Cl. 214—1)



Means for locating a very small and fragile article in a desired position in a manufacturing fixture, which fixture includes a housing having a chamber. A plurality of ducts connect the chamber with the housing exterior. The terminating ends of the ducts are arrayed in a predetermined pattern corresponding to the perimeter of the article. A piston-like member is supported in the chamber, and has one end exterior of the housing. When the article is in the desired location in the fixture, it covers all the terminating ends of the ducts, thereby sealing the chamber from the atmosphere. The chamber is evacuated which moves the piston-like member to a position which indicates that the article is in its desired location for movement of the fixture to a processing station for working on the article.

3,388,812
GRAVITY TURNOVER

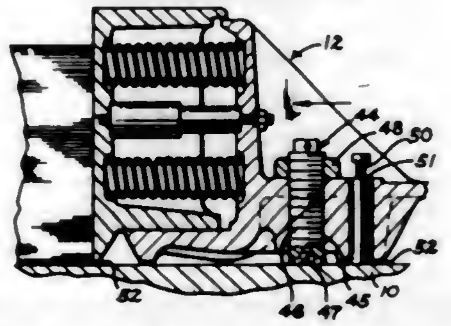
William C. Cooper, Royal Oak, Mich., assignor to The Budd Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Dec. 10, 1965, Ser. No. 512,969
5 Claims. (Cl. 214—1)



An apparatus for turning an article over by means of gravity and including a positive assist arm for contacting the article during dropping movement thereof to assure that the article is inverted during such movement.

3,388,813
PAPER CUTTER

Leo D. Barley, Dayton, Ohio, assignor to Harris-Intertype Corporation, Cleveland, Ohio, a corporation of Delaware
Original application Jan. 28, 1966, Ser. No. 523,754. Divided and this application Mar. 9, 1967, Ser. No. 621,901
5 Claims. (Cl. 214—1.6)



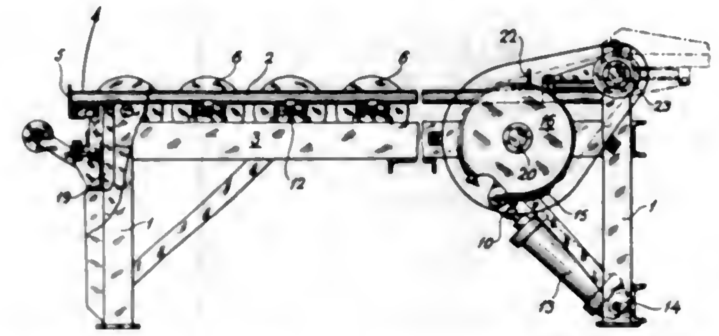
A back gage for use with large paper cutters includes adjustable support members of synthetic resinous material having a low coefficient of friction in sliding engagement with the table of the paper cutter. A gauging member is installed adjacent each supporting member to permit alignment of the back gage with respect to the table.

3,388,814
STACKING DEVICE FOR SHEETS, PARTICULARLY VENEER SHEETS

Heikki J. J. Mustakallio % Lahden Rautateollisuus Oy, Lahti, Finland
Filed June 17, 1965, Ser. No. 464,760
Claims priority, application Finland, June 23, 1964 1,355/64
9 Claims. (Cl. 214—6)

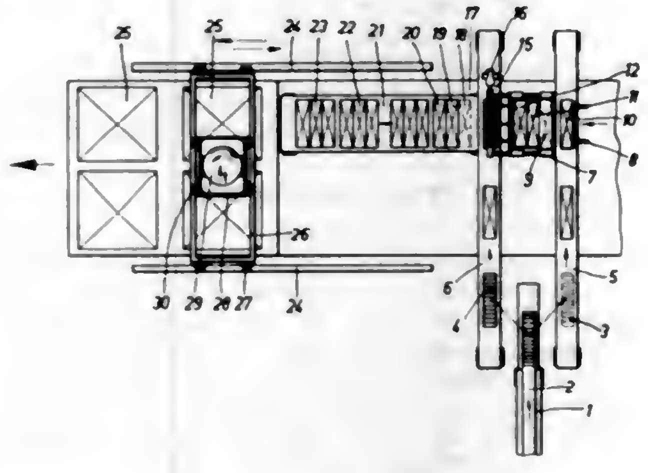
A stacking device for glue-coated wood veneer sheets is disclosed, and includes a rest surface arranged to receive a glue-coated sheet to be stacked and supporting the sheet along laterally spaced parallel support lines. The stacking device further includes a turning table having support elements positioned between said parallel support lines and beneath said rest surface, the turning table being pivotally supported for swinging through substantially 180° about an axis extending along an end thereof and perpendicular to the support elements.

The rest surface is formed by a plurality of relatively thin disks arranged on spaced axles extending transversely of the support lines, with the disks on laterally adjacent axles being diametrically aligned along the support lines and the upper peripheral edges of the disks constituting the rest surface. Thereby, the rest surface-forming disks have substantially a narrow line contact with the lower surface of a glue-coated wood veneer sheet supported thereon, so that the glue-coating is disturbed only along laterally spaced narrow lines. Furthermore, the disks are spaced laterally inwardly of the longitudinal edges of a supported sheet, so that there is no disturbance of the glue along these longitudinal edges. Additionally, the support elements of the turning table have a substantially narrow line contact with the lower sheet surface during turning of the sheet.



3,388,815
METHOD AND APPARATUS FOR SETTING BRICKS

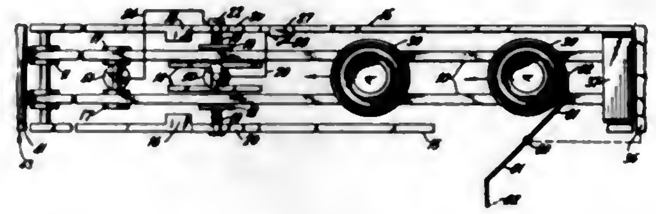
Johann Lingl, Finninger Strasse 70, Neu-Ulm (Danube), Germany
Filed June 21, 1966, Ser. No. 559,200
10 Claims. (Cl. 214—6)



4. An apparatus for setting bricks comprising a first conveyer for conveying a continuous row of bricks from an extrusion press, a second and third conveyer parallel to said first conveyer, means for transferring equal longitudinal brick rows laterally from said row on said first conveyer alternately upon said second and third conveyers near one end thereof, two separate supports laterally of said second and third conveyers near the other end thereof, means for pushing each of said longitudinal rows laterally from said second and third conveyers near the other end thereof upon said supports so as to accumulate a group of laterally adjacent longitudinal rows on each support which then also form rows extending transverse to said conveyers, a turnover device having first gripping means for gripping said group on the first of said supports and for swinging the same of said first support at an angle of substantially 180° about an axis extending parallel to said conveyers in the direction toward and upon and in registry with the group of brick rows on said second support so as to form a double-layer group, second gripping means for then gripping the narrow front and rear ends of each of said transverse rows of at least one double-layer group on said second support, means for then lifting all of said gripping means simultaneously so as to lift at least said entire double-layer group off said second support, means for then drawing apart the adjacent transverse rows of at least said one double-layer group so as to be spaced at a certain distance from each other, and means for conveying at least said one double-layer group in said drawn-out position to another support and for then releasing said gripping means so as to form the base layer of a pack on which subsequently other double-layer groups may be deposited to increase the height of said pack.

3,388,816
DISC STACKING MACHINE ORGANIZATION

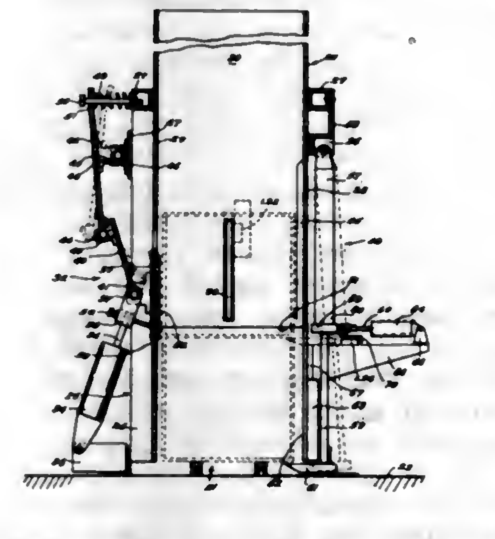
Raymond Paul Lueddeke and Louis Lueddeke, Scotch Plains, N.J., assignors to Eastern Target Company, Inc., Scotch Plains, N.J., a corporation of New Jersey
Filed July 20, 1966, Ser. No. 566,615
9 Claims. (Cl. 214—6)



1. In combination in a disc stacking machine organization, a conveyor belt, means for stopping discs transported by said belt, spring biased retaining finger means mounted adjacent to said belt and adapted to separate as the disc carried by said belt translate thereby, means mounted adjacent to said belt for detecting the incidence of each disc carried by said belt, and means activated by said detecting means for lifting a stopped disc above the level of said retaining finger means to be supported thereon.

3,388,817
CASE UNSTACKER

John A. Johnson, Milford, Ohio, assignor to Cedar Sales, Inc., Cincinnati, Ohio, a corporation of Ohio
Filed Mar. 17, 1966, Ser. No. 535,187
8 Claims. (Cl. 214—8.5)



5. In a case unstacker a continuously operating conveyor, a frame straddling the conveyor and adapted to receive a stack of cases, an elevator on the frame, intermittently operating means for raising and lowering the elevator, grip means on the elevator adapted to engage the second from the bottom case in a stack during operation of the elevator, a case stack lowerator on the frame,

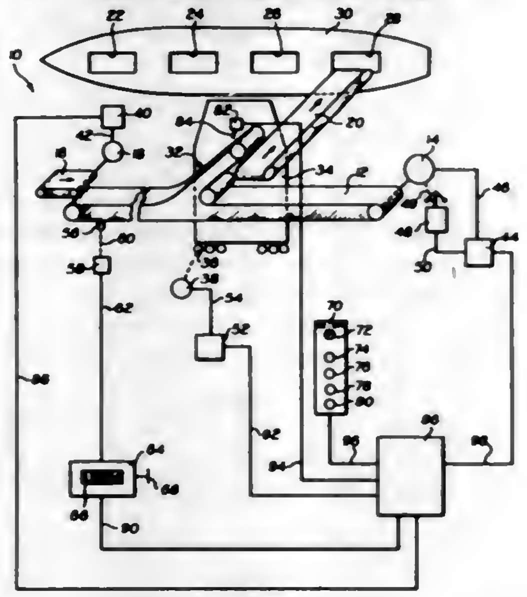
a finger on the lowerator adapted to engage the second from the bottom case in the stack during operation of the lowerator, laterally acting means connected to the finger of the lowerator, and adapted to reciprocate the lowerator finger between operative and retracted positions, a two-position control means operated by the laterally acting means and having an initial position simultaneously raising the elevator and raising the lowerator and a second position simultaneously lowering the elevator and operating the lowerator, a conveyor positioned switch adapted to sense the presence of the lowermost case in the stack, means actuated by the conveyor positioned switch initiating operation of the laterally acting means, and a stack sensing switch on the frame adapted to energize the conveyor positioned switch.

3,388,818

CONVEYOR SYSTEM AND METHOD OF OPERATION THEREOF

Paul Soros, New Canaan, Conn., and Leslie C. Friel, New York, N.Y., assignors to Paul Soros, New Canaan, Conn.

Filed Dec. 5, 1966, Ser. No. 599,002
15 Claims. (Cl. 214—14)



1. In a method of moving materials through the use of materials feeding means, conveyor means cooperatively associated therewith for receiving materials therefrom, and materials loading means and materials transfer means cooperatively associated with said conveyor means for receiving materials therefrom and being spaced along said conveyor means from said materials feeding means whereby materials may be fed from said materials feeding means to said conveyor means, conveyed by the latter to said materials transfer means and transferred thereby to said materials loading means for the loading of said materials, the steps of, discontinuing operation of said materials feeding means while leaving materials remaining on said conveyor means, operating said conveyor means in the direction toward said materials transfer means to create an empty space between the materials remaining on said conveyor means and said materials feeding means, discontinuing operation of said conveyor means before all of the materials remaining thereon have been transferred to said materials loading means to thus leave an empty space on said conveyor means between said materials feeding means and said remaining materials, operating said conveyor means in the direction toward said materials feeding means to move said remaining materials through at least part of said empty space and create another empty space between said materials transfer means and said remaining materials, again discontinuing operation of said conveyor means to thus leave said another empty space thereon between said remaining materials and said materials transfer means, moving said materials transfer means and said materials loading means relative to said conveyor means toward said materials feeding means through at least part of said another empty space, and restarting operation of said materials feeding means and operation of said conveyor means in the direction toward said materials transfer and loading means.

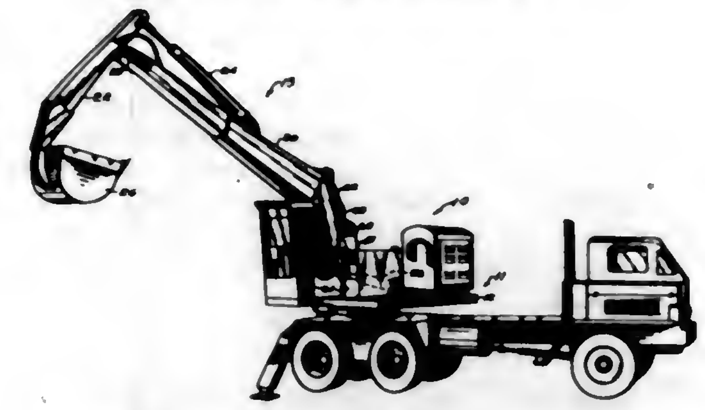
3,388,819

MATERIAL HANDLING MACHINE

Daniel F. Przybylski, Winona, Minn., assignor to The Warner & Swasey Company, Cleveland, Ohio, a corporation of Ohio

Original application Apr. 4, 1966, Ser. No. 540,014. Divided and this application Sept. 20, 1967, Ser. No. 669,062

6 Claims. (Cl. 214—138)



A material handling machine includes a boom member carried on a boom support. A hydraulic power means is utilized to effect pivoting movement of the boom in a substantially vertical plane relative to the boom support. The hydraulic power means is pivotally connected to the boom at a point below the boom pivot axis. The boom is carried by a link member which, in turn, is pivotally carried by the boom support. The link member may be moved by a power means in order to effect relative movement of the boom pivot axis and the hydraulic power means.

3,388,820

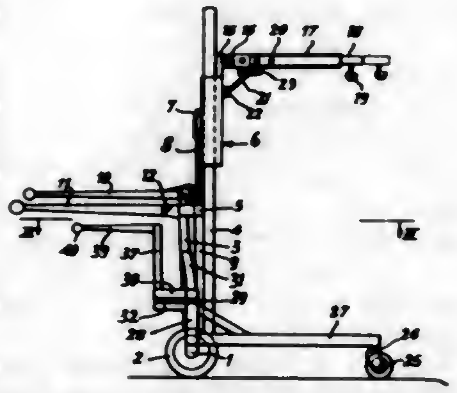
LIFT TRUCKS WITH LATERALLY RETRACTABLE COUNTERBALANCING CASTERS

Charles Jean Pierre Lebre, 35 Avenue de l'Orangerie, Sainte-Genevieve-des-Bois, Essonne, France

Filed Mar. 17, 1965, Ser. No. 440,443

Claims priority, application France, Mar. 20, 1964, 968,113; Oct. 28, 1964, 992,955, Pat. 1,397,465

1 Claim. (Cl. 214—394)



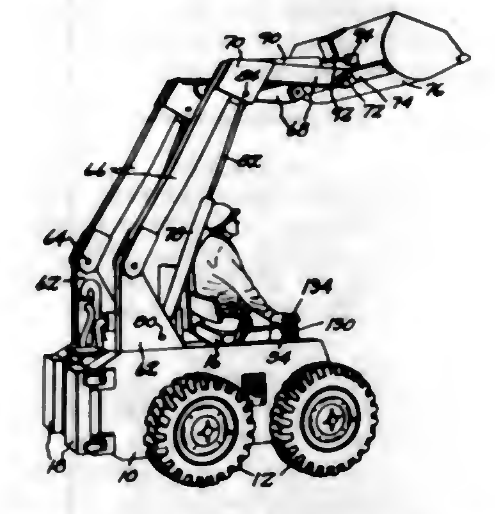
The present manually-operated lift truck permits the gripping, hoisting, lowering and moving of a load and includes a wheeled frame, vertical load hoisting means on said frame, counterbalancing swivel casters carried by a linkage system connected to and extending in front of said frame, means connected to said linkage system for controlling the relative lateral spacing of said casters and means for driving the frame wheels either in a forward or a backward motion direction.

3,388,821

HYDRAULIC CONTROL MEANS FOR LOADERS

William McKean White, Jr., Elkhart, Ind., assignor to The Warner & Swasey Company, Cleveland, Ohio, a corporation of Ohio

Filed Sept. 22, 1966, Ser. No. 581,206
4 Claims. (Cl. 214—778)



A hydraulic actuating means for wheeled loaders having two spaced levers shiftable fore and aft of the loader for controlling actuation of the loader wheels. Another lever is linked to each of said shiftable levers by means of an interconnecting pivoted handgrip which actuates one of either a loader bucket or a boom when shifted relative to the associated wheel control lever. The bucket and boom actuating levers are each shiftable with the associated wheel actuating levers in a manner to produce no actuation of the boom or bucket.

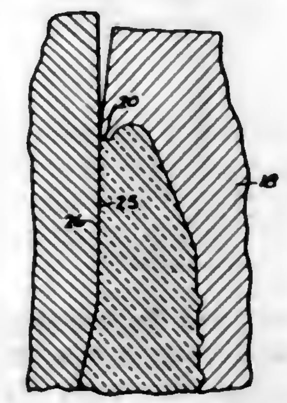
3,388,822

PRESSING FLANGED GLASS ARTICLES

Roland L. Vogelpohl, Gahanna, Ohio, assignor to Owens-Illinois Inc., a corporation of Ohio

Original application Feb. 4, 1963, Ser. No. 255,762, now Patent No. 3,298,813, dated Jan. 17, 1967. Divided and this application Oct. 3, 1966, Ser. No. 583,597

2 Claims. (Cl. 220—2.1)



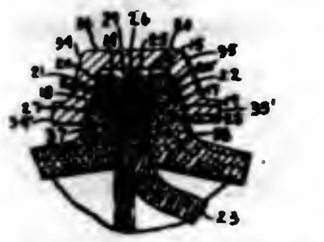
The flanged glass article disclosed herein comprises a glass face plate which is adapted to be attached to a funnel by thermal fusion to form a cathode ray tube envelope. The face plate comprises a base portion defining a viewing portion and an annular flange portion extending generally axially from the periphery of the base portion. The flange portion has a sealing edge by which it is to be hermetically sealed to a funnel by thermal fusion. The inner surface of the flange portion adjacent the edge has at least some portions thereof extending substantially parallel to an axis extending through the center of a base portion for a substantial distance axially along the flange portion and the remaining portions of the inner surface tapering radially inwardly from the substantially parallel portions toward the base portion.

3,388,823

DOUBLE CHAMBER COMPRESSED FLUID RESERVOIR

Thomas M. Fleming, Leawood, and Joseph R. Fleming, Prairie Village, Kans., assignors to T. J. Fleming Co., Kansas City, Kans., a corporation of Missouri

Filed Jan. 11, 1967, Ser. No. 608,531
1 Claim. (Cl. 220—5)



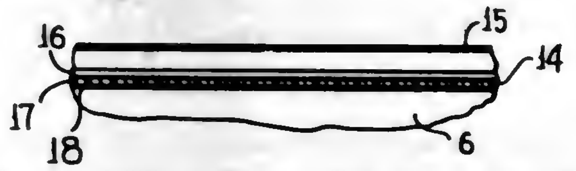
Opposed bowl shaped tank members of non-metallic material each have a circular flange defining an open end. A dome shaped separation member of non-metallic material closes both open ends and has a circular flange sandwiched between the tank member flanges, the sandwiched condition being maintained by a removable U-shaped strap extending around the reservoir and urging the tank member flanges toward the separation member flange.

3,388,824

LAMINATED EASY OPENING END FOR CANS

Ellison L. Hazard, Darien, Conn., assignor to Continental Can Company, Inc., New York, N.Y., a corporation of New York

Filed Sept. 14, 1964, Ser. No. 396,085
13 Claims. (Cl. 220—27)



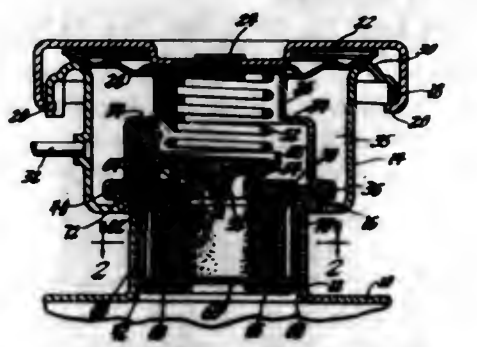
This subject has to do with an easy opening end for cans which is of a laminated construction whereby two thin layers of metal bonded together by an intermediate softer layer replace the usual single metal layer. By providing such a laminated construction in a can end for beverage cans of the type wherein opening normally occurs by means of a punture-type can opener, progressive rupture of the two metal layers occurs and therefore the opening force is greatly reduced.

3,388,825

FILTER PROTECTED RADIATOR CAP

Tom B. Miller, Grand Blanc, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

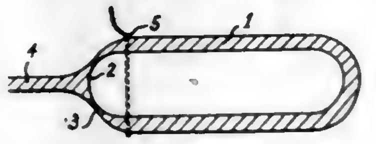
Filed Dec. 22, 1966, Ser. No. 604,036
7 Claims. (Cl. 220—44)



This invention relates to closures and more particularly to automobile radiator caps in each of which a main closure valve and a small vent are embodied for determining the pressure to be contained.

3,388,826
CONTAINER CONFINING A FLUID UNDER PRESSURE

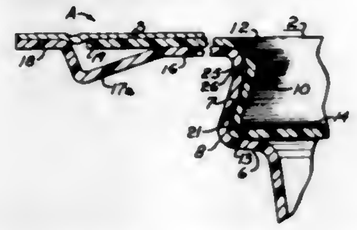
Jean Tubeuf, Ville d'Avray, France, assignor to Societe d'Etude de la Propulsion par Reaction, Villejuif, France, a society of France
Filed Mar. 28, 1966, Ser. No. 538,048
Claims priority, application France, Mar. 1, 1965, 7,471
7 Claims. (Cl. 220—47)



A container for confining fluid under pressure in which there is a main wall and a weaker integral wall portion which can be ruptured by application of heat to permit release of the confined fluid.

3,388,827
SEALED RECLOSABLE FOOD PACKAGE

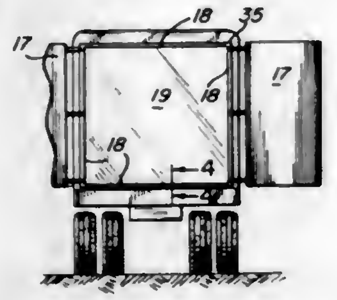
Albert S. Thanhauser, Stamford, Conn., and Hugh R. Weiss, Montclair, N.J., assignors to The Pantasote Company of New York, Inc., New York, N.Y., a corporation of New York
Filed Mar. 30, 1967, Ser. No. 627,024
20 Claims. (Cl. 220—60)



Molded plastic, reclosable container for margarine, etc., the walls of which have a lateral offset with an upright rim, which forms a peripheral groove at their top portions, and a semi-rigid snap-in-cover having a marginal flange with an upstanding portion which fits into said groove and has a portion resting on said offset. Both the container and the cover have outwardly extending flanges at their extreme outer edges, the flange of the container being wider than that of the cover and having a depressed portion to receive the narrower flange of the cover. A narrow, peelable sealing strip is adhered to the upper surfaces of said outstanding flanges to prevent air leakage.

3,388,828
APPARATUS FOR STORING AND PRESERVING PERISHABLE PLANT AND ANIMAL MATERIALS

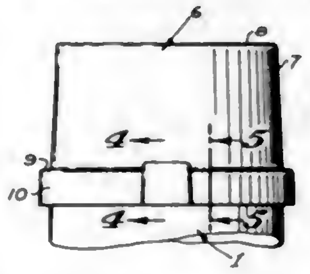
Donald F. Swanson and Wynn G. Winkler, St. Paul, Minn., assignors to Whirlpool Corporation, a corporation of Delaware
Filed Dec. 21, 1965, Ser. No. 515,330
2 Claims. (Cl. 220—24)



A container having an access opening bounded by a peripheral surface member, a closure means for the opening comprising a flexible sheet material having an opening spanning portion normally extending across the opening and having an edge portion at the peripheral surface member, means forming an elongated recess in a surface of this surface member which is accessible to this opening with the sheet material edge portion being normally located in the recess and an opening spanning portion of the sheet material extending across the opening, an elongated generally flat strip locking means located in the recess expansible laterally for locking the sheet material edge portion at two laterally spaced areas in the recess so as to hold the sheet in position.

3,388,829
AEROSOL CONTAINER CAP

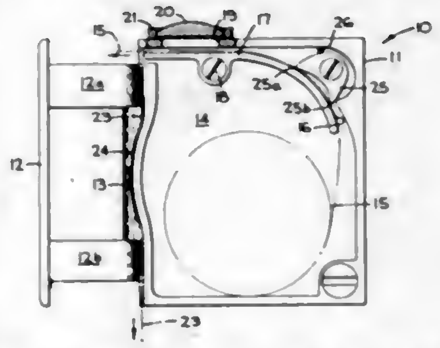
Murray Windman, 3325 Union Pacific Ave., Los Angeles, Calif. 90023
Filed June 26, 1967, Ser. No. 648,873
6 Claims. (Cl. 220—60)



A plastic cap having a stepped flange which snaps over the rim of an aerosol can. Latch ribs within the flange prevent ready removal. An outwardly and upwardly offset portion of the flange forms a channel to receive a tool such as a screwdriver, so that the tool may be used as a lever to pry the cap free of the can.

3,388,830
LABEL DISPENSER

Charles R. Short, Cupertino, Calif., assignor to FMC Corporation, San Jose, Calif., a corporation of Delaware
Filed Apr. 6, 1967, Ser. No. 628,895
6 Claims. (Cl. 221—73)

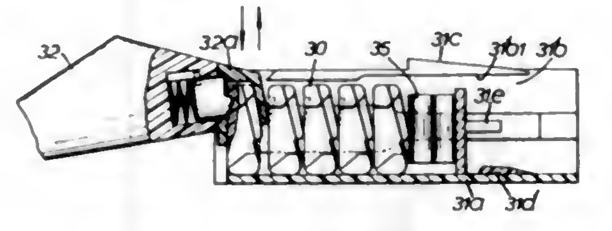


A label dispenser that fits into the hand for dispensing labels in a sequential manner wherein a pawl mechanism allows one label at a time to be dispensed, and wherein information provided on the label is easily readable through a magnifying lens for the selection of articles in accordance with indicia imprinted on the labels.

3,388,831
SHAVING UNITS AND DISPENSERS THEREFOR

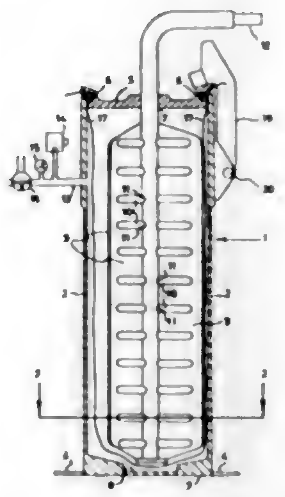
Bernard S. Hansom, Langley, England, assignor to Wilkinson Sword Limited, London, England, a British company
Filed Apr. 25, 1966, Ser. No. 545,055
Claims priority, application Great Britain, Apr. 29, 1965, 18,177/65; July 22, 1965, 31,179/65; Mar. 9, 1966, 10,239/66
12 Claims. (Cl. 221—220)

A razor having a shaving unit formed with a rigid member and a thin cutting edge prepositioned in shaving relation to the rigid member and having a handle releasably grasping the rigid member together with a dispenser which stores the shaving units with the rigid member of at least one unit exposed to permit the handle to grasp the backing member and remove the unit from the dispenser.



3,388,832
METHOD OF AND APPARATUS FOR DISPENSING FLUENT MATERIALS

Iain G. H. Stewart, North Rand, Transvaal, and Michael S. Hunt, Lombardy East, Transvaal, Republic of South Africa, assignors to African Explosives and Chemical Industries Limited, Johannesburg, Transvaal, Republic of South Africa
Filed Oct. 18, 1966, Ser. No. 587,554
Claims priority, application Republic of South Africa, Oct. 22, 1965, 65/5,701
17 Claims. (Cl. 222—1)

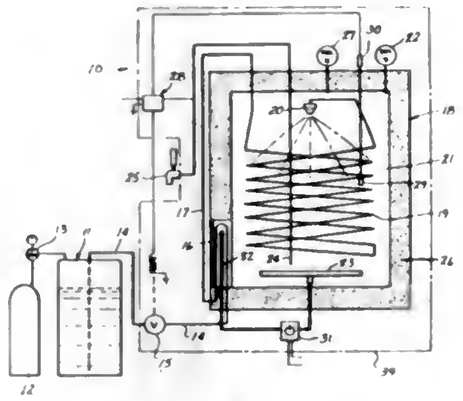


Method and apparatus for dispensing fluent materials such as slurried explosives from a container. A collapsible container is secured within a vessel and pressure fluid is applied against the outside of the container to collapse the same and force the material therein into a plurality of orifices in a delivery conduit communicating with the interior of the container and discharging outwardly of the vessel. The delivery conduit within the container is provided with vanes which are equipped with apertures that coincide with the orifices to facilitate passage of the material into the orifices and through the conduit for discharge as the container is collapsed.

3,388,833
METHOD AND MEANS FOR DISPENSING COFFEE BEVERAGE

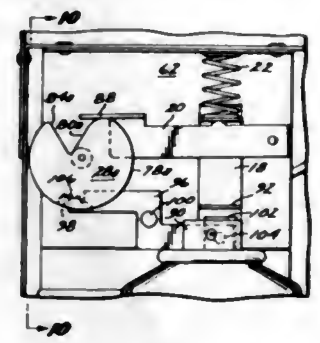
Richard T. Cornelius, Minneapolis, and Adelbert L. Schurman, Crystal, Minn., assignors to The Cornelius Company, Anoka, Minn., a corporation of Minnesota
Filed Feb. 26, 1964, Ser. No. 347,471
7 Claims. (Cl. 222—54)

Carbonated coffee beverage is conducted through a sensing coil and thence through a preheating coil and is discharged through a spray nozzle at the upper part of a depressurizing and heating chamber that effects decarbonation. The chamber is heated by an electrical heater carried by the bottom end thereof, the heater being under the control of a sensing element that is responsive to the temperature of the carbonated beverage in the sensing coil as well as the temperature of the chamber. Liquid level sensing means regulate a solenoid valve which controls the flow of unheated carbonated coffee beverage to the sensing coil. The preheating coil and the spray nozzle are carried by a removable cover.



3,388,834
SPRAY DISPENSER

Charles M. Hart, 7737 Florence Ave., Apt. D, Downey, Calif. 90240
Continuation-in-part of application Ser. No. 455,469, May 13, 1965. This application Mar. 20, 1967, Ser. No. 644,741
4 Claims. (Cl. 222—70)

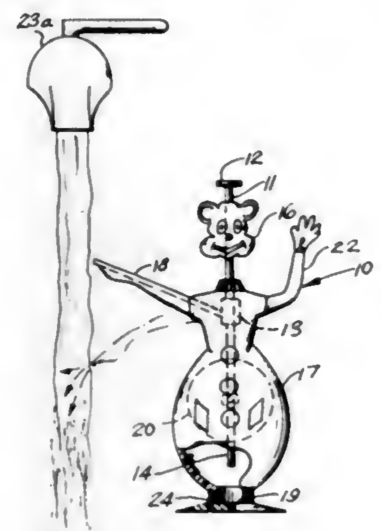


A spray dispenser for use with an aerosol spray container of the type in which the container valve is a metering valve operative to release only a short burst of spray during each actuation, the spray dispenser including a drive motor geared down to slowly drive a cam having a cam fall for suddenly releasing an actuator for sudden depression of the container valve, one version of the dispenser using an abrupt rise to thereafter raise the actuator, and another version utilizing a hold-down trigger to hold the valve down until the actuator is raised, with a secondary cam thereafter abruptly releasing the trigger to allow the valve to suddenly raise.

3,388,835
LOTION AND BUBBLE BATH DISPENSER

Larry S. Naughten, 18509 73 W., Edmonds, Wash. 98020
Filed Feb. 18, 1966, Ser. No. 528,502
1 Claim. (Cl. 222—78)

A dispenser for lotion or bubble bath, the device comprising a container of toy-like character, a dispensing mechanism including a plunger tube attached to one end of a suction cylinder, the plunger tube extending downwardly into the liquid contained within the container, the plunger tube being attached at the lower end of the suction cylinder, a sidewardly extending flexible tube out



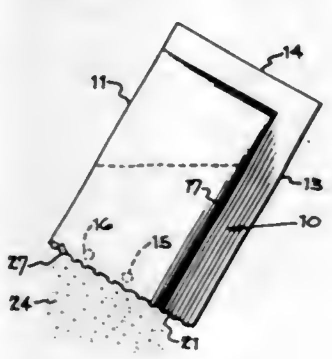
of which the liquid is dispensed, and an upper plunger tube connected to the upper end of the suction cylinder, the upper plunger tube having a press-button at its upper end.

3,388,836
SHAKER-TYPE DISPENSING PACKAGE

Robert E. Otto, 5420 Brillwood Lane, Cincinnati, Ohio 45243, and Herbert C. Brinkman, Jr., Cincinnati, Ohio; said Brinkman assignor to said Otto

Filed Nov. 10, 1966, Ser. No. 593,577

6 Claims. (Cl. 222—107)



A shaker-type package for dispensing granular or powdered material. The package is formed of two opposed paper layers sealed around their periphery and includes a plurality of spaced inner sealed areas which are also spaced from one edge seal. A series of slits extend across the package in the space between the edge seal and inner seals. When the package is torn along the slits, the fibers between the slits interlock.

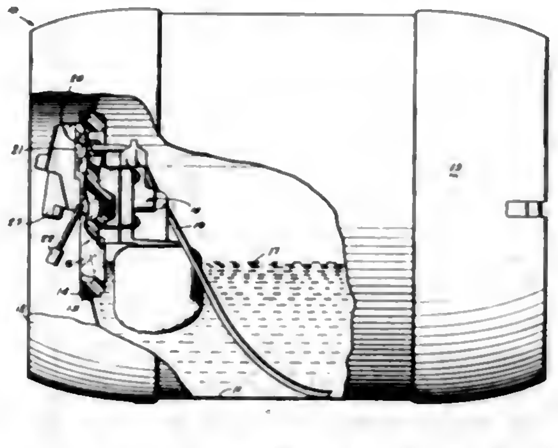
3,388,837
BEVERAGE DISPENSING DEVICE

Richard T. Cornelius, Minneapolis, Minn., assignor to The Cornelius Company, Anoka, Minn., a corporation of Minnesota

Filed June 28, 1966, Ser. No. 561,257

3 Claims. (Cl. 222—156)

A beverage dispensing device includes a cylindrical tank having an oval opening in one end thereof, a transparent cover inside the tank closing said oval opening, the transparent cover having a portion defining a portion of a dispensing valve, the tank having an end member with a convex lower surface below the dispensing valve onto which the tank can be gently rocked.

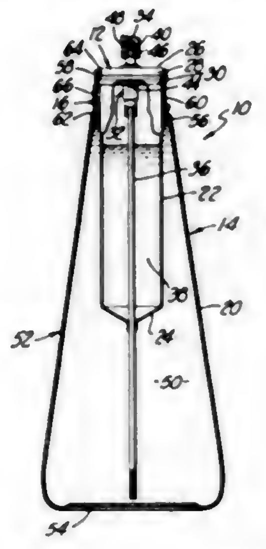


3,388,838
AEROSOL SPRAY CONTAINER FOR RECEIVING A FLUID COMMODITY DISPENSING PRESSURIZED CARTRIDGE

Paul A. Marchant, Kansas City, Mo., assignor to Rexall Drug and Chemical Company, Los Angeles, Calif., a corporation of Delaware

Filed Feb. 13, 1967, Ser. No. 615,461

1 Claim. (Cl. 222—193)



A thin, flexible walled aerosol container having a neck for tightly receiving and supporting a fluid commodity dispensing, pressurized cartridge in the container, and an air by-pass between the main body and neck of the container which is only closed upon the seating of and by the cartridge in the container, whereby the cartridge may be rapidly inserted into the container without building up air pressures which might otherwise deform or damage the thin walled container.

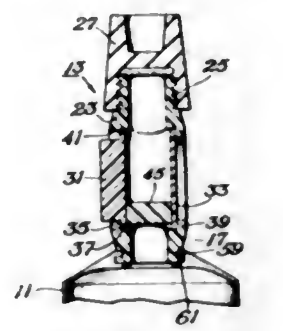
3,388,839
METERING DISPENSER WITH PISTON CONFINED IN A ROTATABLE ELEMENT

Donald V. Frydenberg, Rte. 2, P.O. Box 526, Longview, Tex. 75601

Filed Dec. 12, 1966, Ser. No. 600,998

5 Claims. (Cl. 222—219)

My invention relates to apparatus for dispensing a metered amount of material from an associated container, generally of the collapsible type such as, for example, a toothpaste tube. This specification discloses a preferred manner of constructing a dispenser in accordance with my concept of utilizing a dispenser body having a rotatable element which includes an aperture containing a free-floating, pressure responsive piston. Pressure generated inside the container moves the piston and fills the aperture with the material to be dispensed. The rotatable element may then be rotated so that subsequent pressure from the container again moves the piston, but in an opposite direction, to discharge a metered amount of material from the dispenser. Also disclosed is a form of piston having sealing lips extending from it, peripheral edges to adapt the dispenser for use with liquids of low viscosity, and a form of rotatable element secured by an interference fit in a locked position in the body of the dispenser.

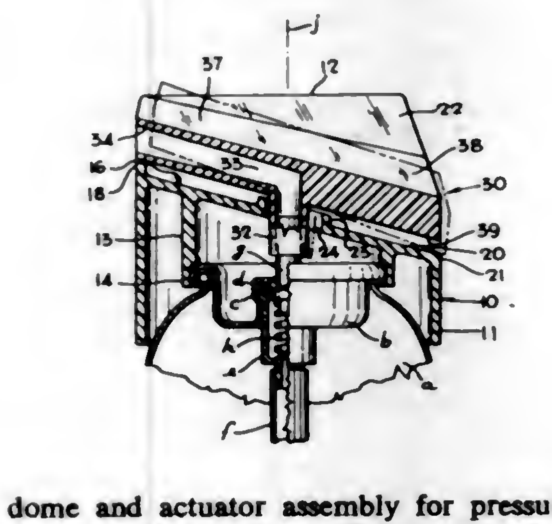


3,388,840
SHIELDED DOME AND ACTUATOR ASSEMBLY FOR FOAM VALVES

Richard C. Hug, St. Louis, Mo., assignor to Clayton Corporation, St. Louis, Mo., a corporation of Delaware

Filed Apr. 25, 1967, Ser. No. 633,576

7 Claims. (Cl. 222—402.13)



A dome and actuator assembly for pressurized foam dispensers permits rinsing without accumulating water in the valve mounting cup. Across the dome, mounted in the valve mounting cup. Across the rome, mounted exteriorly of the mounting cup rim, is a sloping drain channel having a central opening surrounded by a protecting ridge. A diametral dispensing actuator, recessed within the drain channel, is fitted onto the valve stem through the opening. Sides of the actuator overhang the protecting ridge, to shed rinse water beyond the ridge, for draining out of the lower end of the drain channel.

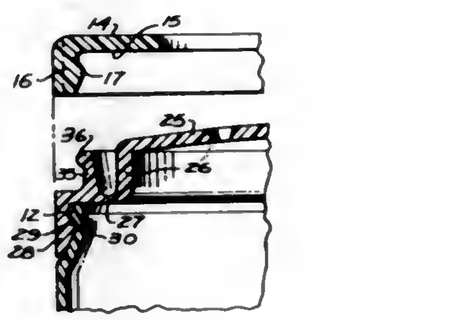
3,388,841
TWO-PIECE CLOSURE

Kenneth R. McHardy, Independence, and Paul A. Marchant, Kansas City, Mo., assignors to Rexall Drug and Chemical Company, Los Angeles, Calif., a corporation of Delaware

Filed Feb. 23, 1967, Ser. No. 617,900

5 Claims. (Cl. 222—548)

A multiple piece container and closure for dispensing a commodity from the container when the closure is in an "open" position. The closure includes a perforated diaphragm attached to the container and covering the open mouth thereof. A cap is rotatably mounted over the diaphragm and flexes the diaphragm inwardly from its normally bowed configuration to an inward position to insure a tight seal between the diaphragm and cap.

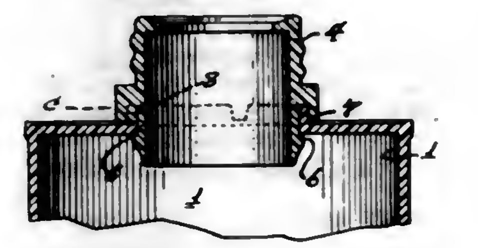


3,388,842
COMBINATION CAN AND PLASTIC NOZZLE

Allan A. Costa, 682 Uball Road, West Islip, N.Y. 11795

Filed Dec. 28, 1965, Ser. No. 516,840

1 Claim. (Cl. 222—566)



The invention is for a structure comprising, in combination, a can having a top wall and a fluid receiving opening therein which is bounded by a relatively short neck, and a unitary tubular nozzle of plastic, the nozzle having an upper area merging into a lower area and an intermediate outwardly-extending shoulder terminating in a downwardly extending skirt spaced from the outer nozzle wall and outwardly bounding a channel adapted to receive the can neck, the depth of the channel permitting contact of the skirt with the top of the can. The lower area of the nozzle extends below the inner face of the can top and having an outwardly-extending shoulder adapted to engage the can top inner face, the said shoulder being above the end of the nozzle lower area, which end is inwardly beveled to form a wedge. The can neck has spaced tapered and closed-bottom cut-outs, and the nozzle within its said channel carries spaced projections formed for close fit in said tapered cut-outs.

3,388,843
GLASSCUTTING CONTROL APPARATUS

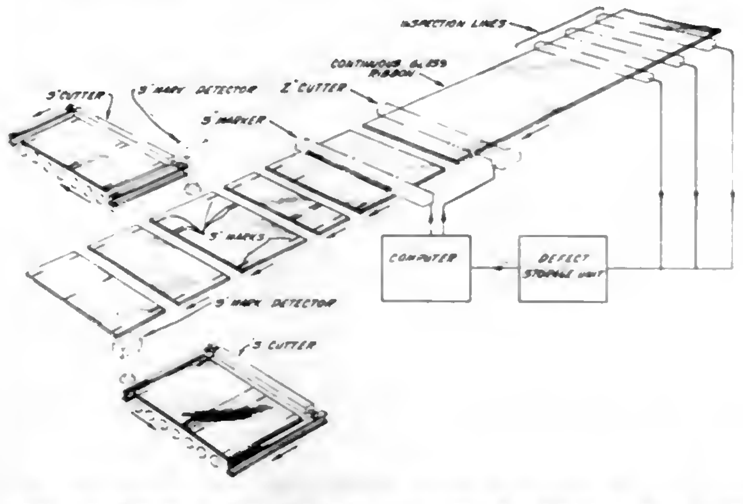
Forrest K. Umbel, Verona, Pa., assignor to Pittsburgh Plate Glass Company, Allegheny County, Pa., a corporation of Pennsylvania

Original application June 16, 1961, Ser. No. 125,329, now Patent No. 3,274,390, dated Sept. 20, 1966. Divided and this application June 22, 1966, Ser. No. 559,525

11 Claims. (Cl. 225—96)

1. In apparatus for partitioning glass including a glass conveyor for moving individual glass sheets to a cutting berth, the combination comprising, a series of selectively operable glasscutting scoring and snapping means in said cutting berth, apparatus immediately ahead of said cutting berth for reading cutting information recorded as a series of marks on a glass sheet as the latter moves into said cutting berth from said conveyor, and means responsive to said cutting information for selectively operating

certain of said glasscutting scoring and snapping means in said cutting berth corresponding to the series of marks



on the sheet to cut the glass sheet received in the cutting berth at cutting points determined by the marks on the sheet.

3,388,844

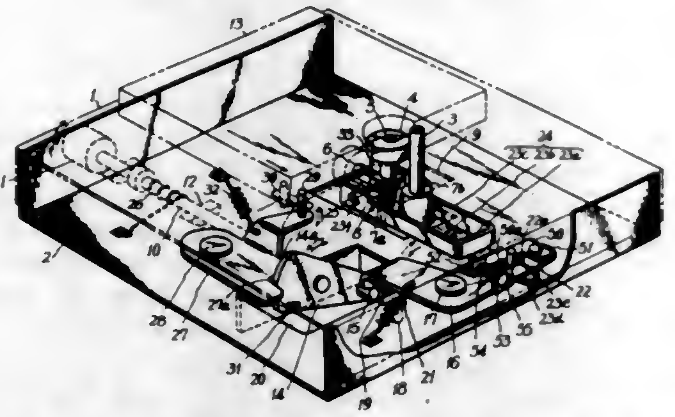
PINCH ROLLER OPERATING DEVICE FOR MAGNETIC TAPE RECORDERS

Naoji Tamura, Tokyo, Japan, assignor to Kabushikikaisha Taiko Denki Seisakusho (Taiko Electric Works Ltd.), Tokyo, Japan, a corporation of Japan

Filed Oct. 20, 1965, Ser. No. 498,697

Claims priority, application Japan, Nov. 4, 1964, 39/86,160

6 Claims. (Cl. 226—90)



A mechanical pinch roller operating device for a magazine-type magnetic tape recorder and player in which a hand rotatable knob is connected to a pinch roller. The pinch roller is raised or lowered to engage with or disengage from a capstan in accordance with hand rotation of the knob. The pinch roller is also raised into the engaged position with the capstan in response to the loading movement of the magazine. An adjusting screw is provided for changing the contact pressure of the pinch roller against the capstan.

3,388,845

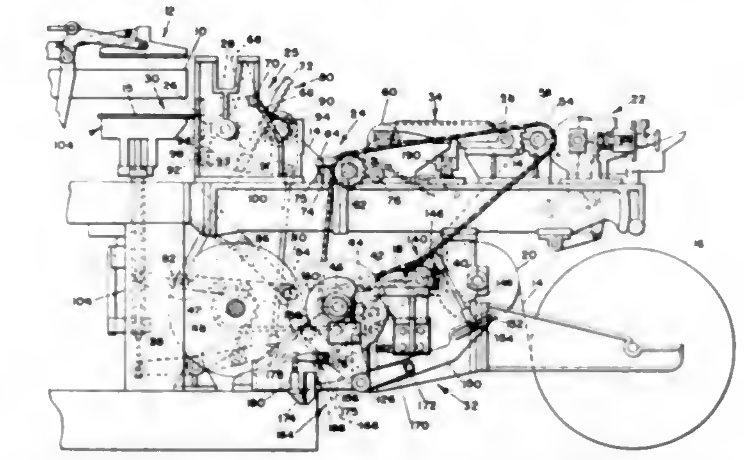
WEB FEED REGISTRATION MEANS HAVING A COARSE AND FINE FEED

John W. Scully, Raynham, Mass., assignor to Pneumatic Scale Corporation, Quincy, Mass., a corporation of Massachusetts

Filed Oct. 1, 1965, Ser. No. 491,989

10 Claims. (Cl. 226—28)

1. In a packaging machine, in combination, web feeding and registering means for continuously advancing a printed web defining successive package forming sections and having substantially equally spaced registration marks thereon comprising a metering roll rotated one revolution per cycle of operation, said metering roll having a circumference such as to advance tthe web a distance substantially less than the nominal length of a package forming section each cycle, means operative each cycle for effecting a further rotation of the metering roll to effect a net advance of the web slightly less than the length of a package forming section, means for advancing the leading end of said web, control means comprising means for detecting the position of a registration mark at a predetermined time during the advance of the web, and means responsive to said detecting means when a deviation from a predetermined position beyond allowable tolerances is detected for effecting a still further rotation of said metering roll to feed an additional increment of thte web providing a net advance of the web a distance slightly more than the nominal length of a package forming section.



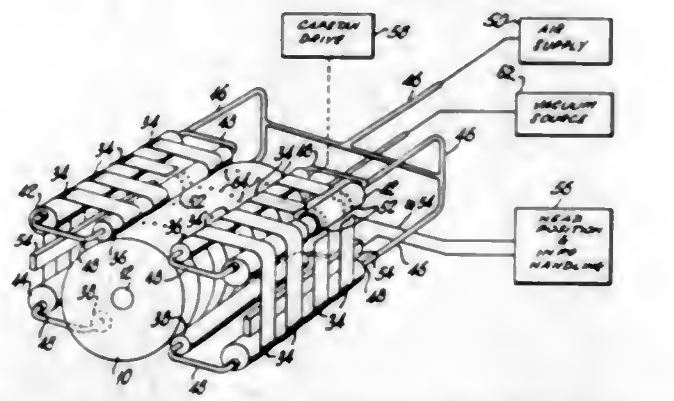
3,388,846

CAPSTAN ARRANGEMENT FOR MAGNETIC TAPE TRANSPORTS

Leonard J. Higgins, Smithtown, N.Y., assignor to Potter Instrument Company, Inc., Plainview, N.Y., a corporation of New York

Filed May 12, 1966, Ser. No. 549,554

7 Claims. (Cl. 226—97)



This specification and drawings describe a magnetic storage device employing endless tape loops in which the loops are driven by a capstan outside the loop and the length of the loop is less than the diameter of the capstan.

3,388,847

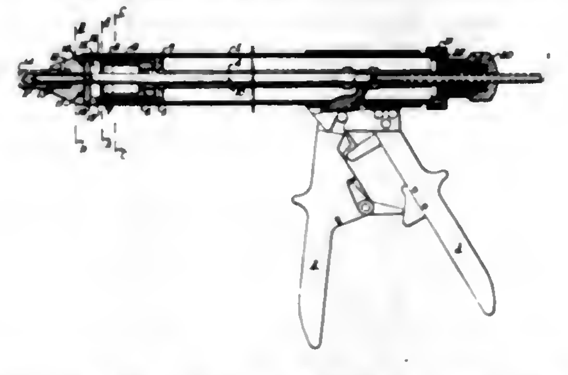
SURGICAL INSTRUMENT FOR SUTURING HOLLOW ORGANS

Vyacheslav Sergeevich Kasulin, Schelkovskoe Chaussee 92, korpus 7, kv. 54; Svetoslav Ivanovich Babkin, 1 Cheremushkinskaya ul. 11/9, korpus 1, kv. 16; Tatyana Vladimirovna Kalinina, Chasovaya ul. 27/12, kv. 22; Galina Mikhailovna Gambashidze, Novo-Ostankinskaya ul. 8a, kv. 16, all of Moscow, U.S.S.R.

Filed Aug. 26, 1965, Ser. No. 482,702

7 Claims. (Cl. 227—19)

A surgical instrument having a hollow body with a slidable hollow rod therein for ejecting staples loaded into grooves in the body to form a staple suture and bearing a cutter for excising excess tissue of the sutured organs, a stem being slidably mounted in the rod and having a pointed tip on which a head is detachably mounted, the head containing a member which acts as a counter surface for the cutter and an anvil for bending the legs of the staples, the stem being fully retractable in the body when the head is detached or extendable from the body for a piercing operation and for mounting of the head.



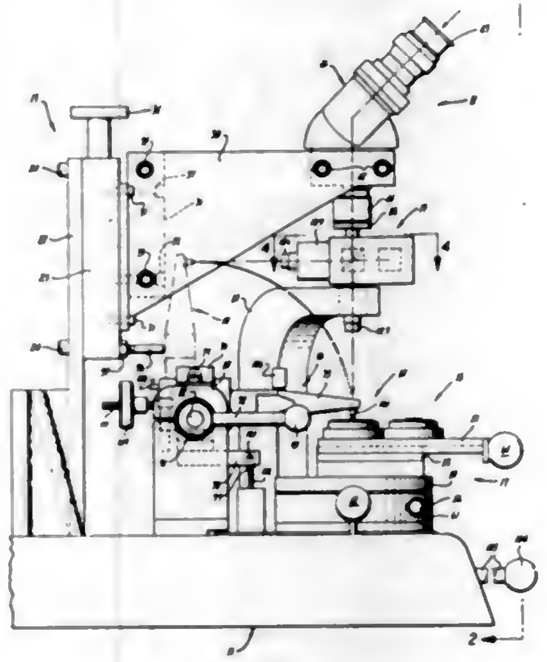
3,388,848

ALIGNMENT AND BONDING DEVICE AND METHOD

Albert Peeples Youmans and Alfred Leslie Greig, Cupertino, Calif., assignors to Signetics Corporation, Sunnyvale, Calif., a corporation of California

Filed July 15, 1966, Ser. No. 565,489

12 Claims. (Cl. 228—1)



1. In an alignment device for aligning first and second parts with said first and second parts being spaced apart, means for supplying light to the parts so that each of the parts reflects light in the form of a light beam, optical means for viewing said parts in said spaced-apart relationship and forming images of said parts from said light beams, and means for causing relative movement between the parts to bring the images of the parts into alignment with each other so that at least certain parts of the images are in registration.

3,388,849

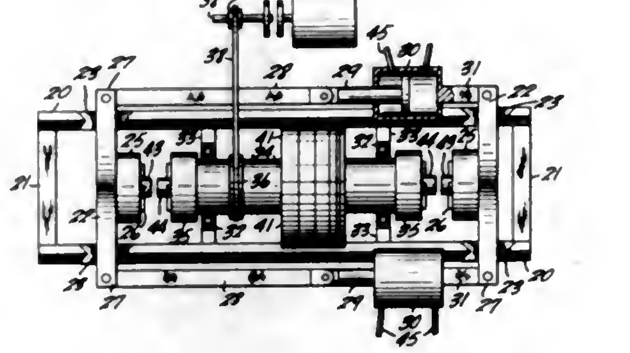
FRICTION WELDING

Robert Morris Blum, Westport, and Milton Bernard Hollander, Stamford, Conn., assignors, by mesne assignments, to Caterpillar Tractor Co., Peoria, Ill., a corporation of California

Filed Apr. 16, 1963, Ser. No. 273,487

1 Claim. (Cl. 228—2)

1. A machine for inertia friction welding a center part to two end parts and comprising, a rotatable spindle and chuck means for holding the center part, nonrotatable chuck means for holding the end parts, loading means for pressing the end parts against the center part, drive means for rotating the spindle, weight means mounted on the spindle for storing all of the energy needed to produce the two friction welds between the center part and the two end parts, and clutch means which disengage the drive means from the spindle when the energy needed for producing the two friction welds has been stored in the weight means before the end parts are engaged with the center part.



3,388,850

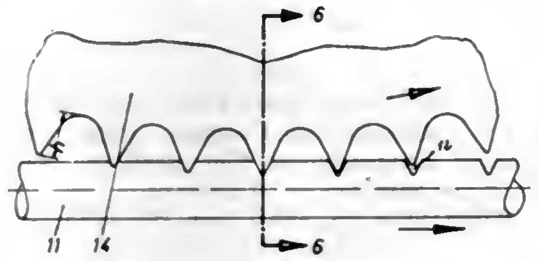
WIRE SOLDER

Gunther Laubmeyer and Marius Smits, both of 73 Bahnhofstrasse, Arolsen, Waldeck, Germany

Continuation-in-part of application Ser. No. 415,727, Dec. 3, 1964. This application Feb. 8, 1967, Ser. No. 614,668

Claims priority, application Germany, Dec. 4, 1963, L 46,508; Aug. 8, 1964, L 48,501; Nov. 10, 1964, L 49,249

9 Claims. (Cl. 228—56)



A flux containing solder wire contains per meter at least 500 slots which have a conical form to hold fluxing agent securely when the wire is wound up or bent.

3,388,851

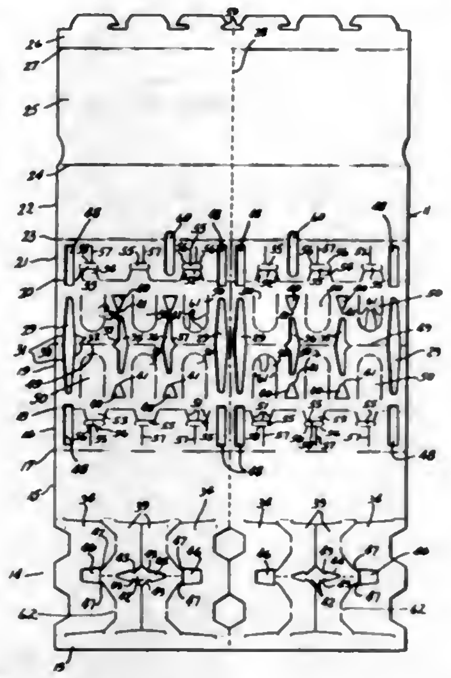
EGG CARTON

Donald G. Coleman and Charles E. Hook, Battle Creek, Mich., assignors to Michigan Carton Co., Battle Creek, Mich., a corporation of Michigan

Filed Apr. 5, 1967, Ser. No. 628,656

18 Claims. (Cl. 229—29)

The present invention involves a paperboard type of inverted V-shaped center partition egg carton improved to reduce egg breakage, supply extra egg space, and facilitate ease of setting up in a set-up machine such as covered by U.S. Patent No. 3,205,793, with such improvements residing in providing a new type cathedral in the form of a bottom hinged tongue in the center partition for each egg compartment; and a hinged member in the bottom of each egg compartment for ready freeing the bottom of the two rows of center supporting feet extending downward from the sides of the inverted V-shaped center partition so that said feet do not become bent out of the plane of said sides so as to reduce their supporting ability. Offsetting said tongue shape cathedrals on opposite sides of said inverted V-shaped central partition vertically relative to each other, and said two rows of feet lengthwise of said carton relative to each other to minimize catching on each other while the carton is being set up. Said hinged members in the bottom of each egg receiving compartment each being hinged on two spaced apart nicks on the side of same remote from that initially in contact with the bottom of said feet, an



egg cushioning slit in the bottom of each egg receiving compartment, said slit extending from the side of said hinged member, between said nicks, substantially to the adjacent outer side of said egg carton bottom to facilitate cushioning the bottom of an egg while holding it against dangerous settling if the egg carton were dropped and which would allow the egg to be more easily broken.

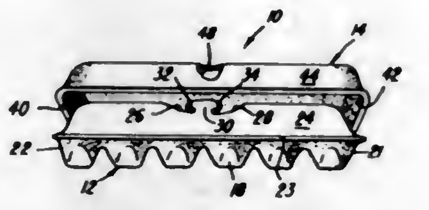
3,388,852

LATCH MEANS FOR CARTONS

Richard F. Reifers, New Canaan, Conn., assignor to Diamond International Corporation, New York, N.Y., a corporation of Delaware

Filed May 26, 1966, Ser. No. 553,128

8 Claims. (Cl. 229—45)



An integral, releasable lock arrangement for molded cartons produced from molded pulp, molded plastics including thermoplastics, foamed plastic, plastic-impregnated paperboard and the like, in which a tray includes a lock flap having an upper, deformable lock tab, and a lid has an aperture at the juncture of a top and peripheral wall, exposing an upper edge portion of the lock tab when the carton is closed to permit the lock tab to be deformably drawn through the aperture to lie in flush engagement on the outer surface of the lid peripheral wall.

3,388,853

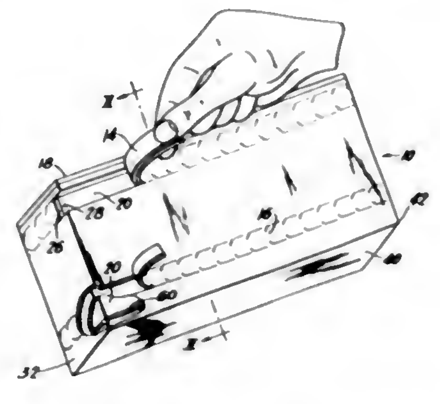
TONER CONTAINER

Thomas G. Matich, Jr., McKeesport, Pa., assignor to Koppers Company, Inc., a corporation of Delaware

Filed Sept. 19, 1966, Ser. No. 580,492

7 Claims. (Cl. 229—51)

A container is provided for storage and discharge of dry powder without spillage. The container is particularly useful for holding toner powder used in electrostatic copying machines because it will minimize spillage of the toner powder when adding toner to an electrostatic copy machine. The container is sealed, but has a puncture member therein, held to the wall of the container. After the puncture member is released by the operator, it is used to puncture the seal enabling the powder to flow out of the container. When the container is used for toner powder to be used in an electrostatic copying machine, the seal is not broken until the container had been inserted into the opening of the toner reservoir which the end of the container is designed to snugly fit into.



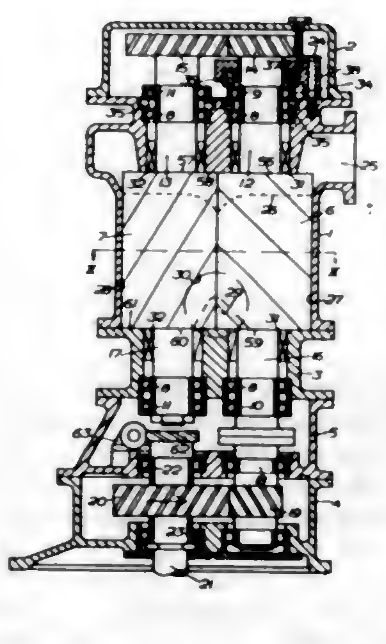
3,388,854

THRUST BALANCING IN ROTARY MACHINES

Hans Kristofer Olofsson, Segeltorp, and Sven Ivar Trulsson, Nacka, Sweden, assignors to Atlas Copco Aktiebolag, Nacka, Sweden, a corporation of the Kingdom of Sweden

Filed June 23, 1966, Ser. No. 564,473

9 Claims. (Cl. 230—143)



1. A rotary machine comprising a housing with inlet and outlet passages and inlet and outlet ports for a working fluid, a rotor mounted for rotation in said housing for operation on said working fluid, antifriction bearings in said housing for rotatably mounting said rotor and capable of taking axial thrust, a thrust balancing cylinder in the housing, a thrust balancing piston movable in said cylinder and acted upon by pressure fluid to exert axial thrust on the rotor in one axial direction, and spring means in the housing arranged to exert axial thrust on the rotor in opposite direction, said spring bias being sufficient to always hold the rotor in said opposite direction.

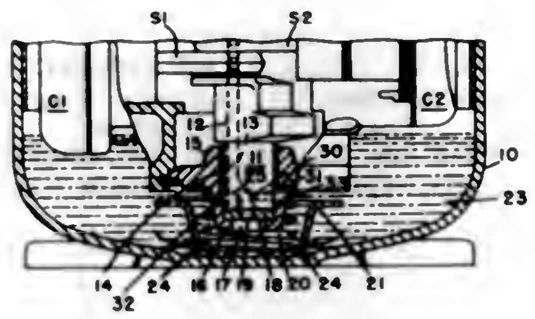
3,388,855

REFRIGERANT COMPRESSORS HAVING VERTICAL CRANKSHAFTS

Robert W. Ayling and Paul G. Thayer, Staunton, Va., assignors to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania

Filed Oct. 17, 1966, Ser. No. 587,295

5 Claims. (Cl. 230—206)



A refrigerant compressor has a vertical crankshaft with an off-center bore for supplying oil to bearings. The bore is connected by an oil pump passage to a central oil inlet opening in the bottom of the crankshaft. The pump passage is connected through a gas vent orifice and a gas vent passage larger than the orifice to the surface of the crankshaft which is connected by a gas outlet passage to the oil sump of the compressor.

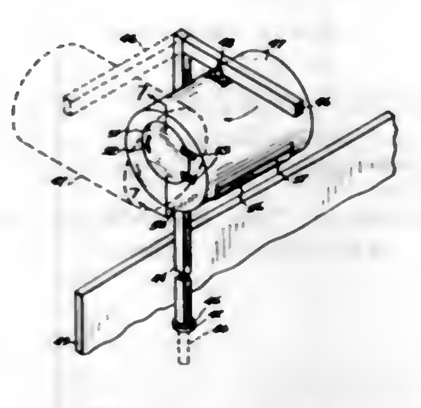
3,388,856

REFUSE RECEPTACLE

Earl Safford, Detroit, Mich., assignor of thirty percent to Walter E. Ellis and nineteen percent to Theodore Singleton, both of Detroit, Mich.

Continuation-in-part of application Ser. No. 545,764, Apr. 27, 1966. This application Oct. 18, 1966, Ser. No. 628,173

2 Claims. (Cl. 232—43.1)



1. A refuse receptacle comprising an elongated upright tube anchored down into the ground;

a cup-shaped thrust washer element at its upper end;

a swing pole supported on and journalled within said tube and extending thereabove;

a thrust washer disc on said pole intermediate its ends and rotatably mounted within said thrust washer element;

a horizontal support arm fixed to the upper end of said pole and extending therefrom;

an elongated trash or garbage container including an endwall and a bottom wall fixedly suspended from said arm;

means bracing said container to said pole;

a refuse trapdoor hinged upon said bottom wall;

a filldoor hinged upon said endwall;

and a spring biased means in each door hinge mounting for automatic closing of said doors and for maintaining said doors in closed position.

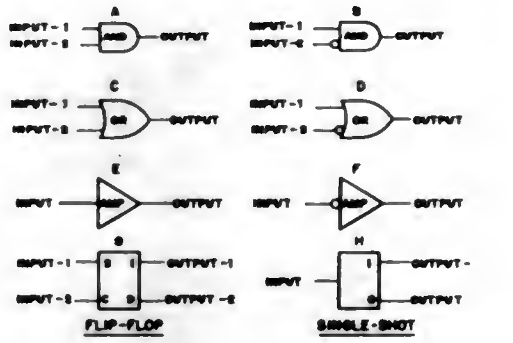
3,388,857

KEYBOARD DEVICE FOR TYPESETTING

Neil Schleifman, Kew Gardens, Queens, N.Y., assignor to Harris-Intertype Corporation, Cleveland, Ohio, a corporation of Delaware

Filed July 8, 1965, Ser. No. 470,537

11 Claims. (Cl. 234—23)



An apparatus converts the seven digit codes produced by a ninety key keyboard, such as used by typesetting machines, into a standard six digit code for recordation on perforated tape. When the keyboard operator changes the case of the character, such as from an upper case to a lower case character, a shifting code is automatically placed on the tape prior to the character code being recorded. A storage register retains the character code during the time that the shifting code is being recorded. A single switch may be associated with each key on the keyboard and interconnected with the storage register by a diode matrix.

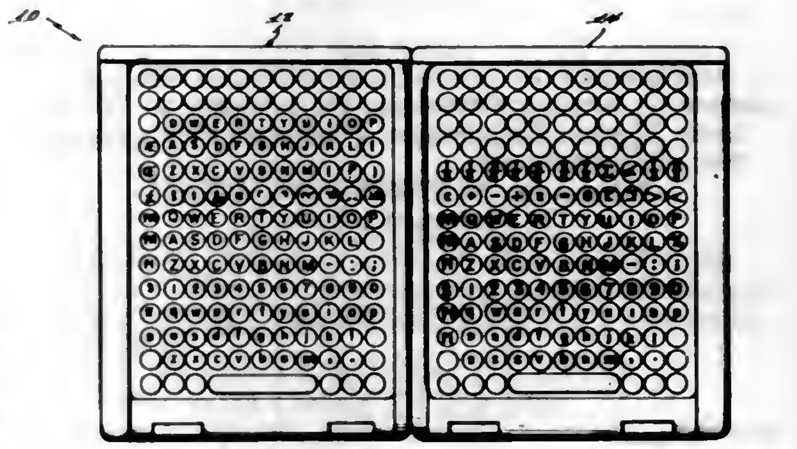
3,388,858

TAPE PUNCHING KEYBOARD APPARATUS

Per Lennart Andersson, Berwyn, Pa., assignor to United States Banknote Corporation, New York, N.Y., a corporation of Virginia

Filed June 13, 1966, Ser. No. 557,094

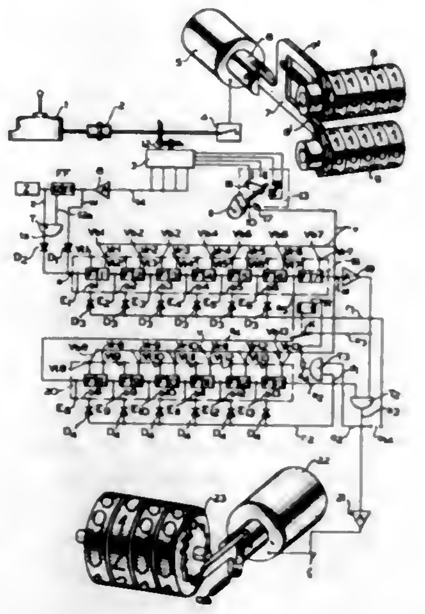
10 Claims. (Cl. 234—23)



A keyboard apparatus including a multiplicity of keys of the order of 236, a 6 channel tape punching mechanism and electrical circuitry operable in response to a single push of a single key for actuating the tape punching mechanism (1) to punch the character code signal associated with the key pushed on a separate punch line, (2) to adjacently punch a shift or unshift precedent code signal only if the shift or unshift precedent code signal associated with the preceded key pushed is different and (3) to adjacently punch a rail or offrail precedent code signal only if the rail or offrail precedent code signal associated with the preceding key pushed is different.

3,388,859
TAXI METER

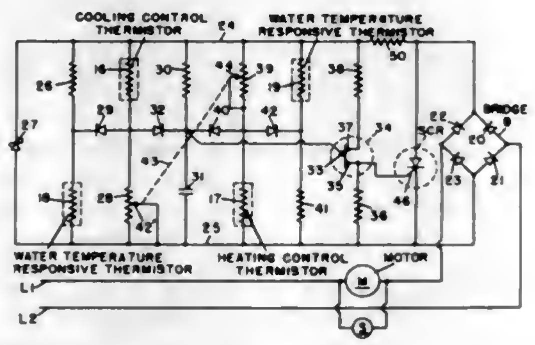
Heinz Kelch, Dattenbergstrasse 30, and Siegfried Spasszus, Gorlitzerstrasse 10, both of Villingen, Black Forest, Germany
Filed Mar. 17, 1967, Ser. No. 623,863
Claims priority, application Germany, Mar. 19, 1966, K 58,776
19 Claims. (Cl. 235—30)



A taxi meter having electronic circuitry for generating two separate pulse train signals. One pulse train corresponds to a timing signal and comprises pulses occurring at equal intervals of time. In the other pulse train, the pulses are generated as a function of the distance traveled by the taxi and with a varying frequency depending upon the speed of the taxi. The electronic circuitry selects the faster one of the two pulse frequencies, and applies the selected pulse train to a counting and accumulator device which registers the pulses and indicates the fare. The taxi meter includes provision for modifying the electronic circuitry whereby the fare rate may be changed to different values.

3,388,860
AUTOMATIC TEMPERATURE CONTROLS

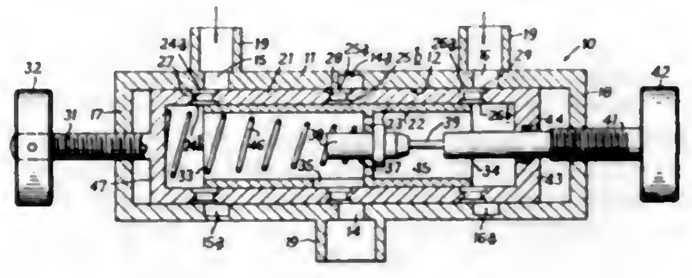
Andrew P. Kruper, Pittsburgh, Pa., assignor to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Aug. 29, 1966, Ser. No. 575,626
21 Claims. (Cl. 236—1)


COOLING CONTROL THERMISTOR
WATER TEMPERATURE RESPONSIVE THERMISTOR
BRIDGE
WATER TEMPERATURE RESPONSIVE THERMISTOR
HEATING CONTROL THERMISTOR
MOTOR
L1
L2

1. An air temperature control system comprising a heat exchanger, supply means for selectively supplying said exchanger with a cooling fluid or a heating fluid, a blower for moving air over the surface of said exchanger, an electric motor for driving said blower, electric supply connections, air temperature responsive means, and means including said responsive means connected to said motor and to said connections for increasing the speed of said motor on an increase in air temperature, and decreasing the speed of said motor on a decrease in air temperature, when cooling fluid is supplied by said supply means to said exchanger, and for decreasing the speed of said motor on an increase in air temperature, and increasing the speed of said motor on a decrease in air temperature, when heating fluid is supplied by said supply means to said exchanger.

3,388,861
THERMALLY CONTROLLED MIXING VALVES

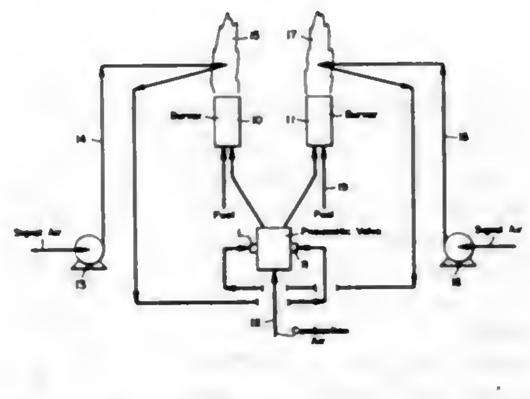
Richard Harding, 17 Lowlands, Eton Ave., London NW. 3, England
Filed Aug. 22, 1966, Ser. No. 574,031
Claims priority, application Great Britain, Aug. 24, 1965, 36,390/65
10 Claims. (Cl. 236—12)



Thermostatically controlled mixing valves and particularly such valves for use with showers. The mixing valve of the invention comprises a valve body with hot and cold water inlet ports and an outlet port, an inner member sliding in the valve body and having hot and cold water inlet port means and outlet port means and an adjustment member slidable within the control valve under the actuation of a thermostat element to control the amount of water passing respectively through the hot and cold water inlet port means.

3,388,862
PNEUMATIC CONTROL OF FURNACES

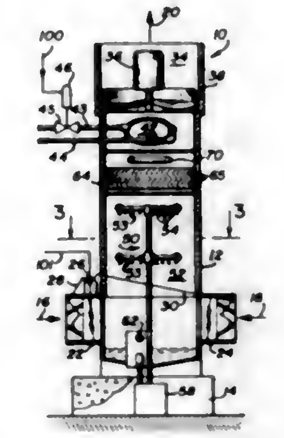
James E. Gabrielson, Edison, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware
Filed Dec. 1, 1965, Ser. No. 526,920
6 Claims. (Cl. 236—15)



A method and apparatus for controlling the fuel rate or combustion air rate to a burner. A Y-shaped flow diverter valve is controlled by a constant volume pump supplied stream of control fluid which passes in a conduit through the burner flame. More or less combustion air or fuel is directed by the diverter valve through the burner in response to changes in energy level of the heated control fluid.

3,388,863
AIR-CONDITIONING DEVICE FOR CONTROLLING HUMIDITY AND TEMPERATURE

John A. Andersen, Los Altos, and Russell M. Magner, Atherton, Calif., assignors to General Industrial Equipment Company, Palo Alto, Calif., a corporation of California
Continuation of application Ser. No. 366,518, May 11, 1964. This application Oct. 20, 1966, Ser. No. 588,221
9 Claims. (Cl. 236—44)

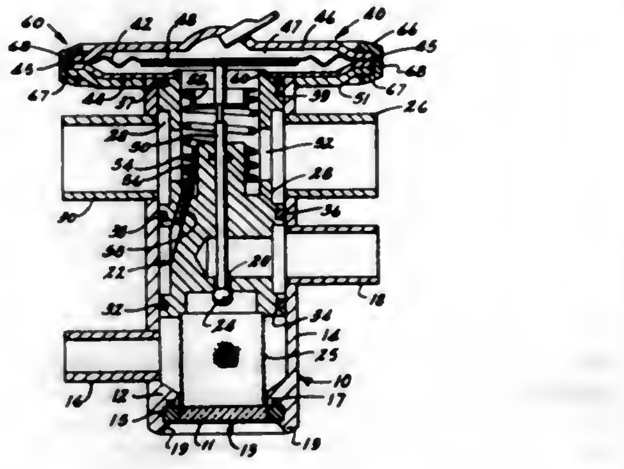


1. An air-conditioning device for raising the temperature of an enclosed space and of any objects stored therein from a first lower temperature to a second higher temperature with an air stream having a dew point temperature which is maintained as close as possible to but less than the temperature of the coldest portion of the enclosed space and the stored object to prevent condensation, said device comprising:
- a tubular enclosure defining a flow channel having an output port and an input port and including circulation means for maintaining a constant air stream from said input port to said output port through said flow channel;
- means communicating said input port and said output port with said enclosed space to establish circulation of said air stream therethrough, said means being arranged and disposed to assure maximum exposure of the enclosed space and the stored objects to said air stream;
- saturation means disposed in said flow channel for substantially completely saturating the air stream passing therethrough with spray water having a temperature substantially equal to the dry bulb temperature of the air stream passing through said input port;
- temperature sensing means responsive to the dry bulb input port air stream temperature and operative to provide a temperature signal as long as the input port air stream temperature is below said second temperature; and
- heating means responsive to said temperature signal disposed in said flow channel intermediate said saturation means and said output port for heating the saturated air stream.

3,388,864
CARTRIDGE TYPE EXPANSION VALVE

Thomas E. Noakes, 17201 Westmoreland, Detroit, Mich. 48219
Filed Sept. 23, 1966, Ser. No. 581,578
13 Claims. (Cl. 236—92)

1. A refrigerant expansion valve comprising a hollow tubular housing defining a cavity; said housing having a high pressure liquid inlet opening, a liquid outlet opening, a low pressure vapor inlet opening, and a vapor outlet opening; a cartridge formed separately from said housing; said cartridge comprising valve body means disposed within the cavity, and a thermostatic power element carried thereon; said power element comprising a container having an expansion charge therein, said container having a movable wall exposed to the vapor flowing from the vapor inlet to the vapor outlet whereby the charge produces movement of the movable wall in accordance with the vapor temperature and pressure; said valve body means having a flow port operatively disposed between the liquid inlet opening and liquid outlet opening; a valve element movable toward and away from the port to control liquid flow therethrough; and force-transmitting means between the movable wall of the power element and the valve element, whereby the position of the valve element is determined by the temperature-pressure relationship of the charge and the media flowing from the vapor inlet opening to the vapor outlet opening; said valve body means comprising a plug slidably insertable into the tubular housing to nest against the housing side wall; said plug having a first peripheral groove interposed between the liquid inlet opening and liquid outlet opening; a first elastomeric sealing element disposed in said first groove to seal against the housing side wall, thereby precluding liquid bypass around the control port; said plug having a second peripheral groove interposed between the two liquid openings and two vapor openings; and a second annular elastomeric sealing element disposed in said second groove to seal against the housing side wall, thereby precluding liquid bypass into the vapor passage formed between the two vapor openings.

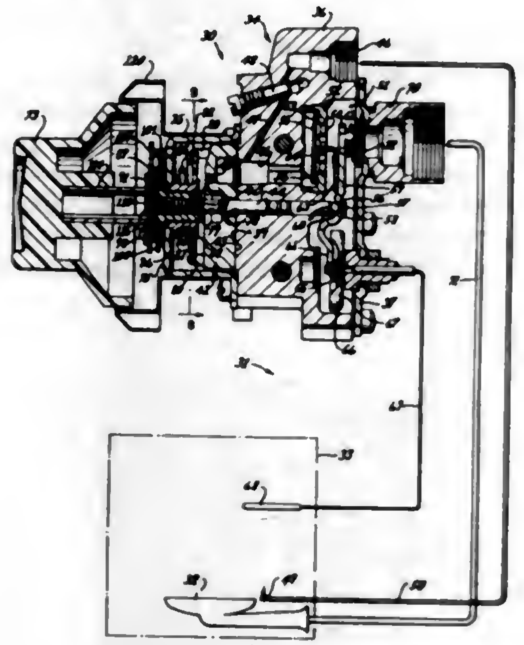


3,388,865
CONTROL DEVICE AND PARTS THEREFOR

James R. Willson, Greensburg, Pa., assignor to Robertshaw Controls Company, Richmond, Va., a corporation of Delaware
Filed Dec. 2, 1964, Ser. No. 415,264
15 Claims. (Cl. 236—99)

1. In combination, a housing means having a wall provided with a cam slot therethrough and having an inlet and an outlet, said cam slot having one edge thereof defining a cam surface means on said wall, a movable valve means for varying the degree of interconnection between said inlet and said outlet, a movable manipulator means carried by said housing means and having a drive means disposed on one side of said cam slot wall, and interconnection means for interconnecting said manipulator means with said valve means, said interconnection means being disposed on the other side of said cam slot wall and having a first part projecting through said cam slot to be moved within said slot by said drive means of said manipulator means and a second part drivingly connected to said valve member, said drive means of said manipulator means engaging said first part of said inter-

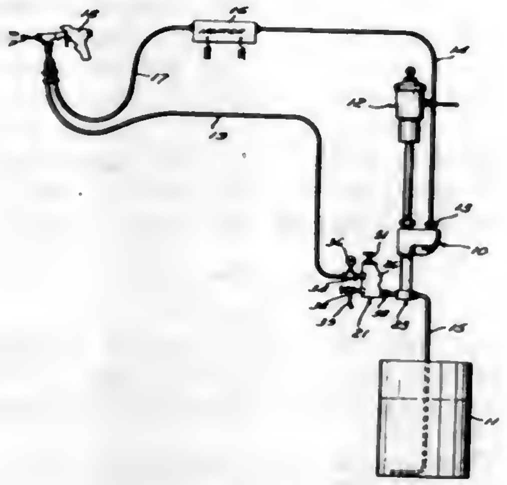
connection means to move said valve means until said cam surface means of said cam slot disengages said driving means of said manipulator means from said first



part of said interconnection means during movement of said manipulator means in one direction.

3,388,866
CLOSED SYSTEM RECIRCULATING ASSEMBLY

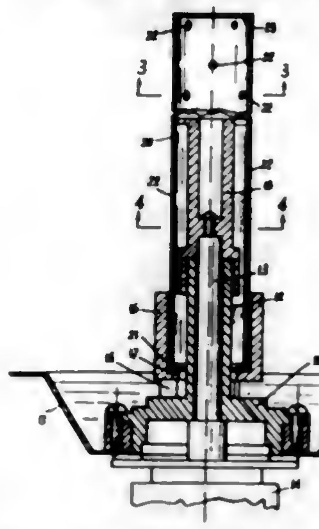
Gustave S. Levey, Houston, Tex., assignor to The Spee-Flo Manufacturing Corporation, Houston, Tex., a corporation of Texas
Filed Jan. 15, 1965, Ser. No. 425,808
7 Claims. (Cl. 239—127)



1. A liquid pressure system comprising a source of liquid, a pump operable to pressurize liquid from said source and deliver it to an outlet, a liquid dispersing device, a supply pressure line connecting said outlet to said dispersing device, and return means connected to said dispersing device operating to return excess liquid for recirculation by said pump, said return means including first relief valve means adjustably operable to control operating pressure at said dispersing device, second relief valve means operable to restrict flow from said first relief valve means when the discharge pressure therefrom is below a predetermined minimum pressure, and a manually operable bleed valve in said return means upstream from said second relief valve means.

3,388,867
LIQUID JET DISTRIBUTING DEVICE

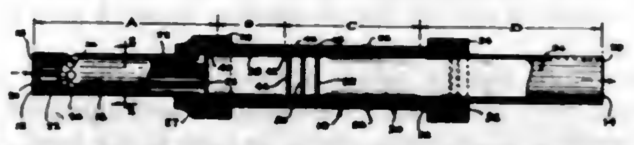
Aldo Adami, Via Montegrappa 14, Baveno, Novara, Milan, Italy
Filed Oct. 28, 1966, Ser. No. 590,352
Claims priority, application Italy, Apr. 28, 1966, 17,232
3 Claims. (Cl. 239—222)



1. A liquid jet distributing device, comprising a base flange secured to the bottom of a vessel containing liquid to be distributed, a central boss projecting from said base flange, a driving motor having a shaft rotatably accommodated in said boss, at least three symmetrically inclined radial blades provided on said base flange and spaced around said boss, a tubular socket arranged on top of said blades and provided with a radially inwardly directed circular flange at its lower end facing said base flange, an outer tube rotatably received with its lower end in said tubular socket and provided at its lower end with a radially inwardly directed circular flange exactly fitting on said flange of said tubular socket, and a coupling sleeve rigidly connecting said motor shaft and said outer tube and arranged to transmit torque from said motor shaft to said outer tube.

3,388,868
FOAM PRODUCING NOZZLE

William R. Watson, Oak Lawn, and Donald R. Anderson, Oswego, Ill., assignors to Nalco Chemical Company, Chicago, Ill., a corporation of Delaware
Filed Oct. 29, 1965, Ser. No. 505,705
8 Claims. (Cl. 239—427)

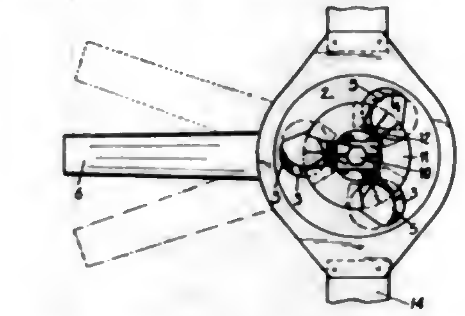


This invention is directed to a foam-producing nozzle comprising a series of continuous fluid-conducting zones. These zones comprise an aspirating zone, a mixing zone, a foam-forming zone and a foam-shaping zone. These zones are in sequential relationship to each other.

3,388,869
APPARATUS FOR SPREADING POWDERED OR GRANULAR MATERIALS

Herbert Vissers, Nieuw Vennep, Netherlands, assignor to Landbouwwerktuigen- en Machinefabriek H. Vissers N.V., Nieuw Vennep, Netherlands, a company of the Netherlands
Filed Sept. 27, 1966, Ser. No. 582,305
Claims priority, application Netherlands, Oct. 27, 1965, 6,513,895
4 Claims. (Cl. 239—659)

The bottom wall of a hopper and the skirt portion of an agitating member are arranged to define a pocket therebetween with the skirt having a notch extending from its marginal edge and adapted for relative oscillation about a mean position located above an aperture in the bottom wall.



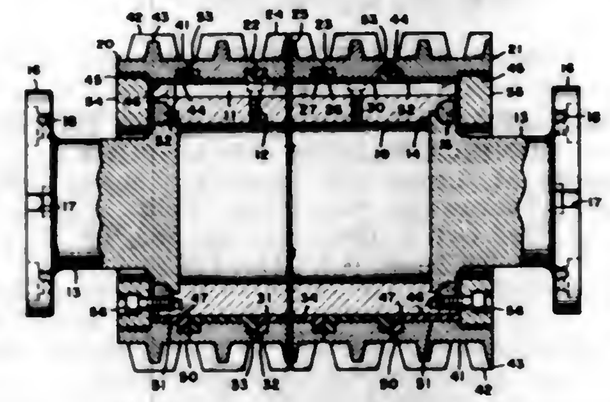
3,388,870
UPGRADING OF LATERITIC ORES

Wilhelm Thumm and Günter Heitmann, Frankfurt am Main, Germany, assignors, by mesne assignments, to The International Nickel Company, Inc., New York, N.Y.
No Drawing. Filed Mar. 29, 1966, Ser. No. 538,243
Claims priority, application Germany, Apr. 7, 1965, M 64,802
14 Claims. (Cl. 241—23)

1. A process for concentrating nickel values contained in lateritic ores which comprises grinding the ore to pelletizing fineness, forming pellets from the ground ore, incorporating in said pellets in concentrating amounts a sulfur-bearing material together with at least one reagent from the group consisting of alkali and alkaline earth metals, feeding the pellets to a tumbling bed heated to a temperature between about 850° C. to about 1250° C. in the presence of reducing agents to metallize the ore so that the ratio of metallic iron to metallic nickel is less than about 10:1 and magnetically separating the metallized portion of the ore to obtain a metallic concentrate containing at least about 8% nickel.

3,388,871
CRUSHING ROLL AND SEGMENTS THEREFOR

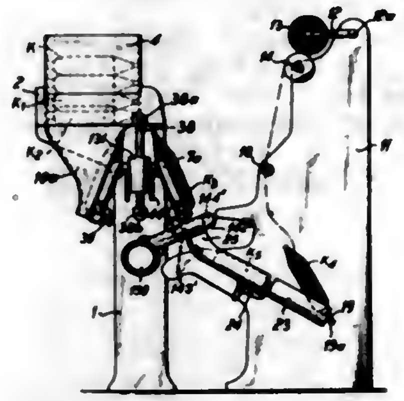
Theodore F. Gundlach, Belleville, Ill., assignor to T. J. Gundlach Company, Belleville, Ill., a corporation of Illinois
Filed Jan. 28, 1966, Ser. No. 523,616
7 Claims. (Cl. 241—295)



The crushing roll assembly includes a plurality of annular segments mounted in clamped relation on a back-up roll. Each segment includes a toothed, metal ring having a resilient liner molded to its inner periphery. A keyed connection is provided between the back-up roll and each resilient liner. The segments include peripheral lateral recesses at opposite side margins. Each liner is substantially U-shaped, having side flanges which occupy the recesses, the flanges extending substantially flush with the sides of the ring. A shaft secured to each end of the back-up roll includes a proportioned coupling. Split rings cooperate with the back-up roll to hold the segments in position and ensure a continuous liner seal.

3,388,872
PNEUMATIC DEVICE FOR SEIZING A STARTING LENGTH OF YARN FROM A COP

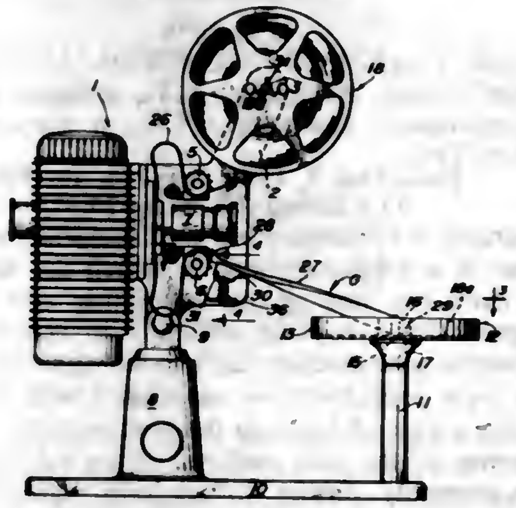
Wilhelm Kupper, Rickelrath, Kreis Erkelenz, Germany, assignor to Walter Reiners, Monchen-Gladbach, Germany
Filed Apr. 1, 1966, Ser. No. 539,394
Claims priority, application Germany, May 29, 1965, R 40,748
9 Claims. (Cl. 242—35.6)



A pneumatic device for seizing a starting length of yarn from a cop includes a suction nozzle member of annular shape having nozzle opening means extending annularly along the inner periphery of the member so as to surround the cop being acted upon, the annular suction member having an internal suction channel extending coaxially about the inner periphery, the opening means forming a substantially continuous circular nozzle slot along the inner periphery, and means for accommodating the cop in substantially coaxial relation to the annular nozzle member, the member and the cop on the nozzle opening means being axially movable relative to one another. The suction channel can have a spiral shape about the nozzle slot. The number of pin means can be mounted on the suction member at the nozzle opening means and peripherally distributed about the opening means, the pin means consisting of barbs having their respective points directed substantially in the flow direction of the suction air current.

3,388,873
FILM REWIND FOR MOTION PICTURE PROJECTOR

Robert Rosenbaum, 6111 N. Washtenaw, Chicago, Ill. 60645
Filed Sept. 8, 1966, Ser. No. 577,903
18 Claims. (Cl. 242—55.21)

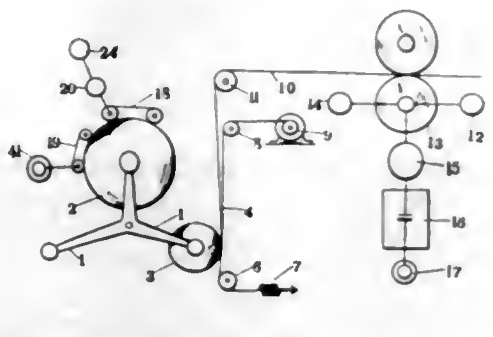


A film projector is provided with a take-up stand having a rotatable housing to receive a take-up reel having a lower flange, hub and removable upper flange. Film is unwound from a supply reel, driven through the projector to a movable guide designed to twist the tape substantially 90 degrees from a horizontal plane to a vertical plane so as to lay the film on its edge near the outer periphery of the lower flange and progressively direct it toward the hub as the take-up reel rotates until the film is unwound whereupon the upper reel flange can be attached to said hub to allow the take-up reel to then be removed to serve as a supply reel.

3,388,874

APPARATUS FOR CONTROLLING THE PERIPHERAL VELOCITY OF A NEW ROLL OF PAPER

Taneji Kishioka, Toyonaka, Osaka, Japan, assignor to Hamada Printing Press Mfg. Co., Ltd., Osaka, Japan
Filed Jan. 3, 1966, Ser. No. 518,428
Claims priority, application Japan, Feb. 1, 1965, 40/5,653
5 Claims. (Cl. 242—58.2)



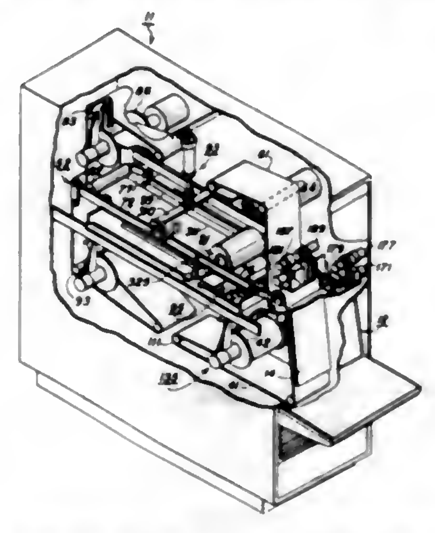
An apparatus for controlling the peripheral velocity of a new roll of paper to be preliminarily driven for automatic joining to an expiring roll of paper in a rotary printing press, comprising a drive belt which contacts the outer periphery of a new roll of paper, a preliminary drive motor connected to said drive belt, a preliminary drive main velocity detector connected to said preliminary drive motor and sensing the speed of said motor, a main velocity detector connected with the press drive and sensing the speed of the press drive, a speed sensing means contacting the outer periphery of the new roll of paper, a preliminary drive secondary velocity detector connected with said speed sensing means, a secondary velocity detector connected with said press drive, and a control circuit connected between said velocity detectors and said preliminary drive motor for driving said preliminary drive motor at a speed for increasing or reducing the peripheral velocity of the new roll of paper depending on the difference between the velocities measured by said velocity detectors.

3,388,875

WEB TRANSPORT CONTROL ASSEMBLY

Edwin Zucker, Rochester, N.Y., assignor to Xerox Corporation, Rochester, N.Y., a corporation of New York
Filed Oct. 1, 1965, Ser. No. 491,991
11 Claims. (Cl. 242—75.51)

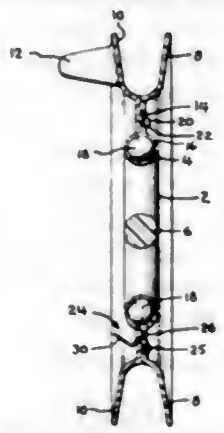
Apparatus for transporting web material over a printing zone in a contact printer in which the web material passes from one storage roll to another and is driven at high speeds by a capstan assembly in contact with the web material intermediate the two storage rolls. A pair of storage loop assemblies one associated with each storage roll forms a pair of loops in the web material which vary in response to the web material being advanced by the capstan assembly. As the storage loop assemblies are displaced, a responsive signal is generated to drive a torque motor which in turn rotates the respective storage roll to either increase or decrease the slack accordingly. A pair of rotational damper assemblies one associated with each storage roll provides a variable rotational damping force to the respective storage roll in response to the quantity of web material wound thereon.



3,388,876

REEL

Henry Allen Wilson, 1000 Eldorado Ave., Clearwater Beach, Fla. 33515
Filed Nov. 15, 1966, Ser. No. 594,475
10 Claims. (Cl. 242—96)

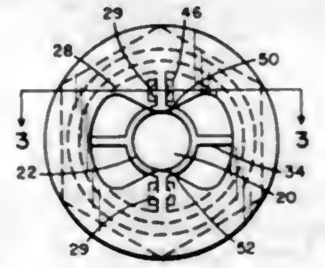


A reel for winding a coil of rope having means for separating the pulley sections to allow removal of the coil. In one form of the invention the pulley sections are releasably locked by tabs and a keeper spring. In another form the pulley sections are releasably locked together by means of a bayonet joint.

3,388,877

FLANGE ADAPTOR FOR ALTERING THE END CONFIGURATION OF A SPOOL

Marguerite M. Lauen and James E. Lauen, both of 6647 Thornwood, San Diego, Calif. 92111
Filed Oct. 3, 1966, Ser. No. 583,708
2 Claims. (Cl. 242—118.4)

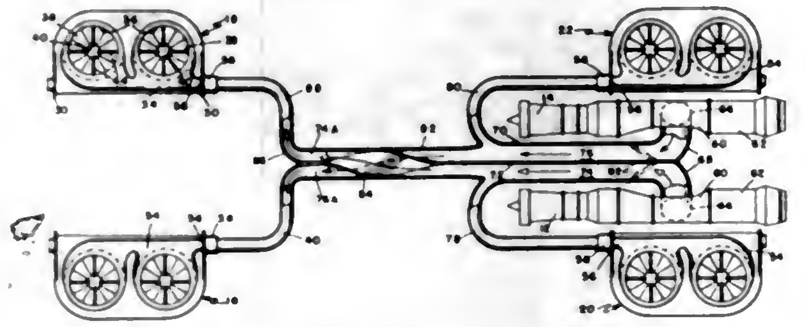


The flange adaptor of this invention fits on a spool construction and changes the configuration of the end flange of the spool so that rolling of the spool is selectively prevented, while the spool construction may otherwise be used for conventional purposes.

3,388,878

VTOL AIRCRAFT WITH BALANCED POWER, RETRACTIBLE LIFT FAN SYSTEM

John M. Peterson and Waldo Virgil Opfer, Jr., San Diego, Calif., assignors to The Ryan Aeronautical Co., San Diego, Calif.
Filed June 1, 1965, Ser. No. 459,987
5 Claims. (Cl. 244—23)

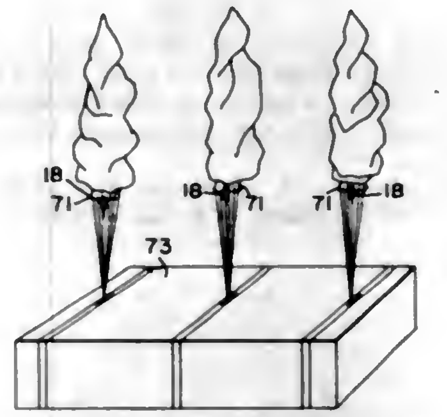


The VTOL aircraft has a plurality of jet engine driven lift fans interconnected by a balanced power distribution system to ensure constant efficient use of total power and to provide symmetrical lift about the aircraft's center of gravity for stability; in the event of an engine failure the remaining power is still properly distributed to maintain symmetrical lift.

3,388,879

ELECTRONICALLY TIME DELAYED CUTTER

Frank T. Pisano, Cherry Hill, N.J., and James H. Daniels, Philadelphia, Pa., assignors to the United States of America as represented by the Secretary of the Army
Filed July 31, 1967, Ser. No. 657,732
11 Claims. (Cl. 244—152)

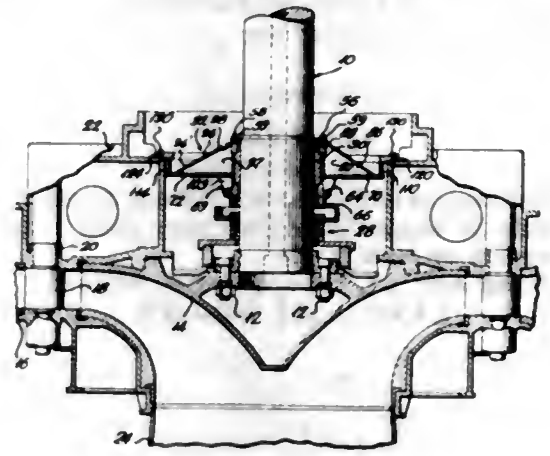


A delay type cutting device is provided to sever the reefing line of a load-dropping parachute after a limited time for free fall, thereby to insure opening of said parachute. A current source, such as a thermal battery, is manually triggered at the time of the load release, and generates an electric current which, after being electrically delayed for the predetermined delay time required, is passed through a bridgewire seated in an explosive charge, thereby initiating an explosion. The explosion of the charge ruptures a diaphragm or seal and drives a cutting blade forward toward and through the reefing line, thereby severing it. The electrically time delayed cutter comprising the invention is adapted for multiple use with a plurality of parachutes in dropping large and massive loads. Thus a plurality of such cutters in a multichute single-drop system may be used when the load or cargo is too massive to be supported by a single parachute. The electrical time delay is designed to be temperature stable from —100° F. to +250° F., thereby eliminating the problems of either premature or excessively delayed parachute blossoming presently attendant with multichute systems.

3,388,880

FLEXIBLE BEARING SUPPORT

Lester L. Knight, Jr., Newport News, Va., assignor to Newport News Shipbuilding and Dry Dock Company, Newport News, Va., a corporation of Virginia
Filed Apr. 3, 1967, Ser. No. 628,052
10 Claims. (Cl. 248—2)

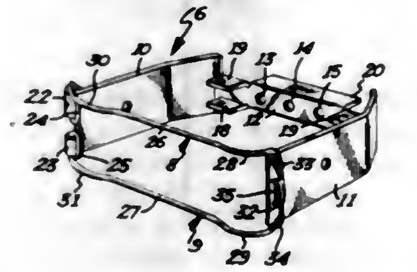


The support comprises two substantially complementary halves which are bolted together. A central inner annular portion is adapted to support a bearing about a shaft. Studs extend upwardly from this inner support portion for connecting the bearing in place. An intermediate portion comprises an annular radially outwardly extending plate means having a plurality of access holes formed therein. A plurality of radially extending gusset plates are connected between the intermediate portion plate means and the inner bearing support portion for reinforcing the structure. These first-mentioned gusset plates are connected with the intermediate plate means above the plate means. A further plurality of reinforcing gusset plates are connected between the undersurface of the intermediate portion plate means and the inner bearing support portion. An annular flexible web portion is secured along one edge thereof to the intermediate portion plate means adjacent the outer periphery thereof, the web portion extending perpendicular thereto. An annular flange portion is connected at the inner periphery thereof to the opposite edge of the web portion and extends radially outwardly of the web portion. The flange portion extends substantially perpendicular to the web portion and parallel with the intermediate portion plate means. The flange portion is provided with a plurality of holes for securing the flange portion to a suitable supporting surface.

3,388,881

DRAIN PIPE MOUNTING

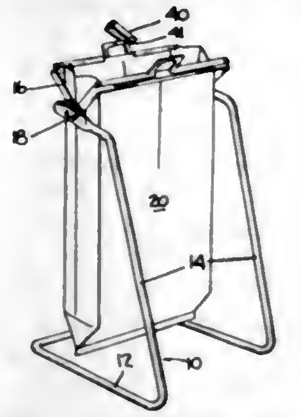
Leroy E. Anderson, Detroit Lakes, Minn., assignor to American Supply, Inc., Detroit Lakes, Minn., a corporation of Minnesota
Filed Aug. 5, 1966, Ser. No. 570,540
13 Claims. (Cl. 248—74)



Disclosed herein is a drain pipe mounting formed from a single generally flat rectangular plate which is U-shaped in form and has a base portion from which centrally disposed wall-engaging spacer elements are stricken inwardly and a pair of pipe grippers are struck outwardly from opposite sides of the base portion at each end of the spacer elements. A spring wire loop is pivotally connected to one end of the legs of the plate and is adapted to engage the other leg in pipe-clamping relation. The wire loop is characterized by a flat intermediate portion and outwardly curved terminal portions located outwardly of the vertical plane of the flat portion and deformable when tension is applied to the end of the loop to effectively hold the drain pipe against the gripper element of the plate.

3,388,882
BAG HOLDER

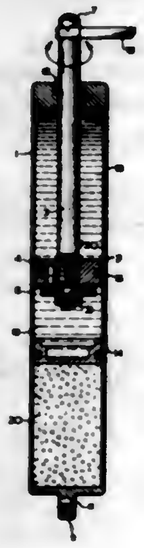
Edwin E. Burroughs and Gene H. Wilkes, Pensacola, Fla., assignors to St. Regis Paper Company, New York, N.Y., a corporation of New York
Filed Apr. 27, 1966, Ser. No. 545,621
3 Claims. (Cl. 248—97)



A bag holder having a supporting frame carrying a pair of jaws which include holding members and clamp members for grasping a portion of the mouth of the bag. The clamp members have inner Z-shaped portions which coact with one another to form a handle for opening and closing the jaws.

3,388,883
HYDROPNEUMATIC SUPPORT COLUMN OF ADJUSTABLE LENGTH

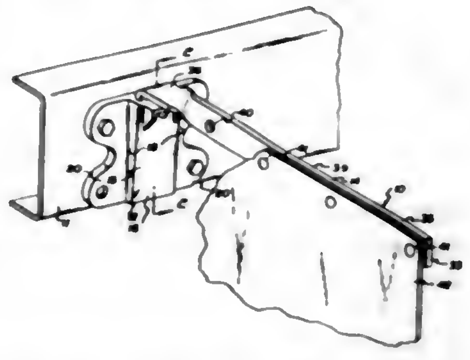
Ludwig Axthammer and Felix Wössner, Schweinfurt, Germany, assignors to Fichtel & Sachs A.G., Schweinfurt, Germany
Filed Feb. 14, 1966, Ser. No. 527,365
Claims priority, application Germany, Feb. 25, 1965, F 45,359/65; July 16, 1965, F 46,621/65
10 Claims. (Cl. 248—188.2)



A hydropneumatic support column having a cylinder, a piston in the cylinder whose piston rod projects from the cylinder, and engaging means on the piston rod and the cylinder for connecting the column to a load and to a support. A recess at least partly extending through the piston in the direction of the cylinder axis may be opened and closed by a valve operated from outside the cylinder to connect or separate two axial parts of the cylinder filled with liquid except for a gas cushion remote from the piston in one part.

3,388,884
MUD FLAP HOLDER

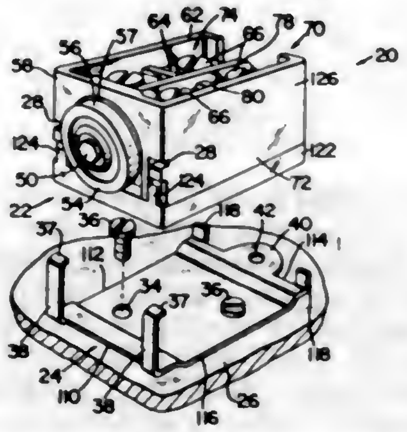
Karl W. Eggler, 8362 East Blvd., Vancouver, British Columbia, Canada, and James R. Waddell, 2435 Deerlake Drive, Burnaby, British Columbia, Canada
Filed Oct. 10, 1966, Ser. No. 585,668
4 Claims. (Cl. 248—224)



A mud flap holder in which a mud flap is attached to a supporting frame having a vertical leg adapted to slidably fit in an upwardly opening socket formed in a bracket attached to a vehicle frame. The socket is bent inwardly at its lower end to bend the leg out of its normal state of repose and force the latter against one side of the socket thereby resulting in the insertion of a projection on the leg into an opening formed in the bracket.

3,388,885
SWITCH CONSTRUCTION WITH QUICK CONNECTING MOUNTING BRACKET

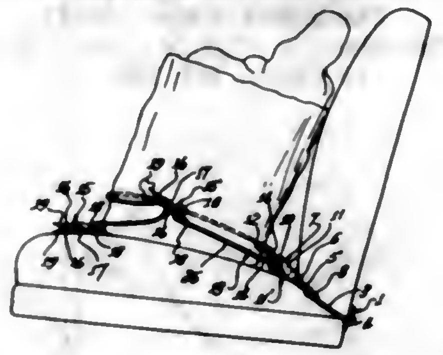
Ronald W. Holmes, Columbus, Ohio, assignor to Robertshaw Controls Company, Richmond, Va., a corporation of Delaware
Filed Feb. 25, 1966, Ser. No. 530,010
7 Claims. (Cl. 248—310)



A switch construction has a switch casing with a main body with the general shape of a parallelepiped with a casing tongue extending from one side of said parallelepiped, said tongue having a screw receiving hole. The opposite side of the main body has two hook receiving openings. A supporting bracket has the general shape of a rectangle of substantially the same extent as one side of said parallelepiped with two hooks extending from one raised flat edge of said rectangle and hooking into said hook receiving openings. Said bracket also has a bracket tongue extending from the opposite raised flat edge of said rectangle with a threaded screw receiving hole. A casing attaching screw passes through said holes and fastens said casing and bracket together. A central depressed body of said rectangle has one or more bracket attaching screw holes to receive one or more bracket mounting screws with heads between said depressed body and said switch casing.

3,388,886
PACKAGE TETHERING DEVICE

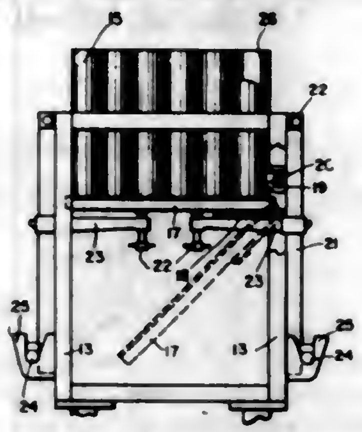
Lynne Tucker, 3200 Parkvista Drive,
La Crescenta, Calif. 91014
Filed May 23, 1966, Ser. No. 552,082
5 Claims. (Cl. 248—361)



A package tethering means for use in securing packages, handbags and the like on motor vehicle seats comprising an elongated, cord-like tethering member having an anchoring means for engagement with a vehicle seat connected thereto by means affording the longitudinal adjustment of the tethering member relative to the anchoring means and each end of the tethering member having means for connecting the portion thereof at that side of the anchoring member into a package engaging and tethering instrumentality.

3,388,887
DEVICE FOR MOLDING SOLID THERMOPLASTIC BODIES

Norman C. Frost, Jr., North Reading, Mass., assignor to W. R. Grace & Co., Cambridge, Mass., a corporation of Connecticut
Filed Mar. 15, 1966, Ser. No. 534,333
4 Claims. (Cl. 249—120)

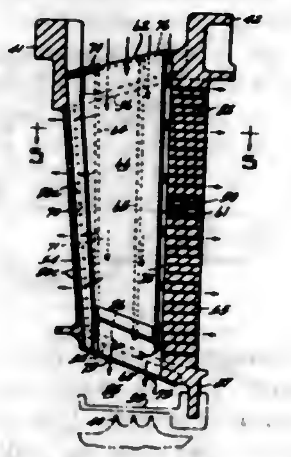


1. A device for molding plastic bodies which comprises

(a) an upstanding frame,
(b) a plurality of vertically aligned hollow mold-forming cylinders fixed to the frame, each of said cylinders being secured to the adjacent cylinders,
(c) an imperforate rigid panel hingedly affixed at one of its ends to the frame for openable and closeable movement underneath the bottom portions of the cylinders, and
(d) means for holding said panel in closed position including a vertical bar fixed on the upstanding frame and a clamp mounted on the vertical bar for slidable movement thereon.

3,388,888
COOLED TURBINE NOZZLE FOR HIGH TEMPERATURE TURBINE

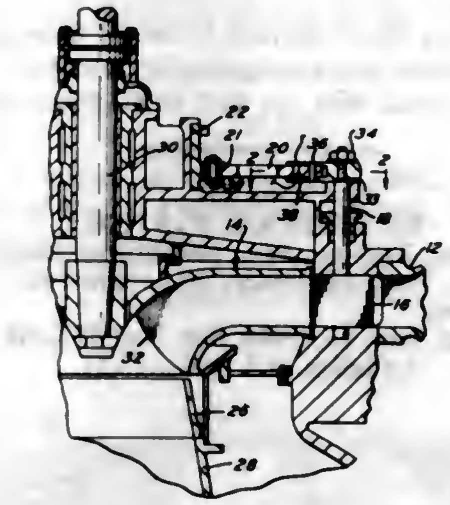
David M. Kercher and Eugene F. Adiutori, Cincinnati, Ohio, assignors to General Electric Company, a corporation of New York
Filed Sept. 14, 1966, Ser. No. 579,324
9 Claims. (Cl. 253—39.1)



A hollow vane body has internal partitions dividing the vane interior into a plurality of radially extending regions including a centrally disposed plenum and separate passages intermediate the central plenum and the leading and trailing edges and the convex and concave side walls. A heat transfer fluid is introduced into the centrally disposed plenum and selected ones of the surrounding passages, from which the fluid is directed in an effective and efficient manner to adequately cool all portions of the vane body.

3,388,889
MEANS TO SIGNAL INCIPIENT SHEAR PIN FAILURE

Richard B. Willi, Norristown, Pa., assignor to Baldwin-Lima-Hamilton Corporation, Philadelphia, Pa., a corporation of Delaware
Filed June 8, 1967, Ser. No. 644,545
7 Claims. (Cl. 253—122)



Shear pins are provided to prevent damage to wicket gates in hydraulic machines in the event an obstruction blocks the normal closure of one or more wicket gates. Frequently prior to actual rupture of the shear pins, yielding will take place many operating cycles prior to rupture. To signal incipient shear pin failure a hole may be drilled into the shear pin. A pair of electrodes may be placed within the hole in the shear pin and closure of such electrodes would be maintained as long as the hole in the shear pin remains true and straight. Any deformation of the hole causes a rupture of a switch mechanism and disengagement of the electrodes and actuation of a signal system.

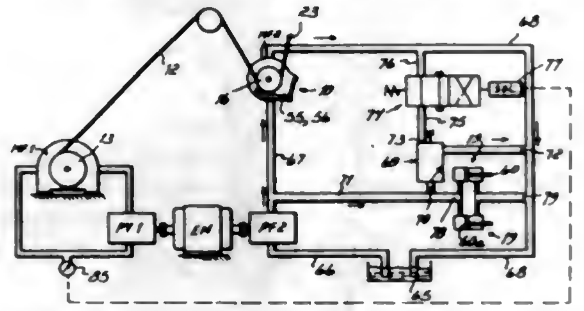
3,388,890

WINCH CABLE ANTI-SLACK UNIT

Ellis H. Born, David G. Raymond, Gary C. Smith, and David L. Thurston, Columbus, Ohio, assignors to Abex Corporation, New York, N.Y., a corporation of Delaware

Filed Mar. 6, 1967, Ser. No. 620,724

16 Claims. (Cl. 254—175.7)



A device for preventing cable from "backlashing" or becoming "birdcaged" as it is payed out or taken in from a motor driven drum or winch. The cable passes over a motor driven pulley operative to pull the cable under tension off of the drum as cable is payed out and operative to maintain a tension on the cable when it is taken in.

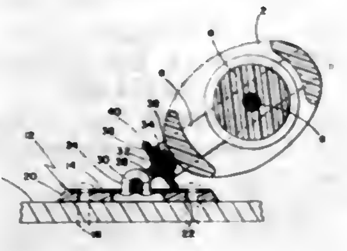
3,388,891

SWIVEL BLOCK

Nicholas Lawrence De Meo, Medford, Mass., assignor to Schaefer Equipment Company, Pittsburgh, Pa., a corporation of Pennsylvania

Filed Jan. 11, 1967, Ser. No. 608,695

3 Claims. (Cl. 254—195)



A swivel deck block adapted to swivel through 360° in a horizontal plane and constructed to maintain the block shell out of contact with the deck in all positions.

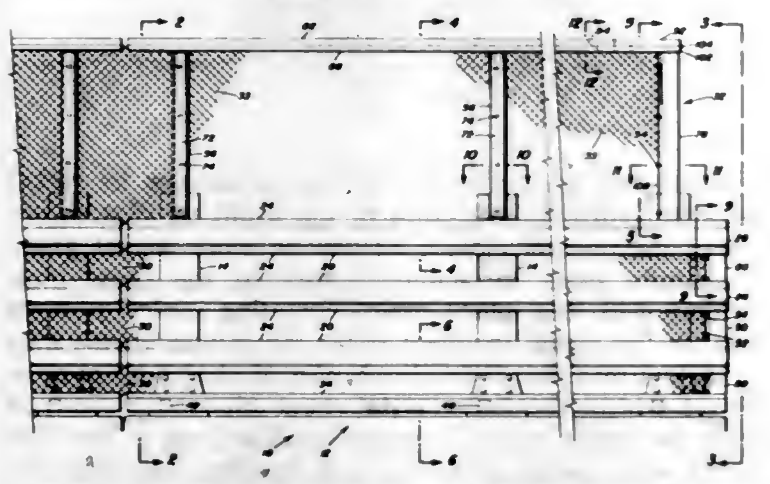
3,388,892

GUARDRAIL SYSTEM

John S. Case, Towson, Md., assignor to Anchor Post Products, Inc., Baltimore, Md., a corporation of New Jersey

Filed June 15, 1966, Ser. No. 557,808

4 Claims. (Cl. 256—13.1)



A screened highway safety rail arrangement is provided for use in locations requiring wire fabric as well as usual collision buffer strips. These buffer strips or rails are mounted on masonry-supported spaced posts and are themselves spaced. Thus the invention utilizes screen strips or panels for use between-the-rails, above the rails, and also for fan guards at the ends of the rails. Special clips and bolts cooperating with bars, T-slots, angle strips, and framing are specially designed for versatile use in differing situations and for safe, easy installation from the roadway side in cases of bridge application.

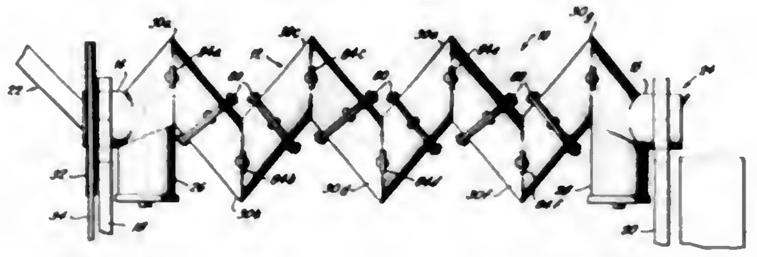
3,388,893

MATERIAL HANDLING DEVICE

Raymond C. Hall, 2121 Browning, Manhattan, Kans. 66502

Filed Mar. 23, 1962, Ser. No. 182,021

13 Claims. (Cl. 259—3)



3. In a continuous mixing device having an open-ended elongated chamber of undulant form mounted for rotation about the general longitudinal axis thereof, the improvement comprising:

material feed and discharge volume control means disposed at least proximate each end of said elongated chamber to independently regulate the volume of material passed thereby upon rotation of said elongated chamber.

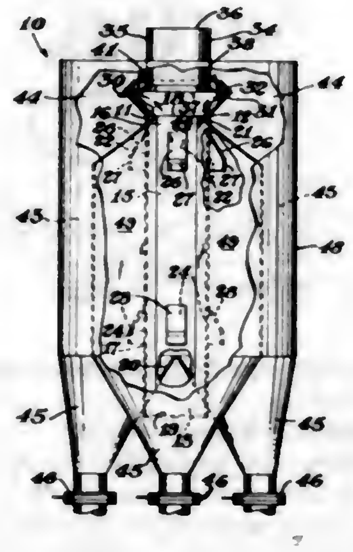
3,388,894

BLENDING APPARATUS

James W. Harrison, Freeport, Tex., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Filed July 14, 1967, Ser. No. 653,490

7 Claims. (Cl. 259—4)



A multi-compartment hopper is provided, each of the compartments having a separate discharge, each compartment being supplied by a common supply header which divides incoming material more or less equally between the compartments. Back flow of granular material from one compartment to another is prevented.

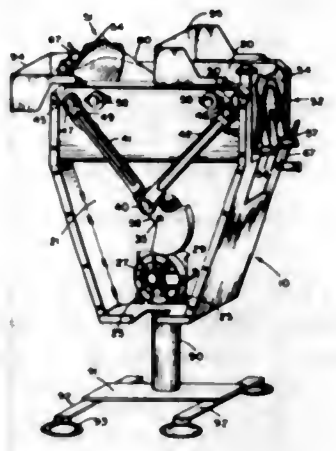
3,388,895

METHOD AND APPARATUS FOR MIXING CONTAINED LIQUIDS

Axel E. Ogren, Mayfield Heights, Ohio, and Victor M. Willis, Dolton, Ill., assignors to The Sherwin-Williams Company, Cleveland, Ohio, a corporation of Ohio

Filed Aug. 17, 1966, Ser. No. 572,954

8 Claims. (Cl. 259—75)



A liquid mixing method and apparatus for mixing liquids within a closed cylindrical container by repeatedly oscillating the container through an arc of at least 90 degrees about an axis which passes through the container and its contents.

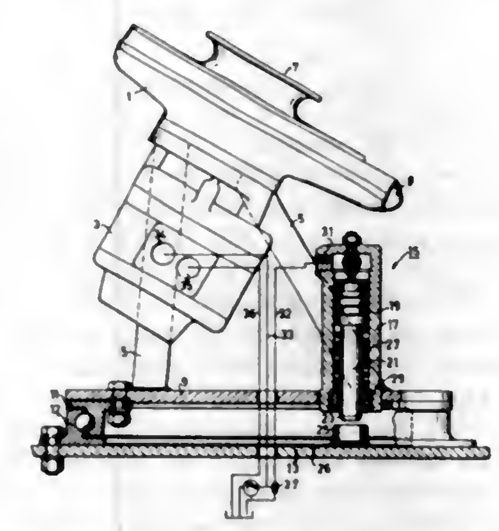
3,388,896

OIL CIRCULATING DEVICE FOR PREVENTING SEDIMENTATION IN OIL STORAGE TANKS

Axel Mentor Isaksson, P.O. Box 77, Arjang, Sweden

Filed Mar. 3, 1967, Ser. No. 620,397

8 Claims. (Cl. 259—95)



A pump unit located at the bottom of an oil storage tank and with its outlet inclined downward toward the tank bottom. The pump unit is revolvable around a vertical axis and keeps the oil circulating in the tank to prevent sedimentation.

3,388,897

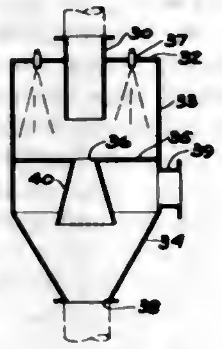
APPARATUS FOR SEPARATING AND COLLECTING PARTICLES CARRIED BY GASES

Ralph R. Calaceto, Ridgewood, N.J., assignor to Automotive Rubber Co., Inc., Detroit, Mich., a corporation of Michigan

Continuation of application Ser. No. 776,797, Nov. 28, 1958. This application Jan. 25, 1963, Ser. No. 254,014

3 Claims. (Cl. 261—111)

1. In a gas treating apparatus, the combination comprising a housing having a flat top portion and a vertical cylindrical side wall extending downwardly from the periphery of the flat top portion, gas inlet means comprising a vertical tubular thimble extending vertically through the top wall portion into the housing, the lower end of said thimble terminating in spaced relation to the upper end of said side wall, said housing including a frustoconical section extending downwardly from the lower end of said side wall and having a restricted opening at the lower end thereof, said housing including a horizontal transverse plate intermediate the top and bottom of said side wall, said plate being imperforate except for an opening therein aligned with the axis of said thimble, a plurality of nozzles in said top portion between said thimble and said side wall and spaced therefrom for directing a plurality of jets of liquid downwardly into the space between the side wall and the thimble onto said transverse plate, said nozzles being spaced circumferentially about said top portion, the lower end of said side wall extending downwardly below said transverse plate, said restricted opening being aligned with the axis of the thimble and the opening in said plate and forming a discharge outlet for liquid, said housing including an outlet opening for gas positioned in said side wall at a level below said plate and above said opening in said frustoconical section, a conduit extending laterally from said gas outlet opening, a second set of nozzles mounted in the side wall of said housing above said plate and spaced around the periphery of said housing and said second set of nozzles having their axes extending tangentially of the side wall of the housing for directing liquid in a rotary fashion around the inner surface of the side wall above said plate.



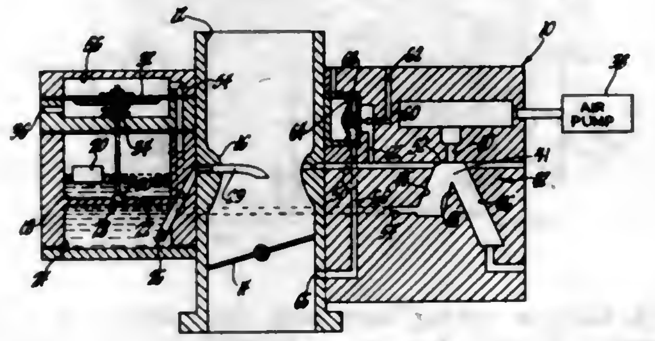
3,388,898

FUEL SYSTEM

Floyd A. Wyczalek, Birmingham, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Sept. 16, 1965, Ser. No. 487,756

8 Claims. (Cl. 261—24)

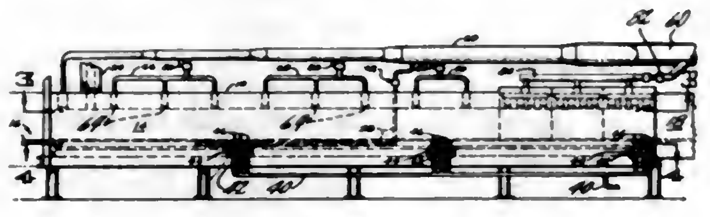


An internal combustion engine fuel system including a nozzle adapted to discharge fuel for mixture with air and fluid amplifier means adapted to control fuel flow to said nozzle in accordance with variations in a fluid signal responsive to engine operating conditions.

3,388,899

HEATING SECTION OF DECORATING LEHR

Robert A. Fuller, West Hartford, Conn., assignor to Emhart Corporation, Bloomfield, Conn., a corporation of Connecticut
Filed Mar. 30, 1966, Ser. No. 538,625
9 Claims. (Cl. 263—8)

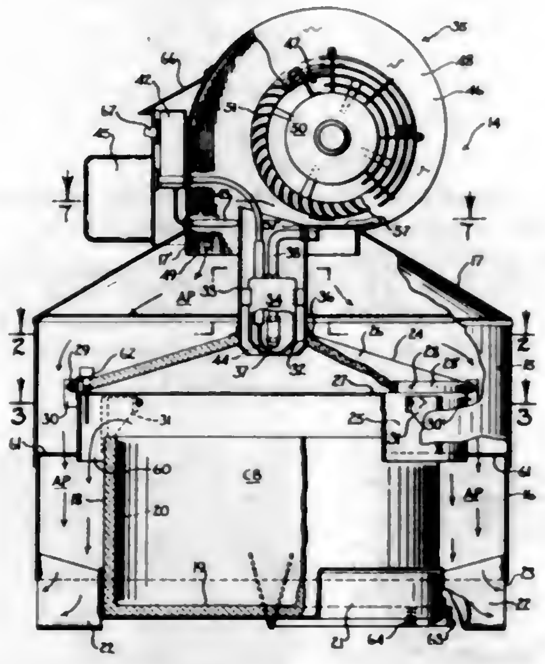


A decorating lehr in which the pre-heat and firing zones include a floor structure above which the ware is adapted to be conveyed on a mesh type conveyor. A plurality of longitudinally extending flues extend at least part way along the floor structure, and each flue has a burner nozzle so mounted therein as to discharge exhaust gases in an upstream direction. Thin heat radiating tiles form the upper boundary of each flue and some of these are spaced from one another to provide slots through which flue exhaust gases are dispersed upwardly through the mesh conveyor. A plurality of tubes extend transversely inwardly above the heat radiating tiles, and each tube has a plurality of nozzle openings through which air is directed upwardly and through the conveyor to create an excess of oxygen in the lehr. Burners in the roof structure of the lehr burn off the volatilized resins driven from the ware by these gases thus preventing the resins from condensing inside the lehr.

3,388,900

TOBACCO CURING AND DRYING APPARATUS

John S. Taylor, Jacksonville, Fla., assignor to Tifcon Company, Jacksonville, Fla., a corporation of Florida
Filed June 7, 1966, Ser. No. 555,796
10 Claims. (Cl. 263—19)

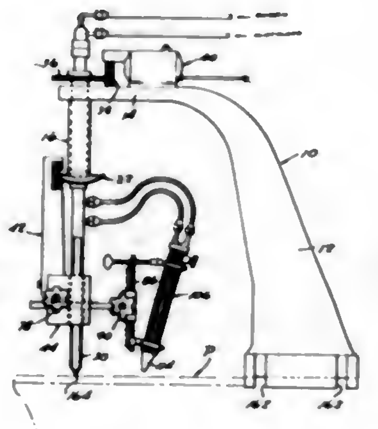


A tobacco curing barn with the tobacco to be cured hanging in tiers, has an air heating and circulating unit setting on the middle of the floor of the barn. The air is drawn into the top of the unit by an air circulating fan and is discharged from the bottom thereof along with the products of combustion to flow radially in all directions across the floor of the barn. The air heating and circulating unit has a cup-shaped fire pot coaxial with and located in the bottom portion of an inverted cup-shaped outer casing. The side walls of the fire pot and outer casing are uniformly spaced to provide an annular air passage. Legs on the unit support the same with the bottom edge of the casing spaced above the floor of the barn to provide an outlet from the annular air passage. A hood-like flame shield supported above the fire pot directs the air drawn into the top of the unit into the annular air passage. The peripheral portion of the flame shield projects beyond the mouth of the fire pot to constrict the entrance into the annular air passage and produces a low pressure zone at the mouth of the fire pot. An oil burner nozzle supported on the top wall of the outer casing receives air for combustion from the air circulating fan and directs flame down into the fire pot.

3,388,901

FLAME CUTTER CARRIED BY ANNULAR CAM RING AND ROTATING RADIUS ROD

Herman V. Ferguson, 4504 Valentine, Fort Worth, Tex. 76107
Filed June 3, 1966, Ser. No. 555,088
8 Claims. (Cl. 266—23)



1. A device of the character described, comprising a frame having a work-engaging member, a radius rod journalled on the frame and laterally spaced from said work-engaging member, said rod having a pointed work-engaging end, said frame having a tubular housing fixed thereto and surrounding said rod, a fixed annular cam ring conforming in contour to the curvature of the surface of the work surrounding and supported on said housing, a cam arm block supported to move along the rod and to turn with the rod, a cam arm fixed to said block, said cam arm having opposed cam follower means engaged with opposite sides of the cam ring, a cutting torch assembly comprising a lateral member carried by and extending from said cam arm block, a torch carried by said lateral member, and means for rotating the radius rod.

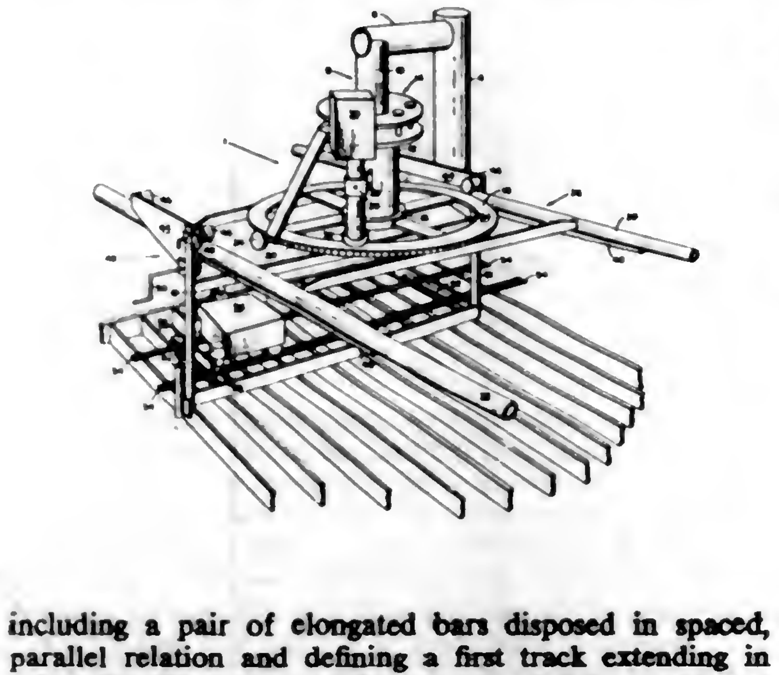
3,388,902

PLATE CUTTING APPARATUS

Willie C. Calhoun, Huntsville, Ala., assignor to the United States of America as represented by the Secretary of the Army
Filed June 14, 1966, Ser. No. 558,219
6 Claims. (Cl. 266—23)

1. An apparatus for cutting a metal plate supported on a metal-working table comprising, in combination: a vertical column supported at its lower end for rotation through 360° about its vertical axis; a cantilever beam projecting from the upper end of said column and disposed horizontally; a cylindrical arm member depending vertically from the terminal end of said beam and disposed in spaced parallel relation with said column; a ring member disposed

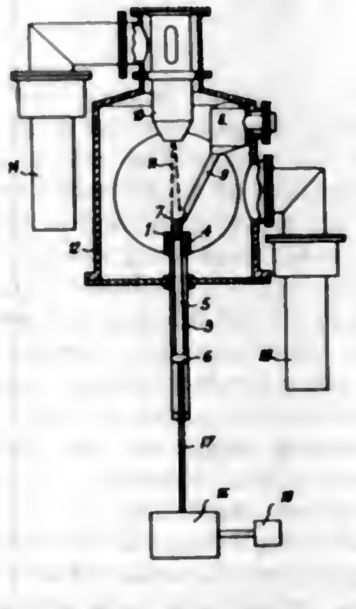
coaxially of said cylindrical arm member and supported by the lower end thereof for rotation through 360° about the axis thereof; a rotary drive mechanism supported by said cylindrical arm member and having means adapted for engagement with an annular portion of said ring for rotating the same; a first frame rigidly secured to the lower side of said ring member and disposed in a horizontal plane normal to the axis of said arm, said first frame including a pair of elongated bars disposed in spaced, parallel relation and defining a first track extending in a first direction; a second frame suspended from said first frame and carrying a second elongated track disposed horizontally below said first track in spaced relation therewith and extending in a second direction transversely of said first direction; and a gas-operated cutting means supported on said second track.



3,388,903

FURNACE FOR MANUFACTURING INGOTS OR BARS OF METAL OR ALLOYS, PARTICULARLY BARS OF URANIUM CARBIDE

André Accary and André Treillou, Paris, and Jean Trouvé, Versailles, France, assignors to Commissariat à l'Energie Atomique, Paris, France
Filed Dec. 7, 1964, Ser. No. 416,547
Claims priority, application France, Dec. 9, 1963, 956,480
5 Claims. (Cl. 266—33)

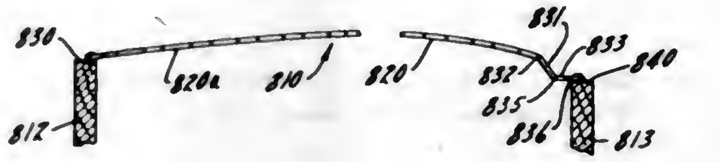


The present disclosure relates to electron beam furnaces for manufacturing ingots or bars of metal, particularly bars of uranium carbide. An electron beam furnace of the instant type generally comprises an enclosure having vacuum pumping means attached thereto. Within this enclosure is a bottomless double walled crucible of a cylindrical shape which diverges at the upper end to receive and contain metal. A head, vertically movable within the cylinder, and means for controlling the movement thereof constitute the base of the furnace. One or more electron beams are directed into the upper open end of the casting crucible to heat metal therein. The furnace also includes means for circulating a coolant fluid in the double wall of the crucible and a system for supplying the material to be melted, in granular form.

3,388,904

SPRING CONSTRUCTION

Lawton H. Crosby, 403 Center Ave., Lake Bluff, Ill. 60044, and Eugene B. Feingold, 3500 N. Lake Shore Drive, Chicago, Ill. 60613
Continuation-in-part of applications Ser. No. 301,552, Aug. 12, 1963, and Ser. No. 434,563, Feb. 23, 1965. This application Nov. 28, 1966, Ser. No. 602,448
8 Claims. (Cl. 267—111)

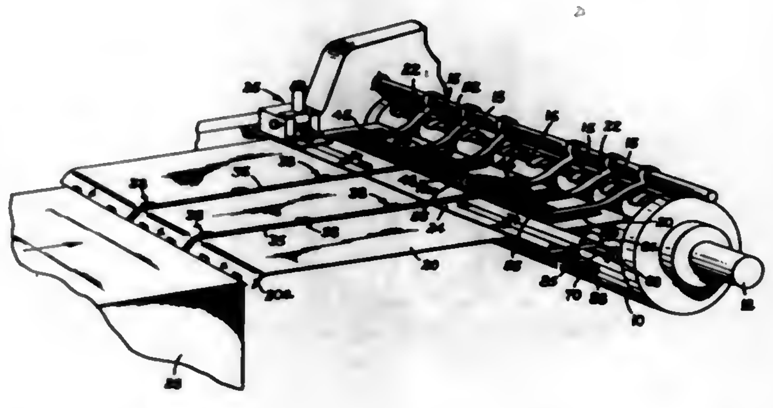


A spring arrangement for furniture or the like including a sinuous spring band stretched from a substantially circular relaxed form to an extended form. The spring band includes a back band portion bent downwardly generally perpendicular to the curve of the main body portion of the band. Horizontal translatory means for lowering the back band portion as it rotates under load connects the lower end of the back band portion to a back rail.

3,388,905

SHEET FEEDING MEANS HAVING REGISTER MEANS FOR UNDERLAPPING FEED

Elmer Dale Nash and Norman Karl Henkel, Dayton, Ohio, assignors to Harris-Intertype Corporation, Cleveland, Ohio, a corporation of Delaware
Filed Dec. 23, 1965, Ser. No. 515,984
4 Claims. (Cl. 271—13)



In a printing press, an endless sheet feeding conveyor is provided by endless chains extending along the feed table and having grippers spaced by a distance such as to convey sheets with the leading edge lapping a trailing portion of the preceding sheet; the grippers open to release the leading edge of a sheet under retaining hooks downstream along the feed table, the hooks opening automatically by deflecting the path of the chain causing spreading of the gripper parts after the grippers pass beneath the hooks.

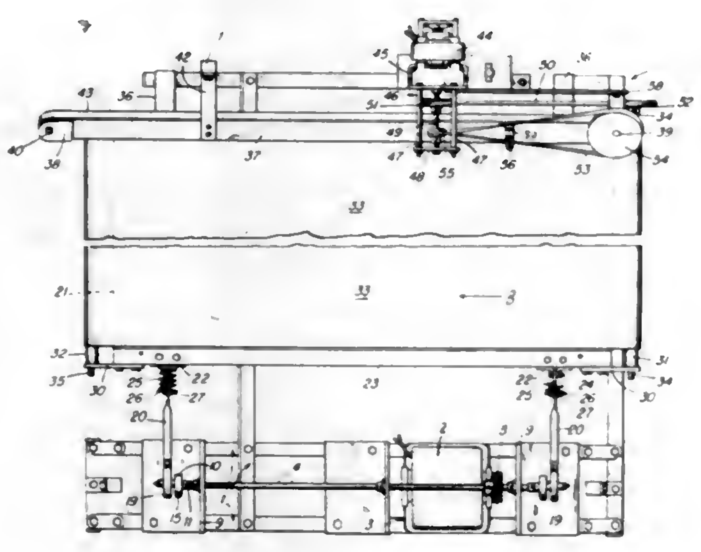
3,388,906

VIBRATING CONVEYOR

John G. Attwood, Oak Park, and Robert L. Kosrow, Elk Grove, Ill., assignors to Union Special Machine Company, Chicago, Ill., a corporation of Illinois

Filed June 4, 1965, Ser. No. 461,377

11 Claims. (Cl. 271—49)



An endless belt conveyor for moving flexible material work pieces to a device for subsequent handling cooperating with a vibrating conveyor which moves the work pieces across the belt conveyor into contact with a mechanism which algins the work pieces relative to the subsequent handling device while they are being moved toward that device by the belt conveyor.

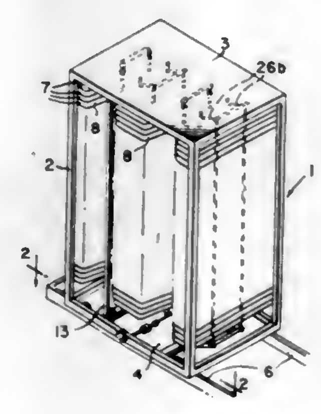
3,388,907

SHEET STACK JOGGING MECHANISM

Donald L. Snellman and Jack D. Keeler, Seattle, Wash., assignors to Norfin, Inc., Seattle, Wash., a corporation of Washington

Filed July 27, 1966, Ser. No. 568,325

9 Claims. (Cl. 271—89)



A device for jogging or laterally "tapping" a loosely-formed stack of sheets in order to form neat piles in receiving bins having a plurality of vertical rows of shelves. A plurality of rows of jogging rods divide the shelves into sheet receiving compartments and the jogging rods are caused to move in arcuate paths by swing links and the rods are moved in unison by actuating means as a resulting of shifting of the receiver bins.

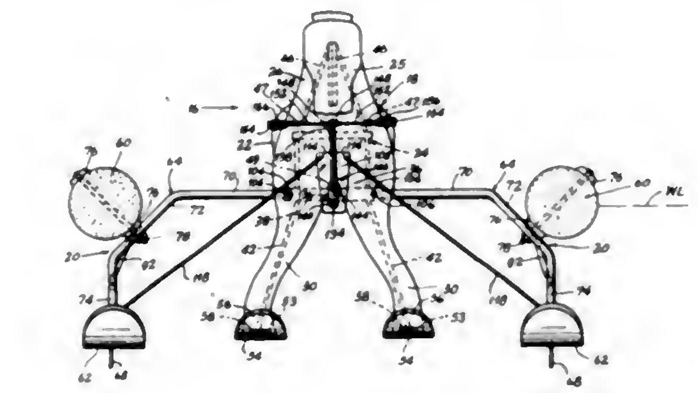
3,388,908

WATER SKIING APPARATUS

Ferdinand P. Ruck, 9776 Big Bend Road, St. Louis County, Mo. 63122

Filed Nov. 20, 1964, Ser. No. 412,808

2 Claims (Cl. 272—1)



For adults and children, comprising three organizations of elements that may be assembled and dismantled at a water site. Included are a rider-supporting assembly in simulated horse form, and two similar combined pontoon and ski assemblies. Rein-actuatable steering mechanism is provided, said mechanism including means for attachment of the apparatus to the tow line of a motor boat. Release of said reins by a rider, will automatically and instantaneously effect disconnection of the apparatus and tow line. Separate footrests for adults and children are included.

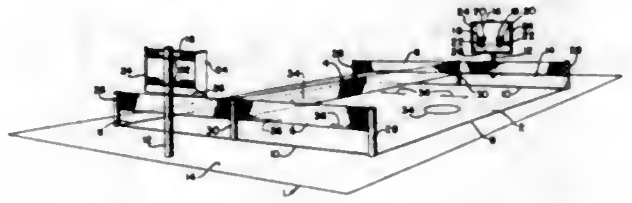
3,388,909

BASKETBALL COURT WITH BARRIER MEANS

William A. Woods, Rte. 2, 308 W. Brazil St. Lindale, Tex. 75771

Filed Apr. 26, 1967, Ser. No. 633,878

5 Claims. (Cl. 273—1.5)



A ball game, the playing field or court of which is divided by a medial, longitudinal net with a transverse net at each end of the longitudinal net, to define a playing field with two portions. A backboard is mounted a spaced distance outward from each end of the longitudinal barrier or net, which backboard has two horizontal, outwardly extending loops or baskets on the sides adjacent to the playing field and being a spaced distance apart transversely on each side of a vertical plane passing longitudinally along the longitudinal barrier or net. The loops or baskets are elevated above the playing field. Outwardly diverging wings are provided on each side of the backboard and a downwardly and forwardly extending wing extends across the lower side of the backboard. A plurality of players, an equal number from each team are positioned on each side of the longitudinal net, with the players on one side using both loops or baskets on the opposite side of the medial, vertical plane to score. Provisions are made for penalties and fouls and for starting and playing the game.

3,388,910

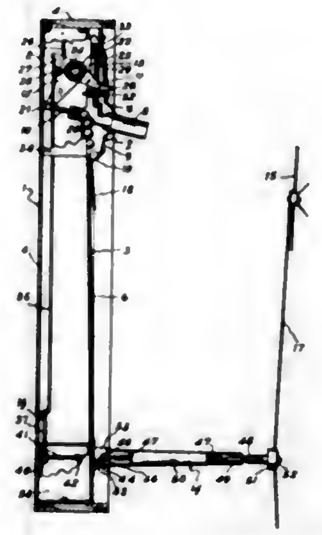
SHOOTING GAME EMPLOYING MOVING TARGETS

Luis Congost Horta, Iradier 6 bis, Barcelona, Spain

Filed Jan. 26, 1965, Ser. No. 428,044

Claims priority, application Spain, Feb. 5, 1965, 296,114

4 Claims. (Cl. 273—101)



A game having a gun for firing a projectile, a rotatable arm releasably supporting a target and an actuator mechanism which produces rotation of the arm, cocks the gun and fires a projectile from the gun.

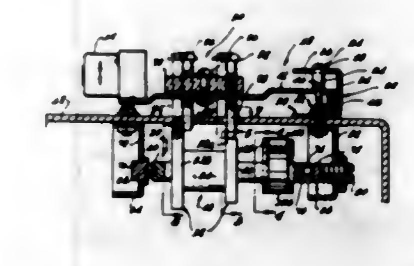
3,388,911

HEAD SHIFT MECHANISM FOR TAPE RECORDER AND PLAYBACK MACHINES

Rex C. Wilson, Granada Hills, Hans W. Messerschmidt, Pacoima, and Robert J. Nicoletti, Burbank, Calif., assignors to Muntz Stereo-Pak, Inc., Van Nuys, Calif., a corporation of California

Filed June 22, 1966, Ser. No. 559,506

11 Claims. (Cl. 274—4)



1. A head shift mechanism in a tape recorder or playback machine for handling magnetic tapes having different numbers of recording tracks, comprising:
   a record or playback head;
   means supporting said head for vertical movement above a top deck of said machine;
   cam means including at least two sets of cams and a support shaft for carrying said sets of cams;
   cam follower means connected to said head for engaging one or the other of said sets of cams to raise and lower said head between two pluralities of different vertical positions with a turning of said shaft;
   selectively operable means for shifting said cam follower means relative to said cam means to engage one or the other of said sets of cams;
   and selectively operable means for turning said shaft between a plurality of preselected positions.

3,388,912

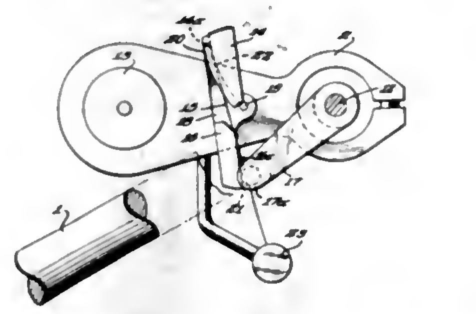
PICKUP ARM

Seisuke Shimoda and Hiroshi Arii, Tokyo, Japan, assignors to Sony Corporation, Tokyo, Japan, a corporation of Japan

Filed Oct. 25, 1966, Ser. No. 589,341

Claims priority, application Japan, Oct. 30, 1965, 40/66,603

2 Claims. (Cl. 274—23)



A pickup arm assembly used for the reproduction of sound from records. The pickup arm assembly includes a mounting bracket which has secured thereto pivotable means to pivotably secure the pickup arm to the mounting bracket to provide lateral and vertical movement of the pickup arm. Also secured to the mounting bracket is a pivotable plate which includes a contact surface and a cam surface. The plate is pivoted intermediate the two surfaces. An extended member is secured to the pivotable means for mounting the pickup arm and moves with the pickup arm. The extended member includes a contact end for engaging the contact surface of said pivotable plate to rotate the plate about its axis of rotation. A tensionable member is secured to the plate so as to wrap the cam surface. Rotation of the cam surface, by movement of the pickup arm, causes a force to be applied to the pickup arm corresponding to the shape of the cam surface and the tension of the tensionable member. This force is equal and opposite to the lateral forces exerted on the pickup arm due to the needle tracking in the groove of the record.

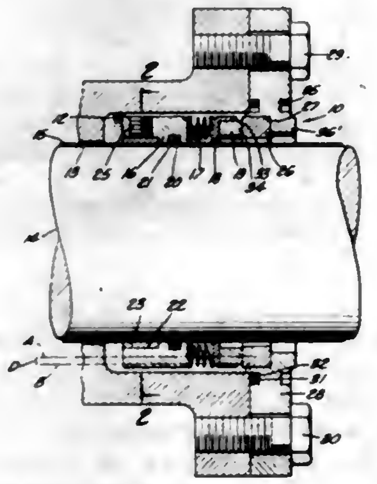
3,388,913

MECHANICAL SEAL

Herbert E. Tracy, Alhambra, Calif., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois

Filed June 3, 1965, Ser. No. 460,899

3 Claims. (Cl. 277—32)

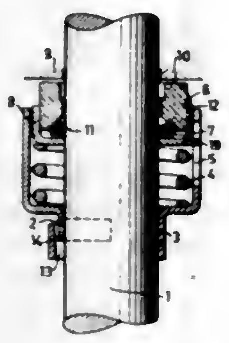


A mechanical seal assembly having a stationary sealing ring carried by a flange and a complementary rotary sealing ring mounted on a shaft. The assembly may be reversed to serve as either an inside seal or an outside seal. Preferably the rotary sealing ring is supported by a bellows having an adapter ring that is locked to the shaft by a set screw which exerts locking pressure on the shaft through a split ring.

3,388,914

ROTARY FACE SEAL ASSEMBLY WITH A SPRING LOCKED SHAFT PIN

Jens Karl Adolf Dahlgren, Stockholm, and Filip Torvald Stahl, Alvsjo, Sweden, assignors to Aktiebolaget Flygts Pumpar, Solna, Sweden, a corporation of Sweden
Filed May 13, 1965, Ser. No. 455,550
Claims priority, application Sweden, May 28, 1964, 6,525/64
4 Claims. (Cl. 277—84)

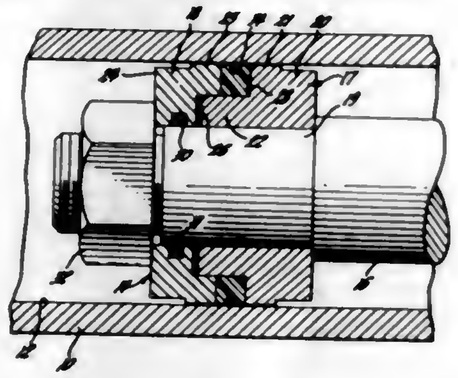


A rotary face seal for a rotating shaft is carried by a pin inserted into a blind hole in the shaft and projecting outwardly. A sleeve retains the pin and rotates with the shaft. The face seal is carried in a rotating cup and is biased into sealing contact by a spring compressed between the cup and the sleeve. The cup and sleeve are drivingly interconnected but movable axially relative to one another and the pin retaining portion of the sleeve is open in a direction away from the seal so that the seal assembly may be easily installed or dismantled by moving the sleeve to uncover the pin and then inserting or removing the pin.

3,388,915

SEALING MEANS

Robert L. Dega, Utica, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed July 19, 1965, Ser. No. 472,867
1 Claim. (Cl. 277—177)

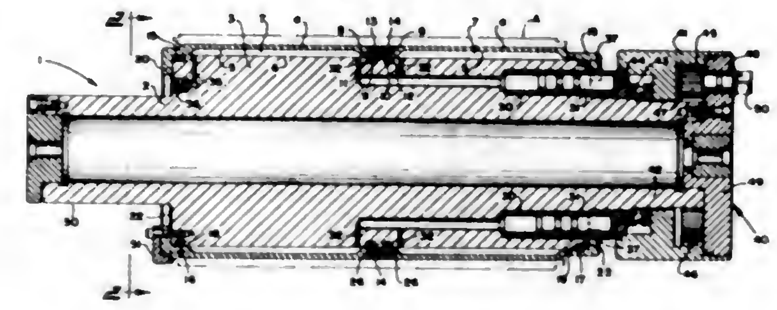


A sealing assembly for sealing between a relatively reciprocating cylinder and piston wherein a flexible O-ring, retained within a low-friction circumferential groove formed in the piston, is compressed into sealing engagement with the inner surface of the cylinder. The inner surface of the cylinder and the piston are relatively sized so that minimum clearance exists therebetween and the groove is shaped so that the O-ring continuously engages the seating surface of the groove thereby permitting the O-ring to move freely within the groove and continuously roll upon the inner surface of the cylinder as the piston and the cylinder are relatively reciprocated.

3,388,916

HYDRAULIC ARBOR

Franklyn E. Winnen, Cleveland, and David D. Walker, Chagrin Falls, Ohio, assignors to Erickson Tool Company, Solon, Ohio, a corporation of Ohio
Filed Mar. 11, 1966, Ser. No. 533,624
9 Claims. (Cl. 279—2)

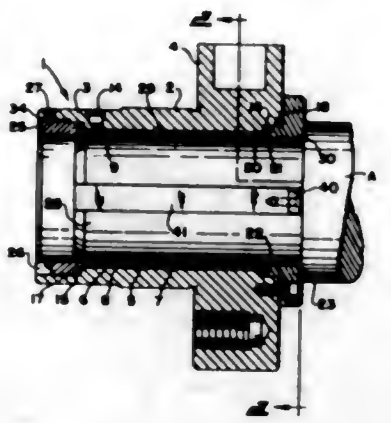


1. In a hydraulic arbor, an arbor body and a metal workpiece-gripping sleeve telescoped over said body and defining therebetween a chamber of substantial axial length adapted to be filled with a hydraulic fluid, packing rings radially squeezed between said body and sleeve adjacent the ends of said chamber effective to seal the body-sleeve joints thereat, said sleeve between said packing rings being relatively thin so as to be radially expanded to grip a workpiece upon supplying fluid pressure to said chamber, said sleeve having an external tapered surface at one end axially adjacent the corresponding packing ring, and a wedge ring disposed around said external tapered surface and having a corresponding tapered internal surface in mating engagement therewith for wedging said one end into tight engagement with said body adjacent the corresponding packing ring to preclude radial deformation thereat.

3,388,917

HYDRAULIC CHUCKS AND ARBORS

Franklyn E. Winnen, Cleveland, and David D. Walker, Chagrin Falls, Ohio, assignors to Erickson Tool Company, Solon, Ohio, a corporation of Ohio
Filed Mar. 14, 1966, Ser. No. 534,034
8 Claims. (Cl. 279—4)

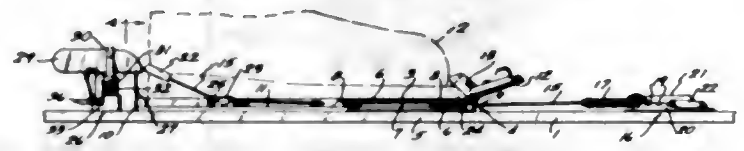


1. A hydrostatic chuck comprising a chuck body and a metal workpiece-gripping sleeve telescopically interfitting one within the other and defining therebetween a chamber of substantial axial length adapted to be filled with a non-compressible fluid; packing rings radially squeezed between said body and sleeve adjacent the ends of said chamber effective to seal the body-sleeve joints thereat; said body having a passage leading to said chamber; said sleeve between said packing rings being relatively thin so as to be radially deformed to grip a workpiece upon supplying fluid pressure to said chamber; and a collar member secured to said body in radially and axially overlapped relation with one end of said sleeve axially adjacent the corresponding packing ring for maintaining said one end in engagement with said chuck body thus to preclude radial deformation of said sleeve thereat; said sleeve at its other end axially adjacent the other packing ring having an integral radially thickened portion threadedly engaging said body, whereby said sleeve may be axially adjusted with respect to said body for automatic takeup of any tolerance variations to position said collar member and said one end of said sleeve in such radially and axially overlapped relation as aforesaid.

3,388,918

SKI BINDING

Richard R. Hollenback, 1404 Potato Point Road, Appleton, Wis. 54911
Filed July 25, 1966, Ser. No. 567,709
7 Claims. (Cl. 280—11.35)



1. A ski binding for releasable connection of a ski to a ski boot, comprising:

a support plate defining a boot supporting surface and having pivot means for pivotal attachment to a ski in the area of the toe of the ski boot, and

a releasable binding member having means coupled to the support member and to the boot to move with the support member and thereby maintain the binding member effective to releasably hold the boot to the support member under all operative positions of the support member,

said boot having a front projecting portion and a rear heel portion adjacent the sole of the boot, and having means secured to the support plate to engage the front projecting portion and having a portion of the binding member engaging the rear heel portion to releasably secure the boot to the support plate,

the support being generally longer than ski boot and including a forward end extending upwardly at an angle,

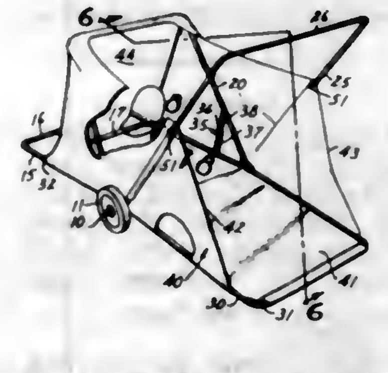
an abutment secured to the angled end of the plate to overtop the forward end of the sole of a ski boot, and,

the pivot means being a hinge means secured to the underside of the plate adjacent the angled end and having securement means for attachment to the ski for pivotally mounting the plate in the foot area of the ski.

3,388,919

TOTE CART FOR LEAVES AND THE LIKE

Norman A. Wang, Minneapolis, Minn., assignor to Allstate-Campbell, Inc., Minneapolis, Minn., a corporation of Minnesota
Filed Oct. 5, 1966, Ser. No. 584,569
5 Claims. (Cl. 280—36)

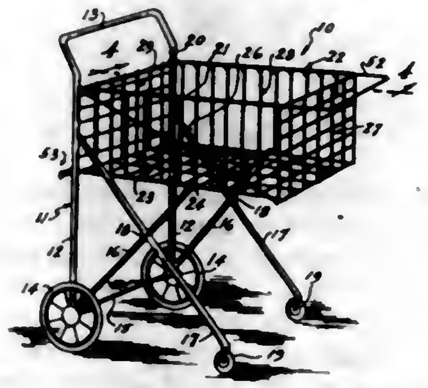


An axle having a wheel mounted at each end thereof and four U-shaped frame members radiating outwardly therefrom and pivotally attached thereto with a flexible covering attached therebetween. The frame is foldable into three configurations, an open configuration for receiving bulky material, a closed configuration for transporting the bulky material and a storage configuration. In the open configuration, two of the frame members radiate outwardly approximately 180° apart with the other two frame members in a spaced apart position therebetween and the flexible covering forms a relatively flat bottom with an end and two side walls. In the closed configuration, the device forms a substantially enclosed chamber around the leaves. In the storage configuration all of the frame members are substantially parallel and in juxtaposition.

3,388,920

FOLDABLE TWO-WAY SHOPPING CART

Leslie F. Hill, Sr., Hollis, and Eugene Eskridge, St. Albans, N.Y., assignors to Hillridge Dual-Cart Corp., Hollis, N.Y., a corporation of New York
Filed Jan. 23, 1967, Ser. No. 610,863
8 Claims. (Cl. 280—41)

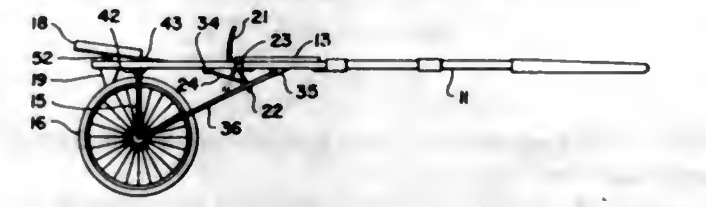


A shopping cart having a convertible frame which is movable between an extended position, where the cart is movable along a supporting surface on a pair of main wheels and a pair of auxiliary wheels spaced forwardly from the main wheels, and a contracted position, where the cart is movable only on the main wheels, is provided with a basket-like carrier which extends horizontally in the extended position of the frame and vertically in the contracted position of the frame, and such carrier has a foldable wall serving alternatively to close the front of the carrier when the latter is vertical and to close the back of the carrier when the latter is horizontal. The basket-like carrier is constructed to collapse flat against the convertible frame when the latter is in its nested position.

3,388,921

SULKY

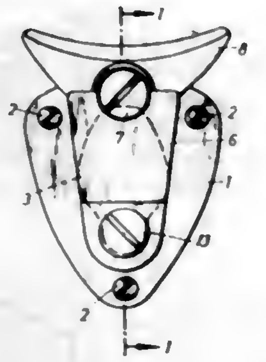
Edgar C. Pickard, 1707 Mount Royal Blvd., Glenshaw, Pa. 15116
Continuation-in-part of application Ser. No. 501,653, Oct. 22, 1965. This application Oct. 18, 1967, Ser. No. 683,068
9 Claims. (Cl. 280—63)



The invention relates to racing sulkies and jog carts, and in particular an improved laminated shaft and seat construction for racing sulkies and job carts, respectively. The shaft is composed of a plurality of laminations at least one of which is of metal and provided with projections which extended beyond the other laminations for attachment to other sulky or jog cart structure. The seat construction includes adjustable springs for adjusting the seat height in accordance with the height and weight of a driver.

3,388,922
SAFETY SKI BINDING

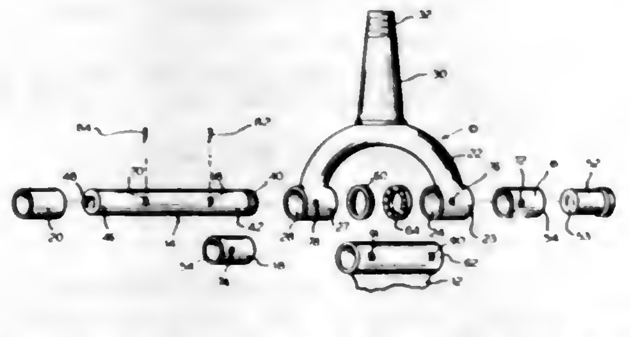
Alfred Gembruch, Ludwigstrasse 3, Ludenscheid, Westphalia, Germany
Filed Feb. 18, 1966, Ser. No. 528,647
Claims priority, application Germany, Feb. 23, 1965, G 42,908
8 Claims. (Cl. 280—11.35)



A safety ski binding in which a swivelling arm carrying a clamping jaw adapted to engage with the sole of a ski boot is pivotally supported on a raised surface portion of the base plate, which is provided with a longitudinally extending guide slot in the raised surface portion through which extends a guide and pivoting screw or bolt engaging in the swivelling arm; the raised surface portion is provided forwardly of the guide slot with a latching aperture into which engages a similarly-shaped latching member extending from the swivelling arm; the latching member is spring-loaded by means of an adjustable pressure spring, contained within a hollow threaded element. The latching aperture is of almost semi-circular configuration with the straight surface portion facing forwardly while the latching member is provided with a forwardly facing straight portion and rounded-off portions opposite the straight stop surface portion.

3,388,923
KINGPIN ASSEMBLY AND METHOD FOR USING SAME

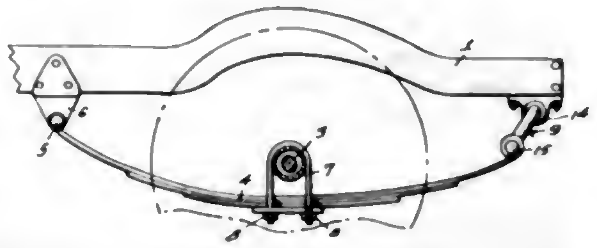
Wade Maynard, 11652 Joalyce Drive, Alsip, Ill. 60658
Filed Sept. 27, 1965, Ser. No. 490,466
8 Claims. (Cl. 280—96.1)



1. A kingpin assembly for associating a spindle with a cross-member comprising:
- a pair of primary bushings disposed respectively within a first opening and a second opening of said spindle; and
- a kingpin having a cutter at the leading end thereof, said cutter being sized to ream out said first and second primary bushings to a proper internal dimension when said bushings are disposed within the openings of said spindle, said kingpin being positioned through the reamed out said first and second primary bushings and said cross-member to provide an operative association of said spindle with said cross-member.

3,388,924
LOAD EQUALIZER

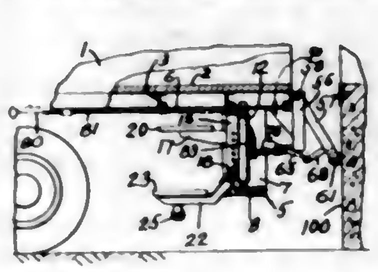
Curtis L. Wilson, 3103 Elizabeth, Space 25, Pueblo, Colo. 81003
Filed June 8, 1966, Ser. No. 556,832
1 Claim. (Cl. 280—124)



A load equalizer for a vehicle having leaf spring suspension consisting of a continuous bar pivotally mounted transversely of the vehicle's frame and connected at each of its ends to a free end of one of the leaf springs whereby the load will be transferred from one spring to the other when the vehicle is rounding a curve or travelling on an uneven surface to reduce tilting of the vehicle's body.

3,388,925
TRUCK STEP

Salvador V. Chavira, 1330 N. Alma St. 90063, and Albert M. Martinez, 961 S. Fetterly Ave. 90022, both of Los Angeles, Calif.
Filed Dec. 5, 1966, Ser. No. 599,679
5 Claims. (Cl. 280—166)

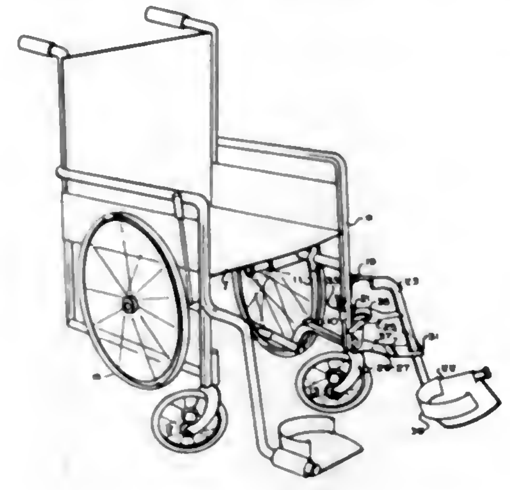


The present apparatus comprises one or more steps secured to a rotatable post, the post being mounted beneath the truck bed adjacent the tailgate portion thereof; a lever is adapted to project from the tailgate portion of the truck for contact with a dock wall when the truck is moved backwardly towards the dock, such movement swings the lever inwardly towards the tailgate portion of the truck and in so doing rotates the post to swing the steps outwardly at one side of the truck; as long as the truck remains adjacent the dock wall the steps are held at one side of the truck and when the truck moves from the dock the lever again extends outwardly and the post rotates to position the steps beneath the truck.

3,388,926
WHEELCHAIR STEERING APPARATUS

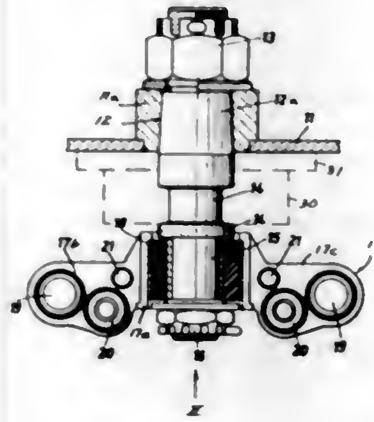
George P. Bardsley, W. Larchmont Drive, Colts Neck, N.J. 07722; Larry R. Questad, 302 E. Callender, Livingston, Mont. 95334; John F. Mason, 3341 Cottage Way, Apt. 51, Sacramento, Calif. 95825; John R. Sondeno, 743 South St., Hollister, Calif. 95023; and Charles R. Smith, Jr., 4700 Paseo de las Tortugas, Torrance, Calif. 90505
Filed June 6, 1966, Ser. No. 555,417
3 Claims. (Cl. 280—265)

Wheelchair steering apparatus enables a wheelchair occupant having one lateral side immobilized (referred to as hemiplegics herein) to steer the wheelchair with the remaining normally responsive leg and foot. Apparatus of this type thus leaves the remaining, normally responsive hand and arm of the wheelchair patient free to supply manual power to one wheel for propelling the wheelchair.



3,388,927
SERVICE CONNECTIONS FOR TRUCK-SEMI-TRAILER FIFTH-WHEEL COUPLINGS

Karl Friedrich von Grunberg, Remscheid, and Ernst Sohnchen, Huckeswagen, Germany, assignors to Bergische Stahl-Industrie, Remscheid, Germany
Filed Mar. 22, 1966, Ser. No. 536,429
Claims priority, application Germany, Mar. 24, 1965, B 81,142
12 Claims. (Cl. 280—421)

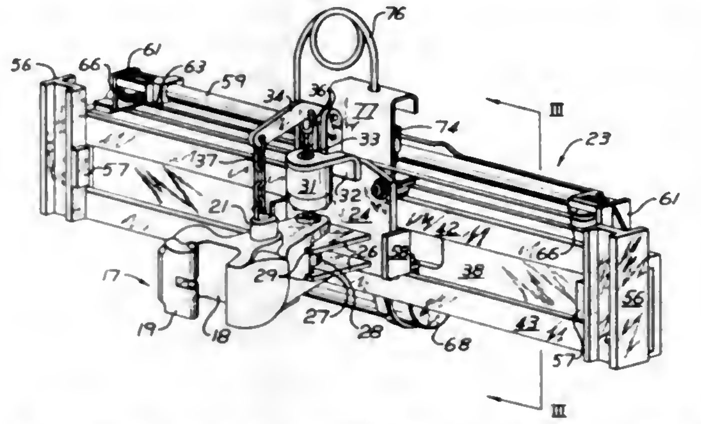


The invention relates to a truck-semitrailer combination which includes a kingpin and a kingpin lock respectively provided on the semitrailer and the truck. An automatic coupling assembly includes a first connecting element provided on the kingpin and a second connecting element provided on the truck. The connectiong elements have respective complementary coupling portions which engage one another when the kingpin is received in the lock.

3,388,928
RAIL CAR COUPLER FOR TRACTORS

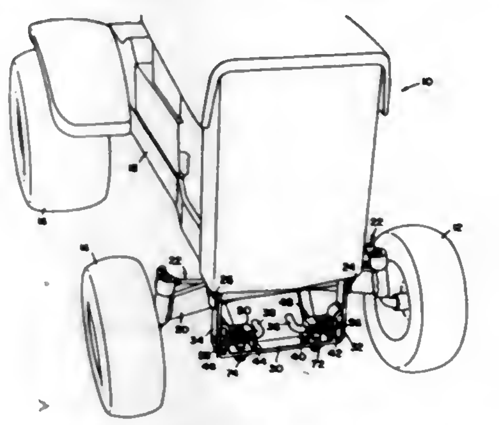
John M. Poker, Oswego, and Gail G. Barbee, Dean M. Lawrence, and Robert J. Orland, Aurora, Ill., assignors to Caterpillar Tractor Co., Peoria, Ill., a corporation of California
Filed June 24, 1966, Ser. No. 560,252
5 Claims. (Cl. 280—456)

An attachment facilitates use of a tractor or the like for moving railway cars by providing a self-engaging coupler which is shiftable in a transverse direction on the tractor by pneumatic controls to simplify the coupling of the tractor to the car. Means in the pneumatic system facilitate precision locating of the coupling for engaging with the car and further serve to damp unwanted motion of the coupling.



3,388,929
IMPLEMENT MOUNTING FRAME

Richard Erwin Miley, Horicon, Wis., assignor to Deere & Company, Moline, Ill., a corporation of Delaware
Filed Oct. 20, 1966, Ser. No. 588,197
3 Claims. (Cl. 280—481)

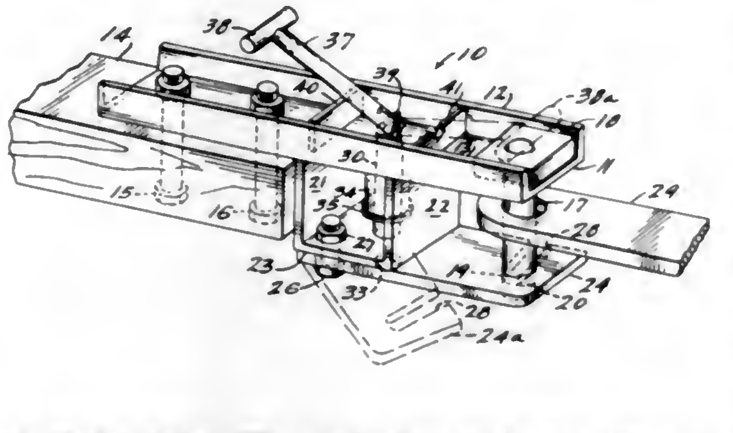


1. An implement mounting frame for securing implements to the forward end of a tractor having a pair of spaced apart steerable front wheels and a pair of rear traction wheels, said mounting frame comprising: a generally U-shaped structure having a bight and upwardly extending legs securable to opposed side portions of the forward end of the tractor, the lower ends of said legs being apertured, opposed pairs of inner and outer upwardly extending apertured members carried by said bight, a pair of transversely extending pin members, each of the pin members being disposed within the apertures of one of the pairs of inner and outer members, resilient means interconnecting each of the pins with its associated inner member, said resilient means normally biasing the pin means outwardly whereby the outer end of the pin is normally disposed within the aperture in the leg, and a pair of detent means operable to hold the pins with the outer end away from said apertured leg.

3,388,930
COUPLING DEVICE

Charles W. Miller, P.O. Box 127, Portage, Ohio 43451
Filed Oct. 19, 1966, Ser. No. 587,745
7 Claims. (Cl. 280—504)

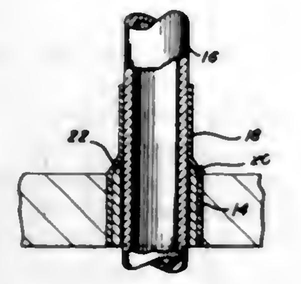
A coupling device for securing together a pair of vehicles, such as a tractor and a drawn implement. The device includes an elongate rigid member with one end secured to one vehicle and a draw pin secured to its other end. The draw pin is inserted through an aperture in the draw bar of the other vehicle. Spaced from the elongate member is a pivoted plate which swings from an open position away from the draw pin to a closed position adjacent the free end of the draw pin to prevent removal of the draw bar. A manually operable lock to hold the pivoted plate in closed position includes an axially movable bolt which extends through the elongate member and a locking recess in the pivot plate when in locked position and a resilient means urging the lock bolt towards its locked position. The pivot plate preferably has a slot which receives the lower end of the draw pin when in closed position so that forces exerted upon the pin are transmitted to the plate. A lever is pivotally secured to the upper end of the lock bolt so that a relatively small force exerted on the lever is sufficient to overcome the resilient means and to move the bolt to its unlocked position.



3,388,931
TUBE PLATE SEAL

Richard C. Johnson, Dansville, N.Y., and Milton Jerome Kraje, Livingston, N.J., assignors to Foster Wheeler Corporation, Livingston, N.J., a corporation of New York

Filed Mar. 31, 1967, Ser. No. 627,528
7 Claims. (Cl. 285—159)



A tube to plate seal including two members between the tube and tube plate, one being a heat-shrinkable cylindrical plastic insert within the plate opening, the other a cylindrical ferrule within the insert pressing the latter against the plate. The plastic insert has a longitudinal dimension in excess of that of the ferrule sufficient so that, on the application of heat, the insert shrinks into sealing engagement with the tube extending through the plate opening.

3,388,932
JOINT FOR LAMINATED ARTICLES

Richard C. Bradley, % Plastic Engineering & Chemical Co., 3501 NW. 9th Ave., Fort Lauderdale, Fla. 33309

Filed Feb. 7, 1964, Ser. No. 343,400
3 Claims. (Cl. 285—288)

1. In a joint for tubular members of the type formed of a plurality of laminate layers of plastic resin and fibrous reinforcing material, the combination of a first tubular member having a laminated wall portion formed of a plurality of layers of plastic resin and fibrous reinforcing material and provided with a male joint end having a first joint surface extending in a straight line taper along the line of from inner diameter to the outer periphery at an angle of less than two degrees with respect to the longitudinal axis thereof from adjacent the inner diameter in a direction toward the outer periphery thereof, said first joint surface exposing an end of a substantial number of the layers of plastic resin and an end of a substantial number of the fibers of the fibrous reinforcing material thereof, the outermost end of said first joint surface thereof extending in a line perpendicular to the longitudinal axis of said tubular member from the straight line taper thereof to the inner diameter thereof; a second tubular member having a laminated wall portion of substantially the same thickness as the wall portion of said first tubular member and formed of a plurality of layers of plastic resin and fibrous reinforcing material and provided with a female joint end having a second joint surface extending in a straight line taper along the line of from the outer periphery to the inner diameter at an angle of less than two degrees with respect to the longitudinal axis thereof from adjacent the inner diameter in a direction toward the outer periphery thereof, said second joint surface exposing an end of a substantial number of the layers of plastic resin and an end of a substantial number of the fibers of the fibrous reinforcing material thereof, the outermost end of said second joint surface thereof extending in a line perpendicular to the longitudinal axis of said tubular member from the straight line taper thereof to the outer periphery thereof and the taper of said second joint surface terminating near the inner diameter in a shoulder portion comprising a continuation of said second joint surface which extends from the taper of said second joint surface to the inner diameter at an angle normal to the longitudinal axis of the second tubular member; and an adhesive coating cementing said tapered male and female end portions together and bonding a plurality of the layers of plastic resin and fibrous reinforcing material exposed along said joint surface thereof of one of said tubular members to a plurality of the layers of plastic resin and fibrous reinforcing material exposed along said joint surface of the other of said tubular members, thereby forming a joint having a substantially constant diameter.

3,388,933
ELECTROMECHANICAL ACTUATOR PACKAGE

John J. Phillips, Los Angeles, Calif., assignor to Gray & Huleguard, Santa Monica, Calif., a corporation of California

Filed Aug. 3, 1966, Ser. No. 569,939
13 Claims. (Cl. 287—1)

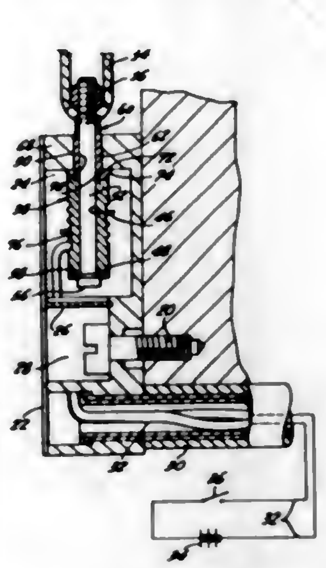
1. An electromechanical actuator package for releasably retaining a load, said package including the combination of,

a pair of substantially identical mating members secured together to form a housing, each of said members including recesses that register with each other to form a passage that extends axially through the housing and has at least one tapered surface thereon,

an electrically conductive element wrapped around the housing and effective to maintain said members secured together,

a shaft slideably disposed in said passage, said shaft including at least one tapered surface that mates with the first tapered surface,

means for coupling the shaft to the load whereby a force is produced between the mating tapered surfaces that tends to separate the housing members and produces a tension in said electrically conductive element, and

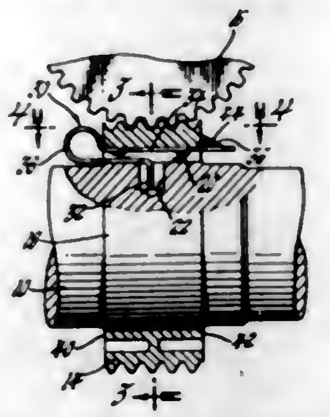


means for circulating an electric current through the element whereby it is heated to a temperature at which its tensile strength is less than the tension therein.

3,388,934
HUB AND SMOOTH SHAFT SPRING KEY ARRANGEMENT

Charles S. Chapman, Jr., and Richard W. Craig, Grand Blanc, Kenneth W. Gage, Birmingham, and Richard W. Smith, Lansing, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Dec. 16, 1965, Ser. No. 514,309
5 Claims. (Cl. 287—52.05)



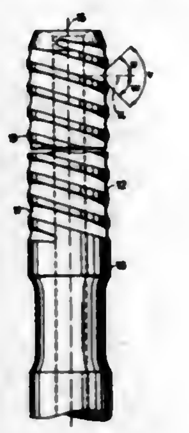
A hub detachably fixed to a smooth intermediate or end portion of a shaft by means of a spring key having a tab extending into the shaft and an elongated portion disposed in a groove of the hub with opposed stops at the ends of the elongated portion of the key engaging the hub.

3,388,935
THREADED DRILL ROD ELEMENT

John Anders Hjalsten and Gunnar Arne Gustafsson, Sandviken, Sweden, assignors to Sandvikens Jernverks Aktiebolag, Sandviken, Sweden, a corporation of Sweden Continuation of application Ser. No. 456,656, May 18, 1965. This application Mar. 27, 1967, Ser. No. 633,339 Claims priority, application Sweden, May 29, 1964, 6,532/64

9 Claims. (Cl. 287—117)

A drill rod coupling comprising a threaded rod and a matching threaded sleeve, the rod threads having at least two starts and flank angles adjacent the crests of at least 45° which gradually increase toward the base, which latter has a concave shape with a radius greater than the depth of the thread, the flanks of the thread

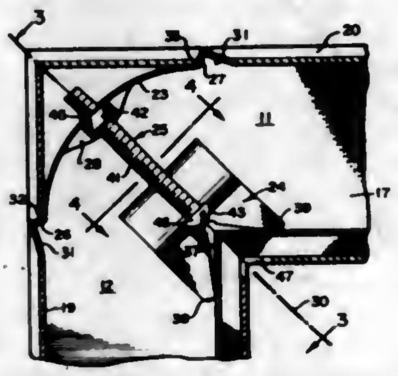


being symmetrical and the crests being bevelled, and spaced from the bottoms of the sleeve threads.

3,388,936
JOINT FASTENING FOR STORM DOORS, STORM WINDOWS, AND SIMILAR STRUCTURES

Paul C. Gebhard, 2426 Westlake Ave., Oceanside, N.Y. 11572

Filed Jan. 27, 1966, Ser. No. 523,405
17 Claims. (Cl. 287—189.36)

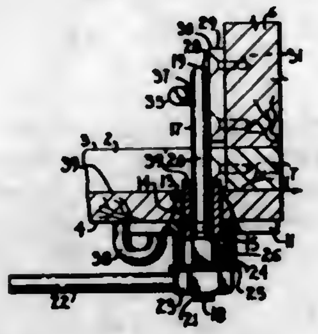


A corner fastening assembly for mitered joints. The assembly includes compression and tension elements that respond to forces applied to an actuating element to accurately align the edges of the joint. Outwardly acting pressure means, also responding to the forces applied to the actuating element, for aligning the front and back sections of the framing sections is also provided by the invention.

3,388,937
DOOR FASTENER

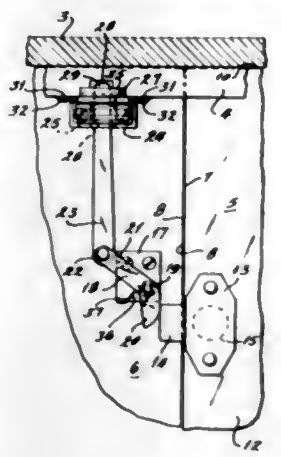
Leo H. Wirsig, Rte. 1, Deepwater, Mo. 64740

Filed May 31, 1966, Ser. No. 554,060
3 Claims. (Cl. 292—62)



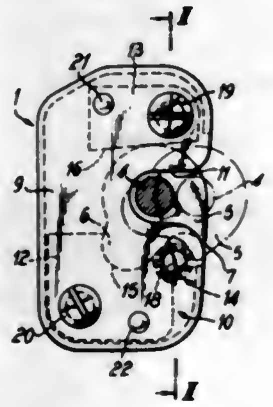
A sliding door fastener comprises an elongated rod which longitudinally slides and rotatably projects through the door with an elongated handle radially extending from one end and an elongated latching leg radially extending from the other end. The leg and handle extend at a right angle to each other and the fastener is limited in rotation to a half-circle whereby the handle maintains the leg in an attained locked position or unlocked position due to the offset weight thereof placing torsion on the rod.

3,388,938
CABINET DOOR LATCH
Francis C. Peterson, 1403 Wells Ave.,
Webster Groves, Mo. 61319
Filed May 20, 1966, Ser. No. 551,739
2 Claims. (Cl. 292—177)



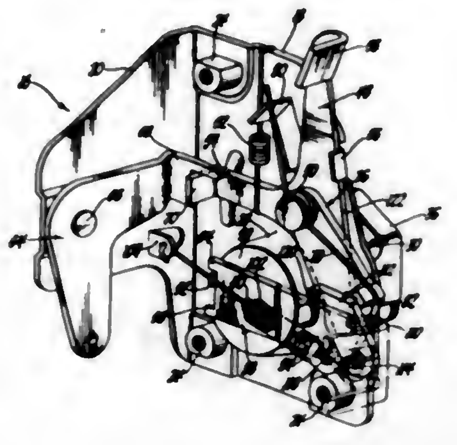
A latch for a cabinet having a plunger therein which moves across the opening between two doors, and a plate having a bell crank lever having one end positioned downwardly so as to pivot its opposite end upwardly upon actuation by said plunger, a latch bar pivotally attached to said opposite end and adapted to extend upwardly above the top edge of said other door, and means for maintaining said latch bar in an upright sliding position.

3,388,939
DOOR LATCH
Hans Colell, Schulhofstr. 11, Schwieberdingen, Germany
Filed Sept. 16, 1966, Ser. No. 579,928
Claims priority, application Germany, Oct. 1, 1965,
P 37,772
7 Claims. (Cl. 292—198)



A motor vehicle door latch consisting essentially of a closing block fastened to the door frame, a lock fastened to the door, and having a turning handle for cooperation with the closing block, and a lock safety member engaging the block from the rear to prevent expanding of the door and the frame. The lock safety member consists of a single plate on the end of a stub shaft, with the plate consisting of a disc portion, a retaining extension for engaging in the recess of a retaining member of the closing block, and a nose portion for engaging the stop of the closing block to rotate the plate. The closing block is provided with an outer keeper wall having a parallel sided slot only slightly wider than and for receiving said shaft.

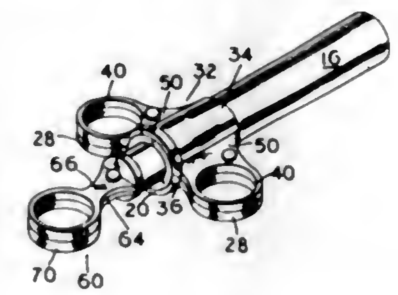
3,388,940
CLOSURE LATCH
Walter Dale, Utica, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Nov. 8, 1966, Ser. No. 592,854
8 Claims. (Cl. 292—216)



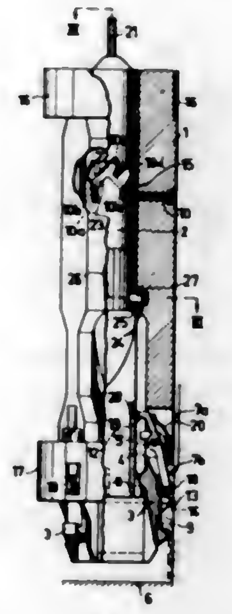
1. A closure latch comprising, in combination, support means, latch means mounted on the support means for movement between latched and unlatched positions, a detent member pivotally mounted on the support means for movement between holding and released positions with respect to the latch means, movement of the latch means from unlatched to latched position moving the detent means to released position, means biasing said detent means to holding position, detent-operating means movably mounted on the support means, a motion transmitting member, means mounting said transmitting member on said support means for bodily movement relative thereto between locked and unlocked positions and pivotal movement relative thereto in each of said positions, means on said transmitting member located in the path of movement of said operating means to couple said transmitting member and operating means when said transmitting member is in unlocked position and being located out of the path of movement of said operating means to uncouple said transmitting member and operating means when said transmitting member is in locked position, and means coupling said transmitting member and said detent means for pivotal movement of one upon pivotal movement of the other, movement of said transmitting member by said detent-operating means moving said detent means to released position, said coupling means including means permitting bodily movement of the transmitting member to locked position without movement of the detent means to thereby uncouple the operating means and the transmitting member and retain the detent means in holding position, movement of said detent means by said latch means pivotally moving said transmitting member relative to said mounting means, said biasing means returning said detent means to holding position upon cessation of movement of said detent means by said latch means.

3,388,941
SYRINGE HAND GRIPPING DEVICE
Joel A. Marcus, 68—61 Yellowstone Blvd.,
Forest Hills, N.Y. 11375
Filed Sept. 16, 1966, Ser. No. 579,951
9 Claims. (Cl. 294—1)

1. A device for promoting the gripping of a hypodermic syringe and plunger therefor comprising a syringe body gripping means having a first frame means and a second frame means, each of said frame means being provided with a body portion having a pair of annular rings extending laterally therefrom, said first and second frame means adapted to fit around the body of a syringe, at least one locking device disposed on said first frame means and in communication with said second frame means for releasably connecting said first and second frame means around the body of the syringe, a second gripping arrangement connectible to the rear end of the plunger being provided with a first frame means and a second frame means, each of said first and second frame means of said second gripping arrangement being provided with an annular ring extending therefrom, and a locking device disposed on said first frame means of said second gripping arrangement in communication with said second frame means thereof for releasably connecting said second gripping arrangement to the rear end of the plunger.

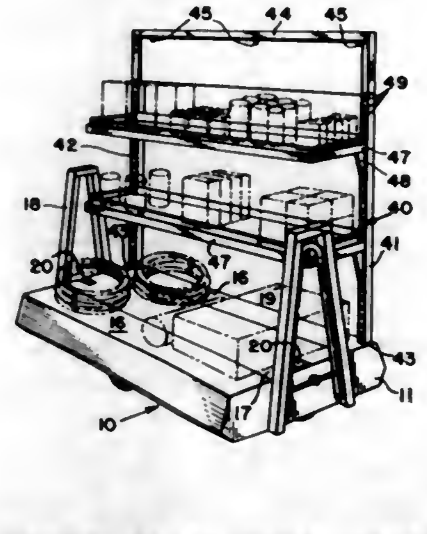


3,388,942
GRIPPER FOR A LOADING MACHINE OF A NUCLEAR REACTOR
Erik Börje Johansson, Stockholm, and Karl Göran Ernst Fröman, Solna, Sweden, assignors to Aktiebolaget Atomenergi, Stockholm, Sweden, a company of Sweden
Filed May 20, 1966, Ser. No. 551,785
Claims priority, application Sweden, May 24, 1965,
6,814/65
4 Claims. (Cl. 294—95)



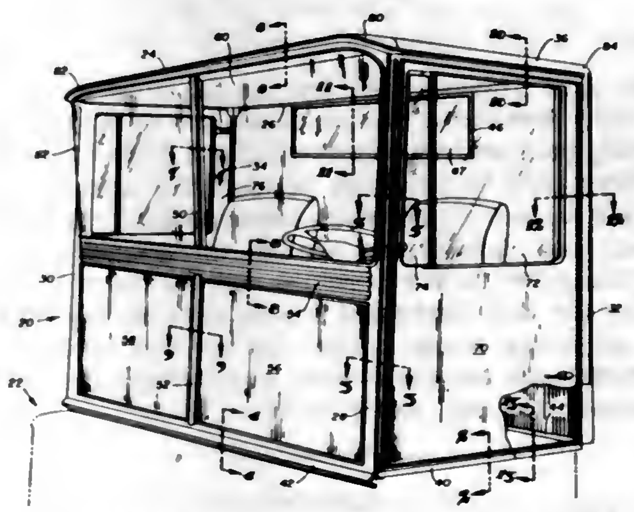
1. A gripper for a loading machine of a nuclear reactor, comprising a frame having on its lower portion at least two lifting hooks which can be moved between an inoperative position and an operative position in which they engage the upper portion of a fuel element which is to be lifted out of or lowered into the reactor, and an operating member which is movable in the frame and which is secured to a wire belonging to the loading machine, the operating member engaging the frame by means of a groove and a pin to the effect that a lowering and a subsequent lifting of the operating member relative to the frame produces a rotation of the operating member by a predetermined angle relative to the frame, the operating member being provided with two sets of shoulders to engage the lifting hooks, namely a first set holding the lifting hooks in their inoperative position and a second set holding them in their operative position, the two sets of shoulders being displaced a distance corresponding to said angle.

3,388,943
MERCHANDISE DISPLAY VEHICLE
Joseph Clement, Atlanta, Ga., assignor to Modern Metal Products Company, Greensboro, N.C., a corporation of North Carolina
Filed July 29, 1966, Ser. No. 568,516
7 Claims. (Cl. 296—21)



1. A merchandise display vehicle comprising a merchandise supporting base, wheels supported on said base for maintaining the base a suitable distance above the ground, merchandise retaining rails extending vertically from opposite ends of said base a suitable distance, and a vehicle pulling handle pivotally connected to said base and nestable in a stationary condition within one of said rails.

3,388,944
PANEL CAB FOR VEHICLES
Robert Crehore, Tulsa, Okla., assignor to CCI Corporation, Tulsa, Okla., a corporation of Delaware
Filed Oct. 23, 1965, Ser. No. 504,013
5 Claims. (Cl. 296—28)



A panel cab structure for vehicles includes planar panel member which are stress loaded, without being mechanically fastened, by interconnection with extrusion type framing members which are retained and drawn together in tension at the corners thereof.

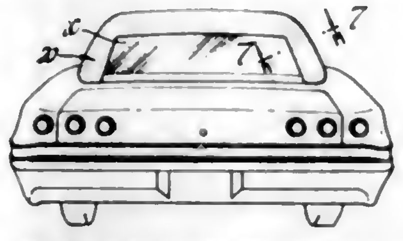
3,388,945
DIELECTRIC BONDING OF CONVERTIBLE TOP DECK MATERIAL TO GLASS

Bruce E. Kevelin, Warren, and Ralph M. Stallard, Rochester, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Aug. 23, 1965 Ser. No. 481,791

6 Claims. (Cl. 296—145)

Vinyl plastic automobile convertible top material is bonded to sheet glass to form a window by applying uncured polyalkylene polysulfide rubber composition to an edge of one side of the glass sheet, curing the composition to form a tough, resilient rubber layer strongly adhering to said glass, trimming the rubber, if necessary, to a layer of desired uniform thickness, abrading the exposed surface of the rubber to form crevices therein, applying a solution of an unplasticized low molecular weight resin such as polyvinyl chloride which is compatible with vinyl polymers to the abraded rubber surface thereby filling the crevices, evaporating the solvent, assembling the vinyl top material against the coated abraded rubber surface under pressure and heating the assembly whereby the vinyl compatible resin fuses with the vinyl material to provide a substantially mechanical bond between the vinyl top and the polysulfide rubber.

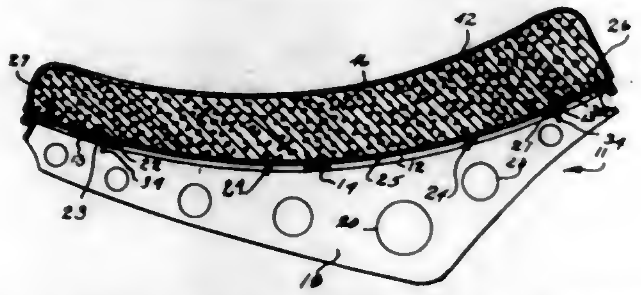


3,388,946
MOTORCYCLE SEAT

Ronald R. Grace, 633 High St., Hamilton, Ohio 45011

Filed Sept. 8, 1966, Ser. No. 577,942

9 Claims. (Cl. 297—214)



The cycle (motorcycle) seat of the present invention essentially requires a pair of plates one of which is substantially permanently connected to the cycle frame while the other plate is relatively permanently secured to the seat, per se, and which plates have means for connecting the seat and cycle to one another for normal use.

As illustrated in the drawings and the following specification the said connecting means may readily take the form of spring means carried by the seat plate for engagement with the cycle plate in securing, even though removably, the seat to the cycle.

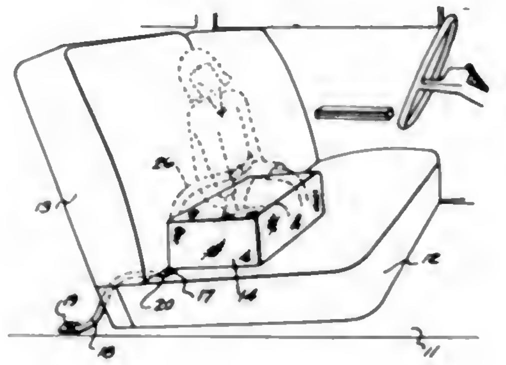
3,388,947
AUXILIARY CHILD'S SAFETY SEAT FOR VEHICLES

Florence Rosen, 17161 Denver, Apt. 2, Detroit, Mich. 48224

Filed Sept. 23, 1966, Ser. No. 581,532

2 Claims. (Cl. 297—250)

An auxiliary child's safety seat for a vehicle seat, having a backrest, including a block of resilient material mounted on the seat against the backrest, a pair of anchor rings secured to the lower rear corners thereof, a continuous protective cover over the block independent of said rings, and a pair of anchor straps at their one ends fixed to the vehicle frame and at the other ends having resilient snap-fastener loops interlocked with said rings.

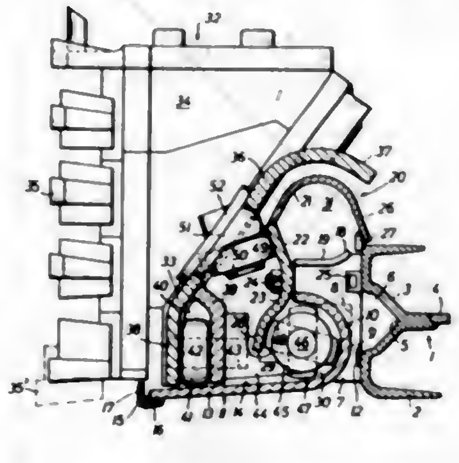


3,388,948
REDUCED FRICTION PLANER CARRIAGE AND GUIDE ARRANGEMENT

Armin Löbbe, Oberaden, Friedrich Jordan, Wethmar, and Günter Flocke, Lunen-Sud, Germany, assignors to Gewerkschaft Eisenhutte Westfalia, Wethmar, near Lunen, Westphalia, Germany

Filed Mar. 14, 1966, Ser. No. 533,894

10 Claims. (Cl. 299—34)



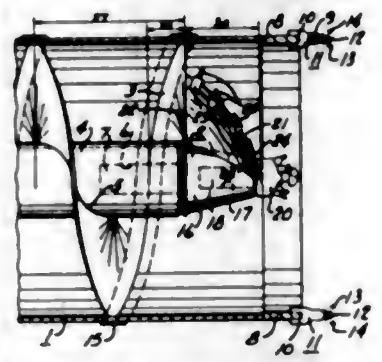
Planer carriage and guide arrangement for disposition longitudinally along a mine face, to permit said carriage to be conducted longitudinally back and forth along the mine face and to receive cutting means thereon for operative engagement with the mine face to extract mineral therefrom substantially without deviation of said carriage from the normal longitudinal path thereof, comprising elongated guide support surface means including an upright wall and a transverse lateral lower wall, and angular carriage means including interconnected lateral and slanted leg means extending from a common apex, mounted for travel on said guide support surface means along a normal longitudinal path and having operatively downwardly directed reduced friction contact surface guide means on said lateral leg means in conductive contact with said lower wall, for transmitting with reduced friction forces acting downwardly on said carriage means to said lower wall, and having operatively transversely directed reduced friction contact surface guide means on said slanted leg means in conductive contact with said upright wall, for transmitting with reduced friction forces acting transversely on said carriage means to said upright wall, during travel of said carriage means on said guide support surface means.

3,388,949
MINING MACHINE HEAD

Joseph L. Kozar, Salem, Ohio, assignor to The Salem Tool Company, Salem, Ohio, a corporation of Ohio

Filed Dec. 22, 1965, Ser. No. 515,670

3 Claims. (Cl. 299—87)



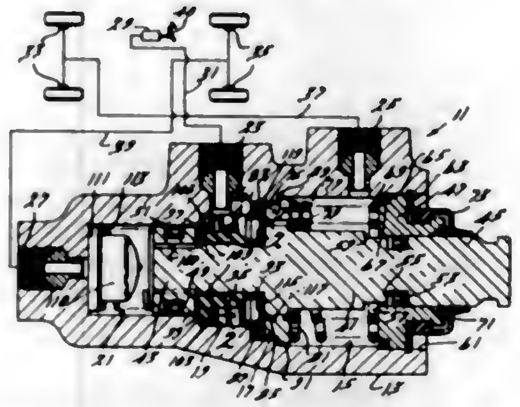
The mining machine head having a first rotary cutter with a passage therethrough and bits on its forward end to cut an annular clearance kerf and a second cutter mounted within the first cutter and carrying a demountable pilot bit and having a backwardly sweeping helical arm with a leading edge that slopes outwardly and rearwardly from its forward end and is spaced from the first cutter and its leading edge with forwardly extending bits and the pitch of its helix being greater than the pitch of the helix of the helical conveyor it feeds.

3,388,950
BRAKE PRESSURE PROPORTIONING AND METERING VALVE

William Stelzer, Bloomfield Hills, Mich., assignor to Kelsey-Hayes Company, Romulus, Mich., a corporation of Delaware

Filed Feb. 4, 1965, Ser. No. 430,433

17 Claims. (Cl. 303—6)



1. A proportioning and metering device for a vehicular hydraulic brake system comprising

a body having a bore therein and an inlet opening and first and second outlet openings,

first and second shoulders in said bore,

piston means slidably disposed in said bore and having a first passage means therethrough communicating said inlet and first outlet opening and forming with said bore a second passage means communicating said inlet and second outlet opening,

first valve means carried by said piston adapted to overlay said first passage means for preventing the flow of fluid to said first outlet and having a portion positioned to engage the first shoulder,

second valve means carried by said piston adapted to engage said second shoulder for preventing the flow of fluid to said second outlet,

resilient means associated with said piston normally holding said first valve means in engagement with said first shoulder to open said first passage means and said second valve means in engagement with said second shoulder,

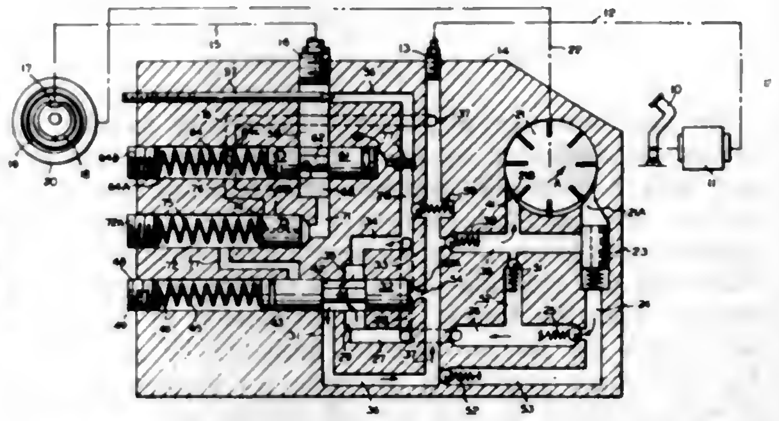
said piston being responsive to a first inlet pressure to open said second valve means, and to a range of inlet pressures greater than said first inlet pressure for opening and closing said first valve means to deliver fluid to said first outlet at a predetermined pressure relationship to the fluid delivered to said second outlet.

3,388,951
POWER BRAKING SYSTEM

Roland de Marcellus, 704 N. State St., Chicago, Ill. 60610

Continuation-in-part of application Ser. No. 383,062, July 16, 1964. This application Sept. 30, 1966, Ser. No. 583,384

12 Claims. (Cl. 303—21)



An antiskid, hydraulic power braking system is disclosed. The hydraulic power braking force is derived from the traction wheels of a vehicle, and a selected portion of that derived power is utilized for braking pressure in accordance with normal brake pedal actuation. In case of a panic stop, where maximum power braking force is utilized bringing the vehicle to the skid point, under prevailing traction conditions, a peak pressure sensor and pressure regulator system operate to limit the braking pressure to that maximum amount reached before skid, and the applied braking pressure is immediately reduced to the valve just under that peak pressure.

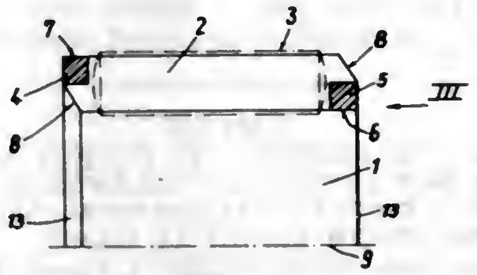
3,388,952
PLASTIC WINDOW CAGE FOR CYLINDRICAL ROLLER

Georg Schaeffler, Herzogenaurach, Germany, assignor to Industriewerk Schaeffler OHG, Herzogenaurach, Germany, a corporation of Germany

Filed May 24, 1966, Ser. No. 552,502

Claims priority, application Germany, July 17, 1965, J 14,029

3 Claims. (Cl. 308—217)

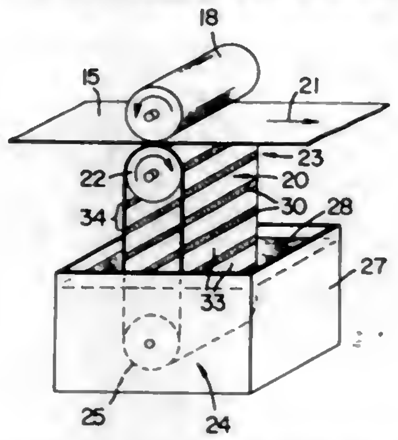


Novel plastic window cages for cylindrical rollers having crossbars for accommodating the rollers, the said crossbars being connected to each other by two concentric rings having a radial extension about one-half the width of the crossbars, one ring extending from the inner diameter of the cage to about the center of the crossbar profile and the other ring extending from about the center of the crossbar profile to the outer diameter of the cage.

3,388,953

WET AND DRY TOWEL DISPENSER

Iben Browning, Sunnyvale, Calif., assignor to Thomas Bede Foundation, a corporation of California
Filed Oct. 6, 1966, Ser. No. 584,903
10 Claims. (Cl. 312—39)

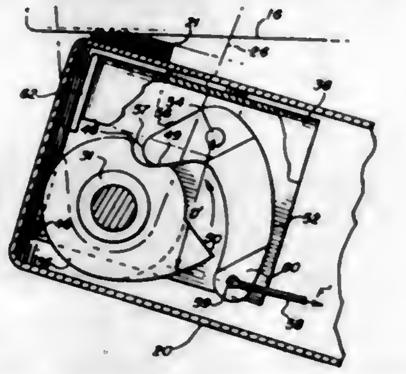


An apparatus for dispensing wet or dry towels. Wet towels are dispensed by positioning the towels into contact with a rotatable moisture-absorbent surface which surface has installed thereon a plurality of transverse capillary insulators. The surface moves through a bath absorbing the solution contained therein and then into contact with the towels being dispensed. In contacting the towels the surface imparts moisture by absorption. The absorbent surface is movable by linkage so as to move selectively in and out of contact with towels as they are being dispensed, thus supplying wet and dry towels respectively.

3,388,954

AUTOMATIC DOOR CLOSING DEVICE

James R. Smith, Kirkwood, Ill., assignor to Admiral Corporation, Chicago, Ill., a corporation of Delaware
Filed June 7, 1967, Ser. No. 644,133
8 Claims. (Cl. 312—319)

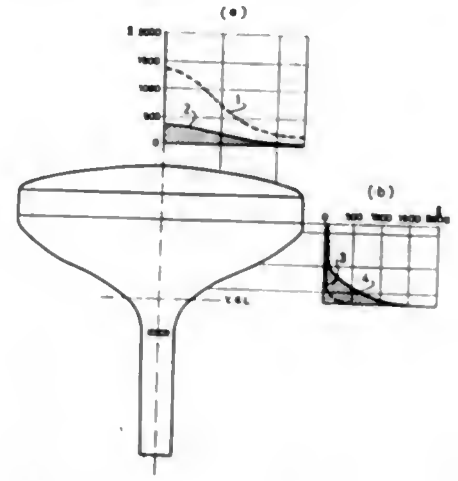


Apparatus including a cam surface and biased cam follower for insuring automatic positive closure of a freezer or refrigerator door from a slightly ajar position and providing detenting thereof to prevent accidental opening.

3,388,955

PROCESS FOR PRODUCING WITHIN ELECTRON TUBES, IN PARTICULAR TELEVISION PICTURE TUBES, A THIN METALLIC FILM CAPABLE OF SORBING THEIR RESIDUAL GASES

Paolo Della Porta, Milan, Tiziano A. Giorgi, Rho, Milan, and Elio Rabusin, Milan, Italy, assignors to S.A.E.S Getters S.p.A., Milan, Italy, a company of Italy
Original application Aug. 24, 1965, Ser. No. 482,104. Divided and this application Aug. 10, 1967, Ser. No. 664,593
Claims priority, application Italy, Feb. 25, 1965, 1,708/65, Patent 742,042
9 Claims. (Cl. 316—25)

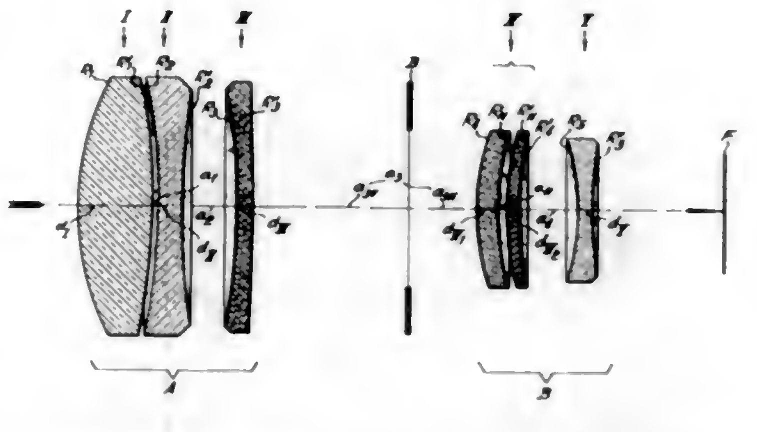


A process of producing within a picture tube, having walls and a screen, a thin getter metal film for sorbing the residual gases, comprising evaporating the getter metal in the picture tube in the presence of a gas present in an amount such that the mean free path of the getter metal atoms in the gas is equal to or less than the distance between the metal evaporating source and the tube screen.

3,388,956

PHOTOGRAPHIC TELEPHOTO LENSES OF HIGH TELEPHOTO POWER

Joachim Eggert, Ernst Tronnier, and Fritz Ueberhagen, Braunschweig, Germany, assignors to Voigtlander A.G., Braunschweig, Germany, a corporation of Germany
Filed Apr. 9, 1964, Ser. No. 358,426
Claims priority, application Germany, Apr. 10, 1963, V 23,924
13 Claims. (Cl. 350—176)



A telephoto lens for photographic purposes having a high telephoto power. The telephoto lens consists of a tele-positive in front and a tele-negative facing the film and separated by a large air space. The tele-positive (A) consists, proceeding sequentially from the longer conjugate to the shorter conjugate, of a converging lens having a positive refractive power equal to from 1.5 to 3 times the equivalent refractive power Φ of the entire lens system, a first diverging lens following the converging lens, and a second diverging lens following the first diverging lens. The tele-negative (B) limits the air space and consists of a front element facing the object and having positive refractive power, this front element being followed, toward the shorter conjugate, by a negative partial element of the tele-negative. The thickness of the air lens between the tele-positive (A) and the tele-negative (B), measured along the optical axis, is from ⅓ to ⅔ of the equivalent focal length of the entire lens system. The second diverging lens (III) in the last position of the tele-positive (A) and the first converging lens element (IV) of the tele-negative (B) following the air space (a_3) have refractive powers consisting of the sums of the refractive powers of their individual surfaces such that the sum of the refractive powers ($\varphi_{III}+\varphi_{IV}$) is between ⅔ and $\frac{3}{2}$ of the equivalent refractive power Φ, and the two inner surfaces (R_3' and R_4) of the two elements (III and IV) limiting the air space (a_3) have refractive powers ($\varphi_3'+\varphi_4$) such that the large air lens included between them has a converging refractive power of from $\frac{3}{2}$ to $\frac{10}{2}\Phi$. The absolute value of the quotient of the refractive power (φ_{IV}) of the converging lens (IV) on that side of the tele-negative (B) facing the image, divided by the refractive power (φ_{III}) of the diverging lens (III) of the tele-positive (A) on the side facing the object is from 2.5 to 5.0.

3,388,957

GASEOUS LENSES EMPLOYING CATALYTIC COMBUSTION

Alfred C. Beck, Red Bank, and Glenn E. Conklin, Middletown, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Nov. 23, 1964, Ser. No. 413,244
7 Claims. (Cl. 350—179)

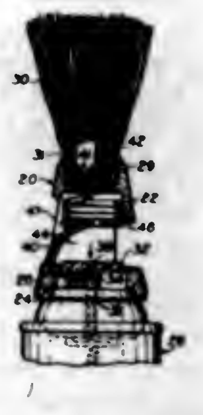
This application describes a thermal gaseous lens for guiding ultrahigh frequency electromagnetic wave energy.

It is known that a focusing effect can be established by causing a transparent, cool gas to flow through a heated tube. In accordance with the present invention, heating is caused by the interaction of a chemically reactive gas, or mixture of gases, with a specific catalytic material placed about the periphery of the tube. In one embodiment of the invention, the catalytic material is located about the interior wall of the tube. In an alternate embodiment of the invention, the catalytic material is located about the exterior wall of the tube, and the chemically reactive gas is kept separate from the gas flowing within the tube.

3,388,958

HOT LATHER SHAVING BRUSH ATTACHMENT FOR AEROSOL DISPENSER

John J. Modla, 46 Jones St., Jersey City, N.J. 07306, now by change of name, William D. Johnson
Filed Aug. 15, 1966, Ser. No. 573,165
9 Claims. (Cl. 401—2)

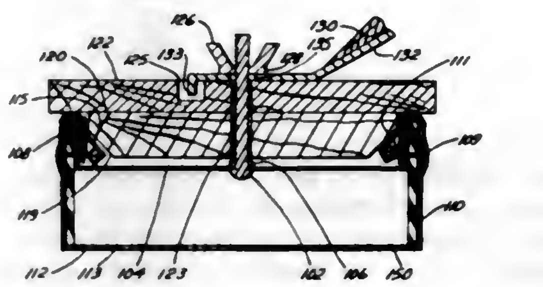


Hot lather shaving brush attachment for aerosol shaving lather container comprising housing, means on one end of housing for detachably mounting housing on can, bristle bearing means, means for detachably mounting bristle bearing means at other end of housing, heat conductive conduit means in housing for communicating outlet of aerosol can with bristles, means for heating conduit means, and means in housing for actuating dispensing mechanism on aerosol can.

3,388,959

ANCHOR GRIP ELEMENT

Samuel Shapiro, P.O. Box 365, Winnipeg, Manitoba, Canada
Filed May 4, 1965, Ser. No. 453,122
1 Claim. (Cl. 401—207)

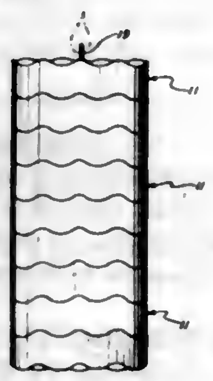


A replaceable paste wax transfer cloth with a loop for receiving a bulk strip of wood to act as an anchor between a paste wax applier lid and frame.

3,388,960

SEGMENTAL CANDLE

Francis J. Cangialosi, 123 Valley View Road, Hillside, N.J. 07205
Filed July 1, 1966, Ser. No. 562,383
5 Claims. (Cl. 431—288)



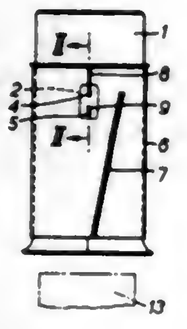
A segmental candle in which each segment is provided with cooperative means on the top and bottom thereof adapted for interengagement with each other to insure axial alignment and in some species to deter or interlock the segments against both vertical and rotational movement of adjacent segments with respect to each other.

3,388,961

LIQUID FUEL BURNING HEATERS OF THE BLUE FLAME TYPE

Hugh Charles Hebard, High Wycombe, England, assignor to Aladdin Industries Limited, Greenford, England, a British company
Filed Oct. 14, 1966, Ser. No. 586,841
4 Claims. (Cl. 431—301)

An annular wick for use in a liquid fuel burning heater of the blue flame type has fixed to its exterior, at diametrically opposite points, two plates each formed with two longitudinally spaced projections, and an associated wick carrier, adapted to surround the wick and to be engaged by wick-adjusting mechanism for raising and lowering the wick, is formed with upper and lower slots for cooperation with the projections on the wick whereby the wick



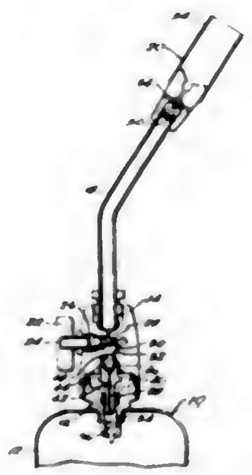
may be secured to the carrier in two alternative positions, in the first of which the lower end of the wick projects from the carrier to facilitate its initial passage over the upper end of the central wick tube of the heater and in the second of which the lower end of the wick is coincident with the end of the carrier.

3,388,962
GAS APPLIANCE METERING DEVICE

Richard S. Baumann, Glenbeulah, and Richard E. Linch, Chilton, Wis., assignors to Western Industries, Inc., Milwaukee, Wis., a corporation of Wisconsin

Filed July 7, 1966, Ser. No. 563,510

3 Claims. (Cl. 431—344)



A portable pressurized gas fuel torch having a fuel metering device in the nature of a porous flow retarding element interposed in the fuel passage.

CHEMICAL

3,388,963
MODIFICATION OF WOOL WITH ACETIC ANHYDRIDE AND PARAFORMALDEHYDE

Nathan H. Koenig, Berkeley, Calif., assignor to the United States of America as represented by the Secretary of Agriculture

No Drawing. Filed Oct. 29, 1964, Ser. No. 407,588

2 Claims. (Cl. 8—127.6)

1. A process for chemically modifying wool which comprises reacting wool under anhydrous conditions with a mixture of acetic anhydride and paraformaldehyde.

3,388,964
SHRINKPROOFING WOOL WITH DIISOCYANATES AND ETHYLENIMINE

Nathan H. Koenig, Berkeley, Calif., assignor to the United States of America as represented by the Secretary of Agriculture

No Drawing. Filed Aug. 19, 1965, Ser. No. 481,145

3 Claims. (Cl. 8—127.6)

1. A process for shrinkproofing wool which comprises reacting the wool with a mixture containing 5 to 95% by weight of ethylenimine and 95 to 5% by weight of an organic diisocyanate selected from the group consisting of aliphatic, aromatic, and aromatic-aliphatic diisocyanates.

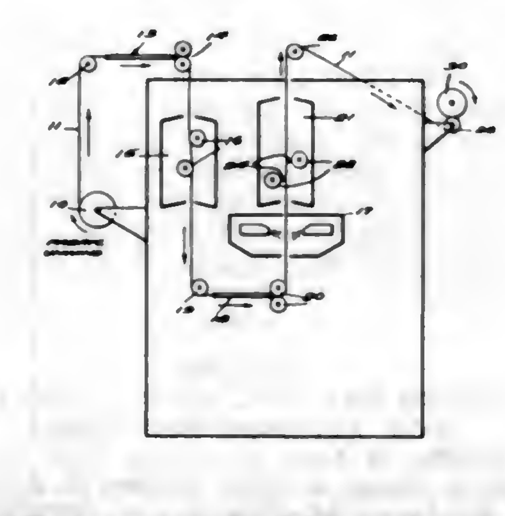
3,388,965
PROCESS FOR PREPARING SMOOTH SURFACE FABRICS

Jerry Alford Garrett, Charlottesville, Va., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Continuation-in-part of application Ser. No. 375,339, June 15, 1964. This application Aug. 31, 1965, Ser. No. 484,075

5 Claims. (Cl. 8—130.1)

A process for preparing smooth fabric from fuzzy fabric, in particular by bonding the free ends of staple fibers protruding from the surface of the fabric. The process comprising applying (preferably in mist form) a swelling agent to the fuzz of free fibers, and steaming the treated fabric to cause the fibers to become plastic and adhesive. The fuzz or free fiber portions have been or are subsequently pressed to the fabric surface (e.g., by mechanically aligning them); preferably this is done before and after the applying and steaming.



3,388,966
AMMONIUM PHOSPHATE PREPARATION

Robert A. MacDonald, 27 Pilgrim Drive, Port Chester, N.Y. 10573

Filed Feb. 10, 1964, Ser. No. 343,649

8 Claims. (Cl. 23—107)

This disclosure relates to processes for the preparation of ammonium phosphates, such as, e.g., monoammonium phosphate and diammonium phosphate, by reacting a relatively impure phosphoric acid, such as, e.g., wet-process phosphoric acid, with a source of ionizable calcium, such as, e.g., phosphate rock, and a recycle mother liquor comprising fluoride and sulfate ions—preferably separating calcium sulfate and calcium fluoride from the reaction mixture—; ammoniating the resulting reaction mixture to form insoluble compounds therein; separating the insoluble compounds from the reaction mixture; crystallizing ammonium phosphate product from the resulting liquor short of the liquor concentration where appreciable fluoride and sulfate ions are coprecipitated with the ammonium phosphate product; and, preferably, recycling the mother liquor. The ammonium phosphates formed are especially useful as intermediates in the preparation of other phosphates, used as fertilizers.

3,388,967
PHOSPHORIC ACID PURIFICATION

Jakkanahally Mallaradhya Ramaradhya, Trail, British Columbia, Canada, assignor to Cominco Ltd.-Cominco Ltee., a corporation of Canada

Filed Oct. 29, 1964, Ser. No. 407,496

Claims priority, application Canada, July 20, 1964, 907,586

9 Claims. (Cl. 23—165)

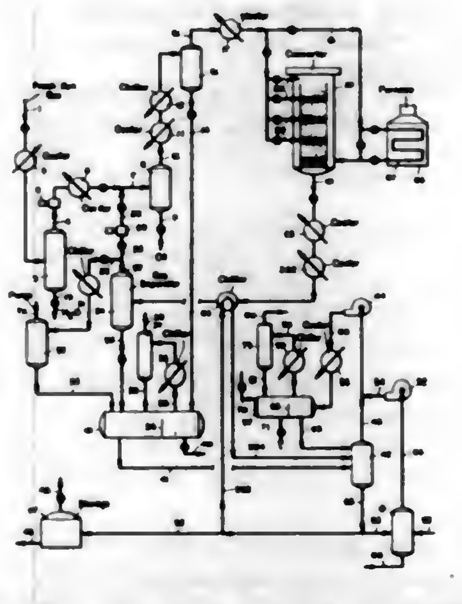
Impure aqueous phosphoric acid made by the "wet process" is purified by extraction with a solvent selected from propyl acetates, butyl acetates, amyl acetates and mixtures thereof. The extract is treated with water to recover purified phosphoric acid. Optionally, the extraction can be preceded by a defluorination step and can be carried out as a multistage countercurrent extraction process.

3,388,968
AMMONIA SYNTHESIS FEED AND RECYCLE LOOP

Maurice Spielman, New Providence, and George P. Baumann, Sparta, N.J., and Burton Hering, Bronx, N.Y., assignors to Esso Research and Engineering Company, a corporation of Delaware

Filed Dec. 1, 1965, Ser. No. 510,848

4 Claims. (Cl. 23—199)



An improved continuous process for the synthesis of ammonia from synthesis gas wherein a mixed feed of fresh ammonia synthesis gas and of recycle synthesis gas which remains unconverted is transported to an ammonia synthesis conversion zone, which comprises condensing 70 to 85% of the ammonia synthesized as high refrigeration grade ammonia, mixing the remaining portion of the recycle gas containing uncondensed ammonia with fresh synthesis gas in a ratio of from 3/1 to 3.5/1, and condensing out fertilizer grade ammonia with catalyst poisons including water, carbon oxides, and hydrocarbon oil.

3,388,969
PROCESS FOR THE PREPARATION OF PHOSPHORUS OXYBROMIDE

Richard C. Nametz, St. Louis, and John H. Todd, Alma, Mich., assignors to Michigan Chemical Corporation, St. Louis, Mich., a corporation of Michigan

No Drawing. Filed Nov. 6, 1963, Ser. No. 321,658

7 Claims. (Cl. 23—203)

1. The process for the preparation of phosphorus oxybromide, by the reaction of phosphorus pentoxide, phosphorus tribromide and bromine, which comprises:

(a) providing a semi-fluid mixture comprising phosphorus pentoxide and phosphorus tribromide at a temperature less than about 105° C., the molar ratio of phosphorus pentoxide to phosphorus tribromide being in excess of 1 to 3;
(b) introducing bromine into the semi-fluid mixture at a rate which maintains the resulting reaction mixture in a semi-fluid state while heating at a temperature less than about 105° C., the molar ratio of total bromine added to phosphorus tribromide in the semi-fluid mixture being at least 1 to 1;
(c) heating the reaction mixture so that the temperature is slowly increased above about 105° C. to a maximum of about 170° C. until substantially all of the phosphorus tribromide reacts to produce a liquid phosphorus oxybromide product; and
(d) recovering the phosphorus oxybromide product from the resultant reaction mixture containing a residue.

3,388,970
CHLORINE PENTAFLUORIDE PROCESS

Gene A. Hyde and Max M. Boudakian, Hamden, Conn., assignors to Olin Mathieson Chemical Corporation, New Haven, Conn., a corporation of Virginia

No Drawing. Filed Apr. 13, 1964, Ser. No. 360,169

6 Claims. (Cl. 23—205)

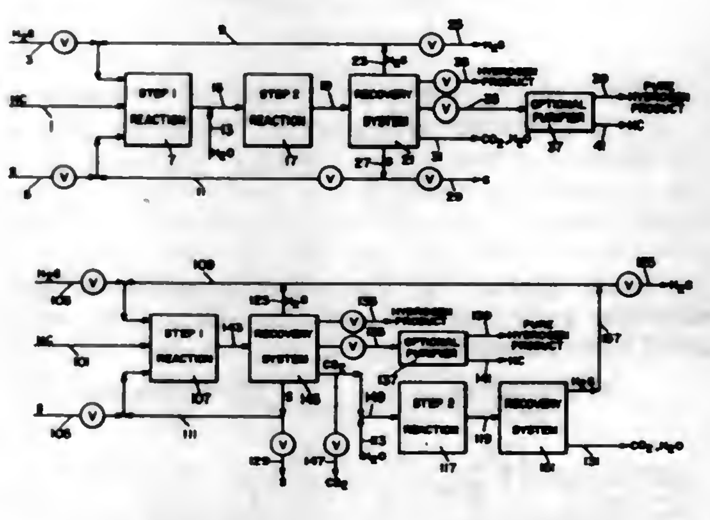
Chlorine pentafluoride is provided in high yield and purity by the reaction of alkali metal or alkaline earth metal chlorides with fluorine at an elevated temperature in a closed reaction vessel and recovery of the chlorine pentafluoride from the volatile reaction products.

3,388,971
PRODUCTION OF HYDROGEN

Seymour C. Schuman, Rocky Hill, N.J. (360 Jefferson Road, Princeton, N.J. 08540)

Filed June 7, 1965, Ser. No. 461,768

2 Claims. (Cl. 23—212)



Hydrogen is produced by contacting a light hydrocarbon feed with hydrogen sulfide at elevated temperatures to produce hydrogen and carbon disulfide, and then, contacting such carbon disulfide with steam to produce the predominant part of the hydrogen sulfide required in the first step.

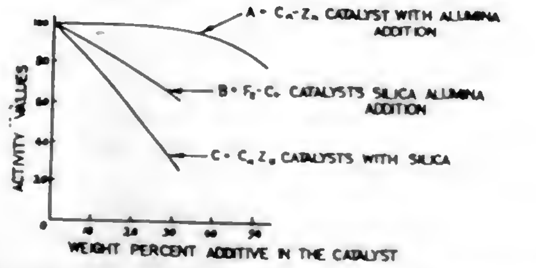
3,388,972
LOW TEMPERATURE SHIFT REACTION CATALYSTS AND METHODS FOR THEIR PREPARATION

Ronald E. Reitmeier, Middletown, and Harold W. Fleming, Jeffersontown, Ky., assignors to Catalysts & Chemicals Inc., Louisville, Ky., a corporation of Delaware

Continuation-in-part of application Ser. No. 498,113, Oct. 19, 1965. This application Dec. 14, 1966, Ser. No. 601,657

14 Claims. (Cl. 23—213)

Water gas shift reactions, the reaction of carbon monoxide with steam, are favored by low temperature operations, but occasionally are subjected to abnormal temperature increases. Increases in temperature have been injurious to low temperature shift catalysts. A shift catalyst suitable under such conditions contains copper, zinc oxide and alumina. The zinc to copper weight ratio is 0.5 to 3 zinc to 1 copper, and the catalyst contains 1 to 55 percent alumina based on the copper oxide-zinc oxide-alumina precursor.

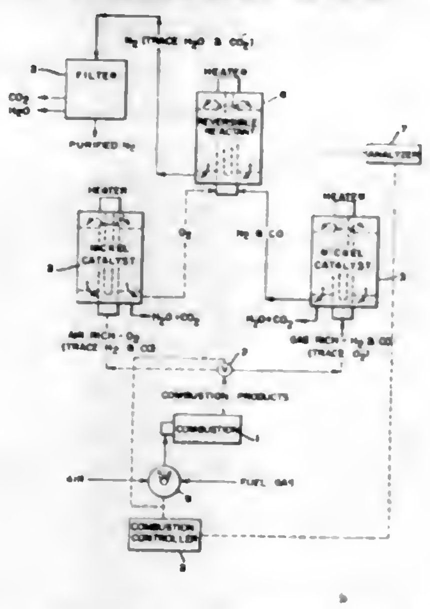


3,388,973
MANUFACTURE OF PURE NITROGEN

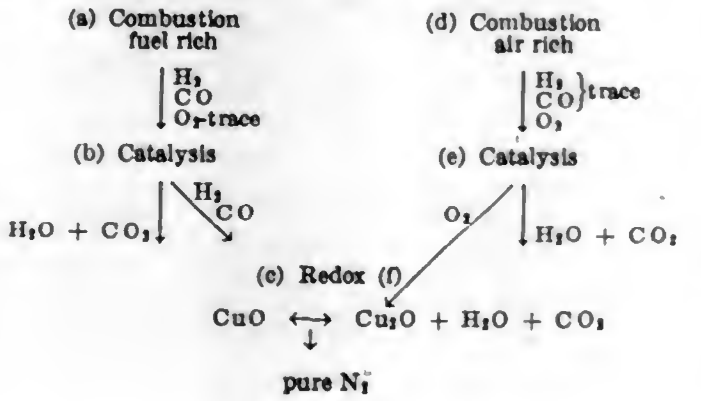
William A. Marquardt, Bay Village, and Roy M. Bednarski, Parma Heights, Ohio, assignors to Alco Standard Corporation, Philadelphia, Pa., a corporation of Ohio

Filed Feb. 1, 1966, Ser. No. 524,323

5 Claims. (Cl. 23—220)



A cyclic process for the manufacture of nitrogen in which the cycle includes steps (a), (b), (c), (d), (e), and (f) as illustrated:



3,388,974
USE OF OZONE TO AID DETECTION IN THIN LAYER CHROMATOGRAPHY

Robert Fuhrmann, Hanover Township, Morris County, and David Jerolamon, Morris Township, Morris County, N.J., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York

No Drawing. Filed Jan. 22, 1965, Ser. No. 427,454

4 Claims. (Cl. 23—230)

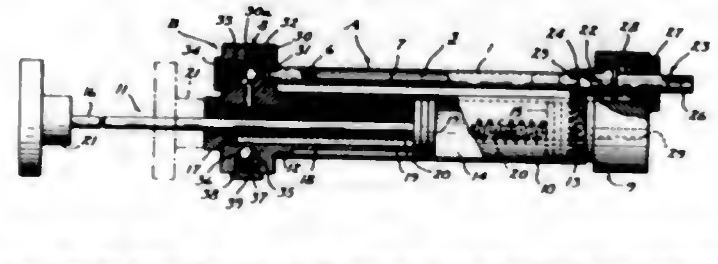
A method of detecting a colorless organic compound on a developed thin layer chromatographic plate which comprises oxidizing said compound with ozone to produce an oxygen-containing functional group capable of reacting with a suitable reagent to produce color.

3,388,975
APPARATUS FOR COLORIMETRIC GAS ANALYSIS AND METHOD FOR MAKING SAME

Donald C. Wallace, Novelty, Ohio, assignor to The Barber Manufacturing Company, County of Cuyahoga, Ohio, a corporation of Ohio

Filed June 16, 1964, Ser. No. 375,538

9 Claims. (Cl. 23—254)



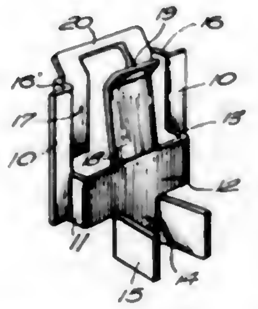
An apparatus for the colorimetric quantitative analysis of gas mixtures characterized by the use of an indicator tube containing a porous column of granulated material coated with a reagent that changes color on contact with a given gas and also containing an axially centered elongated permeable pin which is permeated with an activator for the reagent.

3,388,976
FEMALE MOLDED-ON ELECTRICAL CONNECTOR

Paul P. Danesi, Attleboro Falls, Mass., assignor to Cable Electric Products, Inc., Providence, R.I., a corporation of Rhode Island

Filed Oct. 22, 1965, Ser. No. 500,689

10 Claims. (Cl. 29—193)



1. A female electrical contact element comprising a generally rectangular body of electrically conductive material having flat parallel side edge portions, the lower portion of said body being bent forwardly to form a transverse strip integrally connected at each end to said side edge portions, said strip being a a plane parallel to and forwardly of the plane of said side edge portions, an integral vertical strip extending from the upper edge of said transverse strip, the upper portion of said body being bent rearwardly in a plane rearwardly of the plane of said side edge portions, said vertical strip and transverse strip being in spaced relation to said upper body portion defining a slot therebetween and closed at each side edge by said edge portions for receiving a male contact blade.

3,388,977
POUR POINT DEPRESSANT FOR MIDDLE DISTILLATES

Herbert G. Burkard, Roselle, Edward N. Kresge, Elizabeth, and Irwin J. Gardner, Fanwood, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Jan. 6, 1965, Ser. No. 423,870

6 Claims. (Cl. 44—62)

Petroleum distillate fuel oil containing as a pour point depressant polymer comprising ethylene and C_3 to C_{10} alpha olefin, which has been oxidized and then reduced, and having a molecular weight of about 500 to 49,000. The polymer can contain other olefin monomers.

3,388,978
HYDROCARBON FUEL COMPOSITION

Paul M. Kerschner, Trenton, and Frederick G. Hess, Cranbury, N.J., assignors to Cities Service Oil Company, a corporation of Delaware

No Drawing. Original application Mar. 6, 1964, Ser. No. 350,121, now Patent No. 3,338,935, dated Aug. 29, 1967. Divided and this application Aug. 17, 1967, Ser. No. 670,488

19 Claims. (Cl. 44—68)

A hydrocarbon fuel composition having a major portion of liquid hydrocarbon fuel and a minor portion of a metal (acid hydrocarbyl orthophosphate) wherein the metal is a Group IV–B metal of the periodic table and wherein the acid of the orthophosphate is neutralized with an amine.

3,388,979
GASOLINE COMPOSITION CONTAINING N-AMINOALKYL-SUBSTITUTED 2-AMINOALKANE DETERGENTS

George J. Kautsky, El Cerrito, Calif., assignor to Chevron Research Company, a corporation of Delaware

No Drawing. Filed June 8, 1964, Ser. No. 373,514

5 Claims. (Cl. 44—69)

Leaded gasoline composition containing N-aminoalkyl-substituted 2-aminoalkanes in which the alkane is straight chain and contains from about 9 to 24 carbon atoms.

3,388,980
METHOD OF MAKING GLASS POLISHING COMPOSITION

Homer Roberts Foster, Kittanning, Pa., assignor to Pittsburgh Plate Glass Company, Pittsburgh, Pa., a corporation of Pennsylvania

No Drawing. Filed Dec. 21, 1965, Ser. No. 515,306

4 Claims. (Cl. 51—293)

A glass polishing composition is produced by dissolving zirconium tetrachloride in water to provide a solution containing from 0.05 to 3.5 percent by weight dissolved zirconium, the pH value of the solution is adjusted to a range of 1.5 to 3.0 and thereafter zirconium oxide is added to the solution as an abrasive, so that there is dispersed therein between 0.25 and 10% by weight of zirconium oxide.

3,388,981
METHOD OF MAKING GLASS POLISHING COMPOSITION

John S. Sieger, Allison Park, Pa., assignor to Pittsburgh Plate Glass Company, Pittsburgh, Pa., a corporation of Pennsylvania

No Drawing. Filed Sept. 30, 1966, Ser. No. 583,467

4 Claims. (Cl. 51—293)

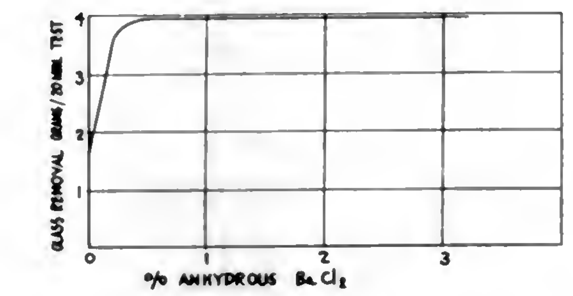
A glass polishing composition is produced by dissolving zirconyl chloride in water to provide a solution containing 0.05 to 3.5 percent by weight dissolved zirconium, the pH value of the solution is adjusted to a range of 1.5 to 3.0 and zirconium oxide is added so that there is dispersed therein between 0.25 and 10 percent by weight zirconium oxide as an abrasive.

3,388,982
GLASS POLISHING COMPOSITION CONTAINING AN INORGANIC BARIUM SALT

Homer R. Foster, Kittanning, Pa., assignor to Pittsburgh Plate Glass Company, Pittsburgh, Pa., a corporation of Pennsylvania

Continuation-in-part of application Ser. No. 520,542, Dec. 21, 1965. This application Aug. 23, 1967, Ser. No. 662,667

7 Claims. (Cl. 51—309)



A soluble barium salt, such as barium chloride, barium bromide, etc., is added to a glass polishing slurry containing soluble zirconium to be used in the presence of sulphate ions so as to react with the sulphate ions and substantially reduce any reaction between the zirconyl ions and the sulphate ions, insuring the presence of the zirconyl ions for glass polishing.

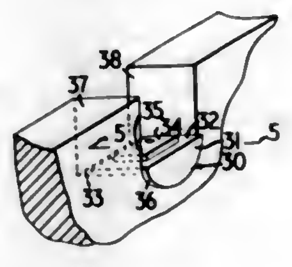
3,388,983
PRESS BENDING MOULD HAVING MODIFIED RECESSES FOR THE GLASS SHEET ENGAGING MEANS

Ronald E. Richardson, Oshawa, Ontario, Canada, assignor to Pittsburgh Plate Glass Company, Pittsburgh, Pa.

Filed June 21, 1965, Ser. No. 465,421

Claims priority, application Canada, Mar. 22, 1965, 926,193

8 Claims. (Cl. 65—286)



An apparatus for press bending glass sheets which have been heat softened, the apparatus including a pair of forming members having complementary concave and convex shaping surfaces and recesses for receiving glass engaging members during pressing, the concave shaping surface being provided adjacent the recesses with raised surfaces extending from the recesses in a direction transverse to the axis of curvature of the shaping surface to contact the sheet of glass during bending so as to reduce distortion.

3,388,984
BLAST HEAD APPARATUS FOR TEMPERING GLASS SHEETS WITH MEANS TO ATTACH AND SEAL NOZZLES TO THE BLAST HEAD

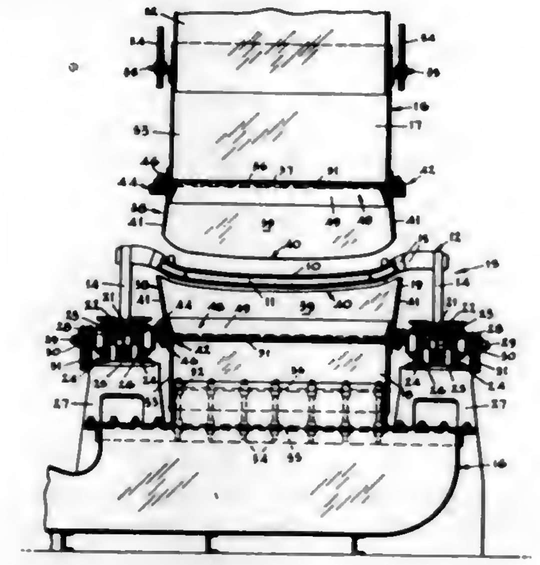
Herbert A. Leflet, Jr., Toledo, Ohio, and Robert D. Caswall, Jr., Erie, Mich., assignors to Libbey-Owens-Ford Glass Company, Toledo, Ohio, a corporation of Ohio

Filed Oct. 27, 1964, Ser. No. 406,854

2 Claims. (Cl. 65—348)

Apparatus for tempering curved glass sheets moving along a substantially horizontal path including a plenum

chamber, an elongated nozzle arranged transversely of said path and communicating with said chamber, said nozzle and chamber having interfitting surfaces to secure said nozzle to said chamber while enabling sliding of the



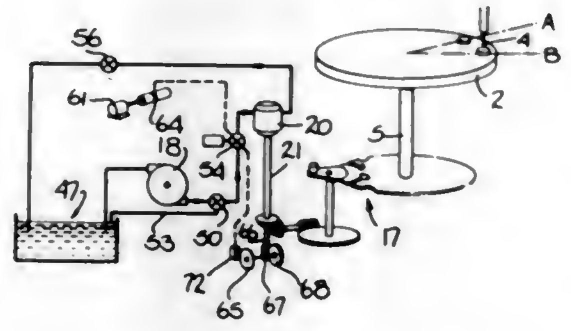
nozzle endwise transversely of said path onto and off of said chamber.

3,388,985
DRIVE FOR GLASS-FORMING MACHINES

Frederick Z. Fouse, Lancaster, Ohio, assignor to Anchor Hocking Glass Corporation, Lancaster, Ohio, a corporation of Delaware

Filed Jan. 28, 1965, Ser. No. 428,638

3 Claims. (Cl. 65—361)



A drive and control system for independently regulating the indexing and dwelling times of the mold table in a glass-forming machine as well as achieving rapid indexing movement, fluid braking and overload drive protection. The system comprises a hydraulic motor which operates the mechanical indexing drive for the table and has valving in the motor control system for protectively limiting line pressure and trapping fluid in the motor for fluid braking. A sequentially operated air valve initiates the indexing action by opening an hydraulic valve which controls fluid flow to the hydraulic motor. Operation of the motor indexes the table through a Geneva drive. A timing wheel geared to the drive actuates another air valve for closing the hydraulic motor valve at the end of the indexing cycle thereby stopping the drive. The closing of the motor valve actuates a down-stream valve trapping fluid in the motor and thus giving controlled fluid braking. A relief valve is provided upstream from the pump which bypasses fluid to the reservoir when the motor is stopped by the control valve or an overload. The sequentially operated air valve again begins the operating cycle.

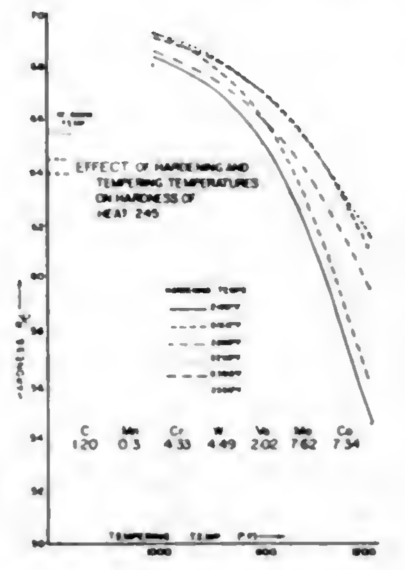
3,388,986
HIGH SPEED TOOL STEEL

William B. F. Mackay, 21 Haist Road N., and Robert O. Carson, 81 Carboro Road, both of Fonthill, Ontario, Canada

Filed Aug. 9, 1965, Ser. No. 478,116

Claims priority, application Canada, June 4, 1965, 932,496

4 Claims. (Cl. 75—126)



A high speed tool steel which in its hardening state has improved hardness suitably of the order of R_c 70 hardness and thus improved wear resistance as well as improved toughness which steel consists of, on a percentage basis, 1.15 to 1.25 carbon, 4.00 to 4.5 chromium, 4.25 to 5.00 tungsten, 1.85 to 2.15 vanadium, 6.75 to 7.75 cobalt, 7.00 to 8.00 molybdenum, .20 to .40 manganese and .15 to .45 silicon, the balance being iron and residual impurities.

3,388,987
CATHODIC PROTECTION ALLOYS

Ronald Ernest Bailey, Ickenham, Uxbridge, England, assignor to The British Aluminium Company Limited, London, England, a company of Great Britain

No Drawing. Filed Oct. 12, 1965, Ser. No. 495,321

Claims priority, application Great Britain, Oct. 21, 1964, 42,969/64

4 Claims. (Cl. 75—146)

1. An aluminum base alloy for use as a sacrificial anode material consisting essentially of 0.5 to 10% zinc, 0.01 to 2% tin, up to 0.015% copper, up to 0.05% magnesium, up to 0.25% silicon, up to 0.35% iron, up to 0.1% manganese and titanium in excess of 0.01% but not more than 0.1%, the tin being dispersed throughout the alloy matrix and the balance being aluminum and inconsequential impurities.

3,388,988
LOW-TEMPERATURE TOUGH STEEL

Shinichi Nagashima, Susumu Goda, and Hisashi Gondou, Kitakyushu, Takayuki Ooka, Tokyo, Hiroshi Mimura, Kawasaki, Toshiyuki Fujishima, Kitakyushu, Kazuo Sugino, Kawasaki, and Seinosuke Yano, Funabashi, Japan, assignors to Yawata Iron & Steel Co., Ltd., Tokyo, Japan

Filed June 21, 1965, Ser. No. 465,640

Claims priority, application Japan, June 22, 1964, 39/35,392, 39/35,393

5 Claims. (Cl. 75—128)

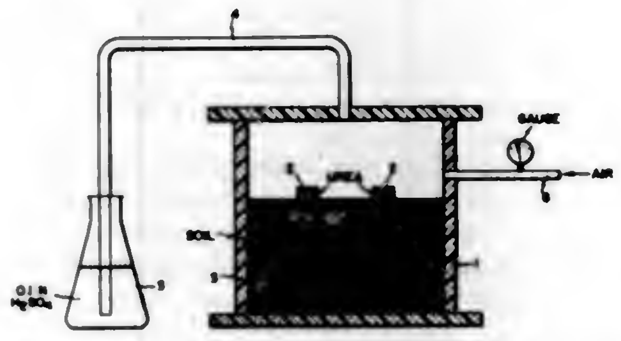
A low-temperature tough steel consisting essentially of 0.01 to 0.15% by weight C, 0.05 to 0.40% by weight Si, 4.50 to 7.50% by weight Ni, 0.50 to 4.50% by weight Mn, 0.1 to 1.50% by weight Cr, 0.1 to 1.50% of a temper brittleness reducing material taken from the group consisting of W and a mixture of W and Mo, N less than 0.05% by weight, and a nitride forming element in an amount equivalent to less than 0.05% by weight acid-soluble Al, the balance being Fe and unavoidable impurities, said steel having as the base structure an austenite grain precipitated in a ferrite matrix.

3,388,989
FERTILIZER COMPOSITION CONSISTING OF UREA, A UREASE INHIBITOR, AND A HYDROCARBON BINDER

Kamil Sor, Linden, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware

Continuation-in-part of applications Ser. No. 197,309, May 24, 1962, Ser. No. 238,124, Nov. 16, 1962, and Ser. No. 275,742, Apr. 25, 1963. This application July 20, 1964, Ser. No. 383,692

6 Claims. (Cl. 71—28)



This disclosure relates to an improved agricultural fertilizer composition which contains urea mixed with a volatilization reducing substance which partially inactivates the urease enzyme, all of which is imbedded in or coated with a solid hydrocarbon such as paraffins, waxes, asphalts, petroleum resins or combinations of same.

3,388,990
METHOD OF PREVENTING THE CAKING OF SUBSTANCES APT TO CAKE

Iwao Maruta and Akihiko Iida, Chiba, Japan, assignors to Kao Soap Company, Ltd., Tokyo, Japan, a corporation of Japan

No Drawing. Filed Apr. 26, 1965, Ser. No. 451,007

Claims priority, application Japan, June 20, 1964, 39/34,305

9 Claims. (Cl. 71—64)

A method of preventing caking of a substance apt to cake comprising applying to the said substance an aqueous solution, a synthetic high polymer and a surface active agent, and drying the substance. The dried substance has a branched configuration and a relatively large specific volume. The polymer and surface active agent are applied to the substance in the range of 0.001 to 0.5% by weight of the substance.

3,388,991
METHOD OF CONTROLLING UNDESIRED VEGETATION WITH POLYCHLOROPHENYL N-ALLYL-N-CYCLOHEXYLCARBAMATES

John J. D'Amico, Dunbar, W. Va., and Anton G. Weiss, Basel, Switzerland, assignors to Monsanto Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Aug. 12, 1964, Ser. No. 389,185

3 Claims. (Cl. 71—106)

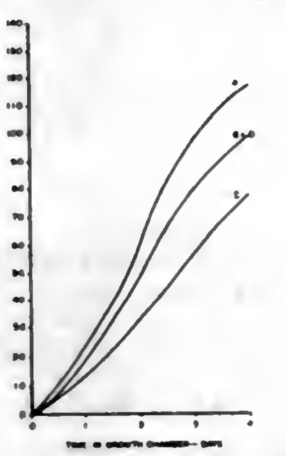
2,4-dichlorophenyl- and 2,4,5-trichlorophenyl N-allyl-N-cyclohexylcarbamates, which compounds are useful for controlling undesired vegetation of the sorghum family.

3,388,992
METHOD OF REDUCING PLANT TRANSPIRATION

Edward L. Ratledge, Claymont, Del., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

Continuation-in-part of application Ser. No. 469,870, July 6, 1965. This application May 15, 1967, Ser. No. 638,288

3 Claims. (Cl. 71—127)



A process for enhancing the effectiveness of a prepared antitranspirant composition consisting essentially of a wax and oil-in-water emulsion containing 0.25 to 5.0 parts wax and oil per 100 parts water, said wax being a petroleum wax having a melting point in the range of 122°–160° F. and said oil being a petroleum hydrocarbon oil having a maximum of 8.0 weight percent gel aromatics and a distillation range at 10 mm. Hg abs. of 300°–500° F. which process comprises admixing 0.25 to 1.0 part of unemulsified petroleum oil of the same characteristics as that disclosed above to the preformed wax and oil-in-water emulsion immediately before applying the emulsion to growing plants and thereafter applying said preformed emulsion with the additional oil to the plants.

3,388,993
METHOD OF SEPARATING METAL CHLORIDES

Hal D. Peterson, Boulder, and James L. Drobnick, Lakewood, Colo., and Stanton B. Smith, Covington, Va., assignors to West Virginia Pulp and Paper Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Oct. 8, 1963, Ser. No. 314,632

13 Claims. (Cl. 75—68)

1. The method of fractionating a mixture of fully chlorinated metal chlorides of different metals which comprises contacting a gaseous mixture containing at least two metal chlorides of different metals selected from the group consisting of the chlorides of beryllium, bismuth, indium, tellurium, aluminum, iron, gallium, hafnium, zirconium, mercury, selenium, gold, tantalum, niobium, molybdenum, tungsten, antimony, vanadium, titanium, arsenic, tin, germanium, and boron with active carbon maintained at a temperature between about 100 and 700° C. which is above the volatilization temperature of the metal chlorides being fractionated whereby said active carbon selectively adsorbs the chloride of some of the metals in greater relative quantities than the chloride of other metals producing at least two fractions each having a composition of metal chlorides differing from that of the original gaseous mixture of metal chlorides, and recovering at least one of said fractions.

5. The method of claim 1 wherein the gaseous mixture of metal chlorides is passed through a bed of active carbon, the effluent fraction after passage through said bed is recovered and the metal chloride content of said effluent fraction is converted to the basic metal by hydrolysis of the metal chloride with steam at an elevated temperature and smelting.

3,388,994

PHOTOGRAPHIC IMAGE-RECEIVING ELEMENTS HAVING BEEN TREATED WITH AMMONIA AFTER DRYING

Richard W. Young, Wellesley Hills, Mass., assignor to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 247,865, Dec. 28, 1962. This application Feb. 20, 1967, Ser. No. 617,028

8 Claims. (Cl. 96—29)

Color transfer image-receiving layers containing polymers of 4-vinylpyridine are treated with ammonia after being dried with heat. The resulting image-receiving elements exhibit improved optical properties, particularly freedom from haze.

3,388,995

PHOTOPOLYMER OFFSET PRINTING PLATES

Andre K. Schwerin, deceased, late of Binghamton, N.Y., by Johanna Schwerin, administratrix, Binghamton, N.Y., and Carl E. Diener, Binghamton, and Steven Levinos, Vestal, N.Y., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Aug. 10, 1964, Ser. No. 391,826

5 Claims. (Cl. 96—86)

A negative working, metal offset photopolymer plate having a hydroxyethyl cellulose coated metal base and, thereon, a lipophilic resin matrix consisting of a vinyl or acrylic polymer or copolymer having dispersed therein a water-soluble, ethylenically unsaturated monomer containing a $CH_2{=}C<$ group and a radiation-sensitive catalyst.

3,388,996

PROCESS AND PRODUCT OF BAKED GOODS PREPARATION

Hans H. Stockmann, Plainfield, and Dilip K. Ray Chaudhuri, Westfield, N.J., assignors to National Starch and Chemical Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Feb. 12, 1965, Ser. No. 432,394

18 Claims. (Cl. 99—91)

A process for preparing baked goods as well as the baked goods resulting therefrom; said process comprising the incorporation of an acyl carboxylic acid derivative, such as, alpha and beta-carboxyethyl (or isopropyl) stearates, behenates, and palmitates, into the raw dough mix prior to the baking thereof. The baked goods thus produced are characterized by their prolonged retention of freshness, fine texture, good color and increased volume.

3,388,997

PROCESS FOR PREPARING DANISH PASTRY

John F. Schaible, Easton, Pa., and Simon S. Jackel, New York, N.Y., assignors to Baker Research Development Service, Inc., New York, N.Y., a corporation of New York

No Drawing. Filed June 8, 1964, Ser. No. 373,534

6 Claims. (Cl. 99—92)

Process of making Danish pastry wherein a plurality of hard, discrete particles of pastry butter are dispersed in developed dough, followed by rolling, folding and shaping.

3,388,998

PROCESS OF PREPARING A QUICK-COOKING BEAN

Ataullah K. Ozai-Durrani, deceased, late of Stuttgart, Ark.; James R. Cherry and The Chase Manhattan Bank, executors of the estate of said Ataullah K. Ozai-Durrani

Continuation of application Ser. No. 217,409, Aug. 16, 1962. This application Apr. 21, 1967, Ser. No. 633,356

5 Claims. (Cl. 99—98)

Process of preparing a bean product comprising subjecting raw beans to heat and moisture to cook the beans and to increase their moisture content to between about 50–70% and then drying the beans to reduce the moisture content to about 10–15% by applying heat and sufficient pressure to substantially close any minor fissures and breaks which may have been created during the heating and drying.

3,388,999

AQUEOUS, SATURATED MONOGLYCERIDE DISPERSION

Noel H. Kuhrt and Russell A. Broxholm, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed June 11, 1964, Ser. No. 374,238

21 Claims. (Cl. 99—118)

An aqueous dispersion comprising a saturated monoglyceride and water, together with a quantity of lecithin sufficient to prolong the maximum activity condition of the monoglyceride. Additionally, the water may have an acid pH and the composition may include a small quantity of a mold inhibitor to prevent the growth of mold over a substantial period of time. Additionally, the composition may comprise a quantity of an unsaturated monoglyceride which creates an improved texture in baked goods; as well as a quantity of a triglyceride.

The invention also comprises a process for making the compositions by blending the ingredients together at a temperature above the melting temperature of the monoglyceride, and then cooling the blend. Separate oil and water phases can be blended, and then combined.

3,389,000

COATED FLAVOURINGS AND PREPARATION THEREOF

Eiichiro Fujita, Toyonaka, Kiyofumi Ishii, Ikeda, Hiromi Nakatani, Kobe, and Yuji Nakai and Kiyoshi Katagiri, Suita, Japan, assignors to Takeda Chemical Industries, Ltd., Higashi-ku, Osaka, Japan

No Drawing. Filed Nov. 6, 1964, Ser. No. 409,591

Claims priority, application Japan, Nov. 14, 1963, 38/61,307

8 Claims. (Cl. 99—140)

Nucleoside-5'-phosphates in granular form, for use in flavoring for foods and beverages, are protected against degradation by phosphatase, by coating the granules with animal or vegetable fat melting within the range from 40 to 100° C., thereupon releasing the 5'-phosphates in situ in the food or beverage, to which it is added, during the processing of such food or beverage at said temperature. The particular fat employed is correlated to storage and use temperature conditions, and the granule size is adjusted to 16–65 mesh prior to coating.

3,389,001

GLASS BONDED CERAMIC WARE PRESSING MOLD AND METHOD OF MAKING SAME

Andrew R. Blackburn, Westerville, and Virgil D. Kendall, Springfield, Ohio, assignors, by mesne assignments, to Ram, Incorporated, Springfield, Ohio, a corporation of Michigan

No Drawing. Continuation of application Ser. No. 309,894, Sept. 18, 1963. This application Aug. 19, 1966, Ser. No. 573,727

3 Claims. (Cl. 106—38.9)

1. A uniformly porous glass bonded ceramic mold composed of a composition comprising as major components 30% to 55% raw kyanite and 25% to 45% clay, and including 15% to 25% flux, said mold having substantially uniformly distributed small pores for effective ware release in use of the mold on a ware press.

3,389,002

HEAT AND CORROSION RESISTANT COATING COMPOSITION

Harold W. Hufcut, Andover, N.Y., assignor, by mesne assignments, to The Air Preheater Company, Inc., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 236,695, Nov. 9, 1962. This application Jan. 8, 1965, Ser. No. 424,208

5 Claims. (Cl. 106—84)

A silica based heat and corrosion resistant coating which may be applied to various materials by spraying, dipping or brushing to provide adequate protection under corrosive conditions at temperatures ranging upward to approximately 2400° F. The coating material consists essentially by weight of from 55% to 68% powdered silica, 25% to 42% potassium silicate, 1% to 4% talc, 1% to 7% nepheline syenite and sufficient water to provide a suitable consistency for the particular type of application desired.

3,389,003

METHOD OF PRODUCING CONCRETE OF IMPROVED STRENGTH

Eugene Gado, 18915 Detroit Ave.,
Lakewood, Ohio 44107

No Drawing. Continuation-in-part of application Ser. No. 441,845, Mar. 22, 1965. This application Aug. 10, 1966, Ser. No. 571,395

2 Claims. (Cl. 106—97)

Concrete of improved compressive strength is made by thoroughly grinding and homogenizing cement with 25–60% water and optionally sand, mixing with gravel and optionally more cement, sand or water, and adding a pre-hardened product. The pre-hardened product contains cement, water and other materials which are mixed, hardened, soaked in water and ground to fine powder.

3,389,004

ULTRAVIOLET LIGHT STABILIZERS FOR PLASTIC MATERIALS

Hans Dressler, Pitcairn, and Kenneth G. Reabe, Delmont, Pa., assignors to Koppers Company, Inc., a corporation of Delaware

No Drawing. Filed Feb. 23, 1966, Ser. No. 529,189

6 Claims. (Cl. 106—176)

3-salicyloylcarbazole derivatives are useful as ultraviolet light stabilizing agents for plastic material. The stabilizers are effective for protecting polyethylene, polypropylene, polystyrene, polyvinyl acetate, polyvinyl chloride, copolymers of vinyl chloride and vinylidene chloride, nitrocellulose, ethylcellulose, cellulose acetate, and polyester resins. The stabilizing agent is generally added in an amount of between 0.01 and 5 percent by weight of the plastic material.

3,389,005

PROCESS FOR THE DECOMPOSITION OF ZIRCON SAND

Harry Kloepfer, Fritz Sperr, and Eugen Meyer-Simon, Frankfurt am Main, Germany, assignors to Deutsche Gold- und Silber-Scheideanstalt vormals Roessler, Frankfurt am Main, Germany

No Drawing. Filed May 1, 1963, Ser. No. 277,106

Claims priority, application Germany, May 8, 1962, D 38,861

6 Claims. (Cl. 106—299)

1. A process for recovery of zirconium values from zircon sand which comprises heating a mixture of finely divided sodium oxide and zirconium sand containing at least 1 mol of sodium oxide per mol of zircon sand to a temperature between about 100 and 300° C. to ignite said mixture and initiate a self-propagating reaction and permitting said self-propagating reaction to go to completion without further supply of heat from an external source, after completion of the reaction extracting the reaction mixture with water to leave an insoluble residue containing zirconium values.

5. The process of claim 1 in which the molar ratio of sodium oxide to zircon sand is about 1 to 2 mols of sodium oxide per mol of zirconium sand and comprising in addition treating the insoluble residue containing zirconium values with a sufficient quantity of ammonium sulfate at sufficiently high temperatures that a product essentially consisting of SiO_2, ZrO_2 and sodium sulfate results and extracting the sodium sulfate from such product with water.

3,389,006

PROCESS FOR FORMING A REFRACTORY COATING ON SILICON-IRON STOCK

Dale M. Kohler, Middletown, Ohio, assignor to Armco Steel Corporation, Middletown, Ohio, a corporation of Ohio

No Drawing. Filed May 18, 1964, Ser. No. 368,422

7 Claims. (Cl. 117—33)

A process for forming a refractory coating on silicon-iron sheet stock prior to the final annealing operation producing cube-on-face orientation, comprising the steps of applying a thin binder layer in liquid form to at least one side of the stock, passing the strip and binder layer into contact with fine particles of a refractory separator substance causing the particles to adhere to the binder layer, and vaporizing the binder layer whereby to leave a thin, porous coating of the refractory particles on the strip stock during the final anneal.

3,389,007

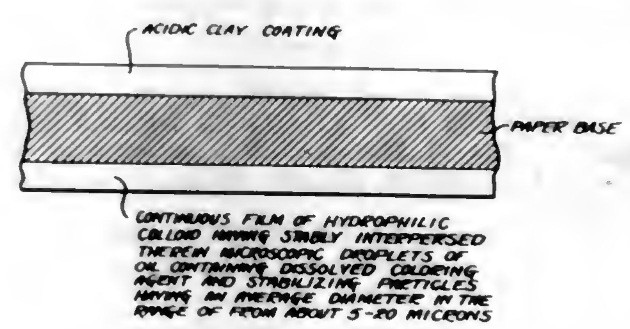
RECORD TRANSFER SHEET MATERIAL, METHOD OF MAKING AND COMPOSITION

Ryohei Oda, 18 Shichiku, Ushiwaka-cho, Kita-ku, Kyoto, Japan; Hiroshi Tujii, 3 Jokoji, Motomachi 2, Amagasaki, Japan; Hiroyuki Moriga, 111 Higashi, Naruo-cho, Nishinomiya, Japan; and Satoshi Dotani, 270 Muromachi, Sumiyoshi-cho, Higashinada-ku, Kobe, Japan

Filed July 17, 1963, Ser. No. 295,821

Claims priority, application Japan, July 20, 1962, 37/30,897

12 Claims. (Cl. 117—36.2)


ACIDIC CLAY COATING
PAPER BASE
CONTINUOUS FILM OF HYDROPHILIC COLLOID HAVING STABLY INTERPERSED THEREIN MICROSCOPIC DROPLETS OF OIL CONTAINING DISSOLVED COLORING AGENT AND STABILIZING PARTICLES HAVING AN AVERAGE DIAMETER IN THE RANGE OF FROM ABOUT 5-20 MICRONS

1. Record transfer sheet material comprising a planar substrate having a continuous film of pressure-disruptable hydrophilic film-forming material coated upon a surface thereof, said film having dispersed therein microscopic oil droplets containing dissolved coloring agent, said oil droplets being stably distributed within said film in the presence in said film of substantially water-insoluble particles having an average diameter in the range of from about 5 microns to about 20 microns, inert to said coloring agent and selected from the group consisting of substantially water-insoluble inorganic salt particles substantially water-insoluble inorganic oxide particles and substantially water-insoluble metal fatty acid salt particles.

3,389,008
URETHANE COATED SYNTHETIC CELLULOSIC BOARD

Maurice E. Bailey, Orchard Park, N.Y., assignor to Allied Chemical Corporation, New York, N.Y., a corporation of New York

No Drawing. Filed Oct. 26, 1964, Ser. No. 406,550

6 Claims. (Cl. 117—57)

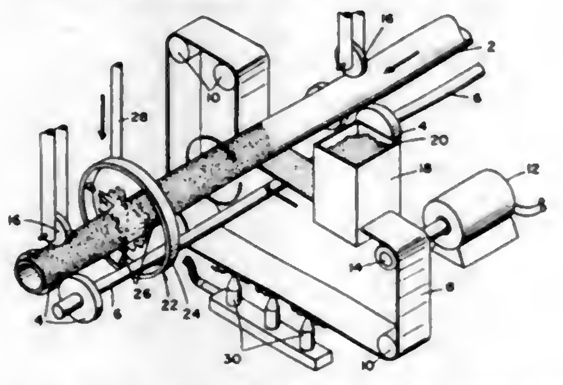
Urethane coated synthetic boards are produced by applying moisture-cure urethane coating compositions having free isocyanato groups to a synthetic cellulosic board substrate which is at a temperature of at least 100° F. and is still exuding moisture caused by the heat and pressure applied during the formation of said substrate.

3,389,009
METHOD OF COATING CONDUITS

Frank E. McNulty and Robert M. Nee, Tulsa, Okla., assignors to Nee & McNulty, Inc., a corporation of Oklahoma

Filed July 22, 1964, Ser. No. 384,445

4 Claims. (Cl. 117—18)



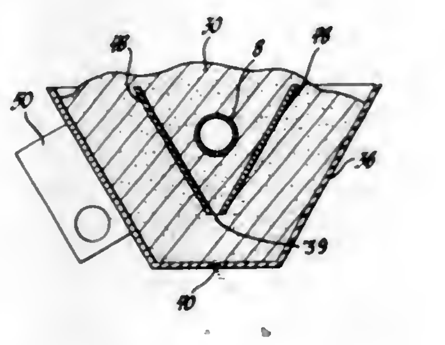
Pipe or similarly shaped objects can be coated by means of a continuous process involving placement of a substantially uniform layer of coating material particles onto an endless or continuous carrier belt which moves at right angles to the longitudinal axis of the pipe being coated. The pipe is heated to a temperature usually from about 400° F. to about 600° F. and the particles of coating material are fused to the metal surface. Simultaneously on contact of the coating material with the hot surface of the pipe, the carrier belt separates from the applied coating, cooled, and a fresh charge of coating material laid on the carrier belt for a subsequent application to the surface of the heated pipe. This results in a pipe section with a protective coat of uniform thickness.

3,389,010
METHOD FOR COATING ARTICLES

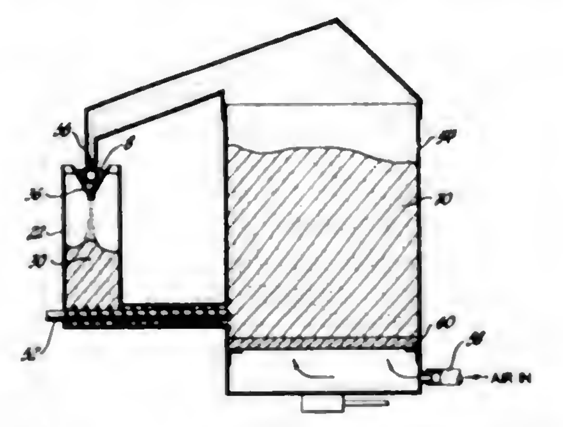
Richard C. Burch, Hilton, N.Y., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Aug. 27, 1964, Ser. No. 392,414

9 Claims. (Cl. 117—18)



A continuous process for the production of uniform synthetic resin and metallic coatings on the elongated articles of indefinite length is disclosed. Tubing is heated to a temperature above the melting point of the thermoplastic coating material and passed through a receptacle having a V-shaped configuration into which a mass of powdery thermoplastic material is continually flowing. The rate the material is poured continuously into the receptacle and the rate at which the material leaves the base of the receptacle are regulated so that the inclined sides of the receptacle support a flowing mass of substantially uniform density of the coating material about the tubing as it passes therethrough. The material adjacent said article in the receptacle is caused to melt and form a molten coating thereon which cools and solidifies after the article leaves the mass to form an adherent coating of substantially uniform thickness.



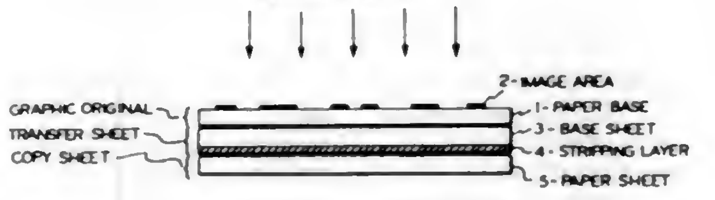
3,389,011
HEAT-SENSITIVE TRANSFER SHEET FOR PRODUCING A THERMOGRAPHIC FACSIMILE COPY

Karl Gunnar Svensson, Bergslagstorget 2D, Filipstad, Sweden

Continuation-in-part of application Ser. No. 352,250, Mar. 16, 1964. This application Apr. 18, 1967, Ser. No. 631,830

Claims priority, application Sweden, Nov. 2, 1961, 10,928/61; Mar. 16, 1962, 2,947/62; May 17, 1962, 5,540/62; Italy, Mar. 15, 1963, 32,970/63

5 Claims. (Cl. 117—36.1)



A heat-sensitive copying sheet for producing a thermographic facsimile copy, comprising a base sheet, a heat-sensitive coating layer on one side of said base sheet, said coating layer being substantially non-pressure-sensitive at room temperature and comprising wax as a major component, a dye component in a total amount of 3 to 11% by weight of said layer, said dye component containing at least one dye retaining substantial color strength upon prolonged influence of light and containing in its molecule at least one molecularly bound atom selected from the group consisting of selenium, tellurium, iodine, chromium, manganese, molybdenum, tungsten, iron, nickel, cobalt and copper, and a solvent agent being a solvent for said wax and said dye component and being present in said layer in an amount sufficient to hold all of said dye component in dissolved state in said layer and containing at least one member of the group consisting of benzyl alcohol and compounds containing at least two hydroxyl groups and at most 8 carbon atoms in their molecule, and said coating layer when heated to a temperature within the range of 50–150° C. having a greater ability to anchor itself on a paper surface pressed against it than of being anchored to said base sheet.

3,389,012
TEFLON COATING ON EDGES OF CONTACT LENS

Homer A. Hamm, Westchester, Ill., assignor to The Plastic Contact Lens Company, Chicago, Ill., a corporation of Illinois

No Drawing. Filed July 15, 1965, Ser. No. 472,327

4 Claims. (Cl. 117—38)

4. In a contact lens comprising a centrally located optical portion and a surrounding edge portion, the improvement comprising a coating on said edge portion of the lens, said coating comprising a tetrafluoroethylene polymer, and said coating being formed on the interior surface of the lens for disposition against the eye of the wearer of the lens.

3,389,013
PROCESSES AND COMPOSITIONS FOR OBTAINING CLEAR, TEXTURED, LIGHT-SCATTERING, LIGHT-REFLECTING AND LIGHT-REFRACTING FINISHES AND ARTICLES MADE THEREBY AND THEREWITH

James D. Armitage, Morris Plains, and Thomas Layster, Jr., Saddle Brook, N.J., assignors to John L. Armitage & Co., Newark, N.J., a corporation of New Jersey

No Drawing. Filed Jan. 28, 1963, Ser. No. 254,443

17 Claims. (Cl. 117—45)

8. The process for making a clear, textured, light-scattering, light-reflecting and light-refracting coating, which comprises applying, over a non-cellular structure having a patterned coating, a composition which comprises

- (a) a resinous film-forming material in particulate and in dissolved form,
  - (1) said material in particulate form
    - (a) being present in an amount from about 2 to about 50 percent, by weight, of the total composition,
    - (b) having a particle size to give gage readings from about 100 to about 250 microns on a PD–250 dispersion grind gage,
    - (c) having particles which remain substantially the same in size and shape in a coating made from said composition, and
      - (i) which are substantially transparent in such a coating,
  - (2) said material in dissolved form being sufficient to prevent mud cracking during the predrying and fusing stages of film-formation with said coating composition,
- (b) said composition being adapted to form a thin coating which is clear, textured, light-scattering, light-reflecting, light-refracting and having the property of imparting a distinctive appearance to a surface over which said coating is applied.

and subjecting the thus-coated structure to film-curing conditions.

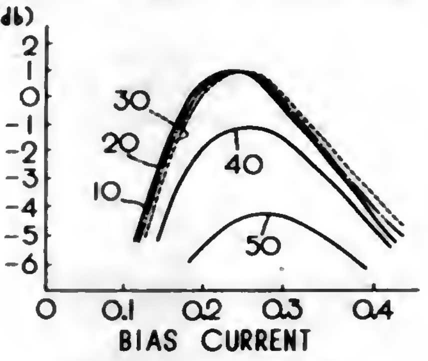
3,389,014
RECORDING ELEMENT WITH MAGNETIC COATING CONTAINING A MIXTURE OF GRANULAR AND ACICULAR MAGNETIC PARTICLES

Goro Akashi, Tokuaki Miyake, and Masaaki Fujiyama, Kanagawa-ken, Japan, assignors to Fuji Shashin Film Kabushiki Kaisha, Kanagawa-ken, Japan, a corporation of Japan

Filed Oct. 1, 1964, Ser. No. 400,833

1 Claim. (Cl. 117—93.2)

A magnetic record having a support coated with a magnetic layer consisting of a binder and mixture of acicular ferromagnetic particles and granular ferromagnetic particles.



3,389,015
DICYCLOPENTADIENE POLYMER MODIFIED POLYESTER WIRE ENAMEL AND VARNISH

Luciano C. Scala, Murrysville, and Frank A. Sattler, Monroeville, Pa., assignors to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania

No Drawing. Filed Feb. 27, 1964, Ser. No. 347,694

12 Claims. (Cl. 117—232)

A resinous composition is prepared by reacting a fatty acid modified polyester with a dicyclopentadiene polymer at temperatures and times sufficient to advance the product to a ball and ring value of about 80° C. to 90° C. An aromatic petroleum fraction having a distillation range of about 400° to 700° F. is then promptly added to the reaction mix. The resulting varnish is applied to electrical conductors and cured to provide improved insulating coatings.

3,389,016
HEAT SEALABLE SHEET HAVING A THERMOPLASTIC SURFACE LAYER OF A MIXTURE OF A POLYOLEFIN AND CERTAIN COPOLYMERS OF POLYOLEFINS

Albert Holtz, Highland Park, and Robert H. Lamason, Bound Brook, N.J., assignors to Johnson & Johnson, a corporation of New Jersey

Filed Mar. 12, 1964, Ser. No. 351,391

12 Claims. (Cl. 117—122)

1. A heat sealable sheet material comprising a thin, flexible backing and a thin, flexible normally non-tacky thermoplastic coating bonded thereto by mechanical and polar molecular force; said thermoplastic coating consisting essentially of a mixture of from about 5 to about 75% by weight of a polyolefin selected from the group consisting of polyethylene and polypropylene and from about 25% to about 95% by weight of a copolymer of an olefin and a terminally unsaturated ester selected from the group consisting of the lower aliphatic esters of acrylic acid and the lower aliphatic esters of vinyl alcohol, said polyolefin having a melt index of from about 30 to about 250 and a density of from about 0.92 to about 0.98 and said copolymer having a melt index of from about 2 to about 25 and a density of from about 0.92 to about 0.96, and said terminally unsaturated ester being present in said copolymer in an amount of from about 5% to about 25% by weight.

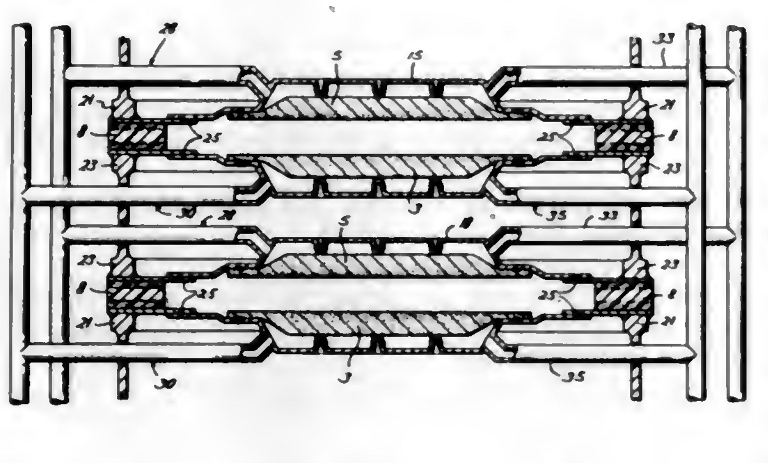
3,389,017
SEALING MEMBER AND COMBINATION THEREOF AND METHOD OF PRODUCING SAID SEALING MEMBER

James E. Webb, Administrator of the National Aeronautics and Space Administration, with respect to an invention of Thomas E. O'Rourke, Jr., Glastonbury, Conn.

Filed Dec. 16, 1964, Ser. No. 418,933

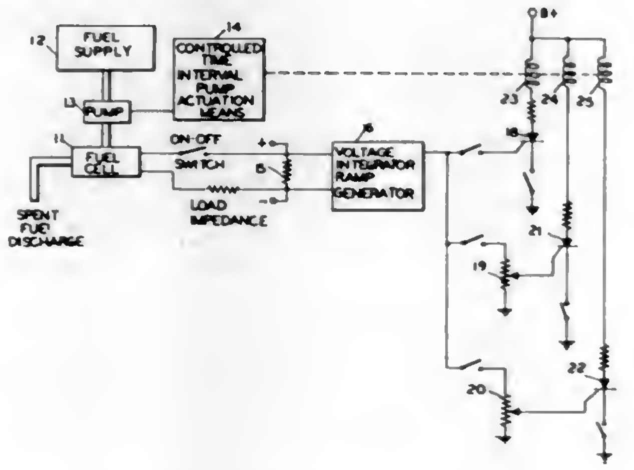
12 Claims. (Cl. 136—86)

A sealing member for sealing between the electrodes of a fuel cell containing a caustic liquid electrolyte. The sealing member includes a central portion of corrosion resistant powdered plastic material and reinforcement portions on both sides of the central portion which comprise alternate layers of powdered metal and powdered plastic wherein the plastic is of decreasing concentration in inverse proportion to distance from the electrically insulative central portion. The outer layer is metal to permit welding to a electrode. Construction is accomplished by laying down the successive layers of powdered metal and powdered plastic in a mold and sintering under elevated temperature and pressure.



3,389,018
FUEL CELL WITH REJUVENATION CONTROL DEVICE

Edward J. Dowgiallo, Jr., 5623 Helmont Drive, Oxon Hill, Md. 20021
Filed Oct. 22, 1965, Ser. No. 502,751
11 Claims. (Cl. 136—86)



1. In a fuel cell system including a fuel cell of replenishable fuel variety, a fuel supply reservoir; input means for controlled introduction of the contents of said reservoir into said fuel cell; controlled time interval actuation means adapted to control said input means; voltage integrator means responsive to the output of said fuel cell and adapted to produce an output proportional to ampere hours dissipation of said fuel cell; normally open, voltage responsive switching means including relay means responsive to the operational state thereof; means connecting said voltage integrator means to said switching means and adapted to change the operational state thereof; and means connecting said relay means to said actuation means such that said actuation means is actuated upon a change in operational state of said switching means from its normal operational state.

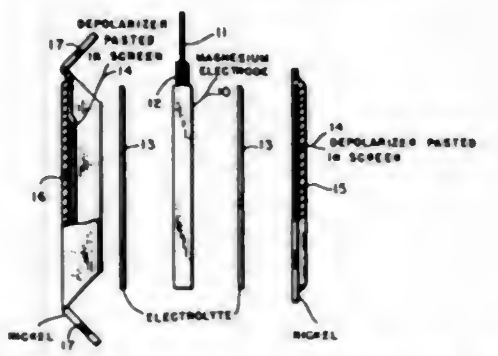
3,389,019
METHOD OF MANUFACTURING AN Ag AND Ni-CONTAINING ELECTRODE FOR AN ELECTROCHEMICAL GENERATOR

Paul Biro, 17 Ave. de Saxe, Paris, France
No Drawing. Filed June 5, 1964, Ser. No. 373,609
Claims priority, application France, June 12, 1963, 937,879; Dec. 16, 1963, 957,278
13 Claims. (Cl. 136—120)

1. A method for manufacturing an electrode for electrochemical reactions which comprises mixing a finely divided oxygenated silver compound with agglomerated grains of nickel in a liquid medium, in an amount sufficient to form a moistened mixture, air-drying the resulting mixture, compressing said mixture to form an electrode, heating said electrode in an inert atmosphere in a first heating stage at a temperature of about 250 to 500° C. for a time sufficient to decompose the oxygenated silver compound, the heating said electrode a second time in a reducing atmosphere at the same temperatures as in said first heating stage, for a time sufficient to complete a reduction of the oxygenated silver compound, to reduce the nickel oxide formed during the first heating stage and to give good mechanical strength to the electrode.

3,389,020
METHOD OF PRODUCING DEPOLARIZER ELECTRODES FOR THERMAL BATTERIES

Adolph Fischbach, Elberon Park, and John E. Teti, West Long Branch, N.J., assignors to the United States of America as represented by the Secretary of the Army
Filed May 4, 1956, Ser. No. 583,603
3 Claims. (Cl. 136—120)

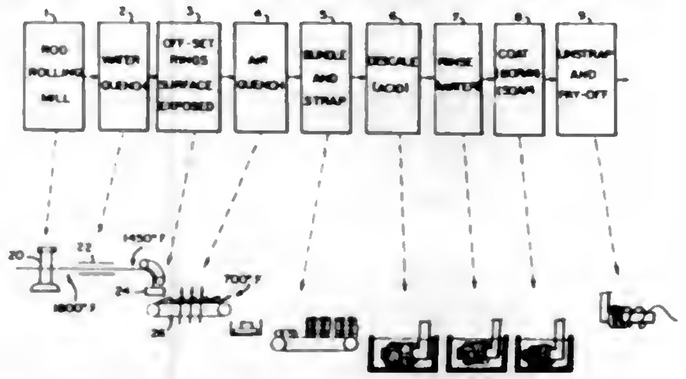


1. A method of producing depolarizer electrodes for thermal batteries composed of thin, flat type cells each cell comprising a negative electrode, a solid nonconductive electrolyte which remains solid at storage temperatures, and depolarizer electrodes welded to a metal casing inclosing all cell elements, said method comprising covering at least one edge of a metal screen with a masking tape, pasting into the uncovered portions of the screen a depolarizer slurry, drying the pasted screen, removing the masking tape and welding the unpasted portion of the electrode to the inner surface of said metal casing.

3,389,021
PROCESS FOR PREPARING STEEL FOR COLD WORKING

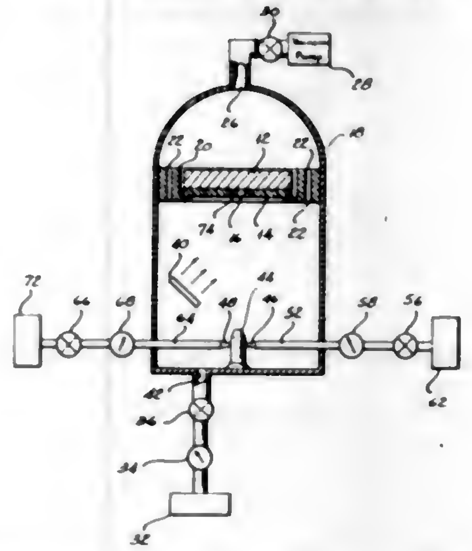
Charles G. Easter, Burlington, Ontario, and Allan B. Dove, Hamilton, Ontario, Canada, assignors to The Steel Company of Canada, Limited, Hamilton, Ontario, Canada, a corporation of Canada
Filed Oct. 7, 1964, Ser. No. 402,691
5 Claims. (Cl. 148—12)

1. In a process of producing a descaled hot rolled steel rod of wire drawing quality, the improvement comprising rolling a steel rod at an elevated temperature above the temperature at which allotropic transformation of the austenite starts to occur, collecting said steel rod at said elevated temperature in the form of a series of non-concentric overlapping rings which are not necessarily aligned and which are offset sufficiently to expose substantially all of the surface of said steel rod, rapidly cooling said rod in a controlled manner in an oxidizing cooling medium having free access to said surface to a lower temperature below that temperature where any appreciable change in the metallurgical properties of said steel rod occurs, thus producing a uniform fine friable scale thereon in which the degradation of Wüstite to magnetite is minimal, collecting the steel rod so cooled in the form of a compact bundle, and while the same is still in said compact bundle subjecting the said steel rod to acid descaling.



3,389,022
METHOD FOR PRODUCING SILICON CARBIDE LAYERS ON SILICON SUBSTRATES

Bernard L. Kravitz, Forest Hills, N.Y., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Sept. 17, 1965, Ser. No. 488,216
5 Claims. (Cl. 148—174)

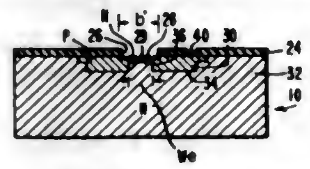


4. A method of forming a semiconducting device including the steps of depositing carbon on the surface of a semiconducting silicon crystal, maintaining the crystal in an environment free of contaminants and then heating said carbon and said crystal to an elevated temperature at which the silicon and carbon react to form silicon carbide.

3,389,023
METHODS OF MAKING A NARROW EMITTER TRANSISTOR BY MASKING AND DIFFUSION

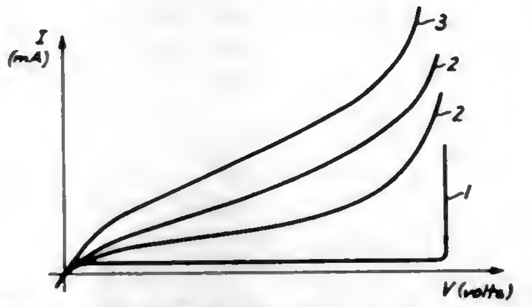
Jack L. Langdon, Wappingers Falls, N.Y., assignor to International Business Machines Corporation, Armonk, N.Y., a corporation of New York
Filed Jan. 14, 1966, Ser. No. 520,621
5 Claims. (Cl. 148—187)

A planar diffusion process is utilized to form a transistor having an emitter of a narrow effective width. The base region is formed by utilizing two separate steps of masking and subsequent diffusion. The first diffusion forms separate base portions that are diffused into the original wafer to some depth. The second diffusion step diffuses the impurity of the base region to a much shallower depth than the first diffusion step, and narrows the gap between the first formed base portions, and overlaps and joins the two prior formed base region portions. The emitter zone is then diffused into the area overlying part of the shallow portion of the base region.



3,389,024
METHOD OF FORMING A SEMICONDUCTOR BY DIFFUSION THROUGH THE USE OF A COBALT SALT

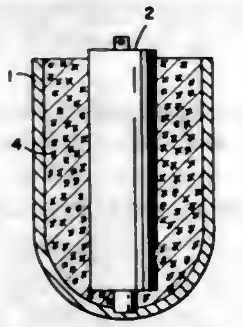
Rigobert Schimmer, Belecke (Mohne), Germany, assignor to Licentia Patent-Verwaltungs-G.m.b.H., Frankfurt am Main, Germany
Filed May 12, 1965, Ser. No. 455,156
Claims priority, application Germany, May 12, 1964, L 47,792
9 Claims. (Cl. 148—188)



A method of making semiconductor devices having "hard" characteristic curves so that there be little variation of the electrical properties between individual devices. The semiconductor devices are of the type having a monocrystalline silicon body with one or more pn-junctions formed in its surface by a diffusion, normally at a temperature of at least 1200° C., of a p- or n-type impurity into the surface. The method comprises the steps of treating the diffusion surface with a solution of a salt, e.g., cobalt nitrate or cobalt chloride; rinsing the surface, if necessary, and drying it; and diffusing a substance such as cobalt or sodium into the surface along with the impurity. The solution may include either a volatile organic solvent, such as methanol or isopropyl alcohol, or a water soluble silicon etching solvent, such as aqua regia.

3,389,025
PROPELLANT COMPOSITION CONTAINING HIGH ENERGY METAL IN THE FORM OF MULTI-DIMENSIONAL CROSSES

Joseph E. Nix, Guntersville, and Winford G. Brock, Athens, Ala., assignors to the United States of America as represented by the Secretary of the Army
Filed Mar. 22, 1967, Ser. No. 625,922
8 Claims. (Cl. 149—19)



A novel shape for metal staples used as a burning rate modifier for solid propellant grains. The shape is that of a multi-dimensional cross.

3,389,026

PLASTICIZED HIGH EXPLOSIVE AND SOLID PROPELLANT COMPOSITIONS

Oliver H. Johnson, Silver Spring, Md., assignor to the United States of America as represented by the Secretary of the Navy

No Drawing. Filed Dec. 8, 1959, Ser. No. 858,295

9 Claims. (Cl. 149—19)

1. An essentially amorphous exothermic composition consisting essentially of a nitropolymer fuel and a submicroscopic suspension of a normally crystalline polynitroaliphatic oxidizer having available oxygen in excess of that amount required to burn the oxidizer to H_2O and CO, said polynitroaliphatic oxidizer being dispersed uniformly through said nitropolymer fuel, said fuel being selected from the group consisting of

(1) nitrocellulose, polydinitropropyl acrylate, polynitropolyurethane and polypetrin acrylate when said oxidizer is selected from the group consisting of bis (trinitroethyl) nitramine, trinitroethyl orthocarbonate, bis (trinitroethyl) carbonate, trinitroethyl formal, trinitroethyl orthoformate, bis (trinitroethyl) urea and trinitroethyl trinitrobutyrate

and said fuel being selected from the group consisting of

(2) polydinitropropyl acrylate, polynitropolyurethane and polypetrinacrylate when said oxidizer is selected from the group consisting of bis (trinitroethyl) nitramine, trinitroethyl orthocarbonate, bis (trinitroethyl) carbonate, trinitroethyl formal, trinitroethyl orthoformate, bis (trinitroethyl) urea, nitroglycerine and trinitroethyl trinitrobutyrate,

said composition containing at least about 20% by weight oxidizer but no more than that percentage of oxidizer at which microscopic crystals are observable within the composition.

3,389,027

LONG-BURNING PYROTECHNIC MATERIAL CONTAINING DEPLETED URANIUM FOR SPOTTING RIFLE PROJECTILES

Thomas Stevenson, Huntingdon Valley, Pa., assignor to the United States of America as represented by the Secretary of the Army

No Drawing. Filed Jan. 19, 1962, Ser. No. 167,449

2 Claims. (Cl. 149—42)

1. A spotting rifle projectile pyrotechnic composition consisting of about 5% to 75% by weight of depleted uranium of about a 20 to 60 mesh particle size, between about 47½% to 12½% by weight of a powdered 50–50 alloy of aluminum and magnesium, and between about 47½% to 12½% by weight of a powdered oxidizing material from the class consisting of potassium perchlorate, barium nitrate, and ammonium nitrate.

3,389,028

AMMUNITION FILLER

Milton Roth, Rockaway, N.J., assignor to the United States of America as represented by the Secretary of the Army

No Drawing. Original application Nov. 4, 1966, Ser. No. 592,682. Divided and this application July 13, 1967, Ser. No. 653,276

1 Claim. (Cl. 149—69)

Dimensionally stable inert practice ammunition fillers which are compatible with high explosives, comprising, in the main, alums combined with cellulose or dextrin to lower the overall specific gravity of the alum combination, and with $BaSO_4$ or Fe_2O_3 to raise the overall specific gravity of the alum combination.

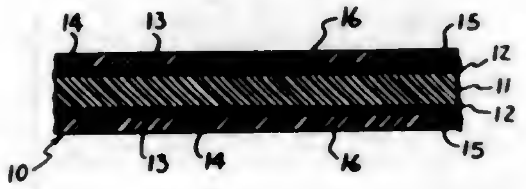
3,389,029

METHOD OF MAKING TRANSPARENCY

Stanley Fred Forman, Chicago, and John Thiede, Mount Prospect, Ill., assignors to Black Box Collotype Studios, Inc., Chicago, Ill., a corporation of Illinois

Filed June 23, 1964, Ser. No. 377,227

1 Claim. (Cl. 156—3)



A method is disclosed for making color transparencies for use in a projection machine so as to project an enlarged image on a screen without minor flaws in light and color transmission. The method includes the steps of etching a transparent plastic base to roughen the same, applying pigment in whole-tone to form the desired image, applying a laminating adhesive layer to cover both the pigment and the exposed roughen surface to render said roughen surface more transparent, and finally applying a transparent cover layer upon the adhesive layer to form a laminate and seal the assembly.

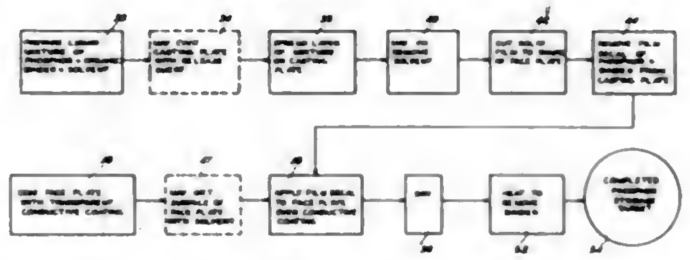
3,389,030

METHOD OF MANUFACTURE OF PHOSPHOR SCREEN

Herbert J. Mepham, Portland, Oreg., assignor to Tektronix, Inc., Beaverton, Oreg., a corporation of Oregon

Filed Oct. 1, 1963, Ser. No. 313,091

9 Claims. (Cl. 156—67)



1. A method of making a phosphor screen, comprising the steps of:

mixing phosphor material with a binder of organic material to form a liquid mixture;

coating one side of a casting member with a thin layer of said liquid mixture;

drying said layer to form a solid film of phosphor material and organic binder on said casting member;

removing said film from said casting member to provide a self-supporting element in the form of a single layer of phosphor material and organic binder;

applying said element to a substrate member; and

beating the element to decompose the organic binder of said element without any appreciable residue and to leave the phosphor material of said element adhered to said substrate member.

3,389,031

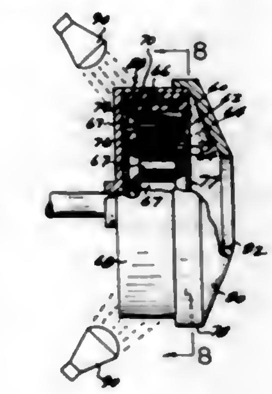
METHOD OF MANUFACTURING PLEATED FILTERS

Nils O. Rosaen, Bloomfield Hills, and Borje O. Rosaen, Ann Arbor, Mich. (both of 1776 E. Nine Mile Road, Hazel Park, Mich. 48030), and Oscar E. Rosaen, Grosse Pointe, Mich.; said Oscar E. Rosaen assignor to said Borje O. Rosaen and said Nils O. Rosaen

Filed Mar. 7, 1966, Ser. No. 532,232

5 Claims. (Cl. 156—74)

A method of manufacturing flat pleated filter elements for fluid systems including the steps of forming a fluid pervious material such as perforated metal or the like into a plurality of pleats, overlaying the surface of the perforated material with a sheet of nylon, providing rods at the inside of the bends to hold the nylon against the perforated material and then molding a thermosetting frame around the periphery of nylon and perforated member to hold these members together.



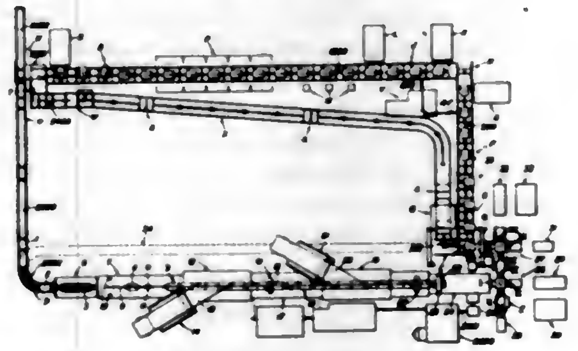
3,389,032

TIRE BUILDING METHODS

Sheppard A. Black, Wayne, and John D. Heide, Ramsey, N.J., assignors to Uniroyal, Inc., a corporation of New Jersey

Original application Jan. 17, 1964, Ser. No. 338,326, now Patent No. 3,355,346, dated Nov. 28, 1967. Divided and this application June 15, 1967, Ser. No. 646,211

22 Claims. (Cl. 156—111)



A method of continuously building tires in which each drum in a series of drums having a number of different length drums therein is successively passed through each station in a first group of tire building stations at which carcasses having lengths corresponding to the lengths of the drums are formed on the drums. The carcass bearing drums are then passed through each station in a second group of tire building stations at which treads are selectively applied to each of the carcasses, different ones of the tread applying stations being provided with and applying respective treads whose widths correspond to the different lengths of the carcasses. The carcass bearing drums are then passed through each station in a third group of stations at which the treads on the carcasses are stitched, the treads being partially stitched in each of a number of such stations so that the cumulative result of passing through all the stitching stations is that the entire tread is stitched.

3,389,033

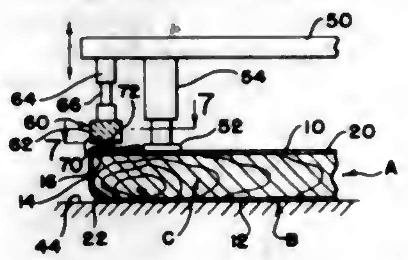
APPARATUS AND METHOD OF MAKING PLASTIC COVERED CABINET DOORS

Myron E. Ullman, Jr., Canfield, Ohio, assignor to Mullins Manufacturing Corporation, Salem, Ohio, a corporation of Delaware

Filed May 11, 1964, Ser. No. 366,468

6 Claims. (Cl. 156—216)

There is provided an apparatus and method of providing a thin plastic covering on a flat core which involve applying a first plastic sheet to one surface of the core and vacuum forming another plastic sheet on the opposite surface of the core, with the marginal portion of the second sheet being formed around the edge of the core and providing an overlapped joint with the first sheet and on the one surface of the core. This overlapped joint is heat sealed with two generally separate, parallel heating elements so that only the material of the sheets between the elements is melted and fused.



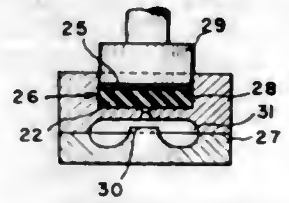
3,389,034

EXTRUSION PROCESS FOR THE PRODUCTION OF ARTICLES OF ELASTIC SUBSTANCES

Ernst Fuhrmann, Burscheid, Bezirk Dusseldorf, and Horst Hermann, Opladen, Germany, assignors to Goetzewerke Friedrich Goetze A.-G., Burscheid, Bezirk Dusseldorf, Germany

Filed July 16, 1964, Ser. No. 383,127

4 Claims. (Cl. 156—242)



Molding process wherein molding material is displaced from a cylinder into a cavity by a plunger and particularly characterized in that the molding material is supplied to the cylinder in an amount only slightly greater than the volume of the mold cavity while an inexpensive bulk material is interposed between the plunger and the molding material thereby to reduce the residue of molding material remaining in the cylinder after a molding operation.

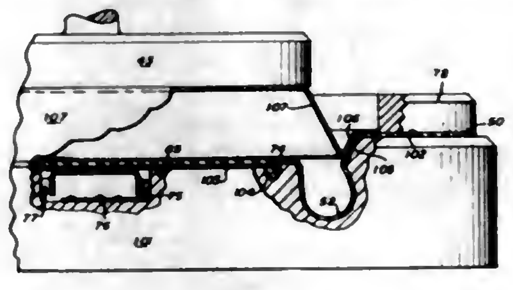
3,389,035

SYSTEM, APPARATUS AND PROCESS FOR THE MANUFACTURE OF METERING DIAPHRAGMS

Charles Vernon Watson, Buena Vista, Va., assignor to Reeves Brothers, Inc., New York, N.Y., a corporation of New York

Original application Mar. 14, 1961, Ser. No. 107,280, now Patent No. 3,289,550, dated Dec. 6, 1966. Divided and this application Aug. 16, 1966, Ser. No. 572,792

11 Claims. (Cl. 156—242)

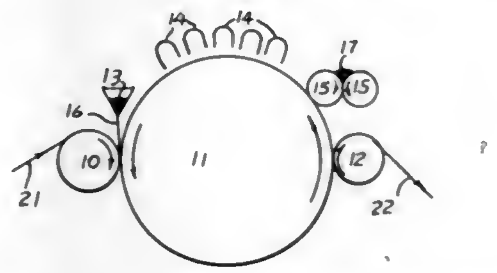


Apparatus for vacuum molding metering diaphragms comprising vacuum molds having mold faces defining the shape of the diaphragm and vacuum distributing grooves therein, sealing rings for clamping the periphery of the diaphragm to the vacuum molds before the vacuum is applied, central discs and/or gaskets for bonding to the diaphragm as desired, and means for pressing the diaphragm into the vacuum mold to aid in the vacuum molding if desired.

3,389,036

METHOD OF MAKING POLYETHYLENE LAMINATES

Arthur Rudolph, Evergreen Park, and John Thomas McShane, Chicago, Ill., assignors to Interchemical Corporation, New York, N.Y., a corporation of Ohio
Filed June 16, 1964, Ser. No. 375,660
3 Claims. (Cl. 156—244)



A method for preparing a polyethylene laminate which consists in extruding molten polyethylene onto a web substrate and immediately applying an adhesive topcoat to the polyethylene film. The improvement resides in the adhesive topcoat composition which comprises an organic solvent solution of shellac and nitrocellulose.

3,389,037

WOOD TREATMENT AND ADHESIVE BONDING AND SEALING TECHNIQUE

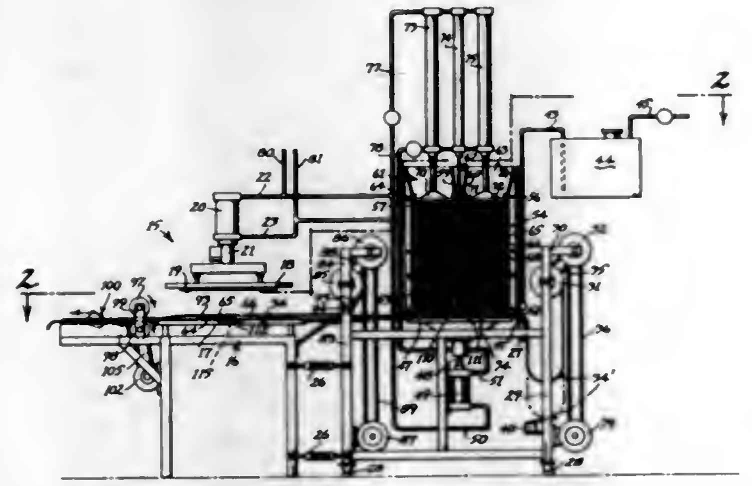
Platt Monfort, 18 Edgewood Place,
Huntington Station, N.Y. 11746
No Drawing. Filed Mar. 19, 1965, Ser. No. 441,352
16 Claims. (Cl. 156—305)

A method of adhesively bonding a plurality of preassembled solid objects involving the application to unexposed portions thereof adjacent their juncture point of a penetrating adhesive having a viscosity of no greater than about 150 cps. A method of sealing a seam between a piece of wood and another solid object involving the application to said seam of a penetrating adhesive having a viscosity of no greater than about 150 cps.

3,389,038

PRESS FEEDING APPARATUS

Charles D. Robison, Jr., 1718 Church St.,
Nashville, Tenn. 37203
Filed July 30, 1964, Ser. No. 386,293
12 Claims. (Cl. 156—361)

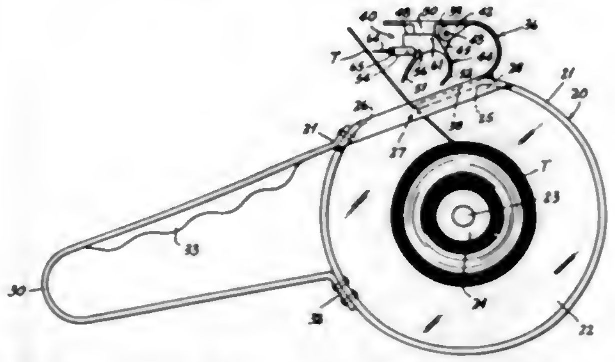


An apparatus for feeding sheet material to a press for laminating the layers of material into a composite product, including a roller remote from the press for feeding a lower web toward the press, a second roller between the remote roller and the press for feeding an upper web above and along the lower web toward the press, means between the two rollers for depositing adhesive upon the the top surface of the lower web, and a vertically disposed magazine for depositing one board at a time upon the top of the lower web to which the adhesive has been applied, but prior to the passage of the lower web beneath the upper web.

3,389,039

TAPING MACHINE

Peter P. Steckler, Box 310,
Cuba, Mo. 65453
Filed July 13, 1964, Ser. No. 382,035
9 Claims. (Cl. 156—468)

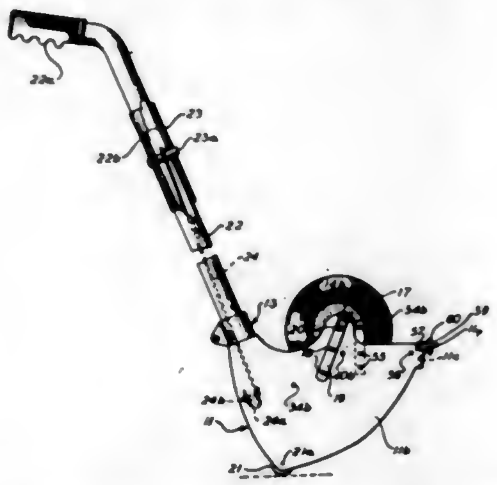


A taping machine wherein a tape supporting frame has a forked presser member pivoted thereon, that opens toward an anvil portion of the frame. Tape is drawn from the frame across to a tape retainer pivoted onto the presser member, and beyond that to a blade on the frame. A stick pushed against the span of the tape presses it into the recess of the fork, looping the tape behind it. When the stick is forced against the far leg of the fork, it rocks the fork, bringing the near leg to the anvil to clamp the lapped tape and force its adhesive-coated faces together. This pulls the free end of the tape from the retainer. The taped stick is withdrawn, the forked member is restored to initial position, and the stick is displaced to draw the tape against the cutter to cut it off and leave the device ready for the next use.

3,389,040

TAPE DISPENSERS

George H. Fritzinger, 18 Oakridge Road,
West Orange, N.J. 07051
Filed Mar. 1, 1965, Ser. No. 436,071
11 Claims. (Cl. 156—523)

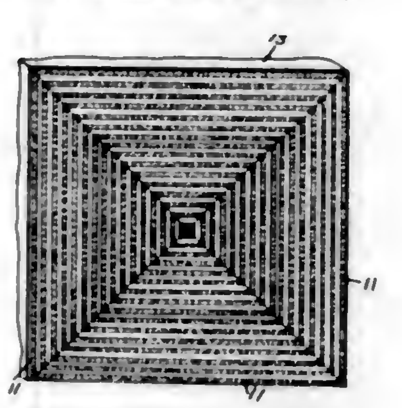


1. A floor tape dispenser comprising a dispenser housing having means for carrying a supply roll of tape and an applicator roller for applying tape to a floor surface as the dispenser is moved thereacross, a tubular handle secured to and extending upwardly from said housing having a handle grip enabling a person to move the dispenser on a floor surface while in a standing position, a dispenser mechanism in said housing shiftable in one direction to cut the tape back of said applicator roller and shiftable in the other direction to project a starting length of tape adjacent to said applicator roller, a movable trigger on the upper portion of said handle, and a link mechanism coupling said trigger to said dispenser mechanism via said tubular handle for controlling the dispenser mechanism by said trigger.

3,389,041

DECORATIVE WEAR-RESISTANT PANEL

Robert J. Hundhausen, Rte. 2, Box 32,
Hayden Lake, Idaho 83835
Continuation-in-part of application Ser. No. 325,630, Nov. 22, 1963. This application Nov. 14, 1966, Ser. No. 602,438
2 Claims. (Cl. 161—37)

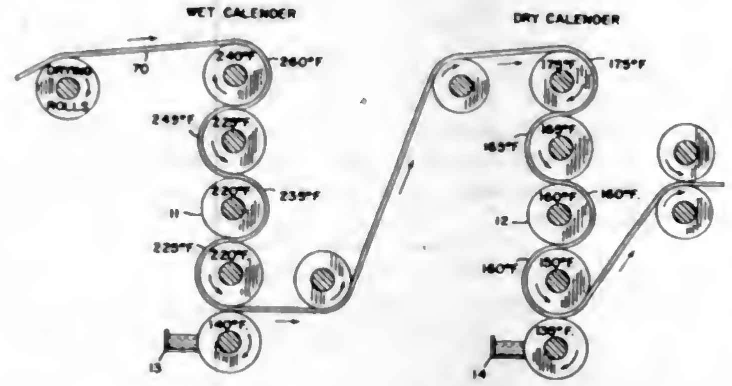


The patent disclosure describes embodiments of my invention concerning a decorative surface panel that is wear resistant and is formed by thin wafers **14** mounted on a backing board **15** in which each wafer **14** is composed of alternating end-grain and side-grain bands. The wafers **14** are constructed by laminating commercially available plywood sheets to a desired thickness to form an assembly **9**. The assembly **9** is then cut to form smaller elongated blocks **11** having a right angle isosceles triangular cross section. Four of the blocks **11** are then bonded together to form a square elongated block **13** having a cross-sectional pattern of concentric square rings with alternating end-grain and side-grain bands. The block **13** is then sliced into thin wafers **14** to be mounted in a desired pattern on the backing board **15**.

3,389,042

GYPSUM WALLBOARD AND METHOD FOR PRODUCING SAME

David Bieri, Tonawanda, and Edward S. Cola, Kenmore, N.Y., assignors to National Gypsum Company, Buffalo, N.Y., a corporation of Delaware
Continuation-in-part of application Ser. No. 344,582, Feb. 13, 1964. This application Jan. 21, 1966, Ser. No. 522,094
18 Claims. (Cl. 161—41)

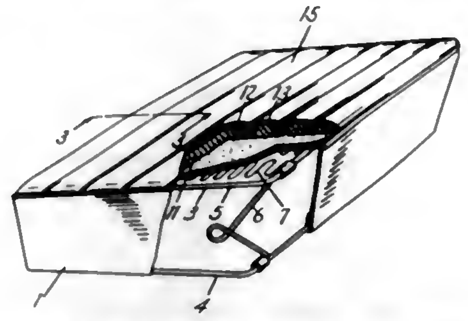


A paper-covered, gypsum core wallboard made of cover paper having therein, or thereon, a cured hydrophobic organo-silicone, which reduces the absorption by the paper of components of the wet gypsum slurry, without affecting substantially the paper porosity, and, of prime importance, without any deleterious effect on the bond of the paper to the gypsum core, either prior to the drying of the board or after the drying of the board.

3,389,043

UPHOLSTERY MAT

Ivan F. Clark, Lyons, Mich., assignor, by mesne assignments, to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware
Filed July 5, 1963, Ser. No. 293,041
1 Claim. (Cl. 161—43)

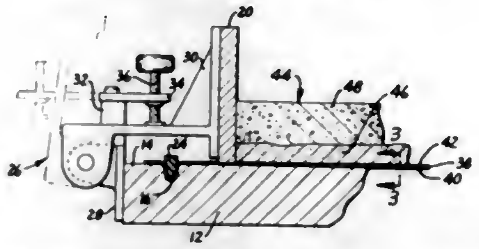


An upholstery mat including a backing unit comprising an outer ply of fabric, an inner ply of substantially nonstretchable material, a layer of fibrous material sandwiched between said fabric and nonstretchable material and bonded thereto, at least one pad unit supposed upon said backing unit and a cover disposed upon said pad unit bonded to said backing unit thereby enclosing the pad unit.

3,389,044

PLAYING TABLE BED AND METHOD OF FABRICATION THEREFOR

Thomas H. Loomis, P.O. Box 71,
Canton, Conn. 06019
Filed Feb. 21, 1966, Ser. No. 528,905
7 Claims. (Cl. 161—94)



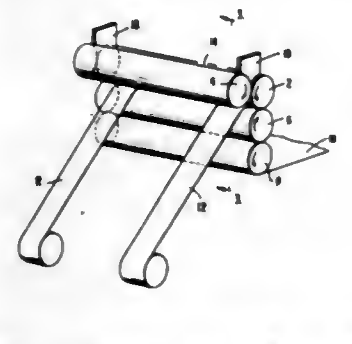
A bed for billiard tables and the like comprising a slab of cementitious material molded directly to the covering cloth therefor and a method of forming the same. The method is characterized in that the cementitious material is formed and set directly against the backing surface of the cloth to ultimately cover the bed. As a result, during formation the cementitious material penetrates the interstices of the backing surface of the cloth and forms a direct bond therewith. The interstices in the backing surface of the cloth also function to permit the cementitious material to "breathe" and, thus, result in the formation of a dense support surface for the cloth free of occluded voids.

3,389,045

MULTICOLORED OMBRÉ FILMS AND PROCESSES OF PRODUCING SAME

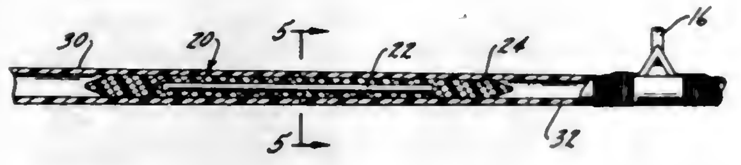
William H. Jones, Temperance, Mich., and Jack W. Shedrick, New Stanton, and Emanuel Lapreziosa, Jeannette, Pa., assignors to The General Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Filed Aug. 3, 1964, Ser. No. 386,852
6 Claims. (Cl. 161—166)

Thin thermoplastic films having a multicolored ombré effect are produced by controlled calendering of several separate thermoplastic materials of different color. The ombré films are useful in making decorative curtains, wearing apparel, surface coverings for floor, walls, furniture and the like.



3,389,046
TUBULAR REPAIR JOINT AND INSERT USED THEREIN

Robert M. Burress, 928 Westfield Blvd.,
Indianapolis, Ind. 46220
Filed Mar. 30, 1964, Ser. No. 355,596
8 Claims. (Cl. 161—194)



The disclosure herein relates to a method and apparatus for repairing hollow glass-fiber fishing rods without impairing the resiliency of the rod. An insert comprising a resilient metal core covered with continuous glass fibers and coated with a self curing resin is fitted within the hollow shafts of the fishing rod and the shaft sections are then pushed into an abutting relationship.

3,389,047
TREATMENT OF COVERPLATES FOR GLASS LAMINATES

Edward Lavin, Longmeadow, and George E. Mont, Springfield, Mass., assignors to Monsanto Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed Oct. 20, 1965, Ser. No. 499,030
8 Claims. (Cl. 161—199)

5. An improved glass sheet for use in laminated automotive glazing units and architectural laminates which comprises at least two silica containing glass sheets having an interlayer of poly(vinyl butyral) interposed between and in direct contact with the glass sheets; wherein at least one of the surfaces of the glass sheet that is in direct contact with the poly(vinyl butyral) interlayer has been treated with a basic solution so as to form a silica type gel on the treated glass surface and wherein the basic solution is selected from the group consisting of solutions of hydroxides of alkali and alkaline earth metals, wherein the concentration of the solution is at least 0.001 N.

3,389,048
METHODS OF REPELLING ANIMALS WITH TRICYCLOHEXYLTIN COMPOUNDS

Eugene E. Kenaga, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed Aug. 22, 1966, Ser. No. 573,885
5 Claims. (Cl. 167—46)

Methods of repelling chewing animals from substances normally chewed by said animals with tricyclohexyltin compounds.

3,389,049
TREATMENT OF TOPICAL FUNGUS INFECTIONS WITH DICHLORODIPHENYLTRICHLOROETHANE

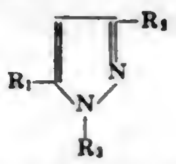
Harold E. Frantz, 2104 Greenhill Road,
Lansdowne, Pa. 19050
No Drawing. Continuation-in-part of application Ser. No. 350,548, Mar. 9, 1964. This application Apr. 27, 1967, Ser. No. 634,102
7 Claims. (Cl. 167—58)

The present disclosure relates to a therapeutic composition for the treatment of human fungus infections. The composition contains dichlorodiphenyltrichloroethane (DDT) as its main active therapeutic ingredient. It also contains compound tincture of benzoin and utilizes a low molecular weight alcohol as the carrier solvent.

3,389,050
TREATMENT OF HYPERLIPIDEMIA WITH 3-METHYL-5-ALKYLPYRAZOLE-1-CARBOXAMIDE

William E. Dulin and John B. Wright, Kalamazoo, Mich., assignors to The Upjohn Company, Kalamazoo, Mich., a corporation of Delaware
No Drawing. Filed Apr. 19, 1965, Ser. No. 449,303
2 Claims. (Cl. 167—65)

A method for treating hyperlipidemia in mammals by administering a substituted pyrazole of the formula



wherein R_1 and R_2 are alkyl, and R_3 is selected from the group consisting of carboxyl, alkoxycarbonyl, carbamoyl and mono- and dialkyl-substituted carbamoyl, said alkyl groups containing 1 through 4 carbon atoms, and physiologically acceptable salts thereof.

3,389,051
METHOD FOR REDUCING CHOLESTEROL IN THE BODY

Fred Kagan, Kalamazoo, Mich., assignor to The Upjohn Company, Kalamazoo, Mich., a corporation of Delaware
No Drawing. Continuation of application Ser. No. 81,269, Jan. 9, 1961. This application Aug. 15, 1966, Ser. No. 572,627
2 Claims. (Cl. 167—65)

1. A method for reducing the cholesterol content of both blood and tissue in mammals by partially arresting the biosynthesis of cholesterol in the body which comprises: orally administering between about 1 and about 250 mg. of 3β-(diethylaminoethoxy)-5-androsten-17-one or a physiologically acceptable acid addition salt thereof to a mammal.

3,389,052
FIXING AND DRYING CYTOLOGICAL SMEARS

Theodore Ehrenreich, 400 E. 57th St., New York, N.Y. 10022, and Stase Kerpe Zadeikis, 85—48 148th St., Jamaica, N.Y. 11435
No Drawing. Continuation-in-part of application Ser. No. 277,466, May 2, 1963, which is a continuation-in-part of application Ser. No. 810,532, May 4, 1959. This application Nov. 2, 1965, Ser. No. 506,124
16 Claims. (Cl. 167—84.5)

1. An aerosol composition composed of a mixture of water-soluble polyethylene glycols dissolved in an alkanol solvent, and a halo-alkane propellant, and which by weight consists essentially of:

(a) from about 10 to about 19.5 percent of a water-miscible lower alkanol solvent which is a dehydrating agent and contains by weight from about 3 to about 10 percent of water;

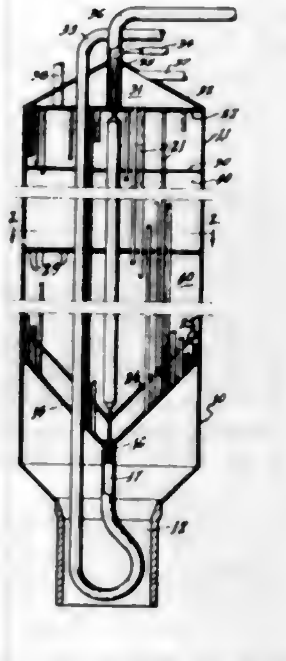
(b) from about 0.25 to about 0.95 percent of the water-soluble polyethylene glycols mixture of at least one ordinarily liquid polyethylene glycol and at least one ordinarily solid polyethylene glycol so proportioned to one another that the film left after evaporation of said aqueous alkanol from an unconfined layer of a solution of from about 15 to about 60 grams of said glycol mixture per liter of said aqueous alkanol deposited on a flat non-absorbent surface is dry to the touch, firm, non-brittle, non-flaky, flow-resistant and of waxy appearance;

(c) from about 89 to about 79 percent of a substantially non-toxic halo-alkane aerosol propellant chemically inert to said alkanol solvent and glycols mixture and miscible with its solution in said solvent, and having a molecular weight of from about 103 to about 204 and under 3 carbon atoms with only chlorine and fluorine linked to each carbon and at most only one hydrogen linked to the carbon when the alkane has only one carbon atom;

said water content of said alkanol solvent being sufficient to enable said solvent to dissolve the polyethylene glycols mixture content.

3,389,053
EXPANDED BED NUCLEAR REACTOR FUEL MODULE

Harry V. Chamberlain, Royal Oak, Jack J. Edwards, Southfield, and Evan C. Kovacic, Trenton, Mich., assignors to the United States of America as represented by the United States Atomic Energy Commission
Filed May 26, 1967, Ser. No. 643,025
10 Claims. (Cl. 176—32)

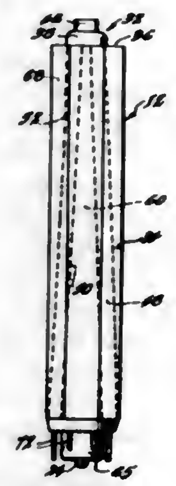


A dispersion of fuel particles in a liquid metal is present as an expanded bed on the shell side and a liquid metal coolant present on the tube side in a fuel module which is a shell and tube heat exchanger. Baffles are provided to prevent rapid collapse of the expanded bed and to establish an axial temperature gradient in the bed and an eductor is employed for discharge of the bed from the module.

3,389,054
RADIAL SPLIT FLOW BREEDER REACTOR

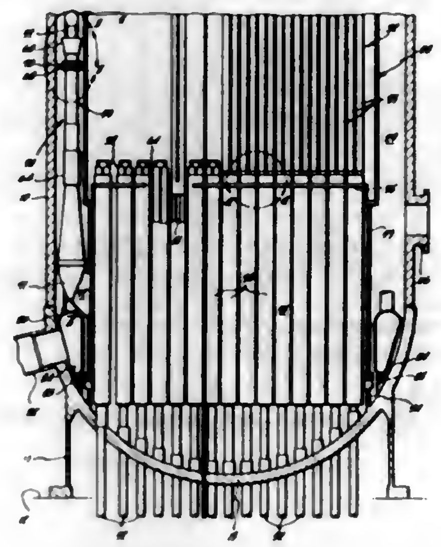
Evan C. Kovacic, Trenton, Mich., assignor to the United States of America as represented by the United States Atomic Energy Commission
Filed May 26, 1967, Ser. No. 643,026
8 Claims. (Cl. 176—32)

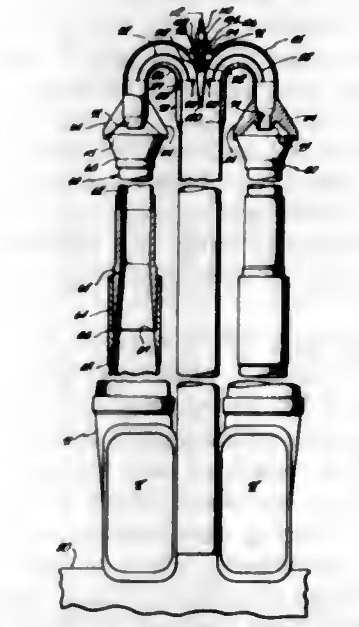
Discrete fuel particles are contained as a settled bed in an annulus formed between two concentric truncated conical screens. Liquid metal coolant is passed radially through the bed in direct contact with the fuel particles.



3,389,055
JET PUMP ASSEMBLY IN A NUCLEAR REACTOR

Donald E. Hughes, San Jose, Calif., assignor to General Electric Company, New York, N.Y., a corporation of New York
Filed Apr. 5, 1965, Ser. No. 445,383
7 Claims. (Cl. 176—61)





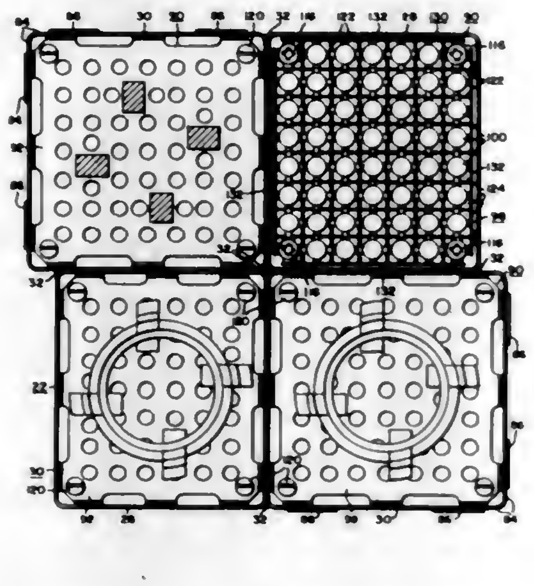
The invention relates to a system of jet pumps for circulating a cooling fluid such as water through a nuclear reactor core contained within a pressure vessel. The jet pumps are located in the downcomer annulus between a shroud surrounding the core and the interior of the pressure vessel whereby the coolant is forced downward into the inlet end or bottom of the core. The nozzles of the pumps are supplied with driving fluid via a distributor near the bottom of the vessel and riser pipes extending upward adjacent the pumps. The jet pump nozzles are supported by an adjacent riser pipe and each nozzle is formed with wings for engaging the respective pump inlet. Each pump body is formed with a slip joint to permit ready removability of the upper or mixer section of the pump. The pump body has a higher thermal coefficient of expansion than the riser pipes whereby the nozzle wings and pump inlet and the slip joint are more firmly forced together with an increase in temperature.

3,389,056
FUEL ASSEMBLIES

Erling Frisch, Pittsburgh, Pa., assignor to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania

Filed July 9, 1964, Ser. No. 381,502

20 Claims. (Cl. 176—78)



1. An orificed fuel assembly for use in a nuclear reactor, comprising in combination: at least one elongated tubular member capable of receiving a fuel element bundle; nozzle means secured at one end of said tubular member and enclosing said one end of said tubular member for introducing a coolant fluid therein; orifice means for controlling the flow of said coolant fluid to said tubular member; and a plurality of tabs projecting axially from the edges at the other end of said tubular member, said tabs inclining outwardly from said assembly and capable of resilient engagement with tabs on adjacent fuel assemblies.

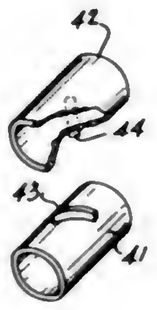
14. A fuel assembly for a nuclear reactor comprising a plurality of elongated relatively thin walled tubular members substantially rectangular in section, means for supporting a plurality of elongated fuel elements in separated relation within each of said tubular members, said plurality of tubular members being positioned with adjacent sidewalls engaging one another to form an assembly of generally rectangular cross section and means for securing said tubular members, of said assembly together at least at each adjacent sidewall to increase the stiffness of said assembly, said assembly being formed with one corner of each of said tubular members being located at a substantially common point.

3,389,057
SKEWED HELICAL WART SPACERS FOR FUEL ASSEMBLIES

John C. McGregor and Kenneth T. Bates, Port Hope, Ontario, Canada, assignors to Atomic Energy of Canada Limited, Ottawa, Ontario, Canada

Filed Apr. 14, 1967, Ser. No. 630,977

3 Claims. (Cl. 176—78)



A fuel rod structure for a nuclear reactor is described in which the elements making up the rod are assembled in a cluster and in which each element is separated from its adjacent elements by the affixing of a wart or spacer to the sheath of each element in the region where it will contact the wart of an adjacent element. The warts are of elongated form and each has its longitudinal axis offset from the longitudinal axis of the element to which it is attached. By this means the warts engage one another in crossed-orientation and contact one another over greater limits of lateral or longitudinal offset from their planned position on the elements. Preferably the warts have their longitudinal axes placed on helices whose axes are in the same direction as the longitudinal axes of the elements and in which all helices are in the same sense for all elements in the cluster.

3,389,058
PROCESS FOR PRODUCING 5'-INOSINIC ACID THROUGH MIXED CULTURE OF TWO DIFFERENT MICROORGANISMS

Shukuo Kinoshita, Tokyo, Yoshiaki Kawamori, Shizuoka-ken, Kunizo Mizuhara, Machida-shi, Yoshinobu Miyamura, Shizuoka-ken, and Takeo Suzuki, Machida-shi, Japan, assignors to Kyowa Hakko Kogyo Co., Ltd., Tokyo, Japan, a corporation of Japan

No Drawing. Continuation of application Ser. No. 372,671, June 4, 1964. This application Nov. 1, 1966, Ser. No. 591,338

Claims priority, application Japan, June 6, 1963, 38/28,753

9 Claims. (Cl. 195—28)

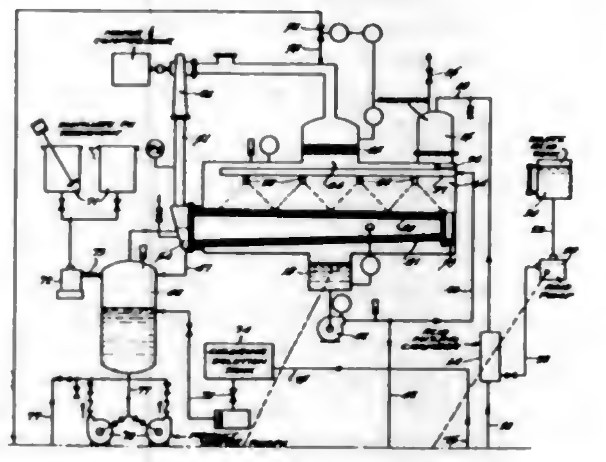
Method for the production of 5'-inosinic acid by fermentation which comprises culturing a mixture of a hypoxanthine accumulating mutant of a *Brevibacterium ammoniagenes* with a *Brevibacterium ammoniagenes* microorganism having a high nucleotide pyrophosphorylase activity and ability to accumulate phosphoribosyl pyrophosphate in a culture medium constituted by a mixture of (1) a cultured medium obtained from the cultivation in a phosphate-containing culture medium of a hypoxanthine accumulating mutant of a *Brevibacterium ammoniagenes* and contraining precursor amounts of hypoxanthine and (2) a cultured medium obtained from the cultivation in a phosphate-containing culture medium of a *Brevibacterium ammoniagenes* microorganism having a high nucleotide pyrophosphorylase activity and ability to accumulate phosphoribosyl pyrophosphate. Exemplary of the first-described mutant are *Brevibacterium ammoniagenes* ATCC 15454 and ATCC 15187. Exemplary of the second-described mutant is *Brevibacterium ammoniagenes* ATCC 6872.

3,389,059
METHOD AND APPARATUS FOR PURIFYING WATER BY DISTILLATION WHILE PREVENTING CORROSION BY SELECTIVE PHOSPHATE AND ACID ADDITION

Richard W. Goeldner, Brookfield, Wis., assignor to Aqua-Chem, Inc., a corporation of Wisconsin

Filed Jan. 27, 1965, Ser. No. 428,402

6 Claims. (Cl. 203—1)



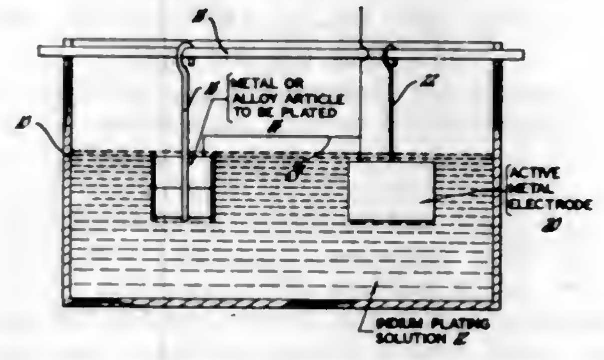
1. A method of purifying impure water, which method comprises treating a feed stream of the water with polyphosphate, treating the polyphosphate-treated feed water with diluted acid, deaerating the resulting acid-treated feed water, directing the feed water as a feed to a vapor compression evaporator, operating said evaporator for vaporizing feed water and compressing and directing distillate through the heat exchange tubes for vaporizing additional feed water to form a distillate overhead and brine bottoms, recovering resulting condensate from the heat exchange tubes, passing the condensate in heat exchange with feed intermediate the polyphosphate-treating step and the acid-treating step for preheating the feed water to a temperature no higher than about 200° F., whereby the polyphosphate inhibits scale formation in the heat exchanger, withdrawing brine from said evaporator, passing withdrawn brine in indirect heat exchange with feed intermediate the polyphosphate-treating step and the acid-treating step for preheating feed water to a temperature no higher than about 200° F., detecting the pH of the evaporator brine, and controlling the rate of acid addition to the feed water in the acid-treating step in response to such detecting for providing a preselected brine pH in the evaporator.

3,389,060
METHOD OF INDIUM COATING METALLIC ARTICLES

Joseph L. Greene, Royal Oak, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed June 15, 1964, Ser. No. 375,028

4 Claims. (Cl. 204—26)



A copper-base alloy bearing is immersed into an aqueous acidic bath consisting essentially of an indium salt; an acid; and sodium potassium tartrate, sodium tartrate, potassium tartrate, or sodium formate acting as buffer. The bath has a pH of about 0.5 to 3.0. The bearing is directly connected to an electrode immersed in said bath having a higher effective electrolytic oxidation potential than said bearing, such as zinc, which thereby forms a galvanic couple causing indium to deposit on the bearing.

3,389,061
ANODIZATION OF A COPPER-NICKEL-MANGANESE ALLOY

David Bono, Maisons-Alfort, Val-de-Marne, France, assignor to Association des Ouvriers en Instruments de Precision, Paris, France, a company of France

Continuation of application Ser. No. 370,926, May 28, 1964. This application Sept. 5, 1967, Ser. No. 665,646

Claims priority, application France, June 4, 1963, 936,933

6 Claims. (Cl. 204—32)

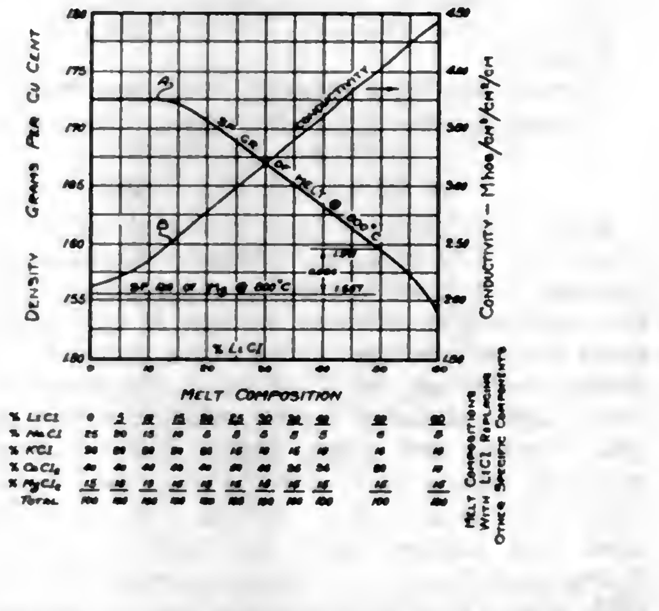
Process for the anodic surface oxidation of a copper-nickel-manganese alloy layer suitable for use as a printed circuit to render the anodically oxidized surface adherent to an insulating support, in which the anodic oxidation is carried out at a current density of 3 to 6 amperes per square decimeter of the surface, the electrolyte contains 30 to 60 grams of lithium hydroxide and is an aqueous alkaline electrolyte, and the anodic oxidation is carried out at an electrolyte temperature between 75° and 85° C., preferably for a period of substantially 20 to 75 minutes and against a cadmium cathode. The flat surface of the layer, which preferably consists of manganin alloy containing 86% copper, 12% manganese and 2% nickel, is reciprocated parallel to the surface during anodization and is preferably sandblasted prior to anodization.

3,389,062
ELECTROLYTIC PRODUCTION OF MAGNESIUM METAL FROM A FLUORIDE-FREE BATH

Frank E. Love, Henderson, Nev., assignor to National Lead Company, New York, N.Y., a corporation of New Jersey

Filed Apr. 21, 1965, Ser. No. 449,852

12 Claims. (Cl. 204—70)



7. The method of producing magnesium metal and chlorine which consists in electrolyzing at temperature above the melting point of magnesium, a molten salt bath consisting essentially of about: 5–25% magnesium chloride, 5–55% lithium chloride, and the balance at least one other chloride of the alkali and alkaline earth metals, said

salt bath having a density greater than the density of molten magnesium at temperature between 750 and 900° C.

3,389,063

PROCESS FOR ELECTROLYTIC RECOVERY AND REFINING OF METALS

Klaus Emicke, Hamburg, Germany, assignor to Norddeutsche Affinerie, Hamburg, Germany

No Drawing. Filed Mar. 18, 1965, Ser. No. 440,950

Claims priority, application Germany, Mar. 19, 1964, N 24,652

6 Claims. (Cl. 204—106)

1. In a process for electrolytic refining of a metal using a cold liquid electrolyte and a depositing electrode supported on a non-conductive carrier, the steps comprising suspending a depositing electrode consisting of paperlike non-conductive material having a conductive metal thereon in an electrolyte in an electrolysis cell, applying electric current thereto and recovering the deposited metal.

3,389,064

ELECTROLYTIC REFINING OF COPPER AND TANK HOUSE ELECTROLYTE USEFUL THEREIN

John Henry Schloen, Mount Royal, Quebec, and Eugene Mitchell Elkin, Montreal, Quebec, Canada, assignors to Canadian Copper Refiners Limited, Toronto, Ontario, Canada, a corporation of Canada

No Drawing. Filed July 22, 1964, Ser. No. 384,519

6 Claims. (Cl. 204—108)

1. An electrolyte suitable for use in the electrolytic refining of copper consisting essentially of an aqueous solution of sulfuric acid and copper sulfate and minor amounts by weight of glue, thiourea and a sulfonated hydrocarbon, said glue, said thiourea and said sulfonated hydrocarbon being present in said electrolyte in an amount of about 3.0, 1.5 and 0.9 parts per million by weight, respectively.

3,389,065

METHOD FOR ELECTROLYTICALLY POLISHING STAINLESS STEEL

Yasuichi Shibasaki and Hiroshi Nagai, Yokohama, and Koichi Nagaoka, Tokyo, Japan, assignors to Kyowa Hakko Kogyo Co., Ltd., Tokyo, Japan, a corporation of Japan

No Drawing. Filed Dec. 22, 1965, Ser. No. 515,726

Claims priority, application Japan, Dec. 28, 1964, 39/73,479, 39/73,480

16 Claims. (Cl. 204—140.5)

Method for electrolytically polishing stainless steel to effect a pear-like appearance thereon which comprises electrolyzing a solution consisting essentially of water, sulfuric acid and an effective amount of an additive which sticks unevenly on the surface of the stainless steel anode during electrolysis. Additives which may be employed include high-molecular weight substances such as starch, glue, sawdust and paper, sugars such as dextrose and mannitol, organic acids or salts thereof such as malic acid, citric acid, succinic acid, tartaric acid, acetic acid, gluconic acid, sodium malate and sodium gluconate, polyhydric alcohols such as glycerine, ethylene glycol and inositol, amines such as butylamine and 2-ethylhexylamine, picoline, nicotinic acid amide, synthetic high molecular weight substances such as polyvinyl alcohol and polyethylene glycol and amino acids such as aspartic acid, glutamic acid and glycine. Electrolysis is carried out at a temperature of from 0° to 100° C. and at a current density of from 5 to 500 amperes per square decimeter.

3,389,066

METHOD FOR ELECTROLYTICALLY POLISHING IRON AND IRON ALLOYS

Yasuichi Shibasaki, Yokohama, Japan, assignor to Kyowa Hakko Kogyo Co., Ltd., Tokyo, Japan, a corporation of Japan

No Drawing. Continuation of application Ser. No. 371,183, May 29, 1964. This application Sept. 14, 1967, Ser. No. 667,666

7 Claims. (Cl. 204—140.5)

A method for electrolytically polishing iron or iron alloys to effect an uneven "pear-like" appearance thereon which comprises electrolyzing a solution consisting essentially of (a) water, (b) at least one compound selected from the group consisting of sulfuric acid, hydrochloric acid, nitric acid, sodium chloride, potassium chloride, calcium chloride, magnesium chloride, ferric chloride, sodium sulfate and ferric sulfate and an effective amount of (c) at least one additive selected from the group consisting of glue, agar, paper, starch, cellulose, glucose, fructose, sucrose, maltose, tannic acid, glycerine, saccharine, polyvinyl alcohol, polyethylene, higher fatty acids, acid hydrolysates of grass and active carbon at a temperature of from 0° to 100° C., a voltage of from 0.5 to 25 volts and a current density of from 5 to 300 amperes per square decimeter, the metal to be polished constituting the anode, until the desired pear-like appearance is attained.

3,389,067

ELECTROLYTIC GRINDING CHLORIDE USING AN ELECTROLYTE INCLUDING 2-IMIDAZOLIDIMETHIONE

Mitchell A. La Boda, East Detroit, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

No Drawing. Filed Oct. 23, 1965, Ser. No. 504,073

7 Claims. (Cl. 204—143)

5. A process for electrochemically machining ferrous metals and alloys thereof comprising the steps of establishing said metal as the anode in an electrochemical cell, orienting an electrolytic grinding cathode adjacent to said metal, bathing the junction between said cathode and said steel in an aqueous electrolyte consisting essentially of an alkali metal chloride and 2-imidazolidinethione, passing an electric current through said steel, electrolyte and cathode, whereby an electrochemical erosion inhibiting film is formed, and selectively removing said film, whereby electrochemical machining can thus selectively continue.

3,389,068

ELECTROCHEMICAL MACHINING USING A CHLORIDE ELECTROLYTE INCLUDING 2-MERCAPTOBENZOTHIAZOLE OR 2-BENZIMIDAZOLETHIOL

Mitchell A. La Boda, East Detroit, and Warren R. Doty, Royal Oak, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

No Drawing. Filed Oct. 23, 1965, Ser. No. 504,147

12 Claims. (Cl. 204—143)

7. A process for electrochemically machining ferrous metals comprising the steps of establishing said metal as the anode in an electrochemical cell orienting an electrolytic grinding cathode adjacent to said metal, bathing the junction between said cathode and said metal in an aqueous electrolyte consisting essentially of an alkali metal chloride and an additive from the group consisting of 2-benzimidazolethiol and 2-mercaptobenzothiazole, passing an electric current through said metal, electrolyte and cathode whereby an electrochemical erosion inhibiting film is formed on the metal, and selectively removing said film whereby electrochemical machining can thus selectively continue.

3,389,069

TWO-STEP CHLORINATION OF HETEROCYCLIC TERTIARY AMINES TO PRODUCE COMPOUNDS HAVING AN —N=CCl-RADICAL

Hans Holtschmidt and Wilfried Zecher, Cologne-Stammheim, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

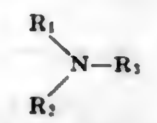
No Drawing. Original application Aug. 28, 1962, Ser. No. 220,070, now Patent No. 3,251,760, dated May 17, 1966. Divided and this application Apr. 7, 1965, Ser. No. 446,402

5 Claims. (Cl. 204—158)

1. A process for the production of an organic compound containing chlorine and nitrogen combined in the —N=CCl-radical which comprises

(A) reacting an amino compound selected from the group consisting of

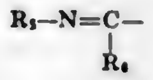
(i) amines of the formula



wherein

R_1 and R_2 taken together with the nitrogen to which each is attached stand for a heterocyclic radical of the group consisting of five and six membered heterocyclic radicals containing from 1 to 2 nitrogen atoms wherein nitrogen is the only heterocyclic atom,

R_3 stands for a radical selected from the group consisting of lower alkyl, chloro-substituted lower alkyl, cyano-substituted lower alkyl, phenyl-substituted lower alkyl, phenyl, chlorophenyl, cyanophenyl, nitrophenyl, naphthyl, benzoquinonyl, chloro-substituted triazinyl chloro- and amino-substituted triazinyl,

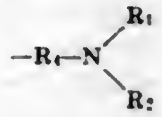


$$R_5{-}N{=}\underset{\displaystyle R_6}{\underset{|}{C}}{-}$$

wherein

R_5 is a member selected from the group consisting of chlorophenyl, lower chloro alkyl and phenyl, and

R_6 stands for a member selected from the group consisting of chloro and amino, and



wherein

R_4 is lower alkyl, and

R_1 and R_2 are separately lower alkyl and when taken together with the nitrogen to which they are attached to a 5 to 6 membered heterocyclic group containing nitrogen as the only heterocyclic atom

(ii) salts of said amines with hydrogen halides, and

(iii) quaternary salts of said amines with alkyl halides, with chlorine while it is irradiated with ultraviolet light at a temperature below 140° C. for such a period that replaceable hydrogen atoms of the amino compound are replaced by chlorine atoms,

(B) further treating the reaction mixture containing the chlorine-containing compound with additional chlorine at a higher temperature between 140° C. and 300° C. while it is irradiated with ultraviolet light, and

(C) recovering the resulting organic compound containing nitrogen and chlorine combined in an —N=CCl-radical.

3,389,070

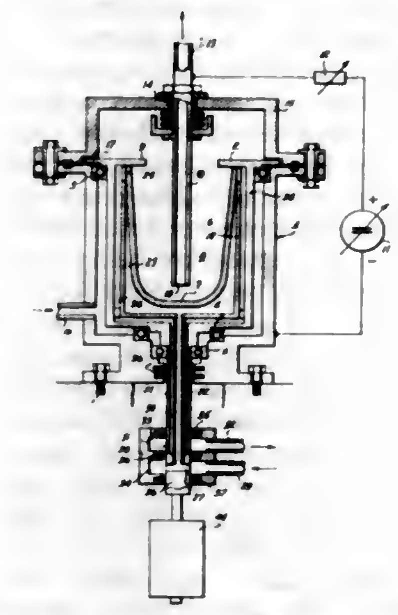
METHOD AND MEANS FOR TREATING ARTICLES ON ALL SIDES

Bernhard Berghaus, Grandhotel Dolder, Zurich, Switzerland, and Marie Staesche, Mattenstrasse 31, Wettingen, Aargau, Switzerland

Filed Nov. 4, 1963, Ser. No. 321,717

Claims priority, application Switzerland, Nov. 6, 1962, 12,954/62; Nov. 9, 1962, 13,140/62; Mar. 27, 1963, 3,887/63; Apr. 5, 1963, 4,403/63

2 Claims. (Cl. 204—177)



An improved process is provided for treating small metal articles with a gaseous medium by glow discharge whereby all surface areas of the articles are exposed to the gaseous medium. The exposure of all metal surfaces to the gaseous medium results by subjecting the metal articles to both centrifugal and kinetic forces in a cylindrical drum.

3,389,071

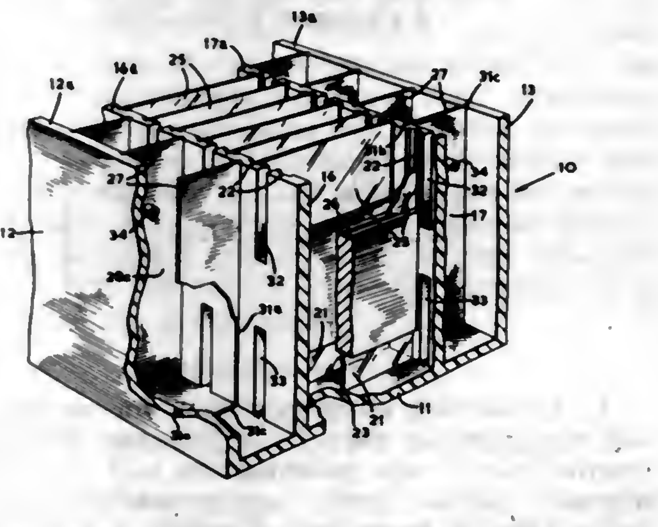
BIPOLAR ELECTROLYTIC CELL

Norman W. Meyers, Etobicoke, Ontario, Canada, assignor to Electric Reduction Company of Canada, Ltd., Toronto, Ontario, Canada

Filed Sept. 27, 1965, Ser. No. 490,198

Claims priority, application Canada, Aug. 7, 1965, 937,611

20 Claims. (Cl. 204—268)



1. A bipolar electrolytic cell comprising a cell tank having a bottom wall and side walls defining a first chamber; at least three electrodes positioned in said first chamber in spaced-apart relationship with respect to each other, at least one of said electrodes being a bipolar electrode, said electrodes of each set of two adjacent electrodes having surfaces facing each other, each set of two

adjacent electrodes and the space therebetween constituting a unit cell for the electrolysis of an electrolyte occupying the space between said two adjacent electrodes, the space between said two adjacent electrodes constituting an electrolysis zone in which electrolysis of said electrolyte can take place, said unit cells occupying only a first portion of said first chamber, said first portion being spaced inwardly from two opposite side walls of said tank, whereby second and third portions of said first chamber are defined between said first portion and said two side walls; and means for isolating said unit cells from each other with respect to any substantial degree of electrical current leakage therebetween during operation of said bipolar electrolytic cell, said last-mentioned means defining a plurality of individual second chambers, first ones of said second chambers being physically separated from said third portion of said first chamber, at least parts of said first ones of said second chambers being located in said second portion of said first chamber, second ones of said second chambers being physically separated from said second portion of said first chamber, at least parts of said second ones of said second chambers being located in said third portion of said first chamber, said last-mentioned means including partitioning means located in said second and third portions of said first chamber, said partitioning means separating said parts of said first ones of said second chambers from each other and separating said parts of said second ones of said second chambers from each other, each one of said second chambers being connected in liquid-flow relationship with a different one of said unit cells for passage of electrolyte into respective ones of said unit cells from said second chambers connected to said unit cells and out of respective ones of said unit cells into said second chambers connected to said unit cells, even numbered ones of said unit cells being connected in liquid-flow relationship with only those ones of said second chambers having said parts thereof located in said second portion of said first chamber, odd numbered ones of said unit cells being connected in liquid-flow relationship with only those ones of said second chambers having said parts thereof located in said third portion of said first chamber.

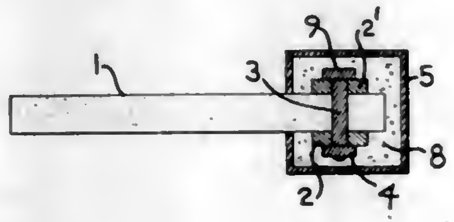
3,389,072

ELECTRODE ASSEMBLY

Arne Strandberg, Sundsvall, Sweden, assignor to Stockholms Superfosfat Fabriks Aktiebolag, Stockholm, Sweden, a corporation of Sweden

Filed Feb. 15, 1966, Ser. No. 527,537

8 Claims. (Cl. 204—288)



1. An electrode assembly suitable for use in a chlorate cell comprising an electrode, at least two electrically conductive metal straps positioned on said electrode across the side surfaces thereof and at one end thereof, said straps being vertically arranged with respect to the long axis of said electrode, means traversing said straps and electrode to thereby hold said straps firmly against said electrode, a resin matrix completely encasing said straps, said means and a portion of said one end of said electrode, a rigid plastic envelope encircling and firmly attached to said matrix and means for conducting current to or from said electrode assembly.

3,389,073

VERMICULAR GRAPHITE STRUCTURES AND PROCESS OF MAKING

Leonard M. Vaught, John J. Newport III, and Oliver Osborn, Lake Jackson, Tex., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Mar. 30, 1966, Ser. No. 538,585

13 Claims. (Cl. 204—294)

1. A process for preparing an electrically oriented graphite structure which comprises initially compressing vermicular graphite in one axis under sufficient pressure to form an integral structure having a density of at least about 0.25% gm./cc. and subsequentially isostatically compressing such integral structure to a density of at least about 1.5 gms./cc.

10. A compressed vermicular graphite article prepared by compressing vermicular graphite in one vector sufficiently to produce an integral structure having a density of at least about 0.25 gm./cc. and subsequently compressing such integral structure isostatically under a pressure greater than 3500 p.s.i.

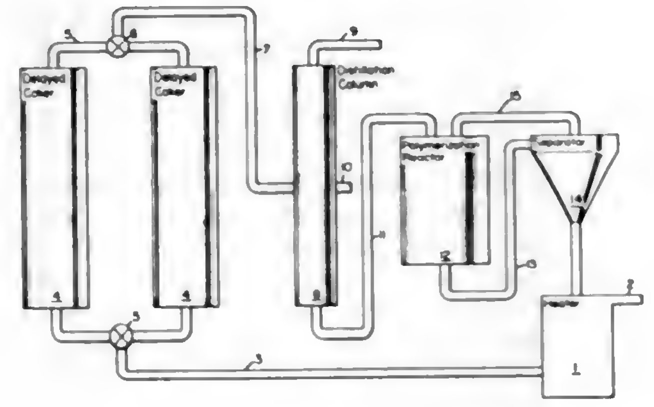
3,389,074

COKING PROCESS WITH POLYMERIZATION OF THE LIQUID PRODUCTS

James A. Biehl, Robinson, Ill., assignor to Marathon Oil Company, Findlay, Ohio, a corporation of Ohio

Filed Apr. 20, 1965, Ser. No. 449,415

13 Claims. (Cl. 208—53)



1. The process comprising coking a petroleum residuum, fractionating hydrocarbon vapors from said coking to form a bottoms fraction and at least one other fraction, polymerizing the bottoms fraction, fractionating the product of the polymerization into a polymerized bottoms fraction and at least one other fraction, and coking the polymerized bottoms fraction.

3,389,075

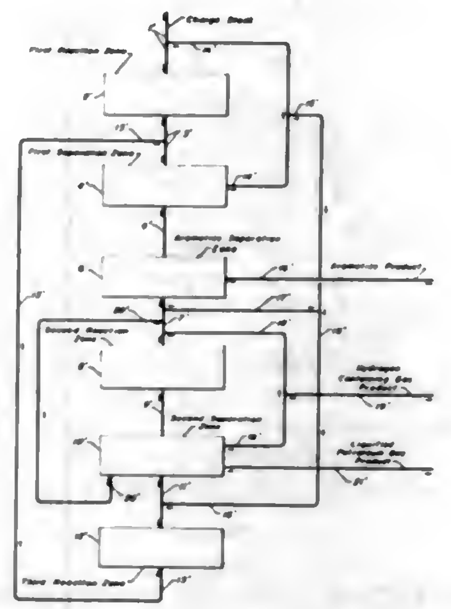
PROCESS FOR PRODUCING AROMATIC HYDROCARBONS AND LIQUEFIED PETROLEUM GAS

George E. Addison, Mount Prospect, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

Filed May 11, 1966, Ser. No. 549,287

6 Claims. (Cl. 208—66)

Process for production of high-purity aromatics and liquified petroleum gas by catalytic reforming a naphtha in a first reaction zone, extracting aromatics from the reformate, hydrocracking the resulting paraffinic raffinate to produce LPG in a second reaction zone, and recycling the C_6+ fraction of the hydrocracking effluent to a third reaction zone for dehydrocyclization to aromatics. In addition, C_6 and C_7 from the various fractionating columns within the process, and all C_9+ aromatics from an aromatics fractionation train which produces benzene, toluene, and C_8 aromatics, may be recycled to the hydrocracking zone for additional synthesis of LPG. By operating the initial catalytic reformer of the first reaction zone to maximize aromatic synthesis, sufficient hydrogen is produced to supply the requirement of the hydrocracking zone. In the preferred embodiment, the initial catalytic reformer contains multiple-stage catalytic contact sections and the third reaction zone wherein the C_6+ fraction of the hydrocracking effluent is dehydrocyclized, comprises the last of the series of catalytic contact sections.



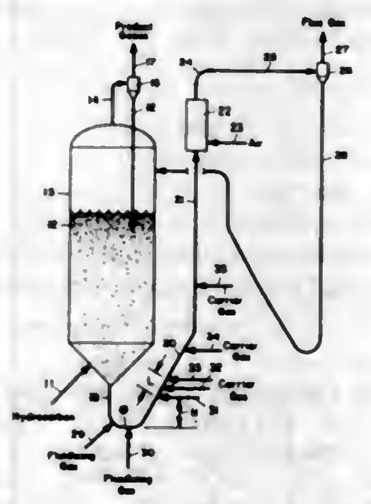
3,389,076

FLUID SOLIDS TRANSPORT

Morey E. Oldweiler, Whippany, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware

Filed June 30, 1966, Ser. No. 561,821

11 Claims. (Cl. 208—127)



High density fluid solids particles of large particle size are conveyed upwardly through an angle riser with minimum slugging by injecting gas in a portion of the riser less than about 4 riser diameters in length, under conditions whereby the superficial gas velocity in the riser is increased from less than about 0.4 ft./sec. to over about 20 ft./sec. The technique is especially useful in circulating fluid coke between a coker and a regenerator.

3,389,077

REGENERATING HYDROFINING CATALYST

William K. T. Gleim, Island Lake, and Mark J. O'Hara, Mount Prospect, Ill., assignors to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Filed Dec. 6, 1965, Ser. No. 511,975

5 Claims. (Cl. 208—264)

Catalytic hydrorefining of asphaltene-containing heavy oil with intermittent catalyst regeneration. During the normal processing run, the reactor effluent is separated to provide a first cycle oil fraction having a 650° F.+IBP which is collected. When the catalyst becomes deactivated, the charge stock is cut out and the first fraction is passed through the catalyst bed, together with H_2, to hydrorefine the first fraction as well as to reactivate the catalyst. The thus hydrorefined first cycle oil fraction is separated to provide a second fraction having a 650° F.+IBP. When the normal processing run is resumed, the second fraction is then recycled to the reactor along with the charge stock.

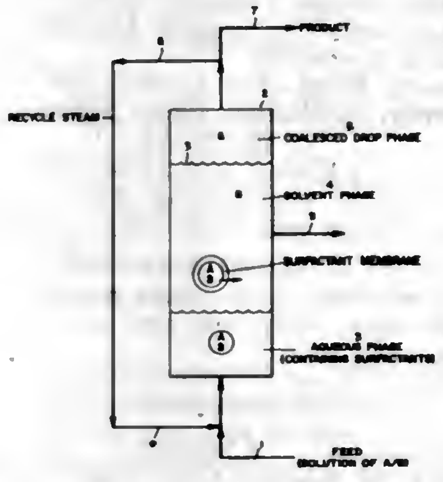
3,389,078

LIQUID SEPARATION THROUGH A PERMEABLE MEMBRANE IN DROPLET FORM

Eugene R. Elzinga, Westfield, and Norman N. Li, Somerset, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

Filed Jan. 20, 1966, Ser. No. 537,580

6 Claims. (Cl. 208—308)



A process for separating mixtures by selective permeation through a liquid membrane. The mixture to be separated is passed into a liquid surfactant solution where individual droplets of the mixture are coated with the liquid surfactant, thereby forming a liquid membrane. The droplets are then contacted with a solvent. The more permeable component or components of the mixture pass through the membrane into the solvent. The less permeable component or components remain within the droplet. The more permeable component(s) is then separated from the solvent, and the less permeable component(s) is separated from the aqueous phase.

3,389,079

WATER PURIFICATION BY CAPILLARY DIFFUSION

Peter S. Litt, Albuquerque, N. Mex., assignor of twelve percent each to Walter B. Hobbs and Watson D. Harbaugh, both of Evanston, and Ralph K. Ball, Kenilworth, Ill.

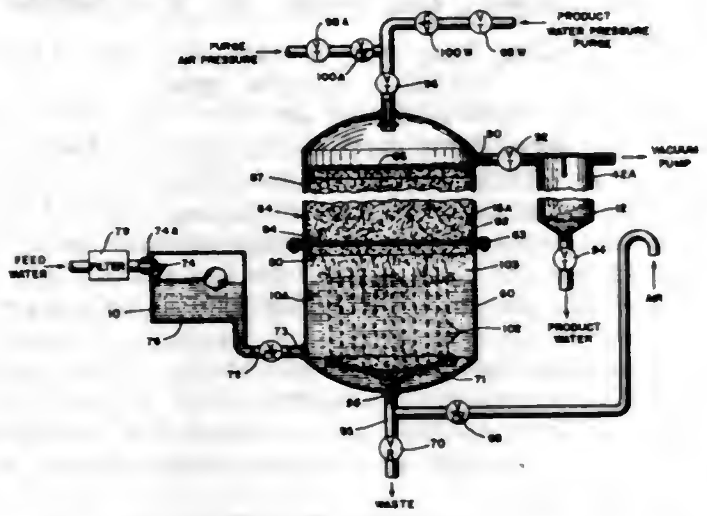
Continuation-in-part of application Ser. No. 214,217, Aug. 2, 1962. This application Oct. 15, 1962, Ser. No. 233,996

10 Claims. (Cl. 210—32)

1. The process of reclaiming water from a feed water solution of ionic content comprising:

conducting feed water films as feed water mists into contact with a capillary diffusion lattice,

collecting the feed water of the mists in the capillary lattice,



conducting the collected feed water through the lattice to retard the flow of ions through said passages by capillary diffusion while urging the water molecules to flow freely through said capillary passages under the influence of capillary action.

3,389,080

TREATMENT OF ION-EXCHANGE RESINS

Thomas Victor Arden, Cobham, Surrey, England, assignor to The Permutit Company Limited, London, England, a British company

No Drawing. Filed May 3, 1965, Ser. No. 452,885

Claims priority, application Great Britain, May 6, 1964, 18,871/64

3 Claims. (Cl. 210—32)

1. A method of regenerating mixed cation-exchange and anion-exchange powdered resins present as a layer on a filter which comprises successively passing through the layer a solution of an alkali metal salt, a solution of an alkali metal hydroxide and a solution of ammonium hydroxide.

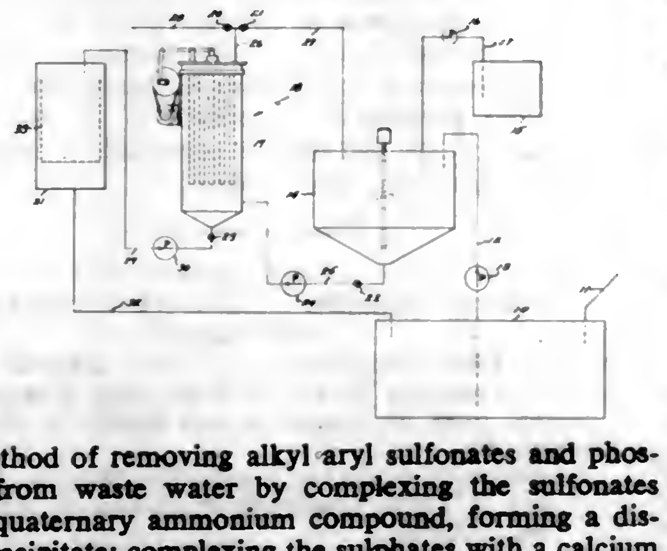
3,389,081

METHOD OF REMOVING ALKYL ARYL SULFONATES AND PHOSPHATES FROM WASTE WATER

William Wesley Eckenfelder, Jr., Ramsey, N.J., and Edwin L. Barnhart, Woodhaven, N.Y., assignors to McGraw-Edison Company, Elgin, Ill., a corporation of Delaware

Filed May 1, 1964, Ser. No. 364,072

9 Claims. (Cl. 210—52)



A method of removing alkyl aryl sulfonates and phosphates from waste water by complexing the sulfonates with a quaternary ammonium compound, forming a disperse precipitate; complexing the sulphates with a calcium salt, forming an insoluble phosphate, which then flocs the disperse precipitate from the waste water.

3,389,082

LUBRICATING COMPOSITION

Paul M. Kerschner, Trenton, and Frederick G. Hess, Cranbury, N.J., assignors to Cities Service Oil Company, a corporation of Delaware

No Drawing. Original application Mar. 6, 1964, Ser. No. 350,121, now Patent No. 3,338,935, dated Aug. 29, 1967. Divided and this application Aug. 17, 1967, Ser. No. 670,489

9 Claims. (Cl. 252—32.5)

A lubricating composition having a substantial quantity of a lubricant base material and a minor quantity of an amine salt of a metal (acid hydrocarbyl orthophosphate) wherein the metal is a Group IV–B metal of the periodic table.

3,389,083

LUBRICANTS CONTAINING ALKALI METAL DITHIOPHOSPHATES

Richard E. Lyle, El Cerrito, and Warren Lowe, Berkeley, Calif., assignors to Chevron Research Company, San Francisco, Calif., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 444,424, Mar. 31, 1965. This application Jan. 26, 1967, Ser. No. 611,830

3 Claims. (Cl. 252—32.7)

Novel lubricants containing alkali metal dithiophosphates, more particularly lubricating oil compositions containing ashless detergents in combination with alkali metal dihydrocarbyl dithiophosphates.

3,389,084

LUBRICATING GREASE CONTAINING ODD AND EVEN-NUMBERED FATTY ACIDS

Jeffrey H. Bartlett, New Providence, Arnold J. Morway, Clark, and Joel R. Livingston, Jr., Berkeley Heights, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Oct. 29, 1965, Ser. No. 505,730

6 Claims. (Cl. 252—39)

Lubricating greases thickened with alkali or alkaline earth metal salts of low molecular weight fatty acid and a mixture of odd and even numbered fatty acids averaging at least 14 carbon atoms wherein 25 to 75 wt. percent of said mixture is acid containing an odd number of carbon atoms.

3,389,085

LUBRICANTS CONTAINING MIXED METAL SALTS OF MONO- AND POLYBASIC ACIDS

Arnold J. Morway, Clark, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Mar. 31, 1964, Ser. No. 356,035

3 Claims. (Cl. 252—41)

1. A lubricating grease comprising a major amount of mineral lubricating oil and about 15 to 35 weight percent of lithium salts of acetic acid, C_{16} to C_{24} fatty acid, and oxalic acid, wherein the mole equivalent ratio of said acetic acid to said oxalic acid is about 0.1:1 to 4:1, and wherein the mole equivalent ratio of said C_{16} to C_{24} fatty acid to said oxalic acid is about 0.2:1 to 2:1.

3,389,086

PRODUCT OF REACTION OF AN EPOXY RESIN WITH AN HYDROLYZED POLYOLEFIN-P_2S_5 AMINE REACTION PRODUCT AND LUBRICATING OIL CONTAINING SAME

David D. Reed, Lagrangeville, and Eugene Moroz, New York, N.Y., and James M. Petersen, Erie, Pa., assignors to Texaco Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed June 1, 1966, Ser. No. 554,315

10 Claims. (Cl. 252—46.7)

An epoxy resin derivative suitable as a detergent dispersant in lube oils and lube oil compositions thereof prepared by contacting epoxy resin sequentially with a steam hydrolyzed, inorganic phosphorus acid-free, polyolefin-P_2S_5 acid product and then an amine of less than 30 carbon atoms.

3,389,087

LUBRICANT CONTAINING ETHYLENE-ALPHA-OLEFIN POLYMERS

Edward N. Kresge, Elizabeth, Joseph Wagensommer, Westfield, Norman Jacobson, East Brunswick, and Darrell W. Brownawell, Scotch Plains, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

Filed Dec. 23, 1965, Ser. No. 515,934

6 Claims. (Cl. 252—59)

1. An oil composition comprising a major proportion of a lubricating oil and from about 0.1 to about 10 wt. percent of an oil-soluble, amorphous-crystalline polymer comprised of 2–98 wt. percent ethylene and 2–98 wt. percent of a C_3–C_{18} alpha-olefin, said polymer having a molecular weight within the range between about 20,000 and 250,000, a degree of head-to-head linkages within the range between about 20% and 60% and a degree of crystallinity up to about 25%.

3,389,088

HYDRAULIC TRANSMISSION FLUID CONTAINING SEAL SWELLING ADDITIVE AND METHOD FOR REDUCING FLUID LEAKAGE

Wayne C. Schar, Middletown, and Donald Borden, Franklin Park, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed May 28, 1963, Ser. No. 283,696

4 Claims. (Cl. 252—73)

An automatic transmission fluid having a mineral lubricating oil base and containing 1 to 5 volume percent of an aliphatic alcohol of from 8 to 13 carbon atoms. The alcohol imparts to the fluid the property of swelling seals in an automatic transmission and thereby prevents leakage.

3,389,089

BLUE ELECTROLUMINESCENT PHOSPHOR AND METHOD FOR ITS PRODUCTION

Ivie L. Smith, Cleveland, Ohio, assignor to General Electric Company, a corporation of New York

Filed Jan. 2, 1964, Ser. No. 335,019

6 Claims. (Cl. 252—301.6)

1. The method of preparing a blue electroluminescent zinc sulfide phosphor which comprises mixing ZnS with from 0.15 to 0.74% by weight of CuI, and from 0.05 to 10% by weight ZnO, and firing in a neutral atmosphere at a temperature in the range of from about 850° C. up to a temperature less than the hexagonal-cubic transition point for a period of time sufficient to allow crystallite growth throughout the bulk of the material.

3,389,090

ASPHALT EMULSIONS

Stanley D. Turk, Anton M. Schnitzer, and Billy D. Simpson, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed Dec. 31, 1964, Ser. No. 422,515

3 Claims. (Cl. 252—311.5)

N-long-chain secondary alkyl-1,3-propanediamines are used as emulsifying agents in the preparation of asphalt emulsions.

3,389,091

STABILIZED SOLVENT COMPOSITION

Louis A. Joo and John B. Braunwarth, Crystal Lake, Ill., assignors, by mesne assignments, to Union Oil Company of California, Los Angeles, Calif., a corporation of California

No Drawing. Original application July 13, 1962, Ser. No. 209,750. Divided and this application Aug. 29, 1966, Ser. No. 607,082

4 Claims. (Cl. 252—356)

An emulsifier composition consisting essentially of a hydrocarbon solvent and nitrogen-containing carboxylic acids prepared by reaction of solvent extracts, obtained in the solvent extraction of mineral lubricating oils with a solvent selective for aromatic compounds, with nitrogen dioxide at a temperature exceeding about 100° C. The composition finds particular utility in preparation of stable toxicant compositions.

3,389,092

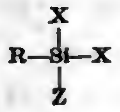
PROCESS FOR PREPARING SILICA-ALUMINA

Robert A. Sanford and Marvin F. L. Johnson, Homewood, and Norman J. Williams, Harvey, Ill., assignors to Sinclair Research, Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed July 13, 1964, Ser. No. 382,381

7 Claims. (Cl. 252—430)

A process for the production of silica-alumina which consists essentially of reacting a hydroxyl-containing alumina with an organosilane having the general formula:



$$R-\overset{\displaystyle X}{\underset{\displaystyle Z}{\overset{|}{\underset{|}{Si}}}}-X$$

wherein R is an aromatic hydrocarbon group of up to 8 carbon atoms; X is halogen; and Z is selected from the group consisting of R and X.

3,389,093

SULFOLENE OXIDE COMPOUNDS AS PROMOTERS FOR POLYMERIZATION OF CYCLIC ETHERS

William R. Busler and Henry L. Hsieh, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed Nov. 6, 1964, Ser. No. 409,575

10 Claims. (Cl. 260—2)

This invention relates to the polymerization of cyclic ethers in the presence of an organoantimony hexachloride catalyst utilizing a sulfolene oxide compound as a polymerization promoter.

3,389,094

FOAMING PHENOL-FORMALDEHYDE RESINS WITH FLUOROCARBONS

William J. D'Alessandro, Old Bridge, N.J., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Oct. 10, 1963, Ser. No. 315,394

20 Claims. (Cl. 260—2.5)

Closed-cell phenolic foam structures of fine cell size are provided by foaming a phenol-formaldehyde resin containing less than 10% water with a polyhalogenated fluorocarbon. Other additive resins may also be present as can be other foaming agents.

3,389,095

PROCESS FOR STABILIZING PHENOLIC FOAM WITH ALKYLENE OXIDE AND PRODUCT OBTAINED THEREFROM

Walter L. Garrett, Freeland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Dec. 16, 1963, Ser. No. 330,658

13 Claims. (Cl. 260—2.5)

1. In a process for the preparation of a solid phenolic foam from a composition comprising a liquid phenol-formaldehyde resole resin, a blowing agent and an acidic catalyst, the improvement which consists of:

(A) adding to the liquid resole resin as the acidic catalyst a strong organic acid comprising at least 30 mole percent of an aromatic sulfonic acid,

(B) holding the liquid resin composition at a temperature in the range from about 20° to 100° C. for a time sufficient to form a solid resilient phenolic foam,

(C) treating the phenolic foam while in the resilient form with a sufficient amount of a gaseous nitrogen base to make the foam alkaline, and

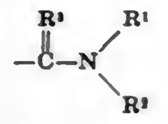
(D) oxyalkylating the residual phenolic OH groups of the alkaline foam with a C_2–C_4 alkylene oxide.

3,389,096
WEAK-BASE ANION EXCHANGE RESINS CONTAINING AMIDE SUBSTITUENTS

Irving M. Abrams, Redwood City, Richard G. Bufton, San Jose, and Frederick L. Burnett III, Sunnyvale, Calif., assignors to Diamond Shamrock Corporation, a corporation of Delaware

No Drawing. Filed Oct. 18, 1965, Ser. No. 497,527
15 Claims. (Cl. 260—2.1)

A weak-base anion exchange resin containing anion-active radical substituents of the structure:



wherein R^1 is hydrogen, alkyl, aminoalkyl or amino-aza-alkyl; R^2 is hydrogen or alkyl; and R^3 is oxygen, NH or sulfur; is prepared by copolymerizing a polymerizable unsaturated nitrile with an aromatic compound containing at least two polymerizable unsaturated groups to form a crosslinked polymeric matrix and then reacting this matrix with an alkylene polyamine in the presence of water.

3,389,097
EXPANDABLE POLYMERS

Alvin R. Ingram and Harold A. Wright, Murrysville, Pa., assignors to Koppers Company, Inc., a corporation of Delaware

Filed June 26, 1964, Ser. No. 378,177
9 Claims. (Cl. 260—2.5)

The invention concerns the preparation of foamable vinyl aromatic polymers by polymerizing the monomers in an aqueous suspension into which a fatty acid bis-amide is added during an intermediate stage of polymerization.

3,389,098
IRRADIATION OF ELASTOMERIC COMPOUNDS

Harold M. Gladstone, Wallingford, Paul M. La Flamme, New Britain, Robert M. Reihmann, Cheshire, and Herbert M. Schoen, Stamford, Conn., assignors to Quantum, Incorporated, Wallingford, Conn., a corporation of Connecticut

No Drawing. Filed Sept. 16, 1963, Ser. No. 309,207
10 Claims. (Cl. 260—4)

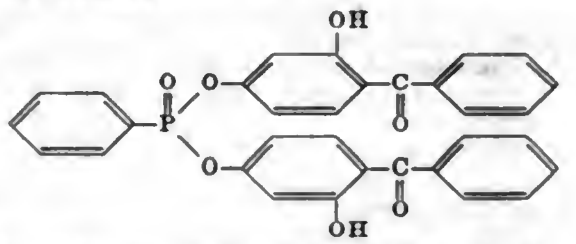
The lubricity of vulcanized elastomers having residual carbon-carbon unsaturation is improved by treatment with acrylic acid in the presence of ultraviolet radiation, gamma radiation, or heat in the presence of a thermal initiator, and heating with sulfur tetrafluoride, a complex of sulfur tetrafluoride and boron trifluoride, or a mixture of sodium fluoride and sulfur dichloride.

3,389,099
ULTRAVIOLET LIGHT STABILIZERS FOR PLASTIC MATERIALS

Hans Dressler, Pitcairn, and Kenneth G. Reabe, Delmont, Pa., assignors to Koppers Company, Inc., a corporation of Delaware

No Drawing. Filed Feb. 23, 1966, Ser. No. 529,239
4 Claims. (Cl. 260—8.65)

1. A polymeric composition stabilized against ultraviolet degradation comprising a polymer selected from the group consisting of polyethylene, polypropylene, polystyrene, polyvinyl acetate, polyvinyl chloride, copolymers of vinylidene chloride and vinyl chloride, nitrocellulose, ethyl cellulose, cellulose acetate, and polyester resins having incorporated therein a stabilizing amount of a stabilizer having the formula:

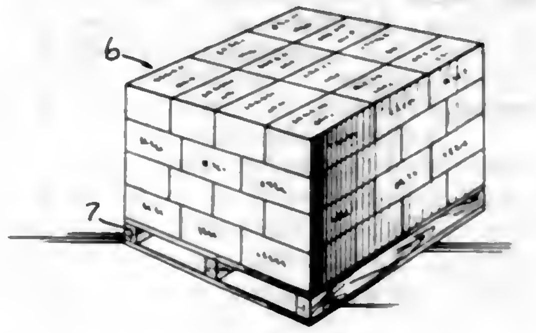


4. The polymeric composition of claim 1 wherein the polymer is a styrene-modified polyester resin.

3,389,100
ANTI-SKID PRINTING INK COMPRISING SILICA AEROGEL AND/OR CORNSTARCH

William H. Cook, Lancaster, Ohio, assignor to Anchor Hocking Glass Corporation, Lancaster, Ohio, a corporation of Delaware

Filed Jan. 25, 1965, Ser. No. 427,776
5 Claims. (Cl. 260—9)



A printing ink having a high coefficient of friction for use on paperboard cartons to prevent sliding between the individual decorated cartons when stacked for shipment. The ink comprises a high gloss synthetic resin ink containing a dispersed drying oil and cornstarch or silica aerogel in amounts sufficient to give the ink an antiskid quality and also may include an amount of microcrystalline wax sufficient to improve the antiscuff quality of the ink.

3,389,101
REDWOOD EXTRACT SUBSTITUTED-PHENOLIC RESIN ADHESIVE

Reino A. Jarvi, Bellevue, Wash., assignor to Simpson Timber Company, Seattle, Wash., a corporation of Washington

No Drawing. Filed July 30, 1965, Ser. No. 476,196
6 Claims. (Cl. 260—17.2)

A resin adhesive for use in the manufacture of exterior grade plywood is formulated from a redwood extract, composed of phenolics solvent extracted from redwood, and phenol co-reacted with formaldehyde in the presence of an alkali hydroxide catalyst.

3,389,102
PROCESS FOR THE PRODUCTION OF CONCENTRATED AQUEOUS METHYLPOLYSILOXANE EMULSIONS CONTAINING ZIRCONIUM SALTS

Karl Schnurrbusch, Cologne-Flittard, and Walter Noll, Leverkusen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Continuation of application Ser. No. 208,949, July 10, 1962. This application Sept. 29, 1967, Ser. No. 671,898
Claims priority, application Germany, Aug. 9, 1961, F 34,650
4 Claims. (Cl. 260—18)

Concentrated aqueous emulsions of methylpolysiloxanes free of Si-H bonds are prepared by emulsification in the presence of anion-active compounds such as fatty acids and NH_3 or morpholine salts thereof.

3,389,103
THERMOSETTING BLEND OF ALKYLOLATED AMIDE-CONTAINING INTERPOLYMER AND HYDROXY-FUNCTIONAL INTERPOLYMER CONTAINING MALEIC ANHYDRIDE GROUPS PARTIALLY ESTERIFIED WITH ALCOHOL AND REACTED WITH MONOEPOXIDE

Kazys Sekmakas, Chicago, Ill., assignor to De Soto, Inc., a corporation of Delaware

No Drawing. Filed Mar. 10, 1965, Ser. No. 438,738
6 Claims. (Cl. 260—21)

Thermosetting organic solvent solution coating compositions are provided by blending in the organic solvent medium an alkylolated amide interpolymer with a solvent-soluble hydroxy copolymer produced by copolymerizing maleic anhydride with other vinyl monomers and then partially esterifying the anhydride groups with an alcohol to generate secondary carboxyl groups which are then reacted with monoepoxide, such as propylene oxide, to generate an hydroxy ester. In this way, compatible and reactive systems are provided at minimum cost.

3,389,104
COATING COMPOSITIONS AND METHODS OF PRODUCING THE SAME

Richmond O. Austin and Dan C. Schmidt, Hattiesburg, Miss., assignors to Pan American Tung Research and Development League, Hattiesburg, Miss., a corporation of Louisiana

No Drawing. Filed May 7, 1964, Ser. No. 365,806
20 Claims. (Cl. 260—22)

1. A rapid air drying coating composition which comprises a volatile solvent and a copolymer comprising the product obtained by mixing together a solution of a polymerization catalyst, a lower alkyl acrylate and a tung oil modified alkyd resin and thereafter heating the solution at a temperature above 100° C. to polymerize the acrylate and alkyd resin, said alkyd resin comprising about 45 to about 92% oil, about 18% to about 60% of said oil being tung oil and at least 40% of the total oil being a secondary vegetable oil having drying properties, at least 3% of a polyhydric alcohol and at least 5% of a polybasic organic acid, said copolymer containing at least 25% of said lower alkyl acrylate and at least 25% of said tung oil modified alkyd resin.

3,389,105
FLAKE METAL POWDERS COATED WITH FLUOROCARBON RESIN

William T. Bolger, Chatham, N.J., assignor to Alcan Metal Powders, Inc., a corporation of Delaware

No Drawing. Filed Mar. 5, 1965, Ser. No. 437,569
37 Claims. (Cl. 260—23)

Procedure for making flake metal powder, wherein finely divided metal is ground to flake form in a ball mill, stamping mill or the like, in the presence of a fluorocarbon resin as a grinding agent. The fluorocarbon resin may be polytetrafluoroethylene, fluorinated ethylene propylene, polyvinylidene fluoride or polychlorotrifluoroethylene, and may be used either alone, as the sole grinding agent employed, or in combination with another grinding agent such as stearic acid; also, the milling may be performed either under dry conditions or in the presence of a liquid wet-milling vehicle. The product of this procedure is a flake metal powder which may be either leafing or nonleafing, depending on the materials employed in the milling operation, and which has a coating of the fluorocarbon resin grinding agent.

3,389,106
CURING OF LIQUID POLYSULFIDE POLYMERS

Billy D. Simpson, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed July 15, 1966, Ser. No. 565,374
10 Claims. (Cl. 260—24)

A liquid polysulfide polymer prepared by reacting (1) sulfur, (2) is a polythiol having the formula $R(SH)_n$ wherein R is a hydrocarbon radical selected from the group consisting of saturated aliphatic, saturated cycloaliphatic, and aromatic radicals and combinations thereof, said hydrocarbon radical having from 3 to 20 carbon atoms and having a valence equal to *n*, and *n* is an integer of at least three, and (3) a dithiol selected from the group consisting of 3-(2-mercaptoethyl)cyclohexanethiol and 4 - (2 - mercaptoethyl)cyclohexanethiol and mixtures thereof under suitable reaction conditions to produce a liquid polysulfide polymer is crosslinked by contacting said polymer with a curing system consisting essentially of lead dioxide and at least one member selected from the group consisting of cobalt linoresinate, lead naphthenate, zinc naphthenate copper naphthenate, manganese naphthenate, and chrominum naphthenate.

3,389,107
WAX-(PROPENE/BUTENE COPOLYMER) FILMS

Melvin V. Hunter, El Cerrito, and Victor A. Rundle, Oakland, Calif., assignors to Chevron Research Company, a corporation of Delaware

No Drawing. Filed June 21, 1965, Ser. No. 465,772
6 Claims. (Cl. 260—28.5)

Self-sustaining films formed from high molecular weight propene/butene copolymer and a major amount of wax.

3,389,108
PRINTING FLUID COMPRISING AN AQUEOUS SOLUTION OF A WATER-SOLUBLE DYE AND A THERMOSETTING VINYLSULFONIUM POLYMER

Morris L. Smith, Lawnside, N.J., and Guido Roccheggiani, Bala Cynwyd, and Robert W. Faessinger, Media, Pa., assignors to Scott Paper Company, Delaware County, Pa., a corporation of Pennsylvania

No Drawing. Continuation-in-part of application Ser. No. 424,222, Jan. 8, 1965. This application July 19, 1967, Ser. No. 654,371
12 Claims. (Cl. 260—29.6)

Aqueous, low-viscosity, printing fluids containing a water-soluble, thermosetting, vinylsulfonium polymer resin and a water-soluble dye which is compatible with the resin in solution. These printing fluids are useful in high speed printing processes.

3,389,109
METHOD FOR PREPARING AQUEOUS DISPERSIONS OF ETHYLENE COPOLYMERS

Thomas O. Harmon, Midland, James B. Louch, Coleman, and Donald S. Morehouse, Jr., Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed July 26, 1965, Ser. No. 474,974
7 Claims. (Cl. 260—29.6)

1. A process for preparing dispersions of ethylene copolymers which comprises dissolving a copolymer of monomers comprising at least 65 percent by weight ethylene and an *α,β*-ethylenically unsaturated carboxylic acid having from 3 to 8 carbon atoms, the acid being present in amount of at least 8 percent by weight when only ethylene and acid are present in the copolymer and when any other monomer polymerized therein is a non-polar monomer, the acid being present in amount of at least

5 percent by weight when another polar monomer is polymerized in the copolymer, in a substantially water-miscible organic solvent which has a boiling point below 100° C. or forms an azeotropic mixture with water having a boiling point below 100° C., dispersing the polymer solution in an aqueous liquid system containing an amount of an alkaline compoud sufficient to neutralize at least 10 percent of the carboxylic acid units present in the copolymer and simultaneously volatilizing a major portion of the solvent as the polymer solution is admixed with the aqueous system and thereby forming a dispersion of the polymer in the aqueous liquid system.

3,389,110

FILM-FORMING BLOCK COPOLYMERIC EMULSIONS PREPARED FROM A POLYMERIZABLE AMIDE

David D. Taft, Minneapolis, Minn., assignor to Ashland Oil & Refining Company, Ashland, Ky., a corporation of Kentucky

No Drawing. Continuation-in-part of application Ser. No. 423,376, Jan. 4, 1965. This application Sept. 2, 1965, Ser. No. 484,731

9 Claims. (Cl. 260—29.6)

A method of producing a copolymeric emulsion containing the following four classes of monomers:

(1) aliphatic ester of α,β-unsaturated monocarboxylic acid;
(2) polymerizable unsaturated amide;
(3) copolymerizable vinyl compound; and
(4) α,β-unsaturated mono- or di-carboxylic acid or salt thereof or a monoester of a dicarboxylic acid or salt thereof.

The method involves a two-step process wherein all of monomer (1) and portions of the remaining monomers are polymerized in the first step and the remaining portions of monomers are polymerized in the second step. The product of the process is a coating composition which produces hard, clear, high gloss, mar resistant, adherent, flexible, water resistant and caustic resistant films.

3,389,111

CORONA RESISTANT POLYIMIDE COMPOSITIONS CONTAINING CERTAIN ORGANO-METALLIC COMPOUNDS

James J. McKeown, Mahtomedi, and Charles D. Wright, White Bear Lake, Minn., assignors to Minnesota Mining and Manufacturing Company, St. Paul, Minn.

No Drawing. Filed Jan. 4, 1965, Ser. No. 423,388

30 Claims. (Cl. 260—30.2)

Polyimide compositions having improved corona resistance by the addition of certain organo-metallic compounds. The metal portion of the organo-metallic compound is selected from the class of elements of Groups IV*b* and V*b* of the Periodic Table of the elements having atomic numbers from 15 to 83, and iron.

3,389,112

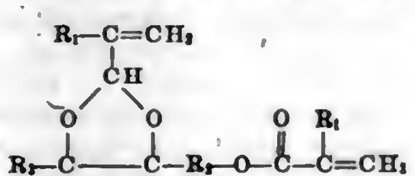
UNSATURATED CYCLIC ACETALS AND POLYMERS THEREOF

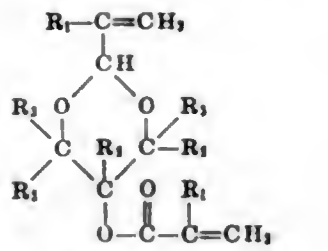
John D. Nordstrom, Minneapolis, Minn., assignor to Ashland Oil & Refining Company, Ashland, Ky., a corporation of Kentucky

No Drawing. Filed Jan. 29, 1965, Ser. No. 429,114

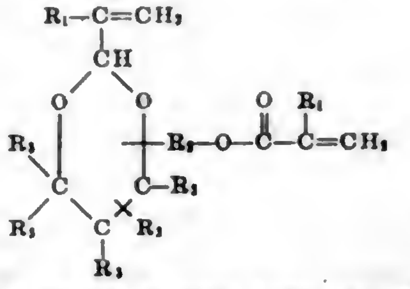
20 Claims. (Cl. 260—30.4)

Bifunctional cyclic acetals having the formulas:





and



wherein R_1 is a radical selected from the class consisting of hydrogen and the methyl group, R_2 is an alkylene radical of 1 to 18 carbon atoms, and R_3 is a radical selected from the class consisting of hydrogen and alkyl radicals having from 1 to 8 carbon atoms, are prepared by reaction of unsaturated compounds having the formula $CH_2{=}CHR_1COX$ wherein X is a chlorine, hydroxyl, or lower alkoxy group with a cyclic acetal. The bifunctional cyclic acetals are polymerizable to polymeric materials suitable as coating resin vehicles.

3,389,113

SOLVENT-BASED GASKETING COMPOSITIONS

Charles W. Simons, Bedford, Joel A. Gribens, Methuen, and Irving J. Arons, West Peabody, Mass., assignors to W. R. Grace & Co., Cambridge, Mass., a corporation of Connecticut

No Drawing. Filed Dec. 21, 1964, Ser. No. 420,096

10 Claims. (Cl. 260—31.8)

Gasket-forming compositions for container closure elements comprised of a peptized curable polymer of 2-chloro-1,3-butadiene dissolved in a solvent having a minimum boiling point of 230° F., such as xylene and toluene. The compositions may be modified by the inclusion of additives, e.g., fillers, such as clay and plasticizers for the polymer, such as dioctyl phthalate. Illustrative curing agents include magnesium oxide, zinc oxide and mixtures thereof.

3,389,114

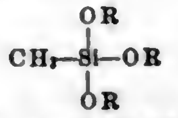
ORGANOPOLYSILOXANE RESINS AND PROCESS

Alfred J. Burzynski and Robert E. Martin, Toledo, Ohio, assignors to Owens-Illinois, Inc., a corporation of Ohio

No Drawing. Continuation-in-part of application Ser. No. 370,684, May 27, 1964. This application Aug. 14, 1967, Ser. No. 660,223

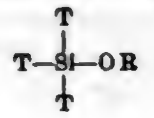
18 Claims. (Cl. 260—32.8)

An organopolysiloxane resin is prepared under particular conditions from a methyltrialkoxysilane represented by the formula



$$CH_3{-}\overset{OR}{\underset{OR}{Si}}{-}OR$$

wherein R represents an alkyl radical containing less than 4 carbon atoms. Methyltriethoxysilane is preferred. Optionally there may be included in the reaction mass from 0 to about 5.0 mole percent, based on total silane reactant material, of at least one compound different from the above-described methyltrialkoxysilane and which is represented by the formula



$$T{-}\overset{T}{\underset{T}{Si}}{-}OR$$

wherein R in the alkoxy radical—OR has the same meaning as in the first-given formula and each T independently represents an aryl, alkyl or alkenyl radical, each of which contains less than 7 carbon atoms, or the aforementioned alkoxy radical,—OR. The reaction mixture contains at least the stoichiometrical amount of water required for complete hydrolysis and condensation of the siloxane precursor (see Equations III, IV and V), e.g., from about 1.5 to 10 moles H_2O per mole of said precursor. An acidity limitation on the initial reaction mixture also is described.

Particular conditions are set forth for (a) heating the reaction mixture to form the initial liquid "siloxane partial condensation product;" (b) for concentrating this product; (c) for precuring the concentrated liquid product; and (d) for final cure of the precured partial condensation product to obtain a solid, thermoset organopolysiloxane resin.

Products of the invention include organic solvent-soluble, siloxane partial condensation products useful, for example, as components of coating compositions or as molding compositions that can be molded to provide thermoset molded articles. The liquid partial condensation products also can be cast to yield shaped, solid, relatively thick, machinable, heat-resistant, thermoset, organopolysiloxane bodies or structures.

3,389,115

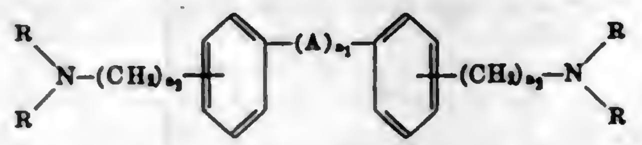
STABILIZATION OF POLYMERS

Clifford W. Childers, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

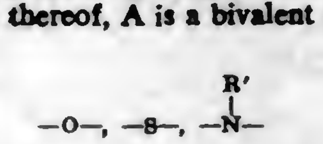
No Drawing. Filed June 29, 1964, Ser. No. 379,037

19 Claims. (Cl. 260—33.6)

Natural and synthetic organic polymers are stabilized against oxidation by tertiary amines having the formula



wherein R is a hydrocarbon radical selected from saturated aliphatic, saturated cycloaliphatic, and aromatic radicals and combinations thereof, A is a bivalent radical selected from



$$-O-,\ -S-,\ -\overset{R'}{N}-$$

wherein n_1 is selected from 0 and 1, each n_2 is selected from 0 and 1, R′ is selected from hydrogen and hydrocarbon radicals such as saturated aliphatic, saturated cycloaliphatic, and aromatic and combinations thereof when n_2 is 1 and is one of said hydrocarbon radicals having at least two carbon atoms when n_2 equals 0.

3,389,116

METAL PIGMENT AND METHOD OF MAKING SAME

Arthur William Sahs, Kenilworth, N.J., assignor to Alcan Metal Powders, Inc., a corporation of Delaware

No Drawing. Filed Aug. 17, 1965, Ser. No. 480,508

9 Claims. (Cl. 260—37)

In procedure for rendering metal pigment powder sufficiently electrically non-conductive to enable use of the same in paints applied by electrostatic spraying, the steps of establishing a slurry of the metal powder in hydrocarbon solvent, mixing with the slurry an amount of n-(trimethoxysilylpropyl) ethylenediamine equal to between about 1% and about 5% of the weight of metal powder in the slurry, and stirring the slurry for a period of time sufficient to establish on the powder metal an electrically insulating surface coating of the silane.

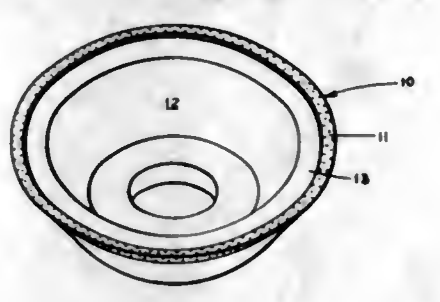
3,389,117

DRESSABLE HEAT CONDUCTIVE BACKING FOR ABRASIVE WHEELS

Stanley E. Kozdemba, Victor G. Soukup, and Don I. Dally, Cincinnati, Ohio, assignors to The Cincinnati Milling Machine Co., Cincinnati, Ohio, a corporation of Ohio

Filed Nov. 26, 1963, Ser. No. 325,980

12 Claims. (Cl. 260—38)



1. An abrasive wheel backing comprised of a non-abrasive material and a phenolic resin binder, said backing being molded under heat and pressure to form a rigid body of the desired configuration, said backing comprising essentially 20–35% by weight of a phenolic resin binder and 80–65% by weight of a powdered aluminum alloy having a nominal grain size of from 50–600 mesh, the alloying element in the aluminum being selected from the group consisting of the rare earth metals, calcium, silver, silicon and the elements contained in Groups VI–B, VII–B and VIII of the Periodic Table of Elements, and being present either alone or in combination in the alloy to an extent of from 1–30% by weight thereof, to thereby provide an abrasive wheel backing which is easily dressable and has superior flexural strength and heat transfer properties.

3,389,118

PAINT COMPOSITION

Simon R. Gordon, Minneapolis, Minn., assignor to Gordon Building Materials, Inc., Minneapolis, Minn., a corporation of Minnesota

No Drawing. Continuation-in-part of application Ser. No. 740,536, June 9, 1958. This application Dec. 3, 1962, Ser. No. 241,478

7 Claims. (Cl. 260—41)

1. A composition of matter for producing a water based coating material consisting essentially of portland cement, polyvinyl alcohol and a metal salt containing a chloride ion selected from the group consisting of calcium chloride, magnesium chloride, strontium chloride, manganese chloride, cupric chloride, ferrous chloride, ferric chloride, cobalt chloride, nickel chloride, zinc chloride, cadmium chloride, tin chloride and aluminum chloride, the dry ingredients being present in the proportion of about 39 parts by weight portland cement, about 3 to 4½ parts by weight polyvinyl alcohol and about ½ to 1½ parts by weight of metal salt containing a chloride ion.

3,389,119

POLYETHYLENE COMPOSITIONS STABILIZED WITH A TERTIARY AMINE AND A PHENOL

Robert Worth Sherrill, Orange, Tex., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Mar. 15, 1965, Ser. No. 439,939

1 Claim. (Cl. 260—45.9)

The melt stability of olefin polymers, e.g. polyethylene, is improved by the addition of from 0.01 to 2.0 percent by weight based upon the polyethylene of a combination of an amine, e.g. octadecyl diethanol amine and a substituted phenol, e.g. 4,4′-butylidene - bis - (6-t-butyl-m-cresol).

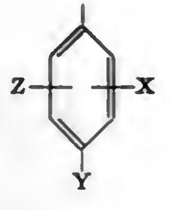
3,389,120
POLYOLEFINS STABILIZED WITH PHENOLIC ESTERS

Alfred R. Globus, Long Island City, N.Y., assignor to Guardian Chemical Corporation, Long Island City, N.Y., a corporation of Delaware

No Drawing. Filed Aug. 19, 1965, Ser. No. 481,083

5 Claims. (Cl. 260—45.85)

A novel class of compounds, their use in stabilizing polyolefins and stabilized polyolefins are disclosed. The compounds are characterized by the formula:



wherein X represents a fatty acid radical having 14 to 20 carbon atoms and such hydroxyl group substituted fatty acids, Y represents lower alkyl and Z represents lower alkyl containing 3 to 5 carbon atoms, X and Z being positioned either ortho or meta with respect to the phenolic hydroxy group.

3,389,121
RESINS AND PROCESSES OF MAKING THE SAME

Alfred J. Burzynski and Robert E. Martin, Toledo, Ohio, assignors to Owens-Illinois, Inc., a corporation of Ohio

No Drawing. Continuation-in-part of application Ser. No. 520,893, Jan. 17, 1966, which is a continuation-in-part of applications Ser. No. 261,226, Feb. 26, 1963, Ser. No. 279,317, May 9, 1963, and Ser. No. 306,344, Sept. 3, 1963. This application Oct. 18, 1967, Ser. No. 676,081

10 Claims. (Cl. 260—46.5)

Organopolysiloxane resins produced by the cohydrolysis and co-condensation of different alkoxysilanes employing the steps of (a) heating the reaction mixture to form a partial condensation product, (b) concentrating this produce; (c) precuring the concentrated product; and (d) finally curing the precured product. The resins are useful as machinable, heat-resistant, thermoset bodies or as coatings.

3,389,122
NOVEL POLYAMIDES AND HETEROCYCLIC POLYMERS PREPARED FROM AROMATIC HYDRAZIDES AND DICARBOXYLIC ACID DICHLORIDES

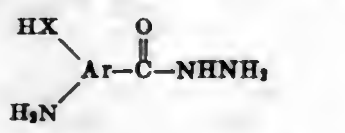
Billy M. Culbertson, Burnsville, Minn., assignor to Ashland Oil & Refining Company, Ashland, Ky., a corporation of Kentucky

No Drawing. Continuation-in-part of application Ser. No. 493,544, Oct. 6, 1965. This application May 18, 1966, Ser. No. 550,924

16 Claims. (Cl. 260—47)

Novel polymeric materials useful in the formation of films and fibers are prepared by a process which comprises reacting a solution of a dicarboxylic acid dichloride in an inert organic polar solvent with a solution of an aromatic hydrazide having the general formula

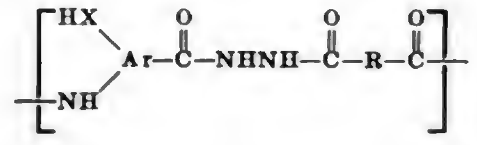
(III)



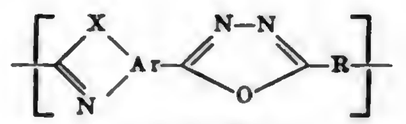
$$(\mathrm{HX})(\mathrm{H_2N})\mathrm{Ar{-}C({=}O){-}NHNH_2}$$

wherein Ar is a trivalent aromatic radical containing at least one ring of six carbon atoms, said ring being characterized by benzenoid unsaturation, wherein said valences are at separate aromatic ring carbon atoms, two of said aromatic ring carbon atoms, attached to the nitrogen and the X group, being adjacent to each other and wherein X is a radical selected from the group consisting of oxygen, sulfur and —N(R′)— (where R′ is hydrogen, alkyl, aryl, or combinations of aryl and alkyl); said aromatic hydrazide being dissolved in said organic polar solvent, and recovering a polymer having recurring units of the following structural formula

(I)



wherein R is the carboxylic acid group-free remainder of said dicarboxylic acid dichloride. On heating to temperatures above 200° C. these polymers cyclodehydrate to form polymers having recurring units of the following structural formula



3,389,123
COMPOSITIONS STABILIZED WITH CYCLIC BORON COMPOUNDS

Robert D. Offenhauer, Pennington, N.J., assignor to Mobil Oil Corporation, a corporation of New York

No Drawing. Continuation-in-part of application Ser. No. 502,424, Oct. 22, 1965. This application Sept. 30, 1966, Ser. No. 583,472

26 Claims. (Cl. 252—49.6)

Organic compositions prone to oxidation are stabilized by the presence of a 5,12-dibora-6,13-dioxarodibenz(a,h) anthracenic compound. This compound may have substitution at the 5,12-positions and at the available nuclear carbon atoms.

3,389,124
ORGANIC SUBSTANCE STABILIZED WITH AMINO-SUBSTITUTED POLYCYCLIC HETEROCYCLIC INHIBITOR

Allen K. Sparks, Des Plaines, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Original application Jan. 28, 1965, Ser. No. 428,877. Divided and this application July 18, 1966, Ser. No. 565,723

7 Claims. (Cl. 252—51.5)

Stabilization of organic substances against deterioration by means of certain amino substituted polycyclic heterocyclic compounds such as 3-(N-cyclohexylamino)-phenoxazine and 2-(N-isopropylamino)-phenothiazine and amino-substituted phenazines.

3,389,125
LOW EXOTHERM CURING PHENOL-RESORCINOL-FORMALDEHYDE RESINS EMPLOYING ALKALI METAL SULFITES AND CALCIUM COMPOUNDS AS CATALYSTS

Myron I. Dietrick and David A. Webb, Valencia, Pa., assignors to Koppers Company, Inc., a corporation of Delaware

Filed June 23, 1967, Ser. No. 648,343

4 Claims. (Cl. 260—54)

A water soluble, fusible phenol-resorcinol-formaldehyde resin which produces a low exotherm upon hardener addition has a composition comprising 50–95 moles phenol and 5–50 moles resorcinol per 100 moles of total phenolic compound and 0.55–0.75 mole of formaldehyde for each mole total phenolic compound. The resin is prepared by reacting phenol and all of the formaldehyde at an initial pH of 8.5–9.0 in the presence of an alkali metal sulfite catalyst in an amount of 0.04–0.09 mole per mole of formaldehyde and refluxing until the mixture has attained a viscosity of 22.7–50 poises. Resorcinol and 0.006–0.060 mole per mole formaldehyde of a calcium catalyst such as calcium oxide, hydroxide or carbonate is added, and the refluxing continued until the resin has a constant viscosity of 200–400 Gardner seconds. The resin is diluted with water or a water miscible solvent to give a solution having a solids content of 40–60% by weight and a viscosity of 3.0–4.3 poises to prepare the resin for use in adhesive formulations.

3,389,126
PROCESS FOR THE PRODUCTION OF HIGH MOLECULAR WEIGHT POLYOXYMETHYLENE

Tadashi Yamaguchi, Sendai-shi, Shinichi Murayama, Musashino-shi, and Nobutaka Nakamura, Tokyo, Japan, assignors to Sumitomo Bakelite Company Limited, Chiyoda-ku, Japan, a corporation of Japan, and to Tadashi Yamaguchi, Sendai-shi, Japan

No Drawing. Filed Jan. 27, 1965, Ser. No. 428,559

Claims priority, application Japan, Feb. 5, 1964, 39/5,695

9 Claims. (Cl. 260—67)

A process for producing a high molecular weight polyoxymethylene having an intrinsic viscosity of at least 1.0 as measured at 60° C. in p-chlorophenol containing 2% of α-pinene which comprises introducing formaldehyde into a mixed solvent consisting of 100 parts of a saturated aliphatic hydrocarbon having 3 to 12 carbon atoms and 0.1 to 100 parts of liquid sulfur dioxide with or without an acidic catalyst.

3,389,127
PROCESS FOR THE MANUFACTURE OF LINEAR POLYESTERS

Peter Paul Kresse, Augsburg, and Adolf Hartmann, Gessertshausen, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning, Frankfurt am Main, Germany, a corporation of Germany

No Drawing. Filed Aug. 28, 1962, Ser. No. 220,087

Claims priority, application Germany, Sept. 2, 1961, F 34,842

8 Claims. (Cl. 260—75)

1. In the process for the production of linear fiber-forming polyesters by the polycondensation of bifunctional hydroxyl compounds with dicarboxylic acid or by the transesterification of low molecular weight aliphatic esters of dicarboxylic acids with bifunctional hydroxyl compounds and polycondensation of the transesterification product the improvement comprising employing as a catalyst during at least one of the polycondensation and transesterfication of a complex compound formed of

(a) an aromatic radical containing a hydroxyl group and adjacently substituted to said hydroxyl group a functional group selected from the class consisting of hydroxyl and carboxyl, the steric distribution of said hydroxyl and functional groups permitting the formation of complex compounds,

(b) a metal selected from the group consisting of titanium, tin, boron, bismuth and arsenic anionically bound to the functional groups of the aromatic radical to form a complex anion and

(c) a bivalent metal selected from the group consisting of magnesium, calcium, strontium, barium, zinc, cadmium, lead, manganese and cobalt cationically bound to the complex anion.

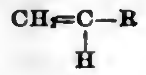
3,389,128
POLYMERIZATION PROCESSES AND CATALYTIC COMPOSITION OF MATTER

John W. Bayer, Perrysburg, and William C. Grinonneau, Toledo, Ohio, assignors to Owens-Illinois, Inc., a corporation of Ohio

No Drawing. Filed June 7, 1965, Ser. No. 462,037

20 Claims. (Cl. 260—93.1)

2. A process for the polymerization of a monomer selected from the group consisting of compounds represented by the formula



$$\mathrm{CH_2{=}C(H){-}R}$$

wherein

R is a member selected from the group consisting of vinyl, phenyl and vinyl phenyl,

and 1,3-cyclooctadiene

which comprises contacting such compositions with at least a catalytic amount of a catalytic composition comprising a compound represented by the formula

$$\mathrm{MX_n}$$

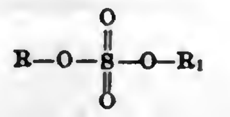
wherein

M is a metal selected from the group consisting of titanium and vanadium;

X is a halide, and;

n is an integer equal to the primary valence of M,

and a compound represented by the formula



$$\mathrm{R{-}O{-}S({=}O)_2{-}O{-}R_1}$$

wherein

R and R_1 independently are hydrocarbon radicals having from one to seven carbon atoms,

3,389,129
PROCESS FOR THE POLYMERIZATION 'OF OLEFINIC HYDROCARBONS IN THE PRESENCE OF ALUMINIUM ALKYL DIHALIDE OR SESQUIHALIDE, TITANIUM HALIDE AND A PHOSPHORUS OXYHALIDE

Noboru Yamada, Tadashi Watanabe, and Yoshiyuki Yamanaka, Iwakuni-shi, Yamaguchi-ken, Japan, assignors to Teijin Limited, Osaka, Japan, a corporation of Japan

No Drawing. Filed July 29, 1963, Ser. No. 298,475

Claims priority, application Japan, Aug. 3, 1962, 37/33,266; Jan. 11, 1963, 38/1,153

5 Claims. (Cl. 260—93.7)

1. Process for the polymerization of olefinic hydrocarbons which comprises polymerizing one or more α-monoolefinic hydrocarbons having 2–12 carbon atoms in the presence of a three-component combination catalyst composed of (1) an organic aluminium dihalide or an organic aluminium sesquihalide or their mixture, (2) one or more of titanium halides, and (3) one or more of oxy-phosphorus compounds represented by the following Formulae I and II below:

$$\mathrm{POX_3} \qquad \text{(I)}$$

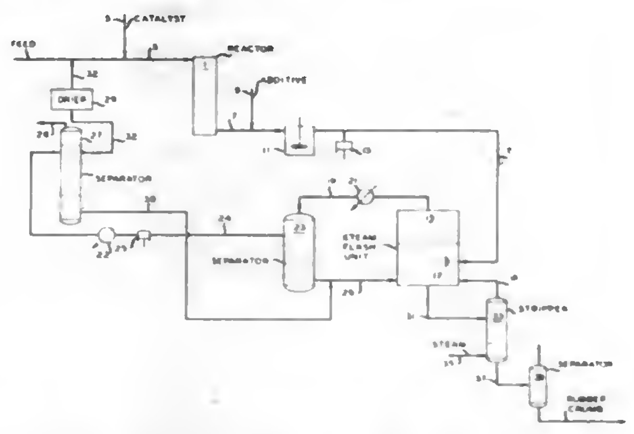
$$\mathrm{RPOX_2} \qquad \text{(II)}$$

wherein X stands for a halogen,

and R is a hydrocarbon group of 1–12 carbons.

3,389,130
BULK POLYMERIZATION OF BUTADIENE AND RECOVERY OF PRODUCT

Lyle W. Pollock, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Nov. 16, 1964, Ser. No. 411,465
8 Claims. (Cl. 260—94.3)



A process and apparatus for preparing polymers of conjugated dienes in which a conjugated diene is polymerized by contacting the said diene in the absence of a diluent with a suitable catalyst. Concentrated polymer solution is withdrawn from the reaction zone, subjected to rapidly pulsating pressure and sparged into a flash zone thereby breaking apart the concentrated polymer solution into discrete particles and flashing the unreacted diene from said polymer solution. The catalyst is inactivated by steam in the flash zone and polymer is recovered in the form of substantially uniform crumb.

3,389,131
METHOD OF MAKING ALKALI METAL CASEINATE COMPRISING DRY MIXING CASEIN AND AN ALKALI METAL COMPOUND AND DIRECTING A JET OF STEAM TO THE MIXTURE TO CAUSE REACTION

Ralph C. Van Horn, Bedford, Quebec, Canada, assignor to Champlain Industries (1962) Ltd., Quebec, Quebec, Canada
Continuation-in-part of application Ser. No. 333,969, Dec. 27, 1963. This application Feb. 21, 1967, Ser. No. 629,343
5 Claims. (Cl. 260—119)

Method of making alkali metal caseinate comprising dry mixing casein and an alkali metal compound capable of producing a high concentration of hydroxyl ions when subjected to a jet of steam.

3,389,132
METALLIFEROUS AZOMETHINE CONTAINING AZO DYESTUFFS CONTAINING AN 8-AMINOQUINOLINE GROUP

Hans Dressler, Pitcairn, and Henry W. Pons, Lock Haven, Pa., assignors to American Aniline Products, Inc., a corporation of Delaware
No Drawing. Filed June 22, 1964, Ser. No. 377,050
4 Claims. (Cl. 260—146)

Complex azo compounds which contain a metal, such as nickel, in complex combination with a metalliferous azomethine dye derived from 8-aminoquinoline and an azo dye containing an o-hydroxyaldehyde group are provided. The compounds can be metallized directly or metallization can be carried out by incorporating the metallizing agent in the fiber to be dyed and thereafter dyeing with the nonmetallized compound. The latter method is particularly desirable because of the availability of metallized polypropylene.

3,389,133
PROCESS FOR ISOLATING AND PURIFYING SOLUBLE RIBONUCLEIC ACID

Sidney Gutcho, Bronx, N.Y., assignor to Schwarz BioResearch, Inc., Orangeburg, N.Y., a corporation of New York
No Drawing. Filed Aug. 10, 1966, Ser. No. 571,389
10 Claims. (Cl. 260—211.5)

A process for obtaining a purified soluble ribonucleic acid wherein an aqueous solution of crude soluble ribonucleic acid is contacted with a highly polar solvent, either dimethyl sulfoxide, dimethylformamide or dimethylacetamide, and a soluble chloride, such as sodium chloride, the polar solvent being present in an amount between about 33% and 45%, by volume, of the mixture. As a result of the contact, impurities are precipitated from the solution and the clear phase is then treated with an alcohol to precipitate the soluble ribonucleic acid therefrom. The crude soluble ribonucleic acid may be isolated from *E. coli* by disrupting the cells with a mixture of phenol and water, preferably at least 405 milliliters of phenol and at least 935 milliliters of water whereby two phases are separated without high speed centrifugation.

3,389,134
PREPARATION OF ω-LAURINOLACTAM

Johan W. Garritsen, Geleen, and Johan A. Bigot, Beek, Limburg, Netherlands, assignors to Stamicarbon N.V., Heerlen, Netherlands
No Drawing. Filed Nov. 1, 1965, Ser. No. 505,970
Claims priority, application Netherlands, Nov. 3, 1964, 6,412,746
5 Claims. (Cl. 260—239.3)

A process for preparing ω-laurinolactam by reacting the hydrochloride of cyclododecanone oxime with hydrogen chloride in the presence of a polar organic solvent and then separating the ω-laurinolactam free base from the reaction mixture.

3,389,135
PROCESS FOR PREPARATION OF ESTRA-4,9-DIENE-3,17-DIONE AND INTERMEDIATES IN SAID PROCESS

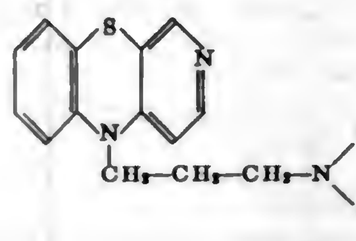
Lewis H. Sarett, Princeton, and Thomas S. Bry, Linden, N.J., John Fried, Palo Alto, Calif., Arthur E. Oberster, North Canton, Ohio, and Roger E. Beyler, Carbondale, Ill., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey
No Drawing. Filed Aug. 13, 1965, Ser. No. 497,577
13 Claims. (Cl. 260—239.55)

The invention disclosed herein is concerned generally with novel steroid compounds and processes of preparing them. More particularly, it relates to the process for preparing estra-4,9-diene-3,17-dione by reacting 3-hydroxy-estra-1,3,5(10),9(11)-tetraene-17-one with a 2,2-dialkyl-dioxolane followed by an alkyl or aralkyl iodide thereby forming the corresponding 3-(alkoxy or aralkoxy)-17-ethylenedioxy-estra-1,3,5(10),9(11) - tetraene, converting the latter compound to the 9,11-epoxide by reaction with a peracid, reacting said 9,11-epoxide with an alkali metal in liquid ammonia to produce the corresponding 3-(alkoxy or aralkoxy)-11-hydroxy-17-ethylenedioxy-estra-2,5(10)-diene, reacting the last-named compound with phosphorus oxychloride thereby forming 3-(alkoxy or aralkoxy) - 17 - ethylenedioxy-estra-2,5(10),9(11)-triene, which upon reaction with an aqueous alcoholic solution of a mineral acid, is converted to estra-4,9-diene-3,17-dione. This compound is then converted by reaction with sodium acetylide to 17α-ethynyl-17β-hydroxy-estra-4,9-diene-3-one which was valuable progestational activity.

3,389,136
10-(3-DIMETHYLAMINOPROPYL)-3-AZAPHENOTHIAZINE AND DERIVATIVES THEREOF

Frank H. Clarke, Jr., Armonk, N.Y., assignor to Schering Corporation, Bloomfield, N.J., a corporation of New Jersey
No Drawing. Continuation of application Ser. No. 436,668, Mar. 2, 1965, which is a continuation-in-part of application Ser. No. 160,933, Dec. 20, 1961, now Patent No. 3,196,076, dated July 20, 1965, which is a continuation-in-part of application Ser. No. 847,056, Oct. 19, 1959, now Patent No. 3,118,884, dated Jan. 21, 1964. This application Apr. 8, 1966, Ser. No. 548,343
3 Claims. (Cl. 260—243)

1. A compound selected from the group consisting 10-(3 - dimethylaminopropyl) -3-azaphenothiazine having the structural formula:

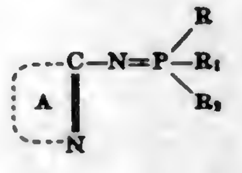


and a non-toxic acid addition salt thereof.

3,389,137
HETEROCYCLIC PHOSPHINE IMIDE COMPOUNDS AND PREPARATION

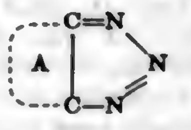
William Lindsay Mosby, North Plainfield, and Mary-Louise Vega, Somerville, N.J., assignors to American Cyanamid Company, Stamford, Conn., a corporation of Maine
No Drawing. Filed Aug. 3, 1965, Ser. No. 477,001
6 Claims. (Cl. 260—256.4)

1. A compound of the formula:

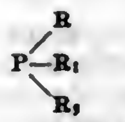


wherein A taken with C═N represents a heterocyclic moiety selected from the group consisting of pyridazinyl, pyrimidinyl, benzothiazolyl, benzoselenazolyl, benzimidazolyl naphthyridinyl, phthalizinyl, purinyl cyclopentapyrimidinyl, quinazolinyl, naphthiazolyl, phenanthridinyl, and quinoxalinyl and R, R_1, and R_2 are selected from the group consisting of lower alkyl, phenyl, a-naphthyl, and benzyl.

5. A process for the preparation of a compound of claim 1 which comprises reacting a tetrazole of the formula:



with a phosphine of the formula:

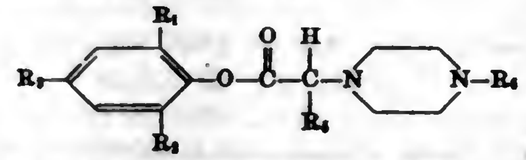


wherein A, R, R_1, and R_2 are as defined in claim 1, said reaction being conducted in an inert solvent at a temperature between 25° C. and the reflux temperature of the solvent.

3,389,138
PHENYL-ALPHA-PIPERAZINO-ALKANOATES

Angelo Larizza and Giovanni Brancaccio, Naples, Italy, assignors to Richardson-Merrell S.p.A., Naples, Italy, a corporation of Italy
No Drawing. Filed Apr. 13, 1965, Ser. No. 447,909
Claims priority, application Great Britain, May 21, 1964, 21,073/64
12 Claims. (Cl. 260—268)

Novel compounds of the formula

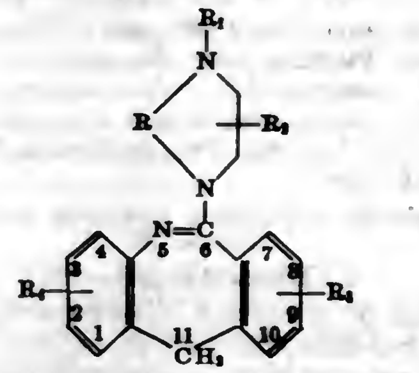


wherein: R_2 is hydrogen or (lower) alkyl; R_1 and R_3 are (lower) alkyl, lower alkoxy or halogen; R_5 is hydrogen, (lower) alkyl, phenyl or alkylphenyl; and R_6 is (lower) alkyl, (lower) hydroxyalkyl or benzyl; and non-toxic acid addition salts thereof. These compounds have utility as local anesthetics. The compounds are prepared by reacting an alpha-halo-alkanoyl chloride with a phenol and reacting the resulting alpha-halo-ester with a piperazine.

3,389,139
6-HOMOPIPERAZINO AND PIPERAZINO-MORPHANTHRIDINES

Jean Schmutz, Muri, near Berne, and Fritz Hunziker and Franz Martin Kunzle, Berne, Switzerland, assignors to Dr. A. Wander, S.A., Berne, Switzerland, a corporation of Switzerland
No Drawing. Continuation-in-part of application Ser. No. 374,158, June 10, 1964. This application June 2, 1966, Ser. No. 554,670
5 Claims. (Cl. 260—268)

(A) 6-basic substituted morphanthridines having the following structural formula:



wherein R denotes a member of the group consisting of ethylene, trimethylene, and methylethylene, R_1 is a member of the class consisting of hydrogen, lower alkyl, lower hydroxyalkyl, acetoxy lower alkyl, and alkoxyalkyl having not more than 5 carbon atoms, R_2 denotes a member of the class consisting of hydrogen and methyl, and R_3 and R_4 are the same or different and denote members of the class consisting of hydrogen, halogen, and lower alkyl; and (B) physiologically acceptable acid addition salts of (A).

The disclosed compounds exhibit marked motility depressing action and are useful as neuroplegics, neuroleptics and analgesics. In addition the 6-piperazinyl substituted compounds exhibit strong cataleptic acid and are therefore suitable for the treatment of psychotic conditions.

3,389,140
1-β-ARYLAMINOETHYL-2-METHYL-6,7-DIMETHOXY-1,2,3,4-TETRAHYDROISOQUINOLINES

Thomas A. Montzka, Manlius, N.Y., assignor to Bristol-Myers Company, New York, N.Y., a corporation of Delaware
No Drawing. Filed May 16, 1966, Ser. No. 550,122
21 Claims. (Cl. 260—286)

1-β-arylaminoethyl - 2 - methyl-6,7-dimethoxy-1,2,3,4-tetrahydroisoquinolines, wherein aryl is substituted or unsubstituted phenyl, pyrrolyl, pyridyl, thiazolyl or thienyl are useful as analgesic agents.

3,389,141

1-β-ARYLOXYETHYLTETRAHYDRO-ISOQUINOLINES

Thomas A. Montzka, Manlius, N.Y., assignor to Bristol-Myers Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed May 16, 1966, Ser. No. 550,151

12 Claims. (Cl. 260—286)

1-β-aryloxyethyl-2-methyl-6,7-dimethoxy - 1,2,3,4-tetrahydroisoquinolines, wherein aryl is substituted or unsubstituted phenyl, pyrrolyl, pyridyl, thiazolyl or thienyl are useful as analgesic agents.

3,389,142

ESTERS OF 2-SUBSTITUTED 1,2-DIHYDRO-QUINOLINE - N - CARBOXYLIC ACIDS AND THIONE ACIDS

Norman L. Weinberg, Cote St. Luc, Quebec, Canada, assignor, by mesne assignments, to Bristol-Myers Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Sept. 29, 1966, Ser. No. 583,076

13 Claims. (Cl. 260—287)

Esters of 2-substituted 1,2-dihydroquinoline-N-carboxylic acids and thione acids exhibit analgesic and tranquilizing activity and are useful as analgesic agents and tranquilizing agents in mammals.

3,389,143

PURIFICATION OF 1,10-PHENANTHROLINES

Bert Halpern, Sunnyvale, Calif., and William G. C. Raper, Moorabbin, Victoria, Australia, assignors to Monsanto Chemical (Australia) Limited, a company of Australia

No Drawing. Continuation-in-part of application Ser. No. 310,934, Sept. 23, 1963. This application Dec. 13, 1966, Ser. No. 601,338

Claims priority, application Australia, Sept. 27, 1962, 22,636/62

5 Claims. (Cl. 260—288)

Purification of substituted 1,10-phenanthrolines by reacting the phenanthroline with an organic acid having a dissociation constant in the approximate range of 1×10^{-4} to 1×10^{-6}, at 25° C.; partially neutralizing this solution by addition of a base until a slight permanent precipitation appears in the solution; separating the precipitation from the solution; adding a base to the filtrate until an alkaline pH is obtained; and separating the purified phenanthroline from the solvent.

Substituted 1,10-phenanthrolines are utilized as analytical reagents for the determination of metals and as oxidation-reduction indicators.

3,389,144

5-PYRIDYL-2,3,4,5-TETRAHYDRO-BENZOTHIEPIN-5-OLS

Richard J. Mohrbacher, Fort Washington, and Vasken Paragamian, Dresher, Pa., assignors to McNeil Laboratories, Incorporated, a corporation of Pennsylvania

No Drawing. Continuation-in-part of application Ser. No. 462,408, June 8, 1965. This application May 2, 1967, Ser. No. 635,401

4 Claims. (Cl. 260—294.8)

5-pyridyl-2,3,4,5-tetrahydrobenzothiepin-5-ols useful as hypotensive agents. The compounds are prepared by reacting a 3,4-dihydro-1-benzothiepin-5(2H)-one with pyridyl lithium or pyridyl magnesium halides.

3,389,145

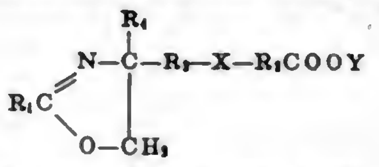
FATTY OXAZOLINE SURFACTANTS AND A PROCESS FOR THEIR PREPARATION

Jacob Katz, 1224 Mendon Road,
Providence, R.I. 02904

No Drawing. Filed Oct. 24, 1965, Ser. No. 504,991

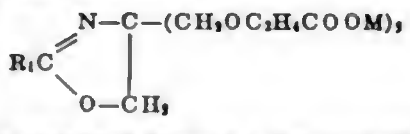
9 Claims. (Cl. 260—307)

1. A fatty oxazoline surfactant having the formula



in which R_1 is selected from the group consisting of alkyl and alkenyl having 11 to 18 carbon atoms and R_2, R_3 and R_4 are alkyl groups having 1 to 6 carbon atoms and X is a linkage consisting of an oxygen atom and Y is selected from the group consisting of hydrogen, alkali metal and a group of amines consisting of di-butyl amine, tripropylamine, monoethanolamine and morpholine.

5. A surfactant consisting of



in which R_1 is selected from a group consisting of alkyl and alkenyl having 11 to 18 carbon atoms, and M is selected from the group consisting of hydrogen, alkali metal and a low molecular weight amine selected from the group consisting of di-butyl amine, tripropylamine, monoethanolamine and morpholine.

9. The process of making a surfactant in which a fatty acid having 7 to 21 carbon atoms is reacted with an amino compound selected from the group consisting of 2-amino-2-methyl-1-propanol, 2-amino-2-methyl-1.3-propanediol, 2-amino-2-ethyl-1.3-propanediol, tris(hydroxymethyl aminomethane and 2-amino-1-butanol and in which 1 mol of said amino compound is combined with 1 to 2 mols of the fatty acid, first by heating under a low vacuum of 15 to 20 inches for about 1½ to 3 hours at 350° F. and then continuing at 450° F. under a high vacuum of 25 to 29 inches for 5 to 8 hours, and then adding drop by drop to the reaction mixture 1 mol of an acrylic compound selected from the group consisting of methyl acrylate, ethyl acrylate and acrylonitrile at a temperature of 100 to 150° F., said dropwise addition continuing for about 1 hour, then following by heating for about 1½ to 3 hours at 180° to 230° F. and increasing the vacuum to 15 to 18 inches and then treating the reaction mixture with caustic alkali.

3,389,146

3-BENZYL HYDANTOINS

Kiyoshi Kitasaki, Garden Grove, and Robert F. Crawford, La Mirada, Calif., assignors to United States Borax & Chemical Corporation, Los Angeles, Calif., a corporation of Nevada

No Drawing. Filed Dec. 16, 1964, Ser. No. 418,866

9 Claims. (Cl. 260—309.5)

3-benzylhydantoins having a lower alkyl substituent at the 5-position of the hydantoin ring. The benzyl group can be chlorinated or it can have a lower alkyl radical on the α-carbon atom. The compounds are useful as herbicides.

3,389,147

NOVEL 2-IMINO-1,3-DITHIOLES

Roger Williams Addor, Pennington, N.J., assignor to American Cyanamid Company, Stamford, Conn., a corporation of Maine

No Drawing. Filed Apr. 21, 1966, Ser. No. 544,122

5 Claims. (Cl. 260—327)

2-imino-1,3-dithiole and the hydrohalide salt thereof are provided as useful intermediates in the preparation of insecticides, acaricides and nematocides by phosphorylating said 2-imino-1,3-dithiole or its hydrohalide salt.

3,389,148

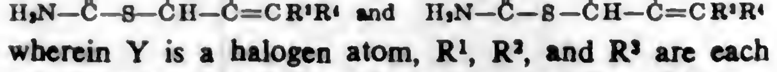
PROCESSES FOR THE PREPARATION OF RING-SUBSTITUTED 2 - IMINO - 1,3 - DITHIOHETERO-CYCLE COMPOUNDS

Thomas Andrew Lies, Montgomery Township, Somerset County, N.J., assignor to American Cyanamid Company, Stamford, Conn., a corporation of Maine

No Drawing. Filed Aug. 31, 1966, Ser. No. 576,242

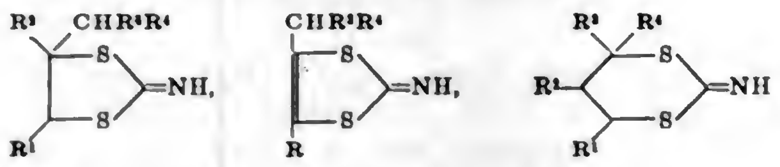
9 Claims. (Cl. 260—327)

1. A method of effecting the cyclization of an allyl dithiocarbamate to obtain ring-substituted dithioheterocyclic derivatives which comprises: contacting (a) an allyl dithiocarbamate selected from the group consisting of compounds represented by the formulas:



$$H_2N-\overset{S}{\overset{\|}{C}}-S-\overset{R^1}{\overset{|}{C}H}-\overset{R^2}{\overset{|}{C}}=CR^3R^4 \quad \text{and} \quad H_2N-\overset{S}{\overset{\|}{C}}-S-\overset{R^1}{\overset{|}{C}H}-\overset{Y}{\overset{|}{C}}=CR^3R^4$$

wherein Y is a halogen atom, R^1, R^2, and R^3 are each substituents selected from the group consisting of hydrogen, lower alkyl, cycloalkyl, and aralkyl, and R^4 is a substituent selected from the class consisting of hydrogen and aryl with (b) a non-oxidizing mineral acid selected from the group consisting of hydrochloric acid, hydrobromic acid and sulfuric acid, and recovering a ring-substituted product selected from the group consisting of:



and the corresponding non-oxidizing acid salt thereof wherein R^1, R^2, R^3 and R^4 are as defined above.

3,389,149

4-OXO-2,4,5,6,7,7a-HEXAHYDROHETEROCYCLIC COMPOUNDS AND PREPARATION THEREOF

Laverne A. Glick, Edison, Harold M. Foster, Middlesex, and Harold A. Kaufman, New Brunswick, N.J., assignors to Mobil Oil Corporation, a corporation of New York

No Drawing. Filed Dec. 20, 1965, Ser. No. 515,228

2 Claims. (Cl. 260—332.3)

4 - oxo-2,4,5,6,7,7a-hexahydrobenzothiophene and its oxygen and nitrogen analogues, and alkyl (C_1–C_8) and alkenyl (C_2–C_8) derivatives thereof are new compounds that are useful intermediates for producing 4-hydroxybenzothiophenes, benzofurans, and indoles. They can be produced by ring closure of a 3 - (2,2-dialkoxyethylmercapto)-cyclohexanone in the presence of a mineral acid catalyst.

3,389,150

4,17-DIOXA-A,D-BISHOMO-STEROIDAL LACTONE

Gerald W. Krakower, Elizabeth, N.J., assignor to E. R. Squibb & Sons, Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Mar. 21, 1966, Ser. No. 535,677

1 Claim. (Cl. 260—343.2)

This disclosure relates to the compound 16β-acetoxy-4aα,8,14-trimethyl-4,17-dioxa-A,D-bishomo - 18 - nor-5α, 8α,9β,13α,14β-androstane-3,11,17a-trione, prepared by treating methyl 16β-acetoxy-3,11-diketo-4α,8,14-trimethyl-18-nor-5α,8α,9β,13α,14β-cholesta-17(20), 24-dien-21-oate with ozone followed by reacting the mixture thus formed with a perocidic acid. This compound possesses anti-androgenic and estrogenic activity.

3,389,151

PREPARATION OF QUINIZARIN-2-SULFONIC ACID

Dominic A. Zanella, Lock Haven, Pa., assignor to American Aniline Products, Inc., a corporation of Delaware

No Drawing. Filed Mar. 7, 1966, Ser. No. 532,110

6 Claims. (Cl. 260—375)

Quinizarin-2-sulfonic acid, a valuable dyestuff intermediate, is made by admixing quinizarin with oleum having a concentration of 10–15 percent by weight SO_3 in the presence of an anhydrous water-soluble alkali or alkaline earth metal sulfate. The mixture is allowed to react at 100–135° C. and quinizarin-2-sulfonic acid is recovered therefrom by conventional methods.

3,389,152

ALKOXYALKOXY-BROMO-1,4,5,8-TETRA-HYDROXYANTHRAQUINONES

Ernest M. May, Summit, and Andrew Fono, Montclair, N.J., assignors to Otto B. May, Inc., Newark, N.J., a corporation of New Jersey

No Drawing. Filed Feb. 4, 1964, Ser. No. 342,547

11 Claims. (Cl. 260—383)

This specification is concerned with tetrahydroxyanthraquinone compounds having one bromo substituent and one alkoxyalkoxy or alkoxyalkoxyalkoxy substituent on the ring. These compounds are suitable for dyeing shaped articles, such as metal-modified polyolefin fibers.

3,389,153

3-ENOL ETHERS OF 17α-HALOETHYNYL-ESTRA 3,5(10),9(11)-TRIEN-17β-OLS

Lewis H. Sarett, Princeton and Thomas S. Bry, Linden, N.J., John Fried, Palo Alto, Calif., Arthur E. Oberster, North Canton, Ohio, and Roger E. Beyler, Carbondale, Ill., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Filed Aug. 13, 1965, Ser. No. 497,579

19 Claims. (Cl. 260—397.5)

17α-haloethynyl-estra-4,9(10)-diene-3-one-17β-ols are prepared by reacting a 3-derivatized estra-4,9(10)-diene-3,17-dione or estra-3,5(10),9(11)-trien - 17 - one with a haloethynylmagnesiumhalide.

3,389,154

17α-ACETOXY-6-METHYLPREGNA-4,6-DIENE-3,11, 20-TRIONE AND INTERMEDIATES FOR PRODUCING SAME

Derek Burn and Vladimir Petrow, London, England, assignors to The British Drug Houses Limited

No Drawing. Filed June 28, 1966, Ser. No. 561,008

Claims priority, application Great Britain, July 1, 1965, 27,862/65

3 Claims. (Cl. 260—397.45)

This invention is for improvements in or relating to organic compounds and has particular reference to 17α-acetoxy-6-methylpregna - 4,6 - diene-3,11,20-trione. This compound has utility in the therapeutic field for such functions as ovulation inhibition. It is produced from 17α-hydroxypregn-4-ene-3,11-20-trione by the Vilsmeier technique, the novel intermdeiates 17α-acetoxy-6-formyl-3-methoxypregna-3,5-diene-11,20-dione and 17α-acetoxy-6-methylenepregna-4-ene-3,11,20-trione being produced en route to the end product.

3,389,155

POLYHYDROXYANDROST-7-ENES AND PROCESSES FOR THEIR PREPARATION

John H. Fried, Palo Alto, Calif., assignor to Syntex Corporation, Panama, Panama, a corporation of Panama

No Drawing. Filed July 22, 1966, Ser. No. 567,045

13 Claims. (Cl. 260—397.45)

5(α and β)androst-7-ene derivatives, substituted at C-2β and C-3β with hydroxy or with an acetal or ketal group bridging the C-2β,3β position, substituted at C-6 with keto or with hydroxy either in the α or β position, substituted at C-17 with keto or with hydroxy or the esters thereof in the β position and optionally with alkyl, alkenyl or alkynyl in the α position, and optionally substituted at C-14α with hydroxy, are anabolic agents and are also antagonistic agents to the actions of certain natural hormones, e.g. ecdysone.

3,389,156

PROCESS FOR ISOMERIZING UNSATURATED FATTY ACIDS OR DERIVATIVES THEREOF

Victor Lewis Larimer, Bloomington, Minn., assignor to Ashland Oil and Refining Company, a corporation of Kentucky

No Drawing. Filed Mar. 22, 1965, Ser. No. 441,869

6 Claims. (Cl. 260—405.6)

Unsaturated fatty acids having 12–26 carbon atoms, such as oleic acid, are isomerized by contacting the same at 500–700° F. with a catalyst obtained by depositing phosphoric acid on a micro-porous glass, e.g. pumice.

3,389,157

GROUP IV–A ORGANOMETALLIC COMPLEXES OF PREDOMINANTLY TETRANUCLEAR AROMATIC CATALYTIC CYCLE OIL STOCK EXTRACTS

Hugh E. Ramsden, Scotch Plains, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 207,427, July 3, 1962. This application Oct. 4, 1965, Ser. No. 492,913

5 Claims. (Cl. 260—429)

Novel compositions comprising Group IV–A organometallic complexes of predominantly tetranuclear aromatic catalytic cycle oil stock extracts, the compounds being useful as fungicides and as agricultural chemicals generally.

3,389,158

PROCESS OF PREPARING TRIMETHYLTIN HALIDES

Bernard G. Kushlefsky, Edison, N.J., assignor to M & T Chemicals Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Aug. 5, 1963, Ser. No. 300,106

11 Claims. (Cl. 260—429.7)

Trimethyltin halide may be prepared by the reaction of one equivalent of tin tetrahalide, e.g., tin tetrachloride, with three equivalents of tetramethyltin, the reaction mixture being maintained at temperature above the melting point of tetramethyltin and below 100° C. to give high yield of product.

3,389,159

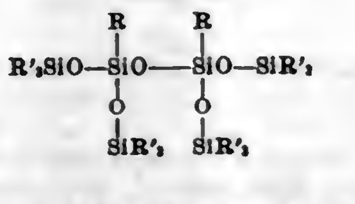
ORGANOPOLYSILOXANES

John M. Nielsen, Burnt Hills, N.Y., assignor to General Electric Company, a corporation of New York

No Drawing. Filed Dec. 21, 1964, Ser. No. 420,178

6 Claims. (Cl. 260—448.2)

Organopolysiloxane fluids which have a viscosity of no more than 25,000 centistokes at 25° C. have the structure:



$$R'_3SiO-\underset{\underset{SiR'_3}{O}}{\overset{R}{Si}}O-\underset{\underset{SiR'_3}{O}}{\overset{R}{Si}}O-SiR'_3$$

where R is a phenyl radical and each R′ is independently selected from the class consisting of methyl radicals and phenyl radicals, at least one of said R′ radicals being a phenyl radical. These fluids are useful as heat transfer fluids and hydraulic fluids under a wide temperature range.

3,389,160

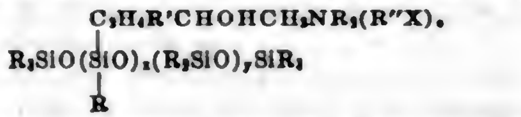
DIALKYLAMINO HYDROXY ORGANOSILICON COMPOUNDS AND DERIVATIVES THEREOF

Wallace G. Reid, Grand Island, N.Y., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Continuation-in-part of application Ser. No. 382,666, July 14, 1964. This application July 8, 1966, Ser. No. 563,694

13 Claims. (Cl. 260—448.2)

Organosilicon compounds having the generic formula:



$$R_3SiO(\underset{R}{\overset{C_3H_6R'CHOHCH_2NR_2(R''X)_a}{Si}}O)_x(R_2SiO)_ySiR_3$$

wherein R is a monovalent hydrocarbon group having up to about 18 carbon atoms; R′ is a divalent hydrocarbon radical having up to 18 carbon atoms or a divalent hydrocarbonoxy radical having up to 18 carbon atoms wherein the oxygen in said hydrocarbonoxy radical is present in the form of ether linkages; X is an acid anion; R″ is either hydrogen or a group represented by R as hereinbefore defined; *a* is 0 or 1; *x* has an average value of from 1 to about 100; *y* has an average value of from 0 to about 1000; and the ratio of *y* to *x* is no greater than about 50 to 1.

3,389,161

PROCESS FOR DISPLACING ALKYL RESIDUES FROM TRIALKYL ALUMINUM COMPOUNDS

Gerald W. Kottong, St. Paul, Minn., and Oran A. Ritter, Baton Rouge, La., assignors to Ethyl Corporation, New York, N.Y., a corporation of Virginia

Continuation-in-part of application Ser. No. 117,358, June 15, 1961. This application Jan. 19, 1966, Ser. No. 521,625

23 Claims. (Cl. 260—448)

1. An improved process for displacing organic residues contained on aluminum comprising:

feeding alkyl aluminum material through a reaction zone in the liquid phase,

feeding a displacing material through the reaction zone in the vapor phase in countercurrent flow relative to the flow of alkyl aluminum material,

maintaining conditions in the reaction zone which are favorable to the interaction of said alkyl aluminum material and said displacing material whereby the alkyl residues of the aluminum material are changed,

and recovering alkyl aluminum material whose alkyl residues were changed in the displacing reaction.

3,389,162

6-BROMO-4-THIOCYANO-o-CRESOL

Martin B. Neuworth and Robert J. Laufer, Pittsburgh, Pa., assignors, by mesne assignments, to Consolidation Coal Company, a corporation of Delaware

No Drawing. Filed Oct. 18, 1965, Ser. No. 497,552

1 Claim. (Cl. 260—454)

1. 6-bromo-4-thiocyano-o-cresol.

3,389,163

2-BROMO-4-THIOCYANO-6-ISOPROPYLPHENOL

Martin B. Neuworth and Robert J. Laufer, Pittsburgh, Pa., assignors, by mesne assignments, to Consolidation Coal Company, a corporation of Delaware

No Drawing. Filed Oct. 18, 1965, Ser. No. 497,551

1 Claim. (Cl. 260—454)

1. 2-bromo-4-thiocyano-6-isopropylphenol.

3,389,164

PROCESS FOR THE PREPARATION OF ARYL ESTERS OF CARBOCYCLIC CARBOXYLIC ACIDS

Gustav Renckhoff, Witten (Ruhr), and Hans-Leo Hülsmann, Rudinghausen, Germany, assignors to Chemische Werke Witten G.m.b.H., Witten (Ruhr), Germany

No Drawing. Filed July 31, 1964, Ser. No. 386,760

Claims priority, application Germany, Aug. 3, 1963, C 30,616

The portion of the term of the patent subsequent to Dec. 5, 1984, has been disclaimed

19 Claims. (Cl. 260—468)

Process for the preparation of aryl esters of carbocyclic mono- and polycarboxylic acids, or of mixed alkyl aryl esters of carbocyclic polycarboxylic acids, which comprises heating a primary or secondary C_2–C_8 alkanol ester of a carbocyclic monocarboxylic acid or a carbocyclic polycarboxylic acid with a phenolic compound in the presence of an effective ester radical interchange catalyst to temperatures above 160° C., while continuously removing the alkanol formed during the reaction from the reaction mixture. Yields of over 90% are obtained.

3,389,165

PROCESS OF PRODUCING β-ARYLAMINO CINNAMOYL COMPOUNDS

Kenneth Wayne Ratts, Creve Coeur, Mo., assignor to Monsanto Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed June 28, 1965, Ser. No. 467,722

11 Claims. (Cl. 260—471)

This invention relates to alkyl β-arylamino cinnamates and N-aliphatic or N,N-dialiphatic β-arylamino cinnamides, which compounds are useful as insecticides and fungicides.

3,389,166

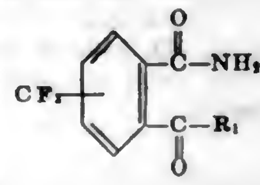
TRIFLUOROMETHYLPHTHALIC ACID AMIDES

Bernard Loev, Broomall, Pa., assignor to Smith Kline & French Laboratories, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Original application Aug. 27, 1963, Ser. No. 304,951, now Patent No. 3,246,009, dated Apr. 12, 1966. Divided and this application July 26, 1965, Ser. No. 474,992

4 Claims. (Cl. 260—471)

1. A compound of the formula:



in which:

R_1 is a member selected from the group consisting of amino, hydroxy and lower alkoxy and

CF_3 is in a position β to a carbonyl group.

3,389,167

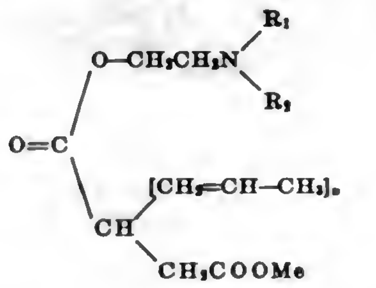
2-(DIALKYLAMINO)ETHYL POLYPROPENYLSUCCINATES

Malcolm Macfarland Donaldson, Bedford Village, N.Y., assignor to American Cyanamid Company, Stamford, Conn., a corporation of Maine

No Drawing. Filed Mar. 12, 1964, Ser. No. 351,536

4 Claims. (Cl. 260—485)

The present invention relates to novel polymeric succinates and to their method of preparation. More specifically, it relates to both a 2-(dialkylamino)ethyl propenylsuccinic tripropenamer and a 2-(dialkylamino)ethyl tetrapropenylsuccinate, each of which can be represented by the formula:



wherein R_1 and R_2 each represents either hydrogen or lower alkyl from 1 to 4 carbon atoms, *n* is an integer from 3 to 4 and Me represents either hydrogen, ammonium or an alkali metal such as sodium, potassium or lithium.

3,389,168

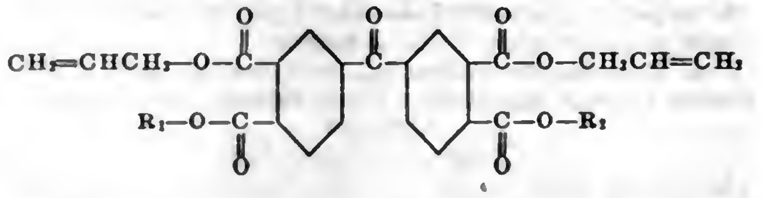
ALLYL BENZOPHENONETETRACARBOXYLATES

John William Hirzy, St. Louis, Mo., assignor to Monsanto Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Aug. 23, 1965, Ser. No. 481,966

10 Claims. (Cl. 260—485)

1. A compound of the formula



wherein R_1 and R_2 are like radicals selected from the group consisting of allyl, alkyl having from 1 to 18 carbon atoms and cycloalkyl having from 6 to 18 carbon atoms.

3,389,169

Δ³-A-NORANDROSTENE-2β,17β-DIOLS AND ESTER DERIVATIVES

Seymour D. Levine, Princeton, N.J., and Patrick A. Diassi, Westfield, N.J., assignors, by mesne assignments, to E. R. Squibb & Sons, Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed July 26, 1965, Ser. No. 474,983

6 Claims. (Cl. 260—488)

This disclosure relates to Δ³-A-norandrostene-2β,17β-diol, derivatives and intermediates thereof. The compounds of this invention are useful as intermediates and can be utilized as anabolic in lieu of such steroids as 17α-ethyl-19-nortestosterone.

3,389,170

3-ACYLAMINO-2,4,6-TRIIODO-BENZOIC ACIDS

Ernst Habicht and Georg Feth, Schaffhausen, Switzerland, assignors to Cilag-Chemie Limited, a corporation of Switzerland

No Drawing. Filed Apr. 23, 1965, Ser. No. 450,512

11 Claims. (Cl. 260—501.11)

The compounds are of the class of 2,4,6-triiodo-benzoic acids and salts thereof having an alkyloxy-alkanoyl-amino or polyalkyloxy-alkanoyl-amino substituent in the 3-position, which compounds are useful as X-ray contrast agents.

3,389,171

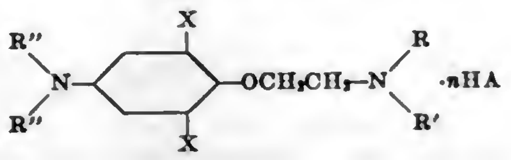
(ALKYLAMINOETHOXY)-DIHALOANILINES AND METHOD OF PREPARATION THEREOF

Halbert C. White and Don V. Wysong, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Feb. 17, 1965, Ser. No. 433,465

11 Claims. (Cl. 260—501.17)

Compounds of the formula



wherein X is halogen selected from the group consisting of chlorine, bromine and iodine, R represents lower alkyl containing 1 to 4 carbon atoms, R′ is selected from the group consisting of hydrogen and alkyls containing 1 to 4 carbon atoms and R and R′ taken together represent $(CH_2)_5$, R″ is selected from the group consisting of hydrogen and methyl, *n* is selected from 0, 1 and 2 and HA represents a chemical equivalent of a pharmaceutically-acceptable acid, have been found useful as analgesic agents, mild central nervous system depressants and tranquilizers.

3,389,172

SULFONIC ACIDS OF N,N-BIS(PHENYLALKYL) DIAMINES

Harold George Burrows, Frederick Keith Duxbury, and Philip Brierley Ingham, Manchester, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Filed Jan. 30, 1967, Ser. No. 612,311

Claims priority, application Great Britain, Feb. 10, 1966, 5,898/66

2 Claims. (Cl. 260—510)

Sulphonic acids of N,N - bis(phenylalkyl)alkylenediamines, and metal salts thereof, and the incorporation of such compounds into polyamides for improving the affinity of polyamides for basic dyestuffs.

3,389,173

PROCESS FOR PREPARING FUMARIC ACID OF GOOD COLOR FROM MALEIC ACID

Joseph L. Russell, Ridgewood, N.J., and Harry Olenberg, Bronx, N.Y., assignors to Halcon International, Inc., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 300,655, Aug. 7, 1963. This application Mar. 31, 1966, Ser. No. 538,940

10 Claims. (Cl. 260—537)

Fumaric acid is prepared by isomerizing a 10–70 weight percent maleic acid solution with a catalyst system containing a bromine-providing compound, an oxidizing agent, and a strong mineral acid.

3,389,174

STABLE TETRACYCLINE SOLUTIONS

Robert Arnold Nash, Spring Valley, and Bruce Edwin Haeger, Pomona, N.Y., assignors to American Cyanamid Company, Stamford, Conn., a corporation of Maine

No Drawing. Original application Oct. 4, 1962, Ser. No. 228,261, now Patent No. 3,219,529, dated Nov. 3, 1965. Divided and this application May 10, 1965, Ser. No. 454,720

6 Claims. (Cl. 260—559)

Stable solutions of neutral tetracycline antibiotics in substantially completely esterified lower alkyl esters of lower aliphatic polyhydroxy alcohols and lower aliphatic acids. Triacetin is the preferred glycerol ester and has been found useful in the preparation of stable solutions of tetracycline antibiotics useful for topical or other therapeutic uses.

3,389,175

STABLE TETRACYCLINE SOLUTIONS

Robert Arnold Nash, Spring Valley, and Bruce Edwin Haeger, Pomona, N.Y., assignors to American Cyanamid Company, Stamford, Conn., a corporation of Maine

No Drawing. Original application Oct. 4, 1962, Ser. No. 228,261, now Patent No. 3,219,529, dated Nov. 23, 1965. Divided and this application May 10, 1965, Ser. No. 454,671

8 Claims. (Cl. 260—559)

Stable solutions of neutral tetracycline antibiotics in amides of higher molecular weight aliphatic fatty acids disubstituted by lower alkyl groups, the fatty acids having from 8 to 14 carbon atoms. Ordinary substituted commercial lauramides such as dimethyl lauramide give good results in making stable solutions useful for topical or other therapeutic uses.

3,389,176

2-AMINOPHENYL-CYCLOALKYL-KETOXIMES

Leo Berger, Montclair, and Leo Henryk Sternbach, Upper Montclair, N.J., assignors to Hoffmann-La Roche Inc., Nutley, N.J., a corporation of New Jersey

No Drawing. Original application Sept. 11, 1961, Ser. No. 137,047, now Patent No. 3,338,886, dated Aug. 29, 1967. Divided and this application Apr. 5, 1967, Ser. No. 628,528

2 Claims. (Cl. 260—566)

This invention relates to novel 2-amino-phenylcycloalkyl ketoximes and 2-chloromethyl-4-cycloalkyl quinazoline-3-oxide which are chemical intermediates in the preparation of novel benzodiazepine compounds selected from the grouping consisting of 5-cycloalkyl-3H-1,4-benzodiazepin-2(1H)-ones, pharmaceutically acceptable acid-addition salts thereof, 2-lower alkylamino-5-cycloalkyl-3H-1,4-benzodiazepines 4-oxides and pharmaceutically acceptable acid-addition salts thereof. Preferred are those benzodiazepine compounds of the above group wherein the 7-position is either unsubstituted or substituted by a halogen or nitro group. The novel benzodiazepine compounds are useful as tranquilizers, and anticonvulsant agents.

3,389,177

5 - (3′ - AMINOPROPYL) - 11,12 - DIHYDRO - DIBENZO[a,e]CYCLOOCTENES AND SALTS THEREOF

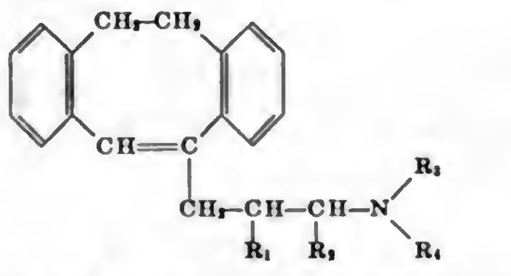
Kurt Adank, Muttenz, Basel-Land, and Daniel A. Prins, Oberwil, Basel-Land, Switzerland, assignors to Geigy Chemical Corporation, Greenburgh, N.Y., a corporation of Delaware

No Drawing. Filed Sept. 9, 1963, Ser. No. 307,290

Claims priority, application Switzerland, Sept. 14, 1962, 10,947/62

5 Claims. (Cl. 260—570.8)

1. A member selected from the group consisting of a compound of the formula



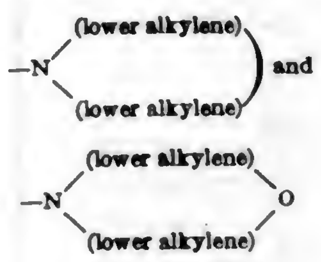
and a pharmaceutically acceptable salt thereof, in which formula:

each of R_1, R_2 and R_3 is a member selected from the group consisting of hydrogen and lower alkyl,

R_4 taken alone represents lower alkyl,

R_3 and R_4 taken together represent a lower alkylene radical with at least 3 and up to 4 carbon atoms as members of the resulting ring,

R_3 and R_4 taken together with the nitrogen atom to which they are linked form a member selected from the group consisting of



the total number of ring members in each of the last two radicals not exceeding seven.

3,389,178

AMINE OXIDE BLENDS

Robert R. Fields, Nitro, and Erich Tobler, Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Sept. 10, 1964, Ser. No. 395,550

2 Claims. (Cl. 260—583)

Blends of random-higher-alkyl di(lower-alkyl)amine oxides. These blends are useful in detergent formulations.

3,389,179

PREPARATION OF ALKYLAMINES BY THE AMMONOLYSIS OF ALKYL HALIDES

Rodney A. James, Helena, Mont., assignor to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed Aug. 2, 1965, Ser. No. 476,733

5 Claims. (Cl. 260—585)

An alkylamine is prepared by the ammonolysis of alkyl halide using an ether diluent to produce a hydrohalide salt of the alkylamine and then decomposing the salt.

3,389,180

17β-CYCLOALKENYLOXY-B-NORSTEROIDS

James F. Kerwin, Broomall, Pa., assignor to Smith Kline & French Laboratories, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Continuation-in-part of application Ser. No. 436,671, Mar. 2, 1965. This application Nov. 14, 1966, Ser. No. 593,701

9 Claims. (Cl. 260—586)

1-alkoxycyclopentyl and cyclohexyl ethers of B-nortestosterones, their 4 and 6-halo derivatives, and Δ^1 and Δ^6 derivatives, are prepared by reaction of the 17-alcohols with cyclopentanone or cyclohexanone ketals. These intermediates are then converted to the corresponding cycloalkenyl ethers of the B-nortestosterones, which have oral antiandrogenic activity.

3,389,181

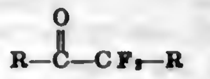
METHOD FOR THE PREPARATION OF DIFLUOROKETONES

Richard F. Merritt, Huntsville, Ala., assignor to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

No Drawing. Filed July 20, 1964, Ser. No. 383,906

5 Claims. (Cl. 260—590)

Ketones of the formula



$$R{-}\overset{\overset{\displaystyle O}{\|}}{C}{-}CF_2{-}R$$

are prepared by reacting oxygen difluoride (OF_2) with an acetylenic compound having the formula $R{-}C{=}CR$, wherein R represents C_{1-12} alkyl, phenyl or alkyl substituted phenyl in which the alkyl totals up to eight carbon atoms.

3,389,182

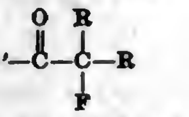
METHOD FOR THE PREPARATION OF FLUOROKETONES

Richard F. Merritt, Huntsville, Ala., assignor to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

No Drawing. Filed July 20, 1964, Ser. No. 383,991

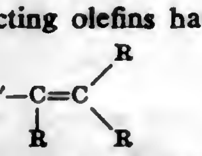
4 Claims. (Cl. 260—590)

Fluoroketones having the formula



$$R'{-}\overset{\overset{\displaystyle O}{\|}}{C}{-}\underset{\underset{\displaystyle F}{|}}{\overset{\overset{\displaystyle R}{|}}{C}}{-}R$$

are prepared by the reacting olefins having the formula



$$R'{-}\underset{\underset{\displaystyle R}{|}}{C}{=}C\begin{matrix}R\\R\end{matrix}$$

with OF_2 in a temperature range of about —80° C. to 0° C. and at subatmospheric pressures of no more than 700 mm. R′ represents alkyl group 1 to 8 carbon atoms and phenyl or alkyl substituted phenyl and R is alkyl of 1 to 8 carbon atoms, hydrogen and phenyl, wherein at least one said R groups is hydrogen or phenyl.

3,389,183

PROCESS FOR THE PREPARATION OF TERTIARY PHOSPHINES

Hugh R. Hays, Colerain Township, Hamilton County, Ohio, assignor to The Procter & Gamble Company, Cincinnati, Ohio, a corporation of Ohio

Filed June 7, 1965, Ser. No. 461,669

17 Claims. (Cl. 260—606.5)

Production of detergent intermediate tertiary phosphine by (1) controlled alkylation of long chain primary phosphine in the presence of an alcohol solvent, and (2) reaction of the trialiphatic phosphonium salt formed in the controlled alkylation step with a strong base. For example, dodecyldimethylphosphine is prepared by reacting dodecylphosphine with methyl chloride at 125° C. for 1.5 hours and then reacting with sodium hydroxide.

3,389,184

NOVEL PROCESS FOR THE PREPARATION OF 2,4-DINITRO-6-CHLOROMETHYL-PHENOL

Manfred Becher, Richard Sehring, and Karl Zeile, Ingelheim, Germany, assignors to C. H. Boehringer Sohn, Ingelheim am Rhein, Germany, a limited partnership of Germany

No Drawing. Filed Feb. 21, 1964, Ser. No. 346,389

Claims priority, application Germany, Mar. 4, 1963, B 70,986

3 Claims. (Cl. 260—622)

1. The method of preparing 2,4-dinitro-6-chloromethylphenol, which comprises nitrating 4-nitro-6-chloromethylphenol with 50% to fuming nitric acid at a temperature between —5 and 60° C., and recovering the reaction product.

2. The method of preparing 2,4-dinitro-6-chloromethylphenol, which comprises nitrating 4-nitro-6-chloromethylphenol with fuming nitric acid at a temperature of about —5° C. in the presence of urea, and recovering the reaction product.

3,389,185

PROCESS FOR THE PARTIAL CHLORINATION OF MONO- AND DIVALENT ALKYNOLS

Georg Bohm, Marl, Germany, assignor to Chemische Werke Huls Aktiengesellschaft, Marl, Germany, a corporation of Germany

No Drawing. Filed Apr. 23, 1964, Ser. No. 362,179

Claims priority, application Germany, Aug. 3, 1963, C 30,620

5 Claims. (Cl. 260—633)

1. Process for the production of a dichloroalkenol which comprises reacting an alkynol selected from the group consisting of propargyl alcohol, butyne-(2)-diol-

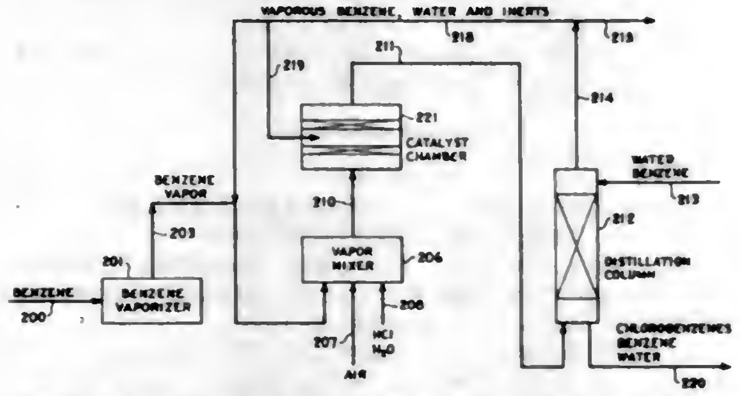
(1,4)-butyne-(2)-ol-(1), hexyne-(3)-diol-(2,5) and 2,7-dimethyloctyne-(4)-diol-(3,6) with less than 2 moles of gaseous chlorine per mole of said alkynol at a temperature below −10° C. at which the added chlorine is still noticeably reacted and in substantial absence of water and in the presence of dissolved hydrogen chloride.

3,389,186
BENZENE OXYCHLORINATION

Walter H. Prahl, Buffalo, N.Y., Jay P. Eggert, Bellefonte, Ashland, Ky., and Sol J. Lederman, Kenmore, Eric H. Scremin, Niagara Falls, and Albert C. Ullrich, Williamsville, Buffalo, N.Y., assignors to Hooker Chemical Corporation, Niagara Falls, N.Y., a corporation of New York

Continuation-in-part of application Ser. No. 133,803, Aug. 25, 1961. This application Nov. 26, 1965, Ser. No. 510,078

4 Claims. (Cl. 260—650)



1. In a continuous process for the production of monochlorobenzene, wherein vapors of benzene, hydrogen chloride and an oxygen-containing gas are passed through a catalytic reaction zone, the reacted mixture is withdrawn therefrom and introduced with substantially no cooling into the bottom portion of a distillation zone wherein benzene and water are being introduced into the top portion thereof, thereby utilizing the available heat content of the said reacted mixture to evaporate a corresponding quantity of a benzene-water mixture having approximately the composition of the benzene-water azeotrope, thereby forming and withdrawing a vaporous mixture comprising water, benzene and inerts at the top portion of the distillation zone, the improvement which comprises: recirculating from about five percent to about seventy-five percent of said vaporous mixture to the said catalytic reaction zone.

3,389,187
PERFLUOROISOBUTYLENE DIMER

Donald L. Miller, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Apr. 27, 1964, Ser. No. 362,956

4 Claims. (Cl. 260—653.1)

A process for preparing perfluoro-2,4,4-trimethyl-2-pentene, which comprises reacting perfluoroisobutylene in an inert solvent at a maximum temperature of about 0° C. in the presence of cesium fluoride or rubidium fluoride catalyst. By following the controlled reaction conditions using the disclosed reactants, perfluoro-2,4,4-trimethyl - 2 - pentene, substantially free from other dimers, trimers or polymers, is obtained in high yield.

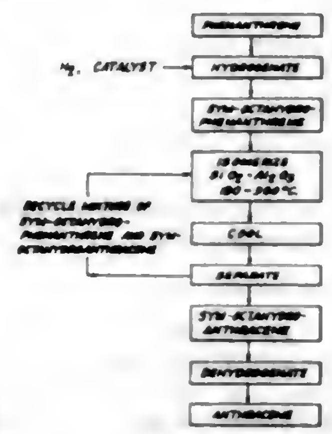
3,389,188
PROCESS FOR PREPARING ANTHRACENE FROM PHENANTHRENE

William A. Michalowicz, Verona, Pa., assignor to Koppers Company, Inc., a corporation of Delaware

Filed Apr. 22, 1966, Ser. No. 544,522

7 Claims. (Cl. 260—668)

Phenanthrene hydrogenated in diethylcyclohexane solvent with Ni catalyst at 195° C. yielded product 91% sym-octahydro-phenanthrene (OHP), 9% unsym. The OHP isomerized to sym-octahydroanthracene (OHA) over silica-13% alumina catalyst with negligible cracking and slight conversion to unsym-OHP when excessive contact time is avoided. Favorable isomerizing conditions are 200–250° C. with contact times short of conversion to the 56% OHA-44% OHP equilibrium. Effluent mixture is cooled to precipitate about 60% of the OHA and the mother liquor is recycled. Recrystallized OHA was aromatized with palladium catalyst to good yield of high quality anthracene.

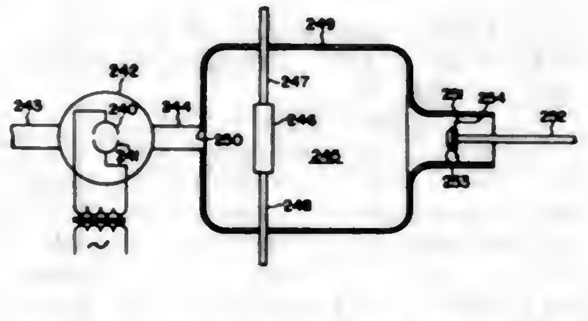


3,389,189
METHOD AND EQUIPMENT FOR THE PYROLYSIS AND SYNTHESIS OF HYDROCARBONS AND OTHER GASES AND ARC HEATER APPARATUS FOR USE THEREIN

Chikara Hirayama, Franklin Township, Murrysville, and George A. Kemeny, Franklin Township, Export, Pa., assignors to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania

Filed Apr. 6, 1965, Ser. No. 446,012

22 Claims. (Cl. 260—679)



An arc heater or arc heaters are used to pyrolize a process gas, and means is provided to thereafter quench the gas to a temperature at which a desired recombination product is present in substantial proportion. Additional means may be used to further quench the gas to prevent further undesired chemical reactions. In one embodiment, arc heater apparatus is arranged to supply an output of alternate relatively hot pyrolized masses of gas and relatively cold masses of gas, and the relatively cold masses of gas are used to quench the relatively hot masses. In another embodiment, two arc heaters are energized from one alternating current source; each arc heater has rectifier means in series therewith, the rectifier means being oppositely poled with the respect to each other, so that both arc heaters supply outputs of alternate relatively hot and relatively cold masses of gas, the relatively cold mass of one arc heater occurring simultaneously with the relatively hot mass of the other arc heater and being used to quench the relatively hot mass. In a further embodiment six arc heaters are employed, connected in pairs by oppositely poled rectifiers to the three phases of a three phase alternating current source and all delivering their outputs to a common mixing chamber.

3,389,190
CATALYST AND POLYMERISATION PROCESS USING SAID CATALYST

Geoffrey Winton Alderson, James Keith Hambling, and Alan Arthur Yeo, Sunbury-on-Thames, England, assignors to The British Petroleum Company Limited, London, England, a joint-stock corporation of Great Britain

No Drawing. Filed Dec. 19, 1961, Ser. No. 160,625

Claims priority, application Great Britain, Dec. 19, 1960, 43,558/60; Oct. 31, 1961, 38,893/61

12 Claims. (Cl. 260—683.15)

7. A process for polymerising an olefinic hydrocarbon which comprises contacting an olefin having at least 3 carbon atoms per molecule with a catalyst consisting essentially of 1 to 20% by weight of elemental sodium dispersed on anhydrous potassium carbonate.

3,389,191
HYDROISOMERIZATION PROCESS WHEREIN THE CATALYST IS TREATED WITH HYDROGEN AT NON-FLOWING CONDITIONS

John H. Estes, Wappingers Falls, N.Y., assignor to Texaco Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Nov. 17, 1964, Ser. No. 411,699

11 Claims. (Cl. 260—683.74)

A method for the hydroisomerization of normal butane in the presence of a chloride activated platinized alumina catalyst where the activity of the catalyst is enhanced and the activity after prolonged use is restored by treating the catalyst with hydrogen under non-flowing conditions at a temperature within the range of about 450 to 700° F. and at a pressure of at least 300 pounds per square inch gauge.

3,389,192
BLENDS OF FLAME RETARDANT UNSATURATED POLYESTER RESINS AND ACRYLIC SYRUP

Mandell S. Ziegler, Massapequa, N.Y., assignor, by mesne assignments, to Talley Industries, Inc., Lindenhurst, N.Y., a corporation of Delaware

No Drawing. Filed May 24, 1963, Ser. No. 282,872

16 Claims. (Cl. 260—862)

This invention relates to heat hardenable resinous mixtures of improved light stability for laminating and molding comprising a mixture of a halogenated polyester and an acrylic syrup. The halogenated polyester comprises condensed hexachloroendomethylene tetrahydrophthalic compound and is dissolved in a vinyl monomer such as styrene. The acrylic syrup comprises a polymer of at least 50% by weight methyl methacrylate dispersed in liquid unsaturated material containing at least 75% by weight monomeric methyl methacrylate.

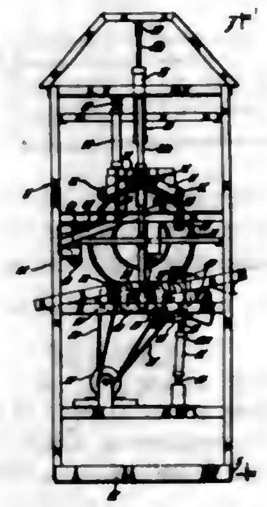
3,389,193
METHOD AND APPARATUS FOR SHAPING A DEFORMED TIRE

Walton Hughes, Scotch Plains, N.J., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Feb. 16, 1966, Ser. No. 527,813

6 Claims. (Cl. 264—36)

1. The method of shaping a deformed tire, comprising: rotating the tire about its normal axis; supporting the rotating tire on its tread at circumferentially spaced places; applying pressure to the tire at a location generally opposite the support location and in a direction to flatten the tread to cause the tread to buckle inwardly between the spaced supports; sensing the buckling action upon its occurrence; and releasing the pressure upon occurrence of buckling.

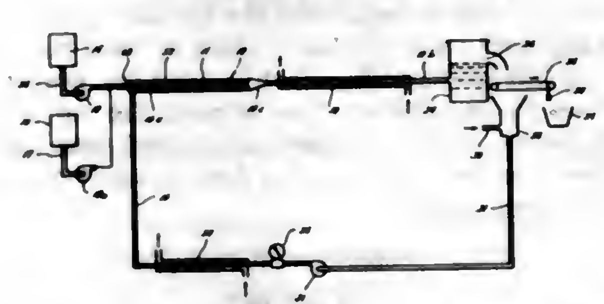


3,389,194
METHOD FOR MASS PRODUCING SMALL SPHERICAL PARTICLES

George R. Somerville, San Antonio, Tex., assignor to Southwest Research Institute, San Antonio, Tex.

Filed June 20, 1966, Ser. No. 558,796

5 Claims. (Cl. 264—4)



A method for mass producing capsules wherein there are a pair of concentric tubes opening into a conduit and filler and film material are fed into the inner and outer tubes, respectively, so as to extrude concentric rods of such materials from the ends of the tubes. A stream of carrier fluid is forced through the conduit and about the tube ends at a speed greater than the rate of extrusion so as to cause said rods to elongate and break off into individual segments which form into fluid capsules of filler material within the film material. In a preferred practice, the temperature of the carrier fluid is reduced below the melting point of the film material to harden it while the capsules are suspended in the stream.

3,389,195
PROCESS FOR MOLDED STRUCTURES HAVING FOAM CORES

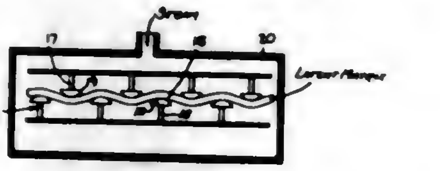
Stylianos Giannakos, 330 W. 174th St., New York, N.Y. 10033, and Andrew Ivar Morrison, 327 Washington Ave., Brooklyn, N.Y. 11205

Filed Apr. 4, 1963, Ser. No. 270,612

1 Claim. (Cl. 264—45)

1. The method of forming a shaped structure having a foam plastic core, comprising the steps of:
- (A) filling an envelope made of a knitted fabric material stretchable in all directions with foam-forming polystyrene pellets,
- (B) sealing the filled envelope to form a latent matrix,
- (C) applying limiting elements to selected areas of the latent matrix to prevent expansion thereof, and

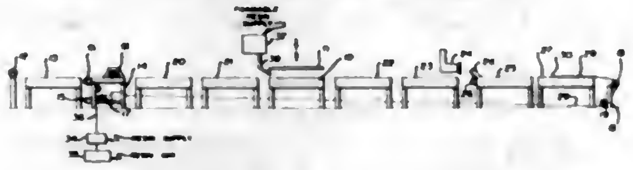
(D) heating the latent matrix to cause the pellets therein to foam and thereby cause the stretchable envelope to expand only in those regions which are not



limited and therefore free to stretch, to produce a shaped structure in which the envelope acts as a tension skin to maintain the foam under compression.

3,389,196
METHOD OF MAKING AN INSULATED CORE BUILDING PANEL

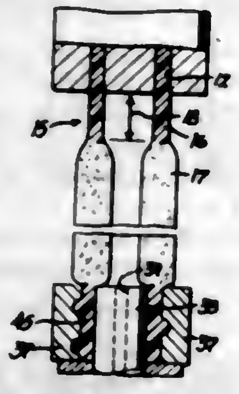
Joel S. Stahl, Youngstown, Ohio, assignor to Stahl Industries, Inc., Youngstown, Ohio, a corporation of Ohio
Filed July 24, 1964, Ser. No. 384,832
1 Claim. (Cl. 264—45)



A method of making an insulated core building panel having surface sheets of a resin such as a polyester or acrylic with a core of foamed resin, such as polyurethane wherein the core material and the surface sheet are cured simultaneously. A cellophane sheet is used as a carrier sheet for the surface sheets while they are prepared and as a liner for a forming press wherein the surface sheets and the core of foam material are cured simultaneously. The liner can be a part of the final product or removed from the final product.

3,389,197
METHOD OF FORMING FOAMED CONTAINER

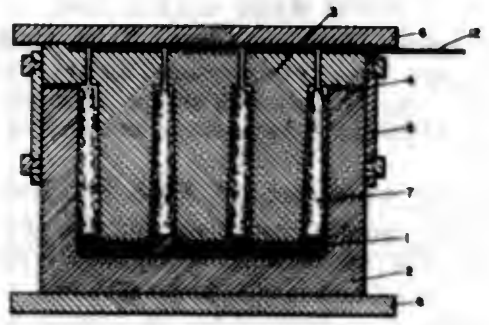
Robert A. Flynn and Charles E. Plymale, Maumee, Ohio, assignors to Owens-Illinois, Inc., a corporation of Ohio
Filed Dec. 30, 1965, Ser. No. 517,711
9 Claims. (Cl. 264—45)



1. In a method of making a blown plastic container from a foamable plastic composition issued as a tubular parison from an extrusion orifice in a plasticized nonfoamed state but capable of foaming when exposed to ambient, substantially atmospheric pressure and temperature conditions for a predetermined relatively short period of time, the improvements of separately forming terminal portions of said parison prior to foaming thereof into the finish and the bottom, respectively, of the container, and blowing the intermediate portion of said parison into the remainder of the container independently of any foaming which may occur therein prior to blowing.

3,389,198
PROCESS FOR MOLDING CELLULAR POLYOLEFINS

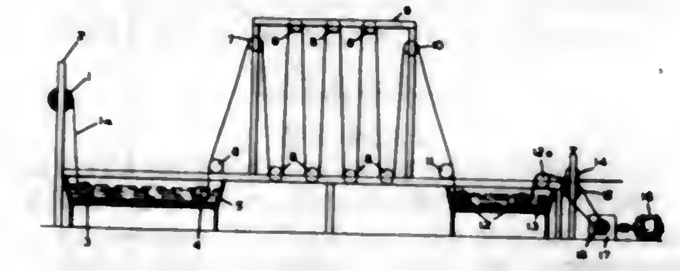
Donald K. Taber, Lancaster Court, Del., assignor to Hercules Incorporated, a corporation of Delaware
Filed Apr. 15, 1965, Ser. No. 448,491
10 Claims. (Cl. 264—52)



Describes an "in-mold" process of preparing cellular polyolefin molded articles by heating to the softening point, in a sealed mold, a mixture of polyolefin, azido cross-linking agent and blowing agent while under gas pressure so as to prevent expansion, reducing the pressure to allow expansion within the confines of the mold and cooling prior to opening the mold.

3,389,199
PROCESS OF MAKING A REINFORCED CELLULAR THERMOPLASTIC SHEET

Collins E. Bushnell, Jr., Manheim Township, Lancaster County, Harry F. Long, East Hempfield Township, Lancaster County, and Richard C. Stadden, Manor Township, Lancaster County, Pa., assignors to Armstrong Cork Company, Lancaster, Pa., a corporation of Pennsylvania
Filed June 1, 1962, Ser. No. 199,465



1. A method for producing foam surfaced polystyrene articles which comprises steeping the surface area to be foamed of the polystyrene articles in a liquid foaming agent consisting of a mixture of trichloromonofluoromethane and methylene chloride for a period of time sufficient to achieve partial penetration of said foaming agent through the articles, said trichloromonofluoromethane being present in said foaming agent mixture in the amount of at least 90% based on the total weight of the mixture, removing the polystyrene articles from said foaming agent and heating the articles to produce foamed surfaces at the areas heated and which was in contact with the foaming agent.

3,389,200
PROCESS FOR PRODUCING COMPRESSED VERMICULAR GRAPHITE STRUCTURES

Franciszek Olstowski, Freeport, and John D. Watson, Sr., and Oliver Osborn, Lake Jackson, Tex., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed Mar. 30, 1966, Ser. No. 538,605
9 Claims. (Cl. 264—105)

1. A process for producing compressed vermicular graphite structures suitable for electrodes in electrolysis of aqueous solutions which comprises

(a) compressing vermicular graphite along one axis to a density of about 0.2 gm./cc. to about 1.0 gm./cc. to form a compact, and

(b) compressing said compact along an axis perpendicular to the original compression axis to a density of at least 1.4 gm./cc.

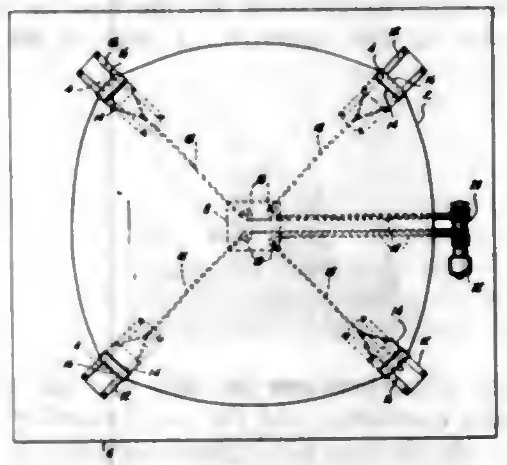
3,389,201
PASTE EXTRUSION OF POLYTETRAFLUOROETHYLENE BY PREBAKING OF THE COAGULATED DISPERSION RESIN

Richard G. Alsup and Charles S. Cope, Vienna, W. Va., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed July 30, 1964, Ser. No. 386,412
3 Claims. (Cl. 264—119)

Prebaking of polytetrafluoroethylene resin obtained from the coagulated aqueous dispersion thereof, at from 250 to 327° C. for 5 to 1200 minutes renders the resin more deformable; the resultant resin is especially suited to paste extrusion at reduction ratios of 10 to 200 to produce articles of increased green tensile strength.

3,389,202
METHOD OF FORMING SHELL ROOF STRUCTURE

Joseph L. Waling, Lafayette, Ind., assignor to Purdue Research Foundation, Lafayette, Ind.
Filed Feb. 7, 1966, Ser. No. 525,474
6 Claims. (Cl. 264—134)

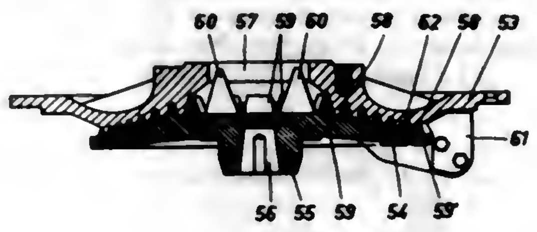


1. The method of forming a shell structure from a bendable sheet material, comprising the steps of: supporting a sheet of said material in a generally horizontal plane; simultaneously applying pressure inwardly to at least three circumferentially spaced portions of the outer periphery of said sheet to thereby cause said portions to move inwardly toward each other and said sheet to buckle to a compoundly curved shape; and securing said portions, in their inner positions ot hold said sheet in said buckled shape.

3,389,203
METHOD AND APPARATUS FOR GRANULATING PIECES OF THERMOPLASTIC SYNTHETIC RESIN FILM

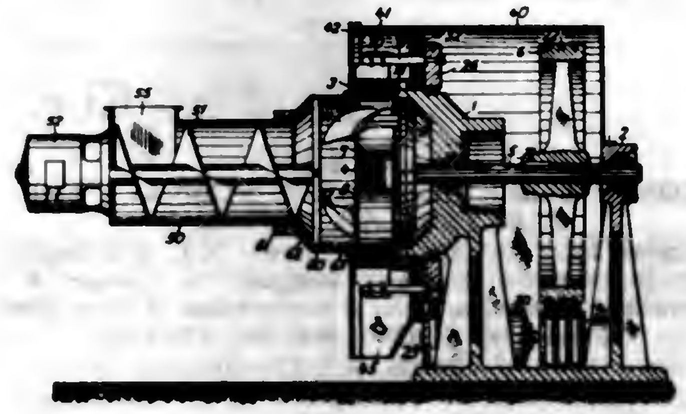
Herbert A. Merges, Werkstrasse 1, Wolfgang, Germany, and Josef Pasteka, Am Laubersberg 19, Steinheim, Germany
Filed June 23, 1964, Ser. No. 377,207
Claims priority, application Germany, June 29, 1963, U 9,924
16 Claims. (Cl. 264—140)

Pieces of thermoplastic synthetic resin film are granulated by feeding the pieces between two cooperating, spaced comminuting elements which produce frictional heat by rotation of one element relative to the other. The feed rate of the pieces into the heating zone is controlled and correlated with the rotational speed and the spacing between the elements so that the frictional heat melts the resin pieces together into the size of granules.



3,389,204
METHOD OF FORMING PELLETS AND APPARATUS THEREFOR

Albert Häfliger, Saint Gall, Switzerland, assignor to Gebruder Buhler, Uzwil, Switzerland
Filed Nov. 18, 1964, Ser. No. 412,065
Claims priority, application Switzerland, Dec. 17, 1963, 15,437/63
10 Claims. (Cl. 264—142)



An extrusion press for pasty to granular materials is disclosed as including feeding means comprising a rotatable feeding drum or ring including a cylindrical portion whose inner diameter is essentially equal to the inner diameter of the press mold, but preferably slightly less than the inner diameter of the press mold. The material to be extruded is fed, under the influence of centrifugal force, to this inner surface. Scraping members are revolvable with the press rollers and move along the inner surface of the cylindrical portion of the feed drum to scrape the material which is in a uniformly thick layer thereon into the press mold.

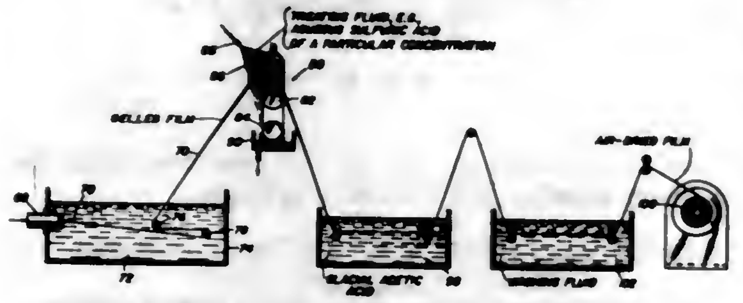
3,389,205
METHOD OF IMPROVING THE DYE RECEPTIVITY OF FIBERS OF VINYLIDENE CYANIDE COPOLYMERS

Saunders E. Jamison, Summit, and William J. Roberts, Bernardsville, N.J., assignors to Celanese Corporation, a corporation of Delaware
No Drawing. Filed Mar. 24, 1964, Ser. No. 354,452
19 Claims. (Cl. 264—178)

A method for producing vinylidene cyanide copolymer fibers of superior dye receptivity wherein the fibers are produced by extruding a spinning solution of vinylidene cyanide copolymer into a coagulation bath containing a minor amount of a polyoxyalkylene glycol and/or fatty acid esters of polyoxyalkylene glycols. The vinylidene cyanide copolymer spinning solution preferably utilizes a solvent comprised of a major proportion of acetonitrile in a minor proportion of water and the coagulation bath preferably utilizes a major proportion of water and a minor proportion of acetonitrile in addition to the minor proportion of polyoxyalkylene material.

3,389,206
ART OF PRODUCING A POLYMERIC FILM OR THE LIKE

Saunders E. Jamison, Summit, N.J., assignor to Celanese Corporation, a corporation of Delaware
Filed June 16, 1965, Ser. No. 464,423
12 Claims. (Cl. 264—203)


TREATING FLUID, E.G., AQUEOUS SULFURIC ACID OF A PARTICULAR CONCENTRATION
GELLED FILM
GLACIAL ACETIC ACID
WASHING FLUID
AIR-DRIED FILM

A method of forming a film from a difficultly-meltable, sulfuric acid-soluble, film-forming polymer wherein transparency is imparted to the water-washed and dried film by treating the continuously moving gelled film, after leaving the coagulating bath and while it is passing over a film-advancing device, e.g., skewed rolls, with a certain specified concentration of H_2SO_4, after which the treated film is passed through a bath of (or otherwise contacted with) glacial acetic acid. This method can be carried out in the presence or absence of tensioning means in the coagulating bath.

3,389,207
PROCESS FOR PREPARING SPECKLED NOVELTY YARNS

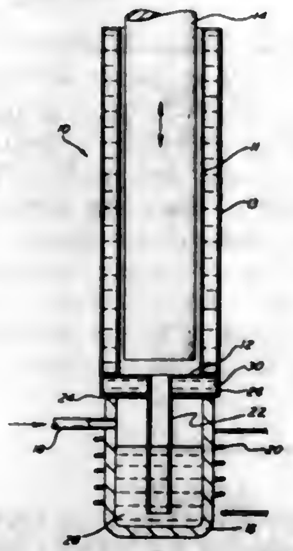
Roderick B. Macleod and Paul Paliyenko, Charlotte, N.C., assignors to Fiber Industries, Inc., a corporation of Delaware
No Drawing. Continuation-in-part of application Ser. No. 293,182, July 5, 1963, now Patent No. 3,275,732. This application May 10, 1966, Ser. No. 548,844
8 Claims. (Cl. 264—290)

1. A process for producing polymethylene terephthalate yarns having a speckled effect of undrawn sections which comprises drawing undrawn polymethylene terephthalate yarn having a birefringence of from about 0.0005 to about 0.009 from about 2.8 to about 3.5 times its original length, at a temperature of said undrawn yarn in the range from about 30° C. to the second order transition temperature of said undrawn yarn, at drawing speeds sufficiently in excess of 1600 feet per minute to produce undrawn sections of yarn substantially all of which do not exceed 2 inches in length.

ELECTRICAL

3,389,208
CONSUMABLE ELECTRODE FURNACE FOR ELECTROSLAG REFINING

Raymond John Roberts, Moorestown, N.J., and Geoffrey Hoyle, Sheffield, England, assignors to Consarc Corporation, Rancocas, N.J., a corporation of New Jersey
Filed May 4, 1967, Ser. No. 636,117
5 Claims. (Cl. 13—9)

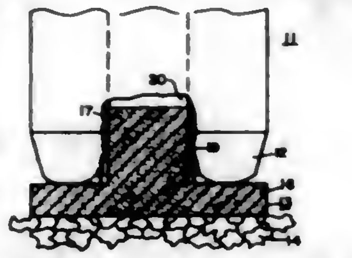


A consumable electrode furnace provided with a separate receptacle for molten slag and further provided with structure for introducing molten slag into the refining zone of the furnace. Slag is forced into the refining zone by the application of gas pressure into a vessel provided with a dip-tube communicating with the refining zone of the furnace.

3,389,209
ELECTRODE FUSE PROTECTOR

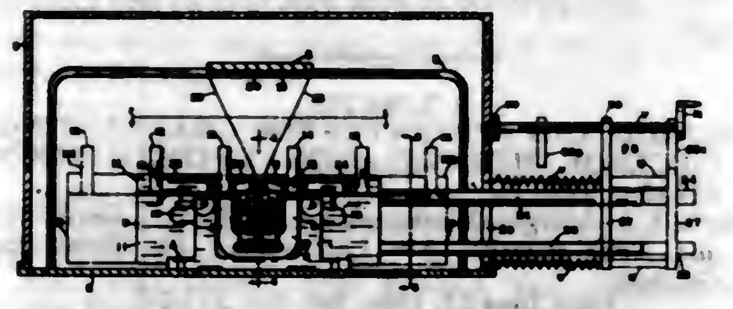
Serafino M. De Corso, Media, Pa., assignor to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
13 Claims. (Cl. 13—18)

A fuse for an electrode used in an arc furnace is composed of a material such as carbon, graphite, or a carbon-graphite mixture, is mounted in or on the electrode tip or other arcing surface, or extends through a central axial aperture through the electrode and beyond the electrode tip. When the arc first starts to the melt of the furnace, the arc takes place between the fuse and the melt. The fuse is rapidly consumed and the arc thereafter transfers to the electrode tip and takes place between the tip and the melt.



3,389,210
MULTIPLE CRUCIBLE FOR A PERMANENT MAGNET TRANSVERSE ELECTRON BEAM EVAPORATION SOURCE

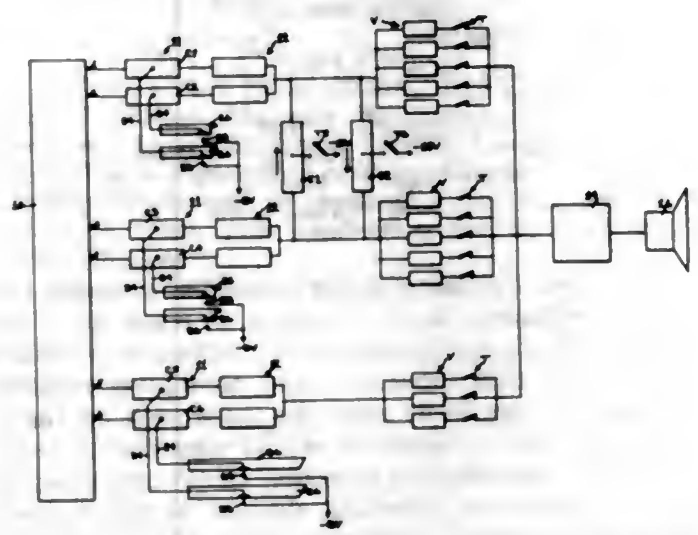
Everette M. Whitson, Castro Valley, and Robert L. Shrader, San Leandro, Calif. (both of 22864 Sutro St., Hayward, Calif. 94541)
Filed Mar. 29, 1965, Ser. No. 443,608
4 Claims. (Cl. 13—31)



A block having a plurality of crucibles arranged in spaced relation and magnetizable pole pieces placed on opposite sides of each crucible. A permanent magnet has its two poles spaced the same distance apart as that which separates the pole pieces for each crucible. An electron beam source is positioned between the magnet poles and the block is movable to bring any desired crucible into registration with the electron beam and also to bring the associated poles for that crucible into registration with the magnet poles so that the electron beam will be focused on the material in the crucible.

3,389,211
ELECTRONIC KEYER

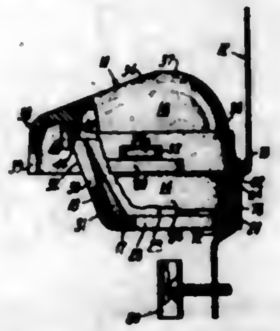
Mathew A. Slaats, Jasper, Ind., assignor to Jasper Electronic Mfg. Corp., Jasper, Ind., a corporation of Indiana
Filed Jan. 5, 1965, Ser. No. 423,489
6 Claims. (Cl. 84—1.01)



An electronic keying or switching arrangement in which a generator providing at least two electrical signals of different frequencies is connected to a signal receiver via first and normally nonconducting electronic switches with at least an additional one-way normally nonconductive electronic switch interconnecting the output sides of the first electronic switches together with a source of control voltage for making the switches conductive and control switches or keys for selectively connecting the control voltage with the respective electronic switches. The receiver may consist of an amplifier and a speaker and voicing circuits may be included in series with the amplifier and speaker.

3,389,212
SERVICE ENTRANCE HEAD

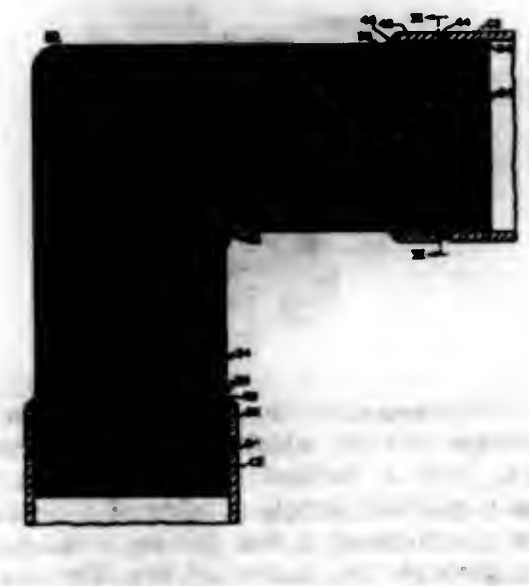
Denis A. Dearle, New Britain, Conn., assignor to North and Judd Manufacturing Company, New Britain, Conn., a corporation of Connecticut
Filed Oct. 14, 1965, Ser. No. 496,114
2 Claims. (Cl. 174—81)



A service entrance head assembly including a base member and a domed roof member releasably secured in snap-locking relation, the base member having a wall portion defining an open top and including at least one opening in the wall portion, the roof member having downwardly facing shoulders formed on its interior and positively seated on upper edges of the base member and defining a conductor receiving chamber disposed above the upper edges of the base, and the roof member further including an extension integrally formed thereon and projecting substantially beyond and below the upper edges of the base member in overhanging relation to the opening in its wall portion.

3,389,213
EXPANSION JOINTS FOR ISOLATED PHASE BUS BARS AND DUCTS

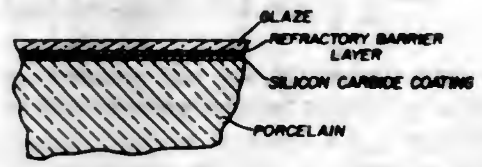
Arthur B. Niemoller, Monroeville, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Oct. 29, 1964, Ser. No. 407,346
6 Claims. (Cl. 174—88)



1. An electrically conducting member adapted to interconnect the adjacent ends of two unaligned conductors comprising first and second hollow cylindrical end members, a plurality of substantially parallel, laterally spaced, elongated conductor segments extending between said end members, each of said conductor segments being substantially rectangular in cross-section, the ends of said conductor segments being secured to the respective end members and distributed around the inner periphery thereof, adjacent portions of each of said conductor segments being bent at substantially the same predetermined angle and being sufficiently resilient to permit a limited variation in the bend angle thereof, and a plurality of spacers disposed between the adjacent ends of the respective conductor segments where said segments are secured to said end members to permit limited bending movement of the intermediate portions of said conductor segments with respect to one another.

3,389,214
COATED INSULATOR

William J. Smothers, Akron, Ohio, assignor to The Ohio Brass Company, Mansfield, Ohio, a corporation of New Jersey
Filed Aug. 20, 1963, Ser. No. 303,325
2 Claims. (Cl. 174—140)

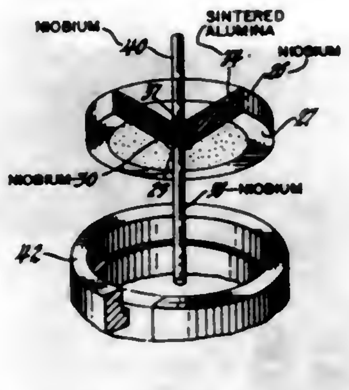


1. An electric insulator comprising an insulating body and a fired ceramic coating on an exterior surface of the body comprising (1) a semi-conducting layer incorporating silicon carbide particles disposed over the surface of the body for distributing electric current over the insulator,

(2) a surface glaze over the said silicon carbide layer, and (3) a ceramic barrier layer between said conducting layer and the glaze.

3,389,215
HIGH TEMPERATURE ALUMINA-TO-NIOBIUM ARTICLE

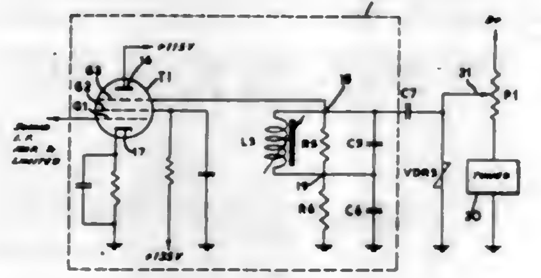
Hal H. Rice, Birmingham, and Russell B. Bennett, Rochester, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Mar. 4, 1966, Ser. No. 531,919
4 Claims. (Cl. 174—152)



An alumina-to-niobium article is suitable for use in vacuum-type devices which are subjected to high temperatures and a method for making the same. The alumina-to-niobium article consists of a sintered alumina body in the form of a disc having a niobium electrode passing through the center of the disc and having a niobium annular ring bonded to the outer periphery at one side of the disc. This alumina-to-niobium article can be used to form a vacuum-tight seal which will remain vacuum-tight at elevated temperatures which are below the sintering temperature of the alumina. The method of preparing this article includes the steps of placing alumina particulate around niobium metal members in a mold, heating the alumina and niobium to the sintering temperature of the alumina and applying pressure to the alumina in the mold.

3,389,216
QUADRATURE TYPE SOUND DETECTOR UTILIZING A VARIABLE BANDWIDTH RESONANT CIRCUIT

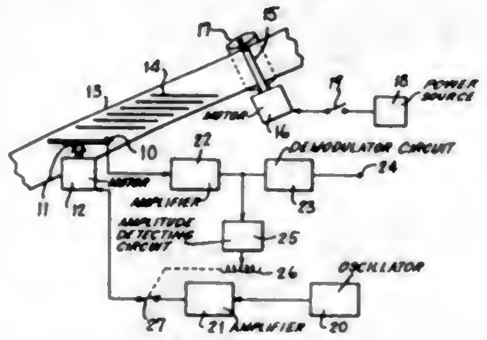
John J. Sennik, Kitchener, Ontario, Canada, assignor to Dominion Electrohome Industries Limited, Kitchener, Ontario, Canada
Filed June 28, 1965, Ser. No. 467,199
4 Claims. (Cl. 178—5.8)



The bandwidth of a resonant circuit comprising a capacitor and an inductance coil may be varied automatically by connecting a voltage dependent resistor in parallel with the coil and supplying a variable D.C. voltage to the voltage dependent resistor to vary the resistance thereof and hence the Q of the coil and the bandwidth of the resonant circuit.

3,389,217
MAGNETIC TAPE RECORDING AND REPRODUCING APPARATUS

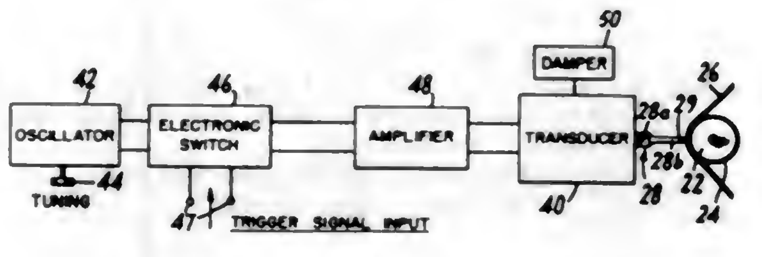
Nobutoshi Kihara, Tokyo, Japan, assignor to Sony Corporation, Tokyo, Japan, a corporation of Japan
Filed Dec. 28, 1964, Ser. No. 421,204
Claims priority, application Japan, Dec. 26, 1963, 38/12,486
9 Claims. (Cl. 178—6.6)

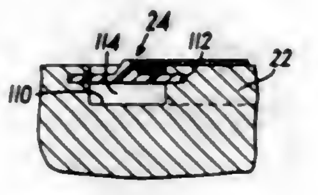


In a video tape recorder in which the magnetic tape is scanned obliquely to its direction of travel by a rotary magnetic head, and wherein a still picture is produced by stopping the tape movement and continuing rotation of the head to repeatedly scan the same path on the tape, excessive wear or abrasion of the tape due to repeated scanning is prevented by detecting means connected to the magentic head for detecting changes in the reproduced signal due to wear or abrasion of the tape at the portion being repeatedly scanned, and, in response to detected changes in the reproduced signal, discontinuing scanning of such portion of the tape either by stopping rotation of the head, moving the head away from the tape or activating the tape transport.

3,389,218
ULTRASONIC FACSIMILE SYSTEM

Lewis Balamuth, New York, and Claus Kleesattel, Forest Hills, N.Y., assignors to Cavitron Ultrasonics Inc., Long Island City, N.Y., a corporation of New York
Filed Dec. 23, 1963, Ser. No. 332,560
12 Claims. (Cl. 178—6.6)



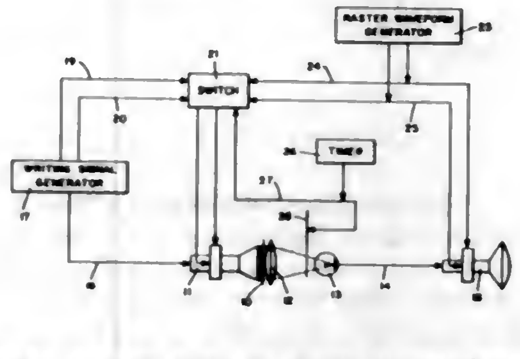


1. In a facsimile reproducting system, a scanning drum having a raised helix extending radially outward from its peripheral surface, a record sheet maintained in contact with said raised helix, a pressure blade mounted adjacent said record sheet, and means coupled to said pressure blade and responsive to an electrical signal pulse to vibrate said pressure blade at a frequency in the ultrasonic range to urge said record sheet against said helix with substantial force thereby producing an imprint on said sheet, the compliance of said scanning drum and helix being greater than that of said pressure blade and mounting means.

12. For use in facsimile reproducing apparatus, a scanning drum comprising a cylindrical member adapted to be rotated about its axis, a helical groove formed in the peripheral surface of said member, resilient strip means mounted in said groove having a raised portion on its outer surface extending substantially the entire length thereof to provide a helical ridge extending radially outward of the peripheral surface of said drum, said strip means providing within said groove an hermetically sealed chamber substantially coextensive with said helical ridge, and variable pressure means within said chamber for controlling the compliance of said helical ridge.

3,389,219
APPARATUS FOR SCAN CONVERSION

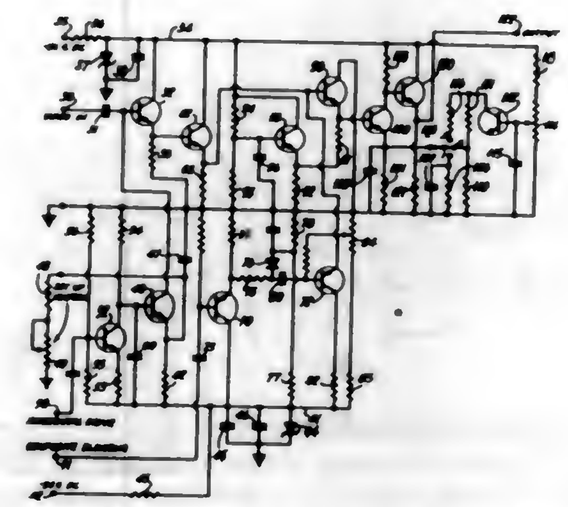
Kenneth J. Stetten, McLean, Va., assignor, by mesne assignments, to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Continuation-in-part of application Ser. No. 409,497, Nov. 6, 1964. This application July 9, 1965, Ser. No. 477,339
2 Claims. (Cl. 178—6.8)



A display system wherein signal generating means are combined with a single cathode ray tube and display means to write and read information with high accuracy and resolution and continuous total capability.

3,389,220
TELEVISION SIGNAL GENERATING APPARATUS

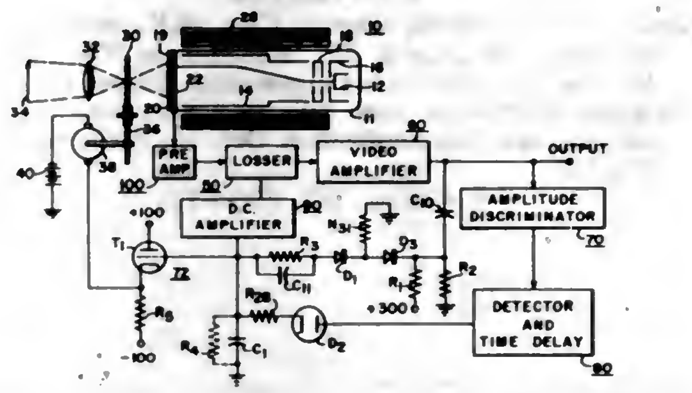
James Dale Buzan, Bloomington, Ind., assignor to Sarkes Tarzian, Inc., Bloomington, Ind., a corporation of Indiana
Filed Aug. 28, 1964, Ser. No. 392,723
10 Claims. (Cl. 178—7.1)



Television signal generating apparatus in which a video signal from the television camera tube is clamped to an adjustable black level set-up voltage and the clamped video signal is then combined with composite blanking pulses in a circuit in which the blanking pulse level is accurately maintained despite wide variations in the average value of the video signal. A gamma correction circuit is also provided in which the collector-base junction of a transistor is employed to provide a sharp inflection point in the transfer characteristic of the associated amplifier.

3,389,221
TELEVISION BRIGHTNESS COMPENSATION SYSTEM

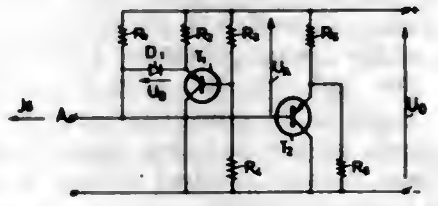
Copthorne Macdonald, Elmira, N.Y., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Apr. 29, 1964, Ser. No. 363,528
10 Claims. (Cl. 178—7.2)



This invention relates to a slow scan television system illustratively including a television camera device having a target element which is scanned by an electron beam in a predetermined interval of time to provide an output video signal, a variable gain amplifier to which the output video signal is applied, an amplitude discriminating circuit for measuring the amplitude of an output signal derived from the amplitude discriminating circuit. The amplitude discriminating circuit provides an output signal indicative of a decrease of amplitude of the output video signal below a predetermined level. If the amplitude of the output video signal remains below the predetermined value for a period in excess of the predetermined interval, the time and delay circuit will effect a change in the gain of the variable gain amplifier.

3,389,222
CIRCUIT ARRANGEMENT FOR CONTROLLING THE AMPLIFICATION OF CASCADE-CONNECTED TRANSISTOR AMPLIFYING STAGES

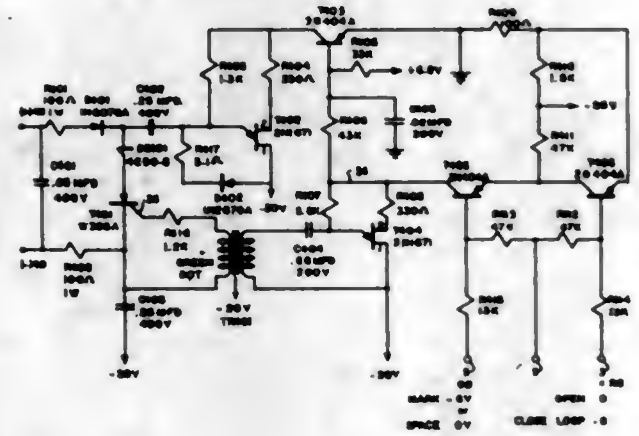
Hermann Schoen, Hamburg, Germany, and Jan Joost Rietveld, Emmasingel, Eindhoven, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Apr. 27, 1964, Ser. No. 362,860
Claims priority, application Germany, Apr. 27, 1963, 31,689; July 25, 1963, 32,278
3 Claims. (Cl. 178—7.3)



A circuit for controlling the gain of a two stage transistor amplifier with a varying control signal by selectively varying the emitter current in each stage is provided with a first stage transistor having a constant voltage supplied to its base electrode, and an emitter network consisting of a first resistor connected between the source potential and the emitter electrode, a diode, connected to the emitter electrode in a direction passing emitter current, and a second resistor connected between the diode and the end of the first resistor remote from the emitter electrode. The second stage transistor is provided with a constant emitter voltage. The control signal is applied between the second resistor and the diode of the first stage, and to the base electrode of the second stage. The first and second resistors are proportioned such that the emitter current of the first stage will decrease with increasing control signal until the diode cuts off, at which point, the emitter current of the second stage will increase with increasing control current.

3,389,223
SENDING DEVICE WITH SIGNAL VOLTAGE CONVERTER

James T. Neiswinter, Garden City, N.Y., and Carl N. Pederson, Westmont, Ill., assignors to The Pioneer Electric and Research Corporation, Forest Park, Ill.
Original application Apr. 10, 1964, Ser. No. 358,739. Divided and this application Oct. 20, 1967, Ser. No. 676,763
9 Claims. (Cl. 178—17)

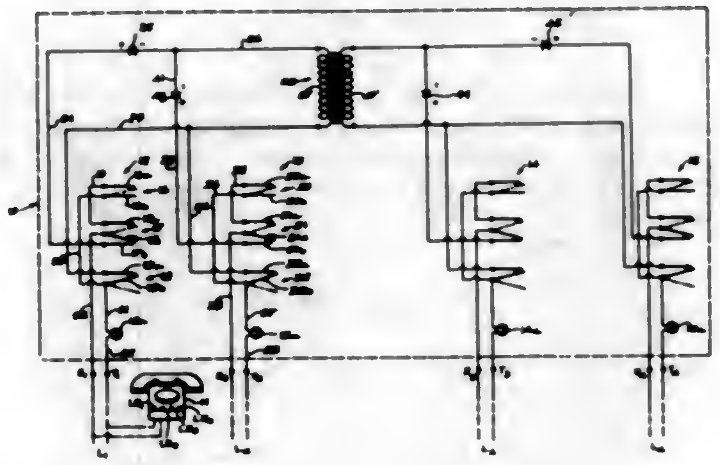


A signal voltage converter circuit for connecting between data communication equipment operable at low voltage levels and transmission lines normally operable at high voltages. The low voltage output signals from the data communication equipment are utilized to control an electronic switching circuit to key a higher voltage telegraph loop. The electronic switch includes a Shockley diode and the current carrying terminals of a silicon controlled rectifier in series across input terminals of a telegraph loop. The converter includes two circuits which generate alternating voltage control signals representing line control and signal transmission bit conditions, one of which circuits applies control pulses to extinguish the Shockley diode to accomplish quick extinction of current conduction through the silicon controlled rectifier to electronically key the loop to "open." The other circuit applies control pulses of sufficient potential level to the control terminal of the silicon controlled rectifier to cause the rectifier to fire and key the loop to "closed." A "Request Send" circuit in the converter renders the "loop open" control circuit subject to being biased inoperative whenever the "loop closed" control circuit is rendered operative by data bit transmission.

3,389,224
CONFERENCE CONNECTION AND CONTROL DEVICE FOR TELEPHONE SUBSCRIBER LINES

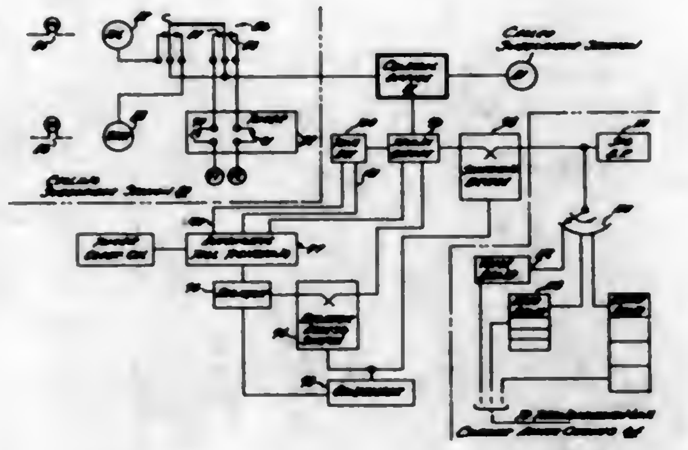
Walter H. Shaw, Miami, Fla., assignor to Shaw Electronics Incorporated, a corporation of Florida
Filed Mar. 5, 1965, Ser. No. 437,443
4 Claims. (Cl. 179—1)

The invention consists of a conference connection and control device for telephone subscriber lines whereupon a controlling subscriber having a plurality of subscriber lines terminating at his set may interconnect these subscriber lines to form a conference circuit. The conference and control circuit consists of a pair of subscriber lines, that are terminated at the control subscribers set and under control of line button keys at the set, connected in parallel across the primary of a transformer and another pair of subscriber lines connected in parallel across the secondary. Each subscriber line is connected into the circuit and is under the control of a three position toggle switch. The switch has a "talk," "hold" and "disconnect" position. In the "hold" position, an indicator lamp approximately equal in impedance to a subscriber set is switched into the conference circuit. The control subscriber brings the other subscribers into the conference circuit individually and manually. The line button keys of the set connect the control subscriber to the various outgoing lines and the three position toggle switches hold the subscriber lines connected while the control subscriber is dialing out on another line.



3,389,225
LIMITED CAPACITY TELEPHONE SYSTEM

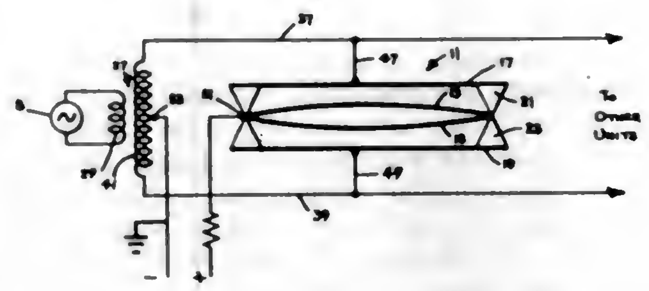
Oscar Myers, New York, N.Y., assignor to International Telephone and Telegraph Corporation, New York, N.Y., a corporation of Delaware
Filed May 15, 1964, Ser. No. 367,614
7 Claims. (Cl. 179—7)



A limited capacity telephone system is one utilizing a transmission medium, such as submarine cable, earth satellite, or the like, which transmits traffic at high density over a medium carrying a limited frequency band. Depending upon the nature of equipment used, the traffic may require a narrow width band of frequencies (as in a telegraph system), a medium width band of frequencies (as in a voice system), or a wide band of frequencies (as in a facsimile system). The invention combines as many narrow bands as may be required to accommodate the traffic at hand. A tone signal identifies the band width in actual use so that charges may be billed accordingly.

3,389,226
ELECTROSTATIC LOUDSPEAKER

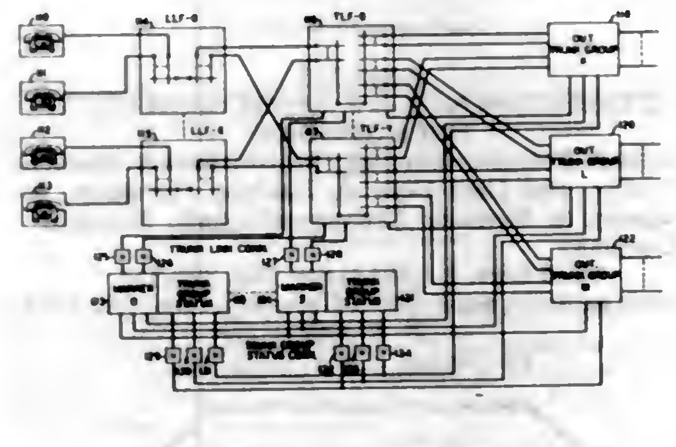
Earl P. Peabody, Los Gatos, Calif., assignor to General Electric Company, a corporation of New York
Filed Dec. 29, 1964, Ser. No. 421,972
5 Claims. (Cl. 179—111)



An improved electrostatic loudspeaker having a composite vibrating diaphragm composed of two sheet-like membranes supported together at their edges. These membranes are electrically conductive and arranged to bulge mutually apart in response to electrostatic forces, thereby rendering the membrane taut, to reduce rattle or flutter.

3,389,227
SWITCHING SYSTEM

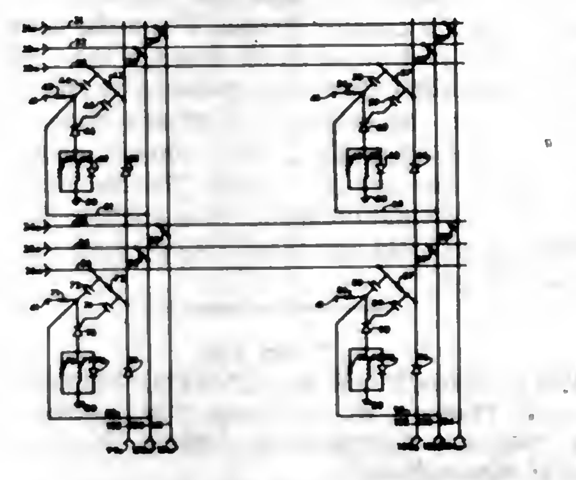
John M. Catterall and Eugene D. Mascucci, Columbus, Ohio, assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Feb. 5, 1965, Ser. No. 430,566
16 Claims. (Cl. 179—18)



1. In combination in a communication switching system, switching means, control means for controlling said switching means responsive to calls of a plurality of different preference levels, communication paths connected to said switching means, storage means interconnected with said communication paths for storing the preference level of each call employing the respective paths, status means interconnectable with a group of said paths to indicate the lowest preference level stored in said storage means of said group of paths, and means included in said control means and responsive to said status means to select one path of said group of paths.

3,389,228
CONTROLLED LATCHING SEMICONDUCTOR SWITCH AND SWITCHING NETWORK

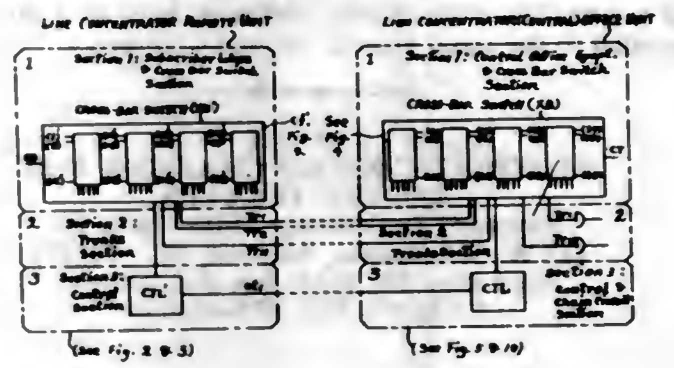
Ernest F. Hasselton, Jr., West Concord, Mass., assignor to Sylvania Electric Products Inc., a corporation of Delaware
Filed Mar. 31, 1965, Ser. No. 444,139
15 Claims. (Cl. 179—18)



A gating network is employed in conjunction with a multilayer controlled semiconductor device, having latching capabilities, to control the switching of a relay associated with a cross-point in a switching matrix.

3,389,229
TELEPHONE SUBSCRIBER LINE CONCENTRATING SYSTEM

Ryokichi Torisu, 1657 Mure, Mitaka-shi, Tokyo, Japan
Continuation-in-part of application Ser. No. 352,860, Mar. 18, 1964. This application July 21, 1966, Ser. No. 566,920
Claims priority, application Japan, July 5, 1963, 38/443
7 Claims. (Cl. 179—18)



A simplified line concentrator has trunk lines connected in accordance with a unique arrangement to corresponding vertical paths of special cross-bar switches at the central office and remote units, respectively. The horizontal paths of the remote switch are connected directly to a number of subscribers' lines larger than the number of trunks and those of the central office switch are correspondingly connected directly to subscribers' terminals of the automatic exchange. A control section at the remote switch is connected via a common control circuit to a like control section and a chain section at the central office switch for effecting connections through the trunks on demand, and for performing related functions. The chain circuit is made up of contacts of the trunk relays of the respective trunk circuits, and fixes the operating order of the trunk circuits. The unique connection of the lesser number of trunks to the vertical paths enables the number of trunk lines extending between the units to be varied as a function of subscriber traffic. The special cross-bar switches have at each crossing point not only a set of normally open contacts closed by operation of the switch to connect the subscriber lines and subscriber terminals to a trunk, but also have at each crossing point a set of normally closed contacts which are opened as the switch is so operated. The normally closed contacts associated with crossing points of the horizontal paths of a subscriber are themselves connected in series forming a demand signal circuit from ground through the subscriber's lines (or terminals) to the control circuit. When the connection of the horizontal paths to a trunk through the vertical paths is effected, enabling ground potential to be applied through the trunk from the calling subscriber's hook switch, the opening of the normally closed contacts at the crossing point releases the control circuit. The circuitry is simplified by the combination which also enables the trunks to be released promptly after their use by a calling party has been completed.

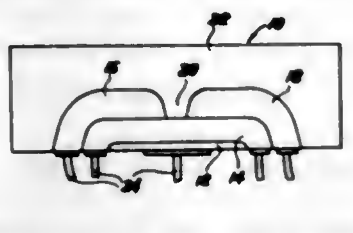
3,389,230

SEMICONDUCTIVE MAGNETIC TRANSDUCER

Edward C. Hudson, Jr., Waltham, Mass., assignor to Hudson Magiston Corporation, Jaffrey, N.H., a corporation of Massachusetts

Filed Jan. 6, 1967, Ser. No. 600,154

10 Claims. (Cl. 179—100.2)



A magnetic transducer, formed of a semiconductive material with an emitter, base and two spaced collector regions, responds directly to a magnetic field that deflects charge carriers in the base region towards one or the other of the collector regions. The magnetic field may be carried by a magnetic tape recorded with a unidirectional transverse field as it passed by the trailing edge of the core faces of a generally conventional magnetic head in a direction parallel to the main axis of the core's air gap.

3,389,231

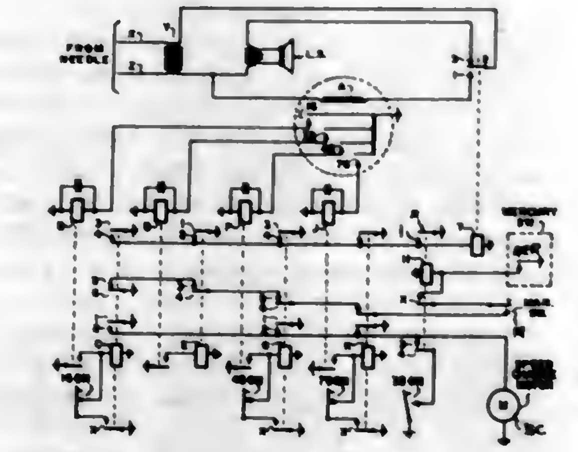
AUTOMATIC SPEED CHANGER FOR RECORD PLAYERS

Raymond L. Brundage, Villa Park, Ill.

(17 W. 370 Sunrise, Addison, Ill. 60101)

Filed May 28, 1964, Ser. No. 370,842

5 Claims. (Cl. 179—100.4)



An automatic speed changer for record players in which a specific tone is produced by the initial groove of each record, which tone in turn controls a frequency responsive device to select the particular speed at which that record should be played.

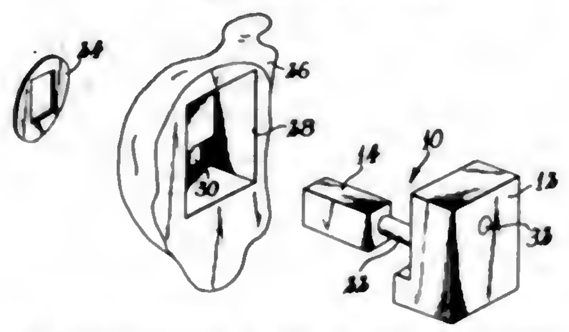
3,389,232

HEARING AID AND EAR MOLD ASSEMBLY

Lawrence Posen, Glencoe, and Sam Posen, Highland Park, Ill., assignors to Beltone Electronics Corporation, a corporation of Illinois

Filed July 15, 1965, Ser. No. 472,136

3 Claims. (Cl. 179—107)



1. The improvement of an in-the-ear hearing aid and ear mold assembly comprising the combination of a compact hearing aid having an external portion and an internal portion, said external portion encasing at least a microphone, an amplifier circuit and a power supply battery, said internal portion encasing at least a hearing aid receiver, said external and internal portions being spaced apart but coupled to each other by an elongated flexible tube extending between said portions, said hearing aid including conductor means interconnecting said microphone, amplifier circuit, battery and receiver to provide a complete and operative hearing aid capable of amplifying sound received at the microphone and applying the same to the user's ear from the receiver, the conductor means connecting the receiver to the remainder of the hearing aid being extended through said elongated flexible tube, and an ear mold formed to fit into the outer ear of the wearer, said ear mold being provided with a recess shaped to receive and encase said external housing portion of the hearing aid such that the latter does not project outwardly from the ear mold and is substantially concealed thereby during use, said ear mold being formed with an opening in its inner wall to permit the internal portion of the hearing aid to be passed therethrough during assembly and to facilitate disassembly of the parts for replacement and repair purposes, said combination when assembled and inserted into the user's ear having the internal portion of the hearing aid positioned inwardly of the ear mold and in the user's ear canal.

3,389,233

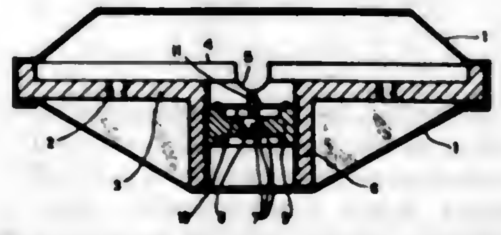
PRESSURE-SENSITIVE SEMICONDUCTOR MICROPHONE

Friedrich Krieger, Gilching, Martin Sauer, Munich-Pasing, and Gert Conrad, Dachau, Germany, assignors to Siemens Aktiengesellschaft, Munich, Germany

Filed Sept. 23, 1964, Ser. No. 398,711

Claims priority, application Germany, Sept. 30, 1963, S 87,645

13 Claims. (Cl. 179—110)



A transducer wherein a pressure member is elastically fixed with respect to a semiconductor to change the pressure thereon upon movement of the pressure member. A control member is supportably positioned in unsecured engagement with the pressure member, whereby changes in pressure applied to the control member are coupled to the pressure member.

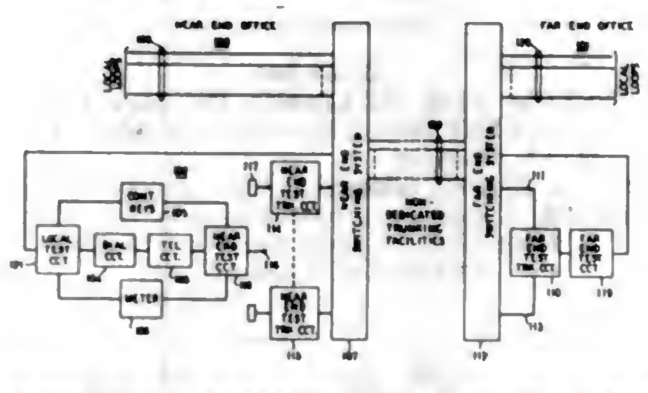
3,389,234

ACCESS CONTROL IN TELEPHONE TESTING SYSTEMS

J. Arthur Cotner, Elizabeth, N.J., assignor to American Telephone and Telegraph Company, New York, N.Y., a corporation of New York

Filed May 27, 1965, Ser. No. 459,389

8 Claims. (Cl. 179—175.2)



A secured-access arrangement for a remote local loop telephone testing system is disclosed in which a remotely located operator dials a connection to the testing location which then automatically dials back another connection to the operator over non-dedicated trunking facilities. Remote tests can then be controlled and monitored over the second connection. Unauthorized access is prevented by the dial-back arrangement and hence dedicated trunks are not required.

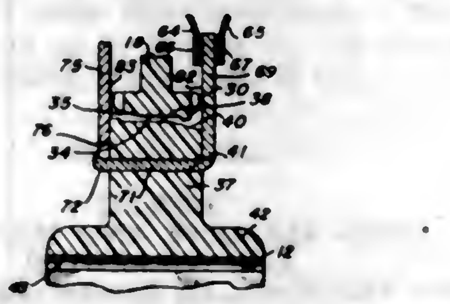
3,389,235

ROTARY SWITCH

Raymond F. Lewandowski, Mount Prospect, Ill., assignor to Oak Electro/Netics Corp., a corporation of Delaware

Continuation-in-part of application Ser. No. 474,244, July 23, 1965. This application Mar. 23, 1967, Ser. No. 634,399

9 Claims. (Cl. 200—11)



A rotary switch with conventional rotor, stator and contact structure with the stator having an axially directed rim extending toward the surface of a contact blade member.

3,389,236

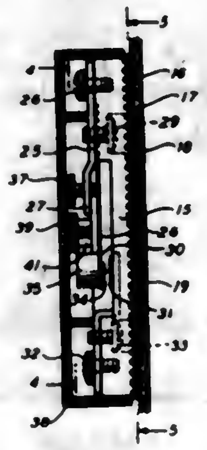
VIBRATION ACTUATED CONTACT SWITCH

Leo A. Guthart, Old Westbury, N.Y., assignor to Alarm Device Manufacturing Company, a Division of Pittsburgh Railways Company, Inc., Carle Place, N.Y., a corporation of Pennsylvania

Filed June 30, 1966, Ser. No. 561,977

4 Claims. (Cl. 200—61.48)

1. A vibration actuated contact switch comprising an elongated base member having an outer planar surface, serrations formed on said surface in relation to a planar plate surface for adhering keying contact therewith so that the vibration of said plate surface will be monitored by said switch, a bracket secured to the interior on the base member opposite and in parallel spaced relation to said serrated surface, a contact mounted in said switch, an elongated flexible strip fixed at one end to the interior of the base member with the other end being free, and freely movably extending in line with and spaced from said contact, means engaging the bracket and flexible strip for adjusting the position of the latter relative to said contact, whereby, on positioning the switch with said serrated face adhered to a planar surface to be monitored, and connecting said switch contact and flexible strip with a circuit, vibration of said planar surface will correspondingly vibrate the switch and thus said flexible strip will flex into engagement with said contact, actuating said circuit.



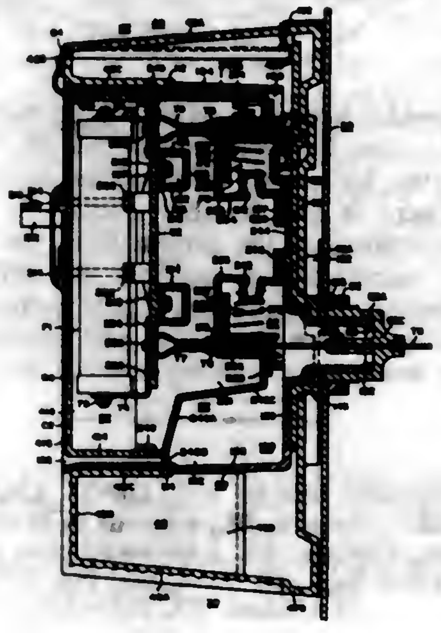
3,389,237

LOAD BREAK AND ISOLATING CIRCUIT INTERRUPTER

Leonard L. Wright and John J. Astleford, Jr., Sharon, Pa., assignors to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania

Filed Mar. 29, 1965, Ser. No. 443,359

12 Claims. (Cl. 200—144)



An insulating housing having at least one pair of spaced contacts mounted thereon is adapted to receive one or more movable insulating carriers having contacts and arc extinguishing means mounted thereon.

3,389,238

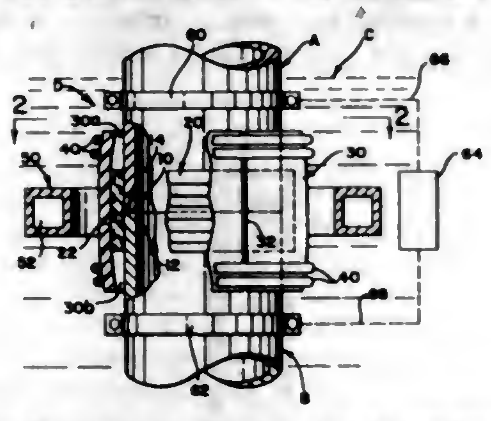
APPARATUS AND METHOD FOR WELDING SUBMERGED PIPES BY INDUCTION HEATING

Robert L. Shaw, Mentor Lake, Ohio, assignor to Park-Ohio Industries, Inc., a corporation of Ohio

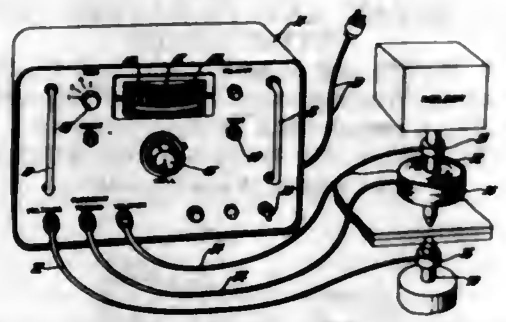
Filed Nov. 20, 1964, Ser. No. 412,768

13 Claims. (Cl. 219—9.5)

A method and apparatus for pressure welding the ends of a pipe which is submerged in a liquid. A porous sleeve is wrapped around the joint formed by the ends of the pipe. A nonporous sleeve is then utilized to surround the porous sleeve being coterminous therewith. An inductor surrounds the nonporous sleeve and is supplied with heating current. Pressure applying means are utilized to effect the pressure weld.

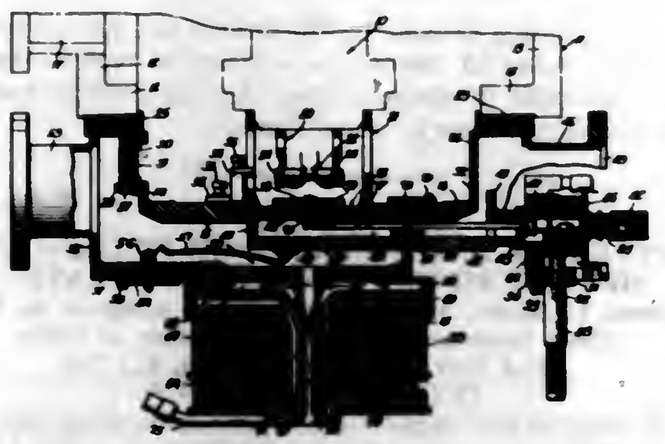


3,389,239
METHOD AND MEANS FOR TESTING WELDING EQUIPMENT
Thomas J. Treppa, Warren, Frederick J. Tralson, Detroit, and Robert B. Allured, Rochester, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Feb. 11, 1964, Ser. No. 344,135
11 Claims. (Cl. 219—110)



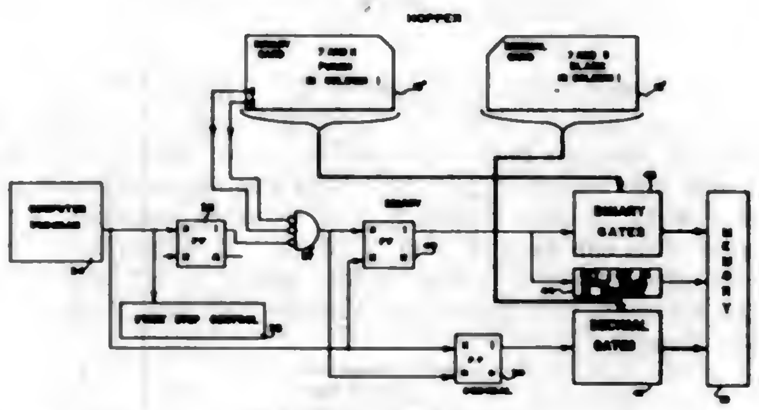
A spot welder having a circuit for measuring the energy developed across the weld nugget per se. The circuit includes pickups for sensing weld current and total electrode voltage. There is also another circuit for subtracting a signal proportional to the current from the voltage signal and other circuits which multiply the difference by the welding current. The product signal resulting from this multiplication is then integrated and utilized to drive an indicating meter or a welding control device.

3,389,240
ELECTRON BEAM WELDING APPARATUS
David Sciaky, Chicago, Ill., assignor to Welding Research, Inc., Chicago, Ill., a corporation of Illinois
Filed Sept. 25, 1964, Ser. No. 399,221
11 Claims. (Cl. 219—121)



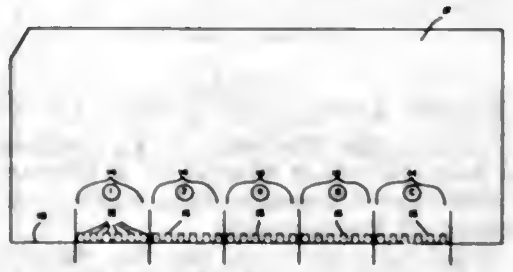
The electron beam welding apparatus of the disclosure is primarily designed for welding in the atmosphere employing venturi means for the purpose and the same also incorporates valve structure in the form of a ball valve for closing the aperture in the anode plate of the electron beam gun. It is possible to actuate the ball valve for closing or opening the aperture from outside the vacuum chamber and additional means are provided for applying resilient pressure to the ball valve when closed to more effectively seal the opening in the anode plate.

3,389,241
SYSTEM FOR READING INFORMATION FROM INTERMIXED BINARY AND DECIMAL CARDS
William G. Harvey, Glendale, Ariz., assignor to General Electric Company, a corporation of New York
Filed Nov. 27, 1963, Ser. No. 326,420
8 Claims. (Cl. 235—61.11)



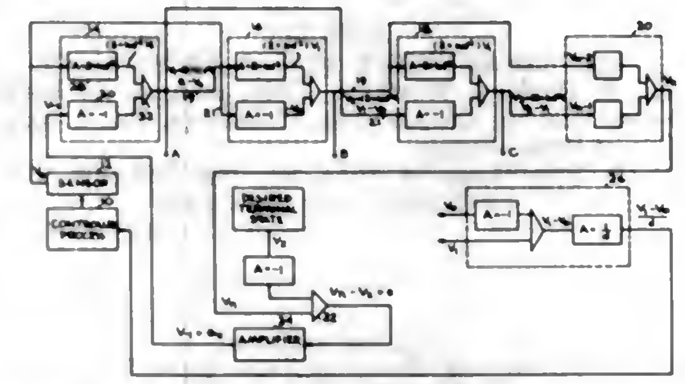
A system for reading information from punched cards in response to a given program instruction wherein a Read Card Decimal instruction causes a reading operation in the decimal mode; a Read Card Binary instruction causes a reading operation in the binary mode and a Read Card Mixed instruction causes the system to read each card in the decimal mode unless a punched hole in the 7th and 9th row position of the first column of the card is read and in that instance reads that card in the binary mode.

3,389,242
CODED ELEMENT AND MEANS FOR USE THEREWITH
Laurence Allan Cross, Jr., Lambertville, N.J., assignor, by mesne assignments, to Randomatic Data Systems, Inc., Trenton, N.J., a corporation of New Jersey
Filed June 4, 1963, Ser. No. 285,336
11 Claims. (Cl. 235—61.12)



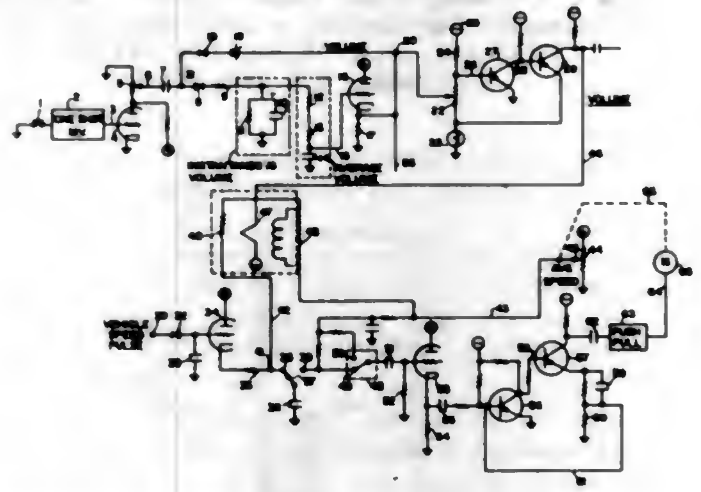
A coded information-carrying element includes a plurality of zones correspondingly subdivided into code locations. The number of locations per zone represents the maximum number of indicia occurring in the coded information, while the order of locations in each zone represents the *order* of the characters. Selected zones are grouped to code a selected indicium. The indicium is thus coded, and its order in the complete series of indicia is established by applying punch marks or other identification to corresponding locations of the zones grouped to represent that indicium.

3,389,243
DYNAMIC OPTIMIZER
John Peschon, Los Altos, Calif., assignor to Stanford Research Institute, Menlo Park, Calif., a corporation of California
Filed June 15, 1964, Ser. No. 375,099
5 Claims. (Cl. 235—150.1)



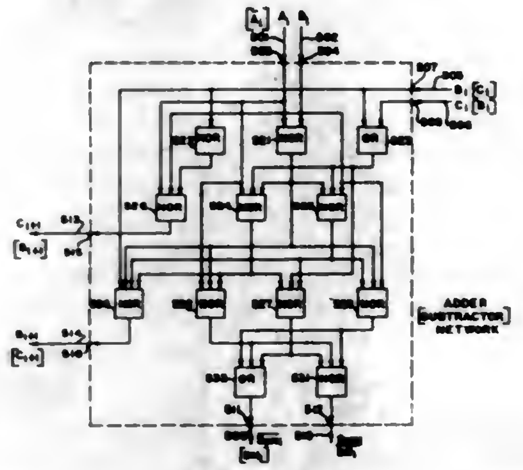
An analogue computer provides the optimal control of a process from information as to the present state of the process and as to the desired terminal state. It does this by solving, over the predetermined increments required to proceed from the present to the desired terminal state, an equation which represents optimal conditions for proceeding from the present to the desired terminal state. From the information provided by the computer and from the information as to the present state of the control process, a rate control signal is calculated which is applied to the controlled process for operating it in a mode responsive to said rate control signal.

3,389,244
TRAFFIC VOLUME OR SPEED COMPUTER WITH ZENER DIODE IN FEEDBACK CIRCUIT
Peter C. Brockett, Milford, Conn., assignor to Laboratory for Electronics, Inc., Boston, Mass., a corporation of Delaware
Original application Sept. 11, 1961, Ser. No. 137,354, now Patent No. 3,239,805, dated Mar. 8, 1966. Divided and this application Dec. 17, 1964, Ser. No. 419,155
15 Claims. (Cl. 235—150.24)



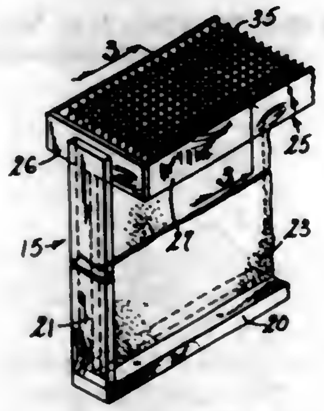
Electrical apparatus for computing an average of a characteristic of traffic flow for a series of cars passing a point. One aspect involves a traffic volume computing circuit employing a condenser charged incrementally by input pulses from the passing vehicles against a relatively short time discharge so that the condenser charge provides a short term pulse rate or "instantaneous traffic volume" voltage, such voltage being applied to an RC circuit of relatively long time constant to provide an average traffic volume signal as an output, the computing circuit having a feedback circuit including a reversed biased Zener diode between such output and the pulse input to provide controlled linearity in computing the traffic volume. Another aspect involves a traffic speed computing circuit for averaging the speeds of a number of vehicles varying linearly with traffic volume, this circuit including a thermistor heated by a heater to vary its resistance to control the number of vehicles in the speed average, the heater being energized from a nonlinear degenerative feedback amplifier circuit controlled by the traffic volume signal to compensate for the nonlinearity in heating the thermistor.

3,389,245
NEGABINARY ADDERS AND SUBTRACTORS
Maurits Pieter Deregt, 6528 Jay Miller Drive, Falls Church, Va. 22041
Continuation-in-part of application Ser. No. 389,760, Aug. 14, 1964. This application Sept. 10, 1965, Ser. No. 486,347
5 Claims. (Cl. 235—175)



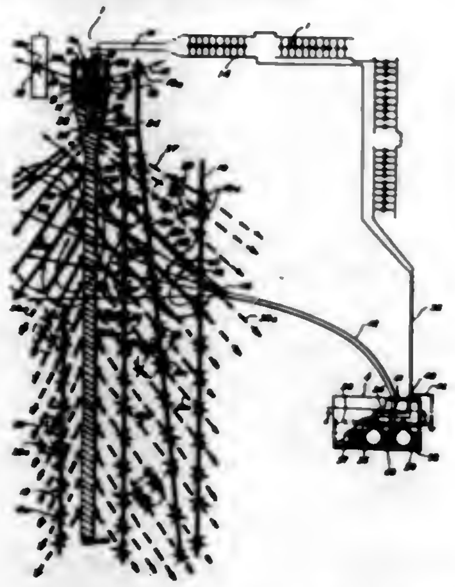
An apparatus using electronic, fluidic, cryogenic or other means for performing arithmetic operations upon two numbers expressed in negative radix notation, wherein the choice of operation may depend on the interconnection and arrangement of a plurality of identical logic circuits, or on the nature of the input signals and the choice of output terminals of each of a plurality of identical stages, or on externally-applied control signals to each of a plurality of identical stages. The apparatus also provides for detection of both negative and positive register overflow situations by appending either two additional identical stages, or two special stages.

3,389,246
ILLUMINATED WALL PARTITION DIVIDER
Sylvan R. Shemitz, Sunbrook Road, Woodbridge, Conn. 06525
Filed Jan. 17, 1966, Ser. No. 521,068
3 Claims. (Cl. 240—2)



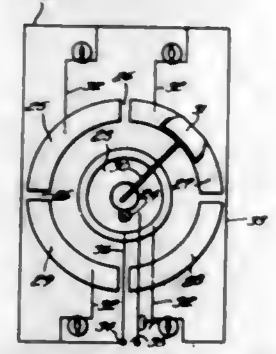
A room divider partition for dividing a room into work areas, at the same time providing direct illumination over a desk or the like positioned adjacent thereto and simultaneously providing light for indirectly illuminating the remainder of the room. The room divider has a divider partition panel which includes a portion constructed for standing on the floor of the room, a frame extending and supported along substantially the entire length of the divider partition panel opposite the portion of the divider partition panel constructed to stand on the floor. This frame overhangs a portion of the divider partition panel, the frame being open on the bottom and top, and provided with illuminating means positioned and supported in said frame.

3,389,247
PENDULUM LIGHT SOURCE
Fay E. Null, Choctawmar Subdivision, Fla.
(Box 158, Shalimar, Fla. 32579)
Filed July 1, 1964, Ser. No. 379,596
10 Claims. (Cl. 240—10)



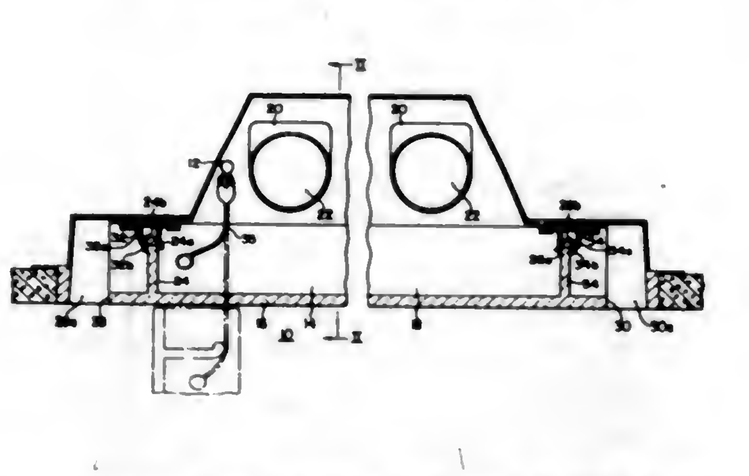
This invention concerns the transfer of intense light from a fixed source to a pendulum source with a single fiber-type suspension, so that in a slight breeze said pendulum will have coupled oscillations of swing and spin. The pendulum source acts as a light funnel by total reflection from the walls except at windows formed at surface angles to interior rays that permit outward refraction. The pendulum oscillations sweep the relatively intense beams from said windows across nearby ornaments with a scintillation pattern that never quite repeats. A light control rheostat also generates entrained air-steam jets for oscillation of said pendulum and to give colored cloud effects.

3,389,248
DWELL LIGHT
Ralph Abrams, Warwick, R.I., assignor to Cable Electric Products, Inc., Providence, R.I., a corporation of Rhode Island
Filed Oct. 23, 1965, Ser. No. 503,866
2 Claims. (Cl. 240—10)



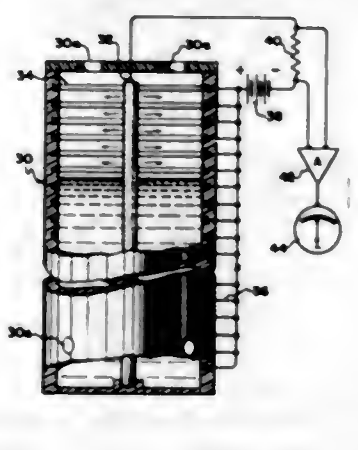
A dwell light in which the front wall of a molded plastic housing is provided with a plurality of multicolored lenses with reflector lamps behind them. A low voltage motor drives a contact arm slowly in a circle to successively contact arcuately spaced elements for lighting each lamp. By elongating the contact elements and the contact end of the moving arm, a dwell effect is created, each light remaining on for a predetermined period when the next succeeding light goes on.

3,389,249
SHIELD SUPPORT FOR A LUMINAIRE
Carle E. Rackley, Westlake, Ohio, assignor to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed June 10, 1966, Ser. No. 556,619
9 Claims. (Cl. 240—147)



A luminaire having a housing defining a bottom opening and a light transmissive shield mounted within and closing off the bottom opening which is releasable from the housing under certain temperature conditions. Resilient thermoplastic clip means are provided along the parallel longitudinal edges of the housing opening which releasably grip the shield and which soften under elevated temperature to release the flammable shield from the ceiling. The luminaire may further include a baffled air entrance path when air handling is required.

3,389,250
MULTIPLE CHAMBER LIQUID LEVEL PROBE
John E. Clemens, Xenia, Ohio, assignor to Industrial Nucleonics Corporation, a corporation of Ohio
Filed Apr. 20, 1964, Ser. No. 361,032
11 Claims. (Cl. 250—43.5)



1. Material level sensing apparatus comprising:

a probe constructed and arranged to be partially submerged in said material and having

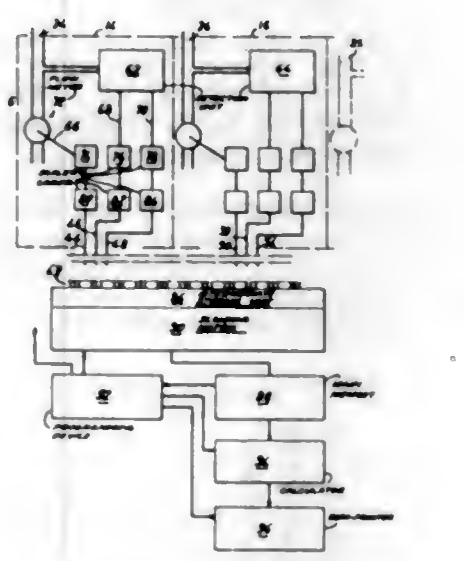
- a first electrode emitting nuclear radiation and extending down the length of said probe and
- a plurality of vertically aligned second electrodes spaced from said first electrode to permit said material to flow in between, said nuclear radiation establishing an ionization region between said first and said second electrodes to provide a current flow between said first electrode and each of said second electrodes in accordance with the electrical conductance of said region,

circuit means responsive to said current flow for measuring the electrical conductance of the region located between each of said second electrodes and said first electrode,

said conductance being significantly different when said material occupies said region than when it does not, and

means for examining the conductance of each of said ionization regions to determine the level at which said conductance changes.

3,389,251
EQUIPMENT FOR MEASURING RADIOACTIVITY AS DISCHARGED IN THE FORM OF EFFLUENTS
Pierre Raimbault, Boulogne-sur-Seine, Jean Goupil, St. Germain-en-Laye, and Yves Marque, Antony, France, assignors to Commissariat à l'Energie Atomique, Paris, France
Filed June 16, 1964, Ser. No. 375,464
Claims priority, application France, June 24, 1963, 939,191
2 Claims. (Cl. 250—43.5)



1. A system for measuring the total radiation confined in a group of effluent deactivation storage tanks comprising,

first meter means connected to each tank in said group for measuring the flow of effluent material into said tanks during a predetermined time interval and producing a first electrical signal proportional to said flow rate,

first radiation detector means connected to each tank in said group for measuring the instantaneous level of radioactivity of the effluent material flowing into said tanks and producing a second electrical signal proportional to the level of said radiation,

second meter means connected to each of a series of conduits through which effluent is drained from said tanks for measuring the flow of effluent material out of said tanks during the predetermined time interval and producing a third electrical signal proportional to said flow rate,

second radiation detector means connected to each conduit of said series for measuring the instantaneous level of radioactivity of the effluent material flowing out of said tanks and producing a fourth electrical signal proportional to the level of said radiation,

third radiation detector means connected to each conduit of said series for measuring the background radiation associated with said conduit and producing a fifth electrical signal proportional to the level of said background radiation,

intermediate electrical pulse storage means having a plurality of inputs,

transmission line means for supplying each of said electrical signals to a separate one of the inputs of said intermediate storage means whereby information represented by said electrical signals is temporarily stored,

main storage means,

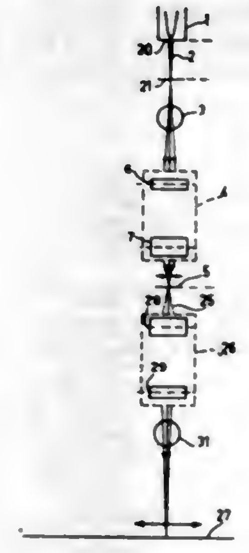
programming means for supplying an electrical control signal,

a scanning matrix connected between said main storage means and said intermediate storage means, actuated by said electrical control signal, for sequentially scanning the inputs of said intermediate storage means and transferring information stored therein to said main storage means,

calculator means, adapted to receive information from said main storage means in response to said electrical control signal, for computing the total radioactivity of the effluent flowing into said tanks during the predetermined time interval as well as the total radioactivity of the effluent material flowing out of said tanks during said predetermined time interval, and

data-printing means connected to said calculator means for printing the calculated value of total radioactivity.

3,389,252
ELECTRON MICROSCOPE HAVING A FOUR-POLE ELECTRON-OPTICAL LENS ASSEMBLY AND A SCANNING LINE-LIKE ELECTRON BEAM
Jan Bart Le Poole, Delft, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed June 4, 1965, Ser. No. 461,379
Claims priority, application Netherlands, June 11, 1964, 6,406,599
10 Claims. (Cl. 250—49.5)



An electron microscope in which an electron beam is focussed on the specimen and with which, by a relative movement between the said beam and the specimen the latter is scanned. Means are also provided for obtaining a reproduction of the specimen projected on an image carrier by intercepting electrons influenced by the specimen. Thus the microscope permits not only a greater intensity of the electron beam focussed on the specimen, but also employs in the microscope itself electron lenses which can more simply be corrected.

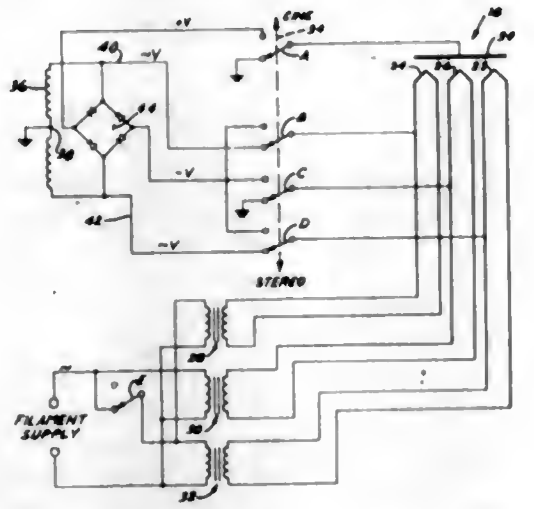
3,389,253

X-RAY APPARATUS FOR SELECTIVELY PRODUCING A STEREOSCOPIC OR MONOSCOPIC X-RAY BEAM

Pieter Willem Kok, New Milford, N.J., assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed June 10, 1965, Ser. No. 462,804

8 Claims. (Cl. 250—61)



A stereoscopic X-ray device is constructed with three electron generating cathodes cooperating with three corresponding anode focal spots. Two of the spots serve as stereoscopic beam emanation points because their respective associated cathodes are coupled to an alternating phase displaced voltage. The third cathode-anode focal spot generates a monoscopic X-ray beam having a higher intensity relative to either of the stereoscopic beams. A switching mechanism serves to selectively couple either stereo or monoscopic cathodes to the appropriate energizing source.

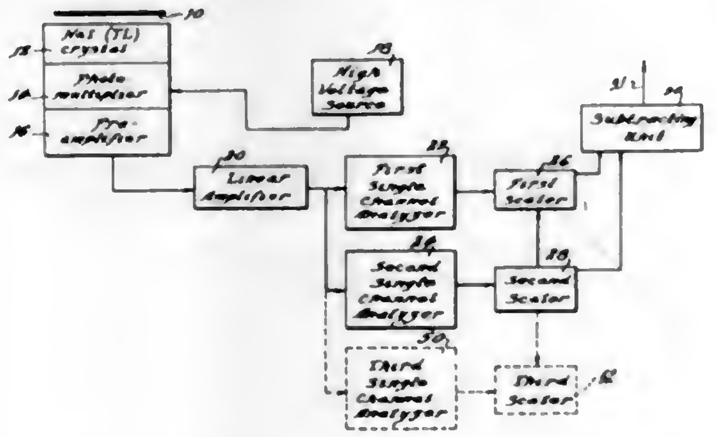
3,389,254

METHOD AND APPARATUS FOR NONDESTRUCTIVE DETERMINATION OF U^{235} IN URANIUM

James T. Russell, Richland, Wash., assignor to the United States of America as represented by the United States Atomic Energy Commission

Continuation of application Ser. No. 309,907, Sept. 18, 1963. This application Aug. 29, 1967, Ser. No. 681,042

8 Claims. (Cl. 250—71.5)



A method and apparatus for determining the relative concentration of U^{235} and U^{238} in a sample of uranium by detecting gamma rays emitted by the sample and measuring the ratio of the number of detected gamma rays having an energy equal to the characteristic 185-kev. U^{235} peak and the number of detected gamma rays having an energy closely adjacent to but higher than the 185-kev. U^{235} peak on the continuum of energies due to radioactive daughters of U^{238}.

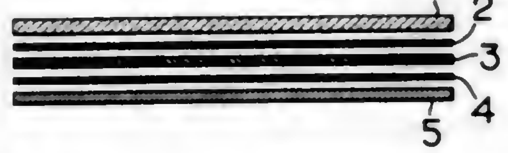
3,389,255

INTENSIFYING SCREENS

Tatsuji Takizawa, Keiji Shimiya, and Akio Kaji, Kanagawa-ken, Japan, assignors to Dai Nippon Toryo Kabushiki Kaisha, Osaka-shi, Japan, a corporation of Japan

Filed Mar. 4, 1964, Ser. No. 349,501

8 Claims. (Cl. 250—80)



1. An intensifying screen for radiography, comprising a layer of fluorescent material, a supporting layer constituted of a material which is transparent of radiation, a metal foil interposed between said layer of fluorescent material and said supporting layer, adhesive layers securing the metal foil to the layer of fluorescent material and to the supporting layer to form an integral body, said fluorescent material being composed of a fluorescent substance of high emission efficiency to radiation, said metal foil being selected from the group consisting of lead foil of 0.01 to 0.5 mm. in thickness and a lead alloy foil equivalent thereto, for preventing scattered radiation from reaching the supporting layer.

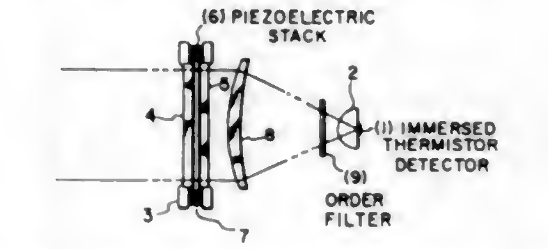
3,389,256

THERMOMETER FOR MEASURING DISTANT TEMPERATURE DISCONTINUITIES IN GASES USING A FABRY-PEROT TYPE SPECTROMETER

Robert W. Astheimer, Westport, Conn., assignor to Barnes Engineering Company, Stamford, Conn., a corporation of Delaware

Continuation-in-part of application Ser. No. 364,151, May 1, 1964, which is a continuation-in-part of application Ser. No. 411,934, Nov. 17, 1964. This application Mar. 4, 1965, Ser. No. 440,352

14 Claims. (Cl. 250—83.3)



A thermometer for measuring temperature discontinuities is described using a Fabry-Perot type spectrometer and effecting spectral scanning by varying the spacing of the Fabry-Perot semitransparent mirrors or the angle at which radiation strikes them. Preferably an order selecting filter is used to select a higher order of interference fringes, for example the 7th order. Another modification drives the Fabry-Perot spectrometer with a sawtooth wave which may be modulated at a higher frequency.

3,389,257

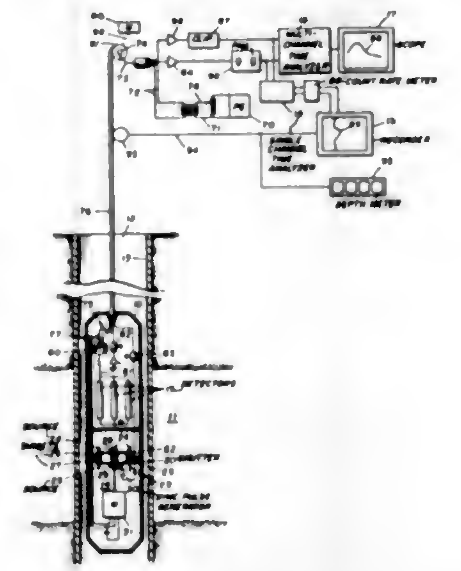
PULSED NEUTRON SOURCE COMPRISING A PLURALITY OF ALPHA SOURCES AND ASSOCIATED TARGETS WITH A ROTATABLE SHUTTER THEREBETWEEN

Richard L. Caldwell and Wyatt W. Givens, Dallas, Tex., assignors to Mobil Oil Corporation, a corporation of New York

Filed Sept. 15, 1964, Ser. No. 396,778

32 Claims. (Cl. 250—84.5)

This specification describes a mechanically actuated pulsed neutron source formed by a plurality of alpha sources spaced from a plurality of associated targets and having a rotatable shutter therebetween for controlling the passage of alpha particles to the targets for producing bursts of fast neutrons. The sources and targets are geometrically positioned and the shutter is constructed to allow all of the targets simultaneously to be irradiated periodically with alpha particles to increase the neutron yield. The sources and targets are maintained in a chamber which is filled with helium at about atmospheric pressure to increase the neutron yield further.



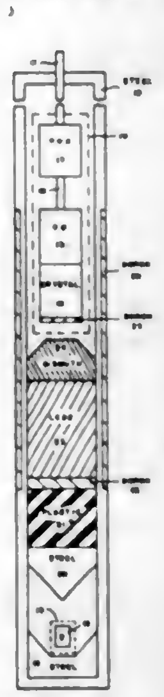
3,389,258

SHIELDING ARRAY FOR CHLORINE LOGGING SONDE UTILIZING NEUTRON AND GAMMA RAY SHIELDING ELEMENTS

Dale H. Reed, Henry F. Dunlap, and William C. Pritchett, Dallas, Tex., assignors to Atlantic Richfield Company, a corporation of Pennsylvania

Continuation-in-part of application Ser. No. 209,352, July 12, 1962. This application July 22, 1964, Ser. No. 384,365

3 Claims. (Cl. 250—108)



1. A shielding array for a chlorine logging sonde having a neutron source located in an air-filled chamber at the lower end of the sonde and a detector including a scintillation crystal and a photomultiplier tube located above the source comprising

- (a) a steel shield positioned above and in close proximity to said neutron source,
- (b) a plastic shield positioned above and adjacent said steel shield,
- (c) a boron shield positioned above and adjacent said plastic shield,
- (d) a lead shield positioned above and adjacent said boron shield, and
- (e) a bismuth shield positioned above and adjacent said lead shield and below said scintillation crystal.

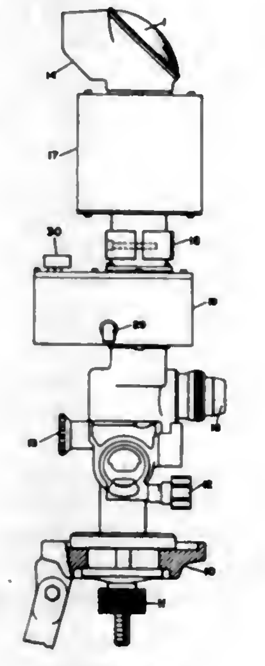
3,389,259

OPTICAL INSTRUMENT ANTI-FLASH SHUTTER SYSTEM

Abe M. Zarem, San Marino, and Stuart M. Hauser, Monrovia, Calif., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Army

Filed Apr. 21, 1965, Ser. No. 449,907

2 Claims. (Cl. 250—201)



Anti-flash shutter system for optical instruments of the type having means for receiving and reflecting light into an optical path terminating in a viewing eyepiece. Included serially in the optical path is a Kerr cell or like electro optical shutter, an objective lens, a high-speed electrically-operated mechanical shutter and a lens system.

An electrical control system for the shutters is provided in connection with an electro-optical flash detector responsive to a flash of light in the field of view and a pulse output signal amplifier therefor. A silicon controlled rectifier is gated by the amplified pulse to apply tripping current to close the mechanical shutter which may be cocked open. A thyratron pulse generator is fired by a delayed portion of the amplified detector pulse output to operate a thyratron-switching element for cutting off a high holding voltage from the electro-optical shutter, thereby permitting it to close just in advance of the above-acting mechanical shutter. Thus a double-acting protection from flash is provided.

3,389,260

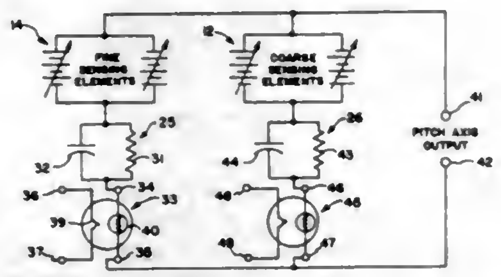
SOLAR SENSOR HAVING COARSE AND FINE SENSING WITH MATCHED PREIRRADIATED CELLS AND METHOD OF SELECTING CELLS

Anthony Fontana, Hampton, Va., assignor to the United States of America as represented by the Administrator of the National Aeronautics and Space Administration

Filed Dec. 8, 1964, Ser. No. 416,943

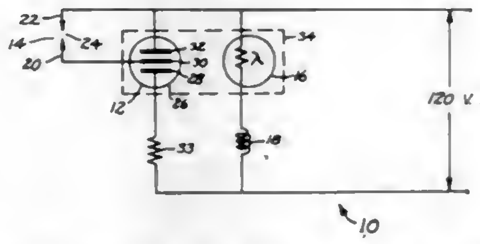
13 Claims. (Cl. 250—203)

A solar sensor having geometrically opposed coarse and fine sensing elements. The elements are located on the pitch and yaw axes and arranged to provide full spherical field of view. Certain of the elements are preirradiated and then matched according to their degradation rates. The sensor has no moving parts thus being particularly adapted for the space environments.



3,389,261
FLAME-RESPONSIVE CONTROL CIRCUIT USING RADIATION SENSITIVE MEANS

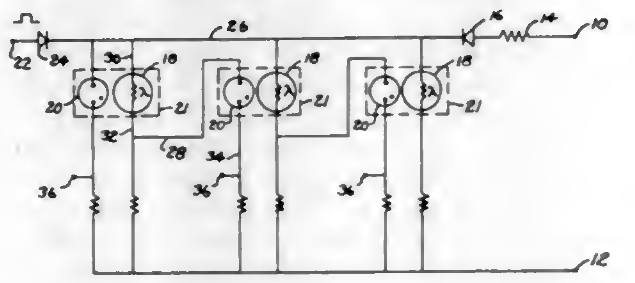
Atlee S. Hart, Oak Park, Mich., assignor to American Standard Inc., a corporation of Delaware
Filed June 30, 1964, Ser. No. 379,309
1 Claim. (Cl. 250—206)



A three electrode glow lamp has a trigger electrode connected to one of a pair of electrodes placed in a flame. The lamp is enclosed in a light-impervious enclosure along with a photocell which comprises part of a control circuit.

3,389,262
RING COUNTER WITH NEON BULBS AND PHOTOCONDUCTIVE CELLS

Atlee S. Hart, Oak Park, Mich., assignor to American Standard Inc., a corporation of Delaware
Filed Oct. 22, 1965, Ser. No. 502,047
3 Claims. (Cl. 250—209)

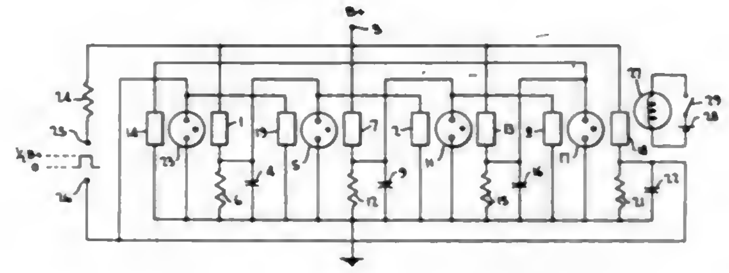


This invention proposes electric circuitry for counting electrical pulses, and applying said pulses to selected load devices in different output lines energized by the circuitry. The circuitry is characterized by glow lamps and photoconductive cells arranged so that each cell energizes the next lamp; i.e., one lamp receives the first pulse to energize the first photo-conductive cell, and that cell in turn furnishes a path for the next pulse to energize the next lamp, and so on.

Novel features of the circuitry are the fact that the pulse supply line connects directly only with one of the power lines which provide the hold-on voltage for the lamps; this reduces the number of circuit connections as compared with arrangements wherein the pulse line connects directly with each lamp or cell.

3,389,263
NEON PHOTOCONDUCTOR RING OSCILLATOR CIRCUIT

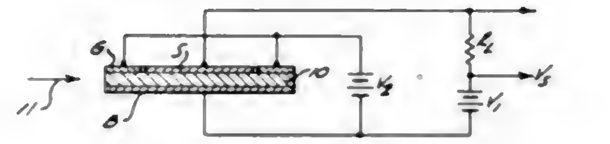
Wesley O. Niccolls, 7015 Centreville Road, Manassas, Va. 22110
Filed Sept. 24, 1965, Ser. No. 490,142
3 Claims. (Cl. 250—209)



A photo-electric ring oscillator circuit having a plurality of oscillator stages and with two photo-electric switches connected as a voltage divider in each stage. The first photo-electric switch is controlled by light radiation from the next preceding stage and the second, by light radiation from the next succeeding stage. Connected in shunt with the second photo-electric switch are a light source and a capacitor. When the first photo-electric switch is made to assume its low-resistance or high-conductivity state, the capacitor charges to the firing voltage of the light source. The light source extinguishes when the second photo-electric switch is made to assume its high-conductivity state.

3,389,264
RADIATION DETECTION WITH GUARD RING DETECTOR

Howard B. Briggs and Walter H. Konkel, Santa Barbara, Calif., assignors to Santa Barbara Research Center, Goleta, Calif., a corporation of California
Filed Oct. 7, 1963, Ser. No. 314,110
6 Claims. (Cl. 250—211)



1. A radiation detector device comprising a slab of semiconductor material, a signal electrode conductor area on one side of the slab, a guard ring conductor area surrounding the signal area on said side of the slab and insulated from the signal electrode area, a base electrode conductor area on the other side of the slab, a signal plate bias circuit between the signal conductor area and the base conductor area, and a guard ring bias circuit between the guard ring conductor area and the base conductor area.

3,389,265
COLORIMETER FOR MEASURING THE TRISTIMULUS COEFFICIENTS OF COLOR IN A LATERALLY MOVING MATERIAL

Jay G. Schreckendgust, Cornwall, N.Y., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed May 3, 1965, Ser. No. 452,565
7 Claims. (Cl. 250—226)

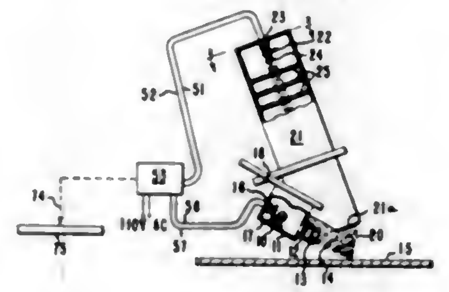
1. A colorimeter for measuring the color characteristics of light diffused from a material which comprises

(A) a light source for directing a collimated beam of light, consisting essentially of wavelengths up to about 7000 Angstrom units, against the surface of said material,

(B) a photocell monitoring said light source,

(C) receptor means for receiving a portion of the light of said beam diffused from the material, said receptor means comprising

  (1) an elongated tube open at one end, said tube disposed to receive said portion of light at said open end and transmit the diffused light to the closed end, said tube having baffles disposed therein for inhibiting spurious light from reaching said closed end,



  (2) at least one detector photocell disposed within said closed end in the path of said diffused light, and

  (3) filter means within said tube for controlling the wavelength distribution of diffused light reaching said photocell,

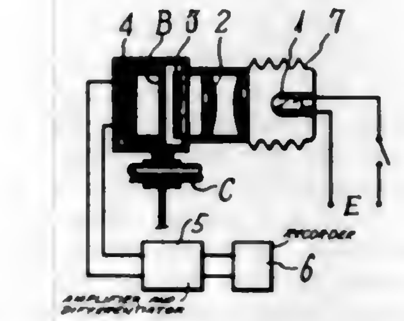
(D) electrical means connecting the output of said detector photocell with one side of the input of an electrical amplifier,

(E) resistance means electrically connecting the output of said monitoring photocell with the other side of the input to said amplifier, and

(F) means for indicating the output of said amplifier.

3,389,266
APPARATUS FOR MEASURING MINUTE VELOCITY FLUCTUATIONS

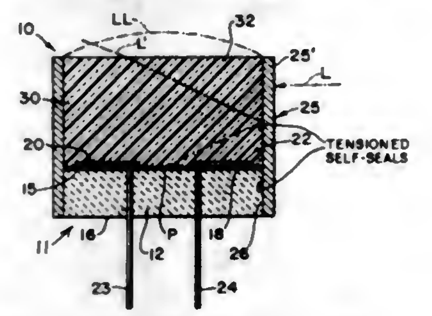
Yoshihiro Okuno, Osaka Prefecture, Japan, assignor to Kabushika Kaisha Daikin Seisakusho, Osaka, Japan, a corporation of Japan
Filed Jan. 20, 1964, Ser. No. 338,996
Claims priority, application Japan, Jan. 26, 1963, 38/3,810
7 Claims. (Cl. 250—231)



1. Apparatus for measuring minute velocity fluctuations of a moving body comprising electrical photosensitive means, means for projecting a narrow beam of light on said photosensitive means, said photosensitive means having means connectable to electrical circuitry for impressing a voltage on said photosensitive means, said circuitry including means for amplifying, differentiating and recording the current passing through said photosensitive means and means mountable for movement with said body, movable along a line of travel intersecting said light beam, said movable means having at least one opening extending along the line of travel thereof and said opening having diverging opposed side edges intersecting said light beam whereby the effective length of said light beam incident upon said photosensitive means varies corresponding to the movement of said movable means along the line of travel thereof.

3,389,267
PHOTOELECTRIC CELL WITH HEAT SINK

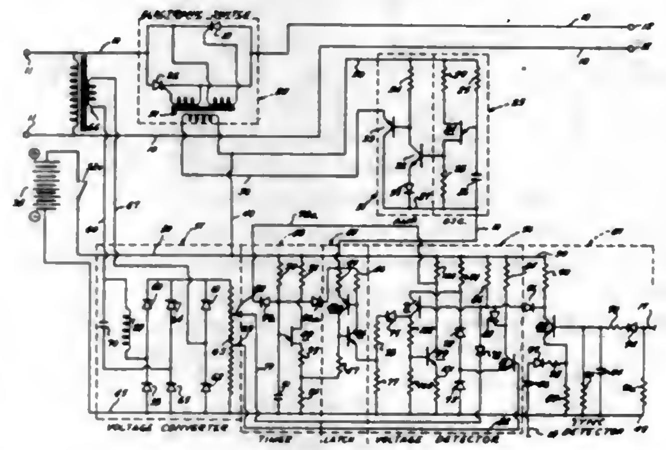
Simon S. Aconsky, Long Island City, N.Y., assignor to Clairex Corporation, New York, N.Y., a corporation of New York
Filed Sept. 10, 1965, Ser. No. 486,439
8 Claims. (Cl. 250—238)



1. A photoelectric cell, comprising a photoconductive disk-like wafer having a peripheral wall and two opposing sides, a massive thermally conductive tubular shell open at both ends, said shell having one tensioned end portion extending around said wafer in virtual hermetic sealing engagement with the entire periphery of the wafer, said shell having another end portion extending axially away from one side of the wafer to define a chamber therewith, and a massive, transparent, solid body constituting a lens filling said chamber, said other end portion of the shell having its inner side disposed in tensioned hermetic sealing engagement with the periphery of said body, said shell having less thermal inertia and more thermal conductivity than both said wafer and said body, whereby said shell serves as a heat sink to conduct heat away from said wafer and said body and effectively protect the wafer from damage by said heat.

3,389,268
LINE CONTROL FOR A.C. POWER LINES

Robert S. Jamieson, San Juan Capistrano, and Paul E. Rolfes, Costa Mesa, Calif., assignors, by mesne assignments, to Lorain Products Corporation, Lorain, Ohio, a corporation of Ohio
Filed Mar. 16, 1964, Ser. No. 352,103
9 Claims. (Cl. 307—66)



A line control in which a synchronism signal is derived from an A.C. power line on the input side of a line switch, such signal being fed through a variable phase-shift means. The phase-shifted signal is used to govern a synchronism control which, in turn, drives an inverter the output of which is continuously connected to the line on the output side of the line switch. Means, including a synchronism detector which compares signals from the synchronism control and from the inverter, are provided to open the line switch in response to out-of-tolerance voltage or frequency conditions.

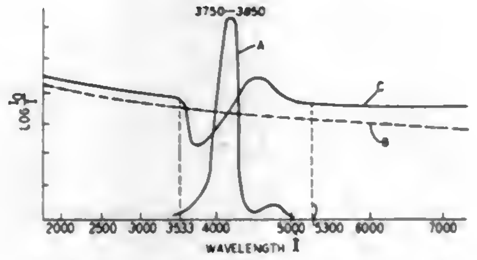
3,389,269

OPTICAL LIQUID PARAMETRIC DEVICES WITH INCREASED COHERENCE LENGTH USING DYE

Joseph A. Giordmaine, Summit, and Peter M. Rentzepis, Millington, N.J., assignors to Bell Telephone Laboratories, Incorporated, Murray Hill, N.J., a corporation of New York

Filed Dec. 27, 1966, Ser. No. 604,925

5 Claims. (Cl. 307—88.3)



1. A high frequency mixing arrangement comprising a liquid solution having a chemically stable constituent characterized by a twisted molecule, means for directing first and second light beams into said solution at an angle to each other such that said beams intersect within the solution and mix to produce a polarization wave and a free wave within the solution, and means within the solution for increasing the coherence length of the produced waves comprising a substance having an absorption peak which occurs at a wavelength lying between the wavelengths of the generated waves and the higher frequency wave of said first and second light beams.

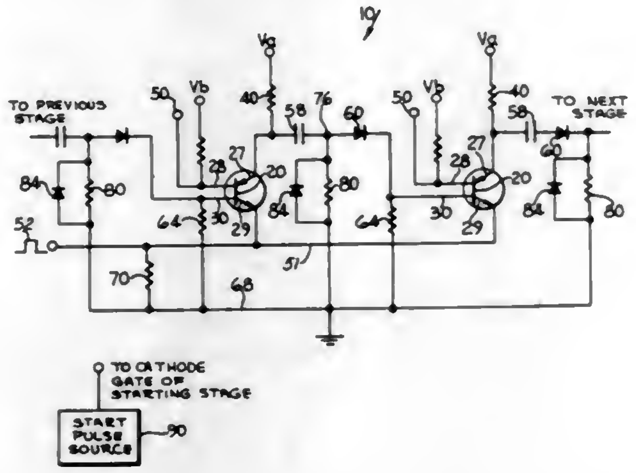
3,389,270

SEMICONDUCTOR SWITCHING CIRCUIT

Gerhard G. Schoenfeld, Berkeley Heights, N.J., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan

Filed Aug. 4, 1965, Ser. No. 477,246

6 Claims. (Cl. 307—225)



The disclosure is of a multiple stage counter circuit including a plurality of four-electrode semiconductor devices, each device including anode, anode gate, cathode, and cathode gate electrodes. The anode is used to couple signals through a capacitor from one stage to the cathode gate of the next stage. Input counting pulses are applied to the cathodes of the counting devices, and each input pulse turns off a device which is on and thereby causes a positive pulse to be coupled from the anode of the turned off device to the cathode gate of the next device which is thus turned on.

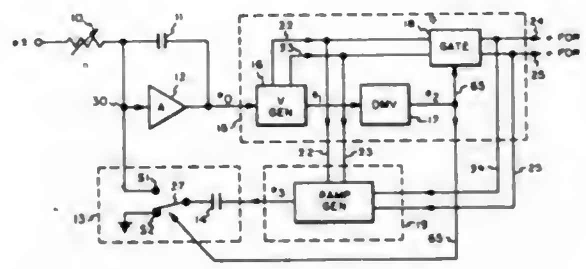
3,389,271

VOLTAGE-TO-FREQUENCY CONVERSION CIRCUIT

John W. Gray, Pleasantville, N.Y., assignor to General Precision Systems Inc., a corporation of Delaware

Filed Sept. 14, 1965, Ser. No. 487,198

10 Claims. (Cl. 307—235)



2. A voltage-to-frequency converter circuit including: input means for receiving an input voltage,
means responsive to the polarity and amplitude of said input voltage for generating a varying signal representative of the polarity of said input voltage and varying at a rate proportional to the amplitude of said input voltage,
means responsive to said varying signal for generating first and second logic signals having a relationship with respect to each other in accordance with the polarity of said input voltage,
means responsive to said varying signal for generating a sweep voltage in which the rate of sweep of said sweep voltage corresponds to the rate at which said varying signal varies,
means for generating a timed pulse in response to said sweep voltage passing through a predetermined voltage value between the extremes of said sweep,
gate means responsive to said timed pulse for providing a first pulsed output when the relationship between said first and second logic signals indicate said input voltage is of one polarity and for providing a second pulsed output when said first and second logic signals indicate said input voltage is of another polarity,
means responsive to said first and second logic signal and said first and second pulsed outputs for generating a voltage signal having a first predetermined value during the interpulse period when said logic signals indicate said input voltage is of one polarity and for varying said voltage signal to a second predetermined value during the timed pulse period and for generating another voltage having said second predetermined value during said interpulse period when said logic signals indicate said input voltage is of another polarity and for varying said another voltage to said first predetermined value during the timed pulse period,
a reset capacitor coupled for receiving the voltage signals of the last mentioned means,
switch means operable in response to said timed pulse and coupled to said capacitor for coupling said capacitor to a reference during said interpulse period for charging said capacitor to the value of voltage signal output of said last mentioned means and for coupling said capacitor so charged to said input means during the timed pulse period for reducing the voltage level at said input to substantially reference value during said timed pulse period.

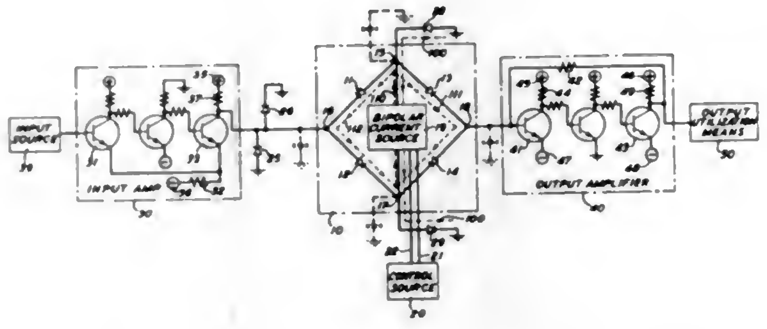
3,389,272

GATED TRANSMISSION ARRANGEMENT

Edward M. Cherry, Summit, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Mar. 17, 1964, Ser. No. 352,603

23 Claims. (Cl. 307—257)



A gated transmission arrangement which is designed to selectively transmit current, rather than voltage signals. Signal voltages are converted into current signals by a high output impedance current source. The gating apparatus, which typically comprises a diamond diode bridge network, selectively passes the current signal to a low input impedance load, thereby minimizing output voltage swings and the effect of stray capacity. Voltage suppression has been included to prevent transmission of spurious signals when the gating apparatus is in a nonconducting state.

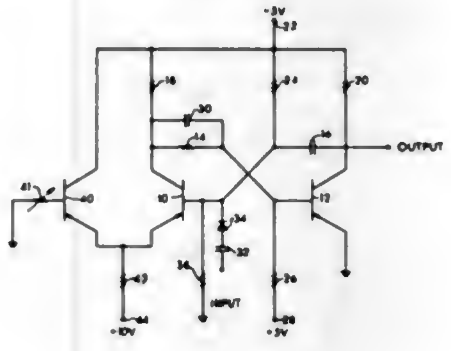
3,389,273

TEMPERATURE COMPENSATED MULTIVIBRATOR

Frederick J. Haines, Alexander, N.Y., assignor to Sylvania Electric Products Inc., a corporation of Delaware

Filed Feb. 5, 1965, Ser. No. 430,564

1 Claim. (Cl. 307—310)



Temperature-compensating network incorporated in the circuitry of one transistor of a two-transistor monostable multivibrator. The network includes a transistor having substantially the same characteristics as the multivibrator transistor with which it is associated. The compensating transistor is connected such that a leakage current is developed at its emitter due to temperature changes in the same manner as the associated multivibrator transistor. The emitters of both transistors are connected in common to a series combination of a resistor and a voltage source. The leakage currents from both of the transistors have the effect of changing the voltage across the resistor, which changed voltage, in turn, alters the current flow through the associated multivibrator transistor so as to compensate for the temperature changes therein.

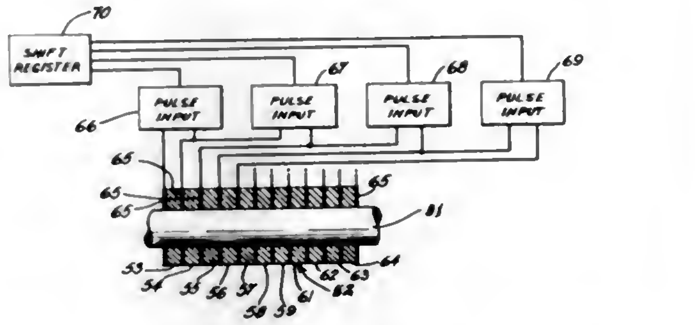
3,389,274

PERISTALTIC ACTUATOR

Hugh J. Robertson, Wilton, Conn., assignor to The Perkin-Elmer Corporation, Norwalk, Conn., a corporation of New York

Filed Dec. 6, 1965, Ser. No. 511,704

19 Claims. (Cl. 310—8)



1. A peristaltic actuator comprising: a first member, a second member, of material changeable in size when excited, in frictional communication with and mounted for slidable movement in the direction of its longitudinal axis relative to said first member, and means for exciting portions of said second member in sequence along the direction of its longitudinal axis, causing thereby a displacement of one of said members relative to the other member.

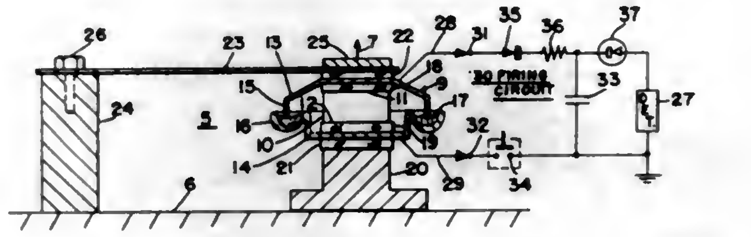
3,389,275

PIEZOELECTRIC GENERATOR UNIT FOR SPACE VEHICLES

Jack Brothers, Succasunna, N.J., assignor to the United States of America as represented by the Secretary of the Army

Filed Jan. 19, 1967, Ser. No. 610,450

8 Claims. (Cl. 310—8.3)



A piezoelectric crystal wafer is enclosed in a casing comprising its own electrodes which are of thin flexible conductive material and cup-shaped with the edges meeting in opposed relation and joined by an annular body or ring of insulating material. One electrode is secured to fixed support means of relatively large weight and mass in a carrier such as a projectile, and the other is connected with a body of relatively lesser weight and mass which is free to respond to setback force and vibrate on the crystal axis with respect to the fixed support means, thereby to apply relative vibratory movement to the electrode connected therewith for voltage generation. The vibratory body or mass is spring mounted and may derive motion from vibratory motor means or from setback forces on launching.

3,389,276

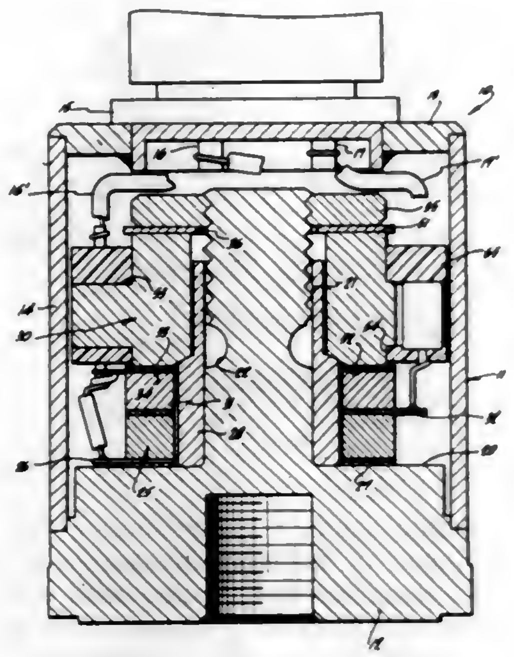
PIEZOELECTRIC INSTRUMENT TRANSDUCERS

James H. Gradin, Whittier, Billy R. Tolliver, Glendora, and Shmuel Elazar, El Monte, Calif., assignors to Consolidated Electrodynamics Corporation, Pasadena, Calif., a corporation of California

Filed May 25, 1965, Ser. No. 458,579

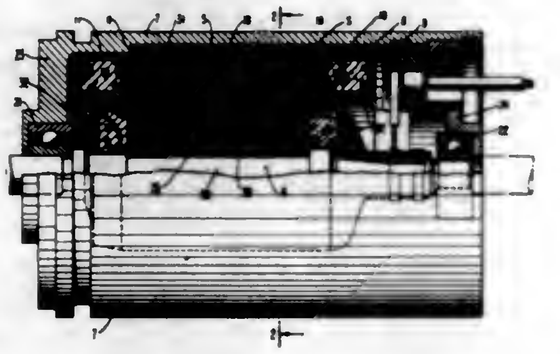
1 Claim. (Cl. 310—8.4)

A transducer including a piezoelectric device and a mass coupled to the device within a transducer housing, and in which active electronic circuit means, such as an impedance converting amplifier, are mounted to the mass and are coupled between the device and transducer output and circuit energization terminal means for conditioning a signal generated by the device prior to presentation of the signal to the output terminal means.



3,389,277
DAMPED ELECTRICAL APPARATUS

William Victor Fiore, Montrose, Pa., assignor to The Bendix Corporation, a corporation of Delaware
Filed May 22, 1967, Ser. No. 640,256
10 Claims. (Cl. 310—77)

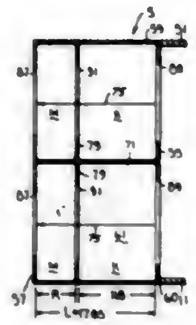


A liquid damped rotary transformer or synchro receiver comprising a rotor having a cylindrical portion positioned in a cylindrical bore of a stator, only the annular clearance space between the rotor and stator being filled with a viscous silicone or comparable damping fluid.

3,389,278
DYNAMOELECTRIC MACHINES

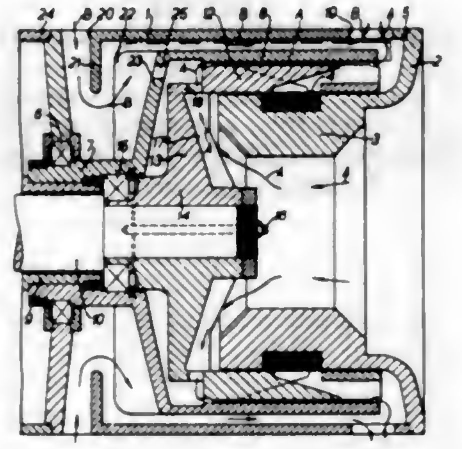
Ralph L. Jaeschke, Kenosha, Wis., assignor to Eaton Yale & Towne Inc., a corporation of Ohio
Continuation-in-part of application Ser. No. 456,094, May 17, 1965. This application Dec. 28, 1965, Ser. No. 528,675
28 Claims. (Cl. 310—105)

Assemblies are disclosed for suppressing sound generated by the relatively rotary members of air or gas-cooled dynamoelectric machines, such as motors and dynamometers. The assembly is constituted by a housing with one or more air inlet passages connected to one or more air inlet openings of the machine. The housing also includes one or more air outlet passages connected to one or more air outlet openings of the machine. Each inlet and outlet passage is provided with a cross wall positioned transversely to the direction of air flow and has an aperture smaller than the respective air inlet and outlet openings. These cross walls are positioned in the passages in a direction away from the openings and at a distance substantially equal to a wavelength function of the characteristic frequency of the sound in the air circulating through the respective passages. Sound suppressors having more than one apertured cross wall are described for effecting substantial cancellation of sound of more than one characteristic frequency.



3,389,279
EDDY CURRENT COUPLING

Philip Elliott Herrick, Wotton-under-Edge, Gloucester, England, assignor, by mesne assignments, to The Louis Allis Company, Milwaukee, Wis., a corporation of Delaware
Filed Mar. 23, 1966, Ser. No. 536,873
9 Claims. (Cl. 310—105)

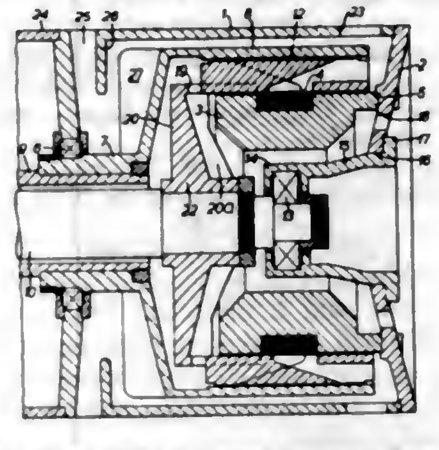


An eddy current coupling includes a hollow field coil surrounded by a pole assembly having impeller blades thereon for inducing an airflow through the field coil. Apertures in the pole assembly permit airflow into an annular space between the pole assembly and an inductor drum. A flange of the drum is provided with impeller blades which may extend along the axial portion of the drum. The blades on the flange induce airflow across the axial blades to cool the drum.

3,389,280
EDDY CURRENT COUPLING

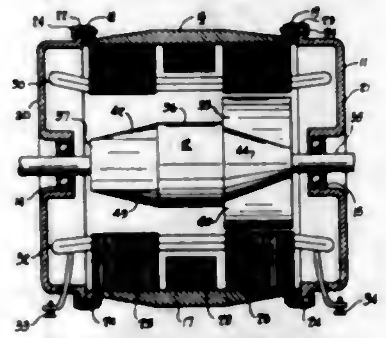
Philip Elliott Herrick, Wotton-under-Edge, Gloucester, and Kenneth Martin Nicol, Amberley, Stroud, Gloucester, England, assignors, by mesne assignments, to, The Louis Allis Company, Milwaukee, Wis., a corporation of Delaware
Filed Mar. 23, 1966, Ser. No. 536,874
9 Claims. (Cl. 310—105)

An eddy current coupling is disclosed in which an output shaft is mounted coaxially with respect to a field coil. A nonmagnetic bearing support extends into a central cavity of the field coil for supporting a bearing housing. The housing encloses a bearing for supporting one end of the output shaft. The bearing support forms an air gap between the field coil and the housing to thermally and magnetically isolate the housing from the field coil.



3,389,281
ROTOR FOR INDUCTOR ALTERNATOR

James N. Ellis, Glendale, Calif., assignor to Lear Siegler, Inc., Santa Monica, Calif., a corporation of Delaware
Filed Aug. 23, 1965, Ser. No. 481,757
7 Claims. (Cl. 310—168)



1. In an inductor alternator the combination comprising:

a housing;

stator means in said housing including at least two sets of laminations and a plurality of stator windings each coupled to at least one set of said laminations; and

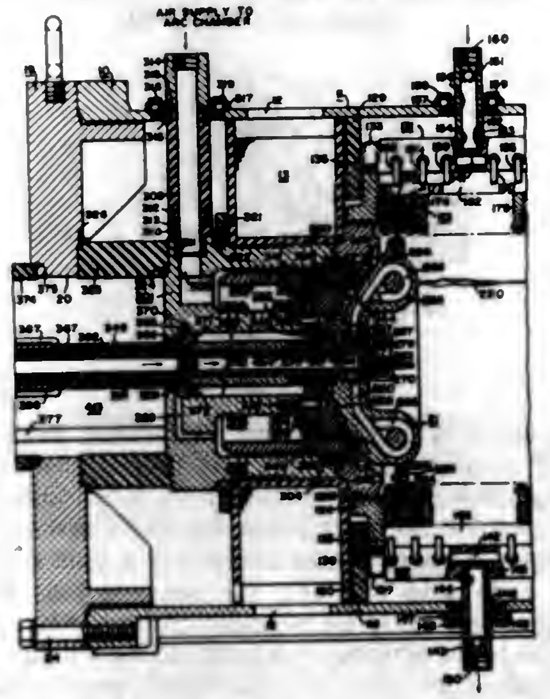
rotor means rotatably mounted in said housing including a shaft and an armature on said shaft having

a longitudinally central section, at least two groups of poles on said shaft, one on each side of said central section, each group including a plurality of poles equally circumferentially spaced relative to the armature axis and tapered sections between adjacent poles of each group, each of said tapered sections tapering from the edge of said cylindrical section toward the armature axis.

3,389,282
ARC HEATER APPARATUS AND HEAT SHIELD ASSEMBLY FOR USE THEREIN

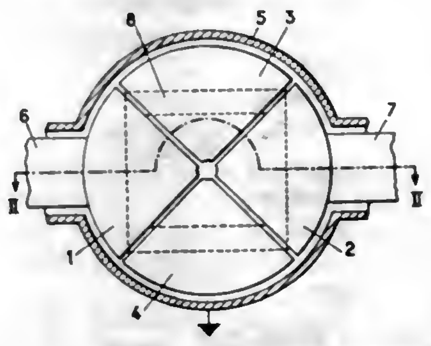
Thomas E. Browne, Jr., Forest Hills, and Charles B. Wolf, Irwin, Pa., assignors to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Jan. 27, 1964, Ser. No. 340,221
16 Claims. (Cl. 313—19)

1. In arc heater apparatus, in combination, means including wall means forming an arc chamber having first and second fluid cooled annular electrodes therein, means for bringing electrical energy to the electrodes to produce an arc therebetween, and magnetic field producing means disposed near the electrodes for producing a magnetic field which causes said arc to rotate in an annular path around the arcing surfaces of the annular electrodes, the chamber having means for admitting gas thereto and means for exiting gas therefrom, the means for admitting gas providing that said gas is admitted at a plurality of points in a circular entrance path around the outside of said first electrode and near the annular arc path, said means for exiting gas including an exhaust vent for exiting only gas which passes through the annular arc path and through the inside of the second annular electrode, the wall means of the arc chamber including a plurality of stacked axially aligned rings, each ring being electrically insulated from the adjacent rings on both sides thereof, the rings having an inside diameter greater than the outside diameter of the electrodes and substantially enclosing the space between electrodes whereby direct radiation from the arc reaches only the electrodes, the rings of the chamber wall means, and the exiting means.



3,389,283
ELECTRODE STRUCTURE CYCLOTRON HAVING GROUNDED COUPLING PLATES BETWEEN THE DEE-RINGS

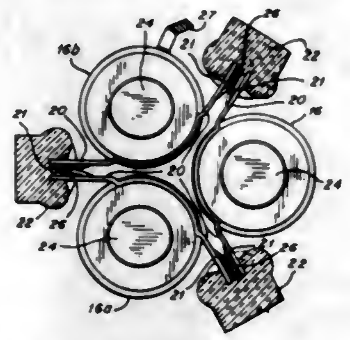
Jean Claude Schnuriger, Paris, France, assignor to CSF—Compagnie Generale de Telegraphie Sans Fil, Paris, France
Filed Dec. 18, 1964, Ser. No. 419,513
Claims priority, application France, Dec. 19, 1963, 957,735
8 Claims. (Cl. 313—62)



A cyclotron comprising a pair of sectoral dee electrodes with the sector angle reduced below 180°, separated by grounded electrodes, wherein coupling electrodes, insulated from ground and extending between the surfaces of the dee electrodes and the internal walls of the envelope of the cyclotron are provided with such a shape that the capacitance coupling the electrode to the dee is high with respect to the capacitance coupling the electrode to ground, thereby enhancing the difference between resonant frequencies of the electrical circuit of the cyclotron, when operated in push-push or push-pull mode, respectively.

3,389,284
ELECTRON GUN STRUCTURE HAVING SUPPORTING TABS THEREFOR

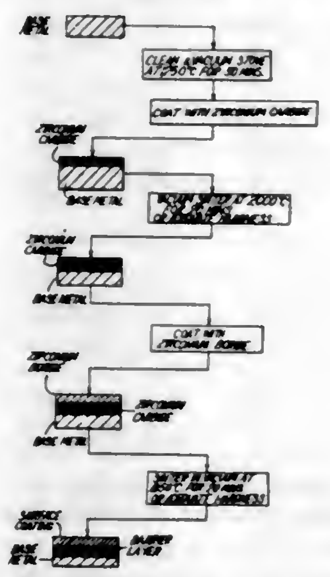
Arthur H. Andrews, Glenview, Ill., assignor to Admiral Corporation, Chicago, Ill., a corporation of Delaware
Filed Mar. 21, 1966, Ser. No. 536,166
4 Claims. (Cl. 313—82)



1. An electron gun structure comprising three similar groups of coaxial substantially cup-shaped elements symmetrically spaced from each other on longitudinally converging axes for forming three distinct converging electron beams; support means including a pair of support tabs for each said element; the support tabs for each group being formed to lie adjacent corresponding support tabs of the other groups; said support means also including three elongate glass beads adapted, when heated, for deformably engaging said support tabs and rigidly supporting said tabs when cooled; the support tabs of at least one corresponding element of each group having tines, corresponding ones of which are offset from the planes of their respective tabs in substantially touching contact with corresponding adjacent offset tines of said other elements to facilitate electrical connection thereof.

3,389,285
GRID ELECTRODE HAVING A BARRIER LAYER OF METAL CARBIDE AND A SURFACE COATING OF METAL BORIDE THEREON

Bernard Thomson, Plumstead, Capetown, Cape Province, South Africa, assignor to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware
Filed Aug. 26, 1965, Ser. No. 482,757
Claims priority, application Great Britain, Sept. 8, 1964, 36,742/64
7 Claims. (Cl. 313—107)



A barrier layer of a metal carbide such as zirconium carbide and a surface coating of a metal boride such as zirconium boride are employed on a refractory metal base to suppress grid emission in an electron tube.

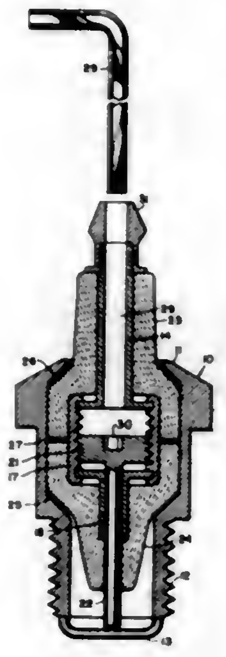
3,389,286
ELECTRONIC DEVICES USING CERTAIN POLYVINYLALCOHOL CYANOALKYL ETHERS AS A DIELECTRIC

Hideo Takahashi and Masayuki Emoto, Tokyo-to, Saburo Imoto and Osamu Ohara, Kurashiki-shi, and Toshiro Masuda, Saijo-shi, Japan, assignors to Kabushiki Kaisha Hitachi Seisakusho, Tokyo-to, and Kurashiki Rayon Kabushiki Kaisha, Okayama-ken, Japan, both Japanese joint-stock companies
Filed May 3, 1965, Ser. No. 452,553
Claims priority, application Japan, May 2, 1964, 39/24,955
2 Claims. (Cl. 313—108)

An electronic device consisting of at least two mutually opposed electrodes and a dielectric interposed therebetween. The dielectric contains at least one polyvinyl alcohol cyanoalkyl ether and electroluminescent phosphors dispersed therein, and a dielectric matrix of polyvinyl alcohol cyanoalkyl ether.

3,389,287
ADJUSTABLE SPARK PLUG

Paul T. Wolcott, 740 E. Michigan, Marshall, Mich. 49068
Filed Nov. 28, 1966, Ser. No. 597,417
4 Claims. (Cl. 313—125)



1. A spark plug comprising:

a metal housing having a downwardly open tubular threaded portion for engagement with an engine, and also having a diametral electrode bar across the end of said threaded portion;

first and second ceramic members having at least portions thereof received within said housing, said ceramic members being separable on a plane perpendicular to the axis of said threaded portion, and said ceramic members each having an axial bore and together defining a central recess;

a sleeve of conductive material having a threaded inside diameter, and disposed within said recess;

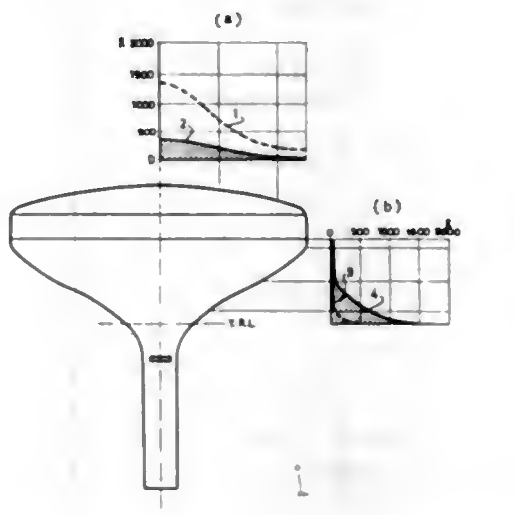
a lower tubular member coaxial with and secured with respect to said sleeve, and extending within the axial bore of one of said ceramic members;

an upper tubular member of conductive material coaxial with and secured with respect to said sleeve, and extending within the axial bore of the other of said ceramic members; and

an adjustable electrode having a portion extending within said lower tubular member in closely fitting relationship, and through said axial bore associated therewith, said electrode having a threaded portion in engagement with said sleeve, said electrode having a wrench recess in the top surface thereof in axial alignment.

3,389,288
GETTERING DEVICE INCLUDING A GETTER METAL AND A GAS RELEASING MATERIAL

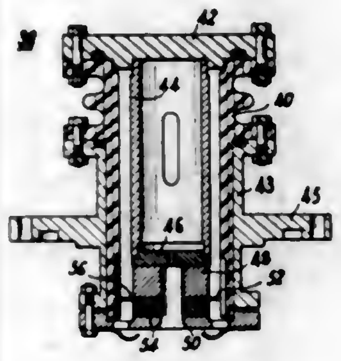
Paolo della Porta, Milan, Tiziano A. Giorgi, Rho, Milan, and Elio Rabusin, Milan, Italy, assignors to S.A.E.S Getters S.p.A., Milan, Italy, a company of Italy
Filed Aug. 24, 1965, Ser. No. 482,104
Claims priority, application Italy, Feb. 25, 1965, 1,708/65, Patent 742,042
10 Claims. (Cl. 313—174)



Getter devices comprising an evaporable getter metal such as barium and a material which releases gas such as nitrogen. These getter devices find particular utility in television picture tubes and the like wherein they yield a reduced amount of getter metal on the tube screen.

3,389,289
PLASMA GUN HAVING A HYDROGEN STORING RESERVOIR

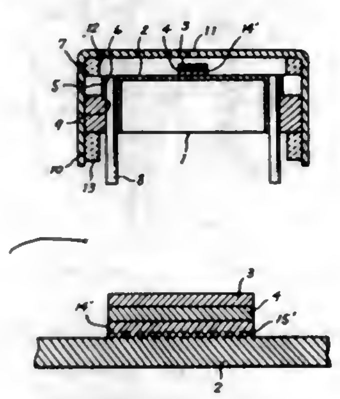
André Marc Bensussan, 57 Ave. de Suffren, Paris, France, and Yves Papillon, 27 Ave. de la Gilquiniere, Morsang-sur-Orge, France
Filed Aug. 31, 1965, Ser. No. 483,991
Claims priority, application France, Sept. 7, 1964, 987,317
5 Claims. (Cl. 313—180)



The present invention relates to a plasma gun having a hydrogen reservoir consisting of powdered titanium hydride which is agglomerated with an insulating binder material also in powder form. Electrodes are arranged to form a spark gap adjacent to said hydrogen reservoir. When the electrodes are energized with a predetermined potential, an electrical discharge occurs across said spark gap which contacts the hydrogen reservoir and ionizes gas released therefrom to form a burst of plasma.

3,389,290
ELECTRON GUN DEVICE

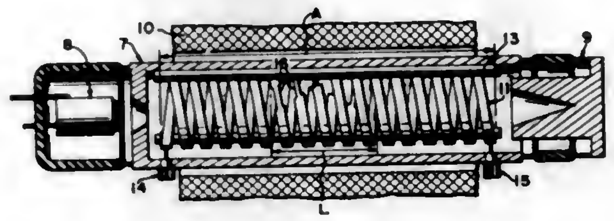
Susumu Yoshida, Tokyo, and Hiroki Sato, Ituma-gun, Saitama-ken, Japan, assignors to Sony Corporation, Tokyo, Japan, a corporation of Japan
Filed Apr. 6, 1965, Ser. No. 446,054
6 Claims. (Cl. 313—337)



Electron emitter assembly wherein a graphite heating element is connected to a lead consisting predominantly of nickel by an intermediate layer including an integral carbide of a refractory metal and an alloy of nickel and the refractory metal.

3,389,291
OSCILLATION SUPPRESSION MEANS FOR HIGH FREQUENCY ELECTRON DISCHARGE DEVICES INCORPORATING TRAVELING WAVE TUBE PORTIONS

John A. Ruetz, Los Altos, Calif., assignor to Varian Associates, Palo Alto, Calif., a corporation of California
Filed Apr. 30, 1965, Ser. No. 452,158
10 Claims. (Cl. 315—3.6)

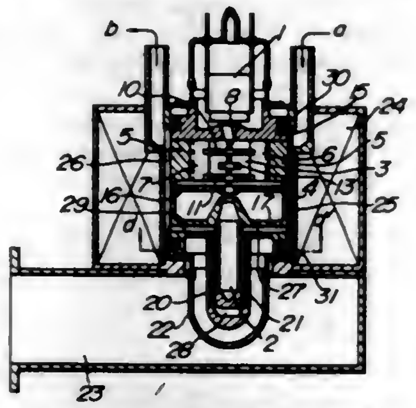


A helical slow wave circuit for use in traveling wave amplifier tubes. A series of notches cut into the helix provide a stop band at frequencies where backward wave oscillations are likely to occur. The notches are cut only in a central portion of the helix and the depth of the notches is tapered so that the depth decreases in a direction away from the center of the helix, with the result that spurious oscillations at the edges of the stop band are suppressed.

3,389,292
ELECTRON DISCHARGE DEVICE CAVITY RESONATOR HAVING A PLURALITY OF PERFORATED MEMBERS ALTERNATELY POSITIONED AT RIGHT ANGLES TO THE BEAM AXIS

Ryoka Sawada, Kokubunji-shi, and Yoichi Kaneko, Hachioji-shi, Japan, assignors to Hitachi, Ltd., Tokyo, Japan, a corporation of Japan
Filed Nov. 30, 1965, Ser. No. 510,548
Claims priority, application Japan, Dec. 9, 1964, 39/68,853, 39/68,854; Dec. 18, 1964, 39/71,059, 39/71,060
4 Claims. (Cl. 315—3.6)

An electron discharge device of the high power, high frequency type including a cavity resonator former as a multi-gap slow wave structure having four support plates provided at equally circumferentially spaced positions on the inner wall of the cavity resonator and disposed oppositely to one another in pairs, and a plurality of first and second perforated members alternately disposed at



right angles to the axis of the discharge device, each having an electron beam passage aperture and being supported by alternate pairs of support plates.

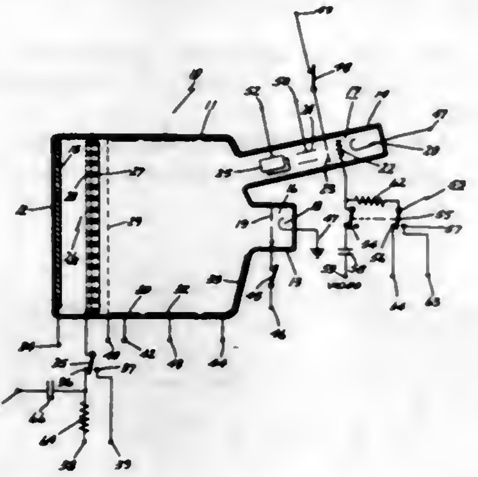
3,389,293

METHOD AND SYSTEM FOR PROVIDING VISUAL AND ELECTRICAL READ-OUT IN SIGNAL-TO-IMAGE STORAGE TUBE

Weldon W. Greutman, Hicksville, Ohio, assignor to International Telephone and Telegraph Corporation, a corporation of Delaware

Filed Nov. 6, 1964, Ser. No. 409,382

7 Claims. (Cl. 315—12)



An image storage tube selectively provides visual and electrical read-out. A writing beam stores a charge image on an insulator screen which then modulates a flood beam to display the image on a display screen. Electric read-out of the image is provided by a writing beam of increased current which is on simultaneously with the flood beam. Output signal is taken from the backing electrode of the insulator screen or a collector electrode.

3,389,294

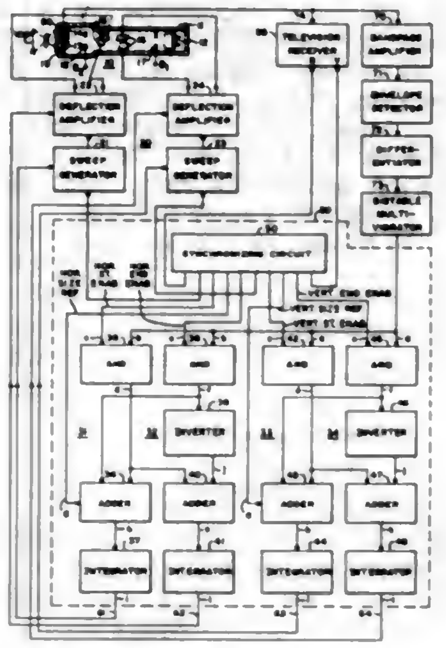
IMAGING SYSTEM IN WHICH THE SIZE AND CENTERING OF THE RASTER ARE KEPT CONSTANT

David B. Shaw, White Plains, N.Y., assignor to Hazeltine Research Inc., a corporation of Illinois

Filed Feb. 28, 1964, Ser. No. 348,081

14 Claims. (Cl. 315—19)

An imaging system, such as a TV type camera, for converting an electromagnetic image into an electrical signal representative of the image by converting the electromagnetic image into an electrical image and sequentially scanning the electrical image with a raster. The electrical image is bordered by a reticle in the form of a series of fine lines or solid bands either imaged thereupon or etched onto the target. The reticle is scanned with the electrical image representative of the electromagnetic image and the portion of the electrical signal which results from scanning the reticle is separated from the remainder of the signal by frequency or time separation. The extent of overlapping on each side of the raster is determined and compared with a signal representative of the desired extent of overlapping in order to regulate the size of the raster. The extent of overlapping along one side of the raster is compared with the extent of overlapping along the opposite side of the raster in order to control the centering of the raster.



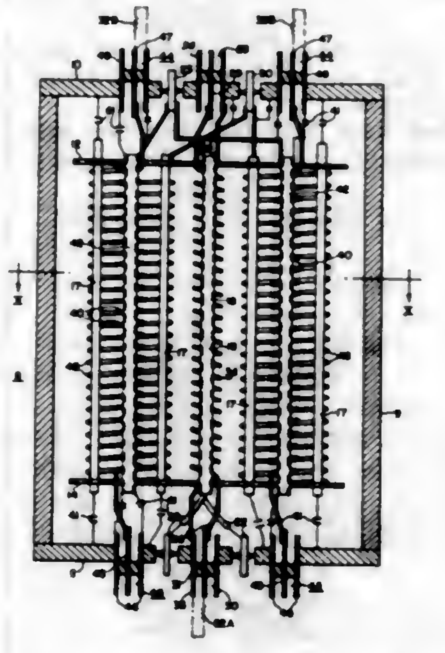
3,389,295

BROADBAND DISCHARGE DEVICES OF THE TRANSMISSION LINE TYPE

Johannes P. Pietrzyk, Elmira, N.Y., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Aug. 11, 1964, Ser. No. 388,839

12 Claims. (Cl. 315—39.3)



This invention relates to a broadband electron discharge device including an input transmission line having a cathode element and a control grid, a continuous output transmission line having a dummy cathode element and a grid whose electrical and mechanical properties are substantially similar to those of the input transmission line. A screen grid is disposed between the input and output transmission lines to substantially isolate spurious signals between the input and output transmission lines. A second output transmission line including a dummy cathode element and a grid may be disposed upon the other side of the input transmission line. In addition, the dummy cathode elements may be coated with a layer of secondary emissive material to emit a beam of secondary electrons onto a second stage of this device including a second dummy cathode and a second grid. Further, a layer of secondary emissive material may be disposed upon the dummy cathode element to receive the electron beam emitted by the cathode element to thereby increase the current adsorbed by the grid of the first output transmission line.

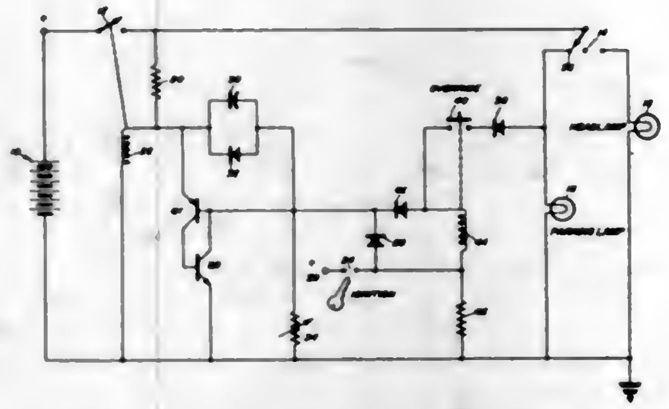
3,389,296

AUTOMATIC AUTOMOBILE LIGHTING CONTROL CIRCUIT WITH TIME DELAY-DEENERGIZING MEANS

Winford B. Carruth, Baltimore, Md., assignor to The Bendix Corporation, Baltimore, Md., a corporation of Delaware

Filed Apr. 4, 1966, Ser. No. 539,890

5 Claims. (Cl. 315—77)



1. In an automobile having a storage battery and an electrical ignition system including an ignition switch, a control circuit for automatically disconnecting an electrical load from said storage battery after a fixed delay from the time of opening said ignition switch; comprising

a relay having normally open contacts, connected between the automobile battery and the load to be controlled, and an operating coil;

a resistor connected from the load contact of said relay to its coil for energizing said coil when said contacts are closed;

means connecting said relay coil to said ignition switch for energizing said coil whenever said ignition switch is closed;

a regenerative trigger circuit connected across said relay coil for short circuiting said coil upon conduction of said trigger circuit;

means for biasing said trigger circuit into non-conduction whenever said ignition switch is closed; and

a discharge circuit connected to be charged when said ignition switch is closed and to discharge when said ignition switch is opened, said discharge circuit being arranged to bias said trgger circuit conductive upon discharge.

3,389,297

PHOTOSENSITIVE FLASHER CIRCUIT

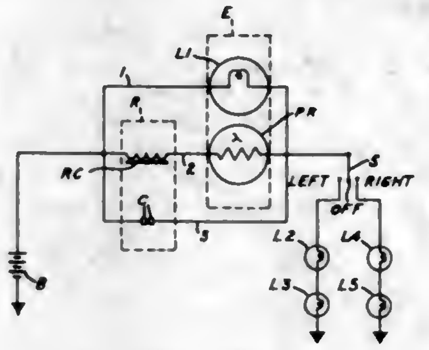
Rodney Hayden, Stoney Creek, Ontario, Canada, assignor to United-Carr Incorporated, Boston, Mass., a corporation of Delaware

Filed Oct. 1, 1965, Ser. No. 492,047

Claims priority, application Canada, June 25, 1965, 934,353

4 Claims. (Cl. 315—152)

A flasher circuit for a load lamp is provided by a photosensitive device which in response to light from a light source controls a relay to deenergize the light source and energize the load lamp and in response to a dark



condition of the light source to permit the relay to reenergize the light source and deenergize the load lamp.

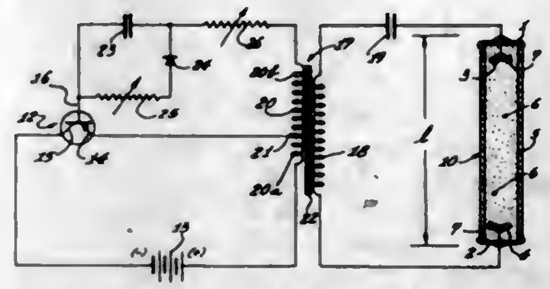
3,389,298

SINGLE-TRANSISTOR FLASHER CIRCUIT

Clifford D. Skirvin, Pomona, Calif., assignor to Microdot Inc., South Pasadena, Calif., a corporation of California

Continuation-in-part of application Ser. No. 442,368, Mar. 24, 1965, which is a continuation-in-part of application Ser. No. 278,059, May 6, 1963. This application July 16, 1965, Ser. No. 472,555

17 Claims. (Cl. 315—206)



This invention relates to a system for producing flashes of light in a tube which is provided with gas at a relatively low pressure. The system produces the flashes during the charging of a capacitor which is included in the system. The flashes are produced at relatively high frequencies corresponding to the frequencies at which the gas is resonant in the tube when ionized.

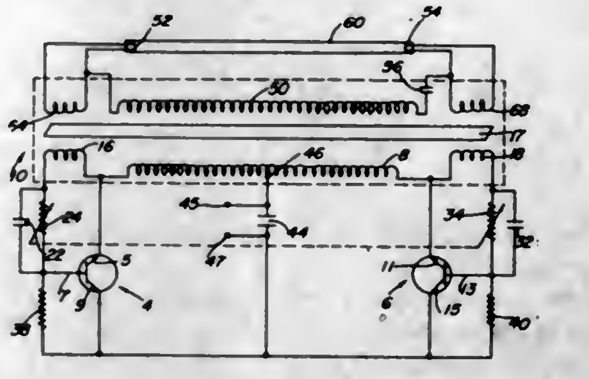
3,389,299

FLUORESCENT LIGHTING SYSTEM

Ronald Bell, Northridge, Calif., assignor, by mesne assignments, to Kegan, Kegan & Berkman, Chicago, Ill.

Filed Nov. 7, 1966, Ser. No. 592,527

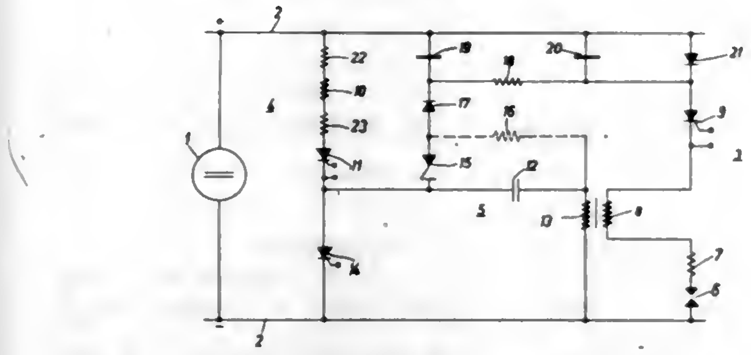
8 Claims. (Cl. 315—206)



This invention relates generally to a fluorescent lighting system including an improved inverter circuit and a cooperating power supply operable on direct or alternating current. The inverter circuit utilizes a novel saturable magnetic core transformer with closely coupled windings.

3,389,300
CIRCUIT FOR THE GENERATION OF WORKING PULSES IN ELECTRO-EROSIVE METAL WORKING MACHINES

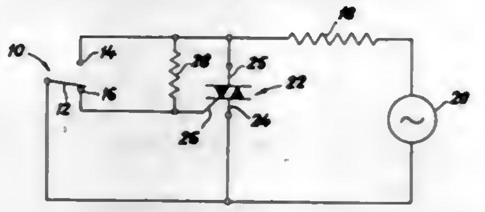
Herbert Walter, Remscheid, Herbert Stichnote, Mainflingen, and Hans-Joachim Nilius, Seligenstadt, Germany, assignors to AEG-Elotherm G.m.b.H., Remscheid-Hasten, and Licentia Patent-Verwaltungs-G.m.b.H., Berlin-Grunewald, Germany
Filed Sept. 17, 1965, Ser. No. 488,165
Claims priority, application Germany, Sept. 18, 1964, A 47,103
2 Claims. (Cl. 315—227)



The following specification discloses a control circuit for the generation of working pulses in electro-erosive metal working machines which comprises a circuit having a controlled rectifier connected in series between the source of electrical energy and the working gap, which rectifier is fired at the desired pulsing frequency. A quenching circuit is provided to quench the controlled rectifier in the working circuit in such a manner as to control the duration of the working pulses. The quenching circuit comprises a first controlled rectifier for charging a capacitor and a second control rectifier for discharging the capacitor through a first inductor which is inductively coupled to a second inductor, which is connected in circuit with the controlled rectifier in the working circuit, the discharge of the capacitor thereby being effective to quench the pulses in the working circuit. A reactive circuit element is further provided to store voltage surges across the capacitor in the quenching circuit which stored voltage is subsequently used to provide an initial voltage peak on each working pulse.

3,389,301
ARC SUPPRESSING CIRCUIT

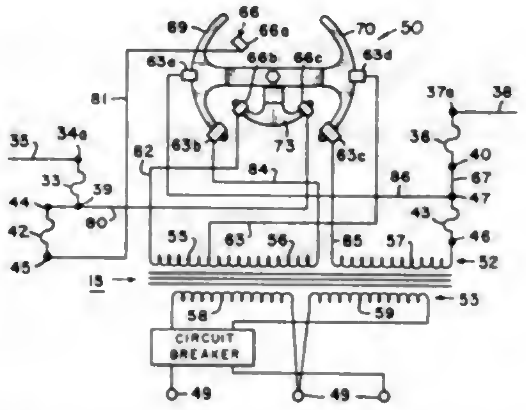
Eric I. Siwko, Marlboro, Mass., assignor to Fenwal Incorporated, Ashland, Mass., a corporation of Massachusetts
Filed Oct. 21, 1965, Ser. No. 499,698
3 Claims. (Cl. 317—11)



An arc-suppressing circuit for use with a single pole double throw mechanical switch which uses a solid state gate-controlled A.C. switch having a pair of power terminals and a gate terminal. The mechanical switch is connected in series with a source of power and a load. When the switch is in the closed position it shunts the power terminals of the A.C. switch. When it is in the open position, it connects the gate terminal to one of the A.C. switch power terminals. Thus the A.C. switch is rendered non-conducting in both the open and closed positions of the mechanical switch. When the switch is between the open and closed positions, a portion of the source voltage across the mechanical switch is applied to the gate of the A.C. switch to render it conducting, thus providing a low impedance across the mechanical switch contacts, thereby limiting arcing.

3,389,302
ELECTRICAL INDUCTIVE APPARATUS

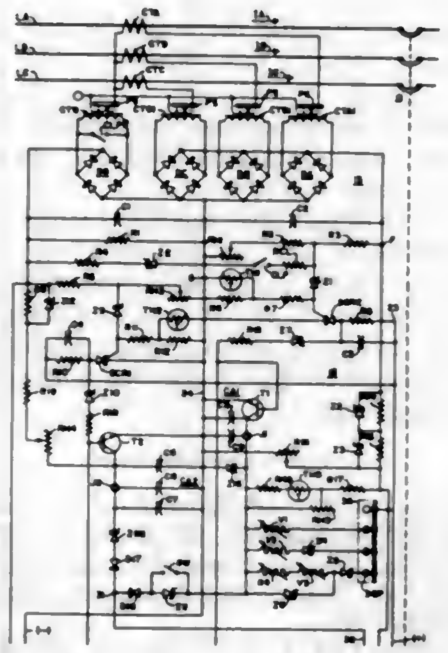
Robert P. Miller, Webster Groves, and Donald P. Shaw, Brentwood, Mo., assignors to Wagner Electric Corporation, St. Louis, Mo., a corporation of Delaware
Filed Oct. 21, 1965, Ser. No. 499,232
19 Claims. (Cl. 317—15)



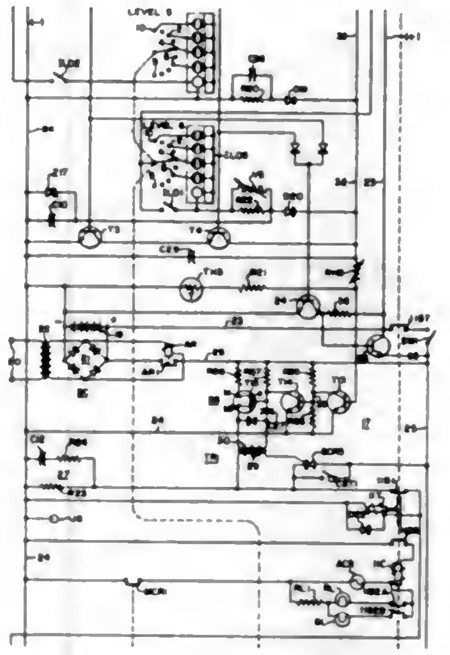
A transformer operable on different supply voltages having switch means to selectively connect the primary in a first winding arrangement in which a first section is connected in series with fuse means and parallel-connected sections, said first section having a different number of turns than the other sections, and a second winding arrangement in which all of the sections are in series with each other and other fuse means, all turns of the primary being conductive in both of the arrangements, the fuse means effective on the first winding arrangement being maintained in the circuit in the second winding arrangement.

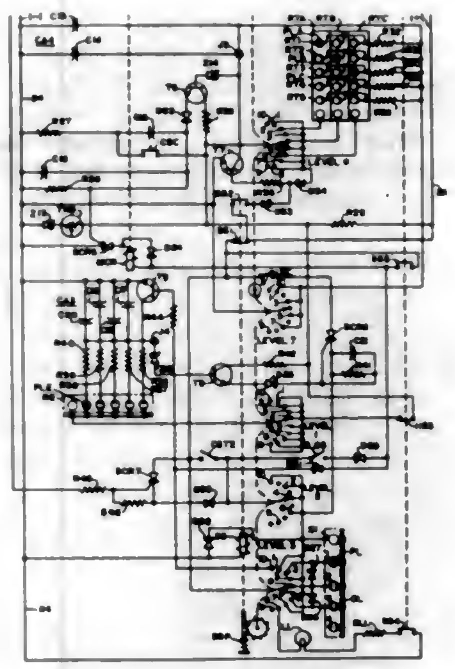
3,389,303
CONTROLLING NETWORK

Nathaniel D. Tenenbaum, Plainfield, N.J., assignor to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Oct. 18, 1965, Ser. No. 497,180
17 Claims. (Cl. 317—22)



A standby energy supply system for a power network protecting relay which should always be ready for instant actuation even though its normal energy supply is inoperative. Under normal condition the energy for actuating the relay is supplied from the normal supply. In the event the normal energy supply fails, the standby energy supply such as a battery is connected to supply energy to a portion only of the relay during the period in which the network is operating normally to conserve the standby energy supply. If the network faults and the relay is actuated during the period that the normal energy supply is inoperative, the operation of the relay connects the standby supply to the entire relay apparatus for a time interval sufficient for the relay to disconnect the faulted network from the power busses.

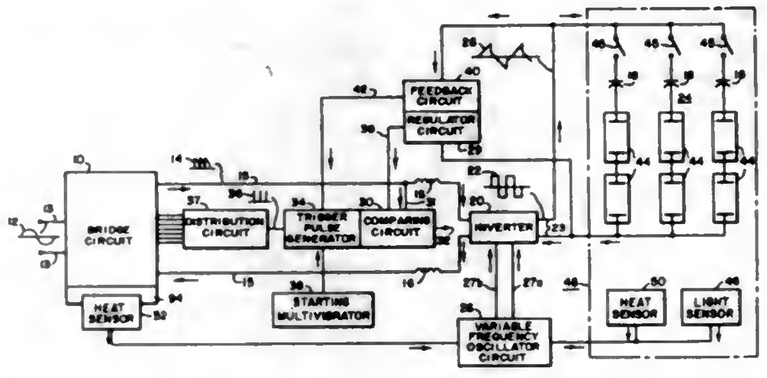




3,389,304
EXCESSIVE CURRENT PROTECTION DEVICE FOR HIGH-FREQUENCY, SQUARE-WAVE POWER SUPPLY FOR DISCHARGE DEVICES

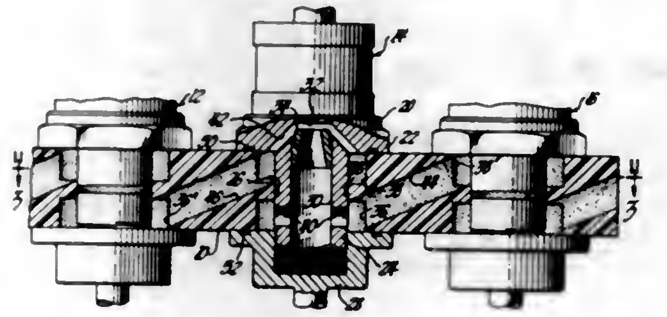
Laban E. Lesster, Pittsburgh, Pa., assignor to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Sept. 10, 1965, Ser. No. 486,285
2 Claims. (Cl. 317—23)

Excessive current protection device for high-frequency, square-wave power supply for discharge devices wherein a current switching means is periodically switched with respect to its impedance states by a trigger means to provide the periodic output current to the load. The load capacitor in series with the discharge device has developed thereacross a saw-tooth voltage. A feedback circuit is coupled by a coupling device to the voltage developed across the load, and a rectifier converts into DC the periodic output developed across the load device. The resulting DC charges a feedback capacitor which is designed to discharge at the predetermined rate. A feedback switching means is responsive to the voltage developed across the feedback capacitor and controls the trigger means to rapidly interrupt the flow of current to the load if an excessive load current is sensed.



3,389,305
MOUNTING AND COOLING APPARATUS FOR SEMICONDUCTOR DEVICES

William D. Bond, Warren, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Aug. 1, 1966, Ser. No. 569,395
7 Claims. (Cl. 317—100)

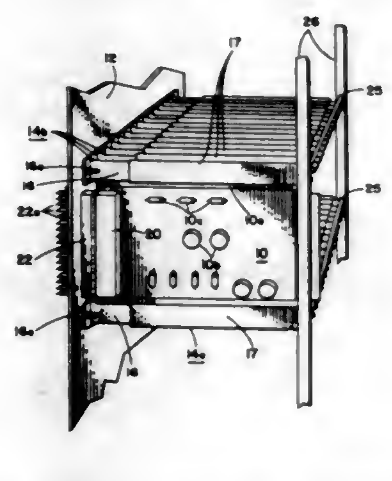


A fluid cooled mounting structure for rectifiers and the like including a base member having a fluid passage which extends past a surface to be cooled and includes a nozzle for accelerating a jet of coolant against the surface to provide a scrubbing action. Serial flow between several devices may be provided by means of a ducted mounting board.

3,389,306
COMPUTER GROUNDING ASSEMBLY HAVING CARD GUIDE BEAMS AND GRIPPING MEMBERS

James L. Schmidt, Red Bank, and Daniel Sinnott, Wanamassa, N.J., assignors to Electronic Associates, Inc., Long Branch, N.J., a corporation of New Jersey
Filed May 23, 1966, Ser. No. 552,241
4 Claims. (Cl. 317—101)

A computer assembly for a plurality of printed circuit boards, each having a metallic rim formed on both surfaces. A plurality of spaced rigid rectangular shaped card guide beams are connected perpendicular to a ground plane sheet forming parallel rows and columns. The circuit boards are received between adjacent rows of beams with each beam having a circuit board on opposing two sides thereof. A pair of thin sheet metal gripping members are secured to the remaining opposing two sides of each card guide beam over a major portion of the length of the beam. Each pair of gripping members forms flat planes parallel to each other and extending beyond the first named opposing sides of the beam.



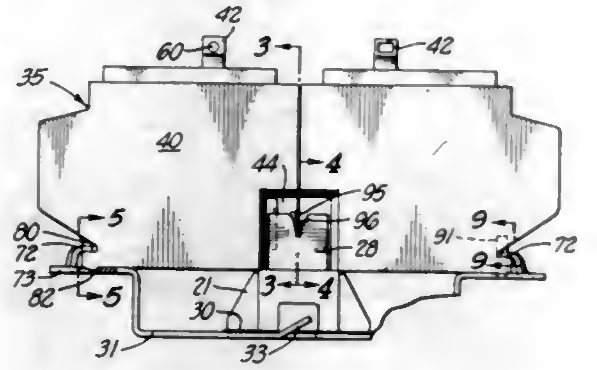
3,389,307

MATING CIRCUIT BREAKERS WITH SPACED BUS CLIPS

Ross E. Locher, West Covina, and Leland P. Williamson, Whittier, Calif., assignors to Zinsco Electrical Products, Los Angeles, Calif., a corporation of California

Filed Jan. 30, 1967, Ser. No. 612,607

4 Claims. (Cl. 317—119)



An electrical circuit breaker having a width one-half the spacing of bus blades of a panelboard, permitting two breakers to be installed in the space normally required for one. A housing and conductor design permitting installation of single breakers, dual breakers, and various combinations of single and dual breakers in a standard panelboard.

3,389,308

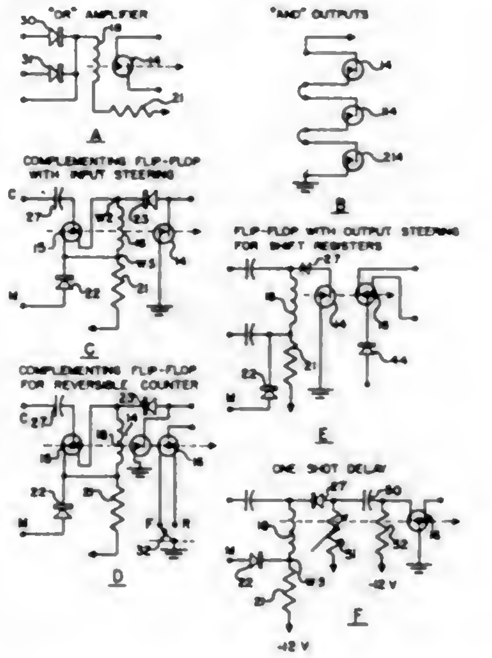
UNIVERSAL SWITCHING LOGIC EMPLOYING LATCHING RELAYS WITH TRANSITION DELAY PERIODS

John Paul Jones, Jr., Norristown, Pa., assignor to Navigation Computer Corporation, Norristown, Pa., a corporation of Pennsylvania

Filed Jan. 3, 1964, Ser. No. 335,635

19 Claims. (Cl. 317—123)

Various logical configurations are disclosed operable with a basic logical element comprising a simple latching magnetic reed switch relay which is operated by A-C coupled pulses at respective ends of a coil in series with the latching contacts to either energize the coil for closing the latching contacts or to deenergize it long enough for its latching contacts to release. In some embodiments additional transfer contacts are provided for isolated memory access. This disclosure shows connections for the most commonly used logic operations in steering, shifting, one-shot, flip-flop and counting circuits.


"OR" AMPLIFIER
"AND" OUTPUTS
A
B
COMPLEMENTING FLIP-FLOP WITH INPUT STEERING
C
FLIP-FLOP WITH OUTPUT STEERING FOR SHIFT REGISTERS
E
COMPLEMENTING FLIP-FLOP FOR REVERSIBLE COUNTER
D
ONE SHOT DELAY
F
-12 V
-12 V

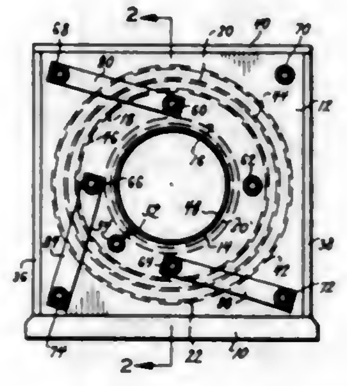
3,389,309

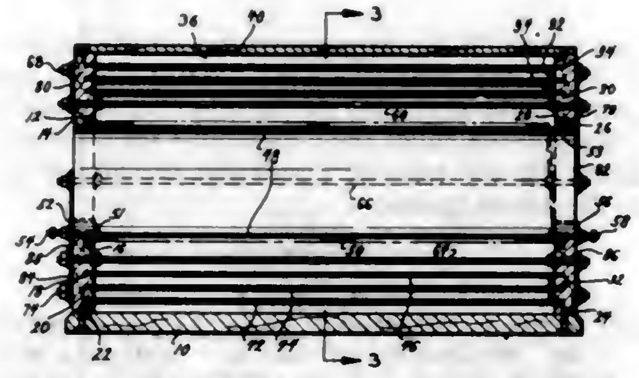
CONTROL SYSTEMS

Niels C. Andersen, St. Louis, and Harold J. Barmeier, Jr., St. Louis County, Mo., assignors to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware

Filed Mar. 10, 1965, Ser. No. 438,475

9 Claims. (Cl. 317—123)





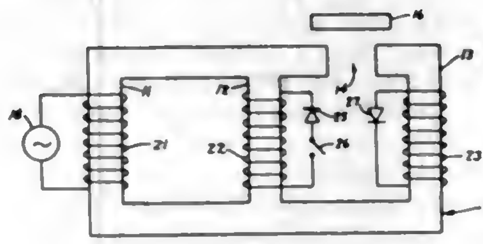
A testing device for the testing of components, which are very sensitive to magnetic fields, includes a high permeability enclosure with a D.C. winding within that enclosure to develop a magnetc field which can be used to test the components. The testing device also includes a winding which develops an alternating magnetic field within the enclosure to avoid establishing a permanent magnetic field within the enclosure.

3,389,310

RELAY APPARATUS

Donald A. Wales, Minneapolis, Minn., assignor to Flo-Tronics, Incorporated, Minneapolis, Minn., a corporation of Minnesota

Filed Feb. 7, 1966, Ser. No. 525,757



1. Relay apparatus comprising:
magnetic core means including first, second and third legs, and an air gap, said second leg connected across said first leg, said third leg and said air gap connected in series across said second leg;
first winding means wound around said first leg;
second winding means wound around said second leg;
third winding means wound around said third leg;
means including a source of alternating energy connected across said first winding means, for providing an alternating magnetic flux in said magnetic core means;
further means including first rectifying means connected across said second winding means, for inhibiting the flow of magnetic flux through said second leg in a first direction to provide unidirectional magnetic flux flow through said third leg and said air gap during first alternate half-cycles of said alternating magnetic flux;
still further means including second rectifying means connected across said third winding means, for inhibiting decay of the magnetic field of said third winding means during second alternate half-cycles of said alternating magnetic flux; and
armature means of the tractive type mounted adjacent said air gap and adapted to be attracted to said magnetic core means in the presence of unidirectional flux flow through said air gap.

3,389,311

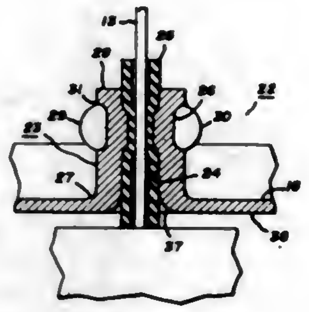
SEALED CAPACITOR AND METHOD OF SEALING THEREOF

Glenn D. Rayno, Glens Falls, N.Y., assignor to General Electric Company, a corporation of New York

Filed Nov. 18, 1966, Ser. No. 595,436

10 Claims. (Cl. 317—256)

1. A capacitor comprising in combination:
(a) a metal can member having open and closed ends
(b) a liquid dielectric impregnated capacitor element in said can
(c) a cover member sealed to said open end to provide a liquid tight seal therewith
(d) a relatively straight continuous electrical lead passing through said cover into said can and substantially straightly into and electrically contacting said element
(e) and sealing means sealing said conductor in said cover in liquid impregnant tight relationship
(f) said sealing means comprising:
  (1) plural protrusions on said cover member and extending away from said can
  (2) said protrusion each defining a thick walled aperture into said can, said protrusion defined apertures constituting the sole apertures into said can for liquid impregnation of said capacitor element
  (3) said leads passing through said protrusion apertures
  (4) a thin wall elastomer material sleeve surrounding said leads in said protrusion for electrical insulation thereof said sleeves having an original outside diameter smaller than the inside diameter of said aperture, and an original wall thickness less than the thickness of the walls of said aperture



  (5) and continuous circumferential indentation means extending substantially the total circumference of said protrusion intermediate the length thereof to compressionally engage said elastomer material seal and to provide a liquid impregnant tight seal for said lead.

3,389,312

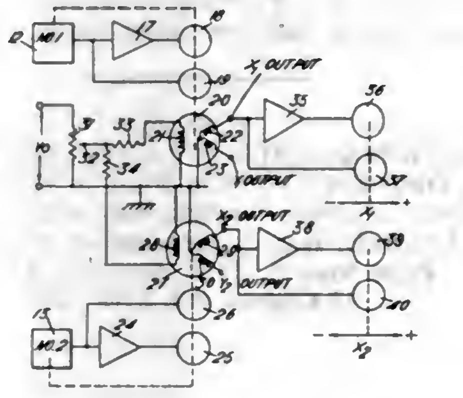
PLURAL MOTOR, PLURAL PHOTOELECTRIC LINE FOLLOWER OXYGEN JET CUTTING MACHINES

Derek Harry Redman, Croydon, Surrey, England, assignor to Hancock & Co. (Engineers) Limited, Croydon, England, a British company

Filed Sept. 29, 1964, Ser. No. 400,145

Claims priority, application Great Britain, July 20, 1964, 29,478/64

1 Claim. (Cl. 318—19)



A flame cutting machine for simultaneously making two cuts according to separate outlines carried on a substrate, in which a beam placed transversely of the machine and mounted for longitudinal movement along the machine carries two steerable photoelectric line follower heads independently movable along the beam for following the separate outlines, each follower head has a synchro resolver coupled for steering rotation with the follower head, the follower heads are moved along the beam according to transverse movement signals from the respective receivers, and the beam is driven longitudinally at constant speed.

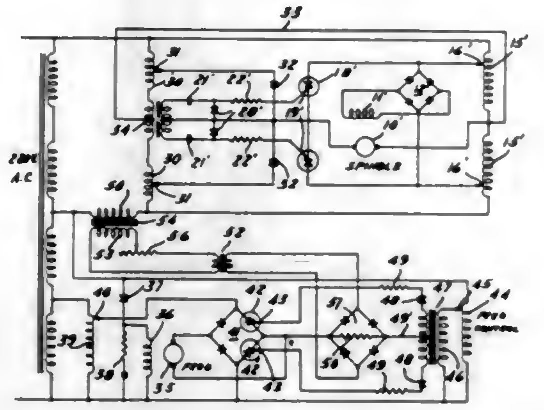
3,389,313

METHOD OF AND MEANS FOR CONTROLLING THE REMOVAL OF MATERIAL WITH A CUTTING TOOL

Rollin A. Reynolds, Palos Verdes, Calif., assignor to Dyna Systems Inc., Torrance, Calif., a corporation of California

Application Mar. 8, 1965, Ser. No. 449,352, which is a continuation of application Ser. No. 218,991, Aug. 23, 1962, now Patent No. 3,325,710, dated June 13, 1967. Divided and this application Sept. 26, 1966, Ser. No. 604,082

11 Claims. (Cl. 318—39)



A control system for milling machines and the like having two motors, as exemplified by a D.C. spindle motor operating a tool, and D.C. feed motor for moving the work against the tool, the motors each having an armature circuit and separately excited field circuit controls adjustable to preset the speed and torque delivery of each of the motors, electronic gating devices being operable to close the armature circuit of the feed motor in response to energization of the armature circuit of the spindle motor, and wherein the spindle motor control operates to vary the speed and torque of the spindle motor so that the actual speed of the spindle motor, expressed as a percentage of a preset speed, added to the actual torque of the spindle motor, expressed as a percentage of a preset torque, is substantially constant, the load or torque of the spindle motor being utilized in a torque sensing feed back circuit for opening the gating means of the feed motor armature circuit so as to deenergize the feed motor armature when the load current of the spindle motor reaches a predetermined value, whereby the operating conditions of the tool are maintained within safe operating limits.

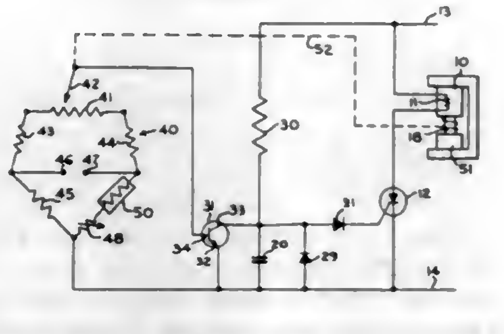
3,389,314

PROPORTIONAL SILICON CONTROLLED RECTIFIER DRIVEN SYSTEM FOR A HEAT MOTOR

Dwight C. Lewis, Goshen, Ind., assignor to Penn Controls, Inc., a corporation of Indiana

Filed May 7, 1962, Ser. No. 192,765

23 Claims. (Cl. 318—117)



1. The combination comprising:

a heat motor having an expandable chamber containing a fluid, an electrical resistance heater and an output actuator,

a silicon-controlled rectifier having an anode, a cathode and a control element, said heater, said anode, and said cathode adapted to be connected in series across a source of alternating current, and means for applying a trigger pulse across said control element and said cathode.

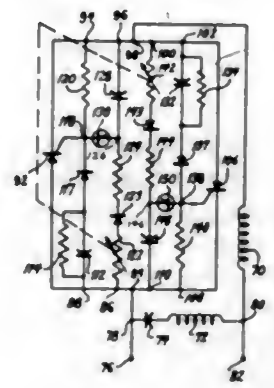
3,389,315

STEPLESS SPEED CONTROL FOR INDUCTION MOTOR

John C. Andreas, Des Peres, and David L. Trower, St. Louis County, Mo., assignors to Century Electric Company, St. Louis, Mo., a corporation of Missouri

Filed Nov. 12, 1963, Ser. No. 322,985

15 Claims. (Cl. 318—221)



1. A control system that can be connected to a source of alternating current and to an induction motor to provide stepless control of the speed of said motor and that comprises:

(a) terminals that are connectable to a source of alternating current,

(b) a variable impedance element that can have the impedance thereof varied to control the effective power supplied to said motor by said source of alternating current, and can thereby determine the torque provided by said motor and the speed of the rotor of the motor,

(c) a bridge rectifier that has one input terminal thereof connected to one of said terminals via said motor and that has the other input terminal thereof connected to the other of said terminals,

(d) said bridge rectifier having the output terminals thereof connected to said variable impedance element,

(e) a combination starting circuit and running circuit which has a starting portion and a running portion,

(f) said starting portion including a capacitor,

(g) said capacitor initially being substantially free of charge so the current flowing therethrough during a given half cycle of the alternating current can promptly render said variable impedance element conductive, whereby said variable impedance element can permit large voltages to be supplied to said motor by said source of alternating current to enable said motor to provide large values of torque,

(h) said capacitor continuing, during each half cycle of the alternating current until the rotor of the motor gets up to speed, to permit the current flowing therethrough to quickly render said variable impedance element conductive, whereby said variable impedance element can permit large voltages to be supplied to said motor by said source of alternating current to enable said motor to provide large values of torque,

(i) said capacitor responding to the alternating current supplied to said control system to accumulate a charge,

(j) said capacitor responding to a predetermined charge therein to limit the value of the current flowing therethrough during succeeding half cycles of the alternating current to a level that is too small to render said variable impedance element conductive,

(k) said running portion including a second capacitor and a break-down element,

(l) said second capacitor passing very little current until the first said capacitor accumulates said predetermined charge, and thereafter responding to subsequent half cycles of the alternating current to accumulate charges therein that cause said breakdown element to break down,

(m) said break-down element isolating the rest of said running portion from said variable impedance element but, after it breaks down, permitting said running portion to render said variable impedance element conductive, whereby said variable impedance element can permit lesser voltages to be supplied to said motor by said source of alternating current so said rotor of said motor can rotate at the desired speed.

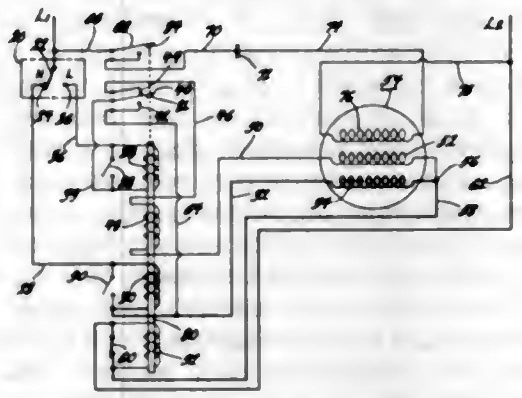
3,389,316

MULTIPLE SPEED MOTOR AND MULTIPLE COIL STARTING CONTROL

Alfred B. Roby, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Oct. 21, 1965, Ser. No. 499,475

7 Claims. (Cl. 318—221)



In the preferred form, a three-coil electromagnetic starting relay is provided for controlling the energization of the starting or phase winding of a selective two-speed induction motor. One of these coils is at all times connected in series with the low speed winding, while the other two coils are respectively connected in series with the higher speed and lower speed contacts of the double throw selector switch. The starting relay operates a make before break double throw switch having its movable contact connected in series with the coil which is in series with the low speed selector switch contacts and which has one of its relatively stationary contacts connected to the coil in series with the lower speed main winding. The other relatively stationary contact of the relay is connected to the higher speed main winding circuit between the coil connected to the higher speed contact of the selector switch and the higher speed main winding. The starting relay also closes a normally open single throw starting switch connected in series with the starting or phase winding.

3,389,317

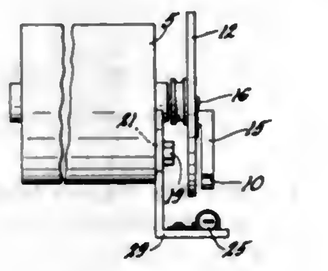
SYSTEM FOR MAINTAINING AN ELECTRIC MOTOR AT A PREDETERMINED SPEED

Thomas A. Prewitt, Kokomo, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Mar. 21, 1966, Ser. No. 536,163

7 Claims. (Cl. 318—325)

1. A system for maintaining an electric motor at a predetermined speed comprising in combination with an electric motor and a source of supply potential, a rotatable member which is revolvable at a speed which is a function of the speed of said motor, a permanent magnet, mounting means which permits displacement of said permanent magnet by a distance proportional to rotational speed for mounting said permanent magnet upon said rotatable member, a magnetically operable switching device, mounting means for locating said magnetically operable switching device in operational relationship with said permanent magnet when said motor is rotating at said predetermined speed and circuit means responsive to the operation of said magnetically operable switching device for controlling the potential supplied to said motor.



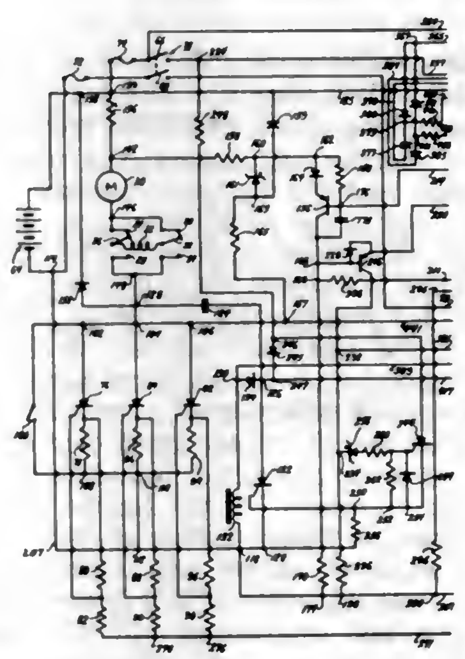
3,389,318

CONTROL SYSTEMS FOR ELECTRICALLY DRIVEN VEHICLES HAVING CONTROLLED RECTIFIERS OPERATIVE IN RESPONSE TO MOTOR CURRENT

Harold C. Hoyt, Jr., Overland, Mo., assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware

Filed Nov. 23, 1964, Ser. No. 413,055

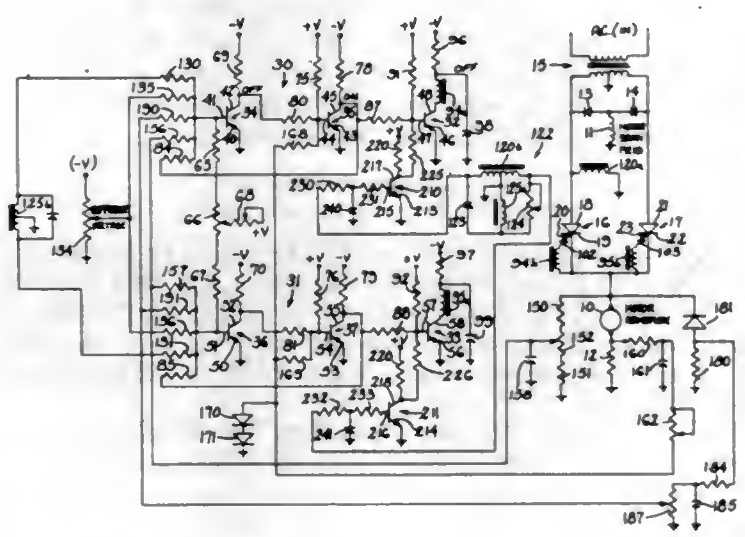
38 Claims. (Cl. 318—345)



A small-value impedance, a series-wound D.C. motor, and a controlled rectifier are connected in series relation across a source of direct current, a sensing circuit senses the amount of current flowing through the small-value impedance and thus senses the amount of current flowing through that motor, a firing circuit renders that controlled rectifier conductive and thus permits that source of direct current to cause current to flow through that motor whenever the amount of current flowing through that small-value impedance falls below a predetermined value, and an extinguishing circuit renders that controlled rectifier non-conductive and thus keeps that source of direct current from causing current to flow through that motor whenever the amount of current flowing through that small-value impedance rises above a second predetermined value. As a result, that sensing circuit and those firing and extinguishing circuits maintain the current flow of the motor substantially between the first said and said second predetermined values despite changes in the load applied to that motor. Inhibiting circuits keep the controlled rectifier from being rendered conductive whenever it should not be rendered conductive; and enabling circuits permit that controlled rectifier to be rendered conductive whenever it should be rendered conductive.

3,389,319
MOTOR SPEED CONTROL SYSTEM

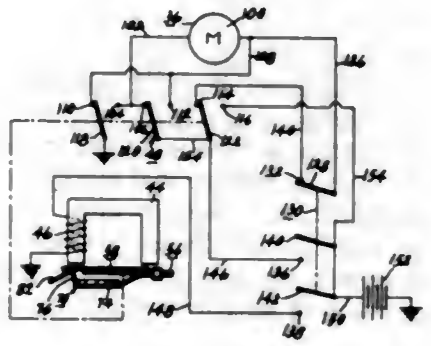
Carles F. Raber, Jr., Simsbury, and Edward F. Nowak, Farmington, Conn., assignors to Pratt & Whitney Inc., West Hartford, Conn., a corporation of Delaware
Filed July 8, 1965, Ser. No. 470,545
11 Claims. (Cl. 318—345)



A motor control system for a direct current motor. In particular, this invention is directed to a control system for controlling silicon controlled rectifiers or the like in order to energize DC motors. The control system of this invention includes feedback circuitry to compensate for the IR drop in the motor armature, low speed boost which takes advantage of an armature voltage reversal which occurs at low speeds due to the armature inductance, and means for limiting the maximum possible conduction time of the controlled rectifiers to eliminate an unstable condition which would occur when full reference voltage is applied with the armature motor at a standstill. In particular, the motor speed control system comprises a load to be controlled, including a motor having an armature, a source of AC supply voltage, at least one semiconductor device having an odd number of PN junctions and input, output and control electrodes, the input and output electrodes of said device being connected in series with said source and said load, the maximum value of the signal from said source being such that at least one of said junctions in said device is normally reverse-biased whereby said device is in a non-conducting state, means for providing an adjustable characteristic reference signal, a phase shift circuit, means for coupling said phase shift circuit to said source to derive a phase-shifted signal, means for summing said phase-shifted signal with said reference signal to derive a control signal to forward bias at least one of said junctions, means coupling said control signal to said control electrode, and means responsive to the source of AC supply voltage for limiting the maximum conduction time of said semiconductor device to eliminate an unstable condition which would occur when full reference voltage is applied with the motor armature at a standstill.

3,389,320
WIPER ACTUATING MECHANISM

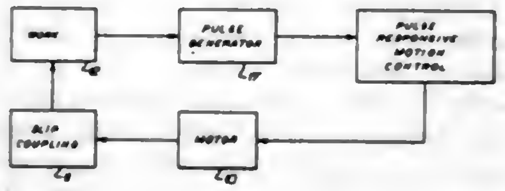
Eugene R. Ziegler, Spencerport, N.Y., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed May 6, 1965, Ser. No. 453,693
9 Claims. (Cl. 318—443)



1. Wiper actuating mechanism comprising, a reversible, direct current rotary electric motor, an oscillatory rock shaft, a gear reduction unit interconnecting said rotary motor and said rock shaft, a reversing switch controlling the direction of rotation of said motor and the direction of oscillation of said rock shaft, reversing switch actuating means operable adjacent each end of a running stroke of said rock shaft for reversing the direction of rotation of said motor comprising a pair of superposed, rotatable cam members having aligned, elongate arcuate slots and means driven by said gear reduction unit and extending into said slots for effecting conjoint angular movement of said cam members adjacent each stroke end of the running stroke for actuating said reversing switch, and means operable to permit relative angular movement between said cam members adjacent one stroke end of said running stroke so as to enable said motor to impart movement to said rock shaft beyond one end of the running stroke to a depressed park position prior to actuating said reversing switch to arrest rotation of said motor.

3,389,321
FREQUENCY SENSING DETECTOR FOR STOPPING A MOTOR UPON SLOWDOWN

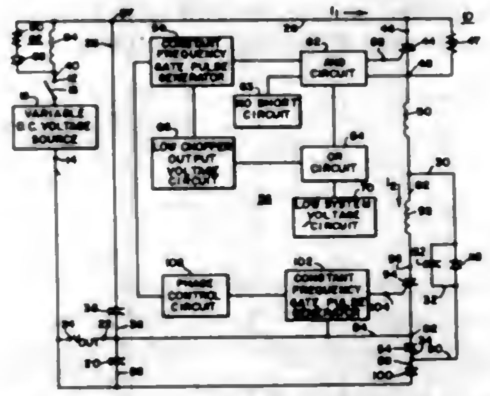
Robert D. Miller, Redlands, and Ronald E. Evans, Riverside, Calif., assignors to California Portland Cement Co., Los Angeles, Calif., a corporation of California
Filed Apr. 27, 1965, Ser. No. 451,183
11 Claims. (Cl. 318—463)



The disclosure concerns an electric motor and loadable apparatus coupled to be driven by the motor so that the effective rate of advancement of the apparatus decreases under an abnormal condition, means to generate electrical pulses at a frequency proportional to the advancement rate of the apparatus, and circuit means connected to receive said pulses and to effect de-energization of the motor in response to a predetermined decrease in the frequency of pulse reception, said circuit including SCR control network and relay elements.

3,389,322
DIRECT CURRENT CHOPPER CIRCUIT

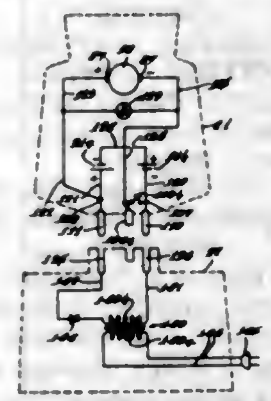
George S. Smeltzer, Pittsburgh, Pa., assignor to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed July 28, 1965, Ser. No. 475,526
15 Claims. (Cl. 320—1)


CONSTANT FREQUENCY GATE PULSE GENERATOR
AND CIRCUIT
NO SHORT CIRCUIT
VARIABLE D.C. VOLTAGE SOURCE
LOW CHOPPER OUTPUT VOLTAGE CIRCUIT
OR CIRCUIT
LOW SYSTEM VOLTAGE CIRCUIT
PHASE CONTROL CIRCUIT
CONSTANT FREQUENCY GATE PULSE GENERATOR
OUT

8. A DC chopper circuit arrangement having input terminals connectable to a variable DC voltage source, said chopper circuit arrangement comprising an energy storage circuit and an energy transfer circuit, a storage capacitor connected in said storage circuit for energization from the input terminals, a storage semiconductor switch connected in said storage circuit, an inductor connected in said storage circuit for energization through said nected in said storage circuit, a charging capacitor coninductor from said storage capacitor, said charging capacitor also connected in said transfer circuit, another inductor connected in said transfer circuit, an output capacitor connected in said transfer circuit, a transfer semiconductor switch connected in said transfer circuit for transmitting discharge current from said charging capacitor through said other inductor to said output capacitor, means for generating gating pulses for said storage switch at a constant frequency, means for applying the gating pulses to said storage switch when predetermined circuit conditions are met so as repeatedly to charge said charging capacitor, means for gating said transfer switch at the same constant frequency but in phase displacement with the first mentioned pulse generating means so as to discharge said charging capacitor into said output capacitor and to regulate the voltage across said output capacitor to a substantially constant value, said charging capacitor and said inductors cooperating with said storage and output capacitors to turn off said storage and transfer switches respectively and repeatedly before the other switch is gated.

3,389,323
ELECTRICALLY OPERATED DRY SHAVER

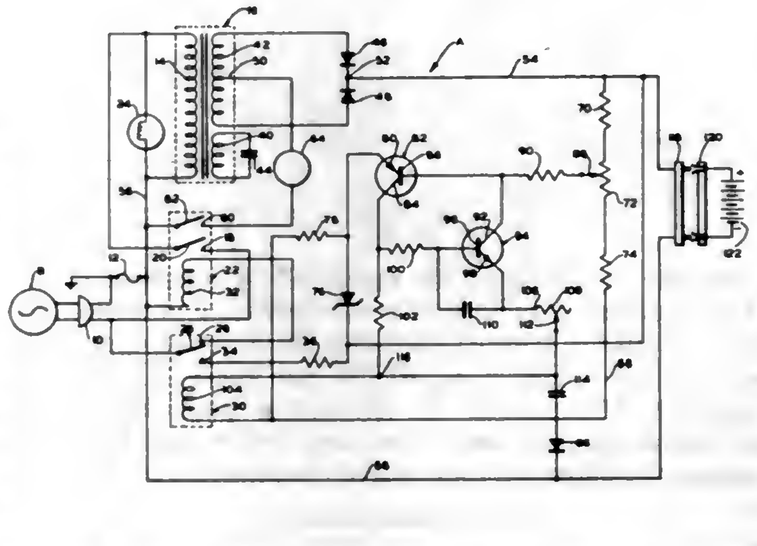
Ivar Jepson, South Duxbury, Mass., and Leon M. Roszyk, Berwyn, and Daniel C. Stahly, Villa Park, Ill., assignors to Sunbeam Corporation, Chicago, Ill., a corporation of Illinois
Original application Jan. 5, 1965, Ser. No. 423,464. Divided and this application Dec. 23, 1965, Ser. No. 515,905
2 Claims. (Cl. 320—5)



Rechargeable battery operated shaver with a separate power unit and a separate charging unit wherein the power unit is both mechanically supported and electrically connected to the charging unit by the mere placing of the former on the latter. Additional conductor means are provided to permit the power unit to be energized directly from the charging unit in the event the batteries are discharged.

3,389,324
REGULATED BATTERY CHARGERS

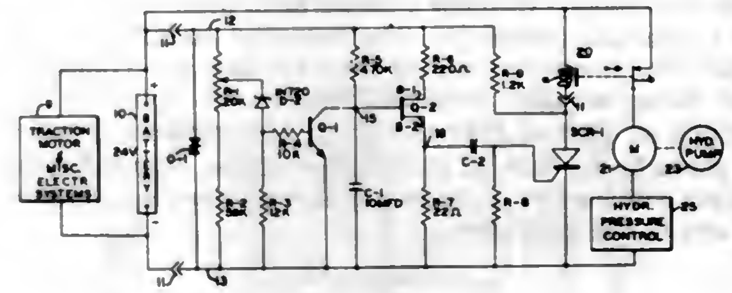
Gray C. Ballman, St. Louis County, Mo., assignor to Chargematic, Inc., a corporation of Missouri
Filed May 26, 1965, Ser. No. 459,043
5 Claims. (Cl. 320—25)



This invention discloses a regulated battery charger which utilizes regeneratively coupled transistors as on-off switches to turn charging current on and off as a battery becomes discharged and charged respectively, which also uses said transistors to turn off charging current when no battery is connected to the charge terminals and which also uses said transistors to prevent the charging current from flowing through the battery when the battery is connected to the charger with reverse polarity.

3,389,325
SYSTEM TO DISCONNECT A MOTOR RESPONSIVE TO LOW BATTERY VOLTAGE

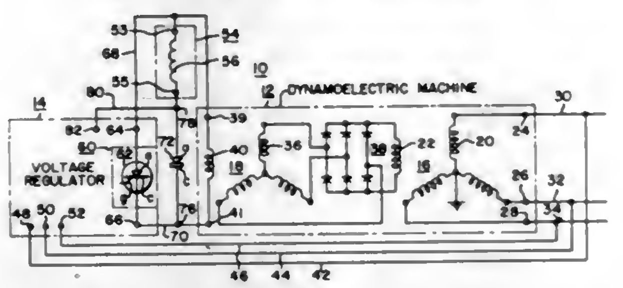
Hiram G. Gilbert, Binghamton, N.Y., assignor to The Raymond Corporation, Greene, N.Y., a corporation of New York
Filed Mar. 29, 1966, Ser. No. 538,402
8 Claims. (Cl. 320—31)



Apparatus arranged to disconnect one or more of several variable motor loads powered by a storage battery whenever the battery charge becomes low by sensing battery voltage, but arranged not to disconnect the loads during a short-term low voltage caused by heavy loads, including means for sensing battery voltage and charging an integrating circuit when battery voltage is below a predetermined level, deriving a pulse signal to fire a controlled rectifier when the integrating circuit charges to a selected level, with the controlled rectifier connected to operate a relay to permanently disconnect certain loads from the battery but allow other loads to remain connected.

3,389,326
EXCITER FIELD CONTROL FOR DYNAMOELECTRIC MACHINES

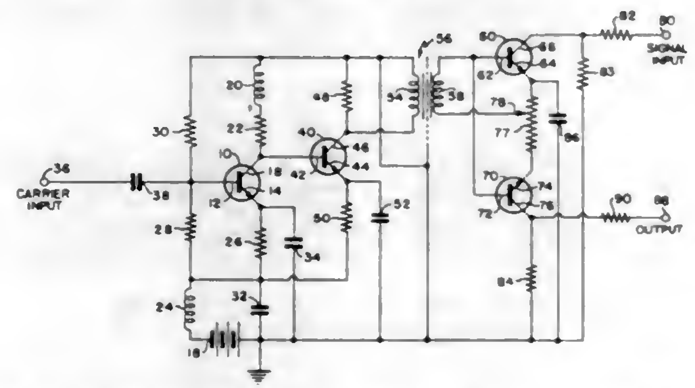
Wayne E. Hyvarinen, American Township, Lima, Ohio, assignor to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Oct. 15, 1965, Ser. No. 496,418
8 Claims. (Cl. 322—28)



Exciter field control for regulated dynamoelectric machines which utilizes a source of alternating potential having a frequency selected such that the time constant of the exciter field is long compared to one cycle of the source potential. The source of alternating potential is thus applied directly to the power amplifier of the associated voltage regulator without power rectifiers.

3,389,327
TRANSISTORIZED SUPPRESSED CARRIER BALANCED MODULATOR

Laughton T. Fine, Cincinnati, Ohio, and John L. Dennis, Lexington, Ky., assignors to Avco Corporation, Cincinnati, Ohio, a corporation of Delaware
Filed June 1, 1965, Ser. No. 460,138
7 Claims. (Cl. 332—44)



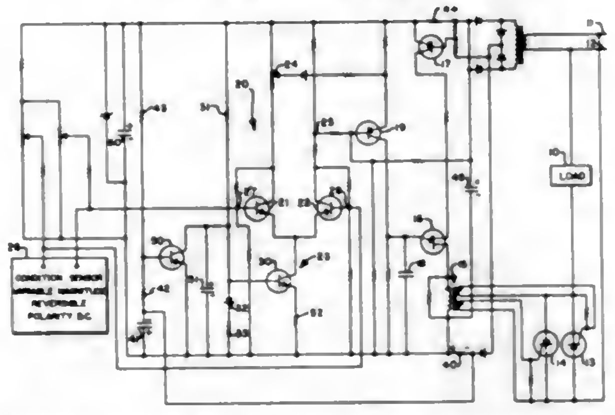
A sine wave carrier is converted to a square wave form and then applied through a broad band pulse transformer to a balanced modulator. The balanced modulator comprises two transistors having their emitters interconnected and being supplied in series between the collector and emitter of each of the transistors. The carrier is applied in phase to the base of each transistor and the modulated output with carrier suppressed is derived from the collector of one of the transistors.

3,389,328
CONTROL APPARATUS WITH SOFT START

Marius A. Janson, Minneapolis, Minn., assignor to Honeywell Inc., Minneapolis, Minn., a corporation of Delaware
Filed Aug. 22, 1966, Ser. No. 574,109
7 Claims. (Cl. 323—19)

1. Control apparatus for use with condition sensing means and a load to variably energize the load from a source of AC voltage in accordance with the magnitude of a sensed condition, and to provide soft start upon initial energization; the apparatus comprising;

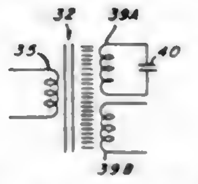
a different amplifier having input means adapted to be connected to the condition sensing means, having output means adapted to control the energization of the load, and having a circuit element connected to constitute a common input element of said differential amplifier and to provide constant current stabilization of said differential amplifier,



and means connected in controlling relation to said circuit element and adapted to be controlled from the source of AC voltage to respond to interruption of the source of AC voltage and its subsequent restoration to institute a time period wherein said circuit element is controlled to soft start the energization of the load during said time period, thereafter the energization of the load being controlled by the condition sensing means.

3,389,329
CONSTANT OUTPUT VOLTAGE TRANSFORMER

Edward J. Quirk, Arcadia, and William W. Finch, Manhattan Beach, Calif., assignors to Transformer Engineers, Inc., San Gabriel, Calif., a corporation of California
Filed June 22, 1965, Ser. No. 465,968
7 Claims. (Cl. 323—45)

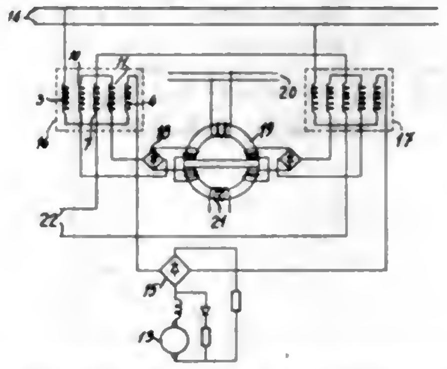


A constant voltage output transformer having a core consisting of E laminations and I laminations but stacked against each other for the completion of magnetic loops, a primary winding and first and second secondary windings carried by the center leg of the E laminations, and a plurality of shunt laminations press fit between the center leg of the E laminations and each outside leg with no air gaps, said shunt laminations being disposed between the primary winding and the first and second secondary windings.

3,389,330
FAIL SAFE MAGNETIC AMPLIFIER VOLTAGE CONTROL SYSTEM

Jean Demeur, Leeuw-st-Pierre, Belgium, assignor to Ateliers de Constructions Electriques de Charleroi (ACEC), Charleroi, Belgium
Filed Dec. 17, 1965, Ser. No. 514,558
Claims priority, application Belgium, Jan. 12, 1965, 658,170
1 Claim. (Cl. 323—89)

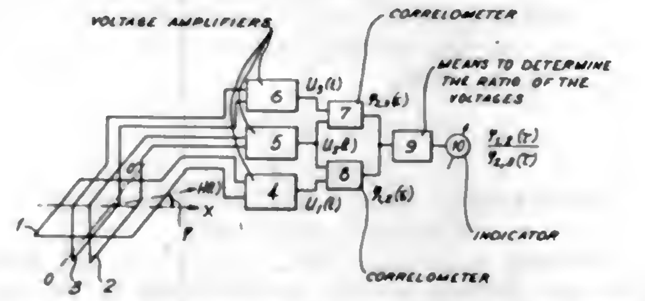
A fail safe magnetic amplifier voltage control system comprising two reactances, each formed of two magnetic circuits each carrying a power winding adapted to carry an alternating current to be controlled and provided with a D.C. saturation winding, each of the two magnetic circuits having a complementary winding coupled to the power winding, the latter two windings being connected in series. The two reactances are connected in series and



the voltages resulting from their supplementary windings are applied to two inputs of a logic safety element of the "AND" type the output of which supplies the safety signal.

3,389,331
DEVICE FOR ELECTROMAGNETIC EXPLORATION WITH THE HELP OF A NATURAL FIELD

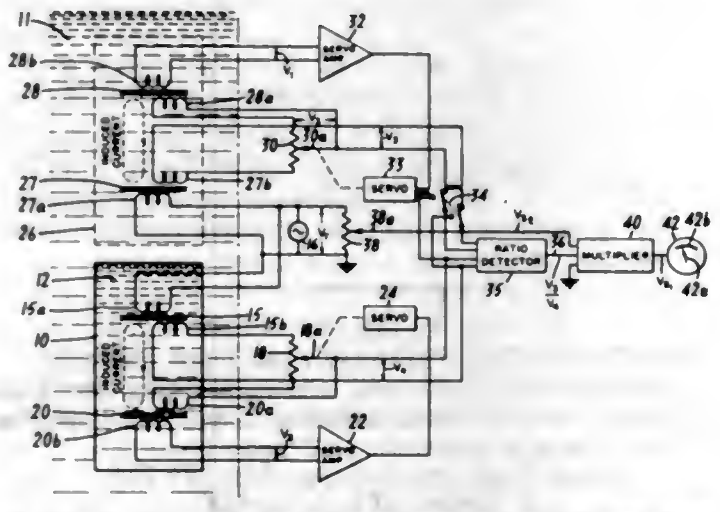
Vladimir Iljich Vexler, Varshavskoje Shaussee 176, Korp. 5, Apt. 73, Moscow, U.S.S.R.
Filed Aug. 3, 1965, Ser. No. 476,824
7 Claims. (Cl. 324—8)



A device for measuring the natural magnetic earth field at subsonic and sonic frequencies in exploring electrically conductive ore bodies and geological mapping. Noiseproofness of the measurements is enhanced by the application of an additional field pickup and also by connection of correlometers in the electric circuit of the device.

3,389,332
METHOD AND INDUCTIVE APPARATUS FOR MEASURING FLUID CONDUCTIVITY WITH TEMPERATURE COMPENSATING MEANS

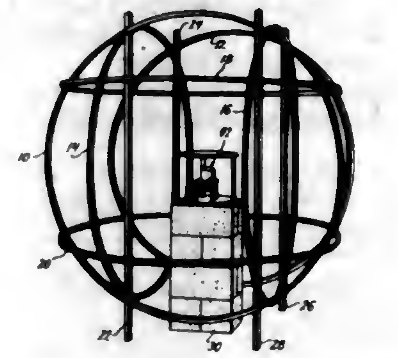
George M. Ketcham, Mystic, Conn., assignor to General Dynamics Corporation, New York, N.Y., a corporation of Delaware
Filed Feb. 14, 1966, Ser. No. 527,027
13 Claims. (Cl. 324—30)



A device is provided for determining the salinity of a sample fluid in situ with temperature compensation by inducing an alternating current in a sample of the fluid being analyzed and in a cell immersed in the sample fluid and containing a reference fluid having known electrolytic properties. The signals from each are compared to produce a signal representing the ratio of fluid conductivity from which may be determined the ratio of the salinity of the sample to the salinity of the reference fluid.

3,389,333
CONTROL SYSTEM FOR MAINTAINING A DESIRED MAGNETIC FIELD IN A GIVEN SPACE

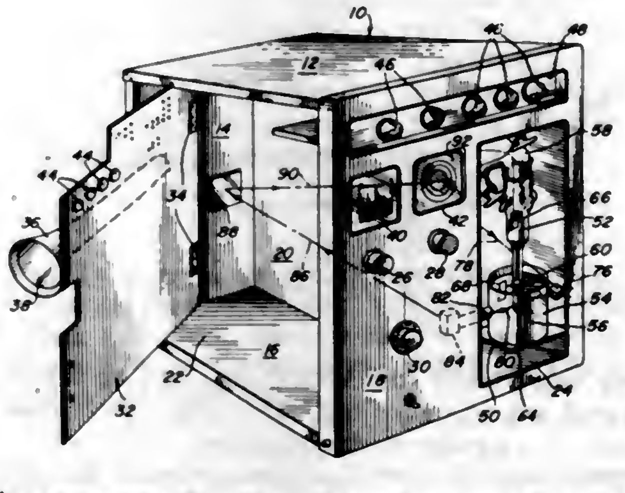
Norman Wolff, Olivette, and Niels C. Andersen, St. Louis, Mo., assignors to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Filed Feb. 10, 1964, Ser. No. 343,632
10 Claims. (Cl. 324—43)



Spaced apart turns of coils define a space in which objects can be positioned, a support is located within that space to hold those objects, a magnetometer is located directly between the spaced apart turns of those coils and immediately adjacent that space so it is subject to essentially the same magnetic field which said coils apply to those objects in that space, a circuit connects the magnetometer to those coils and enables those coils to dynamically and automatically null, adjacent said magnetometer, and thus to substantially null in said space, undesired components of the earth's magnetic field and of magnetic fields due to man-made effects, and a source of magnetic flux lines which develops a predetermined magnetic field adjacent the magnetometer to enable that magnetometer and the circuit and the coils to develop a predetermined magnetic field in the space.

3,389,334
PARTICLE ANALYZING APPARATUS HAVING MEANS FOR OBSERVING A SCANNING APERTURE

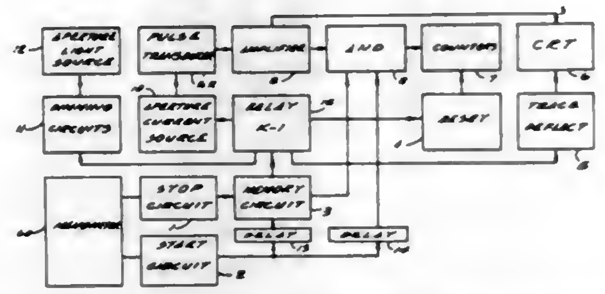
Wallace H. Coulter and Walter R. Hogg, Miami Springs, Fla., assignors to Coulter Electronics, Inc., Hialeah, Fla., a corporation of Illinois
Filed July 14, 1964, Ser. No. 382,560
8 Claims. (Cl. 324—71)



An apparatus for analyzing microscopic particles suspended in a solution and forced through a microscopic scanning aperture which is subject to blockage by oversized particles and debris. The apparatus includes a cabinet which is fitted with optical elements that are focused on the aperture and cast an enlarged image of the aperture upon a screen mounted on the control panel of the cabinet. The apparatus also includes an oscilloscope which is responsive to particles passing through the scanning aperture. The viewing screen of the oscilloscope is mounted adjacent the aperture image screen to enable the simultaneous visual monitoring of the distinctive, yet operationally related, physical and electrical functions of the scanning aperture.

3,389,335
AUTOMATIC CONTROL STRUCTURE FOR PARTICLE STUDY APPARATUS

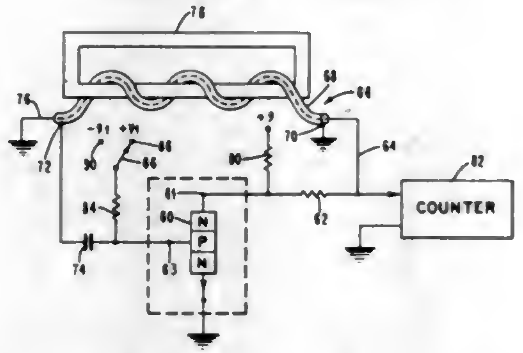
William Anthony Claps and Ervin Lucian Dorman, Hialeah, Fla., assignors to Coulter Electronics, Inc., Hialeah, Fla., a corporation of Illinois
Filed Oct. 19, 1964, Ser. No. 404,691
24 Claims. (Cl. 324—71)



Automatic function control structure for a "Coulter Counter" and like particle analyzing devices having one or more of the following: (a) an aperture current source, (b) a source of aperture illumination, (c) a particle counter, (d) a cathode ray tube display. Through use of stop and start electrodes, in the manometric structure, and a bistable device responsive thereto, the items (a)–(d) are controlled at appropriate times to optimize and automate the operation of the analyzing device.

3,389,336
TIME DELAY TESTER HAVING FEEDBACK INDUCED OSCILLATION

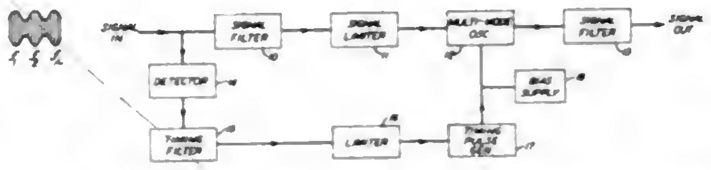
Manfred Hilsenrath, Los Gatos, Calif., and John V. Meehan, Poughkeepsie, Michael J. Patti, Hyde Park, and Joseph Squarzini, Jr., Hopewell Junction, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed May 8, 1964, Ser. No. 366,101
1 Claim. (Cl. 324—158)



A time delay tester for determining turn on and turn off delay of a unit under test. The time delay tester is comprised of a passive feedback means containing a delaying means and an inverting means between the output and input of the unit under test, a biasing means to allow the unit to oscillate and a recording means.

3,389,337
REGENERATIVE REPEATER USING MULTIMODE OSCILLATOR

William M. Hubbard and William D. Warters, Middletown Township, Monmouth County, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed July 29, 1965, Ser. No. 475,758
10 Claims. (Cl. 325—7)



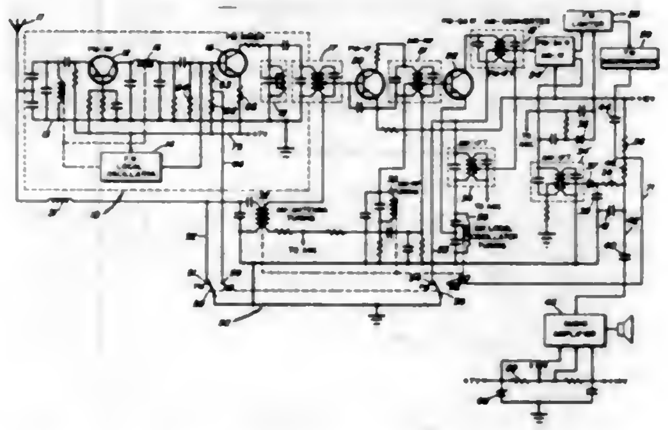
This application describes a regenerative repeater wherein signal regeneration is performed by a multimode oscillator and is capable of oscillating at any one of a number of discrete frequencies, but is constrained to oscillate at only one of these frequencies at any given time. The particular frequency at which oscillations occur is determined by a "seeding" signal.

When used as a regenerator in a PCM communication system, the desired frequency of oscillation corresponds to the frequency of the transmitted message signal. The seeding signal is the degraded message signal which includes a component of the transmitted signal.

Timing signals, which are either separately provided or are derived from the message signal, are used to turn the oscillator on and off at time intervals corresponding to the signal pulse width.

3,389,338
SIMPLIFIED BAND SWITCHING FOR FM-AM RECEIVER

Michael Slavin, Baltimore, Md., assignor to The Bendix Corporation, Baltimore, Md., a corporation of Delaware
Filed Nov. 24, 1964, Ser. No. 413,466
6 Claims. (Cl. 325—316)



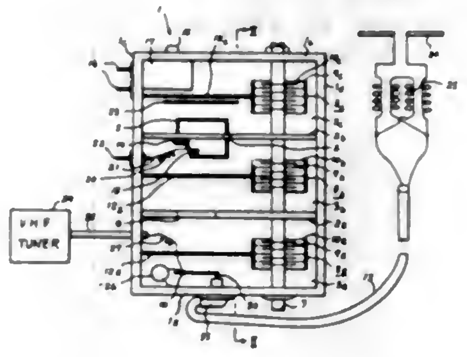
A simplified band switch for an FM-AM receiver utilizing a double pole, double throw electrical switch having both poles grounded. In the FM mode, the switch is positioned to ground the input to the AM antenna tuning circuit and the input to the AM-IF transformer. In the AM mode the switch is positioned to increase the forward bias on the FM mixer transistor so that the transistor saturates and also to remove a back bias normally applied to the AM detector.

3,389,339
DISTRIBUTED PARAMETER UHF TUNER

Yasuharu Kubota, Chiba-ken, and Koji Ouchi and Yuho Koyama, Tokyo, Japan, assignors to Sony Corporation, Tokyo, Japan, a corporation of Japan
Filed June 30, 1964, Ser. No. 379,201
3 Claims. (Cl. 325—458)

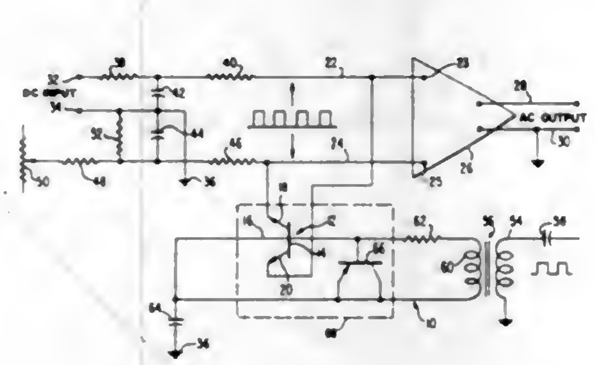
A distributed parameter UHF tuner having a plurality of cavities, a first cavity responsive to a UHF and VHF

input signal including means to selectively filter and separate the signal, a local oscillating circuit in another of the cavities, a resonant circuit in each of the cavities and a mixing circuit to provide an intermediate frequency output disposed in a third of the cavities.



3,389,340
COMMON MODE REJECTION DIFFERENTIAL AMPLIFIER

James A. Forbes, Hatboro, Pa., assignor, by mesne assignments, to Robertshaw Controls Company, Richmond, Va., a corporation of Delaware
Filed Sept. 30, 1964, Ser. No. 400,313
6 Claims. (Cl. 328—155)

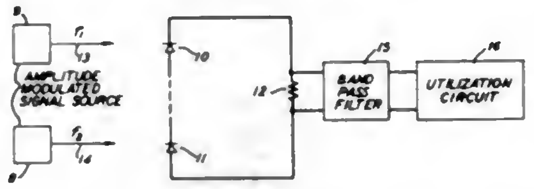


A differential amplifier circuit having a D.C. input level and a proportional A.C. to ground output rejects input common mode errors. The two input terminals to the differential amplifier contain respectively a chopped D.C. input plus common mode error and common mode error alone. The terminal containing common mode error alone is applied to a feedback circuit which puts the common mode error in the proper phase for subtraction from the signal on the other terminal.

3,389,341
SIMULTANEOUS PHOTODETECTOR AND ELECTRICAL MODULATOR

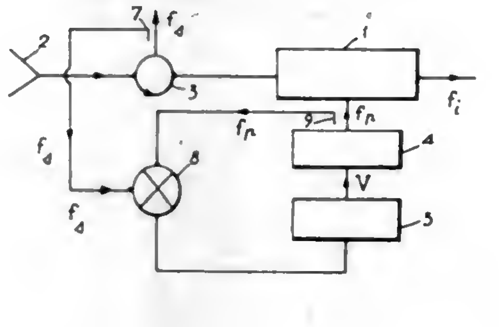
Donald E. Thomas, Madison, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Feb. 9, 1965, Ser. No. 431,313
3 Claims. (Cl. 329—144)

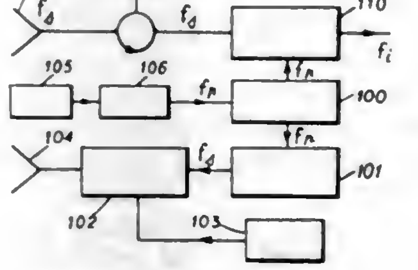
Simultaneous photodetection and electrical modulation is provided by means of a pair of photodiodes connected series-aiding to a common load resistor. The load resistor is selected to be larger than the diode resistances when photo excited, but small compared to the dark resistance of each of the diodes. When exposed to modulated light, a photodiode is capable of conducting and demodulating the light. However, because the two diodes are series connected, conduction only occurs when both diodes are in their conduction states simultaneously. As a result, the voltage developed across the load resistor contains modulation product frequency components given by $n_1f_1 \pm n_2f_2$, where f_1 and f_2 are the light modulating frequencies and n_1 and n_2 are integers. A suitable bandpass filter is used to abstract one of the modulation product components.



3,389,342
AFC FOR PARAMETRIC AMPLIFIERS AND RADARS

Claude Vergnolle, Paris, France, assignor to CSF—Compagnie Generale de Telegraphie Sans Fil, a corporation of France
Continuation of application Ser. No. 313,037, Oct. 1, 1963. This application Sept. 25, 1967, Ser. No. 670,461
Claims priority, application France, Oct. 2, 1962, 911,019
6 Claims. (Cl. 330—4.5)



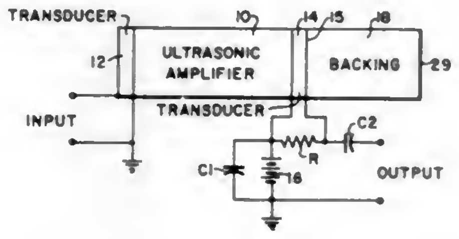


System for receiving ultra-high frequency signals having a variable carrier frequency and comprising at least one parametric amplifier whose pumping frequency is controlled by a computing device. The frequency control is designed in such a manner that the conversion gain of the parametric amplifier remains as high as possible throughout the received band of frequencies.

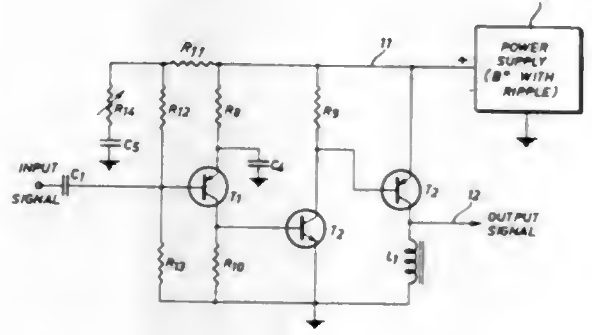
3,389,343
ULTRASONIC AMPLIFIER DEVICE WITH MEANS FOR PREVENTING SELF-OSCILLATION

William E. Newell, Murrysville, Pa., assignor to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Aug. 4, 1967, Ser. No. 658,392
5 Claims. (Cl. 330—5.5)

An ultrasonic amplifier is described utilizing a main body of piezoelectric semiconductor material wherein an additional body of such material is disposed adjacent the output transducer and opposite the main body of material providing the amplifier. The additional body of material has a good acoustic match with the amplifier and output transducer and also provides large attenuation. The attenuation may be provided by having the end surface of the body roughened or cut at an angle to prevent coherent reflection of the amplified acoustic wave. Alternatively, a different drift field may be applied across the backing body than that across the main amplifier body to provide attenuation.

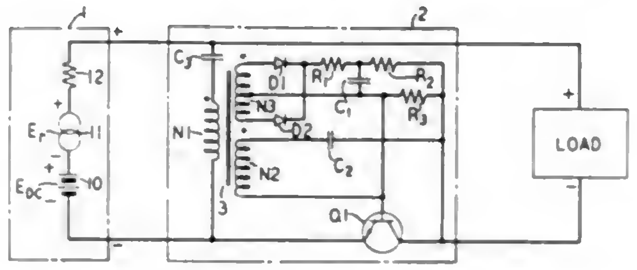


3,389,344
HUM COMPENSATION OF A TRANSISTOR AMPLIFIER
Roland H. Fichtner, Waterloo, Ontario, Canada, assignor to Dominion Electrohome Industries Limited, Kitchener, Ontario, Canada
Filed July 2, 1965, Ser. No. 469,197
8 Claims. (Cl. 330—19)



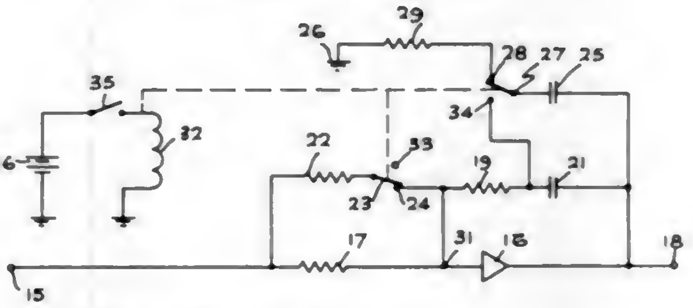
A cascaded transistor amplifier has at least an input stage and an output stage of amplification, these stages including first and second transistors respectively. A power supply produces a D.C. voltage with a ripple component that is supplied to the emitter electrode of the second transistor. A hum compensating circuit is connected to the power supply and the first transistor for applying the ripple component between the base and emitter electrodes of the first transistor to produce a hum compensating signal in the output circuit of the first transistor. The hum compensating circuit includes first, second and third resistors connected in series circuit with each other between the live and grounded terminal of the power supply, and a fourth resistor and a capacitor connected in a second series circuit with the first resistor, the second series circuit also being connected between the live and grounded terminals of the power supply. The second resistor is connected between the first resistor and the base of the first transistor, while the third resistor is connected between the base of the first transistor and the grounded terminal. Means are provided for applying the hum compensating signal to the second transistor in the phase required to produce a collector current component in the collector electrode of the second transistor that is opposite in phase to a collector current component therein produced by application of the ripple component to the emitter electrode of the second transistor.

3,389,345
ELECTRONIC FILTER WITH AUTOMATICALLY ADJUSTED BIAS
Noble E. Wickliff, Winston-Salem, N.C., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Nov. 12, 1965, Ser. No. 507,446
5 Claims. (Cl. 330—40)



An electronic filter wherein a common collector amplifier has its input terminals transformer coupled to the ripple component of a rectified D.C. source and its output terminals serially connected with the source and the load to cancel the ripple component. An automatic bias adjusting network is connected to adjust the transistor bias in response to ripple magnitude variations and thereby increase the efficiency of filtering.

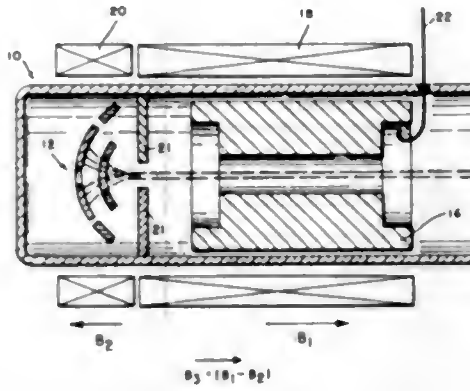
3,389,346
COMPENSATING BANDWIDTH SWITCHING TRANSIENTS IN AN AMPLIFIER CIRCUIT
James E. Webb, Administrator of the National Aeronautics and Space Administration, with respect to an invention of La Rue A. Hoffman, Los Angeles, Calif.
Filed July 20, 1964, Ser. No. 384,010
8 Claims. (Cl. 330—51)



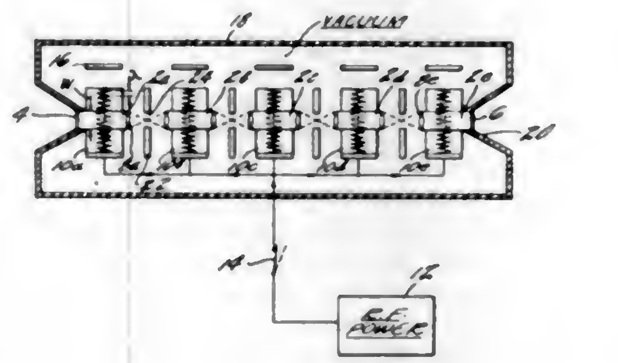
A bandwidth switching arrangement for an operational amplifier-filter, which includes a resistive-capacitive feedback network, formed by a first capacitor and resistor between the input and output terminals thereof. The arrangement includes a second capacitor and a multicontact relay used, in one state, to connect the second capacitor through a resistor to ground so that the voltage across the second capacitor is substantially equal to the voltage across the first capacitor in the feedback loop. Then, when the relay is switched to a second state, the second capacitor is connected by means of the relay contacts, in parallel across the first capacitor to increase the feedback capacitance and thereby reduce the bandwidth. An increase in the input resistance of the amplifier is also incorporated to further reduce the bandwidth.

3,389,347
MICROWAVE NOISE GENERATOR
Arthur I. Wachtenheim, Lakewood, and Bruno W. Zotter, Belmar, N.J., assignors to the United States of America as represented by the Secretary of the Army
Filed Sept. 8, 1966, Ser. No. 578,439
3 Claims. (Cl. 331—78)

An electron beam type microwave noise generator wherein cyclotron and synchronous waves or modes are generated and are propagated on a generated axial electron beam. A suitable coupler is adapted to couple either to the cyclotron waves or synchronous waves. For cyclotron coupled waves, the axial magnetic field in the vicinity of the interaction region is made relatively high and the axial magnetic field in the vicinity of the electron beam generating means is made relatively low. For synchronous coupled waves, the axial magnetic field in the vicinity of the interaction region is made relatively low while the axial field in the vicinity of the electron beam generating means is made relatively high. The amplified noise is coupled out from the coupling means after interaction with the beam.



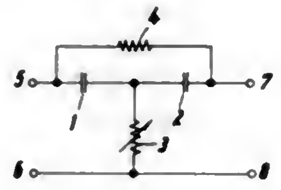
3,389,348
GATING SYSTEM FOR HIGH POWER LASER CASCADE
Anthony J. De Maria, West Hartford, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Feb. 7, 1964, Ser. No. 343,255
7 Claims. (Cl. 331—94.5)



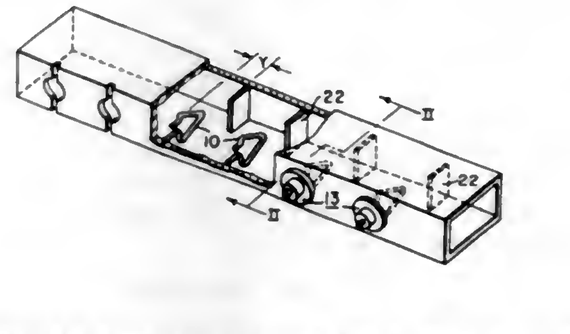
A plurality of short laser elements are cascaded optically in series in an optical cavity, and gating means are provided to prevent each laser from oscillating until a high overpopulation is achieved. Inhibiting of the gating means then results in a high power output pulse.

3,389,349
CIRCUIT ARRANGEMENT USING A NARROW BAND REJECTION FILTER
Albert Troost, Hans Maass, Flori Vogler, and Heinz-Theo Rottgers, Ulm (Danube), Germany, assignors to Telefunken Patentverwertungsgesellschaft m.b.H., Ulm (Danube), Germany
Filed Mar. 30, 1964, Ser. No. 355,613
Claims priority, application Germany, Mar. 29, 1963, T 23,743
14 Claims. (Cl. 332—56)

1. A frequency conversion circuit for converting a given frequency or frequency spectrum into a different frequency or frequency spectrum, said circuit comprising, in combination: a narrow band rejection filter in the form of a four-terminal network consisting solely of resistive and capacitive elements, having a resonant frequency at which the output is a minimum for a given input, and having input and output terminals, one of said elements being variable, means for applying a signal to the input terminals at the resonant frequency of the network, and means for applying a signal to the variable element, so that the signal appearing at the output terminals includes frequency components equal to the sum and difference of the frequencies applied to the input terminals and the variable element.

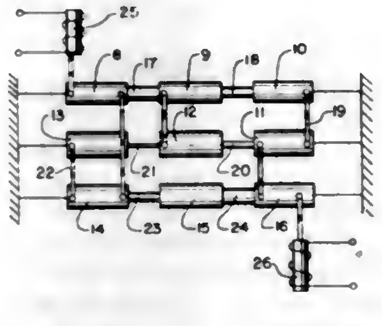


3,389,350
MICROWAVE POWER DIVIDER
George E. Sanner, Sparks, Md., and Otto Schmid, Jr., San Jose, Calif., assignors to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Feb. 24, 1966, Ser. No. 529,761
5 Claims. (Cl. 333—9)



1. Waveguide apparatus comprising a section of waveguide for propagating microwaves, means for extracting microwave energy from said guide comprising a triangular loop having its plane orthogonal to the longitudinal axis of said guide and having its apex adjacent the center of said waveguide.

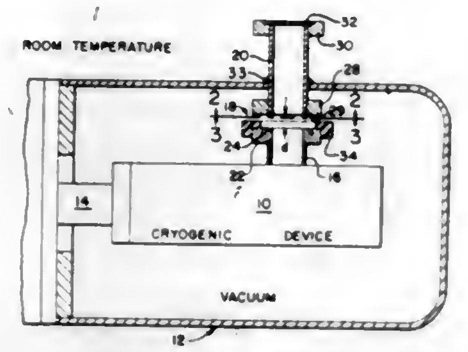
3,389,351
UNSYMMETRICAL ELECTROMECHANICAL FILTERS
Erich Trzeba, Dresden, and Hans Hermann Rudloff and Horst Deliga, Kleinmachnow, Germany, assignors to VEB Werk für Bauelemente der Nachrichtentechnik "Carl von Ossietzky," Teltow, Germany
Filed Oct. 7, 1965, Ser. No. 493,708
1 Claim. (Cl. 333—71)



Mechanical band-pass filter comprising mechanical resonators interconnected by mechanical couplings, the diameters of said couplings and/or resonators having different magnitudes and being unsymmetrically stepped with respect to the geometric center of the filter. The impedances of electromechanical transformers on the terminal elements of the filter have unequal values.

3,389,352
LOW LOSS MICROWAVE TRANSMISSION LINES ACROSS CRYOGENIC TEMPERATURE BARRIERS

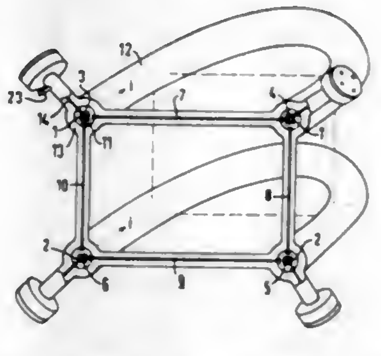
Jans Kliphuis, Huntington, N.Y., assignor to Control Data Corporation, Minneapolis, Minn., a corporation of Minnesota
Filed Feb. 7, 1966, Ser. No. 525,770
6 Claims. (Cl. 333—98)



1. A device for coupling microwave energy between a first device at one temperature and a second device at a temperature substantially different from said one temperature, comprising means for thermally insulating said second device from said first device, a first waveguide section in a thermally conductive relationship with said first device, a second waveguide section adapted to couple energy to or from said second device, said first and second waveguide sections being spaced apart so as to interrupt the heat conduction path therebetween, and choke means positioned at the gap between said waveguide sections for reducing the amount of microwave energy radiated from said gap.

3,389,353
STRUCTURE FOR MOUNTING SUPERCONDUCTIVE COILS

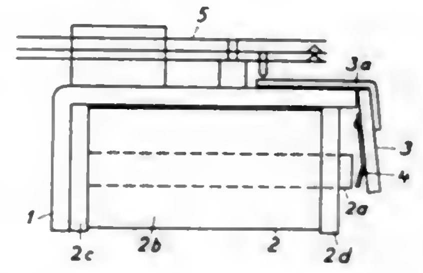
Wilhelm Kafka, Tennenlohe, and Dieter Kullmann, Erlangen, Germany, assignors to Siemens Aktiengesellschaft, a corporation of Germany
Filed Nov. 25, 1966, Ser. No. 597,130
Claims priority, application Germany, Dec. 7, 1965, S 100,831
7 Claims. (Cl. 335—216)



A superconductive coil is supported within a tubular coaxial housing with the aid of tension rods which extend radially to the outside of the housing and are subject to contraction due to refrigeration of the coil. A stop carried by the housing limits the amount of contraction and then forms a rigid connection between tension rod and housing. A spring on the tension rod provides a yielding force opposing the contraction.

3,389,354
ELECTROMAGNETIC RELAYS

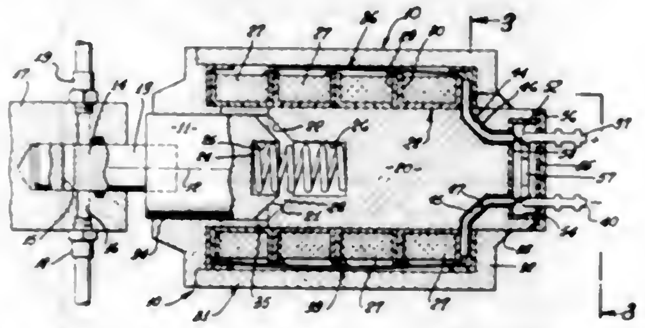
Curt Fredrik Ahlberg, Bromma, Sweden, assignor to Telefonaktiebolaget L M Ericsson, Stockholm, Sweden, a corporation of Sweden
Filed Dec. 13, 1965, Ser. No. 513,483
Claims priority, application Sweden, Mar. 6, 1965, 2,948/65
3 Claims. (Cl. 335—248)



An electromagnetic relay in which the movement of the armature into and out of its position of attraction is damped or cushioned by interposing a flexible member which when the armature moves toward the core softens the impact thereof upon the core by spring action and which when the armature moves away from the core accelerates the initial armature movement and causes a more uniform decrease of the magnetic field then acting upon the armature.

3,389,355
MULTIPLE COIL SOLENOID

Fred Schroeder, Jr., 6614 Valjean St., Van Nuys, Calif. 91906
Filed June 5, 1964, Ser. No. 372,981
11 Claims. (Cl. 335—266)



1. A solenoid assembly comprising a magnetic metallic core, a direct succession of a plurality of coaxial independently conductive coils surrounding said core, connector means for simultaneously electrically energizing all of said coils and each independently of the others, said connector means comprising separate conductors extending from common terminals at one end of the core to connections with each of the coils, and a magnetic metallic plunger within the electromagnetic field of said core and coils and displaceable axially thereof in response to energization of all or less than all of said coils.

3,389,356
FAIL-SAFE PERMANENT MAGNET LIFTING DEVICE WITH A MOVABLE BIAS KEEPER

William Schneider, Pittsburgh, Pa., assignor to American Chain & Cable Company, Inc., New York, N.Y., a corporation of New York
Filed Aug. 23, 1965, Ser. No. 481,552
3 Claims. (Cl. 335—289)

1. In a fail-safe permanent magnet lifting device, the combination comprising,

a center pole piece of magnetic material,

a pair of permanent magnets positioned on opposite sides of said center pole piece and having face portions abutting said center pole piece adjacent face portions,

a pair of end pole pieces of magnetic material positioned on opposite sides of said pair of permanent magnets and having face portions abutting said adjacent permanent magnet face portions,

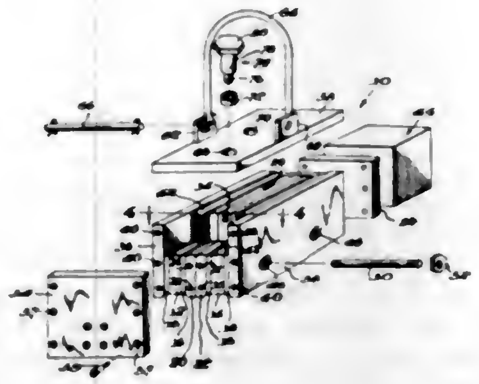
a coil extending around said center pole piece and connected to a source of direct current through a switching means operable to energize said coil and to reverse the direction of current flow through said coil,

said center pole piece and said pair of end pole pieces having top walls arranged in substantially the same plane,

said center pole piece and said pair of end pole pieces having bottom walls arranged in substantially the same plane,

mechanical means connecting and rigidly securing said end pole pieces, said pair of permanent magnets and said center pole piece to each other as a unitary mass to retain said respective top walls and bottom walls in the same plane,

a keeper plate of magnetic material positioned on the top walls of said end pole pieces and center pole piece,



said keeper plate having a plurality of apertures therethrough,

said center pole piece having threaded apertures extending downwardly through said top wall in alignment with said apertures in said keeper plate,

bolt members extending through said apertures in said keeper plate and threadedly secured in said center pole piece threaded apertures,

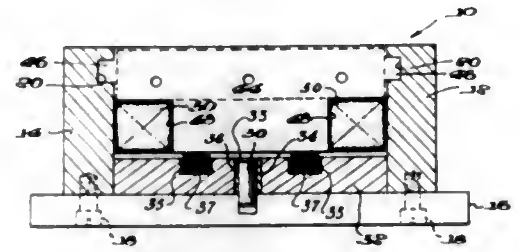
said bolts having enlarged head portions spaced above said keeper plate, and

said keeper plate operable to slide vertically on said bolts into abutting relation with the underside of said bolt heads to space said keeper plate from said end pole pieces and said center pole piece and to permit limited movement of said upper keeper plate relative to said center pole piece to thereby provide an air gap between said center pole piece and said keeper plate.

3,389,357
PERMANENT MAGNET WORK HOLDDOWN DEVICE

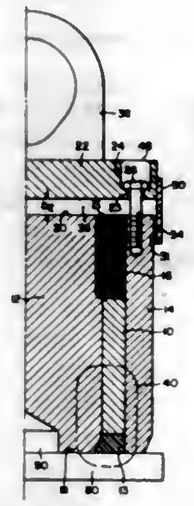
William Schneider, Pittsburgh, Pa., assignor to American Chain & Cable Company, Inc., New York, N.Y., a corporation of New York
Continuation-in-part of application Ser. No. 481,670, Aug. 23, 1965. This application July 5, 1967, Ser. No. 651,289
10 Claims. (Cl. 335—289)

A permanent magnet work holddown device that has a base plate fixedly secured to a work surface. A rectangular enclosure of nonmagnetic material is positioned on the base plate and houses a series of magnetic modules that include permanent magnets, end poles, a center pole and a control coil. A keeper plate is positioned between the lower portion of the modules and the base plate. Spring means urge the keeper plate away from the bottom surface of the modules. The control coils through a source of DC current induce a magnetic field around the center pole either aiding or opposing the magnetic flux field.



3,389,358
FLUX TRANSFER LIFTING MAGNET

Lester G. Tubbs, Pittsburgh, Pa., assignor to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed July 19, 1966, Ser. No. 566,351
4 Claims. (Cl. 335—290)

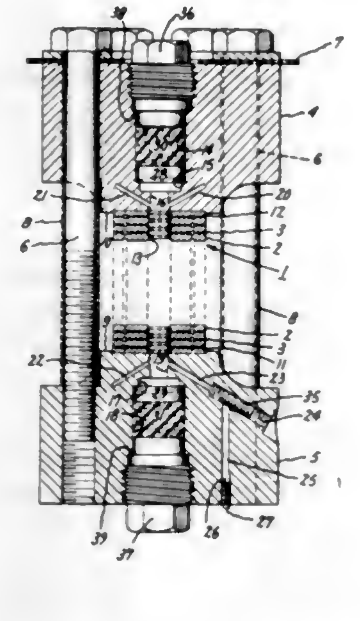


An improved permanent magnet type lifting device is provided having an integral and rugged structure. Flux leakage is substantially reduced thereby permitting greater efficiencies with smaller permanent magnets. A protective skirt surrounding the keeper plate about its movement path excludes contaminating particles and takes the place of the traditional housing.

3,389,359
CHANGE OF STATE CURRENT LIMITER DEVICES WITH STACKED SEGMENT CONSTRUCTION

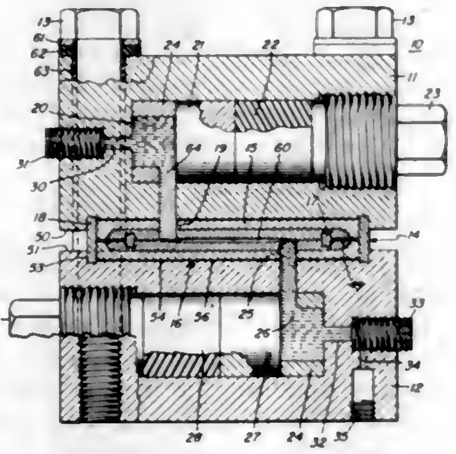
Lawson P. Harris, Scotia, N.Y., assignor to General Electric Company, a corporation of New York
Filed Apr. 19, 1967, Ser. No. 632,049
10 Claims. (Cl. 337—114)

A self-recovering reusable current limiting device relies upon a change of state of a confined liquid metal to provide current limiting of a fault-current in an electrical circuit to facilitate circuit interruption. In the normal condition the limiter conductor is liquid and represents a minimal resistance. In the limiting condition the limiter conductor is in the vapor state and represents a relatively high resistance to the fault-current. The limiter conductor is confined within a chamber formed by alternating insulating and conducting members to provide a strong and flexible container which is held together in compression and which does not conduct electrically except through the limiter conductor.



3,389,360
CHANGE OF STATE CURRENT LIMITER HAVING FLAT PLATE CONSTRUCTION

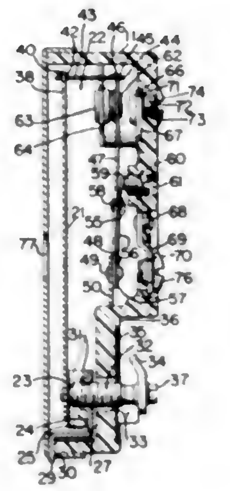
James J. Keenan, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Filed Apr. 19, 1967, Ser. No. 632,050
8 Claims. (Cl. 337—114)



Change of state current limiter, which operates with a liquid metallic current conductor in the normal mode, operates to limit fault-currents by the vaporization of the liquid metallic current conductor by heating thereof by fault-currents. The channel for containing current limiting metallic conductor is formed by mating cavities in the faces of abutting ceramic plates. This channel exists between two pistons which may recede under pressure to minimize thermal and mechanical shock. Plates are maintained in compression between a pair of headers which contain pistons and resilient means allowing pistons to recede under pressure.

3,389,361
THERMOSTATIC SWITCH CONSTRUCTION HAVING FIXED CONTACTS AND MOVABLE CONTACTS MEANS THEREBETWEEN

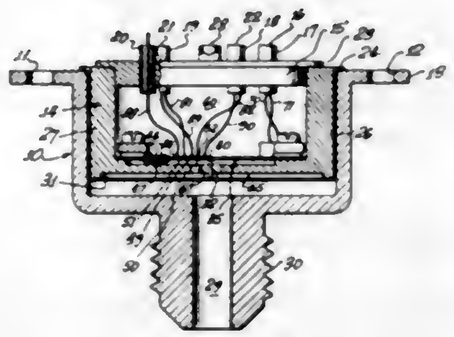
Siegfried E. Manecke, Indiana, Pa., assignor to Robertshaw Controls Company, Richmond, Va., a corporation of Delaware
Continuation of application Ser. No. 503,289, Oct. 23, 1965. This application Sept. 21, 1967, Ser. No. 669,651
5 Claims. (Cl. 337—347)



This disclosure relates to a thermostatically operated electrical switch construction having a pair of fixed electrical contacts and a spring blade having contact means on one end thereof with that end being disposed between the fixed contacts, the spring blade having its movable end directly interconnected to the movable end of a bimetal member by a tie bar so that movement of the movable end of the bimetal member in response to changes in sensed temperature will cause the contact means to move between and engage one or the other of the fixed contacts in response to the particular direction of movement of the bimetal member. One of the fixed contacts is adjustable toward and away from the other contact.

3,389,362
LOW PRESSURE TRANSDUCER

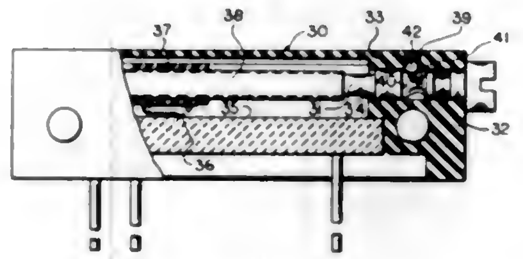
William H. McLellan, Pasadena, Calif., assignor to Electro-Optical Systems, Inc., Pasadena, Calif., a corporation of California
Filed Oct. 22, 1965, Ser. No. 501,612
8 Claims. (Cl. 338—4)



Pressure transducer structure having a casing sealed by a diaphragm coupled by a force pin to the cantilever beam of a beam pressure sensing module disposed within the casing, the module including a slotted plate defining an integral cantilever beam portion projecting from a beam-supporting portion, a sensor element bonded to the cantilever beam portion, an electrical contact tab bonded to the beam-supporting portion and a pigtail lead interconnecting the sensor element with the contact tab. Limit stop means are provided within the casing for limiting diaphragm movement.

3,389,363
SHAFT RETAINER FOR VARIABLE RESISTANCE DEVICE

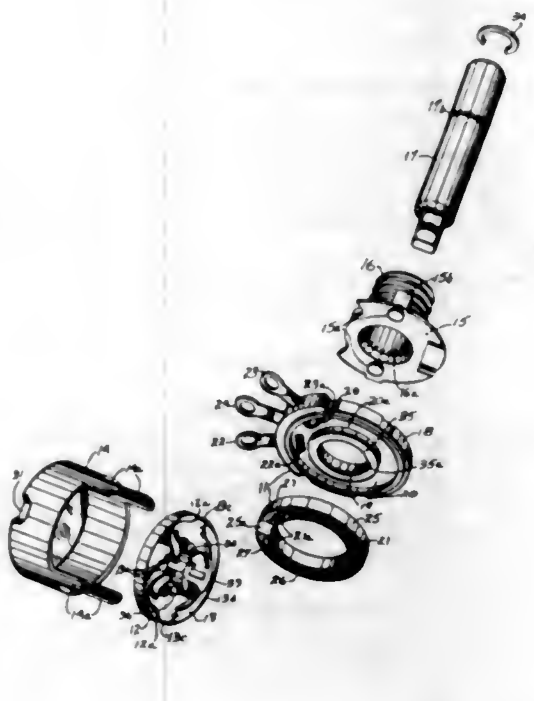
George A. Gerstmeier, Tustin, Calif., assignor to Beckman Instruments, Inc., a corporation of California
Filed Oct. 18, 1967, Ser. No. 676,186
6 Claims. (Cl. 338—176)



Relates to a variable resistance device including a resistance element mounted in a suitable housing having a shaft opening through which a rotatable shaft is positioned for driving a movable contact over the resistance element. The shaft is retained within the shaft opening by means of a ball inserted against a beveled or frusto-conical surface of the shaft through a second opening intersecting the shaft opening, the ball being of sufficient size to produce an interference fit with the side walls of the second opening when inserted therein and is retained firmly against the frusto-conical surface of the shaft.

3,389,364
ELECTRICAL CONTROL HAVING A NONCERAMIC BASE AND CERAMIC SUBSTRATE SUPPORTED CERMET RESISTANCE FILM SUPPORTED THEREON

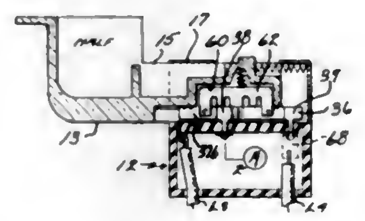
Wilbert H. Budd and John D. Van Benthuysen, Elkhart, Ind., assignors to CTS Corporation, Elkhart, Ind., a corporation of Indiana
Filed Mar. 7, 1966, Ser. No. 532,455
9 Claims. (Cl. 338—174)



Nonceramic molded base with a pair of end terminals and a center terminal embedded therein provided with a flat surface supports a cermet resistance element comprising a cermet resistance film deposited and fired onto a flat surface of a ceramic substrate. Inner end portions of the end terminals project upwardly from the supporting surface of the molded base and terminate in slots provided in the ceramic substrate with conductive material connecting the ends of the terminals with the cermet resistance film. Relieved surface areas in the nonceramic base accommodate build-ups of nonceramic material around the terminals and prevent build-ups of material from being interposed between the flat supporting surface of the nonceramic base and the ceramic substrate. A contactor wipingly engageable with a collector and the cermet resistance film is rotatably mounted in the control and drivingly connected with a control shaft projecting externally from the control housing.

3,389,365
VARIABLE RESISTOR WITH SWITCH

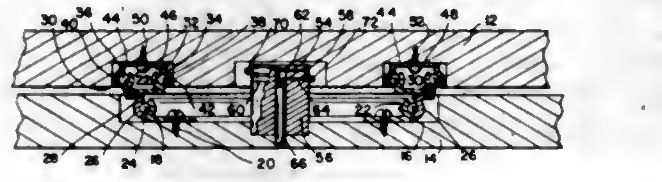
Benjamin H. Matthews, Peninsula, and Jules W. Rhine, Bedford, Ohio, assignors to Lucerne Products, Inc., Northfield, Ohio, a corporation of Ohio
Filed Aug. 23, 1965, Ser. No. 481,564
7 Claims. (Cl. 338—200)



A combination electric switch and resistor speed control is used to regulate the speed of a power tool. An activating trigger is slidable on an insulative base for switching a resistor in circuit with the tool motor and selectively decreasing the amount of resistance in circuit as the trigger is depressed. The resistance element and switching contacts are located on a support fixed to the base and a wiper means is slidably received by the support and positioned to be moved with the trigger. Alternatively, the resistance element and switching contacts are fixed to a surface of the trigger and the wiper means is fixed to the support.

3,389,366
SUPPORT HAVING SLIP RING CONDUCTOR ASSEMBLY

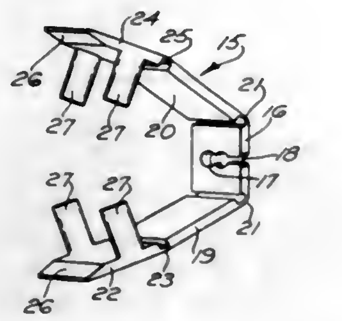
Gilbert V. Galles, 2504 E. Monterosa, Phoenix, Ariz. 85016
Filed Feb. 27, 1967, Ser. No. 618,695
4 Claims. (Cl. 339—7)



A business machine support comprising a stationary base member, and a business machine supporting table member rotatably and slidably supported on the base member to rotate about a vertical axis, and to slide radially relative to the vertical axis, and wherein slip ring conductor means, coupled with an electrical energy source, are secured to the base and to the table so that a business machine supported on the table may derive electrical energy, while the table is rotated about a vertical axis, and reciprocated horizontally relative to the base member.

3,389,367
SAFETY CAP FOR EXTENSION CORD SETS

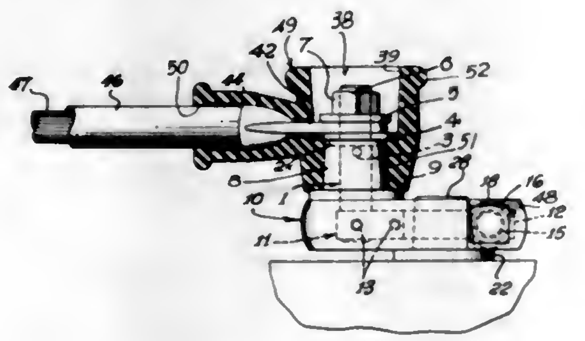
Frederick W. Schwartz, Providence, R.I., assignor to Cable Electric Products, Inc., Providence, R.I., a corporation of Rhode Island
Filed Mar. 25, 1966, Ser. No. 537,461
4 Claims. (Cl. 339—38)



A safety cap for an extension cord comprising a plurality of flat rectangular portions integrally connected by flexible webs. The central portion is provided with a restricted slot for receiving the extension cord to mount the safety cap. The outer portions are provided with spaced parallel flat tabs which enter the slots in the electrical tap to be frictionally retained therein and to dielectrically close the slots.

3,389,368
BATTERY TERMINAL CONNECTOR

Joseph K. Schaefer, 2107 N. Beachwood Drive, Hollywood, Calif. 90028
Filed Feb. 8, 1965, Ser. No. 431,076
9 Claims. (Cl. 339—116)

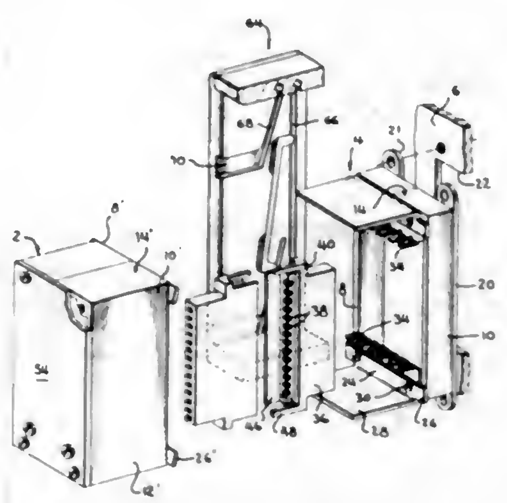


1. A battery terminal connector comprising a cast split clamp body, a reinforcing element cast within said clamp body, a threaded stud affixed to said reinforcing element, a shoulder washer permanently affixed to said threaded stud, a tapered post cast on said split clamp body, said shoulder washer positioned along the length of said stud so as to be aligned flush with the top of said tapered post.

3,389,369
MODULAR ELECTRICAL CONNECTOR

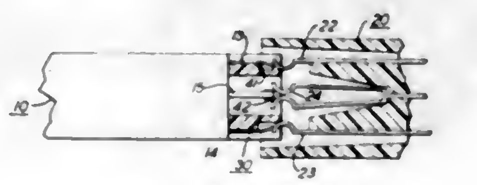
Charles Robert Curtis, Camp Hill, Pa., assignor to AMP Incorporated, Harrisburg, Pa.
Filed Mar. 29, 1966, Ser. No. 538,285
3 Claims. (Cl. 339—121)

2. An electrical connector part comprising a shell member, insert module retaining means securd to, and extending across, opposite sides of said shell member, said insert module retaining means each comprising a plurality of spaced-apart fingers extending parallel to the axis of said shell member, corresponding fingers on said opposite sides of said shell member being aligned with each other, and individual modules mounted on each pair of said fingers, extending into cavities on the end of said module, each module and pair of fingers having interengaging means for retaining said module in said shell member.



3,389,370
ELECTRICAL CONNECTOR

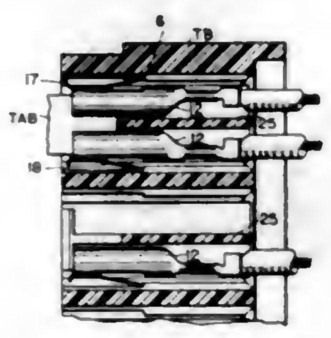
Robert E. Davis, Gahanna, Ohio, assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Jan. 4, 1966, Ser. No. 518,568
6 Claims. (Cl. 339—156)



A connector block for joining a relay to a socket is disclosed which includes tunnels and channels for accepting and joining plugs from the socket and the relay.

3,389,371
ELECTRICAL CONNECTORS

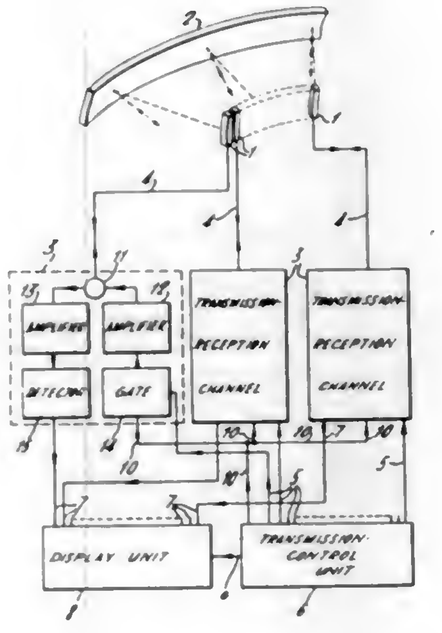
Wheeler D. Maynard, Mendon, N.Y., assignor to General Signal Corporation, Rochester, N.Y., a corporation of New York
Filed Aug. 27, 1965, Ser. No. 483,048
6 Claims. (Cl. 339—192)



The connector is made from a piece of flat material pressed into circular shape to have two thin fingers extending toward each other to tightly grasp the inserted blade or contacting tab. On the back of the connector is a stiff extending lip for preventing rotation of the connector in its socket. This lip is on the forward edge of the circular portion. A backwardly protruding locking spring has its distal end pointing towards the wire connection. Such distal end of the locking spring also prevents rotation of the connector in its socket or cavity. The entire connector with a wire attached is then inserted into a socket or cavity which is grooved for receiving the lip and locking spring. The front or face of the socket has a slit through which a blade or tab can be inserted and grasped by the fingers of the connector.

3,389,372
ECHO-RANGING APPARATUS

William Halliday, London, and Roy William George Haslett, Ilford, England, assignors to Smiths Industries Limited, London, England, a British company
Filed June 21, 1966, Ser. No. 559,292
13 Claims. (Cl. 340—3)



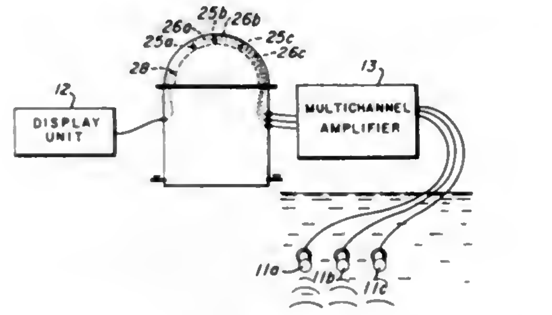
2
AMPLIFIER
AMPLIFIER
DETECTOR
GATE
TRANSMISSION-RECEPTION CHANNEL
TRANSMISSION-RECEPTION CHANNEL
DISPLAY UNIT
TRANSMISSION CONTROL UNIT

A sonar system includes a side-by-side array of electromechanical transducers mounted on the focal surface of a spherical reflector to transmit and receive acoustic waves in respective directions throughout a sector of surveillance. Each transducer has its own transmitting and receiving channels, and a display unit common to the receiving channels displays each detected echo with a directionality dependent upon which of the receiving channels detected that echo.

3,389,373
HEMISPHERICAL GAS FILLED SHELL FOR ACOUSTICAL TIME DELAY ACTION

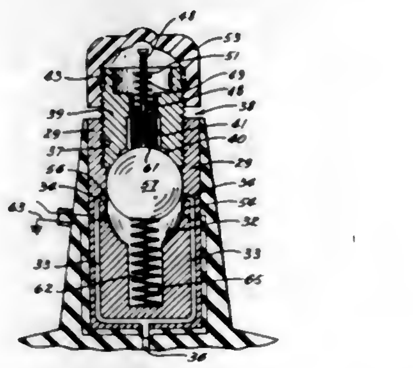
Wesley L. Angeloff and Frank R. Abbott, San Diego, Calif., assignors to the United States of America as represented by the Secretary of the Navy
Filed July 25, 1967, Ser. No. 656,629
7 Claims. (Cl. 340—6)

The present invention relates to an acoustic phase compensator which permits simulation of the operational characteristics of a transducer array by providing a model array simulator scalarly proportional to the acoustic transducer array and disposed in a medium having an acoustic propagation velocity which is proportional to the scalar portionality between the transducer array and the model simulator. Using appropriate driving and monitoring external circuitry, the invention permits simulation and control of the transducer array for beam forming of acoustic signals and for location of a transmitter at a distance unknown point.



3,389,374
TIRE DEFLATION SIGNAL SYSTEM

James A. O'Callaghan, 210 6th Ave. 50309; Joseph H. Beavers, 625 42nd St. 50312; and Earl F. Shoafstall, 305 E. Shawnee 50313, all of Des Moines, Iowa
Filed June 28, 1965, Ser. No. 467,483
5 Claims. (Cl. 340—58)

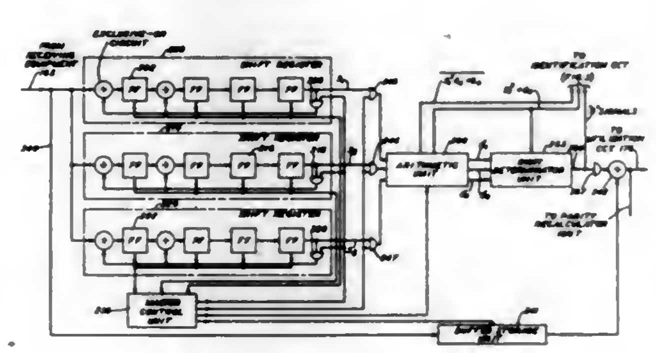


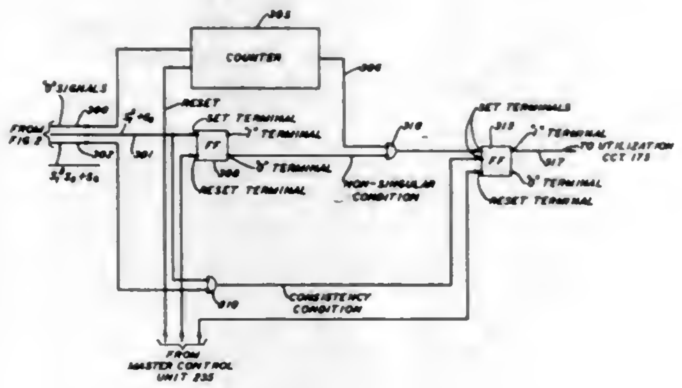
This invention pertains to an air valve assembly for a conventional vehicle tire, which valve assembly has the dual function of being usable as a conventional air valve to insert air into the tire, and for being connectable in a signal system for indicating when the air pressure within the tire is below a certain pressure such that the safety of the vehicle is in danger. The assembly comprises a housing having a cavity with a pair of passages formed therein, one passage going to the atmosphere, and the other passage going to the interior of the tire, includes as a pair of spaced electrodes which are part of a signal system, which when energized informs the operator that the pressure of a particular tire is low, includes further a ball valve which is movable among a plurality of positions affecting the passages and is operable when in engagement with the electrodes to close an electrical circuit whereby the circuit is energized, includes further spring means for biasing the ball valve toward a certain position, and finally includes an air valve unit operable in response to the use of a conventional air hose to position the ball valve such that the two passages are open to each other whereby air can be transmitted into the interior of the tire.

3,389,375
ERROR CONTROL SYSTEM

Herbert O. Burton, Little Silver, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Feb. 1, 1965, Ser. No. 429,386
8 Claims. (Cl. 340—146.1)

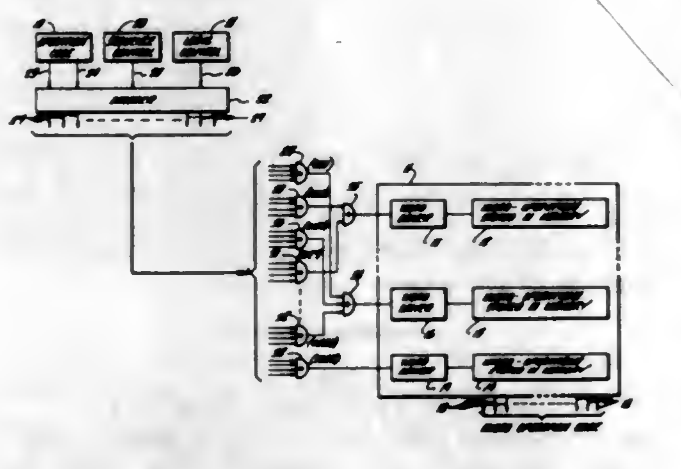
An identification circuit has been incorporated into an error control system employing a Peterson decoder in order to determine whether a corrected sequence delivered to the utilization circuit is a valid code element. The identification circuit is responsive to signals representative of information generated during the decoding cycle which is inherently determinative of the validity of a corrected code sequence and provides an output signal indicative thereof.





3,389,376
MICRO-PROGRAM OPERATED MULTIPLE ADDRESSED MEMORY

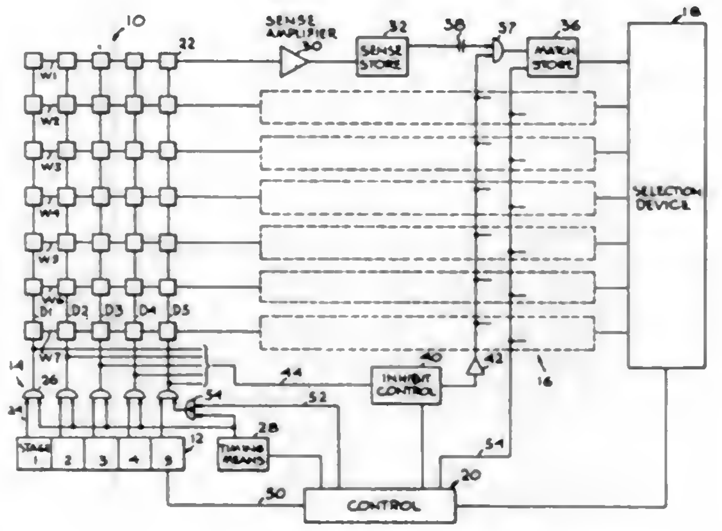
Roger E. Packard, Glendora, Calif., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed July 6, 1965, Ser. No. 469,386
11 Claims. (Cl. 340—172.5)



An improved linear addressed memory system wherein one or more words stored in the memory are addressable by a multiplicity of addresses. The memory system is advantageously used in conjunction with a data processor having certain operations permanently programmed into its hardware. A unique address is defined for each set of simultaneously performed micro-operations within each such program. Word duplications are avoided by the provision of means to address individual words by a plurality of addresses whenever such addresses relate to identical sets of micro-operations. In another embodiment a stacking arrangement is provided wherein one such multiple addressed memory system is utilized to address another multiple addressed memory system.

3,389,377
CONTENT ADDRESSABLE MEMORIES

Robert H. Cole, Canoga Park, Los Angeles, Calif., assignor to The Bunker-Ramo Corporation, Stamford, Conn., a corporation of Delaware
Filed July 6, 1965, Ser. No. 469,755
10 Claims. (Cl. 340—172.5)

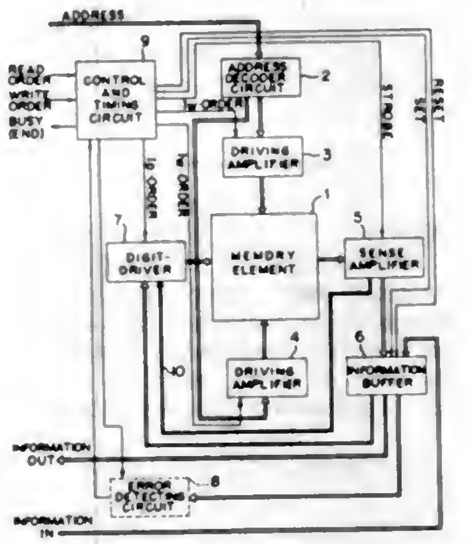


A content addressable memory for yielding search results based on criteria excluding "exact matches" such as "nonexact match," "less than," "greater than." In order to search for those stored words which have a magnitude "less than" a search word, for example, a search is initially performed to isolate those words which are "less than or equal to" the search word. From the set of match indications thus developed, a subset corresponding to exactly matching words is removed by modifying the original search word and performing a subsequent "exact match" search to thus generate mismatch signals with respect to all of the stored words exactly matching the original search word. The invention herein described was made in the course of or under a contract or subcontract thereunder, with Bureau of Ships.

3,389,378
MEMORY SYSTEM

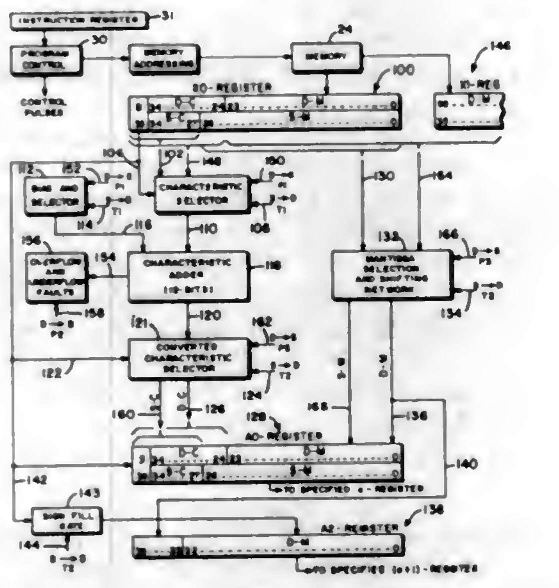
Katsuro Nakamura, Minato-ku, Tokyo-to, Japan, assignor to Toko Kabushiki Kaisha, Tokyo-to, Japan, a joint-stock company
Filed Aug. 6, 1965, Ser. No. 477,687
Claims priority, application Japan, Aug. 8, 1964, 39/45,164
2 Claims. (Cl. 340—172.5)

A memory system of the destructive reading-out type wherein a circuit connects a sense amplifier directly with a digit-driver without passing through the information-buffer-register of the system thus eliminating the time lag needed for setting the information-buffer-register from the time for rewriting.



3,389,379
FLOATING POINT SYSTEM: SINGLE AND DOUBLE PRECISION CONVERSIONS

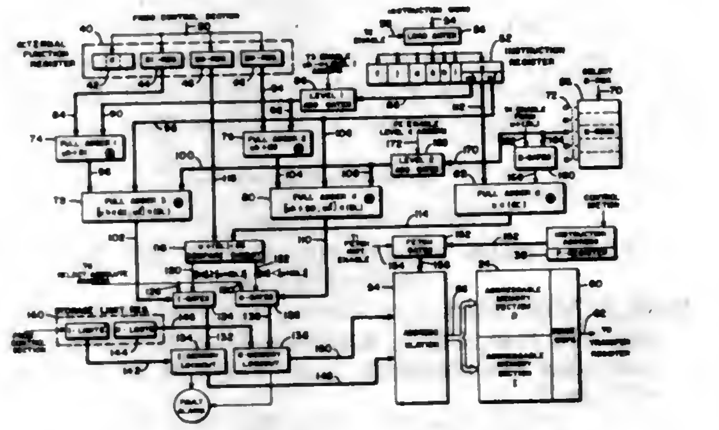
Gerald J. Erickson and Thomas C. Tollefson, St. Paul, Minn., assignors to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Filed Oct. 5, 1965, Ser. No. 493,150
16 Claims. (Cl. 340—172.5)



Conversion circuitry for converting single-precision floating point operands to double-precision floating point operands, and circuitry for converting double-precision floating point operands to single-precision floating point operands are described. Circuitry for converting the numerical capacity of a biased floating point characteristic to a different biased numerical capacity is also described.

3,389,380
SIGNAL RESPONSIVE APPARATUS

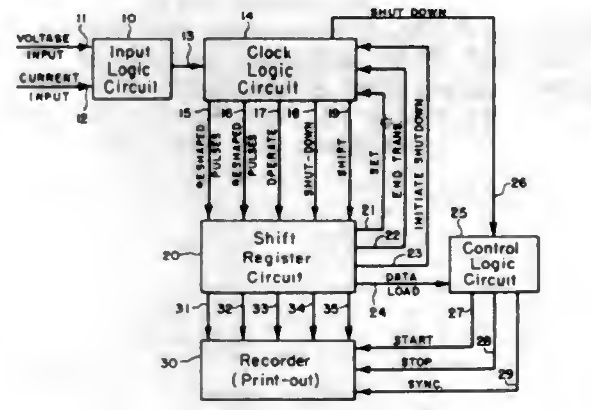
James P. Ashbaugh, James C. Borgstrom, and Thomas C. Tollefson, St. Paul, Minn., assignors to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Filed Oct. 5, 1965, Ser. No. 493,180
20 Claims. (Cl. 340—172.5)



The subject invention relates to an addressing control system. The system finds particular application when two independent memory modules are available, but it is not limited thereto. The system provides for utilizing instructions in a program coded in a relative address format, and further provides for a separate bank or portion of memory for the storage of operands and the like having a separate relative addressing relationship. As the addresses are called out in the operating program, the system operates to compute in parallel a pair of alternative absolute addresses and then operates to select the appropriate absolute address for accessing memory.

3,389,381
COMMUNICATION SYSTEM

William P. Foster, Paoli, Pa., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Filed Jan. 18, 1966, Ser. No. 521,352
10 Claims. (Cl. 340—172.5)

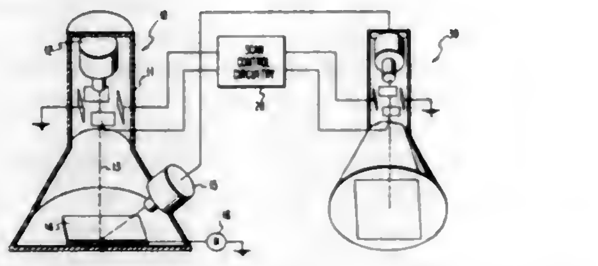


1. A system for synchronizing the receipt and distribution of data pulses received in serial format in groups of pulses, each pulse group denoting a character, and the conversion of the data pulses into a parallel format, comprising:

clock circuit means operative responsive to receipt of the first pulse in each group to provide a train of precisely-spaced clock pulses, and shift register means, including a plurality of memory circuits connected to receive the data pulses in serial format at one of said memory circuits and having a plurality of output conductors respectively coupled to the different memory circuits to present the data pulses in parallel format, means for applying said train of clock pulses simultaneously to all of said memory circuits to step the serial data pulses sequentially through the memory circuits and provide a group of character-denoting signals simultaneously on said output conductors, and means operative upon storage of the last pulse of a character-denoting group to pass a stop pulse to said clock circuit means to terminate the train of clock pulses.

3,389,382
ELECTRON BEAM READOUT OF STORED INFORMATION

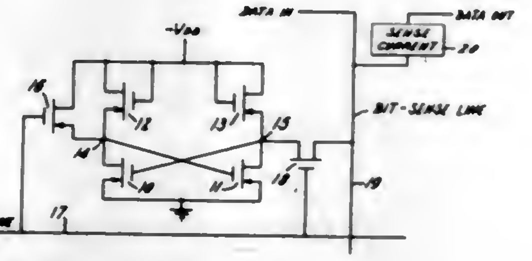
Donald Mills Hart, Los Gatos, and Joseph Robert Werning, San Jose, Calif., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Apr. 27, 1964, Ser. No. 362,599
3 Claims. (Cl. 340—173)



An information storage system wherein information is stored in the form of a pattern of different materials. Information is read by scanning the pattern of different materials with an electron beam and detecting the number of backscattered electrons. In order to prevent the accumulation of charge on the pattern of different materials, the pattern is either made out of a conductive material, or it is coated with a thin layer of conductive material.

3,389,383
INTEGRATED CIRCUIT BISTABLE MEMORY CELL

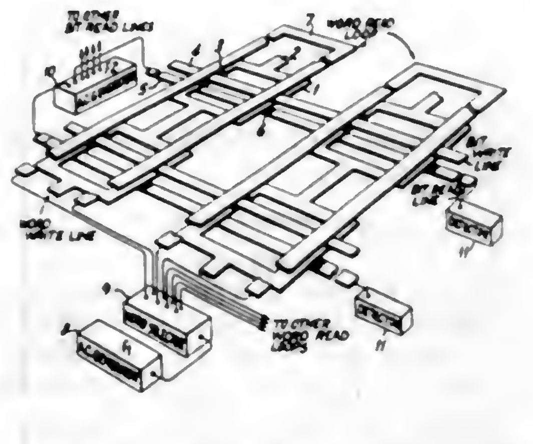
Hubert K. Burke, Schenectady, and Gerald J. Michon, Waterford, N.Y., assignors to General Electric Company, a corporation of New York
Filed May 31, 1967, Ser. No. 642,465
3 Claims. (Cl. 340—173)



A high speed flip-flop bistable memory cell suitable for fabrication as an integrated circuit array is constructed of metal oxide semiconductor field-effect transistors of the same conductivity type. In a "word" organized memory, it comprises a four-transistor flip-flop having a fifth transistor for shunting one load transistor when the word line is energized, and a sixth transistor connected to the juncture of the opposite transistors and to a combination bit-sense line which has signals at two potential levels for writing, one of these or an intermediate potential being applied during non-destructive readout to produce high and low currents indicative of the state of the cell. A continuous read-write cycle is possible, as is a similar "bit" organized memory.

3,389,384
SUPERCONDUCTIVE DIGITAL INFORMATION STORAGE APPARATUS

Glyn Faulkner Jones and George Richard Hoffman, Sale, England, assignors to National Research Development Corporation, London, England, a British corporation
Filed Dec. 1, 1965, Ser. No. 510,792
Claims priority, application Great Britain, Dec. 4, 1964, 49,373/64
9 Claims. (Cl. 340—173.1)

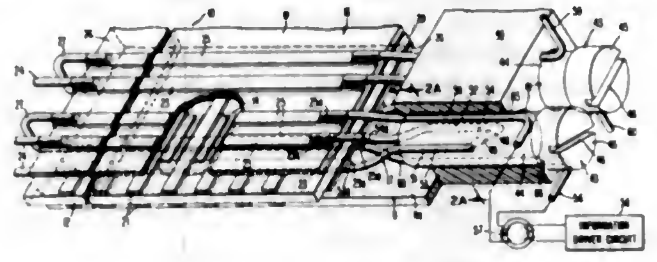


9. Digital information storage apparatus comprising a matrix of rows and columns of superconducting elements arranged to store information in the form of circulating currents and reading means comprising rows of superconducting gates each located in proximity to an element, repetitive drive means comprising an A.C. generator providing current at one frequency, a plurality of current carrying conductors each located in proximity to a column of elements, selection means for enabling the output of the generator to be switched to a selected one of the conductors, the magnitude of the magnetic flux generated by current from the generator in a selected conductor being sufficient in combination with flux trapped by circulating current in an element to drive the associated gate normal, but being insufficient to drive the gate normal in the absence of trapped flux in an element, means for applying a signal alternating at another frequency to all the rows of gates, and detectors sensitive to the difference between the two frequencies connected to the rows of gates.

3,389,385
INDUCTIVE NOISE CANCELLING DEVICE FOR MAGNETIC MEMORY ARRAY

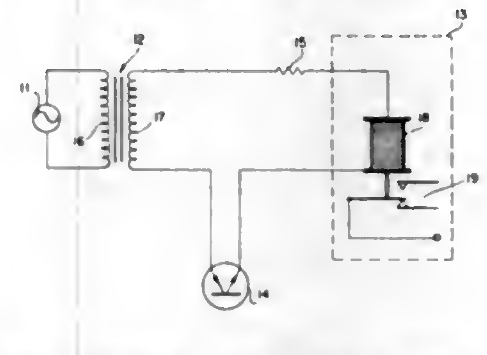
Charles B. Haentze, Broomall, and Edgar O. Sprude, Philadelphia, Pa., assignors to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed June 8, 1964, Ser. No. 373,309
14 Claims. (Cl. 340—174)

1. In a memory plane, first and second windings each looped around opposite planar surfaces thereof said first winding having ends thereof terminating adjacent one edge portion of said memory plane and said second winding having end portions extending beyond said edge portion thereof, a frame adjacent said edge and having a plurality of apertures disposed therein, a member of electrically non-conductive material mounted for rotational movement in each aperture, and a conductive element threaded through said member and having its ends electrically connected to the ends of said first winding to form a loop therewith, whereby rotational movement of said member varies the electromagnetic coupling of said loop with the second winding.



3,389,386
RELIABLE MONITORING SYSTEM

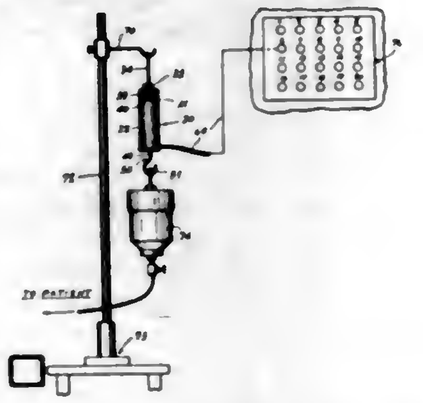
William G. Rowell, Milton, Mass., assignor to Technical Marketing Associates, Inc., Concord, Mass., a corporation of Massachusetts
Filed Sept. 30, 1964, Ser. No. 400,383
2 Claims. (Cl. 340—248)



A fail-safe condition monitoring system including means for continuously self-checking the integrity of the system. The system employs a condition-actuated semiconductive sensor to rectify AC power causing an AC relay to pulsate. A short circuit in the sensor will cause the relay to remain steadily energized and an open circuit or lack of the condition being monitored will cause the relay to remain deenergized.

3,389,387
WARNING DEVICE

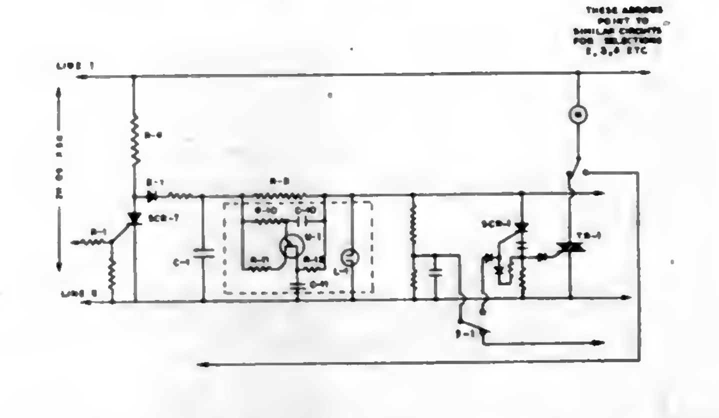
Mark M. Hulse, 306 W. Broadway, Columbia, Mo. 65201, and Wilbur K. Baker II, 2928 Westover Drive, Wichita, Kans. 67210
Filed Sept. 10, 1965, Ser. No. 486,442
2 Claims. (Cl. 340—272)



A warning construction for calling attention to a diminishing or diminished supply of fluid, as blood or dextrose, being injected into a patient, comprising a cylindrical casing, a switch in the casing, a hook member to hold a container of fluid extending from the casing, a tension spring supporting the hook member, a switch actuator supported by the hook member and adapted to actuate said switch, and adjustable means suspending said spring including a cup vertically movable in the casing, axially spaced holes in the casing, a hole in said cup and a spring biased push button extending through the cup hole and a selected hole in the casing.

3,389,388
ELECTRONIC MALFUNCTION CONTROL FOR VENDING MACHINES

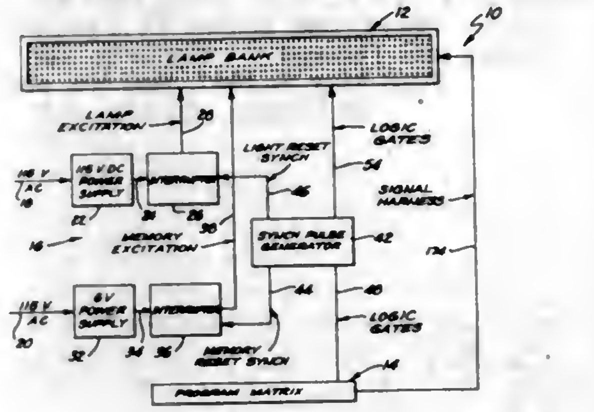
Knud J. Helsing, Washington County, Md., assignor to Victor Products Corporation, Hagerstown, Md.
Filed Nov. 8, 1967, Ser. No. 681,459
2 Claims. (Cl. 340—309.1)



A vending machine malfunction control circuit is disclosed. A timer circuit is activated when a selection is made after a coin has been deposited. If the vending cycle is not completed by the end of the timer period a malfunction has occurred and the timer circuit effects a control function which allows the customer to make another selection.

3,389,389
MOVING MESSAGE SIGN

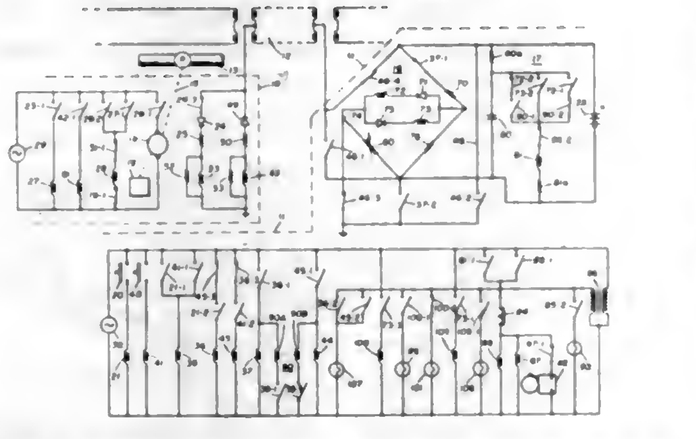
James P. Minear, Orange, Calif., assignor to Neonix, Inc., Orange, Calif., a corporation of California
Filed Jan. 11, 1965, Ser. No. 424,783
5 Claims. (Cl. 340—339)



A moving message sign having a plurality of lamps arranged in rows and columns is disclosed. The lamps in adjacent columns are electrically connected so that one column signals the next as to its state to provide for progressive signaling from column to column. A program matrix is used to energize lamps in a first one of said columns. Upon pulsing, illumination from the first column is caused to progress along successive columns.

3,389,390
REMOTE DEVICE CONTROL SYSTEM AND APPARATUS

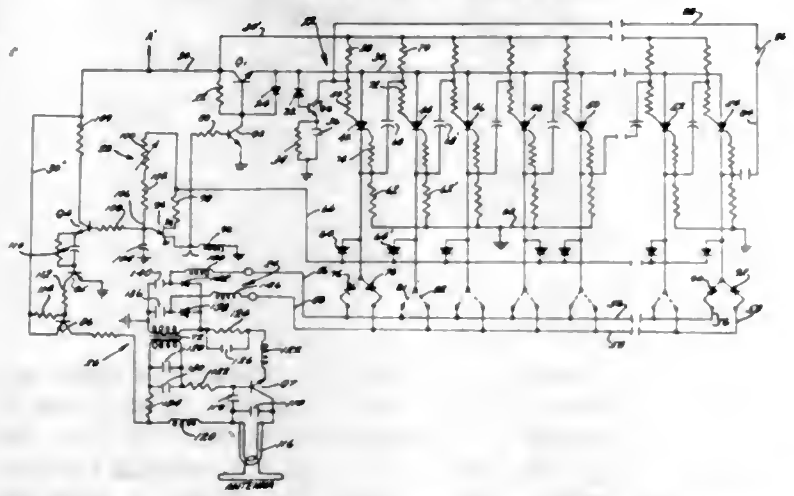
James R. Waller, Jr., Dallas, Tex., assignor to Mobil Oil Corporation, a corporation of New York
Filed Aug. 6, 1964, Ser. No. 387,741
13 Claims. (Cl. 340—409)



11. In a system for controlling the operation of a remotely positioned device wherein energizing and de-energizing signals are transmitted to the device from a control station by way of a transmission line, the combination of:
(a) means at the control station for initiating an energizing signal,
(b) means at the control station for initiating a de-energizing signal,
(c) detecting means at the control station for sensing by way of the transmission line conditions of the device,
(d) an alarm indicating means including an electrical network at the control station and operatively connected with said sensing means,
(e) means responsive to the initiation of an energizing signal for conditioning said network for response to said detecting means for production of an alarm signal upon de-energization of said device following said energizing signal and absent a de-energizing signal, and
(f) means responsive to the initiation of a de-energizing signal for conditioning said network for response to said detecting means for production of an alarm signal upon energization of said device following said de-energizing signal and absent an energizing signal.

3,389,391
VEHICLE IDENTIFICATION RESPONDER

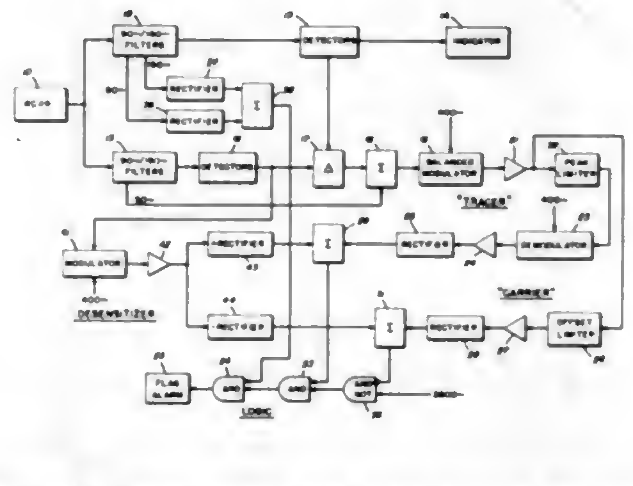
Miner S. Keeler II, 2525 Indian Trail SE., Grand Rapids, Mich. 49506, and Robert C. Thompson, Muskegon, Mich.; said Thompson assignor to said Keeler
Filed May 5, 1967, Ser. No. 636,508
17 Claims. (Cl. 343—6.8)



A passive device for receiving a transmitted RF signal and utilizing the received RF energy to transmit a binary-coded message which identifies the vehicle carrying the device, in which the transmitted binary-coded message is comprised of a pulse train basically consisting of a combination of two different tone-modulated pulses, one representing the binary number zero and the other representing the binary number one. The device features a ring-pulser network which conducts in a timed sequence controlled by a unijunction keying circuit and which produces a series of control signals which are fed into one or the other of two voltage-variable capacitors coupled into a tuned circuit in the transmitter oscillator, by which the transmitter output may be tone-modulated with either of two different tones. Further, a third tone representing the beginning and the ending of a complete message is produced by activating both such tone-modulating circuits. The aforementioned unijunction keying circuit also switches the transmitter on and off, such that it operates only during the time when a modulating tone is present, thereby conserving operating power.

3,389,392
INTEGRITY MONITOR ILS NAVIGATION RECEIVER

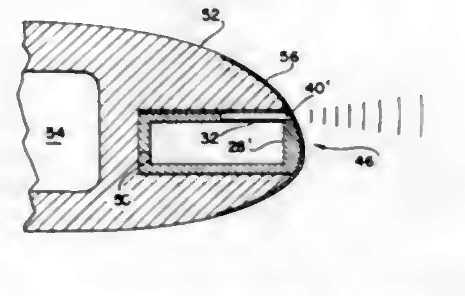
Reuben L. Stauffer, Robert J. Bottorf, and Richard L. Lewis, Baltimore, Md., assignors to The Bendix Corporation, Baltimore, Md., a corporation of Delaware
Filed May 4, 1967, Ser. No. 636,115
12 Claims. (Cl. 343—108)



Integrity monitor system for ILS receivers which compares outputs of duplicate indicator signals, a substantial difference in which represents receiver fault. Difference is applied to balanced modulator causing tracer signal to disappear and carrier signal to appear, either event causing warning flag to appear.

3,389,393
LOW PROFILE BROADBAND MICROWAVE ANTENNA SYSTEM

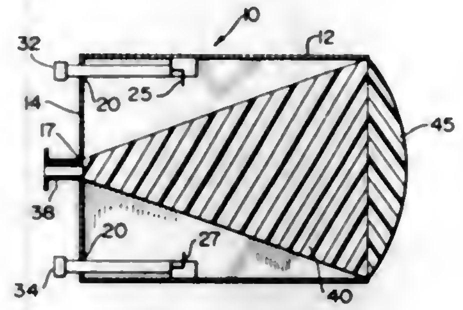
David W. Young, Jr., North Plainfield, N.J., assignor to Lockheed Aircraft Corporation, Burbank, Calif.
Filed Feb. 18, 1966, Ser. No. 528,425
11 Claims. (Cl. 343—708)



A broadband waveguide antenna suitable for helicopter rotor blade installations and the like wherein a wall portion of the waveguide is foraminated to form an array of a large number of below cut-off apertures through which energy is transferred in a leaky coupling mode resulting in a fan-shaped radiation beam pattern transversely of the longitudinal axis of the waveguide. A conductive plate secured to the waveguide and spaced from the foraminated wall portion in a parallel planes relationship protects the foraminated wall portion of the waveguide and provides a controlled width slit aperture minimizing the effects of other proximate conductive material on the radiation beam pattern.

3,389,394
MULTIPLE FREQUENCY ANTENNA

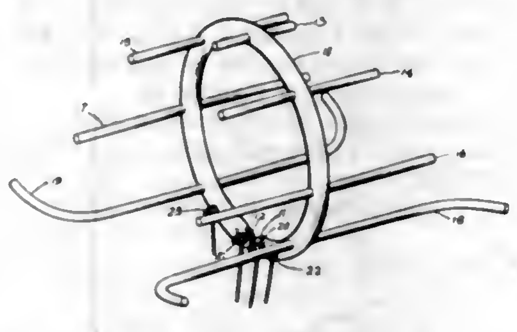
Bernard L. Lewis, Satellite Beach, Fla., assignor to Radiation Incorporated, Melbourne, Fla., a corporation of Florida
Filed Nov. 26, 1965, Ser. No. 509,694
8 Claims. (Cl. 343—725)



1. A multiple frequency microwave antenna comprising a waveguide, means for coupling low frequency microwave signal energy to and from said waveguide, dielectric guide means disposed in coextensive and coaxial relationship with said waveguide internally thereof, and means for coupling high frequency microwave signal energy to and from said dielectric guide means.

3,389,395
ANTENNA OPERABLE WITHIN TWO FREQUENCY RANGES, PARTICULARLY VHF AND UHF RANGES

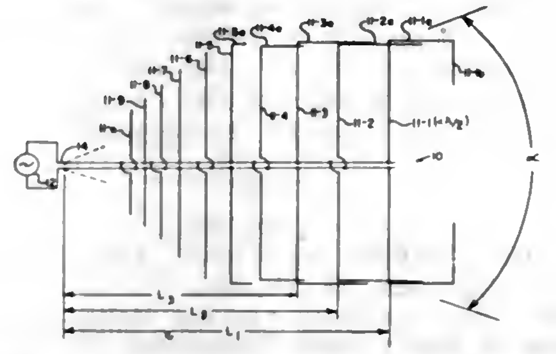
Stanley Lejkowski, Sr., 154 Hillhurst Ave., New Britain, Conn. 06053
Filed Feb. 15, 1965, Ser. No. 432,493
15 Claims. (Cl. 343—743)



There is disclosed an antenna operable within two ranges of frequency which are spaced from one another in the frequency spectrum. The antenna comprises a conductive frame disposed along a planar axis having a pair of adjacent ends supported in spaced insulated disposition, a plurality of spaced dipole elements supported on the frame, and connection means disposed near the insulated ends. The frame has an electrical length substantially equal to an integral multiple of the wave length of the highest of the frequencies and not less than one-sixteenth of the wave length of the lowest frequency, and the dipoles are graduated in size from an electrical length of substantially one-quarter wave length of the highest frequency to one-sixteenth of the lowest.

3,389,396
LOG PERIODIC TYPE ANTENNA FOR OPERATING AT LESS THAN A HALF WAVELENGTH MODE

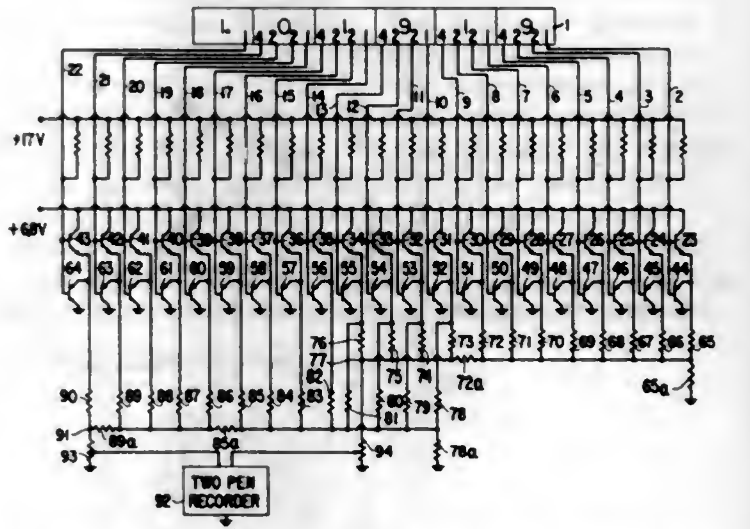
Vito P. Minerva and David G. Berry, Canoga Park, Calif., assignors to Dorne and Margolin, Inc., Westbury, N.Y., a corporation of New York
Filed July 14, 1965, Ser. No. 471,873
22 Claims. (Cl. 343—792.5)



1. A log periodic type antenna for operating at less than a half wavelength mode comprising:
an elongated energy transmission means extending from the front to the rear of the antenna,
a plurality of elements of progressively increasing overall physical length located along said transmission means in order of increasing overall length from the front to the rear of the antenna, means for electrically coupling certain of said elements to said energy transmission means, all of said elements having a first portion extending generally sidewards with respect to said transmission means and selected ones of said elements toward the rear of the antenna having a second portion folded only in a direction generally towards the rear of the antenna, the first portions of those elements having the second folded portions extending for substantially the same distance from the transmission means, and means for coupling energy from the folded portion of an element substantially only to the folded portion of the next adjacent element toward the rear of the antenna.

3,389,397
ANALOG CENTESIMAL RECORDER HAVING REDUNDANT DIGIT

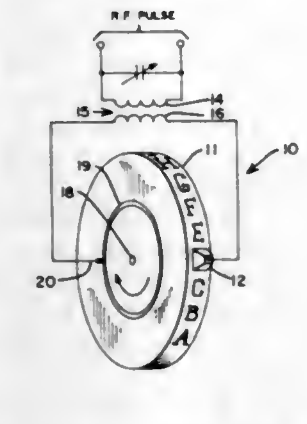
Rowland G. Lex, Jr., Ambler, George C. Mergner, Glenside, Norman E. Polster, Southampton, and Albert J. Williams, Jr., Philadelphia, Pa., assignors to Leeds & Northrup Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Mar. 3, 1967, Ser. No. 620,424
15 Claims. (Cl. 346—35)



An apparatus for recording a variable which may fluctuate over a wide range to produce a strip chart having two analog type records with a 100:1 relationship between the significance of the records.

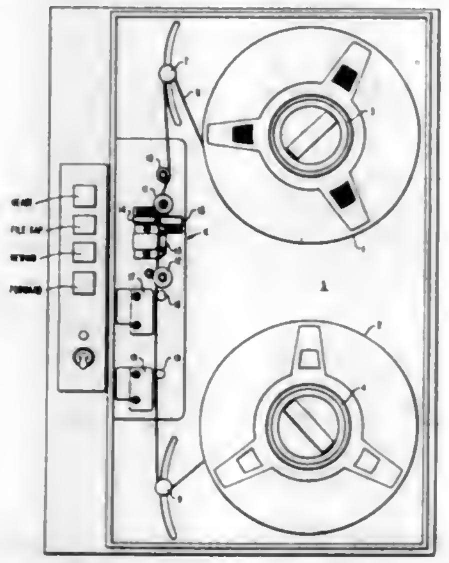
The variable to be recorded is represented by a plurality of digital signals, each of different significance one with respect to another. A first group of these digital signals is converted to an analog signal which drives the coarse recorder pen, and another group of digital signals is converted to an analog signal which drives the fine recorder pen. A digital signal of intermediate significance is used in deriving both the analog signal for the coarse recorder pen and the analog signal for the fine recorder pen. In one embodiment, the zero reference mark for the fine recording pen is not at the extreme end of the fine chart-marking path, and the fine recorder pen may be provided with an extended chart-marking path.

3,389,398
HIGH SPEED PRINTING APPARATUS
John A. Engstrom, Minneapolis, Minn., and Erwin G. Weber, Bad Homburg vor der Hohe, Germany, assignors to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Filed Oct. 17, 1963, Ser. No. 316,979
6 Claims. (Cl. 346—74)



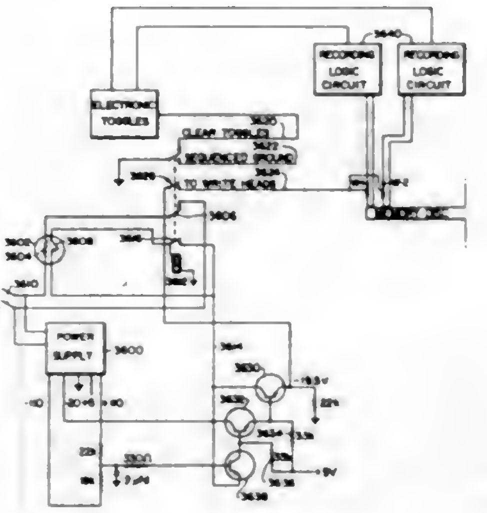
An R.F. plasma printing apparatus which is designed to print indicia on a suitable recording means such as paper. The apparatus utilizes a specific brush transitional discharge which exists between the spark and arc stages but which is terminated prior to the arc stage.

3,389,399
INCREMENTALLY AND CONTINUOUSLY DRIVEN MAGNETIC TAPE RECORDER
Charles J. Kennedy, 266 E. Mendocino St., Altadena, Calif. 91001
Filed Jan. 15, 1965, Ser. No. 425,846
8 Claims. (Cl. 346—74)



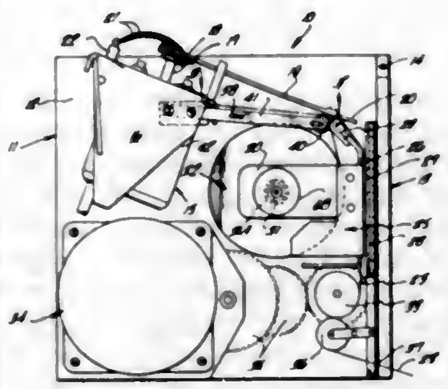
A tape recorder is provided in which a stepping motor drives a capstan which engages a magnetic recording tape to record blocks of information bit position by bit position in synchronism with signals applied to a magnetic recording head and a continuously rotating capstan selectively engages the tape to transport the tape between blocks of information for a predetermined distance whereby a gap is introduced between blocks of digital information recorded on the tape.

3,389,400
PROTECTIVE CIRCUIT FOR MAGNETIC STORAGE UNIT
Winsor Soule, Jr., Berkeley, Calif., assignor to SCM Corporation, New York, N.Y., a corporation of New York
Original application Dec. 27, 1961, Ser. No. 162,526, now Patent No. 3,265,874, dated Aug. 9, 1966. Divided and this application May 2, 1966, Ser. No. 546,956
6 Claims. (Cl. 346—74)



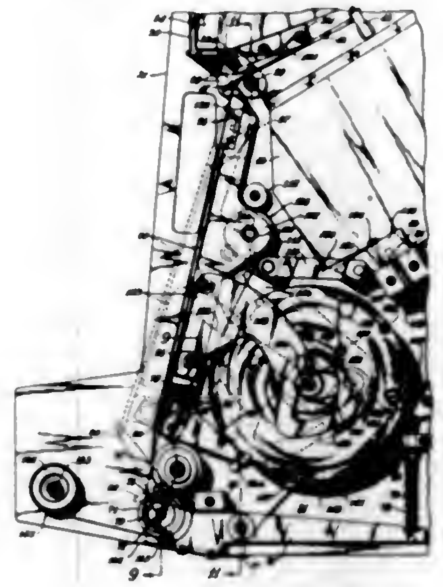
A transistorized circuit responsive to a reduction in the voltage of the power supply energizing the write heads of a magnetic recorder for preventing the alteration of recorded information due to changes in the state of the bistable, lead-selecting circuits which accompany deenergization resulting from lowering of supply voltage.

3,389,401
RECORD MEDIUM HANDLING IN HEAT-WRITING RECORDING OSCILLOGRAPHS
Joseph John Neff, Pasadena, Calif., assignor to Consolidated Electrodynamics Corporation, Pasadena, Calif., a corporation of California
Continuation-in-part of application Ser. No. 530,524, Feb. 28, 1966. This application Sept. 30, 1966, Ser. No. 583,343
6 Claims. (Cl. 346—76)



A heat-writing recording oscillograph in which a strip of recording medium is stored in a supply roll with an obverse side thereof inwardly of the coil and which, in passage to a writing edge, is dragged over a surface which is stationary relative to the edge, engages the rear surface of the medium, and is curved convex toward the medium for conditioning the medium before it reaches the writing edge so that the medium conforms closely to the contour of the writing edge.

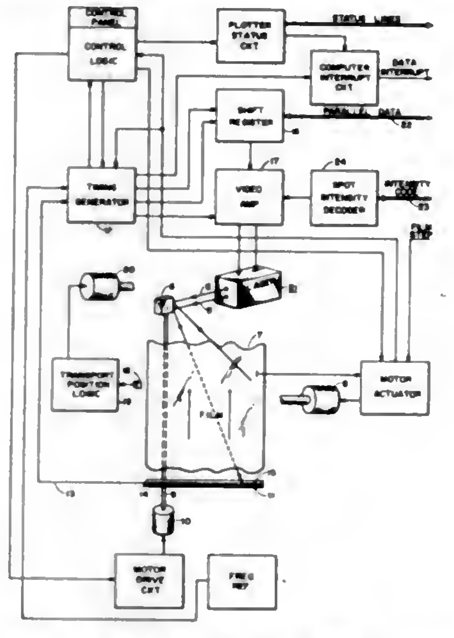
3,389,402
FRONT-LOADING HEATED STYLUS RECORDER
Carl W. Rosmanith, Des Plaines, Ill., assignor to Beckman Instruments, Inc., a corporation of California
Filed Mar. 14, 1967, Ser. No. 622,987
10 Claims. (Cl. 346—76)



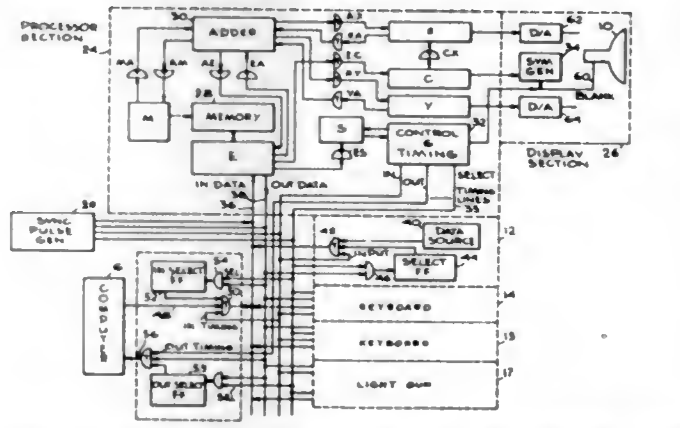
A front-loading recorder having tracks on its side plates for guiding a chart roll spindle to bearing surfaces and sickle-shaped lever arms attached to the sides of a front panel hinged along the bottom to raise and lower the spindle on the track. A spring biased arm bears against a square flange while a chart roll is being lowered into position and lifted off the flange by a pin on the sickle-shaped arm when the front panel is raised into a substantially upright position by an eccentrically pivoted bar on which the panel is hinged. A tension roller on the back of the panel engages two guide rollers, one carried by a spring biased arm, to assure constant tension as the paper is pulled over a chart-forming bar on the top of the panel by a chart drive roller in front of the panel.

3,389,403
LASER BEAM RECORDER WITH MEANS TO COMPENSATE FOR CHANGE IN ANGULAR VELOCITY OF SWEPT BEAM
Jerry M. Cottingham and Arnaldo Rolon, Houston, Tex., assignors to Dresser Industries, Inc., Dallas, Tex., a corporation of Delaware
Filed Sept. 6, 1966, Ser. No. 577,259
7 Claims. (Cl. 346—108)

A modulated laser beam is swept across a flat film by a rotating mirror. A magnetic memory drum integral with the rotating mirror provides compensation for changes in the angular velocity of the swept beam. In alternative embodiments, either a slotted bar or a fiber optical system provides such compensation.



3,389,404
CONTROL/DISPLAY APPARATUS
Robert A. Koster, Canoga Park, Calif., assignor to The Bunker-Ramo Corporation, Stamford, Conn., a corporation of Delaware
Filed Sept. 20, 1965, Ser. No. 488,639
15 Claims. (Cl. 340—172.5)

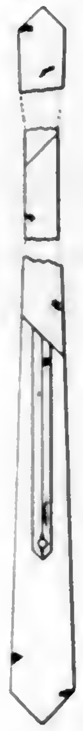


A control and display console for facilitating communication between a human operator and a digital data processing system. The console includes a stored program data processor which performs control functions as well as display functions. The processor includes a memory which stores both instruction words and operand words. The operand words include both symbol and display control words. The instruction words are organized into an executive program and a plurality of control routines. At least one of the instruction words specifies a display operation. The executive program causes the periodic execution of the display operation and the execution of control routines specified by operator actuated keys between periodic executions of said display operation.

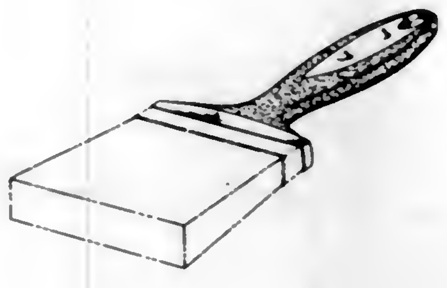
DESIGNS

JUNE 18, 1968

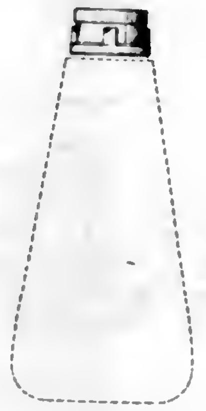
211,445
NECKTIE
Samuel Klaus, 1315 46th St.,
Brooklyn, N.Y. 11219
Filed Sept. 20, 1966, Ser. No. 3,933
Term of patent 3½ years
(Cl. D2—351)



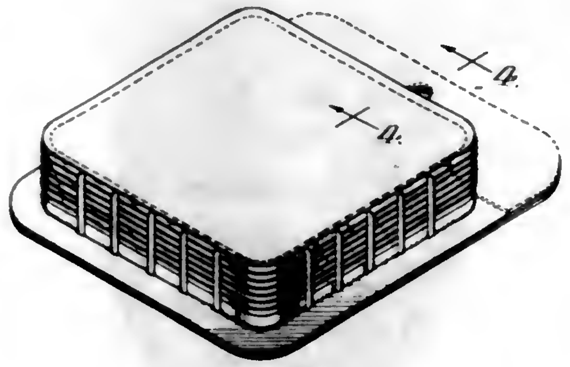
211,446
PAINT BRUSH
Clayton O. Hange, Wooster, Ohio, assignor to The Wooster Brush Co., Wooster, Ohio, a corporation of Ohio
Filed Sept. 18, 1967, Ser. No. 8,637
Term of patent 14 years
(Cl. D4—38)



211,447
BOTTLE OR THE LIKE
Paul A. Marchant, Kansas City, Mo., assignor to Rexall Drug and Chemical Company, Los Angeles, Calif., a corporation of Delaware
Filed Dec. 29, 1966, Ser. No. 5,226
Term of patent 14 years
(Cl. D9—149)



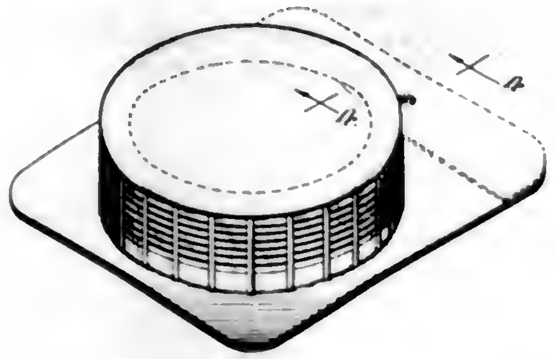
211,448
PACKAGE OF SLICED FOOD OR THE LIKE
Oscar E. Seiferth and Glenn M. Austin, Madison, and Maurice J. Gifford, Monona, Wis., assignors to Oscar Mayer & Co., Inc., Chicago, Ill., a corporation of Illinois
Filed Sept. 9, 1966, Ser. No. 3,800
Term of patent 14 years
(Cl. D9—192)



211,449
PACKAGE OF SLICED FOOD OR THE LIKE

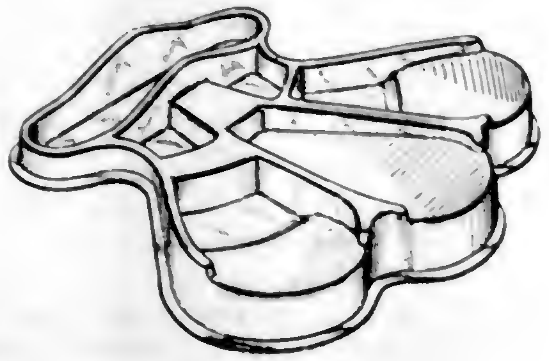
Oscar E. Seiferth and Glenn M. Austin, Madison, and Maurice J. Gifford, Monona, Wis., assignors to Oscar Mayer & Co., Inc., Chicago, Ill., a corporation of Illinois

Filed Sept. 9, 1966, Ser. No. 3,801
Term of patent 14 years
(Cl. D9—192)



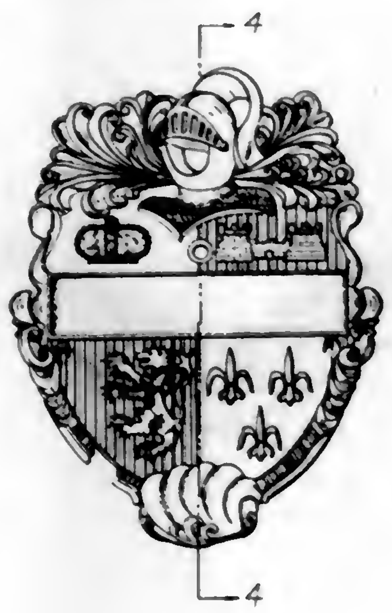
211,450
COMPARTMENTED SILVERWARE TRAY

Merwin A. Caine, R.F.D. 1, Box 218,
Jackson, N.J. 08527
Filed May 3, 1967, Ser. No. 6,929
Term of patent 14 years
(Cl. D9—242)



211,451
DOOR KNOCKER

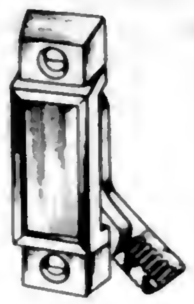
Rudolph Paulich, 7034 Bianca,
Van Nuys, Calif. 91403
Filed Nov. 24, 1967, Ser. No. 9,523
Term of patent 14 years
(Cl. D10—7)



211,452
SLIDING WINDOW LATCH

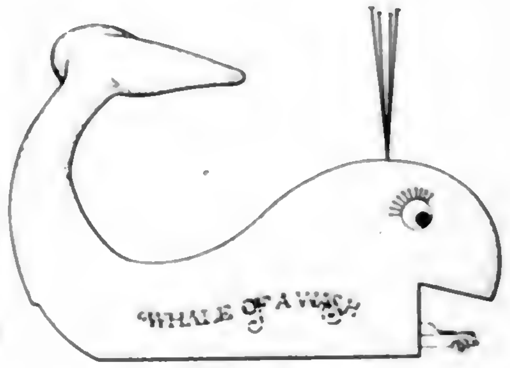
Unto E. Petrell, Brooklyn, N.Y., assignor to Allen Stevens Corporation, Woodside, N.Y., a corporation of New York

Filed June 8, 1967, Ser. No. 7,406
Term of patent 14 years
(Cl. D10—10)



211,453
BUILDING FOR WASHING AUTOMOBILES

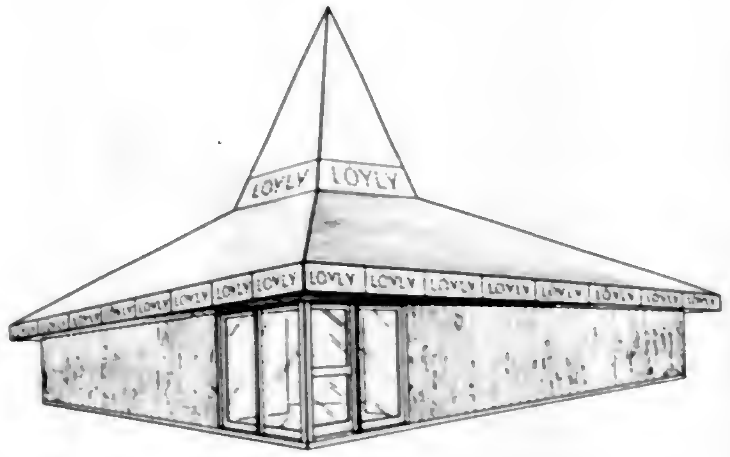
Marvin Adler, 2024 Bagley Ave.,
Los Angeles, Calif. 90034
Filed June 14, 1967, Ser. No. 7,479
Term of patent 7 years
(Cl. D13—1)



211,454
SAUNA BATH BUILDING

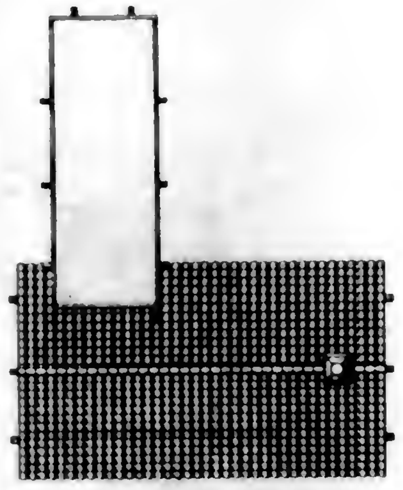
Leonard Hurst, Rexdale, Ontario, and George Dabrowski, Toronto, Ontario, Canada, assignors to J. A. Carrasquel, Miami Beach, Fla.

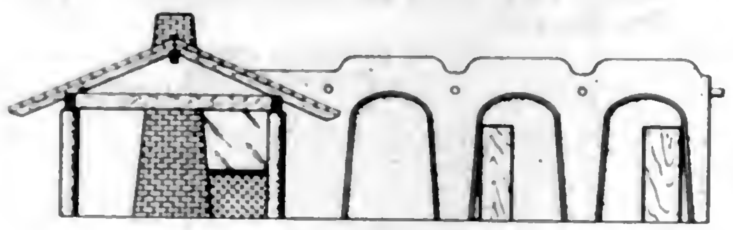
Filed Aug. 7, 1967, Ser. No. 8,159
Claims priority, application Canada Feb. 14, 1967
Term of patent 7 years
(Cl. D13—1)



211,455
BUILDING

Thomas H. Bernatz, 18322 Peralta Hills Drive,
Anaheim, Calif. 92805
Filed Sept. 27, 1967, Ser. No. 8,756
Term of patent 14 years
(Cl. D13—1)

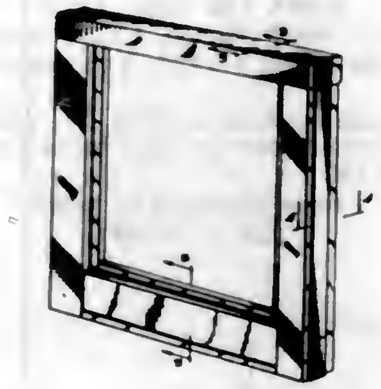




211,456
WINDOW SASH

Richard N. Anderson, Owensboro, Ky., assignor to V. E. Anderson Mfg. Co., Owensboro, Ky., a corporation of Kentucky

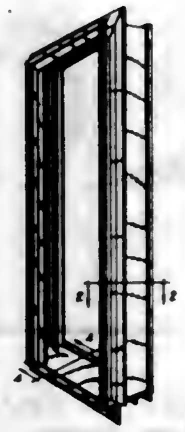
Filed Oct. 16, 1967, Ser. No. 9,008
Term of patent 14 years
(Cl. D13—1)



211,457
WINDOW FRAME STRUCTURE

Richard N. Anderson, Owensboro, Ky., assignor to V. E. Anderson Mfg. Co., Owensboro, Ky., a corporation of Kentucky

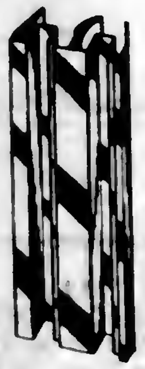
Filed Oct. 16, 1967, Ser. No. 9,009
Term of patent 14 years
(Cl. D13—1)



211,458
WINDOW MEMBER EXTRUSION

Richard N. Anderson, Owensboro, Ky., assignor to V. E. Anderson Mfg. Co., Owensboro, Ky., a corporation of Kentucky

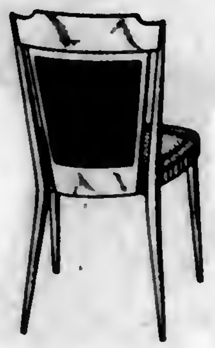
Filed Oct. 16, 1967, Ser. No. 9,129
Term of patent 14 years
(Cl. D13—6)



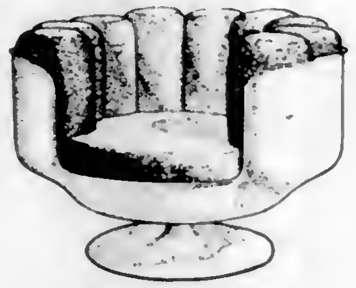
211,459
CHAIR

Wayland B. Parker, South Boston, Va., assignor to Schlumberger Limited (Schlumberger N.V.), Houston, Tex., a corporation of the Netherlands Antilles

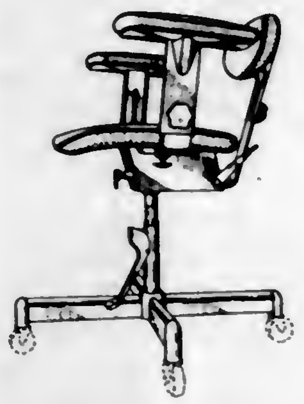
Filed Apr. 25, 1966, Ser. No. 2,008
Term of patent 14 years
(Cl. D15—1)



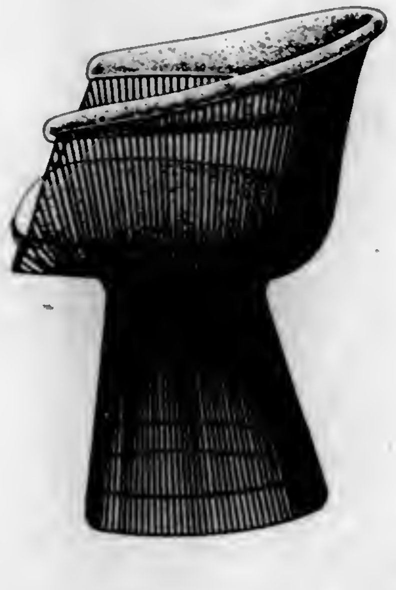
211,460
CHAIR
Hans Zufferey, 50 Scheuchzerstrasse,
Zurich, Switzerland
Filed Aug. 16, 1966, Ser. No. 3,483
Claims priority, application Switzerland June 8, 1966
Term of patent 7 years
(Cl. D15—1)



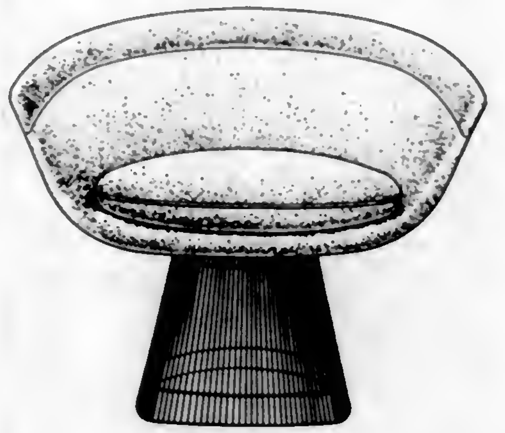
211,461
SWIVEL CHAIR
Thomas G. Walkinshaw, Shawnee Mission, Kans., assignor to Cramer Industries, Inc., Kansas City, Kans., a corporation of Missouri
Filed Apr. 5, 1967, Ser. No. 6,541
Term of patent 14 years
(Cl. D15—1)



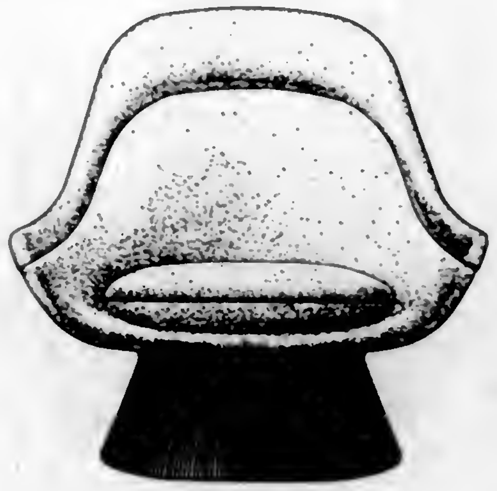
211,462
CHAIR OR THE LIKE
Warren Platner, North Haven, Conn., assignor to Knoll Associates, Inc., New York, N.Y., a corporation of New York
Original design application Aug. 31, 1965, Ser. No. 86,788. Divided and this application July 17, 1967, Ser. No. 8,313
Term of patent 14 years
(Cl. D15—1)



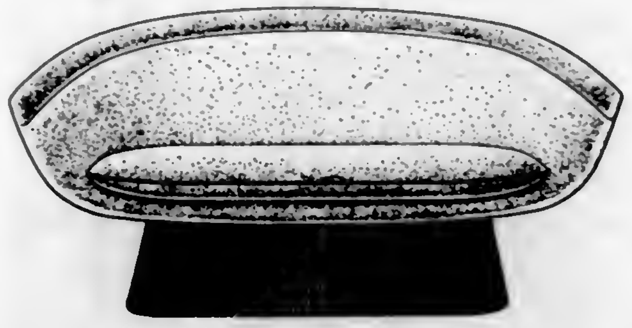
211,463
CHAIR OR THE LIKE
Warren Platner, North Haven, Conn., assignor to Knoll Associates, Inc., New York, N.Y., a corporation of New York
Filed Aug. 31, 1965, Ser. No. 86,788
Term of patent 14 years
(Cl. D15—1)



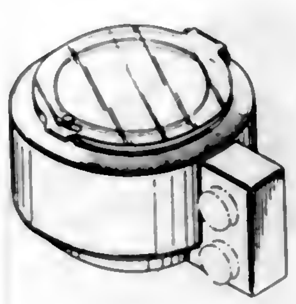
211,464
CHAIR OR THE LIKE
Warren Platner, North Haven, Conn., assignor to Knoll Associates, Inc., New York, N.Y., a corporation of New York
Original design application Aug. 31, 1965, Ser. No. 86,788. Divided and this application July 17, 1967, Ser. No. 8,769
Term of patent 14 years
(Cl. D15—1)

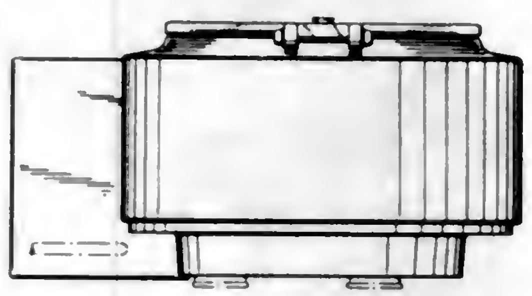


211,465
SOFA OR THE LIKE
Warren Platner, North Haven, Conn., assignor to Knoll Associates, Inc., New York, N.Y., a corporation of New York
Original design application Aug. 31, 1965, Ser. No. 86,788. Divided and this application Sept. 11, 1967, Ser. No. 9,147
Term of patent 14 years
(Cl. D15—11)

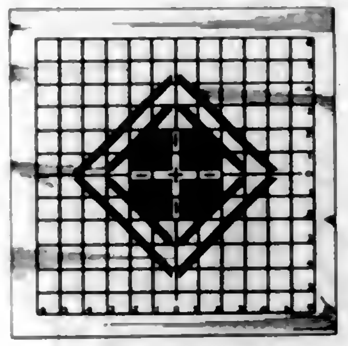


211,466
CENTRIFUGE OR SIMILAR ARTICLE
Gerald D. Gulotta, New York, N.Y., assignor to Clay-Adams, Inc., New York, N.Y., a corporation of New York
Filed June 28, 1967, Ser. No. 7,622
Term of patent 14 years
(Cl. D16—2)

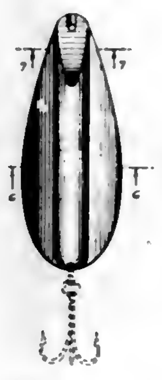


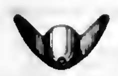


211,467
SHOOTING TARGET
Edwin E. Wilbur, 4505 SE. Ivon St.,
Portland, Oreg. 97206
Filed July 11, 1967, Ser. No. 7,757
Term of patent 14 years
(Cl. D22—15)

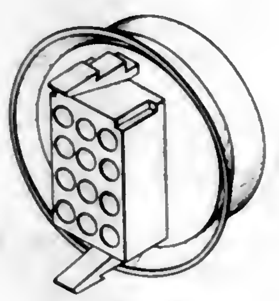


211,468
FISH LURE
Frank A. Serafin, 40 Oneida Road,
Pontiac, Mich. 48053
Continuation-in-part of design application Ser. No. 7,612, June 27, 1967. This application Oct. 18, 1967, Ser. No. 9,051
Term of patent 14 years
(Cl. D22—29)

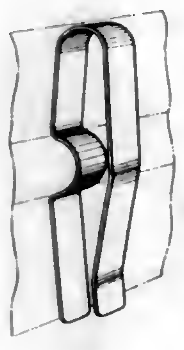




211,469
PANEL SEAL BULKHEAD CONNECTOR
James Seagrave, Bushey Heath, Herts, and Raymond Stanley Willis, Ruislip, Middlesex, England, assignors to AMP Incorporated, Harrisburg, Pa.
Filed Feb. 15, 1967, Ser. No. 5,834
Claims priority, application Great Britain Sept. 21, 1966
Term of patent 14 years
(Cl. D26—1)



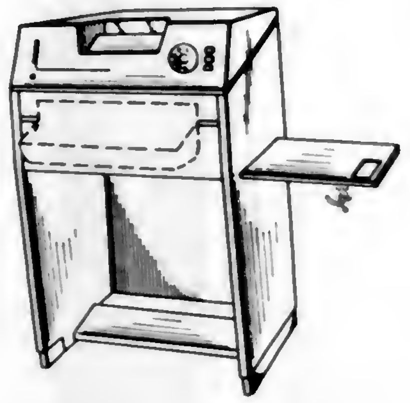
211,470
SWITCH UNIT FOR VEHICLE PARKING ALARM
Arthur G. Millerlel, 212½ N. 11th Ave.,
Evansville, Ind. 47712
Filed July 15, 1966, Ser. No. 3,083
Term of patent 14 years
(Cl. D26—13)



211,471
TELEPRINTER CONSOLE CABINET

Wilhelm Winkler, Weil der Stadt, Germany, assignor to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware

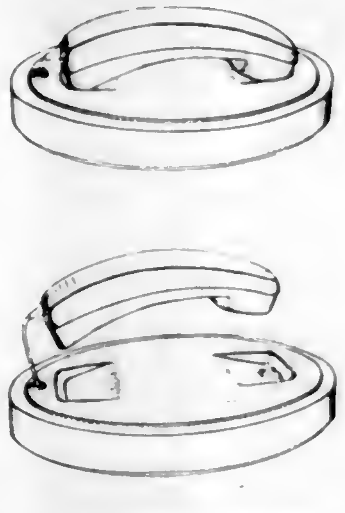
Filed Aug. 23, 1966, Ser. No. 3,564
Claims priority, application Germany Feb. 25, 1966
Term of patent 14 years
(Cl. D26—14)



211,472
COMBINED TELEPHONE HANDSET AND DESK STAND

Henry Dreyfuss, South Pasadena, Calif., assignor to Bell Telephone Laboratories, Incorporated, Berkeley Heights, N.J., a corporation of New York

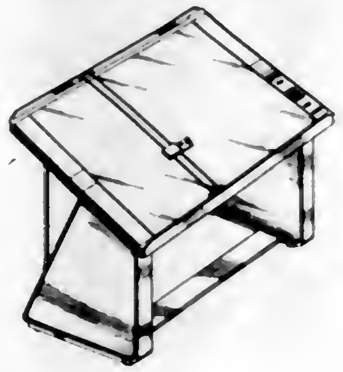
Filed July 3, 1967, Ser. No. 7,679
Term of patent 14 years
(Cl. D26—14)



211,473
GRAPHICAL DATA DIGITIZER

John A. Dykmans, Saratoga, and John Connor, San Rafael, Calif., assignors to Calma Company, a corporation of California

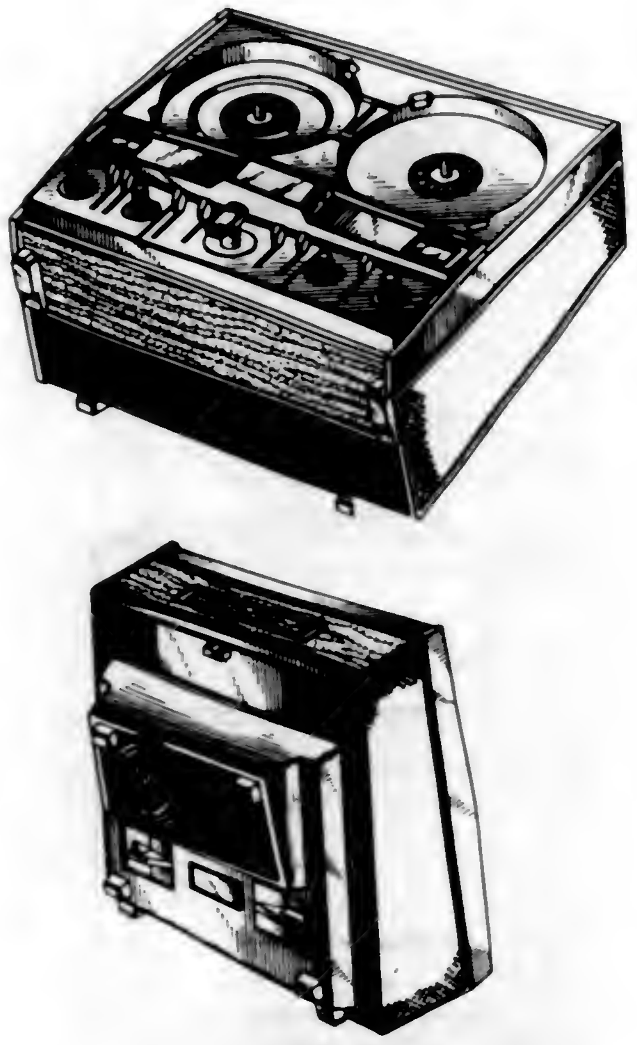
Filed Aug. 11, 1967, Ser. No. 8,240
Term of patent 14 years
(Cl. D26—14)



211,474
MAGNETIC TAPE RECORDER

Norman R. Kubnick, Skokie, Ill., assignor to Bell & Howell Company, Chicago, Ill., a corporation of Illinois

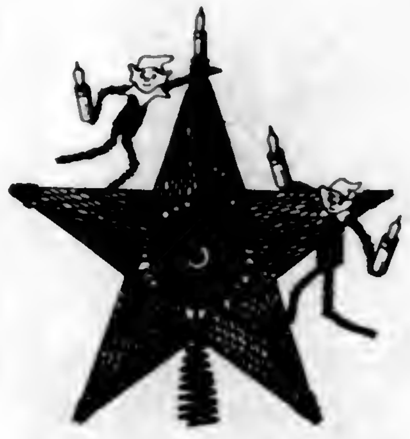
Filed Sept. 12, 1967, Ser. No. 8,565
Term of patent 14 years
(Cl. D26—14)



211,475
CHRISTMAS TREE ORNAMENT

Otto Kadmon and Alice Kadmon, both of 144—37 76th Road, Flushing, N.Y. 11367

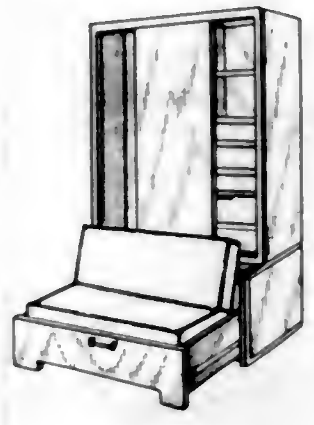
Filed Mar. 1, 1967, Ser. No. 6,007
Term of patent 7 years
(Cl. D29—1)



211,476
COMBINED NESTABLE BED AND CHEST FOR A DORMITORY

George S. Fasanella, Chicago Heights, Ill., assignor to The Englander Company, Inc., Chicago, Ill., a corporation of New York

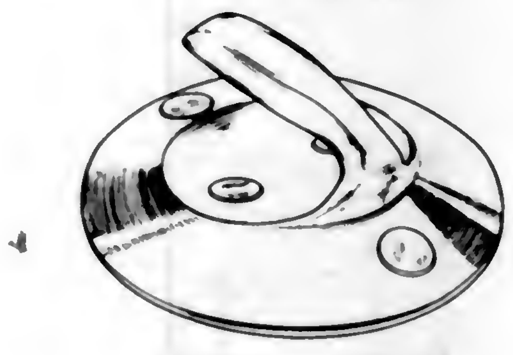
Filed Mar. 7, 1967, Ser. No. 6,110
Term of patent 14 years
(Cl. D33—6)



211,477
COMBINED CURLING STONE HANDLE AND MOUNTING PLATE

Hugh Spencer, Toronto Ontario, Canada, assignor to Ailsa Craig Curling Stones Limited, Toronto, Ontario, Canada, a corporation of Canada

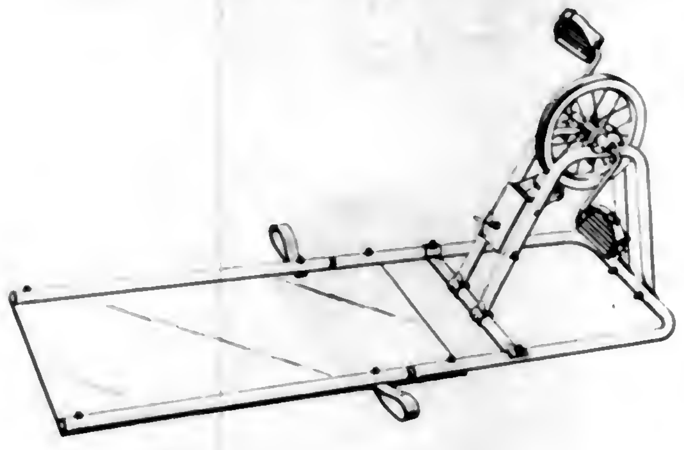
Filed Jan. 25, 1967, Ser. No. 5,553
Claims priority, application Canada July 28, 1966
Term of patent 14 years
(Cl. D34—5)



211,478
EXERCISE APPARATUS

Charles Robert Margolies, Oreland, Pa., assignor to Snyder Manufacturing Company, Philadelphia, Pa., a corporation of Pennsylvania

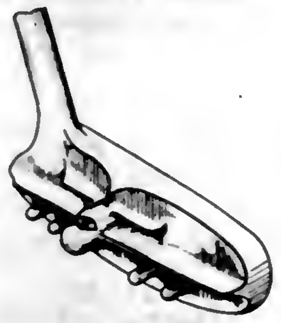
Filed Aug. 2, 1967, Ser. No. 8,117
Term of patent 7 years
(Cl. D34—5)



211,479
GOLF PUTTER

Robert J. Mader, 1607 Hickory St., Torrance, Calif. 90503

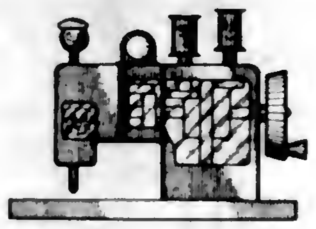
Filed Aug. 31, 1967, Ser. No. 8,438
Term of patent 14 years
(Cl. D34—5)



211,480
TOY SEWING MACHINE OR SIMILAR ARTICLE

Jarvis W. Rockwell, Chicago, Ill., assignor to Playskool Manufacturing Company, Chicago, Ill., a corporation of Illinois

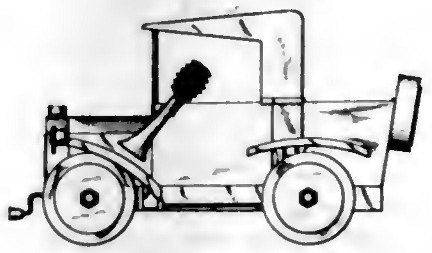
Filed July 5, 1966, Ser. No. 2,942
Term of patent 14 years
(Cl. D34—15)



211,481
TOY VEHICLE

David L. Seitzenger, Erie, and John R. Bonnett and John B. Quigley, Girard, Pa., assignors to Louis Marx & Co., Inc., New York, N.Y., a corporation of New York

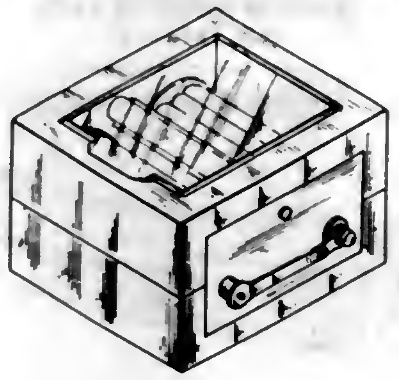
Filed Apr. 20, 1967, Ser. No. 6,766
Term of patent 7 years
(Cl. D34—15)



211,482
RAZOR SHARPENER CASING

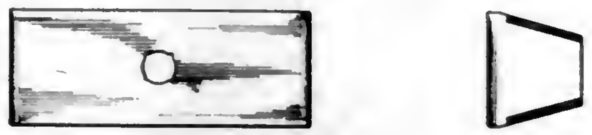
Robert D. Kahn, Rockville Centre, N.Y., assignor to Fedtro, Inc., Long Island, N.Y., a corporation of New York

Filed Apr. 5, 1967, Ser. No. 6,536
Term of patent 14 years
(Cl. D37—1)



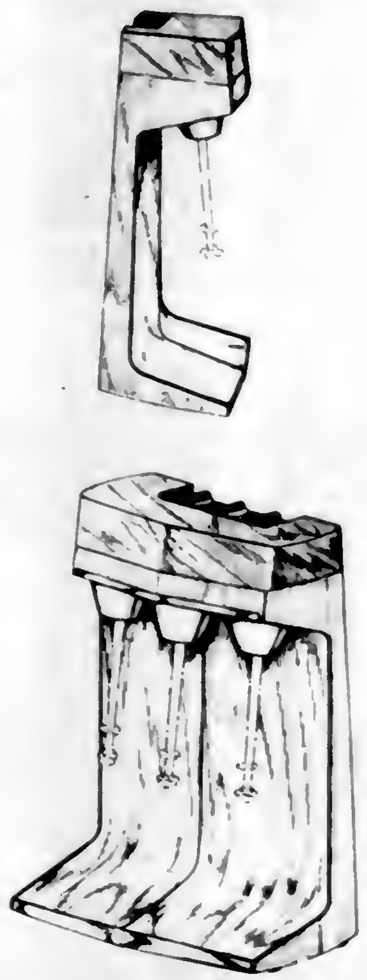
211,483
LAWN TRIMMER BLADE FOR SPRINKLER HEADS

Floyd A. Terwilliger, 1232 SE. 12th Ave.,
Deerfield Beach, Fla. 33441
Filed Sept. 22, 1966, Ser. No. 3,975
Term of patent 14 years
(Cl. D40—1)



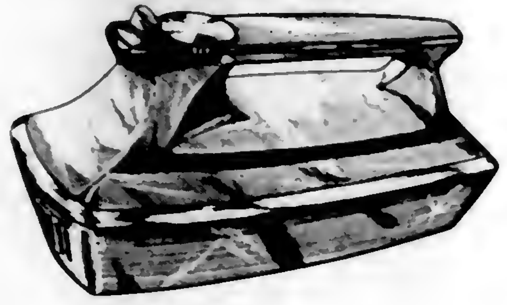
211,484
DRINK MIXER

Robert C. Le Sueur, River Forest, and Marian H. Polhemus, Chicago, Ill., assignors to Scovill Manufacturing Company, Waterbury, Conn., a corporation of Connecticut
Filed Mar. 10, 1967, Ser. No. 6,171
Term of patent 14 years
(Cl. D44—1)



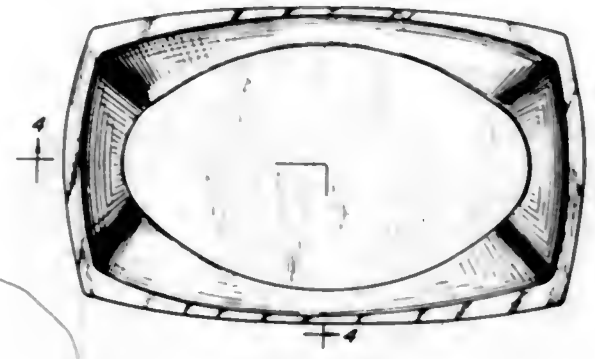
211,485
FOOD MIXER OR THE LIKE

Robert C. Le Sueur, River Forest, Ill., assignor to Scovill Manufacturing Company, Waterbury, Conn., a corporation of Connecticut
Filed Oct. 20, 1967, Ser. No. 9,130
Term of patent 14 years
(Cl. D44—1)



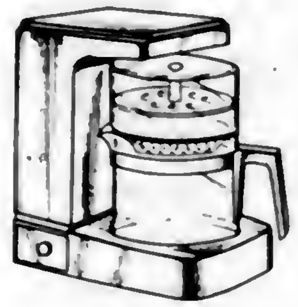
211,486
PLATTER OR THE LIKE

Leo F. Wildgen, Minneapolis, Minn., assignor to Arthur Salm Inc., Chicago, Ill., a corporation of Illinois
Filed Sept. 28, 1966, Ser. No. 4,067
Claims priority, application Germany Apr. 2, 1966
Term of patent 14 years
(Cl. D44—10)



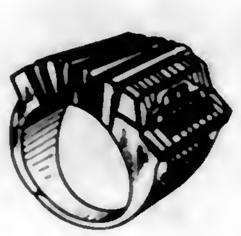
211,487
COFFEEMAKER

Henricus Franciscus Theresia Schellens, Drachten, Netherlands, assignor to North American Philips Co., Inc.
Filed June 22, 1967, Ser. No. 7,568
Claims priority, application Switzerland Dec. 30, 1966
Term of patent 14 years
(Cl. D44—26)



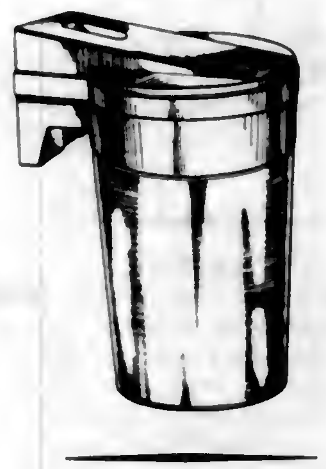
211,488
FINGER RING

James R. Howe, Lincoln, R.I.
(383 Westminster St., Providence, R.I. 02903)
Filed Nov. 13, 1967, Ser. No. 9,381
Term of patent 14 years
(Cl. D45—10)



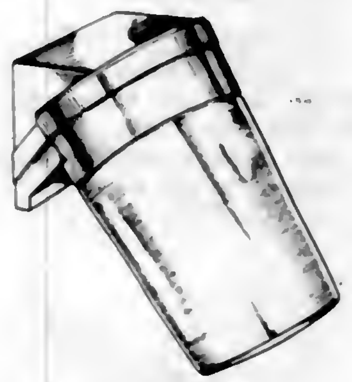
211,489
WALL LAMP

Sigvard Bernadotte, Stockholm, Sweden, assignor to Aktiebolaget Ifoverken, Bromolla, Sweden, a corporation of Sweden
Filed Apr. 13, 1967, Ser. No. 6,666
Claims priority, application Norway Jan. 28, 1967
Term of patent 14 years
(Cl. D48—4)



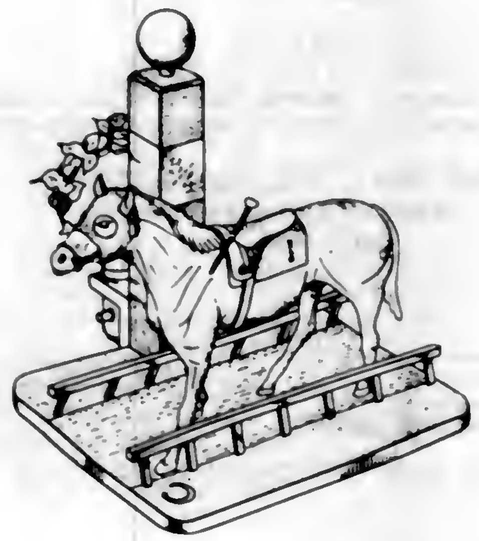
211,490
ANGLED WALL LAMP

Sigvard Bernadotte, Stockholm, Sweden, assignor to Aktiebolaget Ifoverken, Bromolla, Sweden, a corporation of Sweden
Filed Apr. 13, 1967, Ser. No. 6,677
Claims priority, application Norway Jan. 28, 1967
Term of patent 14 years
(Cl. D48—4)



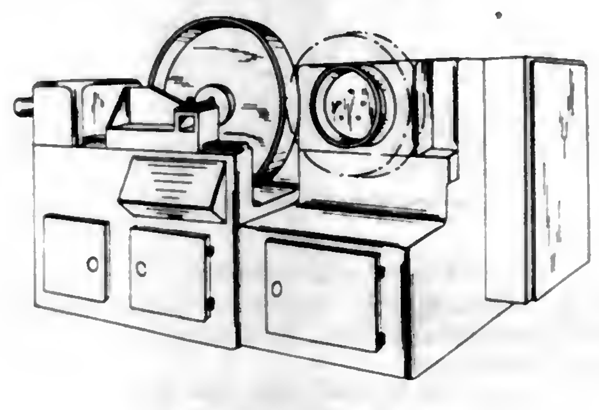
211,491
LAMP

Charles A. Wharmby, Jr., 1137 Dixie Drive,
San Dimas, Calif. 91773
Filed Aug. 11, 1967, Ser. No. 8,230
Term of patent 14 years
(Cl. D48—20)



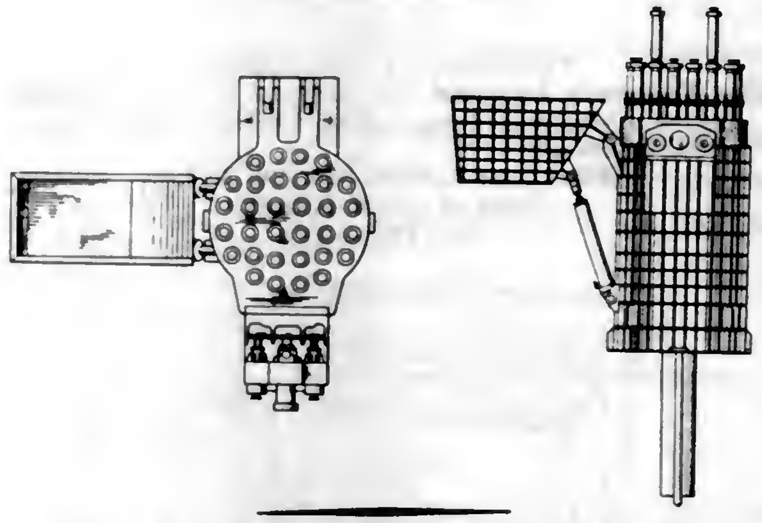
211,492
TIRE UNIFORMITY TESTING MACHINE

Earl L. Bishop, Cuyahoga Falls, Ohio, assignor to The Akron Standard Mold Company, Akron, Ohio, a corporation of Ohio
Continuation-in-part of design application Ser. No. 1,722, Mar. 31, 1966. This application Apr. 19, 1967, Ser. No. 6,749
Term of patent 14 years
(Cl. D54—13)



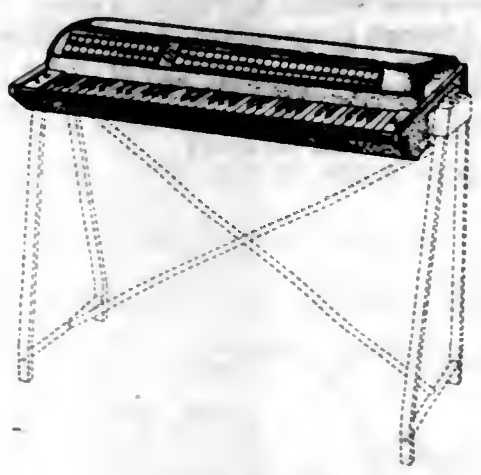
211,493
SCRAP COMPRESSING APPARATUS FOR AN ELECTRIC FURNACE

Kunitoshi Tezuka, 34 7 Minami Sunamachi, Koto-ku,
Tokyo-to, Japan
Filed Oct. 3, 1966, Ser. No. 4,146
Term of patent 14 years
(Cl. D55—1)



211,494
ELECTRIC ORGAN OR SIMILAR ARTICLE

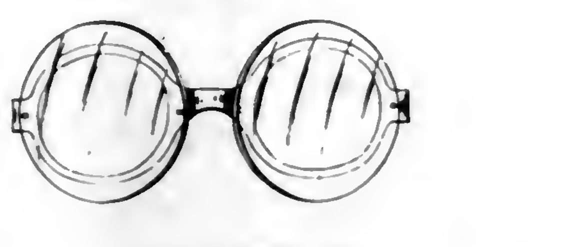
Paul B. Spranger, Fullerton, Calif., assignor to Columbia Broadcasting System, Inc., New York, N.Y., a corporation of New York
Filed Dec. 22, 1966, Ser. No. 5,156
Term of patent 14 years
(Cl. D56—2)



211,495

SUNGLASS FRONT

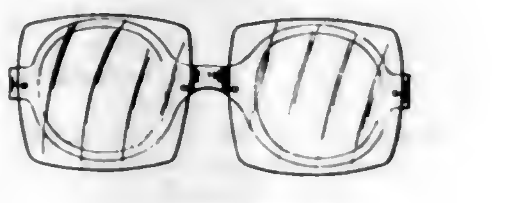
Atherton R. Mitchell, San Francisco, Calif., assignor to Renauld International, Ltd., Fitchburg, Mass., a corporation of Delaware
Filed Oct. 5, 1967, Ser. No. 8,868
Term of patent 14 years
(Cl. D57—1)



211,496

SUNGLASS FRONT

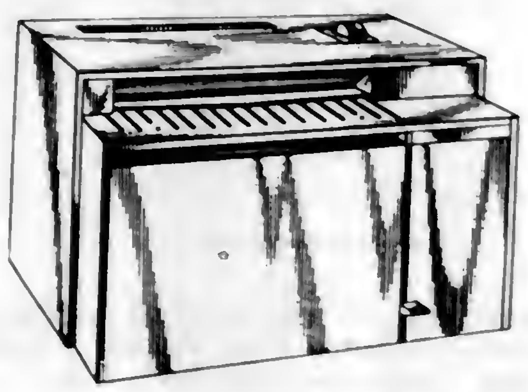
Atherton R. Mitchell, San Francisco, Calif., assignor to Renauld International, Ltd., Fitchburg, Mass., a corporation of Delaware
Filed Oct. 5, 1967, Ser. No. 8,870
Term of patent 14 years
(Cl. D57—1)



211,497

PHOTOCOPY MACHINE

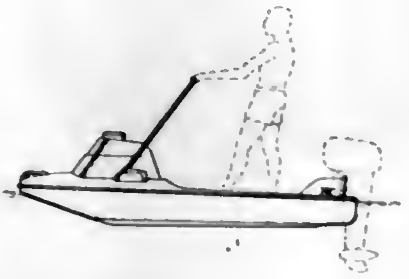
Kim Yamasaki, Lombard, Ill., assignor to Speed-O-Print Business Machines Corporation, Chicago, Ill., a corporation of Illinois
Filed June 2, 1966, Ser. No. 2,517
Term of patent 14 years
(Cl. D61—1)



211,498

WEIGHT-STEERED WATER SLED

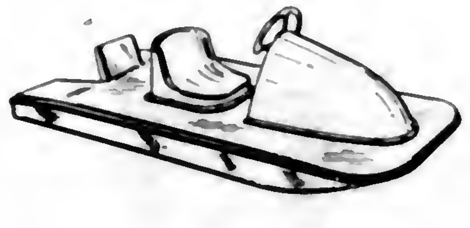
Floyd R. Brown and Walter L. Floehr, Toledo, Ohio, assignors to Unitcast Corporation, Toledo, Ohio, a corporation of Ohio
Filed Jan. 12, 1967, Ser. No. 5,392
Term of patent 14 years
(Cl. D71—1)



211,499

POWERED WATERCRAFT

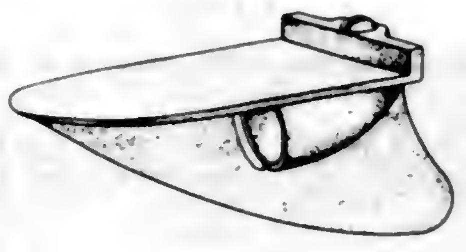
Walter E. Hofius, 4030 W. 108th St., Bloomington, Minn. 55431
Filed June 9, 1967, Ser. No. 7,411
Term of patent 14 years
(Cl. D71—1)



211,500

FIN FOR WATER SKIS AND THE LIKE

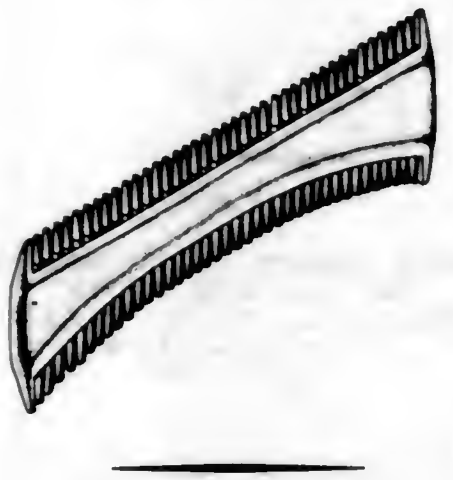
Walter J. Lauterback, 448 W. Pioneer Drive, Glendale, Calif. 91203
Filed June 12, 1967, Ser. No. 7,435
Term of patent 14 years
(Cl. D71—1)



211,501

HAIR COMB

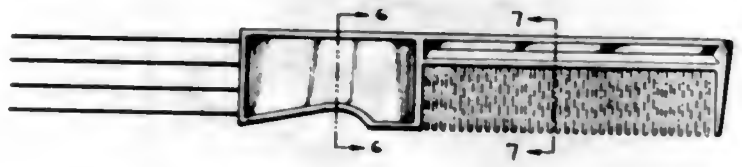
Gene W. Gray, 231 Edison St., Salt Lake City, Utah 84111
Filed Apr. 3, 1967, Ser. No. 6,503
Term of patent 14 years
(Cl. D86—8)



211,502

HAIR STYLING TOOL

Hector S. Cournoyer, Miami Beach, Fla., assignor to Grooming Developers, Inc., Chicago, Ill., a corporation of Illinois
Filed June 1, 1967, Ser. No. 7,333
Term of patent 14 years
(Cl. D86—8)



LIST OF DESIGN PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 18TH DAY OF JUNE, 1968

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

- AMP Inc.: *See*—
  - Seagrave, James, and Willis. 211,469.
- Adler, Marvin. Building for washing automobiles. 211,453, 6–18–68, Cl. D13—1.
- Ailsa Craig Curling Stones Ltd.: *See*—
  - Spencer, Hugh. 211,477.
- Akron Standard Mold Co., The: *See*—
  - Bishop, Earl L. 211,492.
- Aktiebolaget Ifoverken: *See*—
  - Bernadotte, Sigvard. 211,489.
  - Bernadotte, Sigvard. 211,490.
- Anderson, Richard N., to V. E. Anderson Mfg. Co. Window sash. 211,456, 6–18–68, Cl. D13—1.
- Anderson, Richard N., to V. E. Anderson Mfg. Co. Window frame structure. 211,457, 6–18–68, Cl. D13—1.
- Anderson, Richard N., to V. E. Anderson Mfg. Co. Window member extrusion. 211,458, 6–18–68, Cl. D13—6.
- Anderson, V. E., Mfg. Co.: *See*—
  - Anderson, Richard N. 211,456.
  - Anderson, Richard N. 211,457.
  - Anderson, Richard N. 211,458.
- Austin, Glenn M.: *See*—
  - Seiferth, Oscar E., Austin, and Gifford. 211,448.
  - Seiferth, Oscar E., Austin, and Gifford. 211,449.
- Bell & Howell Co.: *See*—
  - Kubnick, Norman R. 211,474.
- Bell Telephone Laboratories, Inc.: *See*—
  - Dreyfuss, Henry. 211,472.
- Bernadotte, Sigvard, to Aktiebolaget Ifoverken. Wall lamp. 211,489, 6–18–68, Cl. D48—4.
- Bernadotte, Sigvard, to Aktiebolaget Ifoverken. Angled wall lamp. 211,490, 6–18–68, Cl. D48—4.
- Bernatz, Thomas H. Building. 211,455, 6–18–68, Cl. D13—1.
- Bishop, Earl L., to The Akron Standard Mold Co. Tire uniformity testing machine. 211,492, 6–18–68, Cl. D54—13.
- Bonnett, John R.: *See*—
  - Seitzenger, David L., Bonnett, and Quigley. 211,481.
- Brown, Floyd R., and W. L. Floehr, to Unitcast Corp. Weight-steered water sled. 211,498, 6–18–68, Cl. D71—1.
- Caine, Merwin A. Compartmented silverware tray. 211,460, 6–18–68, Cl. D9—242.
- Calma Co.: *See*—
  - Dykmans, John A., and Connor. 211,473.
- Carrasquel, J. A.: *See*—
  - Hurst, Leonard, and Dabrowski. 211,454.
- Clay-Adams, Inc.: *See*—
  - Gulotta, Gerald D. 211,466.
- Columbia Broadcasting Systems, Inc.: *See*—
  - Spranger, Paul B. 211,494.
- Connor, John: *See*—
  - Dykmans, John A., and Connor. 211,473.
- Cournoyer, Hector S., to Grooming Developers, Inc. Hair styling tool. 211,502, 6–18–68, Cl. D86—8.
- Cramer Industries, Inc.: *See*—
  - Walkinshaw, Thomas G. 211,461.
- Dabrowski, George: *See*—
  - Hurst, Leonard, and Dabrowski. 211,454.
- Dreyfuss, Henry, to Bell Telephone Laboratories, Inc. Combined telephone handset and desk stand. 211,472, 6–18–68, Cl. D26—14.
- Dykmans, John A., and J. Connor, to Calma Co. Graphical data digitizer. 211,473, 6–18–68, Cl. D26—14.
- Englander Co., Inc., The: *See*—
  - Fasanella, George S. 211,476.
- Fasanella, George S., to The Englander Co., Inc. Combined nestable bed and chest for dormitory. 211,476, 6–18–68, Cl. D33—6.
- Fedtro, Inc.: *See*—
  - Kahn, Robert D. 211,482.
- Floehr, Walter L.: *See*—
  - Brown, Floyd R., and Floehr. 211,498.
- Gifford, Maurice J.: *See*—
  - Seiferth Oscar E., Austin, and Gifford. 211,448.
  - Seiferth, Oscar E., Austin, and Gifford. 211,449.
- Gray, Gene W. Hair comb. 211,501, 6–18–68, Cl. D86—8.
- Grooming Developers, Inc.: *See*—
  - Cournoyer, Hector S. 211,502.
- Gulotta, Gerald D., to Clay-Adams, Inc. Centrifuge or similar article. 211,466, 6–18–68, Cl. D18—2.
- Hange, Clayton O., to The Wooster Brush Co. Paint brush. 211,446, 6–18–8, Cl. D4—38.
- Hofius, Walter E. Powered watercraft. 211,499, 6–18–68, Cl. D71—1.
- Howe, James R. Finger ring. 211,488, 6–18–68, Cl. D45—10.
- Hurst, Leonard, and G. Dabrowski, to J. A. Carrasquel. Sauna bath building. 211,454, 6–18–68, Cl. D13—1.
- International Standard Electric Corp.: *See*—
  - Winkler, Wilhelm. 211,471.
- Kadmon, Alice: *See*—
  - Kadmon, Otto and Alice. 211,475.
- Kadmon, Otto and Alice. Christmas tree ornament. 211,475, 6–18–68, Cl. D29—1.
- Kahn, Robert D., to Fedtro, Inc. Razor sharpener casing. 211,482, 6–18–68, Cl. D37—1.
- Klaus, Samuel. Necktie. 211,445, 6–18–68, Cl. D2—351.
- Knoll Associates, Inc.: *See*—
  - Platner, Warren. 211,462.
  - Platner, Warren. 211,463.
  - Platner, Warren. 211,464.
  - Platner, Warren. 211,465.
- Kubnick, Norman R., to Bell & Howell Co. Magnetic tape recorder. 211,474, 6–18–68, Cl. D26—14.
- Lauterback, Walter J. Fin for water skies and the like. 211,500, 6–18–68, Cl. D71—1.
- Le Sueur, Robert C., to Scovill Mfg. Co. Food mixer or the like. 211,485, 6–18–68, Cl. D44—1.
- Le Sueur, Robert C., and M. H. Polhemus, to Scovill Mfg. Co. Drink mixer. 211,484, 6–18–68, Cl. D44—1.
- Mader, Robert J. Golf putter. 211,479, 6–18–68, Cl. D34—5.
- Marchant, Paul A., to Rexall Drug and Chemical Co. Bottle or the like. 211,447, 6–18–68, Cl. D9—149.
- Margolies, Charles R., to Snyder Mfg. Co. Exercise apparatus. 211,478, 6–18–68, Cl. D34—5.
- Marx, Louis, & Co., Inc.: *See*—
  - Seitzenger, David L., Bonnett, and Quigley. 211,481.
- Mayer, Oscar, & Co., Inc.: *See*—
  - Seiferth, Oscar E., Austin, and Gifford. 211,448.
  - Seiferth, Oscar E., Austin, and Gifford. 211,449.
- Millerlei, Arthur G. Switch unit for vehicle parking alarm. 211,470, 6–18–68, Cl. D26—13.
- Mitchell, Atherton R., to Renauld International, Ltd. Sunglass front. 211,495, 6–18–68, Cl. D57—1.
- Mitchell, Atheron R., to Renauld International, Ltd. Sunglass front. 211,496, 6–18–68, Cl. D57—1.
- North American Philips Co., Inc.: *See*—
  - Schellens, Henricus F. T. 211,487.
- Parker, Wayland B., to Schlumberger Ltd. (Schlumberger N.V.) Chair. 211,459, 6–18–68, Cl. D15—1.
- Paulich, Rudolph. Door knocker. 211,451, 6–18–68, Cl. D10—7.
- Petrell, Unto E., to Allen Stevens Corp. Sliding window latch. 211,452, 6–18–68, Cl. D10—10.
- Platner, Warren, to Knoll Associates, Inc. Chair or the like. 211,462, 6–18–68, Cl. D15—1.
- Platner, Warren, to Knoll Associates, Inc. Chair or the like. 211,463, 6–18–68, Cl. D15—1.
- Platner, Warren, to Knoll Associates, Inc. Chair or the like. 211,464, 6–18–68, Cl. D15—1.
- Platner, Warren, to Knoll Associates, Inc. Sofa or the like. 211,465, 6–18–68, Cl. D15—11.
- Playskool Mfg. Co.: *See*—
  - Rockwell, Jarvis W. 211,480.
- Polhemus, Marian H.: *See*—
  - Le Sueur, Robert C., and Polhemus. 211,484.
- Quigley, John B.: *See*—
  - Seitzenger, David L., Bonnett, and Quigley. 211,481.
- Renauld International, Ltd.: *See*—
  - Mitchell, Atherton R. 211,495.
  - Mitchell, Atheron R. 211,496.
- Rexall Drug and Chemical Co.: *See*—
  - Marchant, Paul A. 211,447.
- Rockwell, Jarvis W., to Playskool Mfg. Co. Toy sewing machine or similar article. 211,480, 6–18–68, Cl. D34—15.
- Salm, Arthur, Inc.: *See*—
  - Wildgen, Leo F. 211,486.
- Schellens, Henricus F. T., to North American Philips Co., Inc. Coffee maker. 211,487, 6–18–68, Cl. D44—26.
- Schlumberger Ltd. (Schlumberger N.V.): *See*—
  - Parker, Wayland B. 211,459.
- Scovill Mfg. Co.: *See*—
  - Le Sueur, Robert C. 211,485.
  - Le Sueur, Robert C., and Polhemus. 211,484.
- Seagrave, James, and R. S. Willis, to AMP Inc. Panel seal bulkhead connector. 211,469, 6–18–68, Cl. D26—1.
- Seiferth, Oscar E., G. M. Austin, and M. J. Gifford, to Oscar Mayer & Co., Inc. Package of sliced food or the like. 211,448, 6–18–68, Cl. D9—192.
- Seiferth, Oscar E., G. M. Austin, and M. J. Gifford, to Oscar Mayer & Co., Inc. Package of sliced food or the like. 211,449, 6–18–68, Cl. D9—192.
- Seitzenger, David L., J. R. Bonnett, and J. B. Quigley, to Louis Marx & Co., Inc. Toy vehicle. 211,481, 6–18–68, Cl. D34—15.
- Serafin, Frank A. Fish lure. 211,468, 6–18–68, Cl. D22—29.
- Snyder Mfg. Co.: *See*—
  - Margolies, Charles R. 211,478.
- Speed-O-Print Business Machines Corp.: *See*—
  - Yamasaki, Kim. 211,497.
- Spencer, Hugh, to Ailsa Craig Curling Stones Ltd. Combined curling stone handle and mounting plate. 211,477, 6–18–68, Cl. D34—5.
- Spranger, Paul B., to Columbia Broadcasting Systems, Inc. Electric organ or similar article. 211,494, 6–18–68, Cl. D56—2.
- Stevens, Allen, Corp.: *See*—
  - Petrell, Unto E. 211,452.
- Terwilliger, Floyd A. Lawn trimmer blade for sprinkler heads. 211,483, 6–18–68, Cl. D40—1.

- Tezuka, Kunitoshi. Scrap compressing apparatus for an electric furnace. 211,493, 6–18–68, Cl. D55—1.
- Unitcast Corp.: *See*—
  - Brown, Floyd R., and Floehr. 211,498.
- Walkinshaw, Thomas G., to Cramer Industries, Inc. Swivel chair. 211,461, 6–18–68, Cl. D15—1.
- Wharmby, Charles A., Jr. Lamp. 211,491, 6–18–68, Cl. D48—20.
- Wilbur, Edwin E. Shooting target. 211,467, 6–18–68, Cl. D22—15.
- Wildgen, Leo F., to Arthur Salm, Inc. Platter or the like. 211,486, 6–18–68, Cl. D44—10.
- Willis, Raymond S.: *See*—
  - Seagrave, James, and Willis. 211,469.
- Winkler, Wilhelm, to International Standard Electric Corp. Teleprinter console cabinet. 211,471, 6–18–68, Cl. D26—14.
- Wooster Brush Co., The: *See*—
  - Hange, Clayton O. 211,446.
- Yamasaki, Kim, to Speed-O-Print Business Machines Corp. Photocopy machine. 211,497, 6–18–68, Cl. D61—1.
- Zufferey, Hans. Chair. 211,460, 6–18–68, Cl. D15—1.

LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 18TH DAY OF JUNE, 1968

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

- A.C.S.A. Appliazioni Chimiche S.p.A.: *See*—
  - Mazzolini, Corrado, and Denti. 3,388,445.
- AMP Inc.: *See*—
  - Curtis, Charles R. 3,389,369.
- Abbott, Frank R.: *See*—
  - Angeloff, Wesley L., and Abbott. 3,389,373.
- Abex Corp.: *See*—
  - Born, Ellis H., Raymond, Smith, and Thurston. 3,388,890.
- Abrams, Irving M., R. G. Bofton, and F. L. Burnett III, to Diamond Shamrock Corp. Weak-base anion exchange resins containing amide substituents. 3,389,096, 6–18–68, Cl. 260—2.1.
- Abrams, Ralph, to Cable Electric Products, Inc. Dwell light. 3,389,248, 6–18–68, Cl. 240—10.
- Accary, André, A. Treillou, and J. Trouvé, to Commissariat a l'Energie Atomique. Furnace for manufacturing ingots or bars of metal or alloys, particularly bars of uranium carbide. 3,388,736, 6–18–68, Cl. 164—154.
- Accary, André, A. Treillou, and J. Trouvé, to Commissariat a l'Energie Atomique. Furnace for manufacturing ingots or bars of metal or alloys, particularly bars of uranium carbide. 3,388,903, 6–18–68, Cl. 266—33.
- Aconsky, Simon S., to Clairex Corp. Photoelectric cell with heat sink. 3,389,267, 6–18–68, Cl. 250—238.
- Adami, Aldo. Liquid jet distributing device. 3,388,867, 6–18–68, Cl. 239—222.
- Adank, Kurt, and D. A. Prins, to Geigy Chemical Corp. 5-(3′-aminopropyl)-11,12-dihydro-dibenzo[a,e]cyclooctenes and salts thereof. 3,389,177, 6–18–68, Cl. 260—570.8.
- Addison, George E., to Universal Oil Products Co. Process for producing aromatic hydrocarbons and liquefied petroleum gas. 3,389,075, 6–18–68, Cl. 208—66.
- Addor, Roger W., to American Cyanamid Co. Novel 2-imino-1, 3-dithioles. 3,389,147, 6–18–68, Cl. 260—327.
- Addressograph-Multigraph Corp.: *See*—
  - Granzow, Daniel B., Lux, and Gawron. 3,388,644.
- Adiutori, Eugene F.: *See*—
  - Kercher, David M., and Adiutori. 3,388,888.
- Admiral Corp.: *See*—
  - Andrews, Arthur H. 3,389,284.
  - Smith, James R. 3,388,954.
- Aeg-Elatherm GmbH: *See*—
  - Walter, Herbert, Stichnote, and Nilius. 3,389,300.
- African Explosives and Chemical Industries Ltd.: *See*—
  - Stewart, Iain G. H., and Hunt. 3,388,832.
- Ahlberg, Curt F., to L. M. Ericsson Telefonaktiebolaget. Electromagnetic relays. 3,389,354, 6–18–68, Cl. 335—248.
- Air Preheater Co., Inc., The: *See*—
  - Huffcut, Harold W. 3,389,002.
  - Jensen, Robert M. 3,388,534.
- Aisin Seiki Kabushiki Kaisha: *See*—
  - Fujita, Kiyoshi. 3,388,681.
- Akashi, Goro, T. Miyake, and M. Fujiyama, to Fuji Shashin Film Kabushiki Kaisha. Recording element with magnetic coating containing a mixture of granular and acicular magnetic particles. 3,389,014, 6–18–68, Cl. 117—93.2.
- Aktiebolaget Atomenergi: *See*—
  - Johnsson, Erik B., and Froman. 3,388,942.
- Aktiebolaget Flygts Pumpar: *See*—
  - Dahlgren, Jens K. A., and Stahl. 3,388,914.
- Aladdin Industries Ltd.: *See*—
  - Hebard, Hugh C. 3,388,961.
- Alarm Device Mfg. Co.: *See*—
  - Guthart, Leo A. 3,389,236.
- Alcan Metal Powders, Inc.: *See*—
  - Bolger, William T. 3,389,105.
  - Saha, Arthur W. 3,389,116.
- Alco Standard Corp.: *See*—
  - Marquardt, William A., and Bednarski. 3,388,973.
- Alderson, Geoffrey W., J. K. Hambling, and A. A. Yeo, to The British Petroleum Co., Ltd. Catalyst and polymerisation process using said catalyst. 3,389,190, 6–18–68, Cl. 260—683.15.
- Aldrich, William L., Jr., and W. J. De Beaubien, to General Motors Corp. Automobile air admission system. 3,388,654, 6–18–68, Cl. 98—2.
- Allen, Kenneth C., and E. E. Boshinski, to The Hobart Mfg. Co. Automatic weighing scales with recording and totaling apparatus. 3,388,758, 6–18–68, Cl. 177—4.
- Allied Chemical Corp.: *See*—
  - Bailey, Maurice E. 3,389,008.
  - Fuhrmann, Robert, and Jerolamon. 3,388,974.
- Allis, Louis, Co., The: *See*—
  - Herrick, Philip E. 3,389,279.
  - Herrick, Philip E., and Nicol. 3,389,280.
- Allstate-Campbell, Inc.: *See*—
  - Waag, Norman A. 3,388,919.
- Allured, Robert B.: *See*—
  - Treppa, Thomas J., Trulson, and Allured. 3,389,239.
- Alsup, Richard G., and C. S. Cope, to E. I. du Pont de Nemours and Co. Paste extrusion of polytetrafluoroethylene by prebaking of the coagulated dispersion resin. 3,389,201, 6–18–68, Cl. 264—119.
- Aluminum Co. of America: *See*—
  - Willis, Eldrich J. 3,388,454.
- American Aniline Products, Inc.: *See*—
  - Dressler, Hans, and Pons. 3,389,132.
  - Zanella, Dominic A. 3,389,151.
- American Chain & Cable Co., Inc.: *See*—
  - Schneider, William. 3,389,356.
  - Schneider, William. 3,389,357.
- American Cyanamid Co.: *See*—
  - Addor, Roger W. 3,389,147.
  - Donaldson, Malcolm M. 3,389,167.
  - Lies, Thomas A. 3,389,148.
  - Mosby, William L., and Vega. 3,389,137.
  - Nash, Robert A., and Haeger. 3,389,174.
  - Nash, Robert A., and Haeger. 3,389,175.
  - Vincent, James G., Jr., and Wray. 3,388,424.
- American Production Machine Co.: *See*—
  - Cohan, Alvin M. 3,388,686.
- American Radiator & Standard Sanitary Corp.: *See*—
  - Mitchell, Donald R. 3,388,599.
- American Standard, Inc.: *See*—
  - Hart, Atlee S. 3,389,261.
  - Hart, Atlee S. 3,389,262.
- American Supply, Inc.: *See*—
  - Anderson, Leroy E. 3,388,881.
- American Telephone and Telegraph Co.: *See*—
  - Cotner, J. Arthur. 3,389,234.
- Anchor Hocking Glass Corp.: *See*—
  - Cook, William H. 3,389,100.
  - Fouse, Frederick Z. 3,388,985.
- Anchor Post Products, Inc.: *See*—
  - Case, John S. 3,388,892.
- Andersen, John A., and R. M. Magner, to General Industrial Equipment Co. Air-conditioning device for controlling humidity and temperature. 3,388,863, 6–18–68, Cl. 236—44.
- Andersen, Niels C., and H. J. Barmeier, Jr., to Sperry Rand Corp. Control systems. 3,389,309, 6–18–68, Cl. 317—123.
- Andersen, Niels C.: *See*—
  - Wolff, Norman, and Andersen. 3,389,333.
- Anderson, Donald R.: *See*—
  - Watson, William R., and Anderson. 3,388,868.
- Anderson, George D.: *See*—
  - Last, Bernard, and Anderson. 3,388,595.
- Anderson, George R., to Westinghouse Electric Corp. Control system for a turbogenerator and once-through steam generator plant. 3,388,553, 6–18–68, Cl. 60—105.
- Anderson, Leroy E., to American Supply, Inc. Drain pipe mounting. 3,388,881, 6–18–68, Cl. 248—74.
- Andersson, Per L., to United States Banknote Corp. Tape punching keyboard apparatus. 3,388,858, 6–18–68, Cl. 234—23.
- Ando, Akira: *See*—
  - Saikawa, Toshihiko, Kinoshita, and Ando. 3,388,432.
- Andreas, John C., and D. L. Trower, to Century Electric Co. Stepless speed control for induction motor. 3,389,315, 6–18–68, Cl. 318—221.
- Andrews, Arthur H., to Admiral Corp. Electron gun structure having supporting tabs therefor. 3,389,284, 6–18–68, Cl. 313—82.
- Angeloff, Wesley L., and F. R. Abbott, to United States of America, Navy. Hemispherical gas filled shell for acoustical time delay action. 3,389,373, 6–18–68, Cl. 340—6.
- Anton, Anthony: *See*—
  - Booth, Harold E., and Anton. 3,388,591.
- Aoki, Katashi. Injection molding machine. 3,388,431, 6–18–68, Cl. 18—42.
- Applied Biological Science Laboratory, Inc.: *See*—
  - Scott, Robert D. 3,388,803.
  - Smallbone, Allan H. 3,388,427.
- Aqua-Chem, Inc.: *See*—
  - Goeldner, Richard W. 3,389,059.
- Archinal, William F., and H. M. Brazener, to Panelfab Products, Inc. Floor, wall and base plate connector. 3,388,514, 6–18–68, Cl. 52—97.
- Arden, Thomas V., to The Permutit Co. Ltd. Treatment of ion-exchange resins. 3,389,080, 6–18–68, Cl. 210—32.
- Arii, Hiroshi: *See*—
  - Shimoda, Seisuke, and Arii. 3,388,912.
- Armco Steel Corp.: *See*—
  - Kohler, Dale M. 3,389,006.
- Armitage, James D., and T. Luyster, Jr., to John L. Armitage & Co. Processes and compositions for obtaining clear, textured, light-scattering, light-reflecting and light-refracting finishes and articles made thereby and therewith. 3,389,013, 6–18–68, Cl. 117—45.
- Armitage, John L., & Co.: *See*—
  - Armitage, James D., and Luyster. 3,389,013.
- Armstrong Cork Co.: *See*—
  - Bushnell, Collins E., Jr., Long, and Stadden. 3,389,199.

- Arnold, Paul: *See—*
  - Barhite, Burl B., and Arnold. 3,388,683.
- Arons, Irving J.: *See—*
  - Simons, Charles W., Gribens, and Arons. 3,389,113.
- Arpin, Paul. Collapsible motor cart. 3,388,761, 6–18–68, Cl. 180—27.
- Asahi Kogaku Kogyo Kabushiki Kaisha: *See—*
  - Yajima, Kinpei. 3,388,647.
- Ashbaugh, James P., J. C. Borgstrom, and T. C. Tollefson, to Sperry Rand Corp. Signal responsive apparatus. 3,389,380, 6–18–68, Cl. 340—172.5.
- Ashland Oil & Refining Co.: *See—*
  - Culbertson, Billy M. 3,389,122.
  - Larimer, Victor L. 3,389,156.
  - Nordstrom, John D. 3,389,112.
  - Taft, David D. 3,389,110.
- Association des Ouvriers en Instruments de Precision: *See—*
  - Bono, David. 3,389,061.
- Astheimer, Robert W., to Barnes Engineering Co. Thermometer for measuring distant temperature discontinuities in gases using a Fabry-Perot type spectrometer. 3,389,256, 6–18–68, Cl. 250—83.3.
- Astleford, John J., Jr.: *See—*
  - Wright, Leonard L., and Astleford. 3,389,237.
- Ateliers de Constructions Electriques de Charleroi: *See—*
  - Demeur, Jean. 3,389,330.
- Atlantic Co.: *See—*
  - Reed, Dale H., Dunlap, and Pritchett. 3,389,258.
- Atlas Copco Aktiebolag: *See—*
  - Olofsson, Hans Kristofer, and Trulsson. 3,388,854.
- Atomic Energy of Canada Ltd.: *See—*
  - McGregor, John C., and Bates. 3,389,057.
- Attwood, John G., and R. L. Kosrow, to Union Special Machine Co. Vibrating conveyor. 3,388,906, 6–18–68, Cl. 271—49.
- Austin, Richmond O., and D. C. Schmidt, to Pan American Tung Research and Development League. Coating compositions and methods of producing the same. 3,389,104, 6–18–68, Cl. 260—22.
- Automated Building Components, Inc.: *See—*
  - Jureit, John C. 3,388,657.
- Automotive Rubber Co., Inc.: *See—*
  - Calaceto, Ralph R. 3,388,897.
- Autoquip Corp.: *See—*
  - Clarke, Jesse E. 3,388,413.
- Avco Corp.: *See—*
  - Fine, Laughton T., and Dennis. 3,389,327.
- Axelrod, Sidney, to Top Flite Models, Inc. Covering for airplanes and method for applying same. 3,388,651, 6–18–68, Cl. 46—76.
- Axthammer, Ludwig, and F. Wössner, to Fichtel & Sachs A.G. Hydropneumatic support column of adjustable length. 3,388,883, 6–18–68, Cl. 248—188.2.
- Ayling, Robert W., and P. G. Thayer, to Westinghouse Electric Corp. Refrigerant compressors having vertical crankshafts. 3,388,855, 6–18–68, Cl. 230—206.
- Babkin, Svetoslav I.: *See—*
  - Kasulin, Vyacheslav S., Babkin, Kalinina, and Gambashidse. 3,388,847.
- Bailey, Maurice E., to Allied Chemical Corp. Urethane coated synthetic cellulosic board. 3,389,008, 6–18–68, Cl. 117—57.
- Bailey, Ronald E., to The British Aluminium Co. Ltd. Cathodic protection alloys. 3,388,987, 6–18–68, Cl. 75—146.
- Baker, Nathan P. Dental drill control. 3,388,472, 6–18–68, Cl. 32—23.
- Baker Research Development Service, Inc.: *See—*
  - Schaible, John F., and Jackel. 3,388,997.
- Baker, Wilbur K., III: *See—*
  - Hulse, Mark M., and Baker. 3,389,387.
- Balamuth, Lewis, and C. Kleesattel, to Cavitron Ultrasonics Inc. Ultrasonic facsimile system. 3,389,218, 6–18–68, Cl. 178—6.6.
- Baldwin-Lima-Hamilton Corp.: *See—*
  - Willi, Richard B. 3,388,889.
- Ball, Ralph K.: *See—*
  - Litt, Peter S. 3,389,079.
- Ballantyne, David B., to General Motors Corp. Integral hinge and hinge bias structure. 3,388,420, 6–18–68, Cl. 16—160.
- Ballman, Gray C., to Chargematic, Inc. Regulated battery chargers. 3,389,324, 6–18–68, Cl. 320—25.
- Bange, Glenn R., and H. F. Young, to Ritter Pfaudler Corp. Method for making joined glass lined pipes. 3,388,447, 6–18–68, Cl. 29—157.
- Barbee, Gail G.: *See—*
  - Poker, John M., Barbee, Lawrence, and Orland. 3,388,928.
- Barber Mfg. Co., The: *See—*
  - Wallace, Donald C. 3,388,975.
- Bardsley, George P., L. R. Questad, J. F. Mason, J. R. Sondeno, and C. R. Smith, Jr. Wheelchair steering apparatus 3,388,926, 6–18–68, Cl. 280—265.
- Bardwell, Allen E., to Trident Industries, Inc. Driving tool. 3,388,753, 6–18–68, Cl. 173—139.
- Bargen, David W., and J. C. Sanchez, to Whittaker Corp. Measuring and computing device and method. 3,389,597, 6–18–68, Cl. 73—398.
- Barhite, Burl B., and P. Arnold. Submersible hull including a detachable man-carrying capsule. 3,388,683, 6–18–68, Cl. 114—16.
- Barley, Leo D., to Harris-Intertype Corp. Paper cutter. 3,388,813, 6–18–68, Cl. 214—1.6.
- Barmeier, Harold J., Jr.: *See—*
  - Andersen, Niels C., and Barmeier. 3,389,309.
- Barnes Engineering Co.: *See—*
  - Astheimer, Robert W. 3,389,256.
- Barnett, Arthur V.: *See—*
  - Spencer, William C., and Barnett. 3,388,549.
- Barnett, Louis H., and H. P. Horton, to Vistron Corp. Thermodynamic casting machine. 3,388,429, 6–18–68, Cl. 18—26.
- Barnhart, Edwin L.: *See—*
  - Eckenfelder, William W., Jr., and Barnhart. 3,389,081.
- Bartlett, Jeffrey H., A. J. Morway, and J. R. Livingston, Jr., to Esso Research and Engineering Co. Lubricating grease containing odd and even-numbered fatty acids. 3,389,084, Cl. 252—39.
- Barton, John S., to Thiele Kaolin Co. Core bit. 3,388,754, 6–18–68, Cl. 175—244.
- Bates, Kenneth T.: *See—*
  - McGregor, John C., and Bates. 3,389,057.
- Baucke, Horst, to Jagenberg-Werke AG. Apparatus for longitudinally cutting moving webs of material, such as paper, cardboard and the like and including means to remove the cutting dust. 3,388,624, 6–18–68, Cl. 83—168.
- Bauer, Edwin L., to W. K. H. Mau. Revolving restaurant. 3,388,513, 6–18–68, Cl. 52—65.
- Baumann, George P.: *See—*
  - Spielman, Maurice, Baumann, and Hering. 3,388,968.
- Baumann, Richard S., and R. E. Linch, to Western Industries, Inc. Gas appliance metering device. 3,388,962, 6–18–68, Cl. 431—344.
- Bausch, Paul, to General Motors Corp. Rear wheel suspensions for motor vehicles. 3,388,762, 6–18–68, Cl. 180—73.
- Bayer, John W., and W. C. Grinonneau, to Owens-Illinois, Inc. Polymerization processes and catalytic compostion of matter. 3,389,128, 6–18–68, Cl. 260—93.1.
- Baynes, Gene P., and G. B. Jacoby, to General Motors Corp. Disc brake with pocketed quick change shoe assembly. 3,388,775, 6–18–68, Cl. 188—73.
- Beare, Robert B., and C. R. Hartley, to Borg-Warner Corp. Washing machine drive arrangement. 3,388,568, 6–18–68, Cl. 68—23.
- Beavers, Joseph H.: *See—*
  - O'Callaghan, James A., Beavers, and Shoafstall. 3,389,374.
- Becher, Manfred, R. Sehring, and K. Zeile, to C. H. Boehringer Sohn. Novel process for the preparation of 2,4-dinitro-6-chloromethyl-phenol. 3,389,184, 6–18–68, Cl. 260—622.
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  - Gerstmeier, George A. 3,389,363.
  - Rosmanith, Carl W. 3,389,402.
- Bede, Thomas, Foundation: *See—*
  - Browning, Iben. 3,388,953.
- Bednarski, Roy M.: *See—*
  - Marquardt, William A., and Bednarski. 3,388,973.
- Bell, Raymond J.: *See—*
  - Croall, Milton L., Creed, and Bell. 3,388,528.
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  - Blakeborn, Merle C. 3,388,423.
  - Burton, Herbert O. 3,389,375.
  - Catterall, John M., and Masucci. 3,389,227.
  - Cherry, Edward M. 3,389,272.
  - Davis, Robert E. 3,389,370.
  - Giordmaine, Joseph A., and Rentzepis. 3,389,269.
  - Hubbard, William M., and Warters. 3,389,337.
  - Thomas, Donald E. 3,389,341.
  - Wickliff, Noble E. 3,389,345.
- Beltone Electronics Corp.: *See—*
  - Posen, Lawrence and S. 3,389,232.
- Bendix Corp., The: *See—*
  - Burnett, Richard T. 3,388,774.
  - Burnett, Richard T. 3,388,776.
  - Carruth, Winford B. 3,389,296.
  - Ditlinger, Richard J. 3,388,615.
  - Fiore, William V. 3,389,277.
  - Hager, Robert R. 3,388,635.
  - Reichard, Robert E. 3,388,763.
  - Slavin, Michael. 3,389,338.
  - Stauffer, Reuben L., Bottorf, and Lewis. 3,389,392.
  - Wesstrom, Alfred, Fischer, Skinner, Zilkowski, and Sanders. 3,388,582.
- Bennett, Leslie N., to Maxant Button & Supply Co. Upholstery button. 3,388,436, 6–18–68, Cl. 24—94.
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  - Rice, Hal H., and Bennett. 3,389,215.
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- Bey, Ahmet K., to Monarch Tool & Machinery Co. Magnetic hinge. 3,388,418, 6–18–68, Cl. 16—139.
- Beyler, Roger E.: *See—*
  - Sarett, Lewis H., Bry, Fried, Oberster, and Beyler. 3,389,135.
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- Bigot, Johan A.: *See—*
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  - Forman, Stanley F., and Thiede. 3,389,029.
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  - Riley, Robert H., Jr., Koen, Ziegler, and Holmes. 3,388,728.
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- Boehringer, C. H. Sohn: *See—*
  - Becher, Manfred, Sehring, and Zeile. 3,389,184.
- Boettcher, Stephen A., to Speedlap Corp. Lap limiting fixture means. 3,388,506, 6–18–68, Cl. 51—129.
- Bohler, Walter: *See—*
  - Weinrotter, Ferdinand, Muller, Schmidt, Bohler, Schweighofer, and Krulla. 3,388,533.
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  - Simpson, Jack N., and Bohner. 3,388,405.
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  - Dryden, Hugh L. 3,388,590.
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  - Totty, Gordon. 3,388,594.
- Borden, Donald: *See—*
  - Schar, Wayne C., and Borden. 3,389,088.
- Borg-Warner Corp.: *See—*
  - Beare, Robert B., and Hartley. 3,388,568.
  - Foster, William P. 3,389,381.
  - Haas, Ronald H., and Underwood. 3,388,637.
  - Kurtz, Curtis E. 3,388,569.
  - Tracy, Herbert E. 3,388,913.
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  - Ashbaugh, James P., Borgstrom, and Tollefson. 3,389,380.
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- Boshinski, Edwin E.: *See—*
  - Allen, Kenneth C., and Boshinski. 3,388,758.
- Bottorf, Robert J.: *See—*
  - Stauffer, Reuben L., Bottorf, and Lewis. 3,389,392.
- Boudakian, Max M.: *See—*
  - Hyde, Gene A., and Boudakian. 3,388,970.
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- Bradley, Richard C. Joint for laminated articles. 3,388,932, 6–18–68, Cl. 285—288.
- Brancaccio, Giovanni: *See—*
  - Larizza, Angelo, and Brancaccio. 3,389,138.
- Braunwarth, John B.: *See—*
  - Joo, Louis A., and Branuwarth. 3,389,091.
- Brazener, Harry M.: *See—*
  - Archinal, William F., and Brazener. 3,388,514.
- Breiling, Hans G.: *See—*
  - Schreiber, Peter, and Breiling. 3,388,701.
- Brenholdt, Irving R., and W. Wojtulewicz, to General Precision Inc. Detection means fo rstar tracker. 3,388,629, 6–18–68, Cl. 88—1.
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  - Webb, Elmer J. 3,388,643.
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- Brinkel, Edwin P., to Ross Operating Valve Co. Piston. 3,388,638, 6–18–68, Cl. 92—245.
- Brinkman, Herbert C., Jr.: *See—*
  - Otto, Robert E., and Brinkman. 3,388,836.
- Bristol-Myers Co.: *See—*
  - Montzka, Thomas A. 3,389,140.
  - Montzka, Thomas A. 3,389,141.
  - Weinberg, Norman L. 3,389,142.
- British Aluminium Co. Ltd., The: *See—*
  - Bailey, Ronald E. 3,388,987.
- British Drug Houses Ltd., The: *See—*
  - Burn, Derek, and Petrow. 3,389,154.
- British Nylon Spinners Ltd.: *See—*
  - Cannon, Cyril G., Davies, Selwood, and Williams. 3,388,545.
- British Petroleum Co., Ltd., The: *See—*
  - Alderson, Geoffrey W., Hambling, and Yeo. 3,389,190.
- British Ropes Ltd.: *See—*
  - Downton, John M. 3,388,543.
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  - Nix, Joseph E., and Brock. 3,389,025.
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  - Varel, Daniel W., Bronson, and Shields. 3,388,756.
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  - Rumberger, George G. 3,388,639.
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- Brownawell, Darrell W.: *See—*
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- Browning, Iben, to Thomas Bede Foundation. Wet and dry towel dispenser. 3,388,953, 6–18–68, Cl. 312—39.
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- Brundage, Raymond L. Automatic speed changer for record players. 3,389,231, 6–18–68, Cl. 179—100.4.
- Bry, Thomas S.: *See—*
  - Sarett, Lewis H., Bry, Fried, Oberster, and Beyler. 3,389,135.
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  - Cooper, William C. 3,388,812.
- Budd, Wilbert H., and J. D. Van Benthuysen, to CTS Corp. Electrical control having a nonceramic base and ceramic substrate supported cermet resistance film supported thereon. 3,389,364, 6–18–68, Cl. 338—174.
- Bufton, Richard G.: *See—*
  - Abrams, Irving M., Bufton, and Burnett. 3,389,096.
- Buhler, Gebruder: *See—*
  - Häfinger, Albert. 3,389,204.
- Bunker-Ramo Corp., The: *See—*
  - Cole, Robert H. 3,389,377.
  - Koster, Robert A. 3,389,404.
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  - Abrams, Irving M., Bufton, and Burnett. 3,389,096.
- Burnett, Richard T., to The Bendix Corp. Adjustable bearing means for a disc brake. 3,388,774, 6–18–68, Cl. 188—73.
- Burnett, Richard T., to The Bendix Corp. Transversely movable, opposing, rim grip brake. 3,388,776, 6–18–68, Cl. 188—76.
- Burress, Robert M. Tubular repair joint and insert used therein. 3,389,046, 6–18–68, Cl. 161—194.
- Burroughs Corp.: *See*—
  - Haentze, Charles B., and Sprude. 3,389,385.
  - Johnston, Arthur. 3,388,465.
  - Packard, Roger E. 3,389,376.
  - Schoenfeld, Gerhard G. 3,389,270.
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- Buzan, James D., to Sarkes Tarzian, Inc. Television signal generating apparatus. 3,389,220, 6–18–68, Cl. 178—7.1.
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  - O'Byrne, Brendan. 3,388,443.
- CCI Corp.: *See*—
  - Crehore, Robert. 3,388,944.
- CSF-Compagnie Generale de Telegraphie Sans Fil: *See*—
  - Schnuriger, Jean C. 3,389,283.
  - Vergnolle, Claude. 3,389,342.
- CTS Corp.: *See*—
  - Budd, Wilbert H., and Van Benthuysen. 3,389,364.
- Cable Electric Products, Inc.: *See*—
  - Abrams, Ralph. 3,389,248.
  - Danesi, Paul P. 3,388,976.
  - Schwartz, Frederick W. 3,389,367.
- Calaceto, Ralph R., to Automotive Rubber Co., Inc. Apparatus for separating and collecting particles carried by gases. 3,388,897, 6–18–68, Cl. 261—111.
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  - Miller, Robert D., and Evans. 3,389,321.
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  - Ellis, Frank V. 3,388,715.
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- Campbell, Kenneth E.: *See*—
  - Evancic, Ernest A., and Campbell. 3,388,618.
- Canada Copper Refiners Ltd.: *See*—
  - Schloen, John H., and Elkin. 3,389,064.
- Cangialosi, Francis J. Segmental candle. 3,388,960, 6–18–68, Cl. 431—288.
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  - MacDonald, Robert D. 3,388,500.
- Carlson, Donald W., to General Motors Corp. Power transmission. 3,388,669, 6–18–68, Cl. 103—38.
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- Carson, Robert O.: *See*—
  - Mackay, William B. F., and Carson. 3,388,986.
- Carter, Leigh: *See*—
  - Wohl, Sanford M., and Carter. 3,388,517.
- Case, John S., to Anchor Post Products, Inc. Guardrail system. 3,388,892, 6–18–68, Cl. 256—13.1.
- Caswall, Robert D., Jr.: *See*—
  - Leflet, Herbert A., Jr., and Caswall. 3,388,984.
- Castle Tool Specialty Co., Inc.: *See*—
  - Levine, Irving. 3,388,497.
- Catalysts & Chemicals, Inc.: *See*—
  - Reitmeier, Ronald E., and Fleming. 3,388,972.
- Caterpillar Tractor Co.: *See*—
  - Blum, Robert M., and Hollander. 3,388,849.
  - Poker, John M., Barbee, Lawrence, and Orland. 3,388,928.
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  - Balamuth, Lewis, and Kleesattel. 3,389,218.
- Caywood, James A., D. M. De Moss, E. C. Fitch, Jr., and R. F. Osborn, to Oklahoma State University of Agriculture & Applied Science. Hydraulic signal control valve. 3,388,721, 6–18–68, Cl. 137—625.66.
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  - Humbert, Marvin H. 3,388,507.
- Cedar Sales, Inc.: *See*—
  - Johnson, John A. 3,388,817.
- Celanese Corp.: *See*—
  - Jamison, Saunders E. 3,389,206.
  - Jamison, Saunders E., and Roberts. 3,389,205.
- Centre de Recherches de Pont-a-Mousson: *See*—
  - Vincenot, Raymond A. 3,388,588.
- Century Electric Co.: *See*—
  - Andreas, John C., and Trower. 3,389,315.
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  - MacGregor, Robert A. 3,388,800.
- Champlain Industries (1962) Ltd.: *See*—
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- Chappell, George D.: *See*—
  - Bolles, William L., Chappell, and Stanton. 3,388,531.
- Chargematic, Inc.: *See*—
  - Ballman, Gray C. 3,389,324.
- Charmglow Mfg. Co.: *See*—
  - Koziol, Walter. 3,388,421.
- Chase Manhattan Bank, The: *See*—
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  - Bohm, Georg. 3,389,185.
- Chmische Werke Witten G.m.b.H.: *See*—
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- Cherry, James R.: *See*—
  - Ozai-Durrani, Ataullah K., and Cherry. 3,388,998.
- Chevron Research Co.: *See*—
  - Blaymay, Alan J. 3,388,628.
  - Hunter, Melvin V., and Ruddle. 3,389,107.
  - Kautsky, George J. 3,388,979.
  - Lyle, Richard E., and Lowe. 3,389,083.
- Chicago Rawhide Mfg. Co.: *See*—
  - McKinven, Robert, Jr. 3,388,456.
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  - Clark, Ivan F. 3,389,043.
- Cilag-Chemie Ltd.: *See*—
  - Habricht, Ernst, and Feth. 3,389,170.
- Cincinnati Milling Machine Co., The: *See*—
  - Kozdebma, Stanley E., Soukup, and Daily. 3,389,117.
- Ciol, Joseph J.: *See*—
  - Wieland, Franz, and Ciol. 3,388,455.
- Cities Service Oil Co.: *See*—
  - Kerschner, Paul M., and Hess. 3,388,978.
  - Kerschner, Paul M., and Hess. 3,389,082.
- Cities Service Research and Development Co.: *See*—
  - Stokes, Charles W., and Mattix, Emory D. 3,388,671.
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  - Aconsky, Simon S. 3,389,267.
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  - Insley, Norman. 3,388,463.
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- Clarke, Frank H., Jr., to Schering Corp. 10-(3-dimethylaminopropyl)-3-azaphenothiazine and derivatives thereof. 3,389,136, 6–18–68, Cl. 260—243.
- Clarke, Jesse E., to Autoquip Corp. Hydraulic dock ramp controls. 3,388,413, 6–18–68, Cl. 14—71.
- Clary Corp.: *See*—
  - Schwend, Fred N. 3,388,782.
- Clary, Edward L., and R. L. Harris, to General Motors Corp. Control linkage. 3,388,611, 6–18–68, Cl. 74—613.
- Clayton Corp.: *See*—
  - Hug, Richard C. 3,388,840.
- Clemens, John E., to Industrial Nucleonics Corp. Multiple chamber liquid level probe. 3,389,250, 6–18–68, Cl. 250—43.5.
- Clement, Joseph, to Modern Metal Products Co. Merchandise display vehicle. 3,388,943, 6–18–68, Cl. 296—21.
- Coats & Clark Inc.: *See*—
  - Morin, Louis H. 3,388,572.
- Cobb, Clifton A., C. I. Platt, and K. D. Salisbury, to Whirlpool Corp. Washing machine agitator with adjustable vanes. 3,388,570, 6–18–68, Cl. 68—134.
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  - Cunningham, Hoyt, Jr., and Schmidt. 3,388,806.

- Cohan, Alvin M., to American Production Machine Co. Dual finishing apparatus for cylindrical containers. 3,388,686, 6–18–68, Cl. 118—4.
- Cola, Edward S.: *See*—
  - Bieri, David, and Cola. 3,389,042.
- Cole, Robert H., to The Bunker-Ramo Corp. Content addressable memories. 3,389,377, 6–18–68, Cl. 340—172.5.
- Cole, Thomas W., to Schlumberger Technology Corp. Drill stem testing apparatus. 3,388,745, 6–18–68, Cl. 166—152.
- Colell, Hans. Door latch. 3,388,939, 6–18–68, Cl. 292—198.
- Coleman, Donald G., and C. E. Hook, to Michigan Carton Co. Egg carton. 3,388,851, 6–18–68, Cl. 229—29.
- Collier, Samuel L., to Mission Mfg. Co. Percussion drilling tool. 3,388,636, 6–18–68, Cl. 91—234.
- Comalco Industries Pty. Ltd.: *See*—
  - Phillips, Rex S. 3,388,446.
- Cominco Ltd.: *See*—
  - Ramaradhya, Jakhanahally M. 3,388,967.
- Commercial Carpet Corp.: *See*—
  - Snyder, John M. 3,388,441.
- Commissariat a l'Energie Atomique: *See*—
  - Accary, Andre, Treillou, and Trouve. 3,388,736.
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  - Golmard, Maurice, and Zanni. 3,388,686.
  - Rainbault, Pierre, Goupil, and Marque. 3,389,251.
- Conklin, Glenn E.: *See*—
  - Beck, Alfred C., and Conklin. 3,388,957.
- Connelly, La Vern R., to Eaton Yale & Towne, Inc. Pump. 3,388,670, 6–18–68, Cl. 103—205.
- Connolly, William H. Method for ceiling construction. 3,388,452, 6–18–68, Cl. 29—428.
- Conrad, Gert: *See*—
  - Krieger, Friedrich, Sauer, and Conrad. 3,389,233.
- Conrad, Richard A.: *See*—
  - Pyle, Val R., and Conrad. 3,388,610.
- Consarc Corp.: *See*—
  - Roberts, Raymond J., and Hoyle. 3,389,208.
- Consolidated Electrodynamics Corp.: *See*—
  - Gradin, James H., Tolliver, and Elazar. 3,389,276.
  - Neff, Joseph J. 3,389,401.
- Consolidated Coal Co.: *See*—
  - Neuworth, Martin B., and Laufer. 3,389,162.
  - Neuworth, Martin B., and Laufer. 3,389,163.
- Continental Can Co., Inc.: *See*—
  - Growney, Lawrence J. 3,388,787.
  - Hazard, Ellison L. 3,388,824.
- Continental Motors Corp.: *See*—
  - Marsh, Francis X., and Pasch. 3,388,772.
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  - Kliphuis, Jans. 3,389,352.
- Cook, William H., to Anchor Hocking Glass Corp. Antiskid printing ink comprising silica aerogel and/or cornstarch. 3,389,100, 6–18–68, Cl. 260—9.
- Cooper, William C., to The Budd Co. Gravity turnover. 3,388,812, 6–18–68, Cl. 214—1.
- Cope, Charles S.: *See*—
  - Alsup, Richard G., and Cope. 3,389,201.
- Copper Range Co.: *See*—
  - Buckwalter, David J., Mukavitz, and Spolarich. 3,388,737.
- Cornelius Co., The: *See*—
  - Cornelius, Richard T. 3,388,837.
  - Cornelius, Richard T., and Schurman. 3,388,833.
- Cornelius, Richard T., to The Cornelius Co. Beverage dispensing device. 3,388,837, 6–18–68, Cl. 222—156.
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- Cornelliusen, Leonard O. Scaffold structures. 3,388,771, 6–18–68, Cl. 182—153.
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  - Claps, William A., and Dorman. 3,389,335.
  - Coulter, Wallace H., and Hogg. 3,389,334.
- Coulter, Wallace H., and W. R. Hogg, to Coulter Electronics, Inc. Particle analyzing apparatus having means for observing a scanning aperture. 3,389,334, 6–18–68, Cl. 324—71.
- Cox, Donald E.: *See*—
  - Sieger, John S., and Cox. 3,388,508.
- Craig, Richard W.: *See*—
  - Chapman, Charles S., Jr., Craig, Gage, and Smith. 3,388,934.
- Crawford, Robert F.: *See*—
  - Kitasaki, Kiyoshi, and Crawford. 3,389,146.
- Crawford, Thomas A. Caster locking means. 3,388,419, 6–18–68, Cl. 16—35.
- Creed, Sherman H.: *See*—
  - Croall, Milton L., Creed, and Bell. 3,388,528.
- Crehore, Robert, to CCI Corp. Panel cab for vehicles. 3,388,944, 6–18–68, Cl. 296—28.
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- Cummings, Howard B., to Shenango Ceramics, Inc. Method for decorating pottery. 3,388,658, 6–18–68, Cl. 101—38.
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- Curtis, Charles R., to AMP Inc. Modular electrical connector. 3,389,369, 6–18–68, Cl. 339—121.
- Cyril Bath Co., The: *See*—
  - Dolney, Stanley M. 3,388,577.
- Dahlgren, Jens K. A., and F. T. Stahl, to Aktiebolaget Flygts Pumpar. Rotary face seal assembly with a spring locked shaft pin. 3,388,914, 6–18–68, Cl. 277—84.
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  - Takizawa, Tatsuji, Shimiya, and Kaji. 3,389,255.
- Dale, Walter, to General Motors Corp. Closure latch. 3,388,940, 6–18–68, Cl. 292—216.
- D'Alessandro, William J., to Union Carbide Corp. Foaming phenol-formaldehyde resins with fluorocarbons. 3,389,094, 6–18–68, Cl. 260—2.5.
- Daily, Don I.: *See*—
  - Kozdemba, Stanley E., Soukup, and Daily. 3,389,117.
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  - Nichols, Harley E., Jr. 3,388,492.
- Danesi, Paul P., to Cable Electric Products, Inc. Female molded-on electrical connector. 3,388,976, 6–18–68, Cl. 29—198.
- Daniels, James H.: *See*—
  - Pisano, Frank T., and Daniels. 3,388,879.
- Davidson, Frederic A., Jr., and R. D. Schalge, to Harsco Corp. Multiple shaft tower construction. 3,388,511, 6–18–68, Cl. 52—30.
- Davies, Barrie L.: *See*—
  - Cannon, Cyril G., Davies, Selwood, and Williams. 3,388,545.
- Davis, Robert E., to Bell Telephone Laboratories, Inc. Electrical connector. 3,389,370, 6–18–68, Cl. 339—156.
- Day, Lawrence, to Spitfire Tool and Machine Co., Inc. Brush or wiper attachment for rotatable lap plates of a lapping machine. 3,388,504, 6–18–68, Cl. 51—129.
- Daymon, Robert C. Truck loading conveyor. 3,388,783, 6–18–68, Cl. 198—11.
- Dearle, Denis A., to North and Judd Mfg. Co. Service entrance head. 3,389,212, 6–18–68, Cl. 174—81.
- De Beaubien, William J.: *See*—
  - Aldrich, William L., Jr., and De Beaubien. 3,388,654.
- Decof, Donald N., to Farrington Business Machines Corp. Identification and printing devices. 3,388,661, 6–18–68, Cl. 101—369.
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  - Hubbard, Arthur L. 3,388,537.
  - Markham, David R. 3,388,538.
  - Miley, Richard E. 3,388,929.
  - Miller, James A. 3,388,609.
- Dega, Robert L., to General Motors Corp. Sealing means. 3,388,915, 6–18–68, Cl. 277—177.
- Deliga, Horst: *See*—
  - Trzeba, Erich, Rudloff, and Deliga. 3,389,351.
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- De Maria, Anthony J., to United Aircraft Corp. Gating system for high power laser cascade. 3,389,348, 6–18–68, Cl. 331—94.5.
- De Meo, Nicholas L., to Schaefer Equipment Co. Swivel block. 3,388,891, 6–18–68, Cl. 254—195.
- Demeur, Jean, to Ateliers de Constructions Electriques de Charleroi. Fail safe magnetic amplifier voltage control (ACEC) system. 3,389,330, 6–18–68, Cl. 323—89.
- De Moss, Dean M.: *See*—
  - Caywood, James A., De Moss, Fitch, and Osborn. 3,388,721.
- Dennis, Donald I., and J. H. Michael. Air diffuser. 3,388,655, 6–18–68, Cl. 98—40.
- Dennis, John L.: *See*—
  - Fine, Laughton T., and Dennis. 3,389,327.
- Denti, Francesco: *See*—
  - Mazzolini, Corrado, and Denti. 3,388,445.
- Deregt, Maurits P. Negabinary adders and subtractors. 3,389,245, 6–18–68, Cl. 235—175.
- Dery, Robert A. Roof de-icer. 3,388,738, 6–18–68, Cl. 165—47.
- De Soto, Inc.: *See*—
  - Sekmakas, Kazys. 3,389,103.
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Deutsche Gold- und Silber-Scheideanstalt vormals Roessler: *See—*
Kloepfer, Harry, Sperr, and Meyer-Simon. 3,389,005.
Diamant, Frederick J. Foot covering. 3,388,486, 6–18–68, Cl. 36—58.5.
Diamond International Corp.: *See—*
Reifers, Richard F. 3,388,852.
Diamond Shamrock Corp.: *See—*
Abrams, Irving M., Bufton, and Burnett. 3,389,096.
Diassi, Patrick A.: *See—*
Levine, Seymour D., and Diassi. 3,389,169.
Dibble, Merton F., to International Minerals & Chemical Corp. Beneficiation of phosphate ores. 3,388,793, 6–18–68, Cl. 209—3.
Diener, Carl E.: *See—*
Schwerin, Andre K., Diener, and Levinos. 3,388,995.
Dietrick, Myron I., and D. A. Webb, to Koppers Co., Inc. Low exotherm curing phenol-resorcinol-formaldehyde resins employing alkali metal sulfites and calcium compounds as catalysts. 3,389,125, 6–18–68, Cl. 260—54.
Dietz, Milton S., to Polaroid Corp. Reciprocatory mount for security seal. 3,388,649, 6–18–68, Cl. 95—36.
Dillon, E. C., & Co., Inc.: *See—*
Glerum, Irvin L. 3,388,593.
Ditlinger, Richard J., to The Bendix Corp. Bushings for tie-bars. 3,388,615, 6–18–68, Cl. 74—579.
Dochterman, Richard W., to General Electric Co. Method of fabricating small electric motors. 3,388,459, 6–18–68, Cl. 29—596.
Dolney, Stanley M., to The Cyril Bath Co. Metal forming machine, traversing wipe shoe and control therefor. 3,388,577, 6–18–68, Cl. 72—151.
Dominion Electric Corp.: *See—*
Satkunas, Bruno. 3,388,698.
Dominion Electrohome Industries, Ltd.: *See—*
Fichtner, Roland H. 3,389,344.
Sennik, John J. 3,389,216.
Donaldson, Malcolm M., to American Cyanamid Co. 2-(dialkylamino) ethyl polypropenylsuccinates. 3,389,167, 6–18–68, Cl. 260—485.
Donn Products, Inc.: *See—*
Downing, Lucien R., Jr. 3,388,519.
Dorman, Ervin L.: *See—*
Claps, William A., and Dorman. 3,389,335.
Dorne and Margolin, Inc.: *See—*
Minerva, Vito P., and Berry. 3,389,396.
Dorrance, John G., to S. I. Handling Systems, Inc. Tow truck system. 3,388,674, 6–18–68, Cl. 104—88.
Dotani, Satoshi: *See—*
Oda, Ryohei, Fujii, Moriga, and Dotani. 3,389,007.
Doty, Warren R.: *See—*
La Boda, Mithell A., and Doty. 3,389,068.
Dove, Allan B.: *See—*
Easter, Charles G., and Dove. 3,389,021.
Dow Chemical Co., The: *See—*
Garrett, Walter L. 3,389,095.
Harmon, Thomas O., Louch, and Morehouse. 3,389,109.
Harrison, James W. 3,388,894.
Kenaga, Eugene E. 3,389,048.
Lowes, Frederick J. 3,388,522.
Miller, Donald L. 3,389,187.
Olstowski, Franciszek, Watson, and Osborn. 3,389,200.
Vaught, Leonard M., Newport, and Osborn. 3,389,073.
White, Halbert C., and Wysong. 3,389,171.
Dowgiallo, Edward J., Jr. Fuel cell with rejuvenation control device. 3,389,018, 6–18–68, Cl. 136—86.
Downing, Lucien R., Jr., to Donn Products, Inc. Controlled expansion structural beam and grid. 3,388,519, 6–18–68, Cl. 52—495.
Downton, John M., to British Ropes Ltd. Manufacture of wire strands. 3,388,543, 6–18–68, Cl. 57—58.52.
Drager, Otto H.: *See—*
Schreiber, Peter, and Breiling. 3,388,701.
Dreiling, Peter M., to Hi-Lite Polishing Machine Co., Inc. Polishing apparatus. 3,388,505, 6–18–68, Cl. 51—134.5.
Dresser Industries, Inc.: *See—*
Cottingham, Jerry M., and Rolon. 3,389,403.
Gorgens, Joseph E., and Jankura. 3,388,600.
Ingham, Robert J. 3,388,601.
Dressler, Hans, and K. G. Reabe, to Koppers Co., Inc. Ultraviolet light stabilizers for plastic materials. 3,389,004, 6–18–68, Cl. 106—176.
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Dressler, Hans, and H. W. Pons, to American Aniline Products, Inc. Metalliferous azomethine containing azo dyestuffs containing an 8-aminoquinoline group. 3,389,132, 6–18–68, Cl. 260—146.
Drobnick, James L.: *See—*
Peterson, Hal D., Drobnick, and Smith. 3,388,993.
Dryden, Hugh L., Deputy Administrator of the National Aeronautics and Space Administration with respect to an invention of W. W. Bond. Connector internal force gauge. 3,388,590, 6–18–68, Cl. 73—88.5.
Dulin, William E., and J. B. Wright, to The Upjohn Co. Treatment of hyperlipidemia with 3-methyl-5-alkylpyrazole-1-carboxamide. 3,389,050, 6–18–68, Cl. 167—65.
Dunlap, Henry F.: *See—*
Reed, Dale H., Dunlap, and Pritchett. 3,389,258.
Duplessis, Gerard. Bucket and adaptor assembly for digging teeth. 3,388,488, 6–18–68, Cl. 37—142.
Du Pont de Nemours, E. I., and Co.: *See—*
Alsup, Richard G., and Cope. 3,389,201.
Garrett, Jerry A. 3,388,965.
Schreckendgust, Jay G. 3,389,265.
Sherrill, Robert W. 3,389,119.
Durand, Francois. Device for transmitting motion to a gear. 3,388,608, 6–18–68, Cl. 74—410.
Duxbury, Frederick K.: *See—*
Burrows, Harold G., Duxbury, and Ingham. 3,389,172.
Dyna Systems Inc.: *See—*
Reynolds, Rollin A. 3,389,313.
Dynair Ltd.: *See—*
Elmer, Arthur E. H. 3,388,694.
ESB Inc.: *See—*
Simpson, Jack N., and Bohner. 3,388,405.
Easter, Charles G., and A. B. Dove, to The Steel Co. of Canada Ltd. Process for preparing steel for cold working. 3,389,021, 6–18–68, Cl. 148—12.
Eastern Target Co., Inc.: *See—*
Lueddeke, Raymond P. and L. 3,388,816.
Eastman Kodak Co.: *See—*
Kuhrt, Noel H., and Broxholm. 3,388,999.
Eaton Yale & Towne Inc.: *See—*
Christie, Chester D. 3,388,760.
Connelly, La Vern R. 3,388,670.
Jaeschke, Ralph L. 3,389,278.
Eckenfelder, William W., Jr., and E. L. Barnhart, to McGraw-Edison Co. Method of removing alkyl aryl sulfonates and phosphates from waste water. 3,389,081, 6–18–68, Cl. 210—52.
Edwards, Jack J.: *See—*
Chamberlain, Harry V., Edwards, and Kovacic. 3,389,053.
Edwards, Walter R. Apparatus for producing decorative wooden column shafts. 3,388,729, 6–18–68, Cl. 144—47.
Effinger, Cecil S. Diagram typewriter. 3,388,781, 6–18–68, Cl. 197—1.
Eggert, Jay P.: *See—*
Prahl, Walter H., Eggert, Lederman, Scremin, and Ullrich. 3,389,186.
Eggert, Joachim, E. Tronnier, and F. Ueberhagen, to Voigtlander A.G. Photographic telephoto lenses of high telephoto power. 3,388,956, 6–18–68, Cl. 350—176.
Eggler, Karl W., and J. R. Waddell. Mud flap holder. 3,388,884, 6–18–68, Cl. 248—224.
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Ehrenreich, Theodore, and S. K. Zadeikis. Fixing and drying cytological smears. 3,389,052, 6–18–68, Cl. 167—84.5.
Elazar, Shmuel: *See—*
Gradin, James H., Tolliver, and Elazar. 3,389,276.
Electric Reduction Co. of Canada, Ltd.: *See—*
Meyers, Norman W. 3,389,071.
Electronic Associates, Inc.: *See—*
Schmidt, James L., and Sinnott. 3,389,306.
Electro-Optical Systems, Inc.: *See—*
McLellan, William H. 3,389,362.
Elkin, Eugene M.: *See—*
Schloen, John H., and Elkin. 3,389,064.
Ellis, Frank V., to Cameron Iron Works, Inc. Lubricated valve with spring means for relieving excessive sealant pressure. 3,388,715, 6–18–68, Cl. 137—246.22.
Ellis, James N., to Lear Siegler, Inc. Rotor for inductor alternator. 3,389,281, 6–18–68, Cl. 310—168.
Ellis, Walter E.: *See—*
Syford, Earl. 3,388,856.
Elmer, Arthur E. H., to Dynair Ltd. Adjustable-pitch engine cooling fan and servocontrol mechanism therefor. 3,388,694, 6–18–68, Cl. 123—41.12.
Elzinga, Eugene R., and N. N. Li, to Esso Research and Engineering Co. Liquid separation through a permeable membrane in droplet form. 3,389,078, 6–18–68, Cl. 208—308.
Emicke, Klaus, to Norddeutsche Affinerie. Process for electrolytic recovery and refining of metals. 3,389,063, 6–18–68, Cl. 204—106.
Emmitt, Ronald W. Test tube holder. 3,388,807, 6–18–68, Cl. 211—74.
Emoto, Masayuki: *See—*
Takahashi, Hideo, Emoto, Imoto, Ohara, and Masuda. 3,389,286.
Engle, Charles J., and M. Santourian, to Phillips Petroleum Co. Method of consolidating an unconsolidated oil sand. 3,388,743, 6–18–68, Cl. 166—11.
English Electric Valve Co. Ltd.: *See—*
O'Loughlin, Cian N. 3,388,740.
Engstrom, John A., and E. G. Weber, to Sperry Rand Corp. High speed printing apparatus. 3,389,398, 6–18–68, Cl. 346—74.
Erickson, Gerald J., and T. C. Tollefson, to Sperry Rand Corp. Floating point system: single and double precision conversions. 3,389,379, 6–18–68, Cl. 340—172.5.
Erickson Tool Co.: *See—*
Winnen, Franklyn E., and Walker. 3,388,916.
Winnen, Franklyn E., and Walker. 3,388,917.
Ernestus, Adolph W., to N.T.W. Missile Engineering, Inc. Method and apparatus for extrusive rolling of annular members. 3,388,576, 6–18–68, Cl. 72—81.
Eskridge, Eugene: *See—*
Hill, Leslie F., Sr., and Eskridge. 3,388,920.
Esso Research and Engineering Co.: *See—*
Bartlett, Jeffrey H., Morway, and Livingston. 3,389,084.
Burkard, Herbert G., Kresge, and Gardner. 3,388,977.
Elzinga, Eugene R., and Li. 3,389,078.
Gabrielson, James E. 3,388,862.
Kresge, Edward N., Wagensommer, Jacobson, and Brownawell. 3,389,087.
Morway, Arnold J. 3,389,085.
Mowell, Roger W., and Bascenik. 3,388,724.
Oldweiler, Morey E. 3,389,076.
Ramsden, Hugh E. 3,389,157.
Schar, Wayne C., and Borden. 3,389,088.
Sor, Kamil. 3,388,989.
Spielman, Maurice, Baumann, and Hering. 3,388,968.
Estes, John H., to Texaco, Inc. Hydroisomerization process wherein the catalyst is treated with hydrogen at non-flowing conditions. 3,389,191, 6–18–68, Cl. 260—683.74.

Ethyl Corporation: *See—*
Kottong, Gerald W., and Ritter. 3,389,161.
Evancic, Ernest A., and K. E. Campbell, to Simonds Saw and Steel Co. Method of making a high speed tool steel bar. 3,388,618, 6–18–68, Cl. 76—101.
Evans, James D. Vehicle trim strip with bumper insert. 3,388,623, 6–18–68, Cl. 52—717.
Evans Products Co.: *See—*
Ceyer, Alfons W., and Jaras. 3,388,502.
Evans, Ronald E.: *See—*
Miller, Robert D., and Evans. 3,389,321.
Everts, John C.: *See—*
Wyman, Le Roy L., Sr., Everts, and Pollard. 3,388,663.
FMC Corp.: *See—*
Croall, Milton L., Creed, and Bell. 3,388,528.
Jones, Allen P. 3,388,792.
Short, Charles R. 3,388,630.
Shumaker, Randell S. 3,388,442.
Vadas, Leslie. 3,388,527.
Faessinger, Robert W.: *See—*
Smith, Morris L., Roccheggiani, and Faessinger. 3,389,108.
Farbenfabriken Bayer Aktiengesellschaft: *See—*
Holtschmidt, Hans, and Zecher. 3,389,069.
Schnurrbusch, Karl, and Noll. 3,389,102.
Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning: *See—*
Kresse, Peter P., and Hartmann. 3,389,127.
Farrington Business Machines Corp.: *See—*
Decof, Donald N. 3,388,661.
Hu, Yow-Jinn. 3,388,659.
Wight, William A. 3,388,660.
Feingold, Eugene B.: *See—*
Crosby, Lawton H., and Feingold. 3,388,904.
Fenwal Inc.: *See—*
Siwko, Eric I. 3,389,301.
Fergurson, Herman V. Flame cutter carried by annular cam ring and rotating radius rod. 3,388,901, 6–18–68, Cl. 266—23.
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Habicht, Ernst, and Feth. 3,389,170.
Fiber Industries, Inc.: *See—*
Macleod, Roderick B., and Paliyenko. 3,389,207.
Fichtel & Sachs A.G.: *See—*
Axthammer, Ludwig, and Wössner. 3,388,883.
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Finch, William W.: *See—*
Quirk, Edward J., and Finch. 3,389,329.
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Fischer, Frederick R.: *See—*
Wesstrom, Alfred, Fischer, Skinner, Zilkowski, and Sanders. 3,388,582.
Fitch, Ernest C., Jr.: *See—*
Caywood, James A., De Moss, Fitch, and Osborn. 3,388,721.
Fittinger, Joseph W., to Smith Industries International, Inc. Hardened inserts for drill bits. 3,388,757, 6–18–68, Cl. 175—410.
Fleming, Harold W.: *See—*
Reitmeier, Ronald E., and Fleming. 3,388,972.
Fleming, Joseph R.: *See—*
Fleming, Thomas M. and J. R. 3,388,823.
Fleming, T. J., Co.: *See—*
Fleming, Thomas M. and J. R. 3,388,823.
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Flo-Tronics, Inc.: *See—*
Wales, Donald A. 3,389,310.
Flocke, Gunter: *See—*
Lobbe, Armin, Jordan, and Flocke. 3,388,948.
Fluidrive Engineering Co. Ltd.: *See—*
Bilton, John. 3,388,652.
Flynn, Robert A., and C. E. Plymale, to Owens-Illinois, Inc. Method of forming foamed container. 3,389,197, 6–18–68, Cl. 264—46.
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Fono, Andrew: *See—*
May, Ernest M., and Fono. 3,389,152.
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Ford Motor Co.: *See—*
McLean, Arthur F. 3,388,778.
Foregger Co., Inc., The: *See—*
Grosshandler, Stanley L. 3,388,705.
Forman, Stanley F., and J. Thiede, to Black Box Collotype Studios, Inc. Method of making transparency. 3,389,029, 6–18–68, Cl. 156—3.
Forsman, Earl R., to Keystone Valve Corp. Tool for inserting a valve seat into a valve body. 3,388,450, 6–18–68, Cl. 29—213.
Foster, Harold M.: *See—*
Glick, Laverne A., Foster, and Kaufman. 3,389,149.
Foster, Homer R., to Pittsburgh Plate Glass Co. Glass polishing composition containing an inorganic barium salt. 3,388,982, 6–18–68, Cl. 51—309.
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Foster Wheeler Corp.: *See—*
Johnson, Richard C., and Kraje. 3,388,931.
Foster, William P., to Borg-Warner Corp. Communication system. 3,389,381, 6–18–68, Cl. 340—172.5.
Fouse, Frederick Z., to Anchor Hocking Glass Corp. Drive for glass-forming machines. 3,388,985, 6–18–68, Cl. 65—361.
Franklin Institute, The: *See—*
Hargens, Charles W., III. 3,388,585.
Frantz, Harold E. Treatment of topical fungus infections with dichlorodiphenyltrichloroethane. 3,389,049, 6–18–68, Cl. 167—58.
Fried, John: *See—*
Sarett, Lewis H., Bry, Fried, Oberster, and Beyler. 3,389,135.
Sarett, Lewis H., Bry, Fried, Oberster, and Beyler. 3,389,153.
Fried, John H., to Syntex Corp. Polyhydroxyandrost-7-enes and processes for their preparation. 3,389,155, 6–18–68, Cl. 260—397.45.
Friel, Leslie C.: *See—*
Soros, Paul, and Friel. 3,388,818.
Frisch, Erling, to Westinghouse Electric Corp. Fuel assemblies. 3,389,056, 6–18–68, Cl. 176—78.
Fritts, Russell A., and S. J. Ketterer, to The Singer Co. Built-in automatic buttonholing devices. 3,388,680, 6–18–68, Cl. 112—73.
Fritsinger, George H. Tape dispensers. 3,389,040, 6–18–68, Cl. 156—523.
Froman, Karl G. E.: *See—*
Johnsson, Erik B., and Froman. 3,388,942.
Frost, Norman C., Jr., to W. R. Grace & Co. Device for molding solid thermoplastic bodies. 3,388,887, 6–18–68, Cl. 249—120.
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Fuhrmann, Ernst, and H. Hermann, to Goetzewerke Friedrich Goetye A.-G. Extrusion process for the production of articles of elastic substances. 3,389,034, 6–18–68, Cl. 156—242.
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Fuji Iron Works Co., Ltd.: *See—*
Saikawa, Toshihiko, Kinoshita, and Ando. 3,388,432.
Fuji Shashin Film Kabushiki Kaisha: *See—*
Akashi, Goro, Miyake, and Fujiyama. 3,389,014.
Fujii, Hiroshi: *See—*
Oda, Ryohei, Fujii, Moriga, and Dotani. 3,389,007.
Fujishima, Toshiyuki: *See—*
Nagashima, Shinichi, Goda, Gondou, Ooka, Mimura, Fujishima, Sugino, and Yano. 3,388,988.
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Fujita, Kiyoshi, to Aisin Seiki Kabushiki Kaisha. Speed change mechanism of a sewing machine. 3,388,681, 6–18–68, Cl. 112—220.
Fujiyama, Masaaki: *See—*
Akashi, Goro, Miyake, and Fujiyama. 3,389,014.
Fuller, Robert A., to Emhart Corp. Heating section of decorating lehr. 3,388,899, 6–18–68, Cl. 263—8.
Fuzere, Robert J. Alignment indicating and correcting tool. 3,388,575, 6–18–68, Cl. 72—35.
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Gage, Kenneth W.: *See—*
Chapman, Charles S., Jr., Craig, Gage, and Smith. 3,388,934.
Galles, Gilbert V. Support having slip ring conductor assembly. 3,389,366, 6–18–68, Cl. 339—7.
Gambashidze, Galina M.: *See—*
Kasulin, Vyacheslav S., Babkin, Kalinina, and Gambashidze. 3,388,847.
Gardner, Irwin J.: *See—*
Burkard, Herbert G., Kresge, and Gardner. 3,388,977.
Gardner, Thomas A. Pocket ventilator for web drying equipment. 3,388,479, 6–18–68, Cl. 34—15.
Garoutte, Kurt F., to United States of America, Army. Test firing missile. 3,388,668, 6–18–68, Cl. 102—87.
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  - Stechemesser, Ernst. 3,388,490.
- Gawron, Stanley A.: *See*—
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- Gebhard, Paul C. Joint fastening for storm doors, storm windows, and similar structures. 3,388,936, 6–18–68, Cl. 287—189.36.
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  - Adank, Kurt, and Prins. 3,389,177.
- Gembruch, Alfred. Safety ski binding. 3,388,922, 6–18–68, Cl. 280—11.35.
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  - Schwerin, Andre K., Diener, and Levinos. 3,388,996.
- General Dynamics Corp.: *See*—
  - Ketcham, George M. 3,389,332.
- General Electric Co.: *See*—
  - Burke, Hubert K., and Michon. 3,389,383.
  - Dochterman, Richard W. 3,388,459.
  - Harle, Harold P. 3,388,562.
  - Harris, Lawson P. 3,389,359.
  - Harvey, William G. 3,389,241.
  - Hughes, Donald E. 3,389,055.
  - Keenan, James J. 3,389,360.
  - Kercher, David M., and Adiutori. 3,388,888.
  - Nielsen, John M. 3,389,159.
  - Peabody, Earl P. 3,389,226.
  - Rayno, Glenn D. 3,389,311.
  - Smith, Ivie L. 3,389,089.
- General Industrial Equipment Co.: *See*—
  - Andersen, John A., and Magner. 3,388,863.
- General Motors Corp.: *See*—
  - Aldrich, William L., Jr., and De Beaubien. 3,388,654.
  - Ballantyne, David B. 3,388,420.
  - Bausch, Paul. 3,388,762.
  - Baynes, Gene P., and Jacoby. 3,388,775.
  - Bond, William D. 3,389,305.
  - Boyd, Richard W., and Welch. 3,388,801.
  - Burch, Richard C. 3,389,010.
  - Carlson, Donald W. 3,388,669.
  - Chapman, Charles S., Jr., Craig, Gage, and Smith. 3,388,934.
  - Clary, Edward L., and Harris. 3,388,611.
  - Dale, Walter. 3,388,940.
  - Dega, Robert L. 3,388,915.
  - Greene, Joseph L. 3,389,060.
  - Hughes, Walton. 3,389,193.
  - Kevelin, Bruce E., and Stallard. 3,388,945.
  - La Boda, Mitchell A. 3,389,067.
  - La Boda, Mitchell A., and Doty. 3,389,068.
  - Logan, John L. 3,388,458.
  - Miller, Tom B. 3,388,825.
  - Prewitt, Thomas A. 3,389,317.
  - Quinn, Clark E. 3,388,773.
  - Rau, John C. 3,388,714.
  - Rice, Hal H., and Bennett. 3,389,215.
  - Roby, Alfred B. 3,389,316.
  - Treppa, Thomas J., Trulson, and Allured. 3,389,239.
  - Upchurch, Joseph D. 3,388,417.
  - Wyczalek, Floyd A. 3,388,898.
  - Ziegler, Eugene R. 3,389,320.
- General Precision Inc.: *See*—
  - Brenholdt, Irving R., and Wojtulewicz. 3,388,629.
- General Precision Systems, Inc.: *See*—
  - Gray, John W. 3,389,271.
  - Pretty, Arthur J. 3,388,464.
- General Signal Corp.: *See*—
  - Maynard, Wheeler D. 3,389,371.
- General Tire & Rubber Co., The: *See*—
  - Jones, William H., Shedrick, and Lapresiosa. 3,389,045.
- Gerstmeier, George A., to Beckman Instruments, Inc. Shaft retainer for variable resistance device. 3,389,363, 6–18–68, Cl. 338—176.
- Getty Oil Co.: *See*—
  - Fincher, Dorsey R., and Williams. 3,388,744.
- Gevaert-Agfa N.V.: *See*—
  - Van de Velde, Rene M. 3,388,584.
- Gewerkschaft Eisenhutte Westfalia Wethmar: *See*—
  - Lobbe, Armin, Jordan, and Flocke. 3,388,948.
- Gex, Virgil E.: *See*—
  - Harm, Alson R., and Gex. 3,388,526.
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  - Della Porta, Paolo, Giorgi, and Rabusin. 3,388,955.
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- Girling Ltd.: *See*—
  - Hill, Albert C. 3,388,606.
- Givens, Wyatt W.: *See*—
  - Caldwell, Richard L., and Givens. 3,389,257.
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  - Schott Charles M., Jr. 3,388,426.
- Glowa, Michael, to Textron, Inc. Optical inspection system. 3,388,631, 6–18–68, Cl. 88—24.
- Gobel, Hans, to Jagenberg-Werke A.G. Apparatus for raising the bottom components of blanks for forming folding boxes. 3,388,641, 6–18–68, Cl. 93—49.
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  - Fuhrmann, Ernst, and Hermann. 3,389,034.
- Golmard, Maurice, and M. Zanni, to Commissariat a l'Energie Atomique. Porosimeter. 3,388,586, 6–18–68, Cl. 73—38.
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  - Kotila, Claudius F. 3,388,727.
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  - Roberts, Leroy S. 3,388,796.
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  - Gordon, Simon R. 3,389,118.
- Gordon, John McG.: *See*—
  - Oakley, Alan P., and Gordon. 3,388,612.
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  - Rainbault, Pierre, Goupil, and Marque. 3,389,251.
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- Grace, W. R., & Co.: *See*—
  - Frost, Norman C., Jr. 3,388,887.
  - Simons, Charles W., Gribens, and Arons. 3,389,113.
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  - Smith, Edward C., and Graham. 3,388,510.
- Granzow, Daniel B., G. K. Lux, and S. A. Gawron, to Addressograph-Multigraph Corp. Photoelectrostatic copying machine. 3 388,644, 6–18–68, Cl. 95—1.7.
- Gray & Huleguard: *See*—
  - Phillips, John J. 3,388,933.
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- Greenwell, James M. Clamping device combined with a shopping basket. 3,388,493, 6–18–68, Cl. 40—308.
- Greig, Alfred L.: *See*—
  - Youmans, Albert P., and Greig. 3,388,848.
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- Griffiths, John H., to Instron Ltd. Tensile testing machines. 3,388,592, 6–18–68, Cl. 73—103.
- Grinnell Corp.: *See*—
  - Hodnett, Robert M. 3,388,747.
- Grinonneau, William C.: *See*—
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  - Ravreby Fred A. 3,388,662.
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  - Globus, Alfred R. 3,389,120.

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  - Hilty, Lloyd W., and Maier. 3,388,414.
- Gundlach, T. J., Co.: *See*—
  - Gundlach, Theodore F. 3,388 871.
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  - Hjalsten, John A., and Gustafsson. 3,388,935.
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  - Nash, Robert A., and Haeger. 3,389,174.
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- Haggstrom, Arthur C.: *See*—
  - Burke, Mary, and Haggstrom. 3,388,710.
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  - Russell, Joseph L., and Olenberg. 3,389,173.
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  - Kishioka, Taneji. 3,388,874.
- Hambling, James K.: *See*—
  - Alderson, Geoffrey W., Hambling, and Yeo. 3,389,190.
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  - Hamel, Edmund. 3,388,544.
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  - Bent, John H. 3,388,726.
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  - Brown, Jerry A. 3,388,678.
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  - Redman, Derek H. 3,389,312.
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  - Dorrance, John G. 3,388,674.
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  - Herman, Donald E., Hanse, and Viñan. 3,388,797.
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  - Schleifman, Neil. 3,388,857.
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Hara, Torakichi, Hirota, and Onoshima. 3,388,587.

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Sawada, Ryoka, and Kaneko. 3,389,292.

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Allen, Kenneth C., and Boshinski. 3,388,758.

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Litt, Peter S. 3,389,079.

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Jones, Glyn F., and Hoffman. 3,389,384.

Hoffman, La Rue A.: *See*—
Webb, James E. 3,389,346.

Hoffmann-La Roche Inc.: *See*—
Berger, Leo, and Sternbach. 3,389,176.

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Coulter, Wallace H., and Hogg. 3,389,334.

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Blum, Robert M., and Hollander. 3,388,849.

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Holly, Harry H. 3,388,529.

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Riley, Robert H., Jr., Koen, Ziegler, and Holmes. 3,388,728.

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Thesing, Georg, and Risse. 3,388,525.

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Honeywell, Inc.: *See*—
Janson, Marius A. 3,389,328.

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Coleman, Donald G., and Hook. 3,388,851.

Hooker Chemical Corp.: *See*—
Prahl, Walter H., Eggert, Lederman, Scremin, and Ullrich. 3,389,186.

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Horton, Henry P.: *See*—
Barnett, Louis H., and Horton. 3,388,429.

Hostetler, Eldon, to Chore-Time Equipment, Inc. Poultry feeder system and pan assembly therefor. 3,388,690, 6–18–68, Cl. 119—53.

Houston Engineers, Inc.: *See*—
Webb, Derrel D. 3,388,755.

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Hoyle, Geoffrey: *See*—
Roberts, Raymond J., and Hoyle. 3,389,208.

Hoyt, Harold C., Jr., to Sperry Rand Corp. Control systems for electrically driven vehicles having controlled rectifiers operative in response to motor current. 3,389,318, 6–18–68, Cl. 318—345.

Hsieh, Henry L.: *See*—
Busler, William R., and Hsieh. 3,389,093.

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Hudson, Edward C., Jr. 3,389,230.

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Renckhoff, Gustav, and Hülsmann. 3,389,164.

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Stewart, Iain G. H., and Hunt. 3,388,832.

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Huntsinger, Carl F.: *See*—
Hanes, James W. E., and Huntsinger. 3,388,792.

Hu, Yow-Jiun, to Farrington Business Machines Corp. Bed and cylinder printing mechanism with adjustable anvil. 3,388,659, 6–18–68, Cl. 101—269.

Hunziker, Fritz: *See*—
Schmutz, Jean, Hunziker, and Kunzle. 3,389,139.

Hyde, Gene A., and M. M. Boudakian, to Olin Mathieson Chemical Corp. Chlorine pentafluoride process. 3,388,970, 6–18–68, Cl. 23—205.

Hyvarinen, Wayne E., to Westinghouse Electric Corp. Exciter field control for dynamoelectric machines. 3,389,326, 6–18–68, Cl. 322—28.

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Maruta, Iwao, and Iida. 3,388,990.

Imoto, Saburo: *See*—
Takahashi, Hideo, Emoto, Imoto, Ohara, and Masuda. 3,389,286.

Imperial Chemical Industries Ltd.: *See*—
Burrows, Harold G., Duxbury, and Ingham. 3,389,172.

Industrial Nucleonics Corp.: *See*—
Clemens, John E. 3,389,250.

Industriewerk Schaeffer OHG: *See*—
Schaeffler, Georg. 3,388,952.

Industrie-Werke Karlsruhe Aktiengesellschaft: *See*—
Walther, Willi. 3,388,866.

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Ingram, Alvin R., and H. A. Wright, to Koppers Co., Inc. Expandable polymers. 3,389,097, 6–18–68, Cl. 260—2.5.

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Griffiths, John H. 3,388,592.

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Rudolph, Arthur, and McShane. 3,389,036.

International Business Machines Corp.: *See*—
Hart, Donald M., and Werning. 3,389,382.
Hilsenrath, Manfred, Meehan, Patti, and Squarzini. 3,389,336.
Langdon, Jack L. 3,389,023.
Totta, Paul A. 3,388,457.

International Minerals & Chemical Corp.: *See*—
Dibble, Merton F. 3,388,793.

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Thomson, Bernard. 3,389,285.

International Telephone and Telegraph Corp.: *See*—
Greutman, Weldon W. 3,389,293.
Myers, Oscar. 3,389,225.

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Goosene, Gunter. 3,388,656.

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Fujita, Eiichiro, Ishii, Nakatani, Nakai, and Katagiri. 3,389,000.

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Schaible, John F., and Jackel. 3,388,997.

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Jacobson, Norman: *See*—
Kreage, Edward N., Wagensommer, Jacobson, and Brownawell. 3,389,087.

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Baynes, Gene P., and Jacoby. 3,388,775.

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Baucke, Horst. 3,388,624.
Gobel, Hans. 3,388,641.

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Gorgens, Joseph E., and Jankura. 3,388,600.

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Jaras, Leonidas: *See*—
Ceyer, Alkons W., and Jaras. 3,388,502.

Jarvi, Reino A., to Simpson Timber Co. Redwood extract substituted-phenolic resin adhesive. 3,389,101, 6–18–68, Cl. 260—17.2.

Jasper Electronic Mfg. Corp.: *See*—
Slaats, Mathew A. 3,389,211.

Jensen, Lloyd, to Schlumberger Technology Corp. Methods for drill stem testing. 3,388,741, 6–18–68, Cl. 166—3.

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Jerolamon, David: *See*—
Fuhrmann, Robert, and Jerolamon. 3,388,974.

Johnson Gage Co.: *See*—
Johnson, Lowell C. 3,388,476.

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Johnson & Johnson: *See*—
Bowes, Donald R. 3,388,703.
Holtz, Albert, and Lamason. 3,389,016.
Nash, Lawrence M. 3,388,535.
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Sanford, Robert A., Johnson, and Williams. 3,389,092.

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Johnson Service Co.: *See*—
Bjornsen, Bjorn G. 3,388,713

Johnson, William D.: *See*—
Modla, John J., and Johnson. 3,388,958.

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Lobbe, Armin, Jordan, and Flocke. 3,388,948.

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Takahashi, Hideo, Emoto, Imoto, Ohara, and Masuda. 3,389,286.

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Kume, Tadashi. 3,388,616.

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Tamura, Naoji. 3,388,844.

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Kaiser Gypsum Co., Inc.: *See*—
Tillisch, Paul W., Meyer, and Papalia. 3,388,521.

Kaji, Akio: *See*—
Takizawa, Tatsuji, Shimiya, and Kaji. 3,389,255.

Kali-Chemie Aktiengesellschaft: *See*—
Peuschel, Gerd K. 3,388,794.

Kalinina, Tatyana V.: *See*—
Kasulin, Vyacheslav S., Babkin, Kalinina, and Gambashidze. 3,388,847.

Kaneko, Yoichi: *See*—
Sawada, Ryoka, and Kaneko. 3,389,292.

Kao Soap Co., Ltd.: *See*—
Maruta, Iwao, and Iida. 3,388,990.

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Fujita, Eiichiro, Ishii, Nakatani, Nakai, and Katagiri. 3,389,000.

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Glick, Laverne A., Foster, and Kaufman. 3,389,149.

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Kinoshita, Shukuo, Kawamori, Mizuhara, Miyamura, and Suzuki. 3,389,058.

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Snellman, Donald L., and Keeler. 3,388,907.

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Bell, Ronald. 3,389,299.

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Stelzer, William. 3,388,950.

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Hirayama, Chikara, and Kemeny. 3,389,189.

Kenaga, Eugene E., to The Dow Chemical Co. Methods of repelling animals with tricyclohexyltin compounds. 3,389,048, 6–18–68, Cl. 167—46.

Kendall Co., The: *See*—
McCarthy, Donald J., and Marshall. 3,388,546.

Kendall, Virgil D.: *See*—
Blackburn, Andrew R., and Kendall. 3,389,001.

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Fritts, Russell A., and Ketterer. 3,388,680.

Kevelin, Bruce E., and R. M. Stallard, to General Motors Corp. Dielectric bonding of convertible top deck material to glass. 3,388,945, 6–18–68, Cl. 296—145.

Keystone Valve Corp.: *See*—
Forsman, Earl R. 3,388,450.

Kienzle Uhrenfabriken G.m.b.H.: *See*—
Schafer, Eberhard. 3,388,605.

Kihara, Nobutoshi, to Sony Corp. Magnetic tap recording and reproducing apparatus. 3,389,217, 6–18–68, Cl. 178—6.6.

Kimball, John W. Gunstock of two sections pivotal relative to each other. 3,388,494, 6–18–68, Cl. 42—74.

Kinoshita, Hisashi: *See*—
Saikawa, Toshihiko, Kinoshita, and Ando, 3,388,432.

Kinoshita, Shukuo, Y. Kawamori, K. Mizuhara, Y. Miyamura, and T. Suzuki, to Kyowa Hakko Kogyo Co., Ltd. Process for producing 5′-inosinic acid through mixed culture of two different microorganisms. 3,389,058, 6–18–68, Cl. 195—28.

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Kirkhof Mfg. Corp.: *See*—
O'Brien, Robert E., Roth, and Markowski. 3,388,625.

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Klang, Leon R. Speed wrench. 3,388,622, 6–18–68, Cl. 81—177.

Kleesattel, Claus: *See—*

Balamuth, Lewis, and Kleesattel. 3,389,218.

Kling, Nelson G., to Technicon Corp. Timing device. 3,388,687, 6–18–68, Cl. 118—9.

Klingelnberg, W. Ferd., Sohne: *See—*

Hemmert, Willi. 3,388,477.

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Koehler, Gordon T. Cartridge adapters for high-powered firearms. 3,388,665, 6–18–68, Cl. 102—41.

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Riley, Robert H., Jr., Koen, Ziegler, and Holmes. 3,388,728.

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Sawyer, Houghton, Jr., and Kogawara. 3,388,673.

Kogyokaihatsu Kenkyujo: *See—*

Kunugi, Taiseki, and Tamura. 3,388,532.

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Konkel, Walter H.: *See—*

Briggs, Howard B., and Konkel. 3,389,264.

Koppers Co., Inc.: *See—*

Dietrick, Myron I., and Webb. 3,389,125.

Dressler, Hans, and Reabe. 3,389,004.

Dressler, Hans, and Reabe. 3,389,099.

Ingram, Alvin R., and Wright. 3,389,097.

Matich, Thomas G., Jr. 3,388,853.

Michalowicz, William A. 3,389,188.

Kosrow, Robert L.: *See—*

Attwood, John G., and Kosrow. 3,388,906.

Koster, Robert A., to The Bunker-Ramo Corp. Control/display apparatus. 3,389,404, 6–18–68, Cl. 340—172.5.

Kotila, Claudius F., to Good-Ko Industries, Inc. Multiple-cut apparatus. 3,388,727, 6–18–68, Cl. 143—36.

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Kovacic, Evan C.: *See—*

Chamberlain, Harry V., Edwards, and Kovacic. 3,389,053.

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Koyama, Yuho: *See—*

Kubota, Yasuharu, Ouchi, and Koyama. 3,389,339.

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Johnson, Richard C., and Kraje. 3,388,931.

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Burkard, Herbert G., Kresge, and Gardner. 3,388 977.

Kresge, Edward N., J. Wagensommer, N. Jacobson, and D. W. Brownawell, to Esso Research and Engineering Co. Lubricant containing ethylene-alpha-olefin polymers. 3,389,087, 6–18–68, Cl. 252—59.

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Weinrotter, Ferdinand, Muller, Schmidt, Bohler, Schweighofer, and Krulla. 3,388,533.

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Kullmann, Dieter: *See—*

Kafka, Wilhelm, and Kullmann. 3,389,353.

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Schmutz, Jean, Hunziker, and Kunzle. 3,389,139.

Kupper, Wilhelm, to W. Reiners. Pneumatic device for seizing a starting length of yarn from a cop. 3,388,872, 6–18–68, Cl. 242—35.6.

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Takahashi, Hideo, Emoto, Imoto, Ohara, and Masuda. 3,389 286.

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Saikawa, Toshihiko, Kinoshita, and Ando. 3,388,432.

Kurtz, Curtis E., to Borg-Warner Corp. Hydraulic transmission for fabric-treating machine. 3,388,569, 6–18–68, Cl. 68—23.

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Kinoshita, Shukuo, Kawamori, Mizuhara, Miyamura, and Suzuki. 3,389,058.

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Laboratory for Electronics, Inc.: *See—*

Brockett, Peter C. 3,389,244.

La Flamme, Paul M.: *See—*

Gladstone, Harold M., La Flamme, Reihsmann, and Schoen. 3,389.098.

Lamason, Robert H.: *See—*

Holtz, Albert, and R. H. Lamason. 3,389,016.

Landbouwwerktuigen- en Machinefabriek H. Vissers N.V.: *See—*

Vissers, Herbert. 3,388,478.

Vissers, Herbert. 3,388,869.

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Marshall, Paul W., and Lankford. 3,388,675.

Lapreziosa, Emanuel: *See—*

Jones, William H., Shedrick, and Lapreziosa. 3,389,045.

Large, Donald M.: *See—*

Beroset, John E., and Large. 3,388,795.

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Lauen, Marguerite M. and J. E. 3,388,877.

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Laufer, Robert J.: *See—*

Neuworth, Martin B., and Laufer. 3,389,162.

Neuworth, Martin B., and Laufer. 3,389,163.

Lavin, Edward, and G. E. Mont, to Monsanto Co. Treatment of coverplates for glass laminates. 3,389,047, 6–18–68, Cl. 161—199.

Lawrence, Dean M.: *See—*

Poker, John M., Barbee, Lawrence, and Orland. 3,388,928.

Lawson, Richard E.: *See—*

McFarland, John W., and Lawson. 3,388,604.

Lear Siegler, Inc.: *See—*

Ellis, James N. 3,389,281.

Lebre, Charles J. P. Lift trucks with laterally retractable counterbalancing casters. 3,388,820, 6–18–68, Cl. 214—394.

Lederman, Sol J.: *See—*

Prahl, Walter H., Eggert, Lederman, Scremin, and Ullrich. 3,389,186.

Leeds & Northrup Co.: *See—*

Lex, Rowland G., Jr., Mergner, Polster, and Williams. 3,389,397.

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Levinos, Steven: *See—*

Schwerin, Andre K., Diener, and Levinos. 3,388,995.

Lewandowski, Raymond F., to Oak Electro/Netics Corp. Rotary switch. 3,389,235, 6–18–68, Cl. 200—11.

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Lewis, Dwight C., to Penn Controls, Inc. Proportional silicone controlled rectifier driven system for a heat motor. 3,389,314, 6–18–68, Cl. 318—117.

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Stauffer, Reuben L., Bottorf, and Lewis. 3,389,392.

Lex, Rowland G., Jr., G. C. Mergner, N. E. Polster, and A. J. Williams, Jr., to Leeds & Northrup Co. Analog centesimal recorder having redundant digit 3,389,397, 6–18–68, Cl. 346—35.

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Bolcey, Charles R. 3,388,462.

Leflet, Herbert A., Jr., and Caswall. 3,388,984.

Libby, McNeill & Libby: *See—*

Reisterer, Lawrence B., Ranger, and Weber. 3,388,731.

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Schimmer, Rigobert. 3,389,024.

Walter, Herbert, Stichnote, and Nilius. 3,389,300.

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Baumann, Richard S., and Linch. 3,388,962.

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Thielen, Heinz G. W. 3,388,516.

Li, Norman N.: *See—*

Elsinga, Eugene R., and Li. 3,389,078.

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Bartlett, Jeffrey H., Morway, and Livingston. 3,389,084.

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Lockheed Aircraft Corp.: *See—*

Stoddard, David F. 3,388,437.

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Bushnell, Collins E., Jr., Long, and Stadden. 3,389,199.

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Jamieson, Robert S., and Rolfes. 3,389,268.

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Louch, James B.: *See—*

Harmon, Thomas O., Louch, and Morehouse. 3,389,109.

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Lyle, Richard E., and Lowe. 3,389,083.

Lowes, Frederick J., to The Dow Chemical Co. Aircraft stiffening section. 3,388,522, 6–18–68, Cl. 52—618.

Lucerne Products, Inc.: *See—*

Matthews, Benjamin H., and Rhine. 3,389,365.

Lueddeke, Louis: *See—*

Lueddeke, Raymond P. and L. 3,388,816.

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Lux, George K.: *See—*

Granzow, Daniel B., Lux, and Gawron. 3,388,644.

Luyster, Thomas, Jr.: *See—*

Armitage, James D., and Luyster. 3.389,013.

Lyle, Richard E., and W. Lowe, to Chevron Research Co. Lubricants containing alkali metal dithiophosphates. 3,389,083, 6–18–68, Cl. 252—32.7.

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Modahl, Robert J., and Lynch. 3,388,557.

M & T Chemicals Inc.: *See—*

Kushlefsky, Bernard G. 3,389,158.

M. T. & D. Co., The: *See—*

Plamper, Gerhard R. and G. F. 3,388,759.

Maass, Hans: *See—*

Troost, Albert, Maass, Vogler, and Rottgers. 3,389,349.

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Magner, Russell M.: *See—*

Andersen, John A., and Magner. 3,388,863.

Maier, Robert W.: *See—*

Hilty, Lloyd W., and Maier. 3,388,414.

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Manufacturing Vega S.A.: *See—*

Vega Urdanoz, Jose. 3,388,676.

Marathon Oil Co.: *See—*

Biehl, James A. 3,389,074.

Marchant, Paul A., to Rexall Drug and Chemical Co. Aerosol spray container for receiving a fluid commodity dispensing pressurized cartridge. 3,388,838, 6–18–68, Cl. 222—193.

Marchant, Paul A.: *See—*

McHardy, Kenneth R., and Marchant. 3,388,841.

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Maremont Corp.: *See—*

Tarbox, Philip B. 3,388,435.

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Marquardt, William A., and R. M. Bednarski, to Alco Standard Corp. Manufacture of pure nitrogen. 3,388,973, 6–18–68, Cl. 23—220.

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McCarthy, Donald J., and Marshall. 3,388,546.

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Burzynski, Alfred J., and Martin. 3,389,114.

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Martinez, Albert M.: *See—*

Chavira, Salvador V., and Martinez. 3,388,925.

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Rainbault, Pierre, Goupil, and Marque. 3,389,251.

Martola, Ronald J., to Walker Mfg. Co. Dual inlet and outlet muffler. 3,388,769, 6–18–68, Cl. 181—56.

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Mason, John F.: *See—*

Bardsley, George P., Questad, Mason, Sondeno, and Smith. 3,388,926.

- Masucci, Eugene D.: *See*—
  - Catterall, John M., and Masucci. 3,389,227.
- Masuda, Toshiro: *See*—
  - Takahashi, Hideo, Emoto, Imoto, Ohara, and Masuda. 3,389,286.
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- Matsuura, Yoshimi: *See*—
  - Warner, Frederick P., and Matsuura. 3,388,415.
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- Mattix, Emory D.: *See*—
  - Stokes, Charles W., and Mattix. 3,388,671.
- Mau, William K. H.: *See*—
  - Bauer, Edwin L. 3,388,513.
- Maxant Button & Supply Co.: *See*—
  - Bennett, Leslie N. 3,388,436.
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- May, Otto B., Inc.: *See*—
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  - Wilson, Rex C., Messerschmidt, and Nicoletti. 3,388,911.
- Metalcraft Corp.: *See*—
  - Spertus, Maurice. 3,388,491.
- Meyer, George E.: *See*—
  - Tillisch, Paul W., Meyer, and Papalia. 3,388,521.
- Meyer-Simon, Eugen: *See*—
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  - Nametz, Richard C., and Todd. 3,388,969.
- Michigan-Dynamics, Inc.: *See*—
  - Whiting, James C. 3,388,682.
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  - Burke, Hubert K., and Michon. 3,389,383.
- Mickiewicz, Edward S.: *See*—
  - Fellner, Phillip J., and Mickiewicz. 3,388,524.
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  - Simandl, Ned W., and Yakich. 3,388,789.
- Mimura, Hiroshi: *See*—
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  - Collier, Samuel L. 3,388,636.
- Mitchell, Donald R., to American Radiator & Standard Sanitary Corp. Pressure gage. 3,388,599, 6–18–68, Cl. 73—418.
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  - Hara, Torakichi, Hirota, and Onoshima. 3,388,587.
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  - Koga, Shiro, and Miyagawa. 3,388,547.
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  - Akashi, Goro, Miyake, and Fujiyama. 3,389,014.
- Miyamura, Yoshinobu: *See*—
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- Mizuhara, Kunizo: *See*—
  - Kinoshita, Shukuo, Kawamori, Mizuhara, Miyamura, and Suzuki. 3,389,058.
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  - Manning, William F. 3,388,556.
  - Offenbauer. Robert D. 3,389.123.
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  - Waller, James R., Jr. 3,389,390.
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- Monfort, Platt. Wood treatment and adhesive bonding and sealing technique. 3.389.037, 6–18–68, Cl. 156—305.
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  - Halpern, Bert, and Raper. 3,389,143.
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  - Hirsy, John W. 3.389,168.
  - Lavin, Edward, and Mont. 3,389,047.
  - Ratts, Kenneth W. 3,389,165.
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- Morgan Construction Co.: *See*—
  - Wykes, Robert D. 3,388,578.
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  - Bartlett, Jeffrey H., Morway, and Livingston. 3.389,084.
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  - Weinrotter, Ferdinand, Muller, Schmidt, Bohler, Schweighofer, and Krulla. 3,388,533.
- Mullins Mfg. Corp.: *See*—
  - Ullman, Myron E., Jr. 3,389,033.
- Muntz Stereo-Pak, Inc.: *See*—
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  - Ernestus, Adolph W. 3,388,576.
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  - Watson. William R., and Anderson. 3,388.868.
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  - Dryden. Hugh L. 3.388,590.
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- National Dairy Products Corp.: *See*—
  - Hellem, Robert P. 3,388,788.
- National Gypsum Co.: *See*—
  - Bieri, David, and Cola. 3,389,042.
- National Lead Co.: *See*—
  - Love, Frank E. 3,389,062.
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  - Jones, Glyn F., and Hoffman. 3,389,384.
  - Sayce, Leonard A. 3,388,735.
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  - Lovett, Richard E. 3,388,448.
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  - Herrick, Philip E., and Nicol. 3,389,280.
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  - Kok, Pieter W. 3,389,253.
  - Le Poole. Jan B. 3,389,252.
  - Schoen. Hermann, and Rietveld. 3,389,222.
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  - Gleim, William K. T., and O'Hara. 3,389,077.
- Ohara, Osamu: *See*—
  - Takahashi, Hideo, Emoto, Imoto, Ohara, and Masuda. 3,389,286.
- Ohio Brass Co., The: *See*—
  - Smothers, William J. 3,389,214.
- Oklahoma State University of Agriculture & Applied Science: *See*—
  - Caywood, James A., De Moss, Fitch, and Osborn. 3,388,721.
- Okuna, Yoshihiro, to Kabushika Kaisha Daikin Seisakusho. Apparatus for measuring minute velocity fluctuations. 3,389,266, 6–18–68, Cl. 250—231.
- Oldweiler, Morey E., to Esso Research and Engineering Co. Fluid solids transport. 3,389,076, 6–18–68, Cl. 207—127.
- Olenberg, Harry: *See*—
  - Russell, Joseph L., and Olenberg. 3,389,173.
- Oles, Joseph F., to White Consolidated Industries Inc. Dry cleaning apparatus. 3,388,567, 6–18–68, Cl. 68—18.
- Olin Mathieson Chemical Corp.: *See*—
  - Hyde, Gene A., and Boudakian. 3,388,970.
- Olofsson, Hans K., and S. I. Trulsson, to Atlas Copco Aktiebolag. Thrust balancing in rotary machines. 3,388,854, 6–18–68, Cl. 230—143.
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- Onoshima, Yoshio: *See*—
  - Hara, Torakichi, Hirota, and Onoshima. 3,388,587.
- Ooka, Takayuki: *See*—
  - Nagashima, Shinichi, Coda, Gondou, Ooka, Mimura, Fujishima, Sugino, and Yano. 3,388,988.
- Opfer, Waldo V., Jr.: *See*—
  - Peterson, John M., and Opfer. 3,388,878.
- Orland, Robert J.: *See*—
  - Poker, John M., Barbee, Lawrence, and Orland. 3,388,928.
- O'Rourke, Thomas E., Jr.: *See*—
  - Webb, James E., and O'Rourke. 3,389,017.
- Orton, George Sons and Spooner Ltd.: *See*—
  - Mothershaw, Harold G. 3,388,785.
- Osborn, Oliver: *See*—
  - Olstowski, Franciszek, Watson, and Osborn. 3,389,200.
  - Vaught, Leonard M., Newport, and Osborn. 3,389,073.
- Osborn, Ronald F.: *See*—
  - Caywood, James A., De Moss, Fitch, and Osborn. 3,388,721.
- Osterresichische Stickstoffwerke Aktiengesellschaft: *See*—
  - Weinrotter, Ferdinand, Muller, Schmidt, Bohler, and Schweighofer. 3,388,533.
- Otto, Robert E., and H. C. Brinkman, Jr., said Brinkman assor. to said Otto. Shaker-type dispensing package. 3,388,836, 6–18–68, Cl. 222—107.
- Ouchi, Koji: *See*—
  - Kubota, Yasuharu, Ouchi, and Koyama. 3,389,339.
- Owens-Corning Fiberglas Corp.: *See*—
  - Benson, Gustav. 3,388,444.
- Owens-Illinois, Inc.: *See*—
  - Bayer, John W., and Grinonneau. 3,389,128.
  - Burzynski, Alfred J., and Martin. 3,389,114.
  - Burzynski, Alfred J., and Martin. 3,389,121.
  - Flynn, Robert A., and Plymale. 3,389,197.
  - Vogelpohl, Roland L. 3,388,822.
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- Pacific Plantronics, Inc.: *See*—
  - Wilson, Donald R. 3,388,767.
- Packard, Roger E., to Burroughs Corp. Micro-program operated multiple addressed memory. 3,389,376, 6–18–68, Cl. 340—172.5.
- Paliyenko, Paul: *See*—
  - Macleod, Roderick B., and Paliyenko. 3,389,207.
- Pan American Tung Research and Development League: *See*—
  - Austin, Richmond O., and Schmidt. 3,389,104.
- Panelfab Products, Inc.: *See*—
  - Archinal, William F., and Brazener. 3,388,514.
- Pantasote Co. of New York, Inc., The: *See*—
  - Thanhauser, Albert S., and Weiss. 3,388,827.
- Papalia, Rocco: *See*—
  - Tillisch, Paul W., Meyer, and Papalia. 3,388,521.
- Papillon, Yves: *See*—
  - Bensussan, Andre M., and Papillon. 3,389,289.
- Paragamian, Vasken: *See*—
  - Mohrbacher, Richard J., and Paragamian. 3,389,144.
- Park-Ohio Industries, Inc.: *See*—
  - Shaw, Robert L. 3,389,238.
- Parker, Eugene F. Roping saddle horn assembly. 3,388,530, 6–18–68, Cl. 54—44.
- Parker-Hannifin Corp.: *See*—
  - Madland, Rolf A. 3,388,634.
- Parker Metal Goods Co.: *See*—
  - Larson, Robert L. 3,388,626.
- Parr, Edward L., to Wendell L. Thompson. Four-way valve. 3,388,720, 6–18–68, Cl. 137—625.48.
- Parrent, George B., Jr., to Technical Operations, Inc. Photographic processing control. 3,388,652, 6–18–68, Cl. 95—59.
- Parrott, Delbert R., to United Aircraft Products, Inc. Recirculated air cooling apparatus. 3,388,561, 6–18–68, Cl. 62—467.
- Pasch, Theodore: *See*—
  - Marsh, Francis X., and Pasch. 3,388,772.
- Pasteka, Josef: *See*—
  - Merges, Herbert A., and Pasteka. 3,389,203.
- Patrick, Lewis D. Adjustable milking claw support for teat cups. 3,388,689, 6–18–68, Cl. 119—14.13.
- Patti, Michael J.: *See*—
  - Hilsenrath, Manfred, Meehan, Patti, and Squarzini. 3,389,336.
- Peabody, Earl P., to General Electric Co. Electrostatic loudspeaker. 3,389,226, 6–18–68, Cl. 179—111.
- Pederson, Carl N.: *See*—
  - Neiswinter, James T., and Pederson. 3,389,223.
- Peek, Raymond. Trenching apparatus. 3,388,487, 6–18–68, Cl. 37—90.
- Penn Controls, Inc.: *See*—
  - Lewis, Dwight C. 3,389,314.
- Perkin-Elmer Corp., The: *See*—
  - Robertson, Hugh J. 3,389,274.
- Permutit Co. Ltd., The: *See*—
  - Arden, Thomas V. 3,389,080.
- Perry, Robert P., to White Consolidated Industries, Inc. Air conditioner closure panel. 3,388,520, 6–18–68, Cl. 52—511.
- Peschon, John, to Stanford Research Institute. Dynamic optimizer. 3,389,243, 6–18–68, Cl. 235—150.1.
- Petersen, James M.: *See*—
  - Reed, David D., Moroz, and Petersen. 3,389,086.
- Peterson, Francis C. Cabinet door latch. 3,388,938, 6–18–68, Cl. 292—177.
- Peterson, Hal D., J. L. Drobnick, and S. B. Smith, to West Virginia Pulp and Paper Co. Method of separating metal chlorides. 3,388,993, 6–18–68, Cl. 75—68.
- Peterson, John M., and W. V. Opfer, Jr., to The Ryan Aeronautical Co. VTOL aircraft with balanced power, retractible lift fan system. 3,388,878, 6–18–68, Cl. 244—23.
- Petrow, Vladimir: *See*—
  - Burn, Derek, and Petrow. 3,389,154.
- Pettibone Mulliken Corp.: *See*—
  - Herman, Donald E., Hanse, and Viñan. 3,388,797.
- Peuschel, Gerd K., to Kali-Chemie Aktiengesellschaft. Electrostatic separation process and conditioning compositions therefor. 3,388,794, 6–18–68, Cl. 209—9.
- Peyto, William K.: *See*—
  - Woods, Geoffrey, and Peyto. 3,388,749.
- Philadelphia Handle Co., Inc.: *See*—
  - Szabo, Marton. 3,388,416.
- Philco-Ford Corp.: *See*—
  - Wood, Richard F. 3,388,764.
- Phillips, John J., to Gray & Huleguard. Electromechanical actuator package. 3,388,933, 6–18–68, Cl. 287—1.
- Phillips Petroleum Co.: *See*—
  - Busler, William R., and Hsieh. 3,389,093.
  - Childers, Clifford W. 3,389,115.
  - Detter, Clyde V. 3,388,425.
  - Engle, Charles J., and Santourian. 3,388,743.
  - James, Rodney A. 3,389,179.
  - Oaks, Jerald L. 3,388,742.
  - Pollock, Lyle W. 3,389,130.
  - Simpson, Billy D. 3,389,106.
  - Turk, Stanley D., Schnitzer, and Simpson. 3,389,090.
- Phillips, Rex S., to Comalco Industries Pty. Ltd. Method of forming metal sheets into shapes involving compound curvatures, and metal sheets so formed. 3,388,446, 6–18–68, Cl. 29—155.
- Pickard, Edgar C. Sulky. 3,388,921, 6–18–68, Cl. 280—63.
- Pierce, George, to Rapaport Brothers, Inc. Jumping shoes. 3,388,485, 6–18–68, Cl. 36—7.8.
- Pietrzyk, Johannes P., to Westinghouse Electric Corp. Broadband discharge devices of the transmission line type. 3,389,295, 6–8–68, Cl. 315—39.3.
- Pioneer Electric and Research Corp., The: *See*—
  - Neiswinter, James T., and Pederson. 3,389,223.
- Pisano, Frank T., and J. H. Daniels, to United States of America, Army. Electronically time delayed cutter. 3,388,879, 6–18–68, Cl. 244—152.
- Pittsburgh Plate Glass Co.: *See*—
  - Foster, Homer R. 3,388,980.
  - Foster, Homer R. 3,388,982.
  - Richardson, Ronald E. 3,388,983.
  - Sieger, John S. 3,388,981.
  - Sieger, John S., and Cox. 3,388,508.
  - Umbel, Forrest K. 3,388,843.

- Plamper, Gerhard R. and G. F., to The M. T. & D. Co. Self-propelled mower. 3,388,759, 6–18–68, Cl. 180—19.
- Plamper, Gunter F.: *See*—
  - Plamper, Gerhard R. and G. F. 3,388,759.
- Plasser, Franz, and J. Theurer. Apparatus for lifting a track rail. 3,388,672, 6–18–68, Cl. 104—7.
- Plastic Contact Lens Co., The: *See*—
  - Hamm, Homer A. 3,389,012.
- Platt, Clark I.: *See*—
  - Cobb, Clifton A., Platt, and Salisbury. 3,388,570.
- Plymale, Charles E.: *See*—
  - Flynn, Robert A., and Plymale. 3,389,197.
- Pneumatic Scale Corp.: *See*—
  - Scully, John W. 3,388,845.
- Poker, John M., G. G. Barbee, D. M. Lawrence, and R. J. Orland, to Caterpillar Tractor Co. Rail car coupler for tractors. 3,388,928, 6–18–68, Cl. 280—456.
- Polaroid Corp.: *See*—
  - Dietz, Milton S. 3,388,649.
  - Sullivan, Robert T. 3,388,645.
  - Sullivan, Robert T. 3,388,646.
  - Young, Richard W. 3,388,994.
- Pollard, Mabel: *See*—
  - Wyman, Le Roy L., Sr., Everts, and Pollard. 3,388,663.
- Pollard, Rolla E.: *See*—
  - Wyman, Le Roy L., Sr., Everts, and Pollard. 3,388,663.
- Pollock, Lyle W., to Phillips Petroleum Co. Bulk polymerization of butadiene and recovery of product. 3,389,130, 6–18–68, Cl. 260—94.3.
- Polster, Norman E.: *See*—
  - Lex, Rowland G., Jr., Mergner, Polster, and Williams. 3,389,397.
- Polyliner Corp.: *See*—
  - Giannella, Harris. 3,388,640.
- Pons, Henry W.: *See*—
  - Dressler, Hans, and Pons. 3,389,132.
- Posen, Lawrence and S., to Beltone Electronics Corp. Hearing aid and ear mold assembly. 3,389,232, 6–18–68, Cl. 179—107.
- Posen, Sam: *See*—
  - Posen, Lawrence and S. 3,389,232.
- Potter Instrument Co., Inc.: *See*—
  - Higgins, Leonard J. 3,388,846.
- Prahl, Walter H., J. P. Eggert, S. J. Lederman, E. H. Scremin, and A. C. Ullrich, to Hooker Chemical Corp. Benzene oxychlorination. 3,389,186, 6–18–68, Cl. 260—650.
- Pratt & Whitney Inc.: *See*—
  - Raber, Carles F., Jr., and Nowak. 3,389,319.
- Presley, Ned H., Jr. Tube bending method and machine. 3,388,573, 6–18–68, Cl. 72—7.
- Pretty, Arthur J., to General Precision Systems Inc. Circuit board. 3,388,464, 6–18–68, Cl. 29—627.
- Prewitt, Thomas A., to General Motors Corp. System for maintaining an electric motor at a predetermined speed. 3,389,317, 6–18–68, Cl. 318—325.
- Price, Richard D., to Hascolube Research & Mfg. Corp. Apparatus for greasing baking pans. 3,388,685, 6–18–68, Cl. 118—2.
- Prins, Daniel A.: *See*—
  - Adank, Kurt, and Prins. 3,389,177.
- Pritchett, William C.: *See*—
  - Reed, Dale H., Dunlap, and Pritchett. 3,389,258.
- Procter & Gamble Co., The: *See*—
  - Harm, Alson R., and Gex. 3,388,526.
  - Hays, Hugh R. 3,389,183.
- Professional Bionics, Inc.: *See*—
  - Webb, Marvin W., and Yoder. 3,388,699.
- Przybylski, Daniel F., to The Warner & Swasey Co. Material handling machine. 3,388,819, 6–18–68, Cl. 214—138.
- Puhringer, Othmar, and R. Spannlang, to Vereinigte Osterreichische Eisen- und Stahlwerke. Apparatus for removing and installing crucible or converter bottoms. 3,388,501, 6–18–68, Cl. 49—324.
- Purdue Research Foundation: *See*—
  - Waling, Joseph L. 3,389,202.
- Pyle, Val R., and R. A. Conrad. Brake pedal linkage. 3,388,610, 6–18–68, Cl. 74—512.
- Quantum, Inc.: *See*—
  - Gladstone, Harold M., La Flamme, Reihsmann, and Schoen. 3,389,098.
- Questad, Larry R.: *See*—
  - Bardsley, George P., Questad, Mason, Sondeno, and Smith. 3,388,926.
- Quinn, Clark E., to General Motors Corp. Vehicle brake lining wear indicating device. 3,388,773, 6–18–68, Cl. 188—1.
- Quirk, Edward J., and W. W. Finch, to Transformer Engineers, Inc. Constant output voltage transformer. 3,389,329, 6–18–68, Cl. 323—45.
- Raber, Carles F., Jr., and E. F. Nowak, to Pratt & Whitney Inc. Motor speed control system. 3,389,319, 6–18–68, Cl. 318—345.
- Rabusin, Elio: *See*—
  - Della Porta, Paolo, Giorgi, and Rabusin. 3,388,955.
  - Della Porta, Paolo, Giorgi, and Rabusin. 3,389,288.
- Rackley, Carle E., to Westinghouse Electric Corp. Shield support for a luminaire. 3,389,249, 6–18–68, Cl. 240—147.
- Radek, John R., to Ready Metal Mfg. Co. Collapsible display tray. 3,388,808, 6–18–68, Cl. 211—132.
- Radiation Inc.: *See*—
  - Lewis, Bernard L. 3,389,394.
- Rainbault, Pierre, J. Goupil, and Y. Marque, to Commissariat a l'Energie Atomique. Equipment for measuring radioactivity as discharged in the form of effluents. 3,389,251, 6–18–68, Cl. 250—43.5.
- Raleigh Industries, Ltd.: *See*—
  - Oakley, Alan P., and Gordon. 3,388,612.
- Ram, Inc.: *See*—
  - Blackburn, Andrew R., and Kendall. 3,389,001.
- Ramaradhya, Jakkanahally M., to Cominco Ltd. Phosphoric acid purification. 3,388,967, 6–18–68, Cl. 23—165.
- Ramsden, Hugh E., to Esso Research and Engineering Co. Group IV–A organometallic complexes of predominantly tetranuclear aromatic catalytic cycle oil stock extracts. 3,389,157, 6–18–68, Cl. 260—429.
- Randomatic Data Systems, Inc.: *See*—
  - Cross, Laurence A., Jr. 3,389,242.
- Ranger, Dee B.: *See*—
  - Reisterer, Lawrence B., Ranger, and Weber. 3,388,731.
- Rapaport Bros., Inc.: *See*—
  - Pierce, George. 3,388,485.
- Raper, William G. C.: *See*—
  - Halpern, Bert, and Raper. 3,389,143.
- Rapidograph, Inc.: *See*—
  - Wieland, Franz, and Ciol. 3,388,455.
- Ratledge, Edward L., to Sun Oil Co. Method of reducing plant transpiration. 3,388,992, 6–18–68, Cl. 71—127.
- Ratts, Kenneth W., to Monsanto Co. Process of producing β-arylamino cinnamoyl compounds. 3,389,165, 6–18–68, Cl. 260—471.
- Rau, John C., to General Motors Corp. Vent assembly. 3,388,714, 6–18–68, Cl. 137—202.
- Ravreby, Fred A., to L. J. Gross. Hand-stamp kit with detachable stamp handle. 3,388,662, 6–18–68, Cl. 101—405.
- Ray Chaudhuri, Dilip K.: *See*—
  - Stockmann, Hans H., and Ray Chaudhuri. 3,388,996.
- Raymond Corp., The: *See*—
  - Gilbert, Hiram G. 3,389,325.
- Raymond, David G.: *See*—
  - Born, Ellis H., Raymond, Smith, and Thurston. 3,388,890.
- Raymond, W. S.: *See*—
  - Muckelrath, Ernest R. 3,388,691.
  - Muckelrath, Ernest R. 3,388,697.
- Rayno, Glenn D., to General Electric Co. Sealed capacitor and method of sealing thereof. 3,389,311, 6–18–68, Cl. 317—256.
- Rayonier Inc.: *See*—
  - Gartner, Frank. 3,388,784.
- Reabe, Kenneth G.: *See*—
  - Dressler, Hans, and Reabe. 3,389,004.
  - Dressler, Hans, and Reabe. 3,389,099.
- Ready Metal Mfg. Co.: *See*—
  - Radek, John R. 3,388,808.
- Redman, Derek H., to Hancock & Co. (Engineers) Ltd. Plural motor plural photoelectric line follower oxygen jet cutting machines. 3,389,312, 6–18–68, Cl. 318—19.
- Reed, Dale H., H. F. Dunlap, and W. C. Pritchett, to Atlantic Co. Shielding array for chlorine logging sonde utilizing neutron and gamma ray shielding elements. 3,389,258, 6–18–68, Cl. 250—108.
- Reed, David D., E. Moroz, and J. M. Petersen, to Texaco, Inc. Product of reaction of an epoxy resin with a hydrolyzed polyolefin-P_2S_5 amine reaction product and lubricating oil containing same. 3,389,086, 6–18–68, Cl. 252—46.7.
- Reeves Bros., Inc.: *See*—
  - Watson, Charles V. 3,389,035.
- Regie Nationale des Usines Renault: *See*—
  - De Coye de Castelet, Gaetan. 3,388,614.
- Reichard, Robert E., to The Bendix Corp. Automotive cruise control. 3,388,763, 6–18–68, Cl. 180—108.
- Reid, Wallace G., to Union Carbide Corp. Dialkylamino hydroxy organosilicon compounds and derivatives thereof. 3,389,160, 6–18–68, Cl. 260—448.2.
- Reifers, Richard F., to Diamond International Corp. Latch means for cartons. 3,388,852, 6–18–68, Cl. 229—45.
- Reihsmann, Robert M.: *See*—
  - Gladstone, Harold M., La Flamme, Reihsmann, and Schoen. 3,389,098.
- Reiners, Walter: *See*—
  - Kupper, Wilhelm. 3,388,872.
- Reisterer, Lawrence B., D. B. Ranger, and A. E. Weber, to Libby, McNeill & Libby. Fruit stem removal. 3,388,731, 6–18–68, Cl. 146—238.
- Reitmeier, Ronald E., and H. W. Fleming, to Catalysts & Chemicals, Inc. Low temperature shift reaction catalysts and methods for their preparation. 3,388,972, 6–18–68, Cl. 23—213.
- Renckhoff, Gustav, and H.-L. Hülsmann, to Chemische Werke Witten G.m.b.H. Process for the preparation of aryl esters of carbocyclic carboxylic acids. 3,389,164, 6–18–68, Cl. 260—468.
- Rentzepis, Peter M.: *See*—
  - Giordmaine, Joseph A., and Rentzepis. 3,389,269.
- Republic Lead Equipment Co.: *See*—
  - Leiblinger, Clarence F. 3,388,453.
- Rexall Drug and Chemical Co.: *See*—
  - Marchant, Paul A. 3,388,838.
  - McHardy, Kenneth R., and Marchant. 3,388,841.
- Reynolds, Rollin A., to Dyna Systems Inc. Method of and means for controlling the removal of material with a cutting tool. 3,389,313, 6–18–68, Cl. 318—39.
- Rhine, Jules W.: *See*—
  - Matthews, Benjamin H., and Rhine. 3,389,365.
- Rice, Hal H., and R. B. Bennett, to General Motors Corp. High temperature alumina-to-niobium article. 3,389,215, 6–18–68, Cl. 174—152.
- Richardson-Merrell S.p.A.: *See*—
  - Larizza, Angelo, and Brancaccio. 3,389,188.
- Richardson, Randel E. Wire winding device. 3,388,725, 6–18–68, Cl. 140—93.
- Richardson, Ronald E., to Pittsburgh Plate Glass Co. Press bending mould having modified recesses for the glass sheet engaging means. 3,388,983, 6–18–68, Cl. 65—286.

- Richer: *See—*
  - Durand, Pierre. 3,388,810.
- Rietveld, Jan J.: *See—*
  - Schoen, Hermann, and Rietveld. 3,389,222.
- Riley, Robert H., Jr., R. F. Koen, H. A. Ziegler, and A. E. Holmes; said Holmes assor. to Martin-Marietta Corp., and said Riley, Koen, and Ziegler assors. to The Black and Decker Mfg. Co. Portable power tools. 3,388,728, 6–18–68, Cl. 143—68.
- Risse, Heinrich: *See—*
  - Thesing, Georg, and Risse. 3,388,525.
- Ritter, Oran A.: *See—*
  - Kottong, Gerald W., and Ritter. 3,389,161.
- Ritter Pfaudler Corp.: *See—*
  - Bange, Glenn R., and Young. 3,388,447.
- Roberson, Virgel O., Jr., to United Merchants and Manufacturers, Inc. Process for producing novelty yarns. 3,388,433, 6–18–68, Cl. 19—145.5.
- Roberts, Leroy S., to The B. F. Goodrich Co. Tire piercing apparatus. 3,388,796, 6–18–68, Cl. 209—82.
- Roberts, Raymond J., and G. Hoyle, to Consarc Corp. Consumable electrode furnace for electroslag refining. 3,389,208, 6–18–68, Cl. 13—9.
- Roberts, William J.: *See—*
  - Jamison, Saunders E., and Roberts. 3,389,205.
- Robertshaw Controls Co.: *See—*
  - Forbes, James A. 3,389,340.
  - Holmes, Ronald W. 3,388,885.
  - Kelly, Samuel T. 3,388,717.
  - Manecke, Siegfried E. 3,389,361.
  - Shopsky, Harvey J. 3,388,602.
  - Willson, James R. 3,388,865.
- Robertson, Hugh J., to The Perkin-Elmer Corp. Peristaltic actuator. 3,389,274, 6–18–68, Cl. 310—8.
- Robison, Charles D., Jr. Press feeding apparatus. 3,389,038, 6–18–68, Cl. 156—361.
- Roby, Alfred B., to General Motors Corp. Multiple speed motor and multiple coil starting control. 3,389,316, 6–18–68, Cl. 318—221.
- Roccheggiani, Guido: *See—*
  - Smith, Morris L., Roccheggiani, and Faessinger. 3,389,108.
- Rockstroh, Horst: *See—*
  - Thiele, Heinz, and Rockstroh. 3,388,648.
- Rockwell Mfg. Co.: *See—*
  - Last, Bernard, and Anderson. 3,388,595.
- Rohm & Haas Co.: *See—*
  - Merritt, Richard F. 3,389,181.
  - Merritt, Richard F. 3,389,182.
- Rolfes, Paul E.: *See—*
  - Jamieson, Robert S., and Rolfes. 3,389,268.
- Rolon, Arnaldo: *See—*
  - Cottingham, Jerry M., and Rolon. 3,389,403.
- Roper, Daniel W. Drive differential with two-way overrunning clutch and temperature compensating operator. 3,388,779, 6–18–68, Cl. 192—44.
- Rosaen, Borje O.: *See—*
  - Rosaen, Nils O., B. O. and O. E. 3,389,031.
- Rosaen, Nils O., B. O. and O. E.; said O. E. Rosaen, assor., to said B. O. and N. O. Rosaen. Method of manufacturing pleated filters. 3,389,031, 6–18–68, Cl. 156—74.
- Rosaen, Oscar E.: *See—*
  - Rosaen, Nils O., B. O. and O. E. 3,389,031.
- Rosen, Florence. Auxiliary child's safety seat for vehicles. 3,388,947, 6–18–68, Cl. 297—250.
- Rosen, Harold: *See—*
  - Kelly, Russell J., Shirley, and Rosen. 3,388,664.
- Rosenbaum, Robert. Film rewind for motion picture projector. 3,388,873, 6–18–68, Cl. 242—55.21.
- Rosengren, Herbert. Safety razor with a disposable cassette head. 3,388,466, 6–18–68, Cl. 30—40.
- Rosenthal, Ben J., to H. Rosenthal. Film-like sheet material feeding and cutting device. 3,388,623, 6–18–68, Cl. 83—98.
- Rosenthal, Harry: *See—*
  - Rosenthal, Ben J. 3,388,623.
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- Schmid, Otto, Jr.: *See—*
  - Sanner, George E., and Schmid. 3,389,350.
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  - Weinrotter, Ferdinand, Muller, Schmidt, Bohler, Schweighofer, and Krulla. 3,388,533.
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- Schweighofer, Johann: *See—*
  - Weinrotter, Ferdinand, Muller, Schmidt, Bohler, Schweighofer, and Krulla. 3,388,533.
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  - Gros, Hermann, and Schweizer. 3,388,684.
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  - Cannon, Cyril G., Davies, Selwood, and Williams. 3,388,645.
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  - Miller, Robert P., and Shaw. 3,389,302.
  - Shaw, Walter H. 3,389,224.
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  - Jones, William H., Shedrick, and Lapreziosa. 3,389,045.
- Shemitz, Sylvan R. Illuminated wall partition divider. 3,389,246, 6–18–68, Cl. 240—2.
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  - Cummings, Howard B. 3,388,658.
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  - Tomkins, David E. 3,388,439.
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  - Ogren, Axel E., and Willis. 3,388,893.
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  - Varel, Daniel W., Bronson, and Shields. 3,388,756.
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  - Takizawa, Tatsuji, Shimiya, and Kaji. 3,389,256.
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- Shirley, Charles L., Jr.: *See—*
  - Kelly, Russell J., Shirley, and Rosen. 3,388,664.
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  - Kafka, Wilhelm, and Kullmann. 3,389,353.
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  - Youmans, Albert P., and Greig. 3,388,848.
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- Simonds Saw and Steel Co.: *See—*
  - Evancic, Ernest A., and Campbell. 3,388,618.
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- Simpson, Billy D.: *See—*
  - Turk, Stanley D., Schnitzer, and Simpson. 3,389,090.
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  - Jarvi, Reino A. 3,389,101.
- Sinclair Research, Inc.: *See—*
  - Sanford, Robert A., Johnson, and Williams. 3,389,092.

- Singer Co., The: *See*—
  - Fritts, Russell A., and Ketterer. 3,388,680.
  - Mishcon, Lester. 3,388,565.
  - Mischon, Sam. 3,388,563.
- Singleton, Theodore: *See*—
  - Syford, Earl. 3,388,856.
- Sinnott, Daniel: *See*—
  - Schmidt, James L., and Sinnott. 3,389,306.
- Siwko, Eric I., to Fenwal Inc. Arc suppressing circuit. 3,389,301, 6–18–68, Cl. 317—11.
- Skinner, Robert L.: *See*—
  - Westrom, Alfred, Fischer, Skinner, Zilkowski, and Sanders. 3,388,582.
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- Slavin, Michael, to The Bendix Corp. Simplified band switching for FM-AM receiver. 3,389,338, 6–18–68, Cl. 325—316.
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  - Bardsley, George P., Questad, Mason, Sondeno, and Smith. 3,388,926.
- Smith, Edward C., and H. P. Graham. Roof structure. 3,388,510, 6–18–68, Cl. 52—15.
- Smith, Elwin G., & Co., Inc.: *See*—
  - Scott, Harley D. 3,388,518.
- Smith, Gary C.: *See*—
  - Born, Ellis H., Raymond, Smith, and Thurston. 3,388,890.
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  - Fittinger, Joseph W. 3,388,757.
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- Smith Kline & French Laboratories: *See*—
  - Kerwin, James F. 3,389,180.
  - Loev, Bernard. 3,389,166.
- Smith, Morris L., G. Roccheggiani, and R. W. Faessinger, to Scott Paper Co. Printing fluid comprising an aqueous solution of a water-soluble dye and a thermosetting vinylsulfonium polymer. 3,389,108, 6–18–68, Cl. 260—29.6.
- Smith, Richard W.: *See*—
  - Chapman, Charles S., Jr., Craig, Gage, and Smith. 3,388,934.
- Smith, Stanton B.: *See*—
  - Peterson, Hal D., Drobnick, and Smith. 3,388,993.
- Smiths Industries, Ltd.: *See*—
  - Halliday, William, and Haslett. 3,389,372.
- Smits, Marius: *See*—
  - Laubmeyer, Gunther, and Smits. 3,388,850.
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  - Bernaux, Henri G. 3,388,751.
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  - Ferrand, Jean G. 3,388,430.
- Societe Bertin & Cie: *See*—
  - Bertin, Jean H. 3,388,766.
- Societe d'Etude de la Propulsion par Reaction: *See*—
  - Tubeuf, Jean. 3,388,826.
- Sohnchen, Ernst: *See*—
  - Von Grunberg, Karl F., and Sohnchen. 3,388,927.
- Solar Thomson Engineering Co. Ltd.: *See*—
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  - Kihara, Nobutoshi. 3,389,217.
  - Kubota, Yasuharu, Ouchi, and Koyama. 3,389,339.
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- Spannlang, Ronald: *See*—
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- Speedlap Corp.: *See*—
  - Boettcher, Stephen A. 3,388,506.
- Spee-Flo Mfg., The: *See*—
  - Levey, Gustave S. 3,388,866.
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  - Andersen, Niels C., and Barmeier. 3,389,309.
  - Ashbaugh, James P., Borgstrom, and Tollefson. 3,389,380.
  - Engstrom, John A., and Weber. 3,389,398.
  - Erickson, Gerald J., and Tollefson. 3,389,379.
  - Hoyt, Harold C., Jr. 3,389,318.
  - Lins, Stanley J. 3,388,461.
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  - Day, Lawrence. 3,388,504.
- Spolarich, George T.: *See*—
  - Buckwalter, David J., Mukavitz, and Spolarich. 3,388,737.
- Sprude, Edgar O.: *See*—
  - Haentze, Charles B., and Sprude. 3,389,385.
- Squarzini, Joseph, Jr.: *See*—
  - Hilsenrath, Manfred, Meehan, Patti, and Squarzini. 3,389,336.
- Squibb, E. R., & Sons, Inc.: *See*—
  - Krakower, Gerald W. 3,389,150.
  - Levine, Seymour D., and Diassi. 3,389,169.
- Staar, Marcel J. H., to Usines Gustave Staar Societe Anonyme. Cassette for storing sound support tape. 3,388,632, 6–18–68, Cl. 88—28.
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  - Bushnell, Collins E., Jr., Long, and Stadden. 3,389,199.
- Staesche, Marie: *See*—
  - Berghaus, Bernhard, and Staesche. 3,389,070.
- Stahl, Filip T.: *See*—
  - Dahlgren, Jens K. A., and Stahl. 3,388,914.
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  - Stahl, Joel S. 3,389,196.
- Stahl, Joel S., to Stahl Industries, Inc. Method of making an insulated core building panel. 3,389,196, 6–18–68, Cl. 264—45.
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- Stallard, Ralph M.: *See*—
  - Kevelin, Bruce E., and Stallard. 3,388,945.
- Stal-Laval Turbin AB: *See*—
  - Jung, Ingvar K. E. 3,388,748.
- Stamicarbon N.V.: *See*—
  - Garristen, Johan W., and Bigot. 3,389,134.
- Stanford Research Institute: *See*—
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- Stanley, Robert K., to Techniservice Corp. Strand windup treatment apparatus. 3,388,440, 6–18–68, Cl. 28—1.
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- Stanton, Walter H.: *See*—
  - Bolles, William L., Chappell, and Stanton. 3,388,531.
- Stauffer, Reuben L., R. J. Bottorf, and R. L. Lewis, to The Bendix Corp. Integrity monitor ILS navigation receiver. 3,389,392, 6–18–68, Cl. 343—108.
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  - Easter, Charles G., and Dove. 3,389,021.
- Stelzer, William, to Kelsey-Hayes Co. Brake pressure proportioning and metering valve. 3,388,950, 6–18–68, Cl. 303—6.
- Sternbach, Leo H.: *See*—
  - Berger, Leo, and Sternbach. 3,389,176.
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- Stichnote, Herbert: *See*—
  - Walter, Herbert, Stichnote, and Nilius. 3,389,300.
- Stöber, Paul and W. Friction wheel transmission. 3,388,607, 6–18–68, Cl. 74—191.
- Stöber, Wilhelm: *See*—
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  - Strandberg, Arne. 3,389,072.
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- Sturtevant Industries, Inc.: *See*—
  - Fellner, Phillip J., and Mickiewicz. 3,388,524.
- Sugino, Kazuo: *See*—
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- Sumitomo Bakelite Co. Ltd.: *See*—
  - Yamaguchi, Tadashi, Murayama, and Nakamura. 3,389,126.
- Sunbeam Corp.: *See*—
  - Jepson, Ivar, Rossyk, and Stahly. 3,389,323.
- Sun Oil Co.: *See*—
  - Ratledge, Edward L. 3,388,992.
- Sutures, Inc.: *See*—
  - Kurtz, Leonard D. 3,388,704.
- Suzuki, Takeo: *See*—
  - Kinoshita, Shukuo, Kawamori, Misuhara, Miyamura, and Suzuki. 3,389,058.
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- Sylvania Electric Products, Inc.: *See*—
  - Haines, Frederick J. 3,389,273.
  - Haselton, Ernest F., Jr. 3,389,228.
- Syntex Corp.: *See*—
  - Fried, John H. 3,389,155.
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- Tamura, Takaaki: *See*—
  - Kunugi, Taiseki, and Tamura. 3,388,532.
- Tarbox, Philip B., to Maremont Corp. Drafting mechanism with intermeshing fluted rolls. 3,388,435, 6–18–68, Cl. 19—266.
- Taylor, John S., to Tifcon Co. Tobacco curing and drying apparatus. 3,388,900, 6–18–68, Cl. 263—19.
- Taylor, N. A., Co., Inc.: *See*—
  - Taylor, Willard H. 3,388,712.
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- Technical Marketing Associates, Inc.: *See*—
  - Rowell, William G. 3,389,386.
- Technical Operations, Inc.: *See*—
  - Parrent, George B., Jr. 3,388,652.
- Technicon Corp.: *See*—
  - Kling, Nelson G. 3,388,687.
- Techniservice Corp.: *See*—
  - Stanley, Robert K. 3,388,440.
- Teijin Ltd.: *See*—
  - Yamada, Noboru, Watanabe, and Yamanaka. 3,389,129.
- Tektronix, Inc.: *See*—
  - Mepham, Herbert J. 3,389,030.
- Telefonaktiebolaget Ericsson, L. M.: *See*—
  - Ahlberg, Curt F. 3,389,354.
- Telefunken Patentverwertungsgesellschaft m.b.H.: *See*—
  - Troost, Albert, Maass, Vogler, and Rottgers. 3,389,349.
- Tenenbaum, Nathaniel D., to Westinghouse Electric Corp. Controlling network. 3,389,303, 6–18–68, Cl. 317—22.
- Tension Envelope Corp.: *See*—
  - Berkley, Eugene B. 3,388,642.
- Teti, John E.: *See*—
  - Fischbach, Adolph, and Teti. 3,389,020.

- Tetzlaff, Clarence C., to Wittek Mfg. Co. Hose clamp with load distributing member. 3,388,438, 6–18–68, Cl. 24—278.
- Texaco, Inc.: *See*—
  - Estes, John H. 3,389,191.
  - Reed, David D., Moroz, and Petersen. 3,389,086.
- Textile Machine Works: *See*—
  - Sanders, Robert M. 3,388,564.
- Textron, Inc.: *See*—
  - Glowa, Michael. 3,388,631.
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- Thayer, Paul G.: *See*—
  - Ayling, Robert W., and Thayer. 3,388,855.
- Thesing, Georg, and H. Risse, to Holstein & Kappert, Maschinenfabrik Phonix G.m.b.H. Method and apparatus for forming and sealing a container. 3,388,525, 6–18–68, Cl. 53—39.
- Theurer, Josef: *See*—
  - Plasser, Franz, and Theurer. 3,388,672.
- Thiede, John: *See*—
  - Forman, Stanley F., and Thiede. 3,389,029.
- Thiele Kaolin Co.: *See*—
  - Barton, John S. 3,388,754.
- Thielen, Heinz G. W., to Linoleum Aktiebolaget Forshaga. Floor construction. 3,388,516, 6–18–68, Cl. 52—393.
- Thiele, Heinz, and H. Rockstroh, to Zeiss Ikon Aktiengesellschaft. Photographic camera with exposure meter or exposure control device. 3,388,648, 6–18–68, Cl. 95—11.
- Thomas, Donald E., to Bell Telephone Laboratories, Inc. Simultaneous photodector and electrical modulator. 3,389,341, 6–18–68, Cl. 329—144.
- Thompson, Robert C.: *See*—
  - Keeler, Miner S., II, and Thompson. 3,389,391.
- Thompson, Wendell L.: *See*—
  - Parr, Edward L. 3,388,720.
- Thompson, William C. Stress eliminator for partial dentures. 3,388,471, 6–18–68, Cl. 32—7.
- Thomson, Bernard, to International Standard Electric Corp. Grid electrode having a barrier layer of metal carbide and a surface coating of metal boride thereon. 3,389,285, 6–18–68, Cl. 313—107.
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- Thurston, David L.: *See*—
  - Born, Ellis H., Raymond, Smith, and Thurston. 3,388,890.
- Tifcon Co.: *See*—
  - Taylor, John S. 3,388,900.
- Tillisch, Paul W., G. E. Meyer, and R. Papalia, to Kaiser Gypsum Co., Inc. Construction. 3,388,521, 6–18–68, Cl. 52—573.
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- Tinnerman Products, Inc.: *See*—
  - Holton, Robert J. 3,388,732.
- Tobler, Erich: *See*—
  - Fields, Robert R., and Tobler. 3,389,178.
- Todd, John H.: *See*—
  - Nametz, Richard C., and Todd. 3,388,969.
- Toko Kabushiki Kaisha: *See*—
  - Nakamura, Katsuro. 3,389,378.
- Tollefson, Thomas C.: *See*—
  - Ashbaugh, James P., Borgstrom, and Tollefson. 3,389,380.
  - Erickson, Gerald J., and Tollefson. 3,389,379.
- Tomkins, David E., to Shenango China, Inc. Tunnel kiln. 3,388,439, 6–18–68, Cl. 25—142.
- Top Flite Models, Inc.: *See*—
  - Axelrod, Sidney. 3,388 651.
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- Totta, Paul A., to International Business Machines Corp. Interface resistance monitor. 3,388,457, 6–18–68, Cl. 29—574.
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- Toyo Boseki Kabushiki Kaisha: *See*—
  - Koga, Shiro, and Miyagawa. 3,388,547.
- Tracy, Herbert E., to Borg-Warner Corp. Mechanical seal. 3,388,913, 6–18–68, Cl. 277—32.
- Trane Co., The: *See*—
  - Modahl, Robert J., and Lynch. 3,388,557.
- Transformer Engineers, Inc.: *See*—
  - Quirk, Edward J., and Finch. 3,389,329.
- Treillou, Andre: *See*—
  - Accary, André, Treillou, and Trouvé. 3,388,736.
- Treillou, André: *See*—
  - Accary, André, Treillou, and Trouvé. 3,388,903.
- Tremco Mfg. Co., The: *See*—
  - Wohl, Sanford M., and Carter. 3,388,517.
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- Trident Industries, Inc.: *See*—
  - Bardwell, Allen E. 3,388,753.
- Tronnier, Ernst: *See*—
  - Eggert, Joachim, Tronnier, and Ueberhagen. 3,388,956.
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  - Accary, André, Treillou, and Trouvé. 3,388,736.
- Trouvé, Jean: *See*—
  - Accary, André, Treillou, and Trouvé. 3,388,903.

Trower, David L.: *See—*
Andreas, John C., and Trower. 3,389,315.
Trulson, Frederick J.: *See—*
Treppa, Thomas J., Trulson, and Allured. 3,389,239.
Trulsson, Sven I.: *See—*
Olofsson, Hans K., and Trulsson. 3,388,854.
Trzeba, Erich, H. H. Rudloff, and H. Deliga, to VEB fur Bauelemente der Nachrichtentechnik "Carl Von Ossietzky." Unsymmetrical electromechanical filters. 3,389,351, 6–18–68, Cl. 333—71.
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Tucker, Lynne. Package tethering device. 3,388,886, 6–18–68, Cl. 248—361.
Tuckmantel & Martin: *See—*
Martin, Werner. 3,388,467.
Tunashima, Shigeo: *See—*
Yoshioka, Toshio. 3,388,475.
Turk, Stanley D., A. M. Schnitzer, and B. D. Simpson, to Phillips Petroleum Co. Asphalt emulsions. 3,389,090, 6–18–68, Cl. 252—311.5.
Uberti, Gene. Tool tip sharpening device. 3,388,503, 6–18–68, Cl. 51—33.
Ueberhagen, Fritz: *See—*
Eggert, Joachim, Tronnier, and Ueberhagen. 3,388,956.
Ufer, Willy. Power knife. 3,388,470, 6–18–68, Cl. 30—272.
Ullman, Myron E., Jr., to Mullins Mfg. Corp. Apparatus and method of making plastic covered cabinet doors. 3,389,033, 6–18–68, Cl. 156—216.
Ullrich, Albert C.: *See—*
Prahl, Walter H., Eggert, Lederman, Scremin, and Ullrich. 3,389,186.
Umbel, Forrest K., to Pittsburgh Plate Glass Co. Glasscutting control apparatus. 3,388,843, 6–18–68, Cl. 225—96.
Underwood, Herbert N.: *See—*
Haas, Ronald H., and Underwood. 3,388,637.
Uniroyal, Inc.: *See—*
Black, Sheppard A., and Heide. 3,389,032.
Unistrut Corp.: *See—*
Irish, Elwood. 3,388,809.
Union Carbide Corp.: *See—*
D'Alessandro, William J. 3,389,094.
Fields, Robert R., and Tobler. 3,389,178.
Reid, Wallace G. 3,389,160.
Union Oil Co. of California: *See—*
Joo, Louis A., and Braunwarth. 3,389,091.
Union Special Machine Co.: *See—*
Attwood, John G., and Kosrow. 3,388,906.
United Aircraft of Canada Ltd.: *See—*
Binek, John S. 3,388,550.
United Aircraft Corp.: *See—*
De Maria, Anthony J. 3,389,348.
Foley, William M. 3,388,596.
Kravitz, Bernard L. 3,389,022.
United Aircraft Products, Inc.: *See—*
Parrott, Delbert R. 3,388,561.
United-Carr Inc.: *See—*
Hayden, Rodney. 3,389,297.
United Merchants and Manufacturers, Inc.: *See—*
Roberson, Virgel O., Jr. 3,388,433.
United Shoe Machinery Corp.: *See—*
Hanson, Raymond, and Mellors. 3,388,412.
Walsh, John E. 3,388,791.
United States of America
Agriculture: *See—*
Koenig, Nathan H. 3,388,963.
Koenig, Nathan H. 3,388,964.
Army: *See—*
Brothers, Jack. 3,389,275.
Calhoun, Willie C. 3,388,902.
Campbell, Albert S. 3,388,589.
Fischbach, Adolph, and Teti. 3,389,020.
Garoutte, Kurt F. 3,388,668.
Kirshner, Howard A. 3,388,633.
McFarland, John W., and Lawson. 3,388,604.
Nix, Joseph E., and Brock. 3,389,025.
Pisano, Frank T., and Daniels. 3,388,879.
Roth, Milton. 3,389,028.
Stevenson, Thomas. 3,389,027.
Wachtenheim, Arthur I., and Zotter. 3,389,347.
Wyman, Le Roy L., Sr., Everts, and Pollard. 3,388,663.
Zarem, Abe M., and Hauser. 3,389,259.
Atomic Energy Commission: *See—*
Chamberlain, Harry V., Edwards, and Kovacic. 3,389,053.
Kovacic, Evan C. 3,389,054.
Russell, James T. 3,389,254.
National Aeronautics and Space Administration: *See—*
Fontana, Anthony. 3,389,260.
Navy: *See—*
Angeloff, Wesley L., and Abbott. 3,389,373.
Johnson, Oliver H. 3,389,026.
Voida, Louis, Wilke, and Tafel. 3,388,667.
United States Banknote Corp.: *See—*
Andersson, Per L. 3,388,858.
United States Borax & Chemical Corp.: *See—*
Kitasaki, Kiyoshi, and Crawford. 3,389,146.
Universal Oil Products Co.: *See—*
Addison, George E. 3,389,075.
Gleim, William K. T., and O'Hara. 3,389,077.
Sparks, Allen K. 3,389,124.
Upchurch, Joseph D., to General Motors Corp. Closure hinge. 3,388,417, 6–18–68, Cl. 16—128.1.
Upjohn Co., The: *See—*
Dulin, William E., and Wright. 3,389,050.
Kagan, Fred. 3,389,051.
Usines Gustave Staar Societe Anonyme: *See—*
Staar, Marcel J. H. 3,388,632.
VEB fur Bauelemente der Nachrichtentechnik "Carl Von Ossietzky": *See—*
Trzeba, Erich, Rudloff, and Deliga. 3,389,351.
Vadas, Leslie, to FMC Corp. Case filling machine. 3,388,527, 6–18–68, Cl. 53—247.
Van Benthuysen, John D.: *See—*
Budd, Wilbert H., and Van Benthuysen. 3,389,364.
Van de Velde, Rene M., to Gevaert-Agfa N.V. Device for the determination of the resistance to friction. 3,388,584, 6–18–68, Cl. 73—7.
Van Horn, Ralph C., to Champlain Industries (1962) Ltd. Method of making alkali metal caseinate comprising dry mixing casein and an alkali metal compound and directing a jet of steam to the mixture to cause reaction. 3,389,131, 6–18–68, Cl. 260—119.
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Varel Mfg. Co.: *See—*
Varel, Daniel W., Bronson, and Shields. 3,388,756.
Varian Associates: *See—*
Ruetz, John A. 3,389,291.
Vaughn, Rudolph M. Method and apparatus for forming undercut screw head slots. 3,388,411, 6–18–68, Cl. 10—10.
Vaught, Leonard M., J. J. Newport III, and O. Osborn, to The Dow Chemical Co. Vermicular graphite structures and process of making. 3,389,073, 6–18–68, Cl. 204—294.
Vega, Mary-Louise: *See—*
Mosby, William L., and Vega. 3,389,137.
Vega Urdanoz, Jose, to Mfg. Vega S.A. Construction of cupboards convertible into tables. 3,388,676, 6–18–68, Cl. 108—38.
Vene Klasen, Gordon O.: *See—*
Olson, Donald M., and Vene Klasen. 3,388,739.
Ventura Tool Co.: *See—*
Hanes, James W. E., and Huntsinger. 3,388,752.
Verdenius, Peter: *See—*
Kaper, Arjen, and Verdenius. 3,388,566.
Vereinigte Osterreichische Eisen- nnd Stahlwerke: *See—*
Puhringer, Othmar, and Spannlang. 3,388,501.
Vergnolle, Claude, to CSF Compagnie Generale de Telegraphie Sans Fil. ACF for parametric amplifiers and radars. 3,389,342, 6–18–68, Cl. 330—4.5.
Vexler, Vladimir I. Device for electromagnetic exploration with the help of a natural field. 3,389,331, 6–18–68, Cl. 324—8.
Vibber, Alfred W. Apparatus for and method of twisting and plying strands. 3,388,542, 6–18–68, Cl. 57—58.3.
Victor Products Corp.: *See—*
Helsing, Knud J. 3,389,388.
Vieths, Alman H. Rotating and reciprocating tool arrangement. 3,388,548, 6–18–68, Cl. 60—6.
Vifian, Paul R.: *See—*
Herman, Donald E., Hanse, and Vifian. 3,388,797.
Villarreal Pantoja, Ernesto. Garbage incinerator. 3,388,679, 6–18–68, Cl. 110—12.
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Vissers, Herbert, to Landbouwwerktuigen- en Machinefabriek H. Vissers N.V. Apparatus for spreading powdered or granular materials. 3,388,869, 6–18–68, Cl. 239—659.
Vistron Corp.: *See—*
Barnett, Louis H., and Horton. 3,388,429.
Vogelpohl, Roland L., to Owens-Illinois Inc. Pressing flanged glass articles. 3,388,822, 6–18–68, Cl. 220—2.1.
Vogler, Flori: *See—*
Troost, Albert, Maass, Vogler, and Rottgers. 3,389,349.
Voida, Louis, D. H. Wilke, and R. E. Tafel, to United States of America, Navy. Contact fuze. 3,388,667, 6–18–68, Cl. 102—70.2.
Voigtlander A.G.: *See—*
Eggert, Joachim, Tronnier, and Ueberhagen. 3,388,956.
Von Grunberg, Karl F., and E. Sohnchen, to Bergische Stahl-Industrie. Service connections for truck-semitrailer fifth-wheel couplings. 3,388,927, 6–18–68, Cl. 280—421.
Waag, Norman A., to Allstate-Campbell, Inc. Tote cart for leaves and the like. 3,388,919, 6–18–68, Cl. 280—36.
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Waddell, James R.: *See—*
Eggler, Karl W., and Waddell. 3,388,884.
Wagensommer, Joseph: *See—*
Kresge, Edward N., Wagensommer, Jacobson, and Brownawell. 3,389,087.
Wagner Electric Corp.: *See—*
Miller, Robert P., and Shaw. 3,389,302.
Wahl, Frank: *See—*
Kuwayama, George T., and Wahl. 3,388,811.
Wales, Donald A., to Flo-Tronics, Inc. Relay apparatus. 3,389,310, 6–18–68, Cl. 317—123.
Waling, Joseph L., to Purdue Research Foundation. Method of forming shell roof structure. 3,389,202, 6–18–68, Cl. 264—134.
Walker, David D.: *See—*
Winnen, Franklyn E., and Walker. 3,388,916.
Winnen, Franklyn E., and Walker. 3,388,917.

Walker Mfg. Co.: *See—*
Heath, Robert A., and Slagle. 3,388,768.
Martola, Ronald J. 3,388,769.
Straw, Eldred G. 3,388,770.
Wallace, Donald C., to The Barber Mfg. Co. Apparatus for colorimetric gas analysis and method for making same. 3,388,975, 6–18–68, Cl. 23—254.
Waller, James R., Jr., to Mobil Oil Corp. Remote device control system and apparatus. 3,389,390. 6–18–68, Cl. 340—409.
Walsh, John E., to United Shoe Machinery Corp. Packages. 3,388,791, 6–18–68, Cl. 206—65.
Walter, Herbert, H. Stichnote, and H.-J. Nilius, to Aeg-Elatherm GmbH, and Licentia Patent-Verwaltungs-GmbH. Circuit for the generation of working pulses in electro-erosive metal working machines. 3,389,300, 6–18–68, Cl. 315—227.
Walther, Willi, to Industrie-Werke Karlsruhe Aktiengesellschaft. Rifle grenade. 3,388,666, 6–18–68, Cl. 102—49.7.
Wander, Dr. A., S.A.: *See—*
Schmutz, Jean, Hunziker, and Kunzle. 3,389,139.
Wardlaw, Frank C. Fabric dyeing apparatus. 3,388,571, 6–18-68, Cl. 68—184.
Warner, Frederick P., and Y. Matsuura, to Warner Mfg. Co. Applicator for paint and the like. 3,388,415, 6–18–68, Cl. 15—233.
Warner Mfg. Co.: *See—*
Warner, Frederick P., and Matsuura. 3,388,415.
Warner & Swasey Co., The: *See—*
Phzybylski, Daniel F. 3,388,819.
White, William McK. Jr. 3,388,821.
Warters, William D.: *See—*
Hubbard, William M., and Warters. 3,389,337.
Watanabe, Tadashi: *See—*
Yamada, Noboru, Watanabe, and Yamanaka. 3,389,129.
Watson, Charles V., to Reeves Bros., Inc. System apparatus and process for the manufacture of metering diaphragms. 3,389,035, 6–18–68, Cl. 156—242.
Watson, John D., Sr.: *See—*
Olstowski, Franciszek, Watson, and Osborn. 3,389,200.
Watson, William R., and D. R. Anderson, to Nalco Chemical Co. Foam producing nozzle. 3,388,868, 6–18–68, Cl. 239—427.
Webb, David A.: *See—*
Dietrick, Myron I., and Webb. 3,389,125.
Webb, Derrel D., to Houston Engineers, Inc. Combination shock absorber and jar. 3,388,765, 6–18–68, Cl. 175—297.
Webb, Elmer J., to Brewer-Titchener Corp. Sealing strip. 3,388,643, 6–18–68, Cl. 94—18.
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Webb, Marvin W., and G. W. Yoder, to Professional Bionics, Inc. Method and apparatus for inducing lethargic relaxation or sleep. 3,388,699, 6–18–68, Cl. 128—1.
Weber, Alan E.: *See—*
Reisterer, Lawrence B., Ranger, and Weber. 3,388,731.
Weber, Erwin G.: *See—*
Engstrom, John A., and Weber. 3,389,398.
Weinberg, Norman L., to Bristol-Myers Co. Esters of 2-substituted 1,2-dihydroquinoline-N-carboxylic acids and thione acids. 3,389,142, 6–18–68, Cl. 260—287.
Weinrotter, Ferdinand, W. Muller, A. Schmidt, W. Bohler, J. Schweighofer, and W. Krulla, to Osterresichische Stickstoffwerke Aktiengesellschaft. Process for the preparation of melamine. 3,388,533, 6–18–68, Cl. 55—82.
Weisbecker, Joseph A. Computer-type game and teaching aid. 3,388,483, 6–18–68, Cl. 35—30.
Weiss, Anton G.: *See—*
D'Amico, John J., and Weiss. 3,388,991.
Weiss, Hugh R.: *See—*
Thanhauser, Albert S., and Weiss. 3,388,827.
Welch, Russell K.: *See—*
Boyd, Richard W., and Welch. 3,388,801.
Welding Research, Inc.: *See—*
Sciaky, David. 3,389,240.
Werning, Joseph R.: *See—*
Hart, Donald M., and Werning. 3,389,382.
Wesstrom, Alfred, F. R. Fischer, R. L. Skinner, E. J. Zilkowski, and W. E. Sanders, Jr., to The Bendix Corp. Apparatus for slitting sheet metal and method of forming circular members therefrom. 3,388,582, 6–18–68, Cl. 72—335.
West Virginia Pulp and Paper Co.: *See—*
Peterson, Hal D., Drobnick, and Smith. 3,388,993.
Westbrook, William H., to Russell Constructions Ltd. Vibrating screens with unbalanced weight. 3,388,798, 6–18–68, Cl. 209—325.
Western Electric Co., Inc.: *See—*
Beroset, John E., and Large. 3,388,795.
Kuwayama, George T., and Wahl. 3,388,811.
Western Industries, Inc.: *See—*
Baumann, Richard S., and Linch. 3,388,962.
Westinghouse Electric Corp.: *See—*
Anderson, George R. 3,388,553.
Ayling, Robert W., and Thayer. 3,388,855.
Browne, Thomas E., Jr., and Wolf. 3,389,282.
DeCorso, Serafino M. 3,389,209.
Frisch, Erling. 3,389 056.
Harnish, James R. 3,388,558.
Hirayama, Chikara, and Kemeny. 3,389,189.
Hyvarinen, Wayne E. 3,389,326.
Johnson, John G. 3,388,559.
Kruper, Andrew P. 3,388,860.
Lesster, Laban E. 3,389,304.
Macdonald, Copthorne. 3,389,221.
Moreland, William C., II. 3,388,560.
Newell, William E. 3,389,343.
Niemoller, Arthur B. 3,389,213.
Pietrzyk, Johannes P. 3,389,295.
Rackley, Carle E. 3,389,249.
Sanner, George E., and Schmid. 3,389,350.
Scala, Luciano C., and Sattler. 3,389,015.
Smeltzer, George S. 3,389,322.
Stetten, Kenneth J. 3,389,219.
Tenenbaum, Nathaniel D. 3,389,303.
Tubbs, Lester G. 3,389,358.
Wright, Leonard L., and Astleford. 3,389,237.
Westphalen, Leonard F. Multifocal camera. 3,388,650, 6–18–68, Cl. 95—44.
Whirlpool Corp.: *See—*
Cobb, Clifton A., and Platt, and Salisbury. 3,388,570.
Swanson, Donald F., and Winkler. 3,388,828.
White Consolidated Industries Inc.: *See—*
Oles, Joseph F. 3,388,567.
Perry, Robert P. 3,388,520.
White, Halbert C., and D. V. Wysong, to Dow Chemical Co. (Alkylaminoethoxy)-dihaloanilines and method of preparation thereof. 3,389,171, 6–18–68, Cl. 260—501.17.
White, William McK., Jr., to The Warner & Swasey Co. Hydraulic control means for loaders. 3,388,821, 6–18–68, 214—778.
Whiting, James C., to Michigan-Dynamics, Inc. Vacuum responsive device. 3,388,682.
Whitson, Everette M., and R. L. Shrader. 3,389,210, 6–18–68, Cl. 13—31.
Whittaker Corp.: *See—*
Bargen, David W., and Sanchez. 3,386,597.
Wickliff, Noble E., to Bell Telephone Laboratories, Inc. Electronic filter with automatically adjusted bias. 3,389,345, 6–18–68, Cl. 330—40.
Wieland, Franz, and J. J. Ciol, to Rapidograph, Inc. Method for press fitting of miniature tubing of varying diameters. 3,388,455, 6–18–68, Cl. 29—525.
Wight, William A., to Farrington Business Machines Corp. Printing machine having means for rocking platen assembly from one position to another depending on direction of travel. 3,388,660, 6–18–68, Cl. 101—269.
Wilbur Curtis Co., Inc.: *See—*
Hester, John P. 3,388,804.
Wilke, Donald H.: *See—*
Voida, Louis, Wilke, and Tafel. 3,388,667.
Burroughs, Edwin E., and Wilkes. 3,388,882.
Wilkinson, James W., to Hastings Mfg. Co. Filter element support means. 3,388,802, 6–18–68, Cl. 210—315.
Wilkinson Sword Ltd.: *See—*
Hansom, Bernard S. 3,388,831.
Willi, Richard B., to Baldwin-Lima-Hamilton Corp. Means to signal incipient shear pin failure. 3,388,889, 6–18–68, Cl. 233—122.
Williams, Albert J., Jr.: *See—*
Lex, Rowland G., Jr., Mergner, Polster, and Williams. 3,389,397.
Williams, James L.: *See—*
Fincher, Dorsey R., and Williams. 3,388,744.
Williams, Norman J.: *See—*
Sanford, Robert A., Johnson, and Williams. 3,389,092.
Williams, Roy A.: *See—*
Cannon, Cyril G., Davies, Selwood, and Williams. 3,388,545.
Williamson, Leland P.: *See—*
Locher, Ross E., and Williamson. 3,389,307.
Willis, Eldrich J., to Aluminum Co. of America. Method of forming metal ladder structures and the like. 3,388,454, 6–18–68, Cl. 29—523.
Willis, Victor M.: *See—*
Ogren, Axel E., and Willis. 3,388,895.
Willson, James R., to Robershaw Controls Co. Control device and parts therefor. 3,388,865.
Wilson, Curtis L. Load equalizer. 3,388,924, 6–18–68, Cl. 280—124.
Wilson, Donald R., to Pacific Plantronics, Inc. Acoustic noise attenuating apparatus. 3,388,767, 6–18–68, Cl. 181—31.
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Wilson, Rex C., H. W. Messerschmidt, and R. J. Nicoletti, to Muntz Stereo-Pak, Inc. Head shifts mechanism for tape recorder and playback machines. 3,388,911, 6–18–68, Cl. 274—4.
Wilson, Ronald M., to William M. Wilson's Sons, Inc. Hose reel. 3,388,716, 6–18–68, Cyl. 137—355.22.
Wilson's, William M., Sons Inc.: *See—*
Wilson, Ronald M. 3,388,716.
Windman, Murray. Aerosol container cap. 3,388,829, 6–18–68, Cl. 220—60.
Winkler, Karl: *See—*
Sedlacek, Franz, and Winkler. 3,388,780.
Whirlpool Corp.: *See—*
Swanson, Donald F., and Winkler. 3,388,828.
Winnen, Franklyn E., and D. D. Walker. 3,388,916, 6–18–68, Cl. 279—2.
Winnen, Franklyn E., and D. D. Walker, to Erickson Tool Co. Hydraulic chucks and arbors. 3,388,917, 6–18–68, Cl. 279—4.
Wirsig, Leo H. Door fastener. 3,388,937, 6–18–68, Cl. 292—62.
Wittek Mfg. Co.: *See—*
Ttezlaff, Clarence C. 3,388,438.
Wohl, Sanford M., and L. Carter, to The Tremco Mfg. Co. Gasket for sealing a windowpane and method for installing the same. 3,388,517, 6–18–68, Cl. 52—403.
Wojtulewicz, Waclaw: *See—*
Brenholdt, Irving R., and Wojtulewicz. 3,388,629.

Wolcott, Paul T. Adjustable spark plug. 3,389,287, 6–18–68, Cl. 313—125.
Wolf, Charles B.: *See—*
 Browne, Thomas E., Jr., and Wolf. 3,389,282.
Wolff, Norman, and N. C. Andersen, to Sperry Rand Corp. Control system for maintaining a desired magnetic field in a given space. 3,389,333, 6–18–68, Cl. 324—43.
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Woods, Geoffrey, and W. K. Peyto. Fan impellers. 3,388,749, 6–18–68, Cl. 170—159.
Woods, William A. Basketball court with barrier means. 3,388,909, 6–18–68, Cl. 273—1.5.
Wossner, Felix: *See—*
 Axthammer, Ludwig, and Wossner. 3,388,883.
Wray, Paul E.: *See—*
 Vincent, James G., Jr., and Wray. 3,388,424.
Wright, Charles D.: *See—*
 McKeown, James J., and Wright. 3,389,111.
Wright, Harold A.: *See—*
 Ingram, Alvin R., and Wright. 3,389,097.
Wright, John B.: *See—*
 Dulin, William E., and Wright. 3,389,050.
Wright, Leonard L., and J. J. Astleford, Jr., to Westinghouse Electric Corp. Load break and isolating circuit interrupter. 3,389,237, 6–18–68, Cl. 200—144.
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Wysong, Don V.: *See—*
 White, Halbert C., and Wysong. 3,389,171.
Xerox Corp.: *See—*
 Zucker, Edwin. 3,388,875.
Yajima, Kinpei, to Asahi Kogaku Kogyo Kabushiki Kaisha. Objective lens mount. 3,388,647, 6–18–68, Cl. 95—11.
Yakich, Walter J.: *See—*
 Simandl, Ned W., and Yakich. 3,388,789.
Yamada, Noboru, T. Watanabe, and Y. Yamanaka, to Teijin Ltd. Process for the polymerization of olefinic hydrocarbons in the presence of aluminium alkyl dihalide or sesquihalide, titanium halide and a phosphorus oxyhalide. 3,389,-129, 6–18–68, Cl. 260—93.7.
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Yamanaka, Yoshikuki: *See—*
 Yamada, Noboru, Watanabe, and Yamanaka. 3,389,129.
Yano, Seinosuke: *See—*
 Nagashima, Shinichi, Goda, Gondou, Ooka, Mimura, Fujishima, Sugino, and Yano. 3,388,988.
Yawata Iron & Steel Co., Ltd.: *See—*
 Nagashima, Shinichi, Goda, Gondou, Ooka, Mimura, Fujishima, Sugino, and Yano. 3,388,988.
Yeo, Alan Arthur: *See—*
 Alderson, Geoffrey W., Hambling, and Yeo. 3,389,190.
Yoder Co., The: *See—*
 Keska, Kenneth R. 3,388,460.
Yoder, Gulden W.: *See—*
 Webb, Marvin W., and Yoder. 3,388,699.
Yoshida, Susumu, and H. Sato, to Sony Corp. Electron gun device. 3,389,290, 6–18–68, Cl. 313—337.
Yoshioka, Toshio, 60% to S. Tunashima. Centerless universal arc ruler. 3,388,475, 6–18–68, Cl. 33—177.
Youmans, Albert P., and A. L. Greig, to Signetics Corp. Alignment and bonding device and method. 3,388,848, 6–18–68, Cl. 228—1.
Young, David W., Jr., to Lockheed Aircraft Corp. Low profile broadband microwave antenna system. 3,389,393, 6–18–68, Cl. 343—708.
Young, Herbert F.: *See—*
 Bange, Glenn R., and Young. 3,388,447.
Young, Richard W., to Polaroid Corp. Photographic image-receiving elements having been treated with ammonia after drying. 3,388,994, 6–18–68, Cl. 96—29.
Zadeikis, Stase K.: *See—*
 Ehrenreich, Theodore, and Zadeikis. 3,389,052.
Zanella, Dominic A., to American Aniline Products, Inc. Preparation of quinizarin-2-sulfonic acid. 3,389,151, 6–18–68, Cl. 260—375.
Zanni, Michel: *See—*
 Golmard, Maurice, and Zanni. 3,388,586.
Zarem, Abe M., and S. M. Hauser, to United States of America, Army. Optical instrument anti-flash shutter system. 3,389,259, 6–18–68, Cl. 250—201.
Zecher, Wilfried: *See—*
 Holtschmidt, Hans, and Zecher. 3,389,069.
Zelle, Karl: *See—*
 Becher, Manfred, Sehring, and Zelle. 3,389,184.
Zeiss Ikon Aktiengesellschaft: *See—*
 Thiele, Heinz, and Rockstroh. 3,388,648.
Ziegler, Eugene R., to General Motors Corp. Wiper actuating mechanism. 3,389,320, 6–18–68, Cl. 318—443.
Ziegler, Hubert A.: *See—*
 Riley, Robert H., Jr., Koen, Ziegler, and Holmes. 3,388,-728.
Ziegler, Mandell S., to Talley Industries, Inc. Blends of flame retardant unsaturated polyester resins and acrylic syrup. 3,389,192, 6–18–68, Cl. 260—862.
Zilkowski, Eugene J.: *See—*
 Wesstrom, Alfred, Fischer, Skinner, Zilkowski, and Sanders. 3,388,582.
Zinsco Electrical Products: *See—*
 Locher, Ross E., and Williamson. 3,389,307.
Zotter, Bruno W.: *See—*
 Wachtenheim, Arthur I., and Zotter. 3,389,347.
Zucker, Edwin, to Xerox Corp. Web transport control assembly. 3,388,875, 6–18–68, Cl. 242—75.51.

CLASSIFICATION OF PATENTS

ISSUED JUNE 18, 1968

NOTE.—First number, class; second number, subclass; third number, patent number

2– 3	3,388,405
5–317	3,388,406
327	3,388,407
338	3,388,408
6– 12	3,388,409
8–127.6	3,388,963
	3,388,964
130.1	3,388,965
158	3,388,410
10– 10	3,388,411
12–146	3,388,412
13– 9	3,389,208
18	3,389,209
31	3,389,210
14– 71	3,388,413
15– 93	3,388,414
233	3,388,415
16– 35	3,388,419
115	3,388,416
128.1	3,388,417
139	3,388,418
150	3,388,420
171	3,388,421
17– 2	3,388,422
18– 2	3,388,423
	3,388,424
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14	3,388,426
16.5	3,388,427
19	3,388,428
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	3,388,430
42	3,388,431
19– 65	3,388,432
145.5	3,388,433
203	3,388,434
266	3,388,435
23–107	3,388,966
165	3,388,967
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230	3,388,974
254	3,388,975
24– 94	3,388,436
230	3,388,437
278	3,388,438
25–142	3,388,439
28– 1	3,388,440
	3,388,441
	3,388,442
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72	3,388,444
76	3,388,445
29–155	3,388,446
163.5	3,388,448
193	3,388,976
202	3,388,449
213	3,388,450
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627	3,388,464
30– 40	3,388,466
53	3,388,467
90	3,388,468
116	3,388,469
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32– 7	3,388,471
23	3,388,472
57	3,388,473
33– 1	3,388,474
177	3,388,475
178	3,388,476
179.5	3,388,477
34– 13	3,388,478
15	3,388,479
57	3,388,480
164	3,388,481
210	3,388,482
35– 30	3,388,483
47	3,388,484
36– 7.8	3,388,485
58.5	3,388,486
37– 90	3,388,487
142	3,388,488
40–106.1	3,388,489
.21	3,388,490
152	3,388,491
301	3,388,492
308	3,388,493
42– 74	3,388,494
43– 42.05	3,388,495
.08	3,388,496
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44– 62	3,388,977
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46– 8	3,388,498
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49–130	3,388,500
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51– 33	3,388,503
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53– 33	3,388,524
39	3,388,525
182	3,388,526
247	3,388,527
253	3,388,528
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54– 44	3,388,530
55– 64	3,388,531
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82	3,388,533
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105	3,388,553
217	3,388,554
61– 15	3,388,555
46.5	3,388,556
62–112	3,388,557
196	3,388,558
224	3,388,559
353	3,388,560
62–467	3,388,561
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65–286	3,388,983
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361	3,388,985
66– 27	3,388,563
148	3,388,564
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68– 12	3,388,566
18	3,388,567
23	3,388,568
	3,388,569
134	3,388,570
184	3,388,571
70–315	3,388,572
71– 28	3,388,989
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126	3,388,986
128	3,388,988
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76–101	3,388,618
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77– 69	3,388,620
81– 3	3,388,621
177	3,388,622
83– 98	3,388,623
168	3,388,624
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261	3,388,626
84– 1.01	3,389,211
85– 32	3,388,627
86– 1	3,388,628
88– 1	3,388,629
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91– 26	3,388,634
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92–245	3,388,638
93– 36	3,388,639
.6	3,388,640
49	3,388,641
62	3,388,642
94– 18	3,388,643
95– 1.7	3,388,644
11	3,388,645
	3,388,646
	3,388,647
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36	3,388,649
44	3,388,650
89	3,388,652
	3,388,653
96– 29	3,388,994
86	3,388,995
98– 2	3,388,654
40	3,388,655
99– 91	3,388,996
92	3,388,997
98	3,388,998
118	3,388,999
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208	3,388,657
101– 38	3,388,658
269	3,388,659
	3,388,660
369	3,388,661
405	3,388,662
102– 7.4	3,388,664
24	3,388,663
41	3,388,665
49.7	3,388,666
70.2	3,388,667
87	3,388,668
103– 38	3,388,669
111	3,388,671
205	3,388,670
104– 7	3,388,672
36	3,388,673
88	3,388,674
106– 38.9	3,389,001
84	3,389,002
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176	3,389,004
299	3,389,005
107– 1	3,388,675
108– 38	3,388,676
136	3,388,677
157	3,388,678
110– 12	3,388,679
112– 73	3,388,680
220	3,388,681
114– 16	3,388,683
115– 34	3,388,684
116– 70	3,388,682
117– 18	3,389,009
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36.1	3,389,011
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45	3,389,013
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93.2	3,389,014
122	3,389,016
232	3,389,015
118– 2	3,388,685
4	3,388,686
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637	3,388,688
119– 14.13	3,388,689
53	3,388,690
122– 20	3,388,691
367	3,388,692
123– 18	3,388,693
41.12	3,388,694
198	3,388,695
124– 12	3,388,696
126–110	3,388,697
200	3,388,698
128– 1	3,388,699
24	3,388,700
33	3,388,701
153	3,388,702
214.4	3,388,703
335.5	3,388,704
351	3,388,705
131–238	3,388,706
131–261	3,388,707
132– 9	3,388,708
42	3,388,709
85	3,388,710
135– 1	3,388,711
2	3,388,712
136– 86	3,389,017
	3,389,018
120	3,389,019
	3,389,020
137– 81.5	3,388,713
202	3,388,714
246.22	3,388,715
355.22	3,388,716
484.2	3,388,717
494	3,388,718
565	3,388,719
625.48	3,388,720
.66	3,388,721
138–144	3,388,723
149	3,388,724
139–125	3,388,722
140– 93	3,388,725
147	3,388,726
143– 36	3,388,727
68	3,388,728
144– 47	3,388,729
317	3,388,730
146–238	3,388,731
148– 12	3,389,021
174	3,389,022
187	3,389,023
188	3,389,024
149– 19	3,389,025
	3,389,026
42	3,389,027
69	3,389,028
151– 41.75	3,388,732
156– 3	3,389,029
67	3,389,030
74	3,389,031
111	3,389,032
216	3,389,033
242	3,389,034
	3,389,035
244	3,389,036
305	3,389,037
361	3,389,038
468	3,389,039
523	3,389,040
159– 4	3,388,733
160–348	3,388,734
161– 37	3,389,041
41	3,389,042
43	3,389,043
94	3,389,044
166	3,389,045
194	3,389,046
199	3,389,047
164– 47	3,388,735
154	3,388,736
283	3,388,737
165– 47	3,388,738
80	3,388,739
105	3,388,740
166– 3	3,388,741
4	3,388,742
11	3,388,743
40	3,388,744
152	3,388,745
167– 46	3,389,048
58	3,389,049
65	3,389,050
	3,389,051
84.5	3,389,052
169– 2	3,388,746
39	3,388,747
170–135.2	3,388,748
159	3,388,749
172– 45	3,388,750
173– 12	3,388,751
131	3,388,752
139	3,388,753
174– 81	3,389,212
88	3,389,213
140	3,389,214
152	3,389,215
175–244	3,388,754
297	3,388,755
410	3,388,756
175–410	3,388,757
176– 32	3,389,053
	3,389,054
61	3,389,055
78	3,389,056
	3,389,057
177– 4	3,388,758
178– 5.8	3,389,216
6.6	3,389,217
	3,389,218
.8	3,389,219
7.1	3,389,220
.2	3,389,221
.3	3,389,222
17	3,389,223
179– 1	3,389,224
7	3,389,225
18	3,389,227
	3,389,228
	3,389,229
100.2	3,389,230
.4	3,389,231
107	3,389,232
110	3,389,233
111	3,389,226
175.2	3,389,234
180– 19	3,388,759
22	3,388,760
27	3,388,761
73	3,388,762
105	3,388,764
108	3,388,763
	3,388,765
127	3,388,766
181– 31	3,388,767
54	3,388,768
56	3,388,769
72	3,388,770
182–153	3,388,771
188– 1	3,388,772
	3,388,773
73	3,388,774
	3,388,775
76	3,388,776
190– 51	3,388,777
192– .049	3,388,778
44	3,388,779
193– 35	3,388,780
195– 28	3,389,058
197– 1	3,388,781
49	3,388,782
198– 11	3,388,783
35	3,388,784
190	3,388,785
196	3,388,786
200– 11	3,389,235
61.48	3,389,236
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203– 1	3,389,059
204– 26	3,389,060
32	3,389,061
70	3,389,062
106	3,389,063
108	3,389,064
140.5	3,389,065
	3,389,066
143	3,389,067
	3,389,068
158	3,389,069
177	3,389,070
268	3,389,071
288	3,389,072
294	3,389,073
206– 45.14	3,388,787
.33	3,388,788
56	3,388,789
63.3	3,388,790
65	3,388,791
	3,388,792
208– 53	3,389,074
66	3,389,075
127	3,389,076
264	3,389,077
308	3,389,078
209– 3	3,388,793
9	3,388,794
73	3,388,795
82	3,388,796
241	3,388,797
325	3,388,798

210– 32 : 3,389,079
3,389,080
52 : 3,389,081
102 : 3,388,799
131 : 3,388,800
234 : 3,388,801
315 : 3,388,802
321 : 3,388,803
470 : 3,388,804
499 : 3,388,805
211– 13 : 3,388,806
74 : 3,388,807
132 : 3,388,808
176 : 3,388,809
212– 46 : 3,388,810
214– 1 : 3,388,811
3,388,812
.6 : 3,388,813
6 : 3,388,814
3,388,815
3,388,816
8.5 : 3,388,817
14 : 3,388,818
138 : 3,388,819
394 : 3,388,820
778 : 3,388,821
219– 9.5 : 3,389,238
110 : 3,389,239
121 : 3,389,240
220– 2.1 : 3,388,822
5 : 3,388,823
24 : 3,388,828
27 : 3,388,824
44 : 3,388,825
47 : 3,388,826
60 : 3,388,827
3,388,829
221– 73 : 3,388,830
220 : 3,388,831
222– 1 : 3,388,832
54 : 3,388,833
70 : 3,388,834
78 : 3,388,835
107 : 3,388,836
156 : 3,388,837
193 : 3,388,838
219 : 3,388,839
402.13: 3,388,840
548 : 3,388,841
566 : 3,388,842
225– 96 : 3,388,843
226– 28 : 3,388,845
90 : 3,388,844
97 : 3,388,846
227– 19 : 3,388,847
228– 1 : 3,388,848
2 : 3,388,849
56 : 3,388,850
229– 29 : 3,388,851
45 : 3,388,852
51 : 3,388,853
230–143 : 3,388,854
206 : 3,388,855
232– 43.1 : 3,388,856
234– 23 : 3,388,857
3,388,858
235– 30 : 3,388,859
61.11: 3,389,241
.12: 3,389,242
150.1 : 3,389,243
.24: 3,389,244
175 : 3,389,245
236– 1 : 3,388,860
12 : 3,388,861
15 : 3,388,862
44 : 3,388,863
92 : 3,388,864

236– 99 : 3,388,865
239–127 : 3,388,866
222 : 3,388,867
427 : 3,388,868
659 : 3,388,869
240– 2 : 3,389,246
10 : 3,389,247
3,389,248
147 : 3,389,249
241– 23 : 3,388,870
295 : 3,388,871
242– 35.6 : 3,388,872
55.21: 3,388,873
58.2 : 3,388,874
75.51: 3,388,875
96 : 3,388,876
118.4 : 3,388,877
244– 23 : 3,388,878
152 : 3,388,879
248– 2 : 3,388,880
74 : 3,388,881
97 : 3,388,882
188.2 : 3,388,883
224 : 3,388,884
310 : 3,388,885
361 : 3,388,886
249–120 : 3,388,887
250– 43.5 : 3,389,250
3,389,251
49.5 : 3,389,252
61 : 3,389,253
71.5 : 3,389,254
80 : 3,389,255
83.3 : 3,389,256
84.5 : 3,389,257
108 : 3,389,258
201 : 3,389,259
203 : 3,389,260
206 : 3,389,261
209 : 3,389,262
3,389,263
211 : 3,389,264
226 : 3,389,265
231 : 3,389,266
238 : 3,389,267
252– 32.5 : 3,389,082
.7 : 3,389,083
39 : 3,389,084
41 : 3,389,085
46.7 : 3,389,086
49.6 : 3,389,123
51.5 : 3,389,124
59 : 3,389,087
73 : 3,389,088
301.6 : 3,389,089
311.5 : 3,389,090
356 : 3,389,091
430 : 3,389,092
253– 39.1 : 3,388,888
122 : 3,388,889
254–175.7 : 3,388,890
195 : 3,388,891
256– 13.1 : 3,388,892
259– 3 : 3,388,893
4 : 3,388,894
75 : 3,388,895
95 : 3,388,896
260– 2 : 3,389,093
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.5 : 3,389,094
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3,389,097
4 : 3,389,098
9 : 3,389,100
17.2 : 3,389,101
18 : 3,389,102
21 : 3,389,103

260– 22 : 3,389,104
23 : 3,389,105
24 : 3,389,106
28.5 : 3,389,107
29.6 : 3,389,108
3,389,109
3,389,110
30.2 : 3,389,111
.4 : 3,389,112
31.8 : 3,389,113
32.8 : 3,389,114
33.6 : 3,389,115
37 : 3,389,116
38 : 3,389,117
41 : 3,389,118
45.85: 3,389,120
.9 : 3,389,119
46.5 : 3,389,121
47 : 3,389,122
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67 : 3,389,126
75 : 3,389,127
93.1 : 3,389,128
.7 : 3,389,129
94.3 : 3,389,130
119 : 3,389,131
146 : 3,389,132
211.5 : 3,389,133
239.3 : 3,389,134
.55: 3,389,135
243 : 3,389,136
256.4 : 3,389,137
268 : 3,389,138
3,389,139
286 : 3,389,140
3,389,141
287 : 3,389,142
288 : 3,389,143
294.8 : 3,389,144
307 : 3,389,145
309.5 : 3,389,146
327 : 3,389,147
3,389,148
332.3 : 3,389,149
343.2 : 3,389,150
375 : 3,389,151
383 : 3,389,152
397.45: 3,389,154
3,389,155
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405.6 : 3,389,156
429 : 3,389,157
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448 : 3,389,161
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454 : 3,389,162
3,389,163
468 : 3,389,164
471 : 3,389,165
3,389,166
485 : 3,389,167
3,389,168
488 : 3,389,169
501.11: 3,389,170
.17: 3,389,171
510 : 3,389,172
537 : 3,389,173
559 : 3,389,174
3,389,175
566 : 3,389,176
570.8 : 3,389,177
583 : 3,389,178
585 : 3,389,179
586 : 3,389,180
590 : 3,389,181
3,389,182

260–606.5 : 3,389,183
622 : 3,389,184
633 : 3,389,185
650 : 3,389,186
653.1 : 3,389,187
668 : 3,389,188
679 : 3,389,189
683.15: 3,389,190
.74: 3,389,191
862 : 3,389,192
865 : 3,389,099
261– 24 : 3,388,898
111 : 3,388,897
263– 8 : 3,388,899
19 : 3,388,900
264– 4 : 3,389,194
36 : 3,389,193
45 : 3,389,195
3,389,196
3,389,197
52 : 3,389,198
53 : 3,389,199
105 : 3,389,200
119 : 3,389,201
134 : 3,389,202
140 : 3,389,203
142 : 3,389,204
178 : 3,389,205
203 : 3,389,206
290 : 3,389,207
266– 23 : 3,388,901
3,388,902
33 : 3,388,903
267–111 : 3,388,904
271– 13 : 3,388,905
49 : 3,388,906
89 : 3,388,907
272– 1 : 3,388,908
273– 1.5 : 3,388,909
101 : 3,388,910
274– 4 : 3,388,911
23 : 3,388,912
277– 32 : 3,388,913
84 : 3,388,914
177 : 3,388,915
279– 2 : 3,388,916
4 : 3,388,917
280– 11.35: 3,388,918
3,388,922
36 : 3,388,919
41 : 3,388,920
63 : 3,388,921
96.1 : 3,388,923
124 : 3,388,924
166 : 3,388,925
265 : 3,388,926
421 : 3,388,927
456 : 3,388,928
481 : 3,388,929
504 : 3,388,930
285–159 : 3,388,931
288 : 3,388,932
287– 1 : 3,388,933
52.05: 3,388,934
117 : 3,388,935
189.36: 3,388,936
292– 62 : 3,388,937
177 : 3,388,938
198 : 3,388,939
216 : 3,388,940
294– 1 : 3,388,941
95 : 3,388,942
296– 21 : 3,388,943
28 : 3,388,944
145 : 3,388,945
297–214 : 3,388,946
250 : 3,388,947

299– 34 : 3,388,948
87 : 3,388,949
303– 6 : 3,388,950
21 : 3,388,951
307– 66 : 3,389,268
88.3 : 3,389,269
225 : 3,389,270
235 : 3,389,271
257 : 3,389,272
310 : 3,389,273
308–217 : 3,388,952
310– 8 : 3,389,274
.3 : 3,389,275
.4 : 3,389,276
77 : 3,389,277
105 : 3,389,278
3,389,279
3,389,280
168 : 3,389,281
312– 39 : 3,388,953
319 : 3,388,954
313– 19 : 3,389,282
62 : 3,389,283
82 : 3,389,284
107 : 3,389,285
108 : 3,389,286
125 : 3,389,287
174 : 3,389,288
180 : 3,389,289
337 : 3,389,290
315– 3.6 : 3,389,291
3,389,292
12 : 3,389,293
19 : 3,389,294
39.3 : 3,389,295
77 : 3,389,296
152 : 3,389,297
206 : 3,389,298
3,389,299
227 : 3,389,300
316– 25 : 3,388,955
317– 11 : 3,389,301
15 : 3,389,302
22 : 3,389,303
23 : 3,389,304
100 : 3,389,305
101 : 3,389,306
119 : 3,389,307
123 : 3,389,308
3,389,309
3,389,310
256 : 3,389,311
318– 19 : 3,389,312
39 : 3,389,313
117 : 3,389,314
221 : 3,389,315
3,389,316
325 : 3,389,317
345 : 3,389,318
3,389,319
443 : 3,389,320
463 : 3,389,321
320– 1 : 3,389,322
5 : 3,389,323
25 : 3,389,324
31 : 3,389,325
322– 28 : 3,389,326
323– 19 : 3,389,328
45 : 3,389,329
89 : 3,389,330
324– 8 : 3,389,331
30 : 3,389,332
43 : 3,389,333
71 : 3,389,334
3,389,335
158 : 3,389,336

325– 7 : 3,389,337
316 : 3,389,338
458 : 3,389,339
328–155 : 3,389,340
329–144 : 3,389,341
330– 4.5 : 3,389,342
5.5 : 3,389,343
19 : 3,389,344
40 : 3,389,345
51 : 3,389,346
331– 78 : 3,389,347
94.5 : 3,389,348
332– 44 : 3,389,327
56 : 3,389,349
333– 9 : 3,389,350
71 : 3,389,351
98 : 3,389,352
335–216 : 3,389,353
248 : 3,389,354
266 : 3,389,355
289 : 3,389,356
3,389,357
290 : 3,389,358
337–114 : 3,389,359
3,389,360
347 : 3,389,361
338– 4 : 3,389,362
174 : 3,389,364
176 : 3,389,363
200 : 3,389,365
339– 7 : 3,389,366
38 : 3,389,367
116 : 3,389,368
121 : 3,389,369
156 : 3,389,370
192 : 3,389,371
340– 3 : 3,389,372
6 : 3,389,373
58 : 3,389,374
146.1 : 3,389,375
172.5 : 3,389,376
3,389,377
3,389,378
3,389,379
3,389,380
3,389,381
3,389,404
173 : 3,389,382
3,389,383
.1 : 3,389,384
174 : 3,389,385
248 : 3,389,386
272 : 3,389,387
309.1 : 3,389,388
339 : 3,389,389
409 : 3,389,390
343– 6.8 : 3,389,391
108 : 3,389,392
708 : 3,389,393
725 : 3,389,394
743 : 3,389,395
792.5 : 3,389,396
346– 35 : 3,389,397
74 : 3,389,398
3,389,399
3,389,400
76 : 3,389,401
3,389,402
108 : 3,389,403
350–176 : 3,388,956
179 : 3,388,957
401– 2 : 3,388,958
207 : 3,388,959
431–288 : 3,388,960
301 : 3,388,961
344 : 3,388,962

CLASSIFICATION OF DESIGNS

D 2–351 : 211,445
D 4– 38 : 211,446
D 9–149 : 211,447
192 : 211,448
211,449
242 : 211,450
D10– 7 : 211,451
10 : 211,452
D13– 1 : 211,453
211,454

D13– 1 : 211,455
211,456
211,457
6 : 211,458
D15– 1 : 211,459
211,460
211,461
211,462
211,463
211,464

D15– 11 : 211,465
D16– 2 : 211,466
D22– 15 : 211,467
29 : 211,468
D26– 1 : 211,469
13 : 211,470
14 : 211,471
211,472
211,473
211,474

D29– 1 : 211,475
D33– 6 : 211,476
D34– 5 : 211,477
211,478
211,479
15 : 211,480
211,481
D37– 1 : 211,482
D40– 1 : 211,483
D44– 1 : 211,484

D44– 1 : 211,485
10 : 211,486
26 : 211,487
D45– 10 : 211,488
D48– 4 : 211,489
211,490
20 : 211,491
D54– 13 : 211,492
D55– 1 : 211,493

D56– 2 : 211,494
D57– 1 : 211,495
211,496
D61– 1 : 211,497
D71– 1 : 211,498
211,499
211,500
D86– 8 : 211,501
211,502

GEOGRAPHICAL INDEX OF RESIDENCE OF INVENTORS

(U.S. States, Territories and Armed Forces, the Commonwealth of Puerto Rico, and the Canal Zone)

(NOTE.—CODES ARE CHANGED AS OF JANUARY 1, 1967)

Alabama	1	Kentucky	21	Oregon	41
Alaska	2	Louisiana	22	Pennsylvania	42
American Samoa	3	Maine	23	Puerto Rico	43
Arizona	4	Maryland	24	Rhode Island	44
Arkansas	5	Massachusetts	25	South Carolina	45
California	6	Michigan	26	South Dakota	46
Canal Zone	7	Minnesota	27	Tennessee	47
Colorado	8	Mississippi	28	Texas	48
Connecticut	9	Missouri	29	Utah	49
Delaware	10	Montana	30	Vermont	50
District of Columbia	11	Nebraska	31	Virginia	51
Florida	12	Nevada	32	Virgin Islands	52
Georgia	13	New Hampshire	33	Washington	53
Guam	14	New Jersey	34	West Virginia	54
Hawaii	15	New Mexico	35	Wisconsin	55
Idaho	16	New York	36	Wyoming	56
Illinois	17	North Carolina	37	U.S. Air Force	57
Indiana	18	North Dakota	38	U.S. Army	58
Iowa	19	Ohio	39	U.S. Navy	59
Kansas	20	Oklahoma	40		

(First number in listing denotes location according to above key. Refer to patent number in body of the Official Gazette to obtain details as to inventor name, location, etc.)

PATENTS

1 : 3,388,484
3,388,729
3,388,902
3,389,025
3,389,181
3,389,182
4 : 3,389,081
3,389,241
3,389,366
5 : 3,388,998
6 : 3,388,411
3,388,427
3,388,469
3,388,471
3,388,473
3,388,481
3,388,503
3,388,521
3,388,527
3,388,528
3,388,541
3,388,548
3,388,549
3,388,575
3,388,576
3,388,579
3,388,580
3,388,593
3,388,597
3,388,598
3,388,599
3,388,621
3,388,653
3,388,667
3,388,695
3,388,702
3,388,707
3,388,717
3,388,720
3,388,726
3,388,745
3,388,746
3,388,752
3,388,757
3,388,761
3,388,767
3,388,782
3,388,803
3,388,804
3,388,829

6 : 3,388,834
3,388,848
3,388,863
3,388,877
3,388,878
3,388,886
3,388,911
3,388,913
3,388,925
3,388,926
3,388,933
3,388,953
3,388,963
3,388,964
3,388,979
3,389,055
3,389,083
3,389,096
3,389,107
3,389,143
3,389,146
3,389,155
3,389,210
3,389,226
3,389,243
3,389,259
3,389,264
3,389,268
3,389,276
3,389,281
3,389,291
3,389,298
3,389,299
3,389,307
3,389,313
3,389,321
3,389,329
3,389,336
3,389,355
3,389,362
3,389,363
3,389,368
3,389,373
3,389,376
3,389,377
3,389,382
3,389,389
3,389,396
3,389,399
3,389,400

6 : 3,389,401
3,389,404
7 : 3,388,830
8 : 3,388,474
3,388,709
3,388,781
3,388,924
3,388,993
9 : 3,388,476
3,388,596
3,388,600
3,388,601
3,388,738
3,388,818
3,388,824
3,388,827
3,388,849
3,388,852
3,388,874
3,388,899
3,388,970
3,389,044
3,389,098
3,389,212
3,389,244
3,389,246
3,389,256
3,389,274
3,389,319
3,389,332
3,389,348
3,389,395
10 : 3,388,992
3,389,198
11 : 3,388,406
3,388,468
3,388,590
3,389,017
3,389,346
12 : 3,388,421
3,388,509
3,388,510
3,388,514
3,388,523
3,388,565
3,388,573
3,388,617
3,388,657
3,388,683
3,388,699

12 : 3,388,793
3,388,876
3,388,882
3,388,900
3,388,906
3,388,932
3,389,074
3,389,224
3,389,247
3,389,334
3,389,335
3,389,394
13 : 3,388,408
3,388,437
3,388,581
3,388,754
3,388,776
3,388,943
15 : 3,388,493
3,388,513
3,388,673
16 : 3,389,041
17 : 3,388,413
3,388,418
3,388,428
3,388,436
3,388,438
3,388,458
3,388,485
3,388,491
3,388,502
3,388,504
3,388,506
3,388,512
3,388,529
3,388,539
3,388,568
3,388,569
3,388,574
3,388,609
3,388,623
3,388,634
3,388,644
3,388,650
3,388,651
3,388,692
3,388,710
3,388,788
3,388,800
3,388,808

17 : 3,388,868
3,388,871
3,388,873
3,388,904
3,388,923
3,388,928
3,388,951
3,388,954
3,389,012
3,389,029
3,389,036
3,389,075
3,389,077
3,389,091
3,389,092
3,389,103
3,389,124
3,389,231
3,389,232
3,389,235
3,389,240
3,389,284
3,389,402
18 : 3,388,407
3,388,459
3,388,582
3,388,615
3,388,635
3,388,677
3,388,678
3,388,690
3,388,763
3,388,774
3,388,821
3,389,046
3,389,202
3,389,211
3,389,220
3,389,314
3,389,317
3,389,364
19 : 3,388,482
3,388,507
3,388,537
3,388,538
3,388,797
3,389,374
20 : 3,38 8642
3,388,750
3,388,893

21 : 3,388,562
3,388,783
3,388,805
3,388,972
22 : 3,388,422
3,388,434
3,388,671
3,388,689
24 : 3,388,663
3,388,728
3,388,892
3,389,018
3,389,026
3,389,135
3,389,296
3,389,338
3,389,350
3,389,388
3,389,392
25 : 3,388,426
3,388,448
3,388,452
3,388,480
3,388,546
3,388,578
3,388,594
3,388,604
3,388,618
3,388,626
3,388,645
3,388,646
3,388,649
3,388,652
3,388,662
3,388,791
3,388,823
3,388,845
3,388,887
3,388,891
3,388,976
3,388,994
3,389,047
3,389,113
3,389,228
3,389,230
3,389,301
3,389,323
3,389,386
26 : 3,388,417
3,388,420

26 : 3,388,456
3,388,494
3,388,500
3,388,520
3,388,522
3,388,555
3,388,570
3,388,611
3,388,619
3,388,625
3,388,637
3,388,638
3,388,639
3,388,654
3,388,669
3,388,670
3,388,682
3,388,700
3,388,711
3,388,714
3,388,721
3,388,731
3,388,737
3,388,765
3,388,768
3,388,769
3,388,770
3,388,772
3,388,773
3,388,778
3,388,779
3,388,801
3,388,802
3,388,807
3,388,809
3,388,812
3,388,825
3,388,851
3,388,856
3,388,864
3,388,898
3,388,915
3,388,934
3,388,940
3,388,945
3,388,947
3,388,950
3,388,969
3,389,031
3,389,043
3,389,045
3,389,048
3,389,050
3,389,053
3,389,054
3,389,060
3,389,067
3,389,095
3,389,109
3,389,171
3,389,187
3,389,215
3,389,239
3,389,261
3,389,262
3,389,287
3,389,305
3,389,359
3,389,391
27 : 3,388,410
3,388,415
3,388,461
3,388,668
3,388,819
3,388,828
3,388,833
3,388,881
3,388,919
3,389,051
3,389,068
3,389,110
3,389,111
3,389,112
3,389,118
3,389,122

27 : 3,389,156
3,389,161
3,389,310
3,389,328
3,389,379
3,389,380
28 : 3,389,104
29 : 3,388,567
3,388,622
3,388,838
3,388,840
3,388,841
3,388,908
3,388,937
3,388,938
3,389,039
3,389,089
3,389,165
3,389,168
3,389,302
3,389,309
3,389,315
3,389,318
3,389,324
3,389,333
3,389,387
30 : 3,388,409
3,388,771
3,389,179
31 : 3,388,613
32 : 3,389,062
33 : 3,388,664
34 : 3,388,423
3,388,464
3,388,465
3,388,466
3,388,483
3,388,497
3,388,499
3,388,535
3,388,536
3,388,629
3,388,640
3,388,674
3,388,680
3,388,686
3,388,687
3,388,703
3,388,724
3,388,753
3,388,764
3,388,795
3,388,811
3,388,816
3,388,862
3,388,879
3,388,897
3,388,957
3,388,958
3,388,960
3,388,968
3,388,971
3,388,974
3,388,977
3,388,978
3,388,989
3,388,996
3,389,013
3,389,016
3,389,020
3,389,028
3,389,032
3,389,040
3,389,076
3,389,078
3,389,082
3,389,084
3,389,085
3,389,087
3,389,088
3,389,094
3,389,105
3,389,108
3,389,116
3,389,123

34 : 3,389,137
3,389,147
3,389,148
3,389,149
3,389,150
3,389,152
3,389,153
3,389,157
3,389,158
3,389,173
3,389,176
3,389,193
3,389,205
3,389,206
3,389,208
3,389,234
3,389,242
3,389,253
3,389,269
3,389,270
3,389,272
3,389,275
3,389,303
3,389,306
3,389,337
3,389,341
3,389,347
3,389,375
3,389,393
35 : 3,388,589
3,388,739
3,389,079
36 : 3,388,424
3,388,441
3,388,447
3,388,457
3,388,463
3,388,486
3,388,498
3,388,511
3,388,534
3,388,542
3,388,563
3,388,572
3,388,643
3,388,704
3,388,712
3,388,730
3,388,787
3,388,790
3,388,842
3,388,846
3,388,857
3,388,875
3,388,920
3,388,931
3,388,936
3,388,941
3,388,966
3,388,995
3,388,999
3,389,002
3,389,008
3,389,010
3,389,022
3,389,023
3,389,037
3,389,042
3,389,052
3,389,086
3,389,120
3,389,133
3,389,136
3,389,140
3,389,141
3,389,159
3,389,160
3,389,167
3,389,169
3,389,174
3,389,175
3,389,186
3,389,191
3,389,192
3,389,195

36 : 3,389,196
3,389,218
3,389,221
3,389,223
3,389,225
3,389,236
3,389,265
3,389,267
3,389,271
3,389,273
3,389,294
3,389,295
3,389,311
3,389,320
3,389,325
3,389,352
3,389,360
3,389,371
3,389,383
37 : 3,388,806
3,389,207
3,389,345
38 : 3,388,691
3,388,697
3,388,885
39 : 3,388,419
3,388,451
3,388,453
3,388,460
3,388,462
3,388,487
3,388,517
3,388,519
3,388,526
3,388,554
3,388,561
3,388,577
3,388,603
3,388,627
3,388,665
3,388,688
3,388,698
3,388,706
3,388,727
3,388,732
3,388,758
3,388,759
3,388,760
3,388,775
3,388,813
3,388,817
3,388,822
3,388,836
3,388,888
3,388,890
3,388,895
3,388,905
3,388,916
3,388,917
3,388,930
3,388,946
3,388,949
3,388,973
3,388,975
3,388,984
3,388,985
3,389,001
3,389,003
3,389,006
3,389,033
3,389,100
3,389,114
3,389,117
3,389,121
3,389,128
3,389,183
3,389,197
3,389,214
3,389,227
3,389,238
3,389,249
3,389,250
3,389,293
3,389,316
3,389,326

39 : 3,389,327
3,389,365
3,389,370
40 : 3,388,425
3,388,449
3,388,620
3,388,675
3,388,719
3,388,723
3,388,742
3,388,743
3,388,796
3,388,944
3,389,009
3,389,090
3,389,093
3,389,106
3,389,115
3,389,130
41 : 3,389,030
42 : 3,388,405
3,388,414
3,388,416
3,388,439
3,388,440
3,388,442
3,388,454
3,388,455
3,388,496
3,388,508
3,388,518
3,388,553
3,388,560
3,388,564
3,388,583
3,388,585
3,388,595
3,388,602
3,388,633
3,388,658
3,388,685
3,388,716
3,388,837
3,388,843
3,388,853
3,388,858
3,388,860
3,388,865
3,388,889
3,388,921
3,388,980
3,388,981
3,388,982
3,388,997
3,389,004
3,389,015
3,389,027
3,389,049
3,389,056
3,389,097
3,389,099
3,389,125
3,389,132
3,389,144
3,389,151
3,389,162
3,389,163
3,389,166
3,389,180
3,389,188
3,389,189
3,389,199
3,389,209
3,389,213
3,389,237
3,389,277
3,389,282
3,389,304
3,389,308
3,389,322
3,389,340
3,389,343
3,389,356
3,389,357

42 : 3,389,358
3,389,361
3,389,369
3,389,381
3,389,385
3,389,397
44 : 3,388,444
3,388,540
3,388,747
3,389,145
3,389,248
3,389,367
45 : 3,388,433
3,388,435
3,388,571
47 : 3,388,725
3,389,038
48 : 3,388,429
3,388,450
3,388,531
3,388,556
3,388,636
3,388,655
3,388,715
3,388,718
3,388,744
3,388,755
3,388,756
3,388,777
3,388,839
3,388,866
3,388,894
3,388,901
3,388,909
3,389,073
3,389,119
3,389,194
3,389,200
3,389,257
3,389,258
3,389,390
3,389,403
49 : 3,388,610
50 : 3,388,492
3,388,631
51 : 3,388,558
3,388,559
3,388,659
3,388,660
3,388,661
3,388,708
3,388,792
3,388,880
3,389,035
3,389,219
3,389,245
3,389,260
3,389,263
52 : 3,388,847
3,388,965
53 : 3,388,495
3,388,530
3,388,835
3,388,907
3,389,101
3,389,254
54 : 3,388,472
3,388,855
3,388,991
3,389,178
3,389,201
55 : 3,388,505
3,388,515
3,388,524
3,388,557
3,388,705
3,388,713
3,388,789
3,388,918
3,388,929
3,388,962
3,389,059
3,389,278
56 : 3,388,479

Design Patents

6 : 211,451
211,453
211,455
211,472
211,473
211,479
211,491
211,494
211,495

6 : 211,496
211,500
9 : 211,462
211,463
211,464
211,465
12 : 211,483
211,502

17 : 211,474
211,476
211,480
211,484
211,485
211,497
18 : 211,470
20 : 211,461

21 : 211,456
211,457
211,458
26 : 211,468
27 : 211,486
211,499
29 : 211,447
34 : 211,450

36 : 211,445
211,452
211,466
211,475
211,482
39 : 211,446
211,492
211,498

41 : 211,467
42 : 211,478
211,481
44 : 211,488
49 : 211,501
51 : 211,459
55 : 211,448
211,449

U.S. DEPARTMENT OF COMMERCE

OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE

June 18, 1968 Volume 851 Number 3

TRADEMARKS

NOTICES

Trademark Suits

Notices under 15 U.S.C. 1116; Trademark Act of July 5, 1946

Reg. No. 22,406 (COCA-COLA), The Coca Cola Company, Tonic, syrup or beverage; **Reg. No. 47,189**, same, Nonalcoholic maltless beverages and the syrups for making such beverages; **Reg. No. 238,145**, same, Beverages and syrups for the manufacture of such beverages; **Reg. No. 238,146**, same; **Reg. No. 415,755** (COKE) same, Nonalcoholic maltless beverages and the syrups for making such beverages, filed Sept. 25, 1967, D.C., E.D. Ark. (Pine Bluff), Doc. PB67–C–62, *The Coca-Cola Company* v. *Nannie L. Clark and Stanley Clark, doing business as Burger Barn.* Order of dismissal as to defendant Stanley Clark, consent order of injunction as to defendant Nannie L. Clark, Mar. 5, 1968.

Reg. No. 47,189. (See Reg. No. 22,406.)

Reg. No. 112,291 (LIBBY'S), Libby, McNeill & Libby, Canned meats, canned sausage, canned soups, and canned boneless chicken; **Reg. No. 132,013**, same, Pickled and canned beef, veal, pork, mutton, and poultry and their products; sausage, meat extracts, bouillon-cubes, canned soups, canned fish; canned, dried, and preserved fruits, berries, and vegetables; plum-puddings and mince-meats, olives, pickles, catchups and relishes, sauces and condiments for seasoning food, olive-oil, salad-oils and salad-dressings, marmalades; fruit butters, jams, preserves, and jellies; fresh, condensed, powdered, and evaporated milk; peanuts, peanut-butter, and peanut-oil; **Reg. No. 233,742** (LIBBY'S AND RECTANGULAR OUTLINE DESIGN), same, Canned fruits and berries; **Reg. No. 320,977** (LIBBY'S), same, Beer; **Reg. No. 781,105** (LIBBY'S AND DESIGN (FACING LEFT)), same, Canned and frozen fruits and vegetables, canned corned beef hash, canned Spanish rice, canned beef stew, frozen meat pies, and frozen macaroni and cheese casseroles, filed Feb. 18, 1965, D.C., E.D.N.Y. (Brooklyn), Doc. 65C–160, *Libby, McNeill & Libby* v. *Libby Produce, Inc.* Order that plaintiff's motion for summary judgment is granted; defendant, its agents are perpetually enjoined and restrained from using corporate names, etc., Mar. 5, 1968.

Reg. No. 132,013. (See Reg. No. 112,291.)

Reg. No. 297,915 (LACRITE), The Patterson-Sargent Co. Dry and ready-mixed paints, paint and varnish driers, paint enamels, wood stains, varnish stains, wall paint, prepared lacs, fillers for painters' use, varnishes, automobile enamels, baking enamels, and engine enamels, filed Jan. 12, 1968, D.C., E.D. Mo., Doc. 68C17(2), *Jay V. Zimmerman Co.* v. *Missouri Petroleum Products Co.* Judgment decreeing patent valid and granting plaintiff permanent injunction against defendant, Feb. 5, 1968.

Reg. No. 233,742. (See Reg. No. 112,291.)

Reg. No. 238,145. (See Reg. No. 22,406.)

Reg. No. 238,146. (See Reg. No. 22,406.)

CONDITION OF TRADEMARK APPLICATIONS AS OF APRIL 30, 1968

Total number of applications awaiting action [excluding renewals and Sec. 12(c)]	16, 519
Date of oldest new application	May 23, 1967
Date of oldest amended application (filing date)	April 20, 1965

C. M. WENDT, Director, Trademark Examining Operation **TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION**	Oldest Application	
	New	Amended
(I) L. J. BETTENDORF, Classes 2, 3, 4, 5, 7, 9, 10, 11, 27, 28, 30, 32, 33, 37, 38, 39, 40, 41, 42, 43, 50; Certification Marks, Classes A and B	5–23–67	4–20–65
(II) F. H. WETHERBEE, Classes 1, 6, 15, 18, 45, 46, 47, 48, 49, 51, 52; Collective Membership Mark, Class 200	6–28–67	7–6–65
(III) P. S. BALL, Classes 19, 21, 23, 26, 31, 34, 35, 36	8–18–67	10–23–65
(IV) M. E. ABRAMSON, Classes 8, 12, 13, 14, 16, 17, 20, 22, 24, 25, 29, 44; Service Marks, Classes 100, 101, 102, 103, 104, 105, 106, and 107	5–26–67	12–23–65
Renewals (All Classes)	4–9–68	--------
Sec. 12(c) Publications (All Classes)	4–15–68	--------

Applications filed during the month of April 1968—2,640

Registrations Issued	436—No. 850,818 to No. 851,253
Renewals Issued	100

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402 to whom all subscriptions should be made payable and all communications addressed; subscription price $12.00 per annum, foreign mailing $4.00 additional; single copies, 25 cents each.

PRINTED COPIES OF TRADEMARK REGISTRATIONS are furnished by the Patent Office for 20 cents each. Address orders to the Commissioner of Patents, Washington, D.C. 20231.

Reg. No. 272,651 (PRATT AND WHITNEY), The Pratt & Whitney Aircraft Company, Internal combustion engines for aircraft and their parts; **Reg. No. 290,516** (PWA DESIGN), United Aircraft Corporation, same; **Reg. No. 790,295** (PRATT & WHITNEY ETC. AND DESIGN), same, Internal combustion engines including piston, turbine, and rocket engines, and their parts, **filed** Mar. 6, 1968, D.C., N.D. Tex. (Dallas), Doc. Ca-3-2489, *United Aircraft Corporation* v. *Francis Marshall Parsley, doing business as Dallas Aircraft Supply, Dallas Aircraft Supply, Inc., and Airmotive Supply Corporation.*

Reg. No. 287,974. (See Reg. No. 545,127.)

Reg. No. 330,977. (See Reg. No. 112,291.)

Reg. No. 366,253. (See Reg. No. 545,127.)

Reg. No. 290,516. (See Reg. No. 272,651.)

Reg. No. 415,755. (See Reg. No. 22,406.)

Reg. No. 545,127 (CUTLER-HAMMER), Cutler-Hammer, Inc. Electrical control apparatus, electrical machines, and electrical supplies, consisting of controllers for dynamo-electric machines, to wit, starting, stopping, reversing, and speed regulating apparatus for motors, and voltage and current regulating apparatus for generators, and like control apparatus for rotary converters; current breakers; magnetic brakes for various types of machines; lifting and separating magnets and controls therefor; electrical panelboards and multi-breakers; solenoids, safety switches, meter service and entrance switches; float and pressure switches; insulating bases and supports for switches and the like; controllers and driving units for valves requiring rotation of an element thereof; solenoid-operated valves, fuse panels; terminal lugs; wiring fixtures and conduit fittings comprising switches, switch boxes and covers, attachment plugs, taps, receptacles, lamp sockets, and cord connectors; elevator control apparatus, consisting of limit switches, door switches, transfer switches, and floor selector switches; speed regulating and other current control resistors; rheostats; relays; contactors; switch panels; control panels; push button switches for machine tool controllers; motor starters; speed controllers and regulators especially adapted for marine service; resistance units for electric space heaters; industrial type electric heaters; ovens and immersion type electric water heaters; surface units and oven units for electric ranges; theater and spotlight dimmers; battery chargers; starters and speed regulators for the electric motors of fire pumps, printing presses, paper making machines, oil well drillers and pumps; crane and hoist controls; electrical controls for diesel locomotives; circuit controllers of the electronic type; electric welding controllers; and circuit controllers for electric refrigerators; **Reg. No. 287,974** (C-H AND DESIGN), same, Electrical apparatus, machines, and supplies, consisting of controllers for dynamo-electric machines, to wit, starting, stopping and speed regulating apparatus for motors, and voltage and current regulating apparatus for generators, and like control apparatus for rotary converters; current breakers, magnetic brakes for various types of machines, lifting and separating magnets and controls therefor; solenoids, safety switches, meter service and entrance switches, float, pressure and other special switches; insulating bases and supports for switches, automatic valve control units, solenoid-operated valves, fuse panels, terminal lugs; wiring fixtures and conduit fittings, consisting of switches, switch boxes and covers, attachment plugs, taps, receptacles, caps, lamp sockets, shade holders, wall plates, and cord connectors; elevator control apparatus, consisting of limit switches, door switches, transfer switches, and floor selector switches; speed regulating and other current control resistors, rheostats, relays, contactors, switch panels, push button switches for machine tool controllers; motor starters, speed controllers and regulators especially adapted for marine service; resistance units for space heaters, industrial heaters, ovens, and immersion water heaters; theatre and spotlight dimmers, battery chargers; starters and speed regulators for fire pumps, printing presses, paper making machines, oil well drillers and pumps; and crane and hoist controls; **Reg. No. 366,253** (REPRESENTATION OF NAME PLATE), same, Electrical control apparatus, electrical machines, and electrical supplies, consisting of controllers for dynamo-electric machines, to wit, starting, stopping, reversing and speed regulating apparatus for motors, and voltage and current regulating apparatus for generators, and like control apparatus for rotary converters; current breakers; magnetic brakes for various types of machines; lifting and separating magnets and controls therefor; solenoids, safety switches, meter service and entrance switches; float, pressure and other special switches; insulating bases and supports for switches and the like; automatic valve control units; solenoid-operated valves; fuse panels; terminal lugs, wiring fixtures and conduit lugs; wiring fixtures and conduit fittings comprising switches, switch boxes and covers, attachment plugs, taps, receptacles, caps, lamp sockets, and cord connectors; elevator control apparatus, consisting of limit switches, door switches, transfer switches; and floor selector switches; speed regulating and other current control resistors; rheostats; relays, contactors; switch panels, control panels; push button switches for machine tool controllers; motor starters; speed controllers and regulators especially adapted for marine service; resistance units for space heaters; industrial heaters; ovens, and immersion water heaters; theater and spotlight dimmers; battery chargers; starters and speed regulators for fire pumps, printing presses, paper making machines, oil well drillers and pumps, crane and hoist controls; electronic control apparatus; electric welding controllers and electric refrigerator control devices, **filed** Mar. 11, 1968, D.C., S.D.N.Y., Doc. 68-C-1014, *Cutler-Hammer, Inc.* v. *B.L.B. Inc., doing business as American Relays Electronics Division.*

Reg. No. 647,115 (JR. JUNIOR CIRCLE AND DESIGN), A. R. Linsk, Inc., Dresses, jacket or blouse and skirt combinations, skirts, blouses, pedal pushers, slacks, shorts and jackets, **filed** Mar. 14, 1968, D.C., S.D.N.Y., Doc. 68-C-1071, *Huntington Mfg. Co., Inc.* v. *Junior Circle, Inc.*

Reg. No. 697,913 (LEVITT AND SONS), Levitt and Sons, Inc. Construction, maintenance and repair of residential communities including houses, public buildings, swimming pools, and shopping centers, **filed** Mar. 18, 1968, D.C., E.D.N.Y. (Brooklyn), Doc. 68C-269, *Levitt & Sons, Inc.* v. *Tivel Construction Corporation et al.*

Reg. No. 781,106. (See Reg. No. 112,291.)

Reg. No. 790,295. (See Reg. No. 272,651.)

MARKS PUBLISHED FOR OPPOSITION

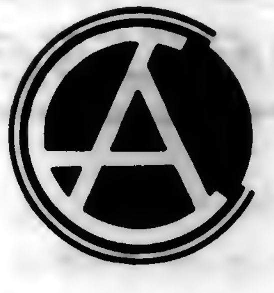
SECTION 1

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Application for the registration of these marks in more than one class has been filed as provided in section 30 of said act as amended by Public Law 772, 87th Congress, approved Oct. 9, 1962, 76 Stat. 769. Opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.

A separate fee of twenty-five dollars for each class opposed must accompany the opposition.

[NOTE: For publication of marks presented in applications for registration in one class, see section 2.]

SN 252,065. Audio Craft Company, Cleveland, Ohio. Filed Aug. 10, 1966.



Class 21—Electrical Apparatus, Machines, and Supplies

For High Fidelity and Stereophonic Components—Namely, Music and Sound Systems Comprising Amplifiers, Microphones, Baffles, Reproducers, Sound Columns for Restriction of Sound Projection, Loud Speakers, Intercom and Telephone Systems, Transcription Turntables as Component Parts Thereof; Commercial Sound Equipment Comprising Music Systems for Public and School Auditoriums, Public Address Systems; Internal Communication Systems Including Recorders, Microphones, and Speakers as Component Parts Thereof (Int. Cl. 9).

Class 26—Measuring and Scientific Appliances

For Electronic Teaching and Learning Systems Comprising Headphones, Microphones, Recorders, Tape, and Playback Units as Component Parts Thereof (Int. Cl. 9).

Class 36—Musical Instruments and Supplies

For Tape Recorders and Component Parts Therefor (Int. Cl. 9).

First use 1957.

SN 253,253. The Steel Company of Canada Limited, Hamilton, Ontario, Canada. Filed Aug. 29, 1966.

STELCO

Owner of Canadian Reg. No. 181/40,099, dated June 22, 1926.

Class 6—Chemicals and Chemical Compositions

For Sulphate of Ammonia, Bensol, Tolnol, Xylol, Solvent Naphtha, and Coal Tar (Int. Cl. 1).

Class 12—Construction Materials

For Steel Beams, Ladder Rungs, Reinforcing Bars and Rods; Spirals, i.e., Steel Wire Rod Formed Into a Spiral for Use in Concrete Construction in Conjunction With Reinforcing Bars; Splice Plates, Tie Rods, Welded Wire Fabric, Wire for Prestressing Concrete, Gabions, and Steel Partitions (Int. Cl. 6).

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

For Turnbuckles; Horseshoe Nails; Fencing and Accessories—Namely, Steel Fencing of All Kinds, Steel Posts, Gates, Welded Fabric; Track Material—Namely, Joint Bars, Lockwashers, "S" Tie Irons, Spikes, Tie Plates, and Track Bolts; Fastening Devices—Namely, Nails, Spikes, Staples, Tacks, Pins, Screws, Machine Screws, Studs, Bolts, Nuts, Washers, Anchor Rods, Threaded Rods, Rivets; Bright Wire Goods—Namely, Bent Wire Goods, Eyes, Hooks, Pulls, Cotter Pins, Jack Chain, Stove Scrapers; Pole Line Hardware—Namely, Bolts, Nuts, Cross Arm Braces, Drive Hooks, Eyebolts, Fetter Drive Screws, Ground Rods, Guy Clamps, Guy Hooks, Insulator Pins, Pole Steps; Metal Stamping Products—Namely, Custom Stampings, Flanges, Hinge Clips, Pipe Hangers, Stake Pockets, Tank Legs; Pipe Products—Namely, Pipe, Tubing, Piling Pipe, Pipe and Tank Bands, Pipe Couplings, Nipples and Plugs, Suspension Strap, Hollow Structural Sections; Wire Products—Namely, Wire of All Types, Sizes and Shapes, Cable Armour, i.e., a Protective Steel Wrapping for Cable, Wire Screening, Wire Strand, Springs, and Chain (Int. Cl. 6).

Class 14—Metals and Metal Castings and Forgings

For Semi-Finished Steel Products—Namely, Billets, Blooms, Slabs and Rods; Steel Sheet and Strip Products—Namely, Hot and Cold Rolled Strip, Tin Plate and Galvanised Strip; Bar Mill Products—Namely, Rails, Rods, Bars, Bands, Flats, Rounds, Angles, Structural Steel Shapes, and Steel Sections of All Kinds, Machining Steels, Grader Blade Sections, Plough Beams; Drop Forgings of All Kinds; Steel Plate of All Kinds; Welding Rods; Lead Shot; and Pig Iron (Int. Cl. 6).

Class 22—Games, Toys, and Sporting Goods

For Playground Equipment—Namely, Swing Sets, Gymnasium Sets, Slides, Climbers, See-Saw Outfits, Bicycle Racks, Baseball Backstops; Swimming Pool Equipment Including Diving Stands, Lifeguard Chairs and Landing Ladders; Merry-Go-Rounds, Basketball Boards, Volleyball Standards, Picnic Table Frames, Chain Link Fabric Tennis Nets and Net Posts, and Parallel Bars (Int. Cl. 28).

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

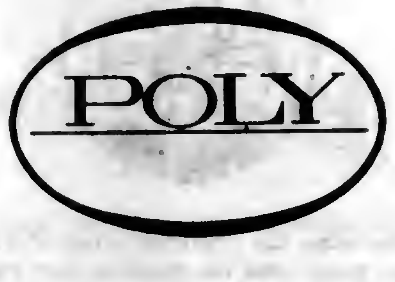
For Industrial Supplies—Namely, Grinding Balls, Grinding Rods, Sucker Rods, and Couplings (Int. Cls. 6 and 7).

Class 35—Belting, Hose, Machinery Packing, and Nonmetallic Tires

For Steel Mesh Conveyor Belting (Int. Cl. 7).

First use January 1918; in commerce June 1951.

SN 254,202. Therachemie Chemisch Therapeutische GmbH, d.b.a. Therachemie GmbH, Dusseldorf, Germany. Filed Sept. 9, 1966.



Owner of Reg. Nos. 680,610, 842,986, and others.

Class 51—Cosmetics and Toilet Preparations

For Preparations for Conditioning, Coloring, Waving, and Setting the Hair (Int. Cl. 3).

First use 1963; in commerce June 1965.

Class 52—Detergents and Soaps

For Hair Coloring Shampoo (Int. Cl. 3).
First use 1963; in commerce March 1965.

SN 254,959. John Wood Company, Midland Park, N.J. Filed Sept. 22, 1966.

Northeast

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

For Steam Cleaners; Steam Cleaner Guns; High Pressure Water Washers; Pressure Spray Cleaners; Air Operated Vacuum Cleaners; and Sand Blasters (Int. Cl. 7).

Class 34—Heating, Lighting, and Ventilating Apparatus

For Portable Space Heaters (Int. Cl. 11).

First use early part of June 1958.

SN 256,896. John Winkler's Sons Incorporated, Far Rockaway, N.Y. Filed Oct. 21, 1966.

Carefree Cruise

Applicant claims exclusive rights in the expression "Cruise" as a part of its mark, but not otherwise.

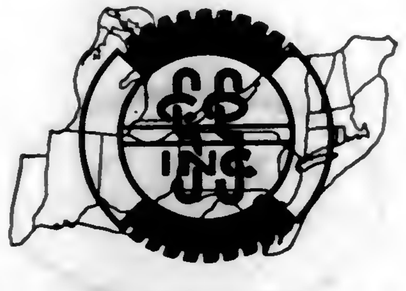
Class 32—Furniture and Upholstery

For Wardrobes (Int. Cl. 20).
First use at least as early as Jan. 22, 1965.

Class 105—Transportation and Storage

For Transportation Services—Namely, Furnishing Clients With Wardrobe Closets for Carrying Personal Belongings During Travel; Pick Up and Delivery of Such Closets From and to Places Designated by Clients; Pick Up and Delivery of Such Closets From and to Carrier Shipping and Receiving Points, Including, but Not Limited to, Ship Piers and Railroad Shipping Terminals (Int. Cl. 39).
First use on or about Jan. 22, 1965.

SN 260,893. Standard Supply Company, Inc., Pittsburgh, Pa. Filed Dec. 15, 1966.



Applicant disclaims the representation of the States aside from the entire mark and its common law rights. Owner of Reg. Nos. 689,424 and 693,145.

Class 19—Vehicles

For Vehicle Front End and Steering Repair Parts and Kits, Vehicle Springs, Vehicle Spring Torque Reaction Absorbers, Vehicle Coil Spring Stabilizer Blocks, Vehicle Spring Lifters, and Vehicle Spring Spacers (Int. Cl. 12).

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

For Vehicle Axle Spindle Bearings, Vehicle Axle Camber and Caster Offset Bushings, Vehicle Wheel Bearings, Vehicle Lifting Jacks, Vehicle Lifting Jack Stands, Vehicle Lifting Jack Rests, and Vehicle Engaging Jaws for Tools (Int. Cls. 12 and 8).

First use during June 1950.

SN 265,234. Dresser Industries, Inc., Dallas, Tex. Filed Feb. 23, 1967.

DRESSER

Owner of Reg. Nos. 549,537, 568,503, and others.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

For Piping Accessories Including Metal Valves, Repair Clamps, Couplings, Tapping Service Connectors, Compression Fittings, Hydrants, Pressure Relief and Safety Valves; and Parts, Components, and Accessories Therefor (Int. Cls. 6 and 11).
First use June 24, 1965.

Class 21—Electrical Apparatus, Machines, and Supplies

For Electrically Driven Lifting, Hoisting, Transporting, and Conveying Devices, and Parts, Components and Accessories Therefor; Switches, Regulators, Parts, Components and Accessories Therefor (Int. Cls. 7 and 9).
First use June 13, 1966.

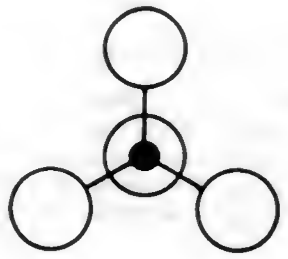
Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

For Lifting, Hoisting, Transporting, and Conveying Devices; and Accessories, Parts, and Components Therefor (Int. Cl. 7).
First use Apr. 26, 1966.

Class 26—Measuring and Scientific Appliances

For Instrument Devices for Measuring, Indicating, Controlling, Recording or Testing a Condition; and Parts, Components and Accessories Therefor, Including Gauges, Transmitters, Switches, Regulators and Their Fittings, and Components Therefor (Int. Cl. 9).
First use Jan. 12, 1966.

SN 270,953. Rex Asbestwerke, Graf von Rex K.G., Schwaebisch Hall, Germany. Filed May 8, 1967.



Owner of German Reg. No. 700,526, dated Feb. 25, 1956.

Class 1—Raw or Partly Prepared Materials

For Asbestos Fiber and Sheet Material (Int. Cl. 17).

Class 43—Thread and Yarn

For Asbestos Yarn and Thread (Int. Cl. 17).

SN 272,779. Modecraft Company, Inc., Brooklyn, N.Y. Filed June 1, 1967.

MODECRAFT

Owner of Reg. No. 787,632.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

For Beauty Parlor Equipment—Namely, Shampoo Bowls and Wash Basins (Int. Cl. 21).
First use 1949.

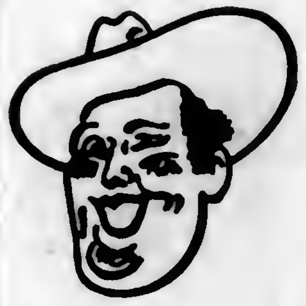
Class 32—Furniture and Upholstery

For Furniture and Fixtures for Beauty Parlors—Namely, Display Cases, Room Dividers, Desks, Chairs, Tables, Dressers, Bureaus, Vanities, Mirrors, Shelving, Cabinets, Drying Chairs, Drying Lounges, Ottomans, Manicure Tables, Room Partitions, Stools, and Hydraulic and Non-Hydraulic Styling Chairs (Int. Cl. 20).
First use 1937.

Class 44—Dental, Medical, and Surgical Appliances

For Beauty Parlor Equipment—Namely, Hair Dryers (Int. Cl. 7).
First use 1964.

SN 275,806. Big Daddy's Enterprises, Inc., Brooklyn, N.Y., assignee of Robert M. Napp and Murray L. Handwerker (joint owners), d.b.a. Big Daddy's Drive In Restaurants, Brooklyn, N.Y. Filed Aug. 23, 1967.



Class 45—Soft Drinks and Carbonated Waters

For Soft Drinks (Int. Cl. 32).

Class 46—Foods and Ingredients of Foods

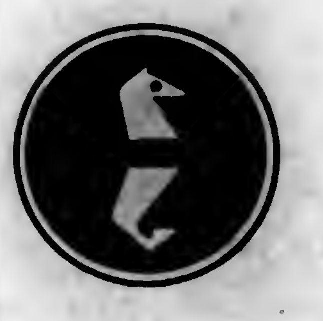
For Prepared Foods—Namely, Hot Dog and Hamburger Sandwiches, and Frozen Shrimp Rolls (Int. Cl. 29).

Class 100—Miscellaneous

For Restaurant Services (Int. Cl. 42).

First use Aug. 26, 1964.

SN 282,230. Atlantic Products Corporation (Delaware corporation), Trenton, N.J., assignee of Atlantic Products Corporation (New Jersey corporation), Trenton, N.J. Filed Oct. 11, 1967.



Owner of Reg. Nos. 504,356, 544,379, and 820,149.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

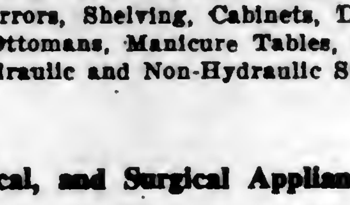
For Baggage (Int. Cl. 18).

Class 22—Games, Toys, and Sporting Goods

For Golf Bags (Int. Cl. 28).

First use April 1967.

SN 283,055. Nazareth Mills, Incorporated, New York, N.Y. Filed Oct. 23, 1967.



Owner of Reg. Nos. 51,328, 407,340, and others.

Class 39—Clothing

For Boys' and Girls' Polo Shirts, Underwear, Pajamas; Infants' Knit Gowns, Sleepwear, and Underwear (Int. Cl. 25).

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

For Crib Sheets (Int. Cl. 24).

First use May 17, 1967.

SN 290,228. Simoniz Company, Chicago, Ill. Filed Feb. 5, 1968.

SIMONIZ

Owner of Reg. Nos. 137,701, 838,649, and others.

Class 6—Chemicals and Chemical Compositions

For Aerosol Air Freshener and Preparation for Melting Ice and Snow on Windshields (Int. Cls. 1 and 5).

Class 52—Detergents and Soaps

For Car Wash Preparations and Windshield Washer Solvent (Int. Cl. 3).

First use Aug. 23, 1967.

SN 294,110. Tobaccoland of Cherry Hill, Inc., Cherry Hill, N.J. Filed Mar. 26, 1968.

TOBACCOLAND

Class 8—Smokers' Articles, Not Including Tobacco Products

For Pipes and Pipe Cleaners (Int. Cl. 34).

Class 17—Tobacco Products

For Pipe Tobacco and Cigars (Int. Cl. 34).

First use at least as early as 1958.

SECTION 2

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Opposition under section 13 may be filed within thirty days of publication. See Rules 2.101 to 2.105.

A fee of twenty-five dollars must accompany the opposition.

[NOTE: For publication of marks presented in a combined application for registration in more than one class, see section 1.]

Class 1 — Raw or Partly Prepared Materials

SN 258,776. Better Turf Seed Company, Inc., Bound Brook, N.J. Filed Nov. 16, 1966.

FRONT LAWN

Applicant disclaims the term "Lawn" apart from the mark as shown.

For Grass Seed (Int. Cl. 31).

First use on or about Apr. 1, 1966.

SN 262,752. Avisun Corporation, Philadelphia, Pa. Filed Jan. 18, 1967.

OLECOAT

Owner of Reg. Nos. 737,355, 796,183, and others.

For Synthetic Resins and Polymers (Int. Cl. 1).

First use Dec. 13, 1966.

SN 274,465. Scotty-Pack Products, Inc., Colgate, Wis. Filed June 21, 1967.

SCOTTY PACK

For Plants (Int. Cl. 31).

First use May 22, 1967.

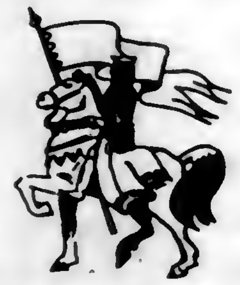
SN 274,899. Stribling's Nurseries, Inc., Merced, Calif. Filed June 27, 1967.

CASCADE

For Nursery Stock, Particularly Navel Orange Trees (Int. Cl. 31).

First use May 23, 1967.

SN 276,316. Benjamin E. Dibble, Delavan, Wis. Filed July 19, 1967.



For Holstein Cattle and Semen From Herd Sires (Int. Cl. 31).

First use September 1965.

Class 2 — Receptacles

SN 269,860. Corrosion Products, Inc., St. Louis, Mo. Filed Apr. 24, 1967.

MOPTOP

For Containers Fitted With a Special Applicator Dispenser in the Mouth Thereof (Int. Cl. 20).

First use Mar. 21, 1967.

SN 276,825. David Douglas & Co., Inc., Manitowoc, Wis. Filed July 26, 1967.

ACCALAC

Owner of Reg. No. 830,431.

For Plastic Material Made Into Tableware (Int. Cl. 21).

First use Aug. 1, 1965.

SN 278,663. Jay J. Busey, Houston, Tex. Filed Aug. 21, 1967.

BURRO

For Refuse Containers Having Disposable Liners (Int. Cl. 21).

First use at least as early as May 10, 1967.

SN 282,781. David Douglas & Co., Inc., Manitowoc, Wis. Filed Oct. 18, 1967.

ROMA WARE

The word "Ware" is disclaimed other than as it is used with the word "Roma."

For Dishware Including Trays, Mugs, Tumblers, Beverage Servers, and Similar Articles (Int. Cl. 21).

First use Sept. 26, 1967.

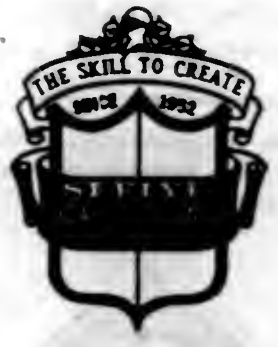
SN 285,543. Harford E. Goings, Washington, D.C. Filed Nov. 24, 1967.

PARTEE-SERV

For Hostess Trays and Airline Trays (Int. Cl. 21).

First use Oct. 25, 1967.

SN 285,584. Seelye Plastic-Fab, Inc., Minneapolis, Minn. Filed Nov. 24, 1967.

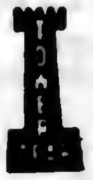


The word "Minneapolis" is disclaimed apart from the mark as shown.

For Custom Fabricated Articles—Namely, Drums for Use in Food Processing; Self-Supporting Tanks and Tank Linings, Including Tanks for Use in the Syphon Filling of Bottles (Int. Cl. 20).

First use at least as early as Aug. 31, 1964.

SN 286,785. Tower Packaging Company, Wheeling, Ill. Filed Dec. 11, 1967.



Owner of Reg. No. 794,269.

For Plastic Bags (Int. Cl. 22).

First use Nov. 1, 1967.

SN 287,005. Collin Box & Supply Co., Boston, Mass. Filed Dec. 15, 1967.

POWER-STAK

For Corrugated Cardboard Cartons (Int. Cl. 16).

First use Nov. 28, 1967.

SN 287,063. Hoover Ball and Bearing Company, Saline, Mich. Filed Dec. 18, 1967.

uniloy

For Plastic Bottles, Jugs and Containers (Int. Cl. 21).

First use Mar. 24, 1965.

SN 287,968. Target Stores, Inc., Minneapolis, Minn. Filed Jan. 2, 1968.

TARGET

For Plastic Garbage Bags, Sandwich Bags and General Utility Bags, and Paper Bags (Int. Cls. 16 and 21).

First use March 1967.

Class 3 — Baggage, Animal Equipments, Portfolios, and Pocketbooks

SN 256,908. Jack C. Abert, d.b.a. Mechanical Products Company, Phoenix, Ariz. Filed Oct. 21, 1966.

TOTE-A-TOT

For Pack Frames for Transporting Children (Int. Cl. 18).

First use June 26, 1962.

SN 282,801. Hogar Industries, Inc., Los Angeles, Calif. Filed Oct. 18, 1967.

THE ARRANGEMENT

For Credit Card Wallets (Int. Cl. 18).

First use Aug. 8, 1967.

SN 282,824. Samsonite Corporation, Denver, Colo. Filed Oct. 18, 1967.

SOVEREIGN

For Luggage—Namely, Attache Cases (Int. Cl. 18).

First use Aug. 23, 1967.

Class 4 — Abrasives and Polishing Materials

SN 270,568. J. Goddard & Sons Limited, Leicester, England. Filed May 3, 1967.

GODDARD'S SHINE MAKER

The term "Shine Maker" is disclaimed apart from the mark as a whole. Owner of U.S. Reg. Nos. 260,103, 831,671, and others.

For Metal Cleaning and Polishing Preparations (Int. Cl. 3).

First use Mar. 8, 1967; in commerce Mar. 8, 1967.

SN 276,328. Masury-Columbia Co., Melrose Park, Ill. Filed July 19, 1967.

CUREALL

For Floor Waxes (Int. Cl. 3).

First use Dec. 1, 1966.

SN 286,877. Baron Blakeslee, Inc., Chicago, Ill. Filed Dec. 14, 1967.

BLACO-POLISH

For Plastic Polishing Solvents (Int. Cl. 3).

First use on or about Sept. 25, 1967.

Class 5 — Adhesives

SN 269,850. The Borden Company, New York, N.Y. Filed Apr. 24, 1967.

PANEL FAST

For Panel Adhesive Used To Install Wood and Other Types of Paneling (Int. Cl. 1).

First use Mar. 16, 1967.

SN 284,447. Casting Materials Company, Inc., White Plains, N.Y. Filed Nov. 9, 1967.

CAMACO

For Binders Used in Making Foundry Molds and Cores (Int. Cl. 1).

First use in or about January 1967.

Class 6 — Chemicals and Chemical Compositions

SN 258,259. Staff Supermarket Associates, Inc., Jericho, N.Y. Filed Nov. 8, 1966.

MINUET

Owner of Reg. No. 749,860.

For Laundry Starch (Int. Cl. 3).

First use January 1959.

SN 268,014. Atlas Chemical Industries, Inc., Wilmington, Del. Filed Mar. 31, 1967.

MILUBE

For Compositions for Use on Textile Fibers, Yarns, or Fabrics as Lubricants, Softeners, Antistatic Agents, or Processing Assistants (Int. Cl. 1).

First use Feb. 19, 1964.

SN 274,082. Microbiological Associates Incorporated, Bethesda, Md. Filed June 16, 1967.

IDENTI-DISC

For Diagnostic Agents for Laboratory Use in Identifying Certain Microplasma (Int. Cl. 1).
First use May 15, 1967.

SN 274,858. Colab Laboratories, Inc., Chicago Heights, Ill. Filed June 27, 1967.

HISTO-TEST

For Diagnostic Reagent Comprised of Latex Antigen for Laboratory Use, To Determine the Presence of Acute Histoplasmosis (Int. Cl. 1).
First use Feb. 6, 1967.

SN 277,375. Parker Laboratories, Inc., Newark, N.J. Filed Aug. 2, 1967.

AQUAGEL

For Skin Contact Jelly for Use With Medical Apparatus Electrodes (Int. Cl. 1).
First use January 1963.

SN 277,786. Avon Products, Inc., New York, N.Y. Filed Aug. 8, 1967.

SEA GARDEN

For Room Freshener (Int. Cl. 5).
First use July 24, 1967.

SN 280,957. Kohn Enterprises, Inc., Chicago, Ill. Filed Sept. 22, 1967.

Salon

For Leather Dressing (Int. Cl. 1).
First use Aug. 14, 1967.

SN 281,063. Fycon Engineering Corporation, Charlotte, N.C. Filed Sept. 25, 1967.

Goosegrease

For Industrial Heat Transfer Compositions (Int. Cl. 1).
First use Sept. 19, 1967.

SN 281,075. W. R. Grace & Co., New York, N.Y. Filed Sept. 25, 1967.

LETTERFLEX

For Photopolymer for Making Printing Plates (Int. Cl. 1).
First use Aug. 25, 1967.

SN 281,094. Monsanto Company, St. Louis, Mo. Filed Sept. 25, 1967.

NITROL

Owner of Reg. No. 382,671.
For Elastomer Modifier (Int. Cl. 1).
First use Jan. 26, 1967.

SN 281,099. Monsanto Company, St. Louis, Mo. Filed Sept. 25, 1967.

SHACKLE

For Herbicide (Int. Cl. 5).
First use Aug. 7, 1967.

SN 281,137. Triangle Chemical Company, Macon, Ga. Filed Sept. 25, 1967.

KLEAROW

For Cotton Herbicides (Int. Cl. 5).
First use on or about Mar. 16, 1967.

SN 281,434. Bausch & Lomb Incorporated, Rochester, N.Y. Filed Sept. 29, 1967.

BAL-TYNT

For Dye for Plastic Lenses (Int. Cl. 2).
First use Sept. 8, 1967.

SN 287,969. Target Stores, Inc., Minneapolis, Minn. Filed Jan. 2, 1968.

TARGET

Owner of Reg. Nos. 816,107, 837,308, and others.
For Household Bleach and Fabric Softener (Int. Cl. 3).
First use May 1964.

SN 289,443. International Dioxcide, Inc., New York, N.Y. Filed Jan. 24, 1968.

ENDIMAL

For Room Deodorants and Deodorants for Household and Industrial Use (Int. Cl. 5).
First use Jan. 15, 1968.

SN 293,985. Geigy Chemical Corporation, Ardsley, N.Y. Filed Mar. 25, 1968.

PHENOLENE

For Chemical Additive for Use in Electro-Deposition of Tin (Int. Cl. 1).
First use July 25, 1967.

Class 7 — Cordage

SN 288,408. Norseman (Cables & Extrusions) Limited, Manningtree, Essex, England. Filed Dec. 12, 1967.

NORSELAY

For Wire Ropes, Covered or Uncovered; and Wire Ropes Impregnated With Plastics (Int. Cl. 6).
First use Oct. 2, 1964; in commerce Oct. 30, 1964.
Subj. to Intf. with SN 246,486.

Class 8 — Smokers' Articles, Not Including Tobacco Products

SN 262,156. S. M. Frank & Co., Inc., New York, N.Y. Filed Jan. 9, 1967.

ReamZall

The word "Ream" is disclaimed apart from the mark as shown.
For Pipe Reamers (Int. Cl. 34).
First use Oct. 14, 1966.

SN 293,315. Shields, Inc. of Attleboro, Mass., New York, N.Y. Filed Mar. 14, 1968.

DORCHESTER

For Cigarette and Cigar Lighters (Int. Cl. 34).
First use Feb. 16, 1968.

SN 293,316. Shields, Inc. of Attleboro, Mass., New York, N.Y. Filed Mar. 14, 1968.

DART

For Cigarette and Cigar Lighters (Int. Cl. 34).
First use Mar. 11, 1968.

SN 293,774. Alfred Dunhill Limited, London, England. Filed Mar. 21, 1968.

ROLLAGAS

For Lighters (Int. Cl. 34).
First use in 1957; in commerce in 1957.

SN 294,037. Wally Frank, Ltd., New York, N.Y. Filed Mar. 25, 1968.

TITAN

Owner of Reg. No. 746,427.
For Tobacco Pipes (Int. Cl. 34).
First use Nov. 24, 1965.

SN 294,219. Swank, Inc., Attleboro, Mass. Filed Mar. 26, 1968.

CUTLASS

For Pyrophoric Lighters (Int. Cl. 34).
First use Feb. 29, 1968.

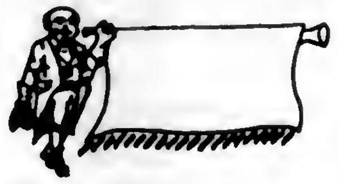
Class 9 — Explosives, Firearms, Equipments, and Projectiles

SN 258,147. Ramada Inns, Inc., Phoenix, Ariz. Filed Nov. 7, 1966.

RAMADA INN

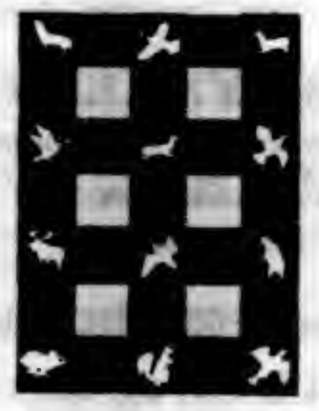
Owner of Reg. Nos. 686,471, 718,705, and 741,047.
For Matchbooks (Int. Cl. 34).
First use Feb. 3, 1958.

SN 258,149. Ramada Inns, Inc., Phoenix, Ariz. Filed Nov. 7, 1966.



Owner of Reg. Nos. 686,471 and 741,047.
For Matchbooks (Int. Cl. 34).
First use Feb. 10, 1961.

SN 280,523. Olin Mathieson Chemical Corporation, New York, N.Y. Filed Sept. 18, 1967.



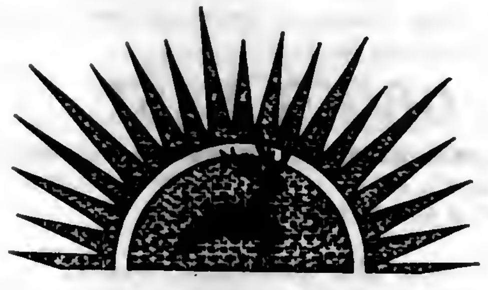
The mark consists of the design shown on the drawing, but the rectangular shape is not a part of the mark. The lining in the mark is a design feature, and does not indicate color.
For Rifles (Int. Cl. 13).
First use Nov. 25, 1964.

Class 10 — Fertilizers

SN 266,963. Western Peat Moss Ltd., New Westminster, British Columbia, Canada. Filed Feb. 13, 1967.

Sunshine

BRAND



The drawing is lined for the colors red and yellow. The word "Brand" is disclaimed apart from the mark as shown.
Owner of U.S. Reg. Nos. 571,992, 578,468, and 802,028.
For Peat Moss for Use as Mulch and Soil Conditioner (Int. Cl. 31).
First use March 1961; in commerce March 1961.

SN 289,759. Anchem Products, Inc., Ambler, Pa. Filed Jan. 29, 1968.

FLORALTONE

For Plant Growth Regulators (Int. Cl. 1).
First use Jan. 17, 1968.

SN 290,343. Wilfrid Smith (Horticultural) Limited, Edgware, Middlesex, England. Filed Feb. 5, 1968.

MARINURE

Owner of British Reg. No. 794,031, dated Aug. 4, 1959.
For Fertilizers Made From Seaweed (Int. Cl. 1).

Class 11 — Inks and Inking Materials

SN 216,722. Old Town Corporation, Brooklyn, N.Y. Filed Apr. 16, 1965.

COPYMAKER

For Spirit Master Units for Use in Duplicating Machines (Int. Cl. 16).
First use in or about January 1952.

Class 12 — Construction Materials

SN 265,456. S-G Steel Glide Mfg. Corp., New York, N.Y. Filed Feb. 16, 1967.

CITYPROOF

For Protective Windows, Preferably Installed on the Interior of Existing Windows, To Provide a Positive Shield Against Street Nois, Dust, and the Like (Int. Cl. 19).
First use in or before October 1961.

SN 268,380. Burnham Corporation, Irvington-on-Hudson, N.Y. Filed Apr. 5, 1967.

SOLARSPAN

Owner of Reg. No. 603,469.
For Prefabricated Greenhouses (Int. Cl. 19).
First use Apr. 3, 1967.

SN 269,300. John L. Doré Co., Houston, Tex. Filed Apr. 17, 1967.

FLUOROPAD

For Weight Bearing Pads for Disposal Between Structural Members (Int. Cl. 19).
First use Dec. 19, 1966.

SN 269,451. Ranco Industrial Products Corporation, Cleveland, Ohio. Filed Apr. 18, 1967.

GROUT FAST

For Fast Setting Expanding Cement for Supporting Heavy Machinery (Int. Cl. 19).
First use on or about Jan. 15, 1954.

SN 269,500. The Camp Company, Inc., Chicago, Ill. Filed Apr. 19, 1967.

HYDRO-PLUG

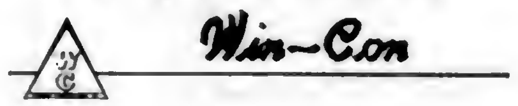
For Caulking, Sealing, and Patching Preparation (Int. Cl. 17).
First use Dec. 26, 1957.

SN 272,459. American Can Company, New York, N.Y. Filed May 26, 1967.

ALLISON

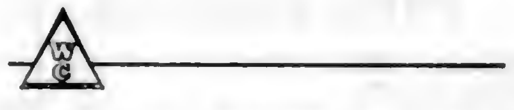
For Lumber (Int. Cl. 19).
First use Sept. 1, 1958.

SN 273,709. Win-Con, Inc., Lake Worth, Fla. Filed June 12, 1967.



For Window and Door Conversion Units (Int. Cl. 19).
First use Jan. 3, 1967.

SN 273,710. Window Conversion, Inc., Lake Worth, Fla. Filed June 12, 1967.



For Window and Door Conversion Units (Int. Cl. 19).
First use Jan. 3, 1967.

SN 274,552. The Union Metal Manufacturing Company, Canton, Ohio. Filed June 22, 1967.

MONOGARD

Owner of Reg. No. 301,601.
For Metal Highway Lighting Poles (Int. Cl. 6).
First use Apr. 18, 1967.

SN 277,918. Interlake Window Industries, Inc., Novi, Mich. Filed Aug. 9, 1967.

NU·WIN·DO

For Replacement Windows and Sash (Int. Cl. 19).
First use on or about May 9, 1967.
Subj. to Intf. with SN 285,477.

SN 278,506. Linton Corporation, Sidney, Mont. Filed Aug. 17, 1967.

LINKOTE

For Liquid Construction Material for Forming Finished Surfaces, e.g., Seamless Flooring, Applied in Its Liquid Form to an Unfinished Surface and Allowed To Harden Into a Solid Surface (Int. Cl. 19).
First use Aug. 14, 1967.

SN 279,498. The Safety Tread Limited, London, England. Filed Aug. 31, 1967.

ALPET

Owner of British Reg. No. 899,212, dated Sept. 8, 1966.
For Stair Treads Predominantly of Metal (Int. Cl. 6).

SN 279,499. The Safety Tread Limited, London, England. Filed Aug. 31, 1967.

ALLITE

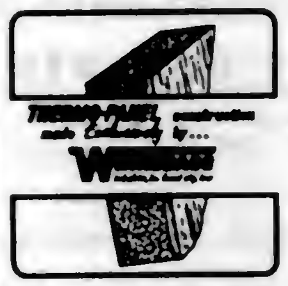
Owner of British Reg. No. 688,838, dated May 5, 1950.
For Stair Treads Predominantly of Metal (Int. Cl. 6).
First use May 1937; in commerce May 1937.

SN 279,500. The Safety Tread Limited, London, England. Filed Aug. 31, 1967.

ALFAB

Owner of British Reg. No. 723,196, dated Oct. 28, 1953.
For Stair Treads Predominantly of Metal (Int. Cl. 6).
First use October 1953; in commerce October 1953.

SN 281,735. Winnebago Industries, Inc., Forest City, Iowa. Filed Oct. 3, 1967.



Applicant disclaims the representation of the goods apart from the mark as shown, and disclaims the following words: "Construction Made Exclusively by Winnebago Industries, Forest City, Iowa" apart from the mark as shown. Owner of Reg. No. 828,761.

For Sandwich-Type Construction Panel, a Foam Core Between Sheets of Metal and/or Wood, and Components of Modular Structures—Namely, Vacation Homes, Lakeside Cottages, Beach Homes, Cabanas, Fish Houses, Utility Sheds, Signs, Sign Boards, Bunk Houses, Commercial Car Washes, Curtain Walls, and Building Partitions (Int Cl. 19).
First use June 1, 1964.

SN 281,884. General Aniline & Film Corporation, New York, N.Y. Filed Oct. 6, 1967.

T/NA-MS

Owner of Reg. Nos. 759,508 and 759,509.
For Plastic Asbestos Roofing Membrane (Int. Cl. 19).
First use June 8, 1967.

SN 285,431. Johns-Manville Corporation, New York, N.Y. Filed Nov. 22, 1967.

KOLOR-KAP

For Mineral Surfaced Roll Roofing (Int. Cl. 19).
First use at least on or about May 4, 1967.

SN 287,926. Luminous Ceilings, Inc., Chicago, Ill. Filed Jan. 2, 1968.

LEAF-LITE

For Suspended Ceiling Modules, Characterized by Planar Suspended Elements Having the Property of Reflecting Light Therefrom (Int. Cl. 19).
First use in or about December 1958.

SN 289,466. American Olean Tile Company, Inc., Lansdale, Pa. Filed Jan. 24, 1968.

TERRA VITRA

For Ceramic Tile (Int. Cl. 19).
First use Aug. 31, 1938.

SN 293,093. Pittsburgh Plate Glass Company, Pittsburgh, Pa. Filed Mar. 13, 1968.

PYROCAL

For Pipe Insulation (Int. Cl. 17).
First use at least as early as Nov. 27, 1967.

SN 293,207. United States Mineral Products Company, Stanhope, N.J. Filed Mar. 14, 1968.

USMFOAM-GRID

Owner of Reg. Nos. 652,946, 812,842, and others.
For Insulating Panels for Suspended Ceilings (Int. Cl. 17).
First use Aug. 31, 1962; Oct. 18, 1956, as to "USM."

SN 293,837. Locke Manufacturing Company, Lodi, Ohio. Filed Mar. 21, 1968.

Tap Root

For Mail Box Post (Int. Cl. 6).
First use Oct. 26, 1967.

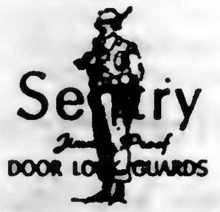
SN 293,960. Tool Research and Engineering Corporation, d.b.a. Stresskin Products Co., Beverly Hills, Calif. Filed Mar. 22, 1968.

SOUNDWICH

For Sound Absorbing Panels (Int. Cl. 19).
First use Nov. 13, 1967.

Class 13 — Hardware and Plumbing and Steam-Fitting Supplies

SN 273,533. Sentry Door Lock Guards, Inc., Dania, Fla. Filed June 9, 1967.



Apart from the mark as shown, the legend "Jimmy Proof Door Lock Guards" is disclaimed.
For Door Lock Guards (Int. Cl. 6).
First use on or about Jan. 26, 1965.

SN 274,196. Falcon Lock Co., South Gate, Calif. Filed June 19, 1967.

YORK

For Knobs (Int. Cl. 6).
First use Apr. 27, 1967.

SN 274,658. Randolph-Rand Corporation, New York, N.Y. Filed June 23, 1967.

PUT-KEY

For Keyholders, Keyholder for Attachment to Handbags, and Keyholders for Attachment to Luggage (Int. Cl. 6).
First use June 6, 1967.

SN 275,503. Amway Corporation, Ada, Mich. Filed July 7, 1967.

AMWAY

Owner of Reg. No. 828,808.
For Hollow Ware—Namely, Stainless Steel Skillets, Roasters, Casserole Pots, Pans, Double Boilers, Cookers, and Covers for Said Items (Int. Cl. 21).
First use on or about Sept. 11, 1963.

SN 275,561. Swiveller Company, Inc., Nanuet, N.Y. Filed July 7, 1967.

LAMPHUGGER

For Swivel Supports for Lighting Fixtures (Int. Cl. 6).
First use Mar. 28, 1967.

SN 276,133. The Harris Calorific Company, Cleveland, Ohio. Filed July 17, 1967.

FLASH-GUARD

For Valves, Particularly Check Valves for Use in Gas Lines (Int. Cl. 6).
First use June 7, 1967.

SN 277,644. FMC Corporation, San Jose, Calif. Filed Aug. 7, 1967.

MANU - KWIK

For Pipe Connectors (Int. Cl. 6).
First use May 2, 1967.

SN 277,836. C. J. Hendry Company, San Francisco, Calif. Filed Aug. 8, 1967.

RAFTGO

For Hydrostatic Pressure Actuated Releases Featuring a Link Whereby Hydrostatic Releases Operate Enabling a Buoyant Object, Such as a Raft, To Remain Secure to the Deck Until Manual or Water Pressure Effectuates the Freedom of the Object From Its Lashings (Int. Cl. 6).
First use on or about Nov. 5, 1953.

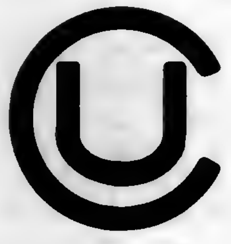
Class 14 — Metals and Metal Castings and Forgings

SN 263,639. The Youngstown Sheet and Tube Company, Boardman, Ohio. Filed Jan. 30, 1967.

YOLEC

Owner of Reg. Nos. 361,366, 375,128, and 393,680.
For Metal Coils and Sheets (Int. Cl. 6).
First use Jan. 10, 1967.

SN 264,530. Eaton Yale & Towne Inc., Cleveland, Ohio. Filed Feb. 13, 1967.



For Metal Forgings (Int. Cl. 6).
First use in or about January 1925.

SN 271,820. Magnetic Metals Company, Camden, N.J. Filed May 18, 1967.

ETCHMU

Owner of Reg. Nos. 686,225, 778,059, and others.
For High Permeability Magnetic Metals, in Sheet, Tape and Foil Form, Processed Expressly for Photofabrication (Int. Cl. 6).
First use Feb. 17, 1967.

SN 273,541. Foote Mineral Company, Exton, Pa., assignee of Vanadium Corporation of America, New York, N.Y. Filed June 9, 1967.

CSF #10

For Cerium Silicide Alloy (Int. Cl. 6).
First use Mar. 2, 1967.

SN 275,218. Baldwin Steel Company, Ecorse, Mich. Filed July 3, 1967.

BALDWIN HI-CASE

For Case Hardened, Precision Ground Alloy Steel Bars (Int. Cl. 6).
First use June 14, 1967.

SN 275,994. Alloys Unlimited, Inc., Melville, N.Y. Filed July 14, 1967.

TUNGSITE

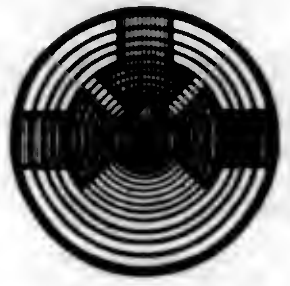
For Composite Metal, Comprising Tungsten Particles Dispersed in a Matrix of Silver or Copper, Sold in Sheet, Strip, Foil, and Specific Shapes in the Form of Stampings (Int. Cl. 6).
First use Apr. 17, 1967.

SN 277,048. Huron Valley Steel Corp., Belleville, Mich. Filed July 28, 1967.

VAL METAL

The term "Metal" is disclaimed apart from the mark as shown.
For Crushed Scrap Metal (Int. Cl. 6).
First use on or about Dec. 1, 1966.

SN 282,173. Cameron Iron Works, Inc., Houston, Tex. Filed Oct. 10, 1967.



The drawing is lined for red, but color is not claimed as a feature of the mark.
For Forgings (Int. Cl. 6).
First use May 12, 1967.

SN 287,347. Combustion Engineering, Inc., Windsor, Conn. Filed Dec. 21, 1967.

HYMET

For Iron Castings (Int. Cl. 6).
First use April 1964.

SN 288,197. Diversified Metals Corporation, Hazelwood, Mo. Filed Jan. 5, 1968.

CU-MINIBRIQ

Owner of Reg. Nos. 830,911, 830,912, and 830,913.
For Non-Ferrous Metal—Namely, Copper, in Pig or Ingot Form (Int. Cl. 6).
First use Oct. 20, 1967.

SN 288,198. Diversified Metals Corporation, Hazelwood, Mo. Filed Jan. 5, 1967.

AL-MINIBRIQ

Owner of Reg. Nos. 830,911, 830,912, and 830,913.
For Non-Ferrous Metal—Namely, Aluminum, in Pig or Ingot Form (Int. Cl. 6).
First use Oct. 20, 1967.

SN 292,835. Arwood Corporation, Rockleigh, N.J. Filed Mar. 11, 1968.

ARCAST 67

For Alminum Alloy and Aluminum Castings (Int. Cl. 6).
First use Jan. 30, 1968.

SN 292,836. Arwood Corporation, Rockleigh, N.J. Filed Mar. 11, 1968.

ARCAST

For Metal Alloy and Castings (Int. Cl. 6).
First use Jan. 30, 1968.

Class 15 — Oils and Greases

SN 294,355. F. Marty Candle Co., Inc., Oshkosh, Wis. Filed Mar. 28, 1968.

MAYFLOWER

For Candles (Int. Cl. 4).
First use Feb. 12, 1968.

Class 16 — Protective and Decorative Coatings

SN 263,248. Ball Bothers Company Incorporated, Muncie, Ind. Filed Jan. 25, 1967.

BALL

Owner of Reg. No. 221,780.
For Glassware Protective Coating Compounds (Int. Cl. 2).
First use on or about Aug. 11, 1964.

SN 272,767. Waterlac Finish Company, Inc., Danvers, Mass. Filed May 31, 1967.

KRAKALAC

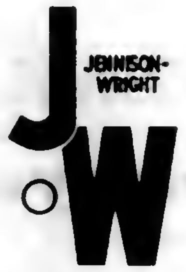
For Lacquer (Int. Cl. 2).
First use June 1966.

SN 275,893. Purity Paint Products Corp., Brooklyn, N.Y. Filed July 13, 1967.

FABULUX

For Interior and Exterior House Coatings and Acrylic Primer Sealers (Int. Cl. 2).
First use in or about September 1963.

SN 278,387. The Jennison-Wright Corporation, Toledo, Ohio. Filed Aug. 16, 1967.



Owner of Reg. Nos. 840,304 and 849,142.
For Penetrating Seal, Wood Block Floor Sealer, Gymnasium Floor Finish, and Primer (Int. Cl. 2).
First use January 1959.

Class 17 — Tobacco Products

SN 292,860. Philip Morris Incorporated, New York, N.Y. Filed Mar. 11, 1968.

CONTROLLED PROFILE

For Cigarettes (Int. Cl. 34).
First use Feb. 27, 1968.

SN 292,861. Philip Morris Incorporated, New York, N.Y. Filed Mar. 11, 1968.

PROFILE

For Cigarettes (Int. Cl. 34).
First use Feb. 27, 1968.

SN 293,216. The American Tobacco Company, New York, N.Y. Filed Mar. 14, 1968.

LUCKY FILTERS

No claim is made of exclusive right to use the word "Filters," apart from the mark as shown. Owner of Reg. Nos. 118,372, 404,302, and others.
For Cigarettes (Int. Cl. 34).
First use Mar. 4, 1968.

SN 293,664. Camacho Cigars, Inc., Miami, Fla. Filed Mar. 20, 1968.

DON MARCOS

Owner of Reg. No. 797,062.
For Cigars (Int. Cl. 34).
First use Feb. 3, 1968.

SN 293,805. Conwood Corporation, Memphis, Tenn. Filed Mar. 21, 1968.

BIG WHEEL

For Snuff (Int. Cl. 34).
First use Feb. 26, 1968.

SN 293,934. Lane Limited, New York, N.Y. Filed Mar. 22, 1968.

GOLDEN MOCCA

For Smoking Tobacco (Int. Cl. 34).
First use February 1968.

Class 18—Medicines and Pharmaceutical Preparations

SN 269,555. Norden Laboratories, Inc., Lincoln, Nebr. Filed Apr. 19, 1967.

myelovac

For Vaccine for Immunization of Horses and Mules Against Eastern and Western Types of Encephalomyelitis, Used in Veterinary Medicine (Int. Cl. 5).
First use Mar. 22, 1967.

SN 274,114. Allergan Pharmaceuticals, Santa Ana, Calif. Filed June 16, 1967.

CHLOROPTIC

For Ophthalmic Preparations (Int. Cl. 5).
First use Feb. 6, 1967.

SN 276,224. Ciba Limited, Basel, Switzerland. Filed July 18, 1967.

OXYSENTIN

Owner of Swiss Reg. No. 209,037, dated Mar. 29, 1965.
For Antibiotic Preparation (Int. Cl. 5).

SN 276,539. Dartell Laboratories, Inc., d.b.a. Dartell Laboratories, Los Angeles, Calif. Filed July 21, 1967.

MOBILAMIDE

For Dietary Food Supplement Providing Niacinamide and Other Vitamins (Int. Cl. 5).
First use in or about February 1966.

SN 276,541. Dartell Laboratories, Inc., d.b.a. Dartell Laboratories, Los Angeles, Calif. Filed July 21, 1967.

LACTO-SYL

For Natural Colloidalgel Bulk Laxative and Intestinal Cleanser (Int. Cl. 5).
First use in or about January 1950.

SN 276,812. Bristol-Myers Company, New York, N.Y. Filed July 26, 1967.

MACH II

For Analgesic (Int. Cl. 5).
First use Mar. 6, 1967.

SN 276,818. Ciba Corporation, d.b.a. Gland-O-Lac Company, New York, N.Y. Filed July 26, 1967.

HEP-A-STAT

For Preparation for Treatment of Blackhead in Fowl (Int. Cl. 5).
First use May 31, 1967.

SN 276,884. The Upjohn Company, Kalamazoo, Mich. Filed July 26, 1967.

FEMINONE

For Hormonal Preparation for Estrogen Replacement (Int. Cl. 5).
First use Apr. 11, 1967.

SN 276,890. The Upjohn Company, Kalamazoo, Mich. Filed July 26, 1967.

DROLEX-A

For Analgesic Preparation (Int. Cl. 5).
First use Apr. 11, 1967.

SN 276,891. The Upjohn Company, Kalamazoo, Mich. Filed July 26, 1967.

DROLEX

For Analgesic Preparation (Int. Cl. 5).
First use Apr. 11, 1967.

SN 276,893. The Upjohn Company, Kalamazoo, Mich. Filed July 26, 1967.

PRODONA

For Hormonal Preparation for Estrogen Replacement (Int. Cl. 5).
First use Apr. 11, 1967.

SN 276,971. Warren-Teed Pharmaceuticals Inc., Columbus, Ohio. Filed July 27, 1967.

KARTA

For Processed Cartilage Powder for the Treatment of Wounds To Promote Healing (Int. Cl. 5).
First use on or about May 17, 1967.

SN 276,972. Warren-Teed Pharmaceuticals Inc., Columbus, Ohio. Filed July 27, 1967.

ESTROVARIN

For Hormonal Medication (Int. Cl. 5).
First use on or about Mar. 3, 1939.

SN 276,974. Warren-Teed Pharmaceuticals Inc., Columbus, Ohio. Filed July 27, 1967.

PEKTAMALT

For Medicament for Treatment of Gastrointestinal Disorders (Int. Cl. 5).
First use on or about July 13, 1943.

SN 277,119. Affiliated Laboratories Corporation, St. Louis, Mo. Filed July 31, 1967.

RABTECT

For Rabies Vaccine (Int. Cl. 5).
First use July 13, 1967.

SN 277,135. Beecham Group Limited, d.b.a. Beecham Research Laboratories, Brentford, Middlesex, England. Filed July 31, 1967.

PENBRITIN-S

Owner of U.S. Reg. No. 705,484.
For Antibiotic Preparations and Substances (Int. Cl. 5).
First use Mar. 25, 1967; in commerce Mar. 25, 1967.

SN 277,260. Carter-Wallace, Inc., New York, N.Y. Filed Aug. 1, 1967.

SLEEPRIN

For Pharmaceutical Preparation for Use as an Aid To Relieve Pain and Achieve Sleep (Int. Cl. 5).
First use June 8, 1967.

SN 277,321. Warner-Lambert Pharmaceutical Company, Morris Plains, N.J. Filed Aug. 1, 1967.

THRESHOLD

For Analgesic Preparation (Int. Cl. 5).
First use June 21, 1967.

SN 277,537. Carter-Wallace, Inc., New York, N.Y. Filed Aug. 4, 1967.

ORMENTIN

For Aid To Relieve Pain and To Achieve Sleep (Int. Cl. 5).
First use Aug. 1, 1967.

SN 277,538. Carter-Wallace, Inc., New York, N.Y. Filed Aug. 4, 1967.

GLUCOTRANSIN

For Aid To Relieve Pain and To Achieve Sleep (Int. Cl. 5).
First use Aug. 1, 1967.

SN 277,539. Carter-Wallace, Inc., New York, N.Y. Filed Aug. 4, 1967.

ORMENTOL

For Aid To Relieve Pain and To Achieve Sleep (Int. Cl. 5).
First use Aug. 1, 1967.

SN 277,574. Syntex Laboratories, Inc., Palo Alto, Calif. Filed Aug. 4, 1967.

NORMENON

For Steroid Hormones (Int. Cl. 5).
First use June 23, 1967.

SN 277,812. Warner-Lambert Pharmaceutical Company, Morris Plains, N.J. Filed Aug. 8, 1967.

DUALACTRIN

For Cough and Throat Lozenges (Int. Cl. 5).
First use June 21, 1967.

SN 278,050. Veterinary Research Institute, Dallas, Tex., assignee of Veterinary Supply Depot Incorporated, Dallas, Tex. Filed Aug. 10, 1967.

JUV-EQUINE

For Vitamin-Mineral Dietary Supplement for Veterinary Use (Int. Cl. 5).
First use March 1967.

SN 278,090. Ciba Limited, Basel, Switzerland. Filed Aug. 11, 1967.

FIRMADIL

Owner of Swiss Reg. No. 204,236, dated May 25, 1964.
For Analgesic and Sedative Preparation (Int. Cl. 5).

SN 278,372. Bristol-Myers Company, New York, N.Y. Filed Aug. 16, 1967.

MAXCAPS

For Antibiotic (Int. Cl. 5).
First use Nov. 22, 1966.

SN 276,988. The Norwich Pharmacal Company, Norwich, N.Y. Filed Aug. 24, 1967.

Jenéen

Owner of Reg. No. 801,699.
For Pharmaceutical Preparations for Feminine Hygiene Care (Int. Cl. 5).
First use Oct. 28, 1964.

SN 283,057. B. F. Ascher & Company, Inc., Kansas City, Mo. Filed Oct. 23, 1967.

AYR Tab

Without relinquishing any common law rights therein, the term "Tab" is disclaimed apart from the mark as shown.
For Preparation for Use as a Bronchodilator (Int. Cl. 5).
First use Oct. 9, 1967.

SN 287,592. E. R. Squibb & Sons, Inc., New York, N.Y. Filed Dec. 26, 1967.

RIZEN

For Anti-Depressant Preparation (Int. Cl. 5).
First use Dec. 8, 1967.

SN 291,674. Mead Johnson & Company, Evansville, Ind. Filed Feb. 23, 1968.

NATALINS BASIC

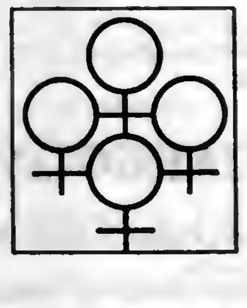
No registration rights are claimed for the word "Basic," apart from the mark shown, but the applicant waives none of its common law rights in the mark shown or any feature thereof. Owner of Reg. Nos. 571,421, 737,626, and others.
For Vitamin and Mineral Tablets (Int. Cl. 5).
First use on or prior to Nov. 7, 1961.

SN 291,676. Mead Johnson & Company, Evansville, Ind. Filed Feb. 23, 1968.

NATALINS PLUS

No registration rights are claimed for the word "Plus," apart from the mark shown, but the applicant waives none of its common law rights in the mark shown or any feature thereof. Owner of Reg. Nos. 571,421, 737,626, and others.
For Vitamin and Mineral Tablets (Int. Cl. 5).
First use on or prior to Jan. 9, 1968.

SN 293,613. American Home Products Corporation, New York, N.Y. Filed Mar. 19, 1968.



For Progestational Agent (Int. Cl. 5).
First use Mar. 6, 1968.

SN 293,873. E. R. Squibb & Sons, Inc., New York, N.Y. Filed Mar. 20, 1968.

SOXOCIL

For Synthetic Antibiotics (Int. Cl. 5).
First use Jan. 29, 1968.

SN 293,886. E. R. Squibb & Sons, Inc., New York, N.Y. Filed Mar. 22, 1968.

DIPENSIN

For Synthetic Antibiotics (Int. Cl. 5).
First use Jan. 29, 1968.

SN 294,233. The Norwich Pharmacal Company, Norwich, N.Y. Filed Mar. 27, 1968.

DANTAMACRIN

Owner of Reg. Nos. 707,729 and 843,990.
For Veterinary Pharmaceutical Preparation Containing Nitrofurantoin in Macrocrystalin Form (Int. Cl. 5).
First use Feb. 29, 1968.

SN 294,236. The Norwich Pharmacal Company, Norwich, N.Y. Filed Mar. 27, 1968.

SOLUBASE

For Water Soluble Composition of Polyethylene Glycols Used as an Ingredient in Pharmaceutical Dressings (Int. Cl. 5).
First use Feb. 29, 1968.

SN 294,708. Mead Johnson & Company, Evansville, Ind. Filed Apr. 2, 1968.

DESICLEAR

Owner of Reg. No. 805,894.
For Topical Anti-Fungal Preparation (Int. Cl. 5).
First use on or prior to Mar. 26, 1968.

SN 294,710. Mead Johnson & Company, Evansville, Ind. Filed Apr. 2, 1968.

DESIGEL

Owner of Reg. No. 808,034.
For Topical Anti-Fungal Preparation (Int. Cl. 5).
First use on or prior to Mar. 26, 1968.

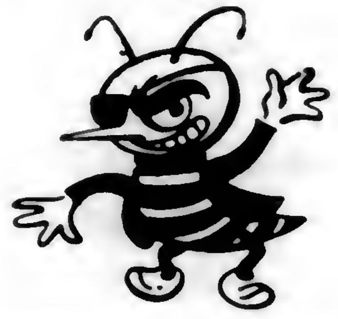
Class 19—Vehicles

SN 258,279. Brownline Corporation, Redondo Beach, Calif. Filed Nov. 9, 1966.

CARGO PAX

Applicant disclaims right in or to the word "Cargo" apart from the mark as shown.
For Aircraft Cargo Handling Equipment—Namely, Floor Members, Locks; and Pallets for Keeping Cargo in Place While in Transit (Int. Cl. 12).
First use Oct. 12, 1966.

SN 264,303. The Crest Manufacturing Co., Southfield, Mich. Filed Feb. 9, 1967.



For Refuse Containers and Combination Refuse Containers and Tissue Dispensers for Automobile Use (Int. Cl. 20).
First use during October 1966.

SN 266,795. Societe Industrielle l'Angeviniere et Joue-les-Tours, Paris, France. Filed Mar. 15, 1967.

Priority claimed under Sec. 44(d) on French Reg. No. 714,516, dated Sept. 21, 1966.
For Pneumatic Craft—Namely, Boats and Rafts (Int. Cl. 12).

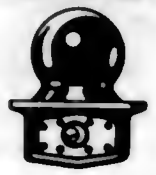
SN 270,362. Detroiter Mobile Homes, Inc. St. Louis, Mich. Filed May 1, 1967.

HOMEDALE

For Mobile Homes and House Trailers (Int. Cl. 12).
First use Nov. 22, 1965.

SN 270,407. Notow Products, Inc., Brookfield, Wis. Filed May 1, 1967.

NO-TOW



The representation of the goods is disclaimed apart from the mark as shown, without waiver of common law rights.
For Trailer Coupling Lock (Int. Cl. 12).
First use Mar. 25, 1967.

SN 274,203. The Goodyear Tire & Rubber Company, Akron, Ohio. Filed June 19, 1967.

GOODYEAR

Owner of Reg. Nos. 504,296 and 505,394.
For Wheel Weights (Int. Cl. 12).
First use Jan. 8, 1963.

SN 274,954. Coliform Company, Geneva, Ill. Filed June 28, 1967.

DYNAFLYTE

For Boats and Parts Therefor (Int. Cl. 12).
First use Mar. 23, 1967.

SN 280,016. Cavalier Industries, Inc., White Pigeon, Mich. Filed Sept. 11, 1967.

CHATEAU TRAVELER

For Travel Trailers (Int. Cl. 12).
First use Aug. 17, 1967.

SN 281,989. Kelsey-Hayes Company, Romulus, Mich. Filed Oct. 6, 1967.

KELSTAR

For Automotive Disk Brakes and Components Thereof (Int. Cl. 12).
First use on or about June 29, 1966.

SN 282,403. Ted Smith Aircraft Co., Inc., Northridge, Calif. Filed Oct. 12, 1967.

AEROSTAR

For Aircraft (Int. Cl. 12).
First use Nov. 1, 1966.

SN 282,412. Wiscraft, Inc., Eau Claire, Wis. Filed Oct. 12, 1967.

WISCRAFT

For Pontoon Boats and Rafts, and Parts Thereof (Int. Cl. 12).
First use about Jan. 28, 1967.

SN 282,712. Mosingo's Tire Company, Incorporated, Charlotte, N.C. Filed Oct. 17, 1967.

DARE DEVIL

For Automobile Wheel Structures (Int. Cl. 12).
First use Sept. 18, 1967.

SN 284,218. Monitor Coach Co., Inc., Wakarusa, Ind. Filed Nov. 6, 1967.

MONITOR

For Travel Trailers and Pick-Up Campers (Int. Cl. 12).
First use Jan. 16, 1963.

Class 20—Linoleum and Oiled Cloth

SN 293,434. General Aniline & Film Corporation, New York, N.Y. Filed Mar. 18, 1968.

GAF

Owner of Reg. Nos. 509,124, 837,005, and others.
For Resilient Floor Coverings, Particularly, Flexible Hard Surface Wall, Floor and Table Top Covering Materials, Plastic-Asphalt Tiles, and Vinyl-Asbestos Tiles (Int. Cl. 27).
First use Nov. 20, 1967.

Class 21—Electrical Apparatus, Machines, and Supplies

SN 243,007. National Automotive Parts Association, Chicago, Ill. Filed Apr. 8, 1966.

ENEREX

For Electric Storage Batteries, Contracted for and Specified by Applicant, and Sold by Members of Applicant (Int. Cl. 9).
First use Feb. 24, 1966.

SN 245,265. Dallas Richard Wilder, d.b.a. Wilder Engineering Products, Chicago, Ill. Filed May 9, 1966.

WILD ONE

For Amplifiers (Int. Cl. 9).
First use on or about June 27, 1965.

SN 257,322. Westinghouse Air Brake Company, Chicago, Ill. Filed Oct. 26, 1966.

ELECTRO-GUARD

For Fail-Safe Continuous Ground Monitoring Circuit (Int. Cl. 9).
First use Feb. 17, 1966.

SN 258,117. Jerrold Electronics Corporation, Philadelphia, Pa., assignee of The Jerrold Corporation, Philadelphia, Pa. Filed Nov. 7, 1966.

PARALOG PLUS

Owner of Reg. No. 817,315.
For Television Receiving Antennas (Int. Cl. 9).
First use July 22, 1966.

SN 263,854. Sterling Multi-Products Inc., Sterling, Ill. Filed Feb. 2, 1967.

MULTIMIXER

For Electric Drink Mixing Machine (Int. Cl. 7).
First use 1939.

SN 264,453. Tasker Industries, Van Nuys, Calif. Filed Feb. 10, 1967.

The mark comprises the stylized letters "TI."
For Electronic Alpha Numeric Display Devices and Radar Equipment—Namely, Waveguides, Power Supplies, Deflection Coils, Magnetron Tubes, Cathode Ray Tubes, Capacitors, and Mixer Pre-Amps (Int. Cl. 9).
First use Dec. 28, 1966, on waveguides.

SN 264,531. Eaton Yale & Towne Inc., Cleveland, Ohio. Filed Feb. 13, 1967.

DYNAMATIC

Owner of Reg. Nos. 515,261, 530,071, and 830,537.
For Electric Motors (Int. Cl. 7).
First use Apr. 11, 1944.

SN 265,634. Jerrold Electronics Corporation, Philadelphia, Pa. Filed Feb. 28, 1967.

VU FINDER

For Television Receiving Antennas (Int. Cl. 9).
First use on or about Jan. 12, 1967.

SN 265,931. John A. Tate, d.b.a. Tate & Sons, Bellevue, Wash. Filed Mar. 3, 1967.

CAMPER COM

The word "Camper" is disclaimed apart from the mark as a whole.
For Wire Intercom Unit, Intended Primarily for Use in Trucks, Campers, or Motor Vehicles (Int. Cl. 9).
First use Mar. 3, 1966.

SN 267,565. Thomas Industries Inc., Louisville, Ky. Filed Mar. 24, 1967.

TI THOMAS

Owner of Reg. No. 839,485.

For Radio-Intercommunication Systems; Fire Alarm and Entry Sensing Apparatus; and Parts for the Foregoing (Int. Cl. 9).

First use Jan. 30, 1967.

SN 268,231. R. P. Scholfield Enterprises, Inc., Armonk, N.Y. Filed Apr. 3, 1967.

GO-MATIC

For Display Devices—Namely, Cabinets Having Power Means for Successively Presenting to Viewing Positions, a Plurality of Posters or Display Cards in Repeating Cycles (Int. Cl. 9).

First use Mar. 1, 1967.

SN 268,232. R. P. Scholfield Enterprises, Inc., Armonk, N.Y. Filed Apr. 3, 1967.

"IT GOES TO SHOW YOU"

For Display Devices—Namely, Cabinets Having Power Means for Successively Presenting to Viewing Positions, a Plurality of Posters or Display Cards in Repeating Cycles (Int. Cl. 9).

First use Mar. 1, 1967.

SN 270,128. Hurletron Incorporated, Danville, Ill. Filed Apr. 27, 1967.

ELECTROSIST

For Apparatus for Use in Conjunction With Printing Presses Featuring Variable Electric Power Supply for Regulating the Transfer of Ink by Controlled Electrostatic Charges Along With Suitable Parts Therefor (Int. Cl. 9).

First use on or about Apr. 4, 1967.

SN 270,585. Lauderdale Electronic Labs, Inc., Fort Lauderdale, Fla. Filed May 3, 1967.

L
E L

Applicant disclaims rights in the "PNP transistor" symbol, apart from the mark as a whole.

For Electrical Winding Systems, Electrical Broadcasting Repeater Systems, and Electrical Alarm Systems (Int. Cl. 9).

First use June 1965.

SN 272,063. Import Associates of America, Inc., Chicago, Ill. Filed May 22, 1967.

ELECTRATONE

For Radios and Transceivers (Int. Cl. 9).

First use on or about Jan. 30, 1967.

SN 275,394. Rinn Corporation, Elgin, Ill. Filed July 5, 1967.

Pluslight

For Fluorescent Lamps (Int. Cl. 11).

First use Aug. 1, 1966.

SN 275,711. Venture II, Inc., South Bend, Ind. Filed July 10, 1967.

LAMP LIGHTER

For Power Converter and Battery Charger Devices for Vehicles, Such as Trailers, Mobile Homes, Truck Campers, and Trailer Parks (Int. Cl. 9).

First use Mar. 9, 1967.

SN 276,458. Maxson Electronics Corporation, Great River, N.Y. Filed July 20, 1967.

LPB

For Electrical Switches—Namely, Lighted Push Button Switches (Int. Cl. 9).

First use Apr. 15, 1967.

SN 277,483. Surrette Storage Battery Co., Inc., Salem, Mass. Filed Aug. 3, 1967.

SURRETTE STORAGE BATTERY

S

The words "Storage Battery" are disclaimed apart from the mark as shown. Owner of Reg. No. 727,932.

For Electrical Storage Batteries for Marine, Truck, and Automotive Vehicles, Diesel Starting Batteries, Farm Light Batteries, and Batteries for Radio Broadcasting, Stationary Plants; Lighting Fixtures, Electric Wires, and Terminals (Int. Cls. 9 and 11).

First use at least as early as Jan. 1, 1931.

SN 278,900. NVF Company, Wilmington, Del. Filed Aug. 23, 1967.

catabond

For Copperclad Laminates With Either a Paper or Glass Base With Copperfoil Laminated to Either One or Both Sides, Used in the Making of Electrical or Electronic Circuits (Int. Cl. 9).

First use Apr. 12, 1967.

SN 281,265. Automatic Switch Co., Florham Park, N.J. Filed Sept. 27, 1967.

Red-Hat

The drawing is lined for red, but no claim is made to color. Owner of Reg. No. 833,596.

For Automatic Electrical Switches; Magnet and Solenoid Operated Switches and Relays; and Electronic Control Equipment—Namely, Switches and Relays, Solid State Switches and Relays, Synchronisers, Reverse Power and Reverse Current Switches and Relays, Sensors, Power Transfer Switches, and Solid State Voltage, Frequency, and Current Monitors (Int. Cl. 9).

First use Sept. 14, 1967.

SN 293,001. Great Valley Industries, Inc., Wayne, Pa. Filed Mar. 12, 1968.

GVI

For Solderless Terminals and Connectors (Int. Cl. 9).

First use Aug. 16, 1967.

Class 22 — Games, Toys, and Sporting Goods

SN 242,114. Colorforms, Norwood, N.J. Filed Mar. 29, 1966.

SECRET PRINT PUTTY

No claim of exclusive right is made to "Print Putty" for the goods recited.

For Toys Utilizing Putty-Like Material as a Carrier To Effect Image Transfer (Int. Cl. 28).

First use Mar. 3, 1966.

SN 267,007. Brunswick Corporation, Chicago, Ill. Filed Mar. 17, 1967.

THE BOMB

For Footballs (Int. Cl. 28).

First use Nov. 1, 1966.

SN 272,009. CPM Corporation, Paducah, Ky. Filed May 22, 1967.

HOOP-T-DO

For Hoop-Type Toy (Int. Cl. 28).

First use Feb. 3, 1967.

SN 273,821. Carl West, d.b.a. Challenger Eastern Surfboards, Neptune, N.J. Filed June 13, 1967.

CHALLENGER
EASTERN
SURFBOARDS

Applicant disclaims the word "Surfboards" apart from the mark as shown.

For Surfboards (Int. Cl. 28).

First use June 2, 1966.

SN 276,788. W. B. Bell, Paris, Ill. Filed July 21, 1967.

LUNKERLANDER

For Artificial Fishing Lure (Int. Cl. 28).

First use Mar. 15, 1965.

SN 277,221. S.p.A. Teodoro Carnielli & C., Vittorio Veneto, Treviso, Italy. Filed July 31, 1967.

CYCLETTE

For Bicycle-Type Exercising Apparatus (Int. Cl. 28).

First use Dec. 31, 1958; in commerce Nov. 2, 1959.

SN 282,504. Wing Archery Company, Jacksonville, Tex. Filed Oct. 13, 1967.

Wing
ARCHERY COMPANY

Applicant disclaims the words "Archery Company" apart from the mark as shown.

For Bows, Arrows, Finger-Protector Gloves, Arm Guards, Arrow Quivers, Bow-Fishing Reels, Arrow Rests, Arrow Heads, Bow and Arrow Carrying Cases, Bow Sights, Bow Stringers, and Bow Slings (Int. Cl. 28).

First use January 1962.

SN 286,546. Jack Nethercutt, Los Angeles, Calif. Filed Dec. 8, 1967.

MIRAGE

For Model Racing Cars (Int. Cl. 28).

First use June 1966.

SN 287,275. The Carlton Tyre Saving Company Limited, Saffron Walden, Essex, England. Filed Dec. 20, 1967.

CARLTON

Owner of Reg. No. 753,250.

For Badminton Rackets, Badminton Racket Presses, Shuttlecocks, Tennis Rackets, Squash Rackets, Golf Clubs, Hockey Sticks, and Table Tennis Bats (Int. Cl. 28).

First use October 1965; in commerce April 1967.

SN 287,465. William G. Schultz, d.b.a. Midwest Distributors, Springfield, Ohio. Filed Dec. 22, 1967.

GOT-CHA

For Fish Hooks (Int. Cl. 28).

First use on or about Nov. 21, 1967.

SN 291,120. Ideal Toy Corporation, Hollis, N.Y. Filed Feb. 15, 1968.

BABY BOLTS

Applicant disclaims the term "Baby" separate and apart from the mark as shown.

For Toy Figures (Int. Cl. 28).

First use June 25, 1964.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

SN 250,092. Cobra Products, Inc., Brooklyn, N.Y. Filed July 12, 1966.

COBRA'S

For Drainpipe and Sewer Cleaning Equipment—Namely, Drain Augers, Closet Augers, Flexible Wire Cleaners and Augers, Drain Rodding Tools and Machines, Sewer Rods, Electricians' Snakes, Plastic and Rubber Coated Drain and Cleaning Tools, and Replacement Wires for Said Goods (Int. Cls. 7 and 8).

First use on or about July 27, 1960.

SN 268,671. Conelec, Inc., Elmira, N.Y. Filed Nov. 15, 1966.

CONELEC

For Electric Fuel and Transfer Pumps for Automotive, Marine, and Industrial Applications (Int. Cl. 7).

First use Dec. 23, 1963.

SN 260,245. Loyd R. Fulton, Seattle, Wash. Filed Dec. 7, 1966.

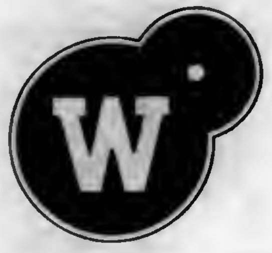
ECONO DUMP

The word "Dump" is disclaimed apart from the mark as shown.

For Kit of the Component Parts of a Portable Dumping Structure for Use on Pick-Up Trucks and Trailers (Int. Cl. 7).

First use on or about Nov. 1, 1966.

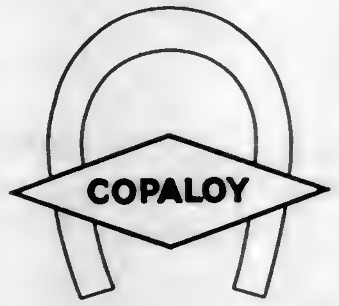
SN 261,695. Wisconsin Drill Head Co., Butler, Wis. Filed Dec. 28, 1966.



For Drilling, Tapping, Boring and Reaming Machines; Drill Heads; Work Tables; Index Tables; Machine Bases and Columns; Holding, Indexing and Special Machine Fixtures; Work Feeds; Approach and Feed Slides; Chucking Machine Heads; Drilling, Tapping, Boring and Reaming Tools; and Tool Holders (Int. Cl. 7).

First use on or about June 1, 1950.

SN 262,408. Diamond Tool and Horseshoe Co., Duluth, Minn. Filed Jan. 12, 1967.

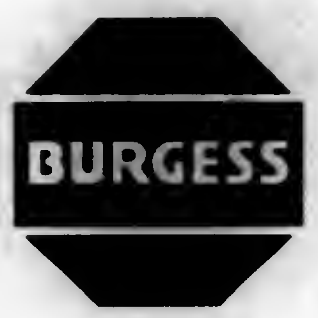


Owner of Reg. Nos. 421,445, 690,852, and others.

For Solid Joint Pliers Including Long-Nosed Pliers, Linemen's Pliers, Cutting Pliers, and Diagonal Cutting Pliers, Using Beryllium Copper Rivets or the Like (Int. Cl. 8).

First use Aug. 1, 1966.

SN 262,852. Burgess Vibrocrafters, Inc., Grayslake, Ill. Filed Jan. 19, 1967.

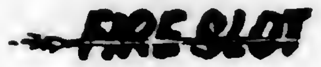


Owner of Reg. Nos. 504,290, 658,263, 660,990, and others.

For Portable Electric Engraving and Cutting Implements, Portable Electric Hand Sprayers for Paints, Insecticides, etc.; Hand Portable Electric Insecticidal Fog Generating Devices, and Insecticidal Fog Generating Devices Operated by Internal Combustion Engines (Int. Cl. 7).

First use Apr. 1, 1965.

SN 264,004. Arthur W. Alexander and Elsie M. Alexander (joint owners), d.b.a. Crank Shaft Co., Los Angeles, Calif. Filed Feb. 6, 1967.



For Pistons (Int. Cl. 7).

First use Aug. 16, 1966.

SN 264,522. Emil Dachtler, Portland, Oreg. Filed Feb. 13, 1967.

DUTCH'S AIR KIT

The words "Air Kit" are disclaimed apart from the mark.

For Power Fluid Operated Conversion Kit for Clothes Presses Including a Main Power Cylinder, a Stop Power Cylinder, and Connecting Links and Controls (Int. Cl. 7).

First use Sept. 30, 1966.

SN 265,063. Gray Company, Inc., Minneapolis, Minn. Filed Feb. 20, 1967.

FF

For Spray Tips for Use With Paint Spray Guns (Int. Cl. 7).

First use Oct. 28, 1960.

SN 266,172. Porta-Shop, Inc., New York, N.Y. Filed Mar. 7, 1967.

PORTA-SHOP A

For Collapsible and Movable Workbench Units, Comprising Work Tables, Vises, Tool Panels, and Racks for Holding Nails, Screws, and Supplies (Int. Cl. 20).

First use Jan. 31, 1967.

SN 266,517. Eaton Yale & Towne Inc., Cleveland, Ohio. Filed Mar. 13, 1967.

CLEVELAND

Owner of Reg. Nos. 182,385, 538,737, and 627,711.

For Mechanical Variable Speed Power Transmissions for Industrial Purposes (Int. Cl. 7).

First use on or about June 20, 1964.

SN 266,713. Alimak-Verken Aktiebolag, Skelleftea, Sweden. Filed Mar. 15, 1967.

ALIMAK

Owner of Swedish Reg. No. 118,501, dated Jan. 5, 1967.

For Cranes, Hoists, Winches, and Related Lifting Devices for Use When Erecting Buildings, and Parts Thereof (Int. Cl. 7).

SN 269,783. Pennsalt Chemicals Corporation, Philadelphia, Pa. Filed Apr. 21, 1967.

CHORD-LOC

For Rotary Compacting Press for the Manufacture of Tablets From Comminuted Materials (Int. Cl. 7).

First use June 30, 1966.

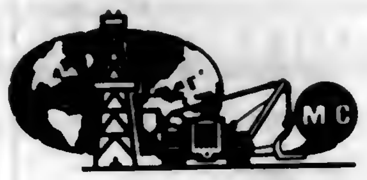
SN 269,784. Pennsalt Chemicals Corporation, Philadelphia, Pa. Filed Apr. 21, 1967.

TRI-PACT

For Multiple Compression Rotary Compacting Press for Making Tablets From Powdered Materials (Int. Cl. 7).

First use July 15, 1966.

SN 270,593. Mid-Continent Pipeline Equipment Co., Houston, Tex. Filed May 8, 1967.



The representation of the tractor with lowering equipment is disclaimed apart from the mark as shown.

Owner of Reg. No. 559,818.

For Pipeline Equipment and Materials—Namely, Boring Machines; Bending Machines; Internal Line-Up Clamps; Cleaning, Coating and Wrapping Machines; Lowering-In Equipment; and Back-Fill Attachments (Int. Cl. 7).

First use Oct. 1, 1965.

SN 271,881. Yeomans Brothers Company, Melrose Park, Ill. Filed May 18, 1967.

AUTO-DOX

For Surface Aerators (Int. Cl. 7).

First use Mar. 14, 1967.

SN 273,538. Sunbeam Corporation, Chicago, Ill. Filed June 9, 1967.

SNOW CHAMP

Applicant disclaims the exclusive right to the word "Snow," except as included in the mark as shown.

For Snow Removal Apparatus (Int. Cl. 7).

First use May 24, 1967.

SN 273,790. Restaurant Equipment Design Co., Wilmington, Del. Filed June 13, 1967.

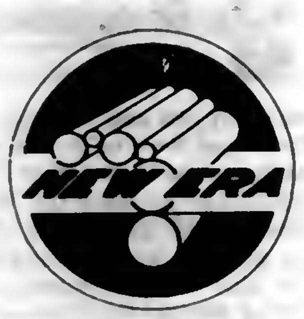
TOMATO KING

Applicant claims no exclusive rights to the word "Tomato," apart from the mark as shown.

For Kitchen Slicer, and More Particularly, a Slicer Especially Adapted for Slicing Tomatoes in Restaurants and Other Mass Food Service Facilities (Int. Cl. 7).

First use June 8, 1967.

SN 274,655. Powers & Eaton Industries, Inc., Hawthorne, N.J. Filed June 23, 1967.

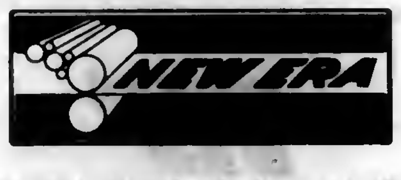


Owner of Reg. Nos. 87,006, 768,699, and 768,700.

For Printing Presses and Attachments and Accessories Therefor; and Machinery for Die Cutting, Perforating, Punching, Slitting, Sheeting, Folding, Rewinding, and Numbering (Int. Cl. 7).

First use during January 1966; on or about Oct. 2, 1905, as to "New Era."

SN 274,656. Powers & Eaton Industries, Inc., Hawthorne, N.J. Filed June 23, 1967.



Owner of Reg. Nos. 87,006, 768,699, and 768,700.

For Printing Presses and Attachments and Accessories Therefor; and Machinery for Die Cutting, Perforating, Punching, Slitting, Sheeting, Folding, Rewinding, and Numbering (Int. Cl. 7).

First use during January 1966; on or about Oct. 2, 1905, as to "New Era."

SN 274,708. Buehler Ltd., Evanston, Ill. Filed June 26, 1967.

REMOMET

For Press for Mounting Metallurgical Specimens (Int. Cl. 7).

First use Apr. 26, 1967.

SN 274,827. Nu-Way Manufacturing Company, Inc., Barnard, Kans. Filed June 26, 1967.

MAT FORK

The word "Fork" is disclaimed apart from the mark as shown.

For Power-Operated Grapple Attachment for Agricultural-Type Tractors (Int. Cl. 7).

First use Mar. 1, 1967.

SN 275,501. Amway Corporation, Ada, Mich. Filed July 7, 1967.

AMWAY

Owner of Reg. No. 828,803.

For Flatware—Namely, Knives, Forks, and Spoons (Int. Cl. 8).

First use on or about Sept. 11, 1963.

SN 276,170. Professional Products Company, Dallas, Tex. Filed July 17, 1967.

PRO-DUX

For Portable Power Operated Pressure Spray Washers for Industrial Uses, Such as, Cleaning Cars, Trucks, Busses, Walls, Floors, Windows, and Industrial Equipment (Int. Cl. 7).

First use June 8, 1967.

SN 277,031. Dresser Industries, Inc., Dallas, Tex. Filed July 28, 1967.

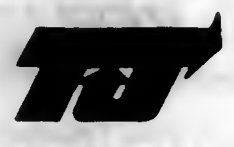
Guiberson

Owner of Reg. Nos. 657,089 and 772,790.

For Oil Field Tools and Related Accessories—Namely, Well Swabs, Tubing Catchers for Wells, Well Packers, Tubing Anchors for Wells, Hydraulic Anchors for Wells, Oil Savers for Wells, Blowout Preventers for Wells, Drilling Heads for Wells, Intermitters for Gas Lift Installations on Wells, Surface Controllers for Gas Lift Installations on Wells, Sucker Rod Strippers, Tubing Strippers, Circulating Valves for Use in Wells, Safety Joints for Use in Wells, Downhole Separators for Use in Wells, Gas Lift Flow Valves for Wells, Tubing Spiders, Blocks and Hooks for Use on Wells, Rotary Swivels for Wells, Kellys, Releasing Attachments for Well Swabs, Pipe Unions for Use on Wells, Rubber Pipe Protector Sleeves, Rubber Slush Pump and Stuffing Box Rings, Mandrels for Mounting Gas Lift Valves in Wells, Stabiliser Sleeves for Drill Pipe, and Parts for the Foregoing Equipment (Int. Cls. 7 and 17).

First use June 1, 1964.

SN 277,205. Petrol Injection Limited, Plymouth, Devon, England. Filed July 31, 1967.



Priority claimed under Sec. 44(d) on British Reg. No. 905,302, dated Feb. 9, 1967. The mark comprises the combination of the block letters "T" and "J" with arrowheads.

For Fuel Injection Apparatus for Internal Combustion Engines and Motors, and Parts and Fittings Therefor (Int. Cl. 7).

SN 277,845. Pettibone Mulliken Corporation, Chicago, Ill. Filed Aug. 8, 1967.

MATCH-BLOMATIC

Owner of Reg. Nos. 593,570, 635,152, and 635,153.

For Match Plate Molding Machines for the Simultaneous Production of Cope and Drag Mold Sections (Int. Cl. 7).

First use May 25, 1966.

SN 278,121. Midwest Industries, Inc., Ida Grove, Iowa. Filed Aug. 11, 1967.

Boom Fork

For Front-End Load Fork Lift and Boom Apparatus (Int. Cl. 7).

First use May 1, 1967.

SN 278,209. Hamilton Kent Manufacturing Co., Kent, Ohio. Filed Aug. 14, 1967.

REXON

Owner of Reg. Nos. 417,722, 609,418, and 671,848.

For Rubber Vibration Mounts for Machinery and Equipment (Int. Cl. 7).

First use December 1944.

SN 278,326. Triangle Package Machinery Company, Chicago, Ill. Filed Aug. 15, 1967.

TRIANGLE

Owner of Reg. No. 423,711.

For Cup Dispensing, Filling, and Closing Machines, Vertical Tube Bag Making, Filling, and Sealing Machines, Wrapping Machines, and Labeling Machines (Int. Cl. 7).

First use spring of 1952 on cup dispensing, filling, and closing machines.

SN 279,388. Fluid Control, Inc., Lafayette, La. Filed Aug. 30, 1967.

FLUCO

For Drilling Mud Gegassing Apparatus (Int. Cl. 7).

First use Nov. 1, 1965.

SN 280,150. Data-Link Corporation, Los Altos, Calif. Filed Sept. 12, 1967.

POSTACOUNT

For Apparatus for Affixing Postage Stamps and the Like (Int. Cl. 16).

First use October 1965.

SN 280,165. Industrial Concepts Incorporated, Bernardsville, N.J. Filed Sept. 12, 1967.

AUTOMAZING

For Machines for Furbishing an Automobile Surface Coating (Int. Cl. 7).

First use July 11, 1967.

SN 280,534. American Railroad Supply Company, South El Monte, Calif. Filed Sept. 18, 1967.

ARSCO

For Rail Saw, Rail-Drilling Machine, Double Wet Saw, Electric Drilling Machine, and Tri-Rail Saw (Int. Cl. 7).

First use May 1963.

SN 280,546. Boyar-Schultz Corporation, Broadview, Ill. Filed Sept. 18, 1967.

HYDRA-LITE

For Apparatus for Feeding Stock to Lathes (Int. Cl. 7).

First use on or about Mar. 1, 1954.

SN 284,535. Doughboy Industries, Inc., New Richmond, Wis. Filed Nov. 13, 1967.

Doboy

Owner of Reg. Nos. 599,908, 601,601, 816,526, and 821,560.

For Conveyors of Single, Multi, and V-Type Belts; Continuous Glue Type Sealing Machines; Bag Closing and Tying Machines; Trimming Devices for Bag Tops; Sewing Machines for Closing Bag Tops; Heavy Duty Sewing Pedestals for Sewing Machines for Closing Bag Tops; Chain Band Tape-Over Sealing Machines; Bag Lubricating Systems and Apparatus; Packaging Machinery; Rotary Work Tables; and Packaging Machines for Enveloping Film About Articles and Goods (Int. Cl. 7).

First use on or about Jan. 1, 1940.

Class 26—Measuring and Scientific Appliances

SN 226,383. Servo Corporation of America, Hicksville, N.Y. Filed Aug. 24, 1965.

SERVODYNAMIC

Owner of Reg. Nos. 338,806, 746,571, and others.

For Control Equipment, Measuring Instruments, and Testing Devices—Namely, Analysing and Testing Apparatus for Servomechanisms, Electronic Amplifiers, Pulse Generators, Signal Generators, Electronic Indicating Equipment, and Digital Display Devices (Int. Cl. 9).

First use Apr. 2, 1965.

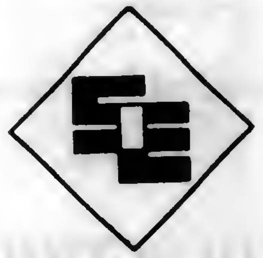
SN 244,875. Automatic Control Devices, Inc., Bethel, Conn. Filed May 4, 1966.

COLOR CODER

For Color Measuring Instruments—Namely, Reflectometers and Spectrophotometers (Int. Cl. 9).

First use March 1963.

SN 245,990. The Superior Electric Company, Bristol, Conn. Filed May 18, 1966.



Owner of Reg. Nos. 663,060 and 781,695.

For Digital Control Equipment—Namely, Numerical Controls and Tape Controls, Electrically Controlled Positioners, Translators, Namely, Pulse to Step Converters, Preset Indexers (Int. Cl. 9).

First use Sept. 12, 1955.

SN 245,991. The Superior Electric Company, Bristol, Conn. Filed May 18, 1966.

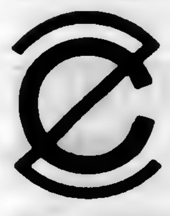
SLO-SYN

Owner of Reg. Nos. 685,066 and 777,758.

For Digital Control Equipment—Namely, Numerical Controls and Tape Controls, Electrically Controlled Positioners, Translators, Namely, Pulse to Step Converters, Preset Indexers (Int. Cl. 9).

First use Dec. 1, 1958.

SN 246,540. Contraves A.G., Zurich, Switzerland. Filed May 25, 1966.



Owner of Swiss Reg. No. 211,027, dated June 4, 1965; and U.S. Reg. No. 696,288.

For Aiming and Tracking Instruments for Antiaircraft Artillery, Remote Control Apparatus for Aeroplanes and Missiles, Observation and Measuring Implements, Steering and Regulating Devices, Analog and Digital Computers; Electronic Apparatus To Store and Reproduce Information; Integration and Selection Apparatus; and Instruments and Components for the Above Including Electrical Relays and Switches (Int. Cl. 9).

SN 263,272. Industrionics Controls, Inc., New York, N.Y. Filed Jan. 25, 1967.

AURASENSOR

For Electric Switch Responsive to Changes in Fluid Flow (Int. Cl. 9).

First use Nov. 23, 1966.

SN 264,416. Hersey-Sparling Meter Company, Dedham, Mass. Filed Feb. 10, 1967.

1001

For Remote Reading Meter Registers and Probe Receptacles (Int. Cl. 9).

First use Jan. 13, 1967.

SN 264,864. Victory Engineering Corporation, Springfield, N.J. Filed Feb. 16, 1967.

MICRO-BEAD

Owner of Reg. No. 795,961.

For Electronic Components—Namely, Thermistors, Varistors, and Resistors (Int. Cl. 9).

First use Oct. 13, 1961.

SN 266,769. Kruse Stroke Electronics, Mountain Viek, Calif. Filed Mar. 15, 1967.

KS KRUSE STORKE

For Microwave Test Instruments—Namely, Oscillators, Sweepers, Samplers, Mixers, Sweeping Current Supplies, and Parts Thereof (Int. Cl. 9).

First use Mar. 21, 1966.

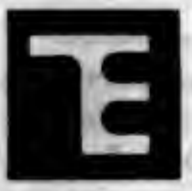
SN 271,289. Rudolph Meijer's Drukinktfabriek N.V., Amsterdam, Netherlands. Filed May 11, 1967.

TACK-O-SCOPE

For Machines Used in the Measuring of Stickiness or Adhesiveness of Liquid Materials Such as Printing Inks, Fluid Adhesives, Paper Coatings, Glues, and the Like (Int. Cl. 9).

First use Apr. 16, 1962; in commerce Oct. 15, 1962.

SN 271,737. Thermo Electric Co., Inc., Saddle Brook, N.J. Filed May 17, 1967.



The mark comprises the stylised letters "TE" and design.

For Temperature Controller of the Potentiometer Type (Int. Cl. 9).

First use Apr. 7, 1967.

SN 272,632. R.D. Products, Inc., East Rochester, N.Y. Filed May 29, 1967.

IDENTI-PROOF

For Cameras (Int. Cl. 9).

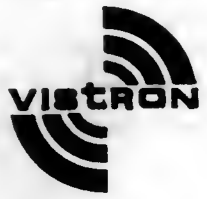
First use Apr. 28, 1967.

SN 280,030. F. W. Dwyer Mfg. Co., Inc., Michigan City, Ind. Filed Sept. 11, 1967.

DIGIFLO

For Digital Readout Flow Meters (Int. Cl. 9).
First use Aug. 18, 1967.

SN 280,036. Nicholas G. Festos, Chicago, Ill. Filed Sept. 11, 1967.



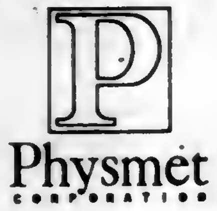
For Electronic Testing Apparatus for Analyzing the Performance of Motor Vehicle Engines (Int. Cl. 9).
First use Jan. 15, 1963.

SN 280,468. Shintron Company, Inc., Cambridge, Mass. Filed Sept. 15, 1967.

ACCUMAT

For X-Ray Film Holders and Display Units (Int. Cl. 10).
First use at least as early as July 1, 1967.

SN 281,489. Physmet Corporation, Cambridge, Mass. Filed Sept. 29, 1967.



Applicant disclaims the word "Corporation" apart from the mark as shown.
For Materials Test Equipment and Instruments, More Particularly, Fracture Toughness Testing Equipment, Namely, Fatigue Pre-Cracking Machines, Slow-Bend Test Machines, Charpy Impact Machines, Gear Testing Impact Machines, Tensile Fatigue Pre-Cracking Attachments for Pre-Cracking Machines, Load Calibration Cells for Slow-Bend Test Machines, Charpy Specimen Grinding Fixtures and Charpy Specimen Notching Fixtures; and High Temperature and Pressure Instruments, Namely, Apparatus for Subjecting Materials to High Pressure and High Temperature Conditions in Order To Determine the Effects of Those Parameters on the Properties of the Materials Being Tested, and Parts and Components of or for Such Apparatus (Int. Cl. 9).
First use November 1966 on high temperature and pressure instruments.

SN 281,986. Johnson Fare Box Company, Chicago, Ill. Filed Oct. 6, 1967.

AUDIT-ON-LOCATION

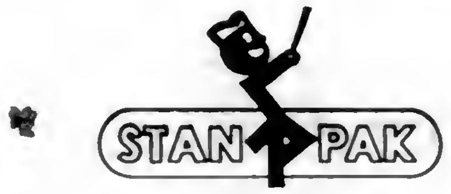
Owner of Reg. No. 752,041.
For Counter Mechanism for Counting and Sorting Coins, Including a Printing Register for Printing on a Ticket the Total Amount of Coins Counted (Int. Cl. 9).
First use May 15, 1967.

SN 282,776. Dade Reagents, Inc., Miami, Fla. Filed Oct. 18, 1967.

MONOFUGE

For Centrifuging Equipment Used in a Method for Performing Plasmapheresis in Situ (Int. Cl. 9).
First use on or before Aug. 17, 1967.

SN 288,378. Standard Packaging Corporation, New York, N.Y. Filed Jan. 8, 1968.



Owner of Reg. Nos. 595,308, 604,047, and others.
For Kitchen Timers, Laminated Tape for Use in Computers, Thermometers, Barometers, Hygrometers, Rain Gauges, Household Weighing Scales, Measuring Cups, Binoculars, Rulers, and T-Squares (Int. Cl. 9).
First use at least as early as Apr. 12, 1967; Sept. 17, 1953, as to "Stanpak."

SN 290,641. Panacolor, Inc., New York, N.Y. Filed Feb. 8, 1968.

PANACOLOR

Owner of Reg. No. 778,201.
For Film Projecting and Film Viewing Devices (Int. Cl. 9).
First use April 1965.
Subj. to Intf. with SN 285,339.

Class 27 — Horological Instruments

SN 277,882. Bulova Watch Company, Inc., Flushing, N.Y. Filed Aug. 9, 1967.

ATOLECTRIC

For Watches and Parts Thereof (Int. Cl. 14).
First use July 28, 1967.

SN 282,692. Enicar S.A. Manufacture d'Horlogerie, Lengnau/Bienne, Switzerland. Filed Oct. 17, 1967.

SEAPEARL

Owner of U.S. Reg. No. 559,062.
For Watches, Clocks, and Parts Thereof (Int. Cl. 14).
First use at least as early as December 1954; in commerce at least as early as December 1954.

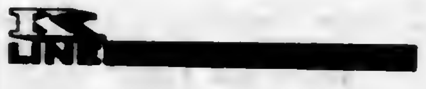
SN 282,883. Bulova Watch Company, Inc., Flushing, N.Y. Filed Oct. 19, 1967.

ATO-LECTRONIC

For Watches and Parts Thereof (Int. Cl. 14).
First use Oct. 3, 1967.

Class 29 — Brooms, Brushes, and Dusters

SN 271,292. Spartans Industries, Inc., New York, N.Y. Filed May 11, 1967.



For Paint Brushes (Int. Cl. 16).
First use Feb. 1, 1966.

Class 31 — Filters and Refrigerators

SN 242,891. Dynalectron Corporation, Washington, D.C. Filed Apr. 7, 1966.

DYNA-KOOL

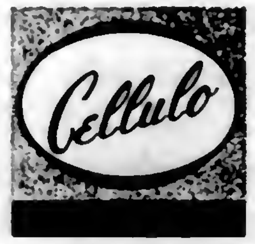
For Conversion Kits Comprising Doors, Shelves, Air Ducts, and Associated Small Hardware Items for Converting Coin-Operated Refrigerated Vending Machines for Bottled Goods Into Visual, Refrigerated Storage Cabinets (Int. Cl. 11).
First use Dec. 13, 1965.

SN 264,284. The Meadowbrook Company, Edina, Minn. Filed Feb. 9, 1967.

AQUANATOR

For Ion Exchange Domestic Water Conditioning Units (Int. Cl. 11).
First use October 1966.

SN 268,022. The Cellulo Company, Sandusky, Ohio. Filed Mar. 31, 1967.



The stippling shown on the drawing is for shading purposes only. Owner of Reg. No. 439,167.
For Filters and Filter Media for Liquid and Air Filtration (Int. Cls. 1 and 11).
First use Feb. 10, 1966.

SN 279,284. Dean Products, Inc., Brooklyn, N.Y. Filed Aug. 29, 1967.

CRISPADEAN

Owner of Reg. No. 553,674.
For Cooling Plates, Immersion Coolers, Cooling Cabinets, Cooling Shrouds, Cooling Drums, Refrigerated Filter Presses, Refrigerated Dip Pans, Utensils for Cooling and Refrigerating Food, Chemicals, Gases and Liquids, Cooling Platens, Refrigerated Counter Tops, and Coolers for Sterilizing Laboratory Equipment (Int. Cl. 11).
First use September 1966.

Class 32 — Furniture and Upholstery

SN 258,861. Associated Design Group, Inc., Salt Lake City, Utah, assignee of Associated Design Group, Salt Lake City, Utah. Filed Nov. 17, 1966.

ARCHON

Owner of Reg. No. 818,149.
For Furniture—Namely, Tabletops and Desk Tops (Int. Cl. 20).
First use July 22, 1965.

SN 264,151. Formfac Aktiebolag, Malmo, Sweden. Filed Feb. 7, 1967.

FORMFAC

Owner of Swedish Reg. No. 104,518, dated Nov. 30, 1962.
For Kitchen and Wardrobe Equipment in the Nature of Shelves and Cupboards (Int. Cl. 20).

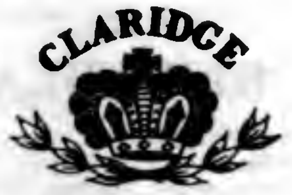
SN 271,749. N. Sumergrade & Sons, Inc., New York, N.Y. Filed May 18, 1967.

Slumberland

Owner of Reg. No. 297,286.
For Pillows (Int. Cl. 20).
First use July 1929.

Class 33 — Glassware

SN 285,484. Almcee Wholesale Corporation, New York, N.Y. Filed Nov. 24, 1967.



Owner of Reg. No. 824,431.
For Earthen, Ironstone, Stone, Porcelain, and China Dinnerware (Int. Cl. 21).
First use Oct. 11, 1967.

Class 34 — Heating, Lighting, and Ventilating Apparatus

SN 256,051. American Precision Industries, Inc., Buffalo, N.Y. Filed Oct. 10, 1966.

DOCSQUARE

For Heat Exchangers of the Plate Fin, Shell, and Tube Types (Int. Cl. 11).
First use on or about June 2, 1966.

SN 261,855. Liebert Corporation, Columbus, Ohio. Filed Jan. 3, 1967.

FLOR-FLO

For Cooling, Humidification and Dehumidification Unit, for Use With Computer and Data Processing Equipment (Int. Cl. 11).
First use June 26, 1965.

SN 277,943. Todd Shipyards Corporation, New York, N.Y. Filed Aug. 9, 1967.

TAM

For Gas-Fired Air Heaters (Int. Cl. 11).
First use Dec. 19, 1966.

SN 278,293. Fleming Devices, Inc., South Portland, Maine. Filed Aug. 15, 1967.

FLEMINATOR

For Combined Sand and Water Heater (Int. Cl. 11).
First use at least as early as December 1964.

SN 278,421. Geo. D. Roper Corporation, Kankakee, Ill. Filed Aug. 11, 1967.

Charm

For Cooking and Baking Units—Namely, Stoves, Ranges, Ovens, and Wall-Mounted, Cabinet-Based, and Countertop Units (Int. Cl. 11).
First use Apr. 1, 1964.

SN 278,539. Thermoil Ltd., Tel-Aviv, Israel. Filed Aug. 17, 1967.

THERMOTRON

For Baking Ovens (Int. Cl. 11).
First use before August 1964; in commerce August 1964.

SN 278,839. Westinghouse Electric Corporation, Boston, Mass. Filed Aug. 22, 1967.

AXIFLO

For Axial Fans (Int. Cl. 11).
First use on or about Jan. 10, 1939.

SN 279,283. Dean Products, Inc., Brooklyn, N.Y. Filed Aug. 29, 1967.

CRISPADEAN

Owner of Reg. No. 553,674.
For Heating Platens and Plates, Immersion Heaters, Heating Ovens, Heat Exchangers, Melting Tanks, Drum Warmers, Heat Treating Furnaces, Heating Tanks, Heated Filter Presses, Heated Dip Pans, Utensils for Heating Food, Chemicals, Gases and Liquids, and Heated Counter Tops and Heaters for Sterilizing Laboratory Equipment (Int. Cl. 11).
First use September 1966.

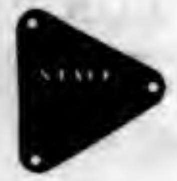
SN 279,568. Fred Roberts Company, San Francisco, Calif. Filed Sept. 1, 1967.

ROTO-BACHI

For Braziers With Spit Attachment (Int. Cl. 11).
First use on or before Mar. 10, 1967.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 268,998. Staff Gasket Mfg. Corp., New York, N.Y. Filed Apr. 12, 1967.



The representation of the gasket and the words "Gasket Mfg. Corp." are disclaimed apart from the mark as shown.
For Gaskets and Rubber Washers (Int. Cl. 17).
First use Mar. 1, 1967.

SN 285,397. C. E. Conover & Co., Inc., Fairfield, N.J. Filed Nov. 22, 1967.

CON-O-VERSEAL

For O-Ring Seals (Int. Cl. 17).
First use May 1967.

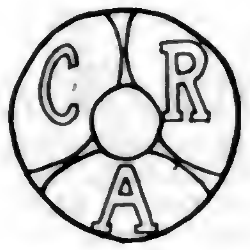
Class 36 — Musical Instruments and Supplies

SN 273,877. W. G. Eavestaff & Sons Limited, London, England. Filed June 14, 1967.

MINITRONIC

Owner of British Reg. No. 611,507, dated Apr. 18, 1940.
For Electronically Stringed Musical Instruments (Int. Cl. 15).

SN 275,935. Continental American Recording Company, Detroit, Mich. Filed July 12, 1967.

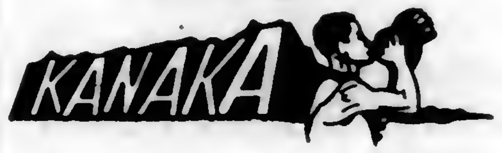


For Phonograph Records, Phonograph Record Albums, and Prerecorded Magnetic Tapes (Int. Cl. 9).
First use Apr. 19, 1967.

SN 277,275. General Recorded Tape, Inc., Sunnyvale, Calif. Filed Aug. 1, 1967.

For Magnetic Recording Tape, Bearing Pre-Recorded Programs (Int. Cl. 9).
First use Oct. 16, 1965.

SN 278,718. Makaha Records, Inc., Honolulu, Hawaii. Filed Aug. 21, 1967.



For Phonograph Records (Int. Cl. 9).
First use Apr. 14, 1967.

SN 280,242. Morhan Exporting Corporation, New York, N.Y. Filed Sept. 13, 1967.

EMERALD

For Magnetic Recording Tape (Int. Cl. 9).
First use Aug. 16, 1965.

SN 280,350. Synthetic Plastics Company, Newark, N.J. Filed Sept. 14, 1967.

CHILD WORLD

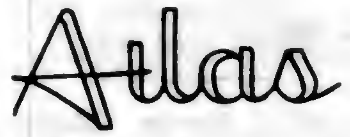
For Grooved Phonograph Records (Int. Cl. 9).
First use Aug. 18, 1967.

SN 281,559. Denki Onkyo Kabushiki Kaisha, Ota-ku, Tokyo, Japan. Filed Oct. 2, 1967.

For Tape Recorders and Parts and Accessories Therefor (Int. Cl. 9).
First use June 1, 1948; in commerce Jan. 10, 1950.

Class 37 — Paper and Stationery

SN 264,993. S. E. & M. Vernon, Inc., New York, N.Y. Filed Feb. 17, 1967.



For Loose Leaf Binder (Int. Cl. 16).
First use Dec. 27, 1966.

SN 266,352. The Northwest Paper Company, Cloquet, Minn. Filed Mar. 9, 1967.

CHARTER 98

For Printing and Converting Papers (Int. Cl. 16).
First use October 1963.

SN 271,615. P. H. Glatfelter Company, Spring Grove, Pa. Filed May 16, 1967.

CC-FORM BOND

Applicant disclaims the word "Bond" apart from the mark, as used.
For Printing, Writing, Typewriter, Duplicator, Drawing, Music, and Lithographic Papers (Int. Cl. 16).
First use Apr. 15, 1967.

SN 272,458. Allied Paper Corporation, Chicago, Ill. Filed May 26, 1967.

WHITE CAP

For Coated and Uncoated Papers for Printing and/or Converting Purposes and Business Papers—Namely, Paper for Letterheads, Second Sheets, and Miscellaneous Business Forms, Duplicator Paper for Making Copies on Gelatin and Spirit Duplicating Machines, Ledger Paper for Ledger Bookkeeping Purposes, and Mimeograph Paper for Making Copies on Mimeograph Machines (Int. Cl. 16).
First use Apr. 14, 1967.

SN 276,946. Noland Paper Company, Inc., Buena Park, Calif. Filed July 27, 1967.

NOPACO

For Envelopes and Flameproof Papers (Int. Cl. 16).
First use as early as 1961.

SN 277,072. Scripto, Inc., Atlanta, Ga. Filed July 28, 1967.

HEY, LUV

For Writing Instruments, Specifically Non-Retractable Ball Point Pens (Int. Cl. 16).
First use June 22, 1967.

SN 278,551. Philip A. Wooster, d.b.a. Acorn Paper Company, Emeryville, Calif. Filed Aug. 17, 1967.

SNO-BRITE

For Paper Towels (Int. Cl. 16).
First use Oct. 15, 1956.

SN 281,992. Longlife Pen Company, Monrovia, Calif. Filed Oct. 6, 1967.

HI-SPOT

For Marking Pens (Int. Cl. 16).
First use July 31, 1967.

SN 282,551. Disa-Pen Inc., Ann Arbor, Mich. Filed Oct. 16, 1967.

DISA-PEN

For Special Writing Instruments Containing Ink Which Becomes Invisible a Predetermined Period of Time After Having Been Applied (Int. Cl. 16).
First use Oct. 4, 1967.

SN 282,684. Consolidated Cellulose Products, Inc., New York, N.Y. Filed Oct. 17, 1967.

CONCEL

For Paper Towels (Int. Cl. 16).
First use Sept. 26, 1967.

SN 282,791. Eberhard Faber Inc., Crestwood, Wilkes-Barre, Pa. Filed Oct. 18, 1967.

STENORACE

For Typewriter Erasers (Int. Cl. 16).
First use July 14, 1959.

SN 282,826. Scripto, Inc., Atlanta, Ga. Filed Oct. 18, 1967.
For Fiber Tip Pens (Int. Cl. 16).

CRAZY HEADS

First use Sept. 26, 1967.

Class 38 — Prints and Publications

SN 242,625. Michigan United Conservation Clubs, Lansing, Mich. Filed Apr. 4, 1966.

MICHIGAN OUT-OF-DOORS

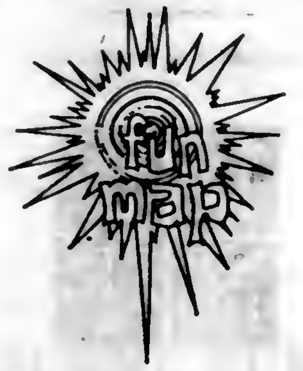
For News Tabloid Magazine Which Is Primarily Distributed to Members and Which Deals With Natural Resource Conservation Matters, Hunting, Fishing, Camping, and Other Outdoor Recreational Activities and Programs of Interest to Such Members (Int. Cl. 16).
First use July 1, 1946.

SN 249,692. Weight Watchers International, Inc., Forest Hills, N.Y. Filed July 6, 1966.

WEIGHT WATCHERS

For Handbooks and Cookbooks (Int. Cl. 16).
First use June 1, 1963.

SN 254,292. Barbara R. Jones, d.b.a. Merchants Greeting Service, Greenville, S.C. Filed Sept. 12, 1966.



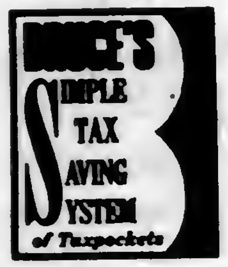
The word "Map" is disclaimed apart from the mark as shown.
For Maps Indicating Places of Entertainment and Interest in a Given Geographical Area (Int. Cl. 16).
First use June 14, 1966.

SN 255,463. Rust-Oleum Corporation, Evanston, Ill. Filed Sept. 29, 1966.

NEW COLOR HORIZONS

For Catalogue Containing Technical Information Relating to Surface Coating Compositions (Int. Cl. 16).
First use on or about Feb. 11, 1959.

SN 260,980. Wiechers Enterprises, Inc., South Miami, Fla. Filed Dec. 16, 1966.



Applicant disclaims all wording in the mark except the word "Bruce's."
For Series of Blanks and Instructions Pertaining to Taxes and Printed on Envelopes for Keeping Tax Records (Int. Cl. 16).
First use May 1966.

SN 261,883. Service Publications, Inc., New York, N.Y. Filed Jan. 3, 1967.

MEN'S HAIRSTYLIST & BARBER'S JOURNAL

For Periodical Magazine Devoted to Matters Concerning Barbering and Men's Hairstyling (Int. Cl. 16).
First use in or about 1958; in or about 1898 as to "Barber's Journal."

SN 261,884. Service Publications, Inc., New York, N.Y. Filed Jan. 3, 1967.

BARBER BOOK OF KNOWLEDGE

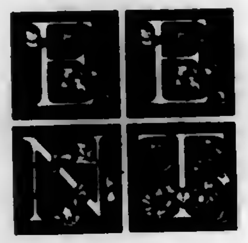
For Periodical Magazine Devoted to Matters Concerning Barbers and Barbering (Int. Cl. 16).
First use in or about 1954.

SN 261,885. Service Publications, Inc., New York, N.Y. Filed Jan. 3, 1967.

PROFESSIONAL BEAUTY BOOK OF KNOWLEDGE

For Periodical Magazine Devoted to Matters Concerning Beauticians and Beautician Trade (Int. Cl. 16).
First use in or about 1952.

SN 266,361. The Professional Press, Inc., Chicago, Ill. Filed Mar. 9, 1967.



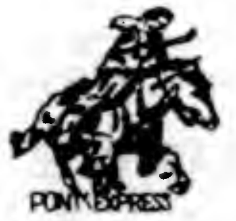
Applicant disclaims the right to exclusive use of the letters "EENT" except in combination with the design as shown. Owner of Reg. No. 715,477.
For Trade Magazine (Int. Cl. 16).
First use on or about Nov. 8, 1966.

SN 267,129. Commercial Decal, Inc., Mount Vernon, N.Y. Filed Mar. 20, 1967.

ASTROGLAZE

For Decalcomanias for Decorating Ceramic Ware (Int. Cl. 16).
First use Feb. 6, 1967.

SN 268,377. James C. Bowers, Colorado Springs, Colo. Filed Apr. 5, 1967.



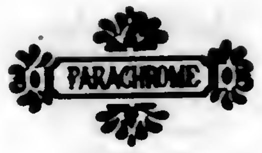
For Souvenir Brochures and Letters (Int. Cl. 16).
First use Feb. 10, 1967.

SN 269,705. United Feature Syndicate, Inc., New York, N.Y. Filed Apr. 20, 1967.

WHERE IN THE WORLD?

For Game Feature for Newspapers (Int. Cl. 16).
First use at least as early as May 4, 1964.

SN 272,743. The Paramount Line, Inc., Pawtucket, R.I. Filed May 31, 1967.



For Greeting Cards (Int. Cl. 16).
First use on or about Jan. 3, 1967.

SN 273,664. Norcross, Inc., New York, N.Y. Filed June 12, 1967.

PLAYMAKES

For Greeting Cards (Int. Cl. 16).
First use Apr. 26, 1967.

SN 273,666. Norcross, Inc., New York, N.Y. Filed June 12, 1967.

LIGHTNING LETTERS

For Greeting Cards (Int. Cl. 16).
First use Apr. 12, 1967.

SN 274,678. Unity School of Christianity, Lee's Summit, Mo. Filed June 23, 1967.

WEE WISDOM

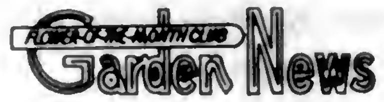
For Periodical Publication in the Nature of a Religious Magazine for Children (Int. Cl. 16).
First use during 1898.

SN 277,599. McLarren Industrial Associates, Inc., Washington, D.C. Filed Aug. 7, 1967.

INTERBANK

For Monthly Newsletter (Int. Cl. 16).
First use Aug. 1, 1966.

SN 278,204. Flower of the Month, Inc., Grand Rapids, Mich. Filed Aug. 14, 1967.



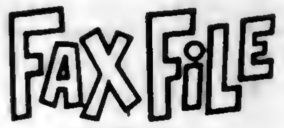
Without waiver of any common law rights and solely for purposes of registration, applicant disclaims the words "Garden News" apart from the mark as shown. Owner of Reg. No. 397,300.
For Newsletter or Bulletin on Flowers, Plants, Bulbs, Trees, and Shrubs (Int. Cl. 16).
First use Sept. 1, 1949.

SN 278,398. Monogram Publications, Inc., Inglewood, Calif. Filed Aug. 16, 1967.

21

For Magazine (Int. Cl. 16).
First use Oct. 15, 1955.

SN 293,667. Kahn Communications Corporation, New York, N.Y. Filed Mar. 20, 1968.



For Newsletter Published Periodically (Int. Cl. 16).
First use Nov. 7, 1967.

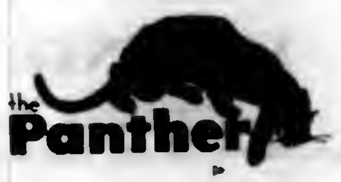
SN 293,780. McGraw-Hill, Inc., New York, N.Y. Filed Mar. 21, 1968.

PACKASCOPE

For Weekly Newsletter (Int. Cl. 16).
First use Mar. 4, 1968.

Class 39 — Clothing

SN 243,572. Oxford Industries, Inc., Atlanta, Ga., by change of name from Oxford Manufacturing Company, Inc., Atlanta, Ga. Filed Apr. 14, 1966.



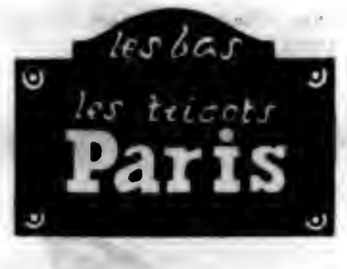
For Sport Coats, Suits, Shirts, Slacks, Outerwear Jackets, and All Weather Coats for Men (Int. Cl. 25).
First use Apr. 1 1966.

SN 251,681. Hat Corporation of America, New York, N.Y. Filed Aug. 4, 1966.

SATURN BY KNOX

Owner of Reg. Nos. 50,790, 755,139, and others.
For Felt-Like Hats for Men (Int. Cl. 25).
First use Apr. 6, 1966.

SN 256,479. Societe G. Pluot & Fils, Saint-Just-Sauvage (Marne), France. Filed Oct. 14, 1966.



Applicant disclaims all the wording apart from the mark as shown. The English translation of the French words "Les Bas" and "Les Tricots" is "stocking" and "knitting" respectively. Owner of French Reg. No. 9,791, dated Aug. 31, 1960 (Epernay); Natl. Inst. No. 150,655.
For Stockings for Men, Women, and Children; and Knitted Outer Wear for Women—Namely, Sweaters, Waistcoats, Vests, Skirts, Tailored Suits, Gowns, and Coats (Int. Cl. 25).

SN 258,200. Bobbie Associates, Inc., New York, N.Y., by change of name from Max Siegel Associates, Inc., New York, N.Y. Filed Nov. 8, 1966.

GIRL-LAND

For Girls' Dresses (Int. Cl. 25).
First use May 25, 1960.

SN 262,799. Mitchell Bros. Inc., New York, N.Y. Filed Jan. 18, 1967.

MISS PAPER

The word "Paper" is disclaimed apart from the mark as shown.
For Dresses Made Wholly or in Part of Paper (Int. Cl. 25).
First use Jan. 9, 1967.

SN 263,552. Fingar & Weiss, Inc., New York, N.Y. Filed Jan. 30, 1967.

MINI-BABI

For Misses' Dresses (Int. Cl. 25).
First use Nov. 15, 1966.

SN 264,314. Flexnit Company, Inc., New York, N.Y. Filed Feb. 9, 1967.

BACK CARE

Owner of Reg. No. 835,976.
For Girdles and Panty-Girdles (Int. Cl. 25).
First use Jan. 30, 1967.

SN 267,189. Sears, Roebuck and Co., Chicago, Ill. Filed Mar. 20, 1967.

NO TAB

For Leg Elastic, Sold as a Component of Panty Girdles (Int. Cl. 25).
First use on or about Dec. 27, 1965.

SN 267,453. E. E. Taylor Corporation, Freeport, Maine. Filed Mar. 23, 1967.

BURNT BUK

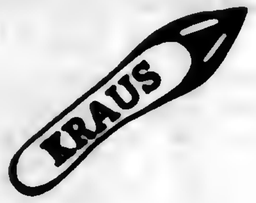
Applicant disclaims the term "Buk" apart from the mark as shown. Owner of Reg. No. 686,930.
For Shoes Made Wholly or in Part of Buckskin (Int. Cl. 25).
First use Mar. 13, 1967.

SN 268,191. Groff Importers, Inc., San Diego, Calif. Filed Apr. 3, 1967.

FANTASIA

For Cloth Scarves, Mantillas, and Triangles (Int. Cl. 25).
First use July 1965.

SN 268,200. Kraus Originals, Inc., Los Angeles, Calif. Filed Apr. 3, 1967.



The representation of the shoe is disclaimed apart from the mark as shown.
For Shoes (Int. Cl. 25).
First use Mar. 20, 1967.

SN 268,519. National Periodical Publications, Inc., New York, N.Y. Filed Apr. 6, 1967.

BATMAN

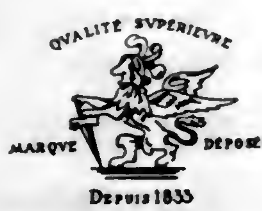
Owner of Reg. Nos. 378,913, 839,561, and others.
For T-Shirts, Sweat Shirts, Pajamas, Hats, Knit Shirts, Sweaters; Boys' Raincoats, Coveralls, Gloves, Mittens, Boys' Bathing Trunks, Pinafores, Shifts, Dresses, Smocks; Boys' and Girls' Bathrobes, Pajamas and Bathrobe Sets, Slippers, Warm-Up Jackets; Boys' Ties; Children's Shorts, Slacks; Boys' Sport and Dress Shirts, Bibs, Cobbler Aprons; Children's Night Gowns, Blanket Sleepers, Children's Belts and Suspenders, Children's Coordinated Shirt and Pants Sets, Boots, Sneakers and Vinyl Waterproof Galoshes, Children's Sunsuits, Sport Jackets, Suits and Vests, Knitted Hats, and Knitted Caps in the Shape of a Mask (Int. Cl. 25).
First use January 1966.

SN 269,283. Bond Stores, Incorporated, New York, N.Y. Filed Apr. 17, 1967.

EVEN-PAR

For Knit Golf Shirts (Int. Cl. 25).
First use March 1963.

SN 269,335. Mossant, Bourg-de-Peage (Drome), France. Filed Apr. 17, 1967.



MOSSANT
PARIS

The terms "Qualité Supérieure," "Marque Déposée Depuis 1833," and "Mossant Paris" are disclaimed apart from the mark as shown. The French words "Qualité Supérieure" and "Marque Déposée Depuis 1833" are translated as "superior quality" and "mark filed since 1833." Owner of French Reg. No. 3,264, dated Feb. 12, 1963 (Romans); Natl. Inst. No. 203,730; and U.S. Reg. No. 566,645.
For Headwear, Shoes, Boots, and Slippers for Men, Women, and Children (Int. Cl. 25).

SN 269,432. B. Kuppenheimer & Co., Inc., Chicago, Ill. Filed Apr. 18, 1967.

VISCOUNT

For Men's Suits, Sportcoats, Slacks, and Outercoats (Int. Cl. 25).
First use July 18, 1966.

SN 269,957. Figure Builders Foundations, Inc., New York, N.Y. Filed Apr. 25, 1967.

Young Love

For Foundation Garments, Girdles, Panty Girdles, and Garter Belts (Int. Cl. 25).
First use Mar. 1, 1966.

SN 270,720. Eugene Potter Thornton, Murrells Inlet, S.C. Filed May 4, 1967.

THORNWOOD

For Men's, Boys', Girls', Women's, and Infant's Hosiery, Underwear, Shirts, Sweaters, Caps, Blouses, Diapers, Gowns, Coats, Suits, Trousers, Jeans, Slacks, Jackets, Belts, Ties, and Pajamas (Int. Cl. 25).
First use May 1, 1967.

SN 272,017. Brown Shoe Company, Inc., St. Louis, Mo. Filed May 22, 1967.

RO-FLEX

For Men's Shoes (Int. Cl. 25).
First use Apr. 14, 1967.

SN 272,776. Chaussures du Bocage, Maine-et-Loire, France. Filed May 9, 1967.

BOCAGE

Priority claimed under Sec. 44(d) on French Reg. No. 718,239, dated Dec. 6, 1966.
For Women's Shoes (Int. Cl. 25).
First use at least as early as October 1965; in commerce in or about October 1965.

SN 273,696. Serbin, Inc., Miami, Fla. Filed June 12, 1967.

MIN-KNEE

For Misses', Juniors', and Junior Petite Dresses, Pants Dresses, Culottes, Skirts, Shorts, and Pedal Pushers (Int. Cl. 25).
First use May 29, 1967.

SN 274,218. Lancome S.A., Chevilly-Larue, Seine, France. Filed June 19, 1967.

LANCÔME

Owner of U.S. Reg. Nos. 425,129, 679,012, and others.
For Women's Hosiery (Int. Cl. 25).
First use November 1966; in commerce November 1966.

SN 274,291. Leila Fashions, Inc., Miami, Fla. Filed June 2, 1967.

MR. Pepito of MIAMI

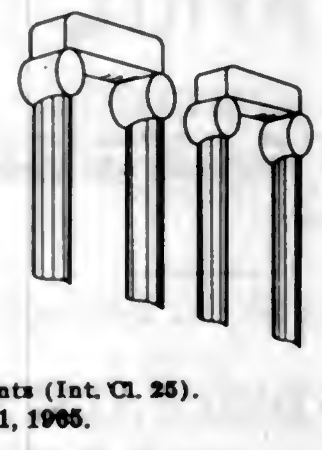
Applicant disclaims the word "Miami" apart from the mark as shown.
For Ladies' Blouses; Men's and Women's Shorts; Women's Shifts and Women's Pants (Int. Cl. 25).
First use Apr. 28, 1967.

SN 274,300. Armored Hosiery Corp., New York, N.Y. Filed June 20, 1967.

SOCK PORT

Applicant makes no claim to the word "Sock" apart from the mark as shown.
For Hosiery (Int. Cl. 25).
First use Mar. 14, 1967.

SN 274,412. The Christie Brothers Fur Corp., New York, N.Y. Filed June 21, 1967.



For Fur Garments (Int. Cl. 25).
First use Sept. 1, 1965.

SN 277,567. Ph. Horowitz, Inc., New York, N.Y. Filed Aug. 4, 1967.

MARCO VELLO

The name "Marco Vello" is fanciful. Owner of Reg. No. 824,092.
For Men's and Boys' Slacks (Int. Cl. 25).
First use Sept. 1, 1965.

SN 279,986. Andrew Geller, Inc., Brooklyn, N.Y. Filed Sept. 11, 1967.

VAN ARDEN

The name "Van Arden" is fanciful and does not identify any living individual.
For Ladies' Shoes (Int. Cl. 25).
First use Sept. 1, 1940.

SN 280,301. Consolidated Millinery Company, Chicago, Ill. Filed Sept. 14, 1967.

SO VERY SAN FRANCISCO

For Ladies' Hats (Int. Cl. 26).
First use Apr. 1, 1967.

SN 282,223. Thorlo, Inc., Statesville, N.C. Filed Oct. 10, 1967.

LADY TAN

For Ladies' Socks (Int. Cl. 25).
First use July 1967.

SN 282,972. S. D. Arrowood & Company, Inc., New York, N.Y. Filed Oct. 20, 1967.

GAY TOPS

For Ladies' Hosiery (Int. Cl. 25).
First use Feb. 9, 1957.

SN 284,261. Robert Woolley Shoe Company Ltd., Galt, Ontario, Canada. Filed Nov. 6, 1967.

WILD! WOOLLEYS

The word "Woolleys" is disclaimed apart from the mark as shown. Owner of Canadian Reg. No. 148,090, dated Nov. 18, 1966.
For Women's and Teenagers' Shoes, Slippers, and Sandals (Int. Cl. 25).

SN 288,285. Countess Mara, Inc., New York, N.Y. Filed Jan. 8, 1968.

MARAFIBRE

Owner of Reg. Nos. 370,030, 597,287, and others.
For Men's Ties (Int. Cl. 25).
First use 1961.

SN 288,478. Robert Miles Sherman, d.b.a. De Martel, Dressmaker, New York, N.Y. Filed Jan. 10, 1968.

ENTRANCEMENT

Owner of Reg. Nos. 632,414 and 823,089.
For Women's Blouses, Sweaters, Dresses, Slacks, Shirts, Jackets, and Shorts (Int. Cl. 25).
First use Dec. 22, 1967.

SN 291,553. Maidenform, Inc., New York, N.Y. Filed Feb. 21, 1968.

DIVIDEND

For Foundation Garments and Lingerie (Int. Cl. 25).
First use Feb. 2, 1968.

Class 40 — Fancy Goods, Furnishings, and Notions

SN 267,912. Brentwood Hair Products, Inc., Los Angeles, Calif. Filed Mar. 30, 1967.

BRENTLON

Owner of Reg. No. 777,456.
For Wigs (Int. Cl. 26).
First use May 1, 1966.

SN 268,726. Groff Importers, Inc., San Diego, Calif. Filed Apr. 10, 1967.

FANTASIA

For Wigs of Human Hair and Synthetics (Int. Cl. 26).
First use March 1967.

SN 282,569. Gaylord Products, Incorporated, Chicago, Ill. Filed Oct. 16, 1967.

SLIDE N' SET

For Hair Rollers (Int. Cl. 26).
First use Sept. 12, 1967.

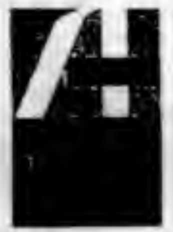
SN 283,156. Product Applications, Inc., Newark, N.J. Filed Oct. 23, 1967.

Naughty Eyes

For Eyelashes, Including Eyelashes Made From Human Hair (Int. Cl. 26).
First use at least as early as June 1966.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 260,389. American Hospital Supply Corporation, Evanston, Ill. Filed Dec. 9, 1966.



The words "Hospital Supply" are disclaimed apart from the mark as shown.
For Towels and Toweling, Cloth in Bolt Form for Making Into Articles of Wearing Apparel, Table and Bed Covers, and Curtains and Drapes, Wash Cloths, Bed Sheeting, Bedspreads, Blankets, Pillow Cases, Mattress Covers, and Curtains (Int. Cl. 24).
First use on or before Sept. 1, 1964.

SN 267,319. Commercial Carpet Corporation, New York, N.Y. Filed Mar. 22, 1967.

POLY 8

For Carpets and Rugs (Int. Cl. 24).
First use Jan. 25, 1967.

SN 267,320. Commercial Carpet Corporation, New York, N.Y. Filed Mar. 22, 1967.

NYLON 360 D

The word "Nylon" is disclaimed apart from the mark as shown.
For Carpets and Rugs, Wholly or in Substanial Part of Nylon (Int. Cl. 27).
First use Feb. 2, 1967.

SN 271,226. Collins & Aikman Corporation, New York, N.Y. Filed May 11, 1967.

CAVELLA

Owner of Reg. Nos. 218,549, 218,550, and 343,330.
For Apparel Fabrics for Making Into Loungewear Apparel Such as Robes, Culottes, and the Like (Int. Cl. 24).
First use Mar. 7, 1967.

SN 273,529. Sabino Silvestre, Buenos Aires, Argentina. Filed June 9, 1967.

SABICORT

Owner of Argentine Reg. No. 385,468, dated Sept. 27, 1957.
For Curtains (Int. Cl. 24).

SN 277,672. Kanegafuchi Boseki Kabushiki Kaisha, d.b.a. Kanegafuchi Spinning Co., Ltd., Miyakojima-ku, Osaka, Japan. Filed Aug. 7, 1967.

KANEBO SYMPHONY

Owner of Reg. Nos. 700,616, 818,255, and others.
For Textile Piece Goods Made of Cotton, Rayon, and Synthetic Textile Fibers or of Mixtures of Such Fibers (Int. Cl. 24).
First use Jan. 16, 1967; in commerce at least as early as March 1967.

SN 284,180. FMC Corporation, Philadelphia, Pa. Filed Nov. 6, 1967.

AVRIL

Owner of Reg. Nos. 695,743 and 707,599.
For Textile Fabrics for Use in Home Furnishings—Namely, Draperies, Curtains, Bedspreads, Table Covers, Slip Covers, Upholstery, and the Like (Int. Cl. 24).
First use Oct. 9, 1967.

SN 284,755. Textiles Inc., Fall River, Mass. Filed Nov. 13, 1967.

WUNDERWALE 100

For Permanent Press Corduroy Fabric (Int. Cl. 24).
First use June 1966.

SN 284,893. J. A. Cissel Co., New York, N.Y. Filed Nov. 15, 1967.

TORON

For Textile Fabrics Made of Wool, Cotton, and Synthetic Fibers, and Combinations Thereof (Int. Cl. 24).
First use Oct. 12, 1967.

SN 285,259. Registered Fabrics Corp., New York, N.Y. Filed Nov. 20, 1967.

LARKAIRE

For Fabrics Made of Polyester Fibres and Cotton (Int. Cl. 24).
First use Aug. 9, 1967.

Class 43—Thread and Yarn

SN 270,482. Filatures Prouvost Masurel & Cie-La Lainiere de Roubaix, Roubaix (Nord), France. Filed May 2, 1967.

ENFANT DO

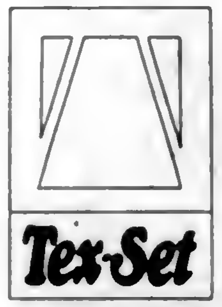
Owner of French Reg. No. 708,451, dated Jan. 21, 1966.
For Yarns and Threads (Int. Cl. 23).

SN 279,804. Carvill Combing Company, Inc., Moosup, Conn. Filed Sept. 7, 1967.

Kay Carville, LTD.

"Kay Carville" is not the name of a particular living individual.
For Knitting Yarn (Int. Cl. 23).
First use about Apr. 15, 1967.

SN 284,754. Texlon Corporation, Denville, N.J. Filed Nov. 13, 1967.



For Continuous Filament Yarns for Knitted and Woven Fabrics (Int. Cl. 23).
First use Sept. 24, 1965.

Class 44—Dental, Medical, and Surgical Appliances

SN 262,469. Julius Aderer, Inc., Long Island City, N.Y. Filed Jan. 13, 1967.

PROP

For Materials for Making Firing Trays To Support Porcelain on Gold Bridgework During the Porcelain Application (Int. Cl. 5).
First use Nov. 22, 1966.

SN 273,532. Selane Products, Inc., d.b.a. Space Maintainers Laboratory, Panorama City, Calif. Filed June 9, 1967.

MAINTAINERS
LABORATORY

For Dental Appliances—Namely, Kiddie Partials, Fixed and Removable Appliances, Expansion Plates, and Habit Controllers (Int. Cl. 10).
First use on or about June 1, 1963.

SN 274,796. Vita Zahnfabrik H. Rauter KG, Sackingen, Germany. Filed June 26, 1967.

LUMIN

For Artificial Teeth and Dental Ceramic Substances Used in Making and/or Repairing Artificial Teeth (Int. Cls. 5 and 10).
First use 1939; in commerce 1948.

SN 276,550. The Foregger Company, Inc., Roslyn Heights, N.Y. Filed July 21, 1967.

METALITE

For Fittings for Use in the Hook-Up of Anesthesia Apparatus—Namely, Y-Pieces, Pediatric Y's, Adaptor, Mask Elbows, and Y-Piece Inhaler Assemblies (Int. Cl. 10).
First use Jan. 17, 1967.

SN 276,929. ESB Incorporated, Philadelphia, Pa. Filed July 27, 1967.

ASTRO-PAK

For Respirators (Int. Cl. 9).
First use Feb. 23, 1967.

SN 283,927. Rexall Drug and Chemical Company, d.b.a. Riker Laboratories, Los Angeles Calif. Filed Nov. 1 1967.

AUTOHALER

For Aerosol Inhalation Device (Int. Cl. 10).
First use Oct. 16, 1967.

SN 283,928. Rexall Drug and Chemical Company, d.b.a. Riker Laboratories, Los Angeles, Calif. Filed Nov. 1, 1967.

ACTIVAIR

For Aerosol Inhalation Device (Int. Cl. 10).
First use Oct. 16, 1967.

SN 289,746. E. I. du Pont de Nemours and Company, Wilmington, Del. Filed Jan. 29, 1968.

FLUSHIES

For Sanitary Napkins (Int. Cl. 5).
First use Dec. 1, 1967.

Class 45—Soft Drinks and Carbonated Waters

SN 275,456. Oil Center Research, Inc., Lafayette, La. Filed July 6, 1967.

ME-2

For Soft Drinks (Int. Cl. 32).
First use on or about Jan. 2, 1967.

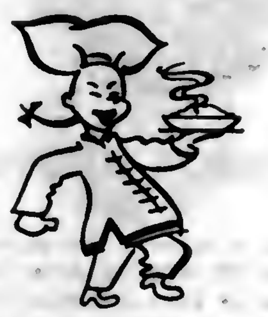
SN 277,756. General Mills, Inc., Minneapolis, Minn. Filed Aug. 8, 1967.

JET

Owner of Reg. No. 684,494.
For Soft Drink Concentrate (Int. Cl. 32).
First use Sept. 16, 1966.

Class 46—Foods and Ingredients of Foods

SN 244,489. N. K. Hurst Company, Inc., Indianapolis, Ind. Filed Apr. 28, 1966.



For Rice With Flavor Packet (Int. Cl. 30).
First use Mar. 16, 1966.

SN 245,310. Eduardo Hernandes, New York, N.Y. Filed May 10, 1966.

LaHabanera

For Condensed Milk (Int. Cl. 29).
First use 1962.

SN 249,248. California Leaf Company, d.b.a. Dina-Mite Food Company, Burbank, Calif. Filed June 29, 1966.

DINA-MITE

For Whole Wheat Cereal (Int. Cl. 30).
First use May 8, 1925.

SN 252,075. Cubb-Pac Corporation, Pittsburgh, Pa. Filed Aug. 10, 1966.

CUBB-PAC

For Fresh and Frozen Meats (Int. Cl. 29).
First use Apr. 24, 1964.

SN 254,911. Armour and Company, d.b.a. Pfaelzer Brothers, Chicago, Ill. Filed Sept. 22, 1966.

Portion Perfect

For Fresh and Frozen Cuts of Beef, Veal, Pork, and Lamb (Int. Cl. 29).
First use Dec. 31, 1957.

SN 259,456. National Biscuit Company, New York, N.Y. Filed Nov. 25, 1966.

HAMIES

For Biscuits and Crackers (Int. Cl. 30).
First use Oct. 26, 1966.

SN 262,147. Felix Postigo Herranz, S.A., Cantimpalos, Segovia, Spain. Filed Jan. 9, 1967.

"EL ACUEDUCTO DE SEGOVIA"

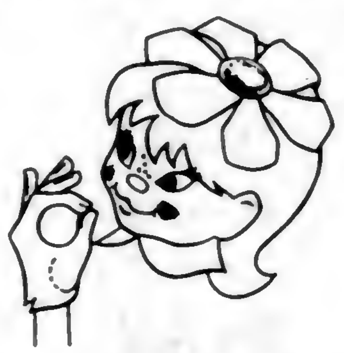
The mark is translated to mean "the aqueduct of Segovia." Owner of Spanish Reg. No. 478,804, dated July 22, 1966.
For Sausages, Chine of Pork Sausages, Cured Pork Ham, Corned Beef, Canned Chopped Beef and Chopped Pork, and Chorizos (Spanish Pork Sausages) (Int. Cl. 29).
First use July 22, 1966; in commerce Aug. 13, 1966.

SN 264,583. Fairmont Foods Company, Omaha, Nebr. Filed Feb. 13, 1967.

P.B.G's

For Snack Items—Namely, Cookies and Crackers (Int. Cl. 30).
First use Dec. 8, 1966.

SN 264,909. C & G, Washington, D.C. Filed Feb. 17, 1967.



For Doughnuts, Doughnut Products, and Coffee (Int. Cl. 30).
First use Aug. 1, 1966.

SN 266,258. Riviana Foods Inc., Houston, Tex. Filed Mar. 8, 1967.

SMOKEHOUSE

For Rice (Int. Cl. 30).
First use Feb. 16, 1967.

SN 269,089. National Starch and Chemical Corporation, New York, N.Y. Filed Apr. 13, 1967.

CLEARJEL

Owner of Reg. No. 535,111.
For Processed Dry Starch Refined From Waxy Maize for Use in the Preparation of Food Products, Such as Pies, Puddings, Salad Dressings, and the Like (Int. Cl. 30).
First use May 27, 1947.

SN 269,090. National Starch and Chemical Corporation, New York, N.Y. Filed Apr. 13, 1967.

INSTANT CLEARJEL

Owner of Reg. No. 683,060.
For Dry Starch for Use in Foods (Int. Cl. 30).
First use Oct. 22, 1957.

SN 269,628. Carnation Company, Los Angeles, Calif. Filed Apr. 20, 1967.

SWEET SURPRISE

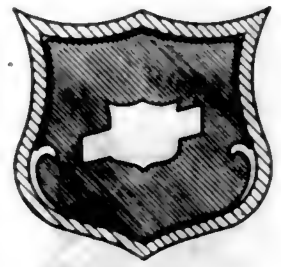
The word "Sweet" is disclaimed separate and apart from the mark as a whole, but the applicant waives none of its common law rights in the mark shown or any feature thereof.
For Sugar and Non-Nutritive Sweeteners (Int. Cls. 1 and 30).
First use Mar. 24, 1967.

SN 269,765. Walter M. Lowney Company Limited, Sherbrooke, Quebec, Canada. Filed Apr. 21, 1967.

GLOSETTES

Owner of Canadian Reg. No. N.S. 144/36,784, dated Aug. 4, 1949.
For Candy (Int. Cl. 30).

SN 270,438. B. F. Trappey's Sons, Inc., New Iberia, La. Filed May 1, 1967.



The drawing is lined for green.
For Pepper Sauce (Int. Cl. 30).
First use on or about July 1, 1959.

SN 273,323. Standard Brands Incorporated, d.b.a. Clinton Corn Processing Company, New York, N.Y. Filed June 7, 1967.

VERSA-LO

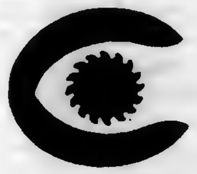
Owner of Reg. No. 840,118.
For Corn Syrup (Int. Cl. 30).
First use Apr. 18, 1967.

SN 276,352. A. H. Robins Company, Incorporated, Charlotte, N.C. Filed July 19, 1967.

"Every bite a fresh treat"

Applicant disclaims the word "Treat" apart from the mark as shown.
For Snack Foods—Namely, Cheese Crackers, Peanut Butter Crackers, Peanuts, Pop-Corn, Potato Chips, Soup Crackers, and Sweet Crackers (Int. Cls. 29 and 30).
First use May 1958.

SN 276,583. Calavo Growers of California, d.b.a. Calavo, Los Angeles, Calif. Filed July 21, 1967.



Owner of Reg. Nos. 655,598 and 817,107.
For Fresh Fruits, Dried Fruits, Canned Fruits, Frozen Fruits, Candied or Preserved Fruits; Cheese; Candy and Fruit Confections Having a Ground or Macerated Fruit Base, and Frozen Vegetables (Int. Cls. 29, 30, and 31).
First use Sept. 28, 1966.

SN 279,269. Carnation Company, Los Angeles, Calif. Filed Aug. 29, 1967.

VEND WHIP

For Cocoa Mix (Int. Cl. 30).
First use at least as early as June 30, 1962.

SN 280,115. The Veterinary Research Co., Inc., Oceanside, N.Y. Filed Sept. 11, 1967.

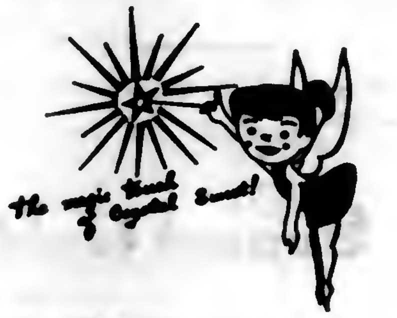
VR

For Dog Food and Cat Food (Int. Cl. 31).
First use Aug. 4, 1967.

SN 280,979. South Coast Rice Milling Company, Inc., Crowley, La. Filed Sept. 22, 1967.

No claim is made to the representation of the goods, apart from the mark as shown.
For Rice (Int. Cl. 30).
First use on or about Jan. 2, 1965.

SN 281,021. American Crystal Sugar Company, Denver, Colo. Filed Sept. 25, 1967.


the magic touch of crystal sweet!

Owner of Reg. No. 579,907.
For Granulated and Refined Sugar (Int. Cl. 30).
First use September 1955.

SN 281,287. General Foods Corporation, White Plains, N.Y. Filed Sept. 27, 1967.

PRIME VARIETY

The word "Variety" is disclaimed apart from the mark as shown. Owner of Reg. Nos. 718,996 and 832,270.
For Dog Food (Int. Cl. 31).
First use Aug. 24, 1967.

SN 281,375. Robert F. Kane, Roslyn Heights, N.Y. Filed Sept. 26, 1967.

RIVER CHICKEN

For Frozen Fish Products—Namely, Catfish (Int. Cl. 29).
First use Sept. 7, 1967.

SN 281,433. Basic Vegetable Products, Inc., Vacaville, Calif. Filed Sept. 29, 1967.

BASIC

Owner of Reg. No. 339,436.
For Dehydrated Vegetables (Int. Cl. 29).
First use June 1, 1935.

SN 281,462. Dodds' Sauce Co., Inc., Columbus, Ga. Filed Sept. 29, 1967.

Foy's

For Flavoring Extracts for Food Purposes, Worcestershire Sauce, Cocktail Sauce, Pickles and Relish, Barbecue Sauce, Salad Dressing, Mayonnaise, Vinegar, Spices, and Pepper Sauce (Int. Cls. 29 and 30).
First use Dec. 1, 1930.

SN 281,724. Standard Brands Incorporated, New York, N.Y. Filed Oct. 3, 1967.

PLANTERS

Owner of Reg. Nos. 123,641, 322,461, and 706,102.
For Snack Items, Baked or Fried, of a Cheese, Vegetable, or Cereal Nature (Int. Cl. 30).
First use June 13, 1967.

SN 281,810. Philip Morris Incorporated, d.b.a. Clark Gum Co., New York, N.Y. Filed Oct. 4, 1967.

CLARKIES

Owner of Reg. Nos. 791,935, 826,996, and others.
For Chewing Gum (Int. Cl. 30).
First use Feb. 23, 1967.

SN 281,818. Piggly Wiggly Corporation, Jacksonville, Fla. Filed Oct. 4, 1967.

Sunset Gold

Owner of Reg. Nos. 308,944, 790,082, and 807,345.
For Coffee (Int. Cl. 30).
First use at least as early as 1932.

SN 281,983. Hygrade Food Products Corporation, Detroit, Mich. Filed Oct. 6, 1967.

BARRINGTON HALL

Owner of Reg. Nos. 65,389, 65,520, and 518,110.
For Coffee and Tea (Int. Cl. 30).
First use on or about June 19, 1902.

SN 282,129. Pet Incorporated, St. Louis, Mo. Filed Oct. 9, 1967.

MILADY'S

Owner of Reg. No. 544,287.
For Frozen Blintzes, Potato Dumplings, Corn Fritters, and Potato Pancakes (Int. Cl. 30).
First use May 15, 1947.

SN 282,294. National Biscuit Company, New York, N.Y. Filed Oct. 11, 1967.

INSIDER

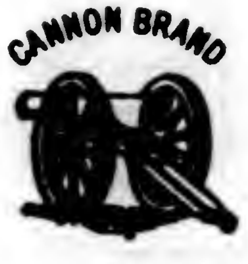
For Candy (Int. Cl. 30).
First use Aug. 14, 1967.

SN 284,545. International Minerals & Chemical Corporation, Skokie, Ill. Filed Nov. 13, 1967.

MI SECRETO

The English translation of the Spanish words "Mi Secreto" is "my secret."
For Sofrito (Caribbean Seasoning and Flavoring Which Combines Meat Flavor or Meat and Other Ingredients) (Int. Cl. 30).
First use Oct. 27, 1967.

SN 285,289. H. P. Cannon & Son, Incorporated, Bridgeville, Del. Filed Nov. 21, 1967.



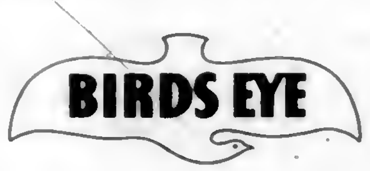
The word "Brand" is disclaimed apart from the mark as shown. Owner of Reg. No. 67,706.
For Canned Olives and Prunes (Int. Cl. 29).
First use at least July 17, 1958.

SN 285,520. Baxter Laboratories, Inc., Morton Grove, Ill. Filed Nov. 24, 1967.

DEX-LO

For Liquid Amylase Used in Making Corn Syrups (Int. Cl. 1).
First use Sept. 21, 1967.

SN 285,538. General Foods Corporation, White Plains, N.Y. Filed Nov. 24, 1967.



Owner of Reg. Nos. 664,142, 787,883, and others.
For Frozen Salad Mix Consisting of Gelatin Dessert and Vegetables; Frozen Salad Mix Consisting of Gelatin Dessert and Fruits and Vegetables; Frozen Salad Mix Consisting of Gelatin Dessert and Cheese, Fruits, Vegetables, and Chopped Nuts; Frozen Non-Dairy Whipped Topping; and Frozen Shredded Potatoes (Int. Cls. 29 and 30).
First use Nov. 29, 1965.

SN 285,687. Virginia Dare Extract Co., Inc., Brooklyn, N.Y. Filed Nov. 27, 1967.

COLORETTES

For Food Colors (Int. Cl. 2).
First use July 19, 1926.

SN 285,933. National Biscuit Company, New York, N.Y. Filed Nov. 30, 1967.

BALI-HAI

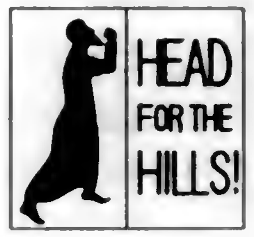
For Creme Filled Cookies (Int. Cl. 30).
First use Sept. 28, 1967.

SN 285,934. National Biscuit Company, New York, N.Y. Filed Nov. 30, 1967.

SOUTH SEAS

For Creme Filled Cookies (Int. Cl. 30).
First use Sept. 28, 1967.

SN 286,142. Hills Bros. Coffee, Inc., San Francisco, Calif. Filed Dec. 4, 1967.


HEAD FOR THE HILLS!

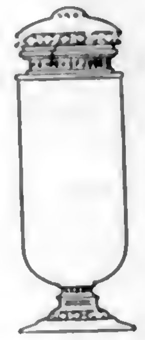
Owner of Reg. Nos. 51,468 and 743,059.
For Coffee (Int. Cl. 30).
First use Oct. 16, 1967.

SN 286,428. N. K. Hurst Company, Inc., Indianapolis, Ind. Filed Dec. 7, 1967.

YOKEHAM

For Artificial Ham Flavor To Be Used in the Preparation of Eggs (Int. Cl. 30).
First use Nov. 17, 1967.

SN 287,043. Russell Stover Candies, Inc., Kansas City, Mo. Filed Dec. 15, 1967.



Owner of Reg. No. 669,358.
For Candy (Int. Cl. 30).
First use Apr. 29, 1957.

SN 287,076. Libby, McNeill & Libby, Chicago, Ill. Filed Dec. 18, 1967.

NEW IDEA

For Canned Fruits and Vegetables (Int. Cl. 29).
First use Dec. 12, 1967.

SN 287,327. Warner-Lambert Pharmaceutical Company, Morris Plains, N.J. Filed Dec. 20, 1967.

COOLMINT

For Chewing Gum (Int. Cl. 30).
First use Dec. 11, 1967.

SN 287,366. King Candy Company, Fort Worth, Tex. Filed Dec. 21, 1967.

MARGARITAS

For Candy (Int. Cl. 30).
First use July 27, 1966.

SN 287,392. Usen Products Company, Woburn, Mass. Filed Dec. 21, 1967.

SUPER SUPPER

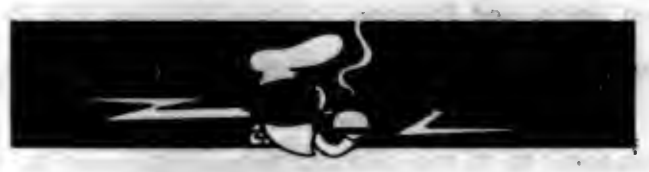
For Cat Food (Int. Cl. 31).
First use Dec. 13, 1967.

SN 287,393. Usen Products Company, Woburn, Mass. Filed Dec. 21, 1967.

SOMETHIN' SPECIAL

For Cat Food (Int. Cl. 31).
First use Dec. 13, 1967.

SN 287,672. Pronto Food Corporation, d.b.a. Hot Line Foods Company, Chicago, Ill. Filed Dec. 27, 1967.



For Cooked Meat Products Sold to Restaurants and Institutions (Int. Cl. 29).
First use Dec. 8, 1967.

SN 287,742. Just Born, Inc., Bethlehem, Pa. Filed Dec. 28, 1967.

JOLLY JOES

For Grape Flavor Candies (Int. Cl. 30).
First use June 23, 1966.

SN 288,431. De Jean Packing Company, d.b.a. Gulf Shellfish Products Co., Biloxi, Miss. Filed Jan. 9, 1968.

GULF CREST

For Canned Shrimp, Canned Oysters, and Canned Tuna Fish (Int. Cl. 29).
First use 1951.

SN 288,612. General Foods Corporation, White Plains, N.Y. Filed Jan. 11, 1968.

MAXWELL HOUSE

Owner of Reg. Nos. 102,050, 212,831, and 599,153.
For Non-Dairy Coffee Creamer (Int. Cl. 29).
First use May 10, 1967.

SN 288,613. General Foods Corporation, White Plains, N.Y. Filed Jan. 11, 1968.

MAX

Owner of Reg. Nos. 102,050, 776,293, and others.
For Coffee (Int. Cl. 30).
First use Sept. 19, 1967.

SN 288,620. Hunt-Wesson Foods, Inc., Fullerton, Calif. Filed Jan. 11, 1968.

KNACKS

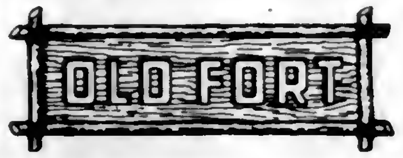
For Canned Peaches (Int. Cl. 29).
First use Dec. 7, 1967.

SN 288,771. R. C. Bigelow Inc., Norwalk, Conn. Filed Jan. 15, 1968.

COMMENT COFFEE

The word "Coffee" is disclaimed apart from the mark as shown. Owner of Reg. No. 591,766.
For Coffee (Int. Cl. 30).
First use Jan. 2, 1968.

SN 289,259. Associated Wild Rice Producers, Inc., Isle, Minn. Filed Jan. 22, 1968.



For Dry Packaged Wild Rice, Canned Precooked Wild Rice, Canned Soups, and Packaged Pancake Mix (Int. Cls. 29 and 30).
First use Oct. 22, 1954.

SN 292,998. H. C. Cole Milling Company, Chester, Ill. Filed Mar. 12, 1968.

Ω OMEGA

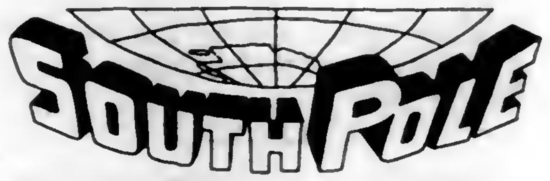
Owner of Reg. No. 243,092.
For Wheat Flour, Corn Meal, and Corn Meal Mix (Int. Cl. 30).
First use 1883 on wheat flour.

SN 293,430. CAI Research & Development Company, San Francisco, Calif. Filed Mar. 18, 1968.

YOEMAN

For Cooking Aid and Seasoning for Meat (Int. Cl. 30).
First use Feb. 9, 1968.

SN 293,441. N. A. Pricola, Brawley, Calif. Filed Mar. 18, 1968.



No claim is made to the representation of the "South Pole."
For Fresh Vegetables (Int. Cl. 31).
First use May 20, 1958.

SN 293,442. N. A. Pricola, Brawley, Calif. Filed Mar. 18, 1968.

N.A.P.

For Fresh Vegetables (Int. Cl. 31).
First use Mar. 15, 1956.

SN 293,670. Mars Limited, Slough, Bucks, England. Filed Mar. 20, 1968.

MARATHON

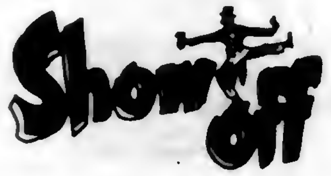
Owner of British Reg. No. B908,364, dated Apr. 20, 1967.
For Candy (Int. Cl. 30).

SN 293,671. Mead Johnson & Company, Evansville, Ind. Filed Mar. 20, 1968.

STARTER

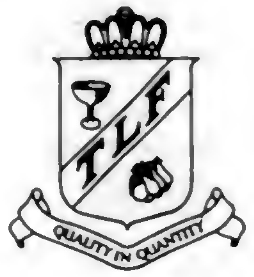
For Flash Dried Cereals (Int. Cl. 30).
First use on or prior to Mar. 7, 1968.

SN 293,782. Salinas Marketing Cooperative, Salinas, Calif. Filed Mar. 21, 1968.



For Fresh Vegetables (Int. Cl. 31).
First use Aug. 14, 1967.

SN 293,888. Tillie Lewis Foods, Inc., Stockton, Calif. Filed Mar. 22, 1968.



Applicant disclaims the words "Quality in Quantity" apart from the mark as shown. Owner of Reg. No. 517,051.
For Canned Fruits and Canned Vegetables (Int. Cl. 29).
First use Sept. 1, 1964; July 28, 1934, in a different form.

SN 294,146. National Biscuit Company, New York, N.Y. Filed Mar. 26, 1968.

COOKIE CUTTER

Applicant disclaims any exclusive rights to the word "Cookie," apart from the mark as shown.
For Creme Sandwich Cookies (Int. Cl. 30).
First use Feb. 23, 1968.

SN 294,232. National Biscuit Company, New York, N.Y. Filed Mar. 27, 1968.

COOKIE BREAK

Applicant disclaims any exclusive rights to the word "Cookie," apart from the mark as shown.
For Creme Sandwich Cookies (Int. Cl. 30).
First use Feb. 23, 1968.

SN 294,357. National Biscuit Company, New York, N.Y. Filed Mar. 28, 1968.

COOKIE DELIGHTS

Applicant disclaims any exclusive rights to the word "Cookie," apart from the mark as shown.
For Creme Sandwich Cookies (Int. Cl. 30).
First use Feb. 23, 1968.

SN 294,713. Ralston Purina Company, St. Louis, Mo. Filed Apr. 2, 1968.

ALL PRO

For Dry Breakfast Cereal (Int. Cl. 30).
First use Mar. 20, 1968.

Class 47 — Wines

SN 277,451. De La Salle Institute, Rheem Valley, Calif. Filed Aug. 3, 1967.

Chateau des Frères

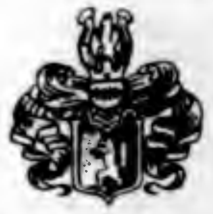
"Chateau des Freres" can be translated as "house of brothers."
For Altar Wines (Int. Cl. 33).
First use June 28, 1967.

SN 282,242. Charles Jacquin et Cie., Inc., Philadelphia, Pa. Filed Oct. 11, 1967.

RESERVE DU DOMAINE

Applicant disclaims the word "Reserve," apart from the mark shown, without prejudice to any common law rights therein. "Reserve du Domaine" means "reserve of the domain" in French.
For Champagne (Int. Cl. 33).
First use Mar. 9, 1967.

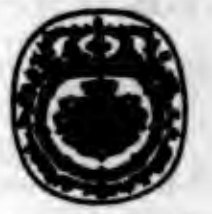
SN 293,668. Leonard Kreusch, Trier, Germany. Filed Mar. 20, 1968.



For Wines (Int. Cl. 33).
First use March 1953; in commerce March 1953.

Class 49 — Distilled Alcoholic Liquors

SN 236,204. Societe Anonyme de Etablissements Louis Regnier, Cote d'Or, France. Filed Jan. 11, 1966.



For Liqueur and Brandy (Int. Cl. 33).
First use Nov. 27, 1961; in commerce May 14, 1963.

SN 293,445. Simon Levi Company, Ltd., d.b.a. Simon Levi Co. Ltd., Los Angeles, Calif. Filed Mar. 18, 1968.

SOHO

For Gin (Int. Cl. 33).
First use Jan. 25, 1967.

Class 50 — Merchandise Not Otherwise Classified

SN 274,884. Natco Products Corporation, West Warwick, R.I. Filed June 27, 1967.

PROTECTO-CLEAR

For Transparent Plastic Protective Matting for Floors and Carpeting (Int. Cl. 27).
First use on or about Oct. 7, 1966.

SN 280,971. Ridg-U-Rak, Inc., North East, Pa. Filed Sept. 22, 1967.

Ridg stak

Any representation in the mark of the goods of applicant is disclaimed apart from the mark as shown. Owner of Reg. No. 703,537.
For Metal Pallet Frames (Int. Cl. 6).
First use Oct. 5, 1966.

SN 282,104. S. S. Kresge Company, Detroit, Mich. Filed Oct. 9, 1967.

Kmart

Owner of Reg. Nos. 743,912, 817,457, and others.
For Trouser Hangers (Int. Cl. 26).
First use on or before Aug. 31, 1967.

SN 282,106. S. S. Kresge Company, Detroit, Mich. Filed Oct. 9, 1967.

SSK

For Trouser Hangers (Int. Cl. 26).
First use on or before Aug. 31, 1967.

SN 285,235. International Paper Company, New York, N.Y. Filed Nov. 20, 1967.

D-RING

For Carton Handles (Int. Cl. 16).
First use Oct. 16, 1967.

Class 51 — Cosmetics and Toilet Preparations

SN 264,430. Lancôme S.A., Paris, France. Filed Feb. 10, 1967.

GALATÉE
de LANCÔME

Priority claimed under Sec. 44(d) on French Reg. No. 724,071, dated Dec. 8, 1966. Owner of U.S. Reg. Nos. 540,348, 549,745, and others.
For Creams and Milks for the Skin (Int. Cl. 3).

SN 264,629. Yar Research Corporation, New York, N.Y. Filed Feb. 13, 1967.

INSTANT RD

No exclusive right to the term "Instant" is asserted apart from the mark as shown. Owner of Reg. No. 793,051.
For Combination Hair Coloring and Dressing (Int. Cl. 3).
First use May 1, 1965.

SN 266,360. I. Posner, Inc., Corona, N.Y. Filed Mar. 9, 1967.

DARKER THAN FAIR

For Face Liquid Make-Up, Lipsticks, Pressed Powder, Face and Body Softening and Conditioning Creams, Face and Body Conditioning Lotions, and Astringents (Int. Cl. 3).
First use Jan. 23, 1967.

SN 268,290. Caron Corporation, New York, N.Y. Filed Apr. 4, 1967.

ROYAL BAIN DE CHAMPAGNE

The translation of the mark from the French is "royal champagne bath." Owner of Reg. Nos. 181,205 and 506,744.
For Perfume, Cologne, Toilet Water, and Talcum Powder (Int. Cl. 3).
First use 1943.

SN 272,275. Bishop Industries Inc., Union, N.J., by change of name from Hazel Bishop Inc., Union, N.J. Filed May 24, 1967.

HAZEL BISHOP

Owner of Reg. No. 584,406.
For Eye Pencil, Eye Shadow, Eye Liner, Brush-On Eyebrow Pencil, Mascara, Eyelash Conditioners, Nail Enamel, Nail Polish Remover, Nail Hardener, Liquid Make-Up, Compact Make-Up, Creme Make-Up, Face Powder, Creme Face Powder, Pressed Tinted Make-Up and Brush, Sold in a Compact, Blusher Creme, Liquid Rouge, Creme Rouge, Lipstick, Hair Spray, Perfume, and Cologne (Int. Cl. 3).
First use 1949.

SN 276,217. John H. Breck, Inc., Wayne, N.J. Filed July 18, 1967.

BRECK BASIC CONDITIONER

The word "Conditioner" is disclaimed apart from the mark as shown. Owner of Reg. No. 834,425.
For Hair Conditioner (Int. Cl. 3).
First use July 7, 1967.

SN 276,237. L.B. Laboratories, Inc., Glendale, Calif. Filed July 18, 1967.

BEAUTY KISS

For Hair Conditioner Preparation (Int. Cl. 3).
First use June 28, 1967.

SN 276,567. The Mennen Company, Morristown, N.J. Filed July 21, 1967.

LUSTY LEATHER

Applicant disclaims the word "Leather" apart from the mark as shown.
For After Shave Lotion (Int. Cl. 3).
First use June 27, 1967.

SN 276,733. John H. Breck, Inc., Wayne, N.J. Filed July 25, 1967.

HAIR ARTIST

Applicant disclaims the word "Hair" apart from the mark as shown.
For Permanent Wave Preparation (Int. Cl. 3).
First use July 6, 1967.

SN 277,346. Clairol Incorporated, New York, N.Y. Filed Aug. 2, 1967.

SURFESSENCE

For Developing Lotion for Hair Lightening and Hair Coloring Preparations (Int. Cl. 3).
First use June 27, 1967.

SN 277,833. Hugh H. Gough, d.b.a. Gough Products, Port Charlotte, Fla. Filed Aug. 8, 1967.

A.C.T.S.

For Denture Cleaner (Int. Cl. 3).
First use June 15, 1955.

SN 279,665. Mi-Lo, Inc., Denver, Colo. Filed Sept. 5, 1967.

PRECIOUS DEW

For Fingernail Moisturizing Solution (Int. Cl. 3).
First use Sept. 15, 1964.

SN 279,670. Mi-Lo, Inc., Denver, Colo. Filed Sept. 5, 1967.

PRECIOUS DROPS

For Fingernail Strengthening Solution (Int. Cl. 3).
First use Sept. 15, 1964.

SN 279,715. Carter-Wallace, Inc., New York, N.Y. Filed Sept. 6 ,1967.

ETERNALLY EVE

For Personal Deodorant (Int. Cl. 5).
First use Aug. 1, 1967.

SN 280,061. Richard Hudnut, Morris Plains, N.J. Filed Sept. 11, 1967.

FINGER FASHIONS

For Nail Enamel (Int. Cl. 3).
First use Aug. 22, 1967.

SN 281,703. Richard Hudnut, Morris Plains, N.J. Filed Oct. 3, 1967.

FINGER PAINTS

For Nail Polish (Int. Cl. 3).
First use Sept. 23, 1967.

SN 288,487. Amway Corporation, Ada, Mich. Filed Jan. 10, 1968.

ARTISTRY

For Make-Up Powders, Eyeliners, Tinted Liquid Make-Ups, Lipstick, and Mascara (Int. Cl. 3).
First use on or about Sept. 15, 1967.

SN 293,204. The Procter & Gamble Company, Cincinnati, Ohio. Filed Mar. 14, 1968.

FIRMATROL

For Holding Ingredient Incorporated in a Hair Spray (Int. Cl. 3).
First use Aug. 24, 1967.

Class 52 — Detergents and Soaps

SN 266,304. Colgate-Palmolive Company, New York, N.Y. Filed Mar. 7, 1967.

ULTRAMARINE-PLUS

For Brightening and Whitening Agent Used as an Ingredient in Laundry Detergent (Int. Cl. 3).
First use April 1964.

SN 275,948. Lowe's, Inc., Cassopolis, Mich. Filed July 18, 1967.

BUTCHER-DRI

For Granular Absorbent Preparation for Use on the Floor of Butcher Shops, and Other Places of Business (Int. Cl. 4).
First use June 22, 1967.

SN 276,174. The Realistic Company, Cincinnati, Ohio. Filed July 17, 1967.

TOP FORM

For Hair Shampoo (Int. Cl. 3).
First use on or about June 12, 1967.

SN 277,550. Joseph D. Farini, d.b.a. The Julien Co., San Francisco, Calif. Filed Aug. 4, 1967.

JULIEN

For Hair Shampoo (Int. Cl. 3).
First use July 28, 1967.

SN 277,772. Avon Products, Inc., New York, N.Y. Filed Aug. 8, 1967.

TISKET-TASKET

For Toilet Soap (Int. Cl. 3).
First use July 24, 1967.

SN 277,778. Avon Products, Inc., New York, N.Y. Filed Aug. 8, 1967.

FIRST STAR

For Toilet Soap (Int. Cl. 3).
First use July 24, 1967.

SN 277,999. Gojer, Inc., Akron, Ohio. Filed Aug. 10, 1967.

GOOD NEIGHBOR

For All-Purpose Household Cleaner (Int. Cl. 3).
First use June 25, 1967.

SN 278,343. Calgon Corporation (Delaware corporation), assignee of Calgon Corporation (Pennsylvania corporation), Pittsburgh, Pa. Filed July 25, 1967.

BC-4

For Alkaline Cleaner for Boiling Out Boilers, Heat Exchangers, and Other Equipment in Aqueous Systems (Int. Cl. 1).
First use Nov. 24, 1965.

SN 278,538. Texize Chemicals, Inc., Greenville, S.C. Filed Aug. 17, 1967.

STAMPEDE

Owner of Reg. No. 754,403.
For Liquid Drain Opener (Int. Cl. 3).
First use Aug. 4, 1967.

SN 279,310. Madison Chemical Corporation, Maywood, Ill. Filed Aug. 29, 1967.

MECHandy

For Hand Soap (Int. Cl. 3).
First use Apr. 26, 1963.

SN 280,303. Del Chemical Corporation, Menomonee Falls, Wis. Filed Sept. 14, 1967.

HAN-D

For Waterless Hand Cleaner (Int. Cl. 3).
First use Jan. 1, 1962.

SN 281,728. Sybil Ives, Incorporated, Yonkers, N.Y. Filed Oct. 3, 1967.

BOND 4

Owner of Reg. No. 777,137.
For Hair Shampoo (Int. Cl. 3).
First use Feb. 19, 1965.

SN 282,045. Bristol-Myers Company, New York, N.Y. Filed Oct. 9, 1967.

LES GIRLS

For Toilet Soap (Int. Cl. 3).
First use July 13, 1967.

SN 282,888. Continental Organization of Distributor Enterprises, Inc., Pittsburgh, Pa. Filed Oct. 19, 1967.

CODE-O-SPRAY

For Spray Cleaners for General Household and Industrial Use (Int. Cl. 3).
First use Sept. 1, 1967.

SN 283,101. Colgate-Palmolive Company, New York, N.Y. Filed Oct. 23, 1967.

PROBE

For Laundry Detergent (Int. Cl. 3).
First use Oct. 3, 1967.

SN 283,359. Ramrod-Polytran, Inc., Burlingame, Calif. Filed Oct. 25, 1967.

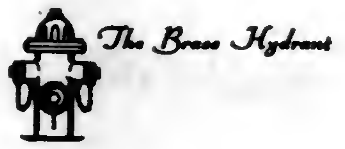
INTER-SAN

For Toilet Bowl Cleaner and Deodorant (Int. Cl. 3).
First use July 31, 1967.

SERVICE MARKS

Class 100 — Miscellaneous

SN 245,112. Arnold J. Stein and Donna Lee Stein (joint owners), d.b.a. Brass Hydrant, Denver, Colo. Filed May 6, 1966.



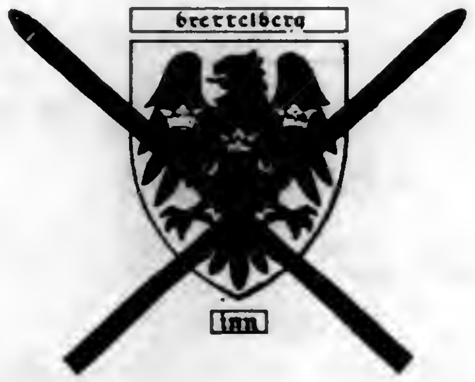
For Pet Lodging and Grooming Business (Int. Cl. 42).
First use Oct. 30, 1965.

SN 249,694. Weight Watchers International, Inc., Forest Hills, N.Y. Filed July 6, 1966.

WEIGHT WATCHERS

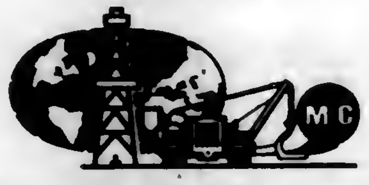
For Planning, Executing and Supervising Diet Programs by Means of Group Meetings, Courses Relating to Diet and Nutrition, and the Distribution of Literature (Int. Cl. 42).
First use May 15, 1963.

SN 266,028. Grant I. Gaeth, Denver, Colo. Filed Mar. 6, 1967.



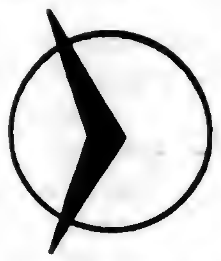
Applicant disclaims any right to the use of the word "Inn."
For Lodging-Inn Service (Int. Cl. 42).
First use Dec. 1, 1966.

SN 270,592. Mid-Continent Pipeline Equipment Co., Houston, Tex. Filed May 3, 1967.



Owner of Reg. No. 559,818.
For Consulting Engineering Services in Connection With the Construction and Maintenance of Pipelines (Int. Cl. 42).
First use September 1965.

SN 273,215. Transportation Consultants Inc., Washington, D.C. Filed June 6, 1967.



For Consulting Services in the Engineering, Economic, Planning, and Management Aspects of All Fields of Transportation (Inc. Cl. 42).
First use on or about July 1, 1957.

SN 278,535. Teledyne Industries, Inc., d.b.a. Geotech—A Teledyne Company, Garland, Tex. Filed Aug. 17, 1967.

WASSP

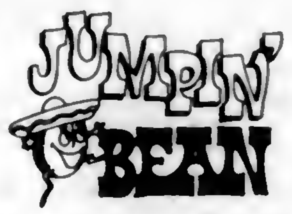
For Conducting Offshore Geophysical Surveys (Int. Cl. 42).
First use Jan. 14, 1967.

SN 279,691. Taco Bell, Torrance, Calif. Filed Sept. 5, 1967.

TACO BELL

Owner of Reg. Nos. 820,073 and 846,432.
For Restaurant Services (Int. Cl. 42).
First use on or about July 29, 1964.

SN 281,082. Jumpin' Bean Restaurants, Inc., Phoenix, Ariz. Filed Sept. 25, 1967.



For Restaurant Services, Specializing in Mexican Food (Int. Cl. 42).
First use Aug. 10, 1967.

SN 288,738. Americana Nursing Centers, Inc., Monticello, Ill. Filed Jan. 15, 1968.

AMERICANA

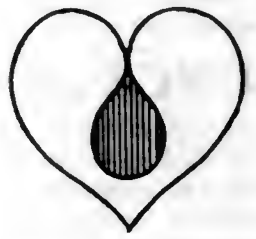
Owner of Reg. No. 790,126.
For Operating Nursing Homes, Convalescent Hospitals, Extended Care Facilities, Health Care Facilities, and the Like, and Consulting Services to Others for the Design and Operation Thereof (Int. Cl. 42).
First use on or about Feb. 14, 1961.

SN 291,806. A Quiet Little Table in the Corner, Ltd., New York, N.Y. Filed Feb. 26, 1968.

A QUIET LITTLE TABLE IN THE CORNER

For Restaurant Serving Food and Liquor (Int. Cl. 42).
First use Nov. 9, 1967.

SN 292,162. St. Anthony's Hospital, Inc., d.b.a. St. Anthony's Blood Bank, St. Petersburg, Fla. Filed Feb. 19, 1968.



The drawing is lined for the color red.
For Blood Bank Services (Int. Cl. 42).
First use Nov. 8, 1966.

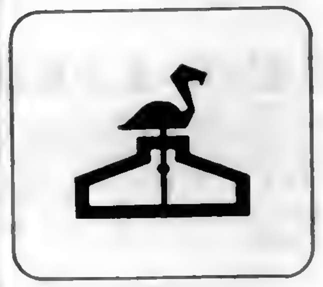
Class 101 — Advertising and Business

SN 266,498. Ballou Services, d.b.a. Skilmasters, Cincinnati, Ohio. Filed Mar. 13, 1967.

Skilmasters

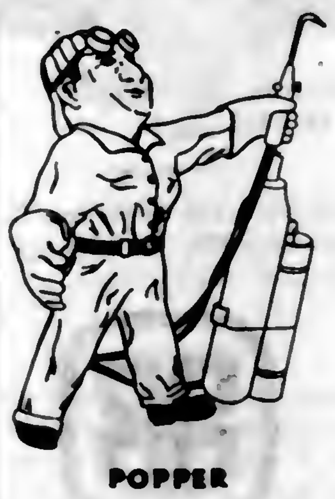
For Providing Temporary Employees to Others (Int. Cl. 35).
First use Dec. 29, 1966.

SN 268,374. Armstrong & Associates, Inc., Winter Park, Fla. Filed Apr. 5, 1967.



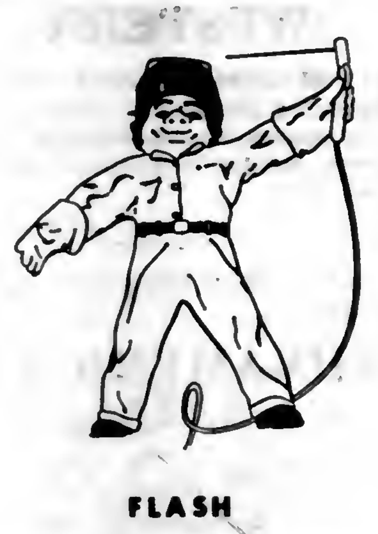
The drawing is lined for orange.
For Real Estate Agency Services (Int. Cl. 35).
First use June 22, 1966.

SN 269,896. Industrial Welding Equipment Company, Houston, Tex. Filed Apr. 24, 1967.



For Distributorship Services in the Field of Welding Supplies (Int. Cl. 35).
First use Jan. 1, 1959.

SN 269,897. Industrial Welding Equipment Company, Houston, Tex. Filed Apr. 24, 1967.



For Distributorship Services in the Field of Welding Supplies (Int. Cl. 35).
First use Jan. 1, 1959.

SN 271,262. Susan Center Klein, Vienna, Va. Filed May 11, 1967.

PHONE POWER

For Telephone Sales Solicitation and Surveys for Others (Int. Cl. 35).
First use Apr. 6, 1967.
Subj. to Intf. with SN 278,723.

SN 272,227. Tax Teller, Inc., Overland, Mo. Filed May 23, 1967.

TAX TELLER

The word "Tax" is disclaimed apart from the mark as shown.
For Preparation of Federal, State, and Local Tax Returns (Int. Cl. 35).
First use January 1941.

SN 272,872. Uniclub, Inc., New York, N.Y. Filed June 1, 1967.

uniCLUB

For Providing Records, Books, and Recorded Tapes of Others at Retail by Mail Order (Int. Cl. 35).
First use Apr. 15, 1966.

SN 273,051. Electronic Marketing Intelligence, Inc., Tulsa, Okla. Filed June 5, 1967.

Σmi

The mark consists of the letters "Emi."
For Marketing Research and Reports to the Order of Others (Int. Cl. 35).
First use May 11, 1967.

SN 276,268. Western Publishing Company Inc., Racine, Wis. Filed July 18, 1967.

WESTERN

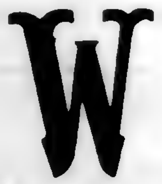
For Printing and Lithographing Various Materials and Publications, Including Pamphlets, Brochures, Books, Magazines, Posters, Catalogues, Year Books, Gift Wrappings, Greeting Cards, Displays,, and the Like (Int. Cl. 35).
First use about 1910.

SN 276,939. Mid-American Companies, Inc., Muncie, Ind. Filed July 27, 1967.

MID-AMERICAN

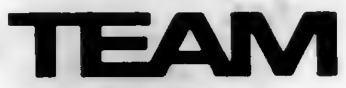
For Managing the Manufacturing Business of Others (Int. Cl. 35).
First use November 1964.

SN 277,094. Western Publishing Company Inc., Racine, Wis. Filed July 28, 1967.



For Printing and Lithographing Various Materials and Publications, Including Pamphlets, Brochures, Books, Magazines, Posters, Catalogues, Year Books, Gift Wrappings, Greeting Cards, Displays, and the Like (Int. Cl. 35).
First use at least as early as about 1940.

SN 277,155. Team Central Incorporated, Minneapolis, Minn., by change of name from Electronic Distributing Co., Minneapolis, Minn. Filed July 31, 1967.



For Distributor Services in the Field of Electronic Apparatus, Parts, Components, Equipment, and Systems, at Wholesale and Retail, and Including Supplying, Distributing, and Advertising Such Goods in the Electronics Field (Int. Cl. 35).
First use July 6, 1967.

SN 283,851. Bard Advertising, Inc., Chicago, Ill. Filed Nov. 1, 1967.

JOKERS WILD

For Services Rendered in Promoting the Sale of the Goods of Others by the Running of Contests in Which the Winners Are Awarded Trading Stamps Which Are Redeemable for Prizes (Int. Cl. 35).
First use Oct. 24, 1967.

SN 290,217. The Bellingrath-Morse Foundation, Mobile, Ala. Filed Feb. 5, 1968.

BELLINGRATH GARDENS

For Mail Order Gift Shop Services (Int. Cl. 35.
First use 1934.

SN 294,149. Tobaccoland of Cherry Hill, Inc., Cherry Hill, N.J. Filed Mar. 26, 1968.

TOBACCOLAND

For Retail Store Services of Sale of Smokers' Articles and Tobacco Products (Int. Cl. 35).
First use at least as early as 1958.

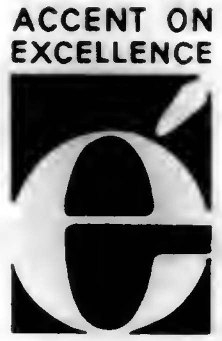
Class 102 — Insurance and Financial

SN 263,554. First Western Bank and Trust Company, Los Angeles, Calif. Filed Jan. 30, 1967.

NO-BOUNCE ACCOUNT

Applicant disclaims any exclusive right to the term "Account," apart from the mark as shown.
For Loaning of Funds by Applicant to Certain of Its Checking Account Customers by Paying Checks Drawn by Such Customers Which Exceed Their Account Balances (Int. Cl. 36).
First use Sept. 2, 1966.

SN 273,523. Pan-American Life Insurance Company, New Orleans, La. Filed June 9, 1967.



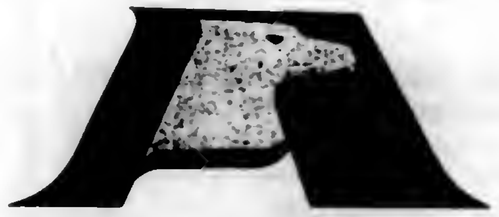
For Underwriting of Life, Health, and Accident Insurance (Int. Cl. 36).
First use Apr. 18, 1967.

SN 277,852. Eastern Air Lines, Inc., New York, N.Y. Filed Aug. 9, 1967.

BANK-A-TRIP

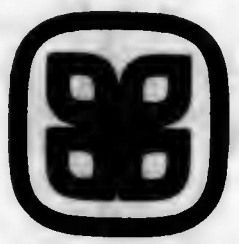
For Pre-Paid Vacation Savings Service to Others, Whereby Members Send in Monthly Payments Which Are Returned in Full After Completion of 12 Payments for Use in Connection With Their Vacations (Int. Cl. 36).
First use May 1, 1967.

SN 290,235. The American National Bank, Gadsden, Ala. Filed Feb. 5, 1968.



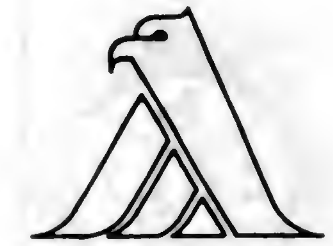
For Banking Services (Int. Cl. 36).
First use Oct. 10, 1967.

SN 293,074. Berkshire Life Insurance Company, Pittsfield, Mass. Filed Mar. 13, 1968.



For Underwriting Insurance (Int. Cl. 36).
First use Dec. 18, 1967.

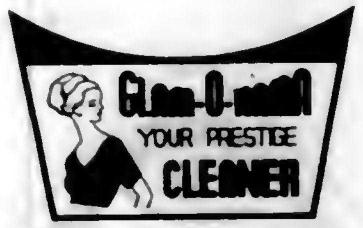
SN 294,225. American National Bank of Jacksonville, Jacksonville, Fla. Filed Mar. 27, 1968.



For General Bank, Trust, and Credit Financing Services (Int. Cl. 36).
First use December 1967.

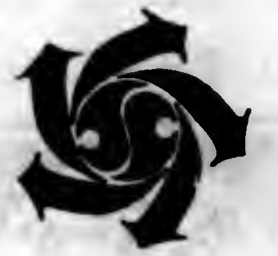
Class 103 — Construction and Repair

SN 266,032. Glam-O-Rama, Incorporated, Benson, N.C. Filed Mar. 6, 1967.



Without waiving its common law rights and for purposes of this registration only, applicant makes no claim to the word "Cleaner" apart from the mark as shown. The lining which appears on the drawing is a feature of the mark and is not indicative of color.
For Standard and Coin-Operated Laundry and Dry Cleaning Services (Int. Cl. 37).
First use Nov. 10, 1962.

SN 271,647. Sensefex, Inc., New York, N.Y. Filed May 16, 1967.



For Providing Illuminating and Other Effects in Store Windows, Night Clubs, and the Like (Int. Cl. 37).
First use Feb. 1, 1967.

SN 272,914. E. L. Bruce Co. (Incorporated), d.b.a. Bruce-Terminix, Bruce-Terminix Co., and Terminix Div. E. L. Bruce Co., Memphis, Tenn. Filed June 2, 1967.

PROFESSIONAL KILLER

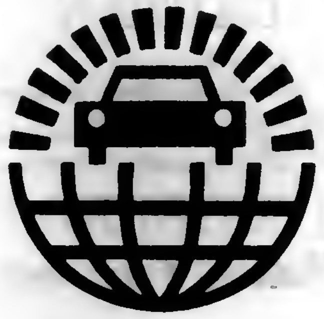
For Termite and Other Household Pest Control Services (Int. Cl. 37).
First use October 1966.

SN 281,281. Extermital Chemicals, Inc., Dayton, Ohio. Filed Sept. 27, 1967.

EXTERMITAL

Owner of Reg. Nos. 361,237 and 524,253.
For Ridding Property of Termite Infestation and Protecting Property Against Termite Infestation or Reinfestation, Including Inspections and the Necessary Treatments (Int. Cl. 37).
First use during 1937.

SN 283,461. Earl Scheib, Inc., Beverly Hills, Calif. Filed Oct. 26, 1967.



For Automotive Painting and Associated Services—Namely, Touch-Up and Body Work Thereon (Int. Cl. 37).
First use on or about June 20, 1965.

Class 104 — Communication

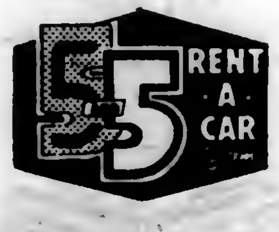
SN 245,353. Tele-Vue Systems, Inc., Seattle, Wash. Filed May 10, 1966.

TELE-VUE

For Installation, Maintenance, and Operation of Cable Television Systems (Int. Cl. 37).
First use Nov. 1, 1965.

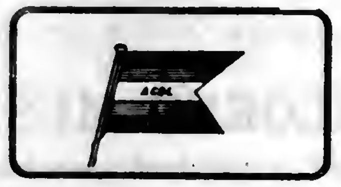
Class 105 — Transportation and Storage

SN 257,578. Ashbaugh Auto Rental Service, Inc., Houston, Tex. Filed Dec. 12, 1966.



Applicant disclaims all rights to the words "Rent A Car System" apart from the mark as shown.
For Auto Rentals (Int. Cl. 39).
First use Aug. 10, 1964.

SN 265,381. American Commercial Barge Line Company, Jeffersonville, Ind. Filed Feb. 24, 1967.



The drawing is lined for red and blue.
For Warehousing and Barge Transportation of the Goods of Others (Int. Cl. 39).
First use Mar. 1, 1966.

SN 280,778. Gulf Atlantic Warehouse Co., Houston, Tex. Filed Sept. 20, 1967.

GULF ATLANTIC

For Distribution Services—Namely, Public Commercial Warehousing of Bulk, Industrial, and Agricultural Products, and Related Packing and Repacking Thereof; Shipside Terminal Operations; and Common Carrier and Contract Trucking Services (Int. Cl. 39).
First use 1963.

SN 281,551. Cartan Travel Bureau, Inc., Chicago, Ill. Filed Oct. 2, 1967.

CARTAN

Owner of Reg. No. 520,922.
For Arranging and Conducting Domestic and Foreign Travel Tours and Cruises (Int. Cl. 39).
First use Nov. 9, 1931.

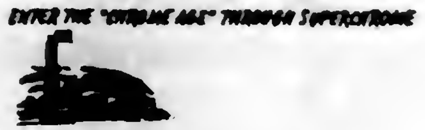
Class 106 — Material Treatment

SN 264,518. Coral Chemical Company, Waukegan, Ill. Filed Feb. 13, 1967.

CORAK

For Metal Plating on Plastics for Others (Int. Cl. 40).
First use Oct. 1, 1966.

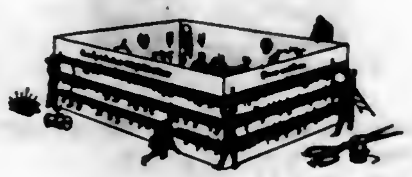
SN 293,206. Superchrome Plating & Engineering Co., Inc., Los Angeles, Calif. Filed Mar. 14, 1968.


ENTER THE "CHROME AGE" THROUGH SUPERCHROME

For Plating Metals for Others (Int. Cl. 40).
First use Feb. 7, 1968.

Class 107 — Education and Entertainment

SN 261,857. S. H. Lynch & Company, Inc., Dallas, Tex. Filed Jan. 3, 1967.



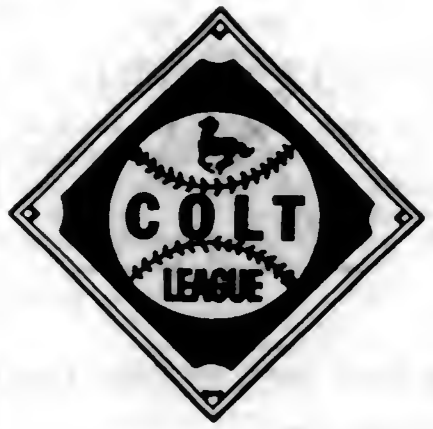
For Supplying Recorded Background Music to Commercial, Industrial, Mercantile, and Other Private and Public Establishments (Int. Cl. 41).
First use May 22, 1946.

SN 261,858. S. H. Lynch & Company, Inc., Dallas, Tex. Filed Jan. 3, 1967.

TAILORED MUSIC

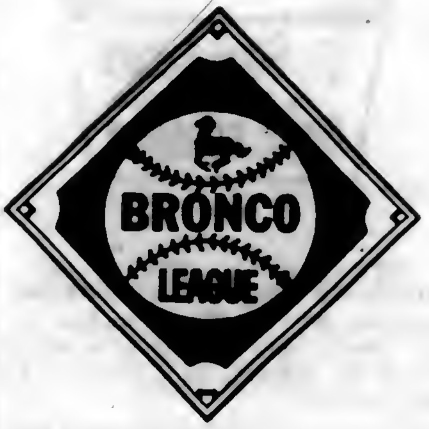
The word "Music" is disclaimed apart from the mark as shown.
For Supplying Recorded Background Music to Commercial, Industrial, Mercantile, and Other Private and Public Establishments (Int. Cl. 41).
First use May 22, 1946.

SN 269,969. Boys Baseball, Inc., Washington, Pa. Filed Apr. 25, 1967.



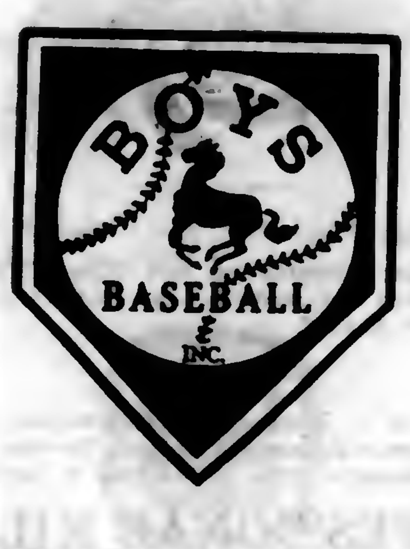
The word "League," the representation of a baseball, and of a baseball diamond, are disclaimed apart from the mark as shown.
For Organizing Boys' Baseball Activities (Int. Cl. 41).
First use June 1, 1965.

SN 269,970. Boys Baseball, Inc., Washington, Pa. Filed Apr. 25, 1967.



The word "League," the representation of a baseball, and of a baseball diamond, are disclaimed apart from the mark as shown.
For Organizing Boys' Baseball Activities (Int. Cl. 41).
First use June 1, 1965.

SN 269,971. Boys Baseball, Inc., Washington, Pa. Filed Apr. 25, 1967.



The wording "Boys Baseball, Inc.," and the representation of a baseball, are disclaimed apart from the mark as shown.
For Organizing Boys' Baseball Activities (Int. Cl. 41).
First use June 1, 1965.

SN 271,090. Xicom Incorporated, Tuxedo, N.Y. Filed May 9, 1967.

xicom
INCORPORATED

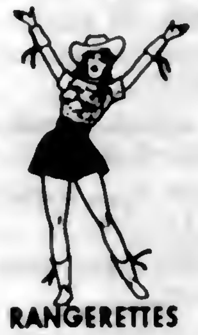
For Preparing Copy, Films, Recordings, Programs, Video and Audio Tapes, and the Like for Visual and Audio Presentation to the Specification of Others (Int. Cl. 41).
First use Nov. 1, 1965.

SN 271,809. Kilgore Junior College District, Kilgore, Tex. Filed May 18, 1967.

RANGERETTES

For Entertainment Services Rendered by an All Girl Drill and Dance Team (Int. Cl. 41).
First use 1950.

SN 271,811. Kilgore Junior College District, Kilgore, Tex. Filed May 18, 1967.



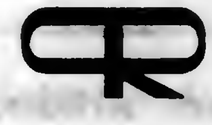
For Entertainment Services Rendered by an All Girl Drill and Dance Team (Int. Cl. 41).
First use 1950.

SN 272,527. Jeffrey Walter, d.b.a. Draught House Enterprises, Akron, Ohio. Filed May 26, 1967.

THE DRAUGHT HOUSE

The word "House" is disclaimed apart from the mark as a whole.
For Entertainment Services—Namely, Providing Dance Facilities and Live Music for Young People (Int. Cl. 41).
First use on or about Sept. 1, 1965.

SN 272,918. Conceptual Research, Inc., Convent Station, N.J. Filed June 2, 1967.



The mark is a fanciful representation of the letters "CR."
For Management Training Services (Int. Cl. 41).
First use Apr. 20, 1967.

SN 277,011. Avco Broadcasting Corporation, Cincinnati, Ohio. Filed July 28, 1967.

50-50 CLUB

Owner of Reg. Nos. 431,915 and 802,415.
For Entertainment Services in the Form of a Radio Program Which Features Informal Interviews With Noteworthy Guests and Informative Informal Discussions of Subjects of General Interest (Int. Cl. 41).
First use Sept. 19, 1949.

SN 281,042. Dellwood Music Co., Inc., d.b.a. Dellwood Records, Saddle Brook, N.J. Filed Sept. 25, 1967.

THE YORKSHIRE PUDDIN

For Entertainment Services Performed by a Vocal and Instrumental Group (Int. Cl. 41).
First use Jan. 1, 1967.

SN 281,337. Variations, Inc., Bristol, Conn. Filed Sept. 11, 1967.

THE VARIATIONS

For Entertainment Services Rendered by a Group of Professional Musicians (Int. Cl. 41).
First use May 1965.

SN 283,229. Terence E. Coleman, Evergreen Park, Ill. Filed Oct. 24, 1967.

COUNTRY PLAYBOYS

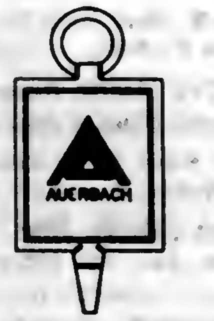
For Providing Entertainment Services by a Musical Organization (Int. Cl. 41).
First use Sept. 17, 1966.

SN 284,044. Scientific Methods, Inc., Austin Tex. Filed Nov. 2, 1967.

GRID

For Conducting Management Training Courses (Int. Cl. 41).
First use April 1962.

SN 284,145. Auerbach Electronics Corporation, d.b.a. Auerbach Corporation, Philadelphia, Pa. Filed Nov. 6, 1967.



Owner of Reg. Nos. 741,739 and 816,126.
For Educational Courses in the Data Processing and Management Fields (Int. Cl. 41).
First use Oct. 30, 1967.

TRADEMARK REGISTRATIONS ISSUED
PRINCIPAL REGISTER

Class 1 — Raw or Partly Prepared Materials

850,818. EASTMAN. Eastman Kodak Company. SN 245,574. Pub. 4–2–68. Filed 5–13–66.

850,819. BUTACLOR. Societe Anonyme: Plastugil (Plastiques et Elastomeres Ugine-Progil). SN 259,476. Pub. 4–2–68. Filed 11–25–66.

850,820. PLASPREG. Furane Plastics Incorporated. SN 266,529. Pub. 4–2–68. Filed 3–13–67.

850,821. GLASTIMAT AND DESIGN. The Glastic Corporation. SN 267,520. Pub. 4–2–68. Filed 3–24–67.

850,822. SANDEL. Armour and Company. SN 267,906. Pub. 4–2–68. Filed 3–30–67.

850,823. DUB'L-TUF. Monsanto Company. (MULTIPLE CLASS (Classes 1 and 50). SN 270,260. Pub. 4–2–68. Filed 4–28–67.

850,824. SQUIRLETTE. Alfred Klugmann, Inc. SN 271,155. Pub. 4–2–68. Filed 5–10–67.

850,825. SABLETTE. Alfred Klugmann, Inc. SN 271,156. Pub. 4–2–68. Filed 5–10–67.

850,826. PONETTE. Alfred Klugmann, Inc. SN 271,157. Pub. 4–2–68. Filed 5–10–67.

850,827. ISOLON. The Duriron Company, Inc. SN 277,350. Pub. 4–2–68. Filed 8–2–67.

Class 2 — Receptacles

850,828. CASUAL CUPS AND DESIGN. Sweetheart Plastics, Inc. SN 240,038. Pub. 4–2–68. Filed 3–2–66.

850,829. STICK UP AND DESIGN. Sweetheart Plastics, Inc. SN 247,735. Pub. 4–2–68. Filed 6–9–66.

850,830. CON-AIRE. Sta-Rite Industries, Inc. SN 248,255. Pub. 4–2–68. Filed 6–16–66.

850,831. LAVA WOOD. Globe Rubber Products Corp., d.b.a. Shayne Products Co. MULTIPLE CLASS (Classes 2 and 32). SN 248,614. Pub. 4–2–68. Filed 6–21–66.

850,832. PROFIT-PAK. Riegel Paper Corporation. SN 252,494. Pub. 4–2–68. Filed 8–16–66.

850,833. KK AND DESIGN. Kraft Corrugated Containers, Inc. SN 256,453. Pub. 4–2–68. Filed 10–14–66.

850,834. CORR-COLLAR. Georgia-Pacific Corporation. SN 260,741. Pub. 4–2–68. Filed 12–14–66.

850,835. HOLDRITE. Lily-Tulip Cup Corporation. SN 265,905. Pub. 4–2–68. Filed 3–3–67.

850,836. PLASTAINER. Owens-Illinois, Inc. SN 269,556. Pub. 4–2–68. Filed 4–19–67.

850,837. BRENTWOOD. Globe Rubber Products Corp. SN 270,055. Pub. 4–2–68. Filed 4–26–67.

850,838. NORD-PAK. Nord Aero Products, Inc. SN 271,823. Pub. 4–2–68. Filed 5–18–67.

850,839. EXECUTIVE PACK. Sweetheart Plastics, Inc. SN 274,781. Pub. 4–2–68. Filed 6–26–67.

850,840. PARADE. Scott Paper Company. SN 275,694. Pub. 4–2–68. Filed 7–10–67.

850,841. PRINCESS HOUSE ETC. AND DESIGN. Phoenix Closet Accessories, Inc. SN 275,870. Pub. 4–2–68. Filed 7–12–67.

850,842. JOLLY JIGGER. Heublein, Inc. SN 278,217. Pub. 4–2–68. Filed 8–14–67.

850,843. GRIF-HO. Griffith-Hope Company. SN 278,482. Pub. 4–2–68. Filed 8–17–67.

850,844. KWIK-STOK. Kwik-Stok Basket Corp. SN 285,927. Pub. 4–2–68. Filed 11–30–67.

Class 3 — Baggage, Animal Equipments, Portfolios, and Pocketbooks

850,845. BOOT BOY. Floyd W. Craig, d.b.a. Floyd's Trim and Upholstery Shop. SN 271,451. Pub. 4–2–68. Filed 5–15–67.

Class 4 — Abrasives and Polishing Materials

850,846. SHUR SHINE. C-Z Chemical Company, Inc. SN 252,813. Pub. 4–2–68. Filed 8–22–66.

850,847. SPARKY. Advance Abrasives Company. SN 272,561. Pub. 4–2–68. Filed 5–29–67.

Class 6 — Chemicals and Chemical Compositions

850,848. IRONAL. Givaudan Corporation. SN 245,074. Pub. 4–2–68. Filed 5–6–66.

850,849. FS–26. Baxter Laboratories, Inc. SN 255,860. Pub. 4–2–68. Filed 10–6–66.

850,850. CYPREN. Imperial Chemical Industries Limited. SN 261,586. Pub. 4–2–68. Filed 12–28–66.

850,851. WRINK-OUT. Dyno Merchandise Corp. SN 262,140. Pub. 4–2–68. Filed 1–9–67.

850,852. VITROX. The Upco Company. SN 262,647. Pub. 4–2–68. Filed 1–16–67.

850,853. VANCARE. VWR United Corporation. SN 262,985. Pub. 4–2–68. Filed 1–20–67.

850,854. VANWATERS'. VWR United Corporation. SN 262,986. Pub. 4–2–68. Filed 1–20–67.

850,855. LUXIANE. Compagnie Francaise de Produits Chimiques et Industriels du Sud-Est. SN 264,651. Pub. 4–2–68. Filed 2–14–67.

850,856. DEHRA'S AND DESIGN. Debra's Magi-Pak. SN 264,727. Pub. 4–2–68. Filed 2–15–67.

850,857. END DRUDGE. Sandtner-Valentine Chemical Company. SN 273,693. Pub. 4–2–68. Filed 6–12–67.

850,858. TRI-FENE. Tenneco Chemicals, Inc. SN 285,378. Pub. 4–2–68. Filed 11–22–67.

850,859. MINER AND BURRO (DESIGN). Nugget Distributors' Cooperative of America, Inc., d.b.a. Nugget Distributors, Inc. SN 286,480. Pub. 4–2–68. Filed 12–8–67.

Class 7 — Cordage

850,860. GATOR-TY. Milton Ross Metals Co., Inc. SN 264,965. Pub. 4–2–68. Filed 2–17–67.

Class 8 — Smokers' Articles, Not Including Tobacco Products

850,861. GOLD VIEW ABC. S. M. Frank & Co., Inc. SN 286,922. Pub. 4–2–68. Filed 12–14–67.

850,862. DIS-PO. The General Fireproofing Company. SN 288,013. Pub. 4–2–68. Filed 1–3–68.

Class 9 — Explosives, Firearms, Equipments, and Projectiles

850,863. DOUSER. Weather Engineering Corporation of Canada Ltd. SN 262,726. Pub. 4–2–68. Filed 1–17–67.

850,864. THE ROYAL. Holland & Holland Limited. SN 275,527. Pub. 4–2–68. Filed 7–7–67.

Class 10 — Fertilizers

850,865. WONDA MULCH AND DESIGN. Jesse C. Haley, Jr., d.b.a. Haley Excelsior Co. SN 285,421. Pub. 4–2–68. Filed 11–22–67.

Class 11 — Inks and Inking Materials

850,866. PLASTISHEEN. Sun Chemical Corporation. SN 266,944. Pub. 4–2–68. Filed 3–16–67.

850,867. PYROTUF. Interchemical Corporation. SN 271,797. Pub. 4–2–68. Filed 5–18–67.

Class 12 — Construction Materials

850,868. PEB-L-PLY. Maul Macotta Corporation. SN 233,972. Pub. 4–2–68. Filed 12–6–65.

850,869. ISOPRESS. Pacific Clay Products. SN 249,662. Pub. 4–2–68. Filed 7–6–66.

850,870. FANCIFUL FC (DESIGN). Hooker Chemical Corporation. SN 255,320. Pub. 4–2–68. Filed 9–28–66.

850,871. CF. The Cleveland Fabricating Company. SN 262,024. Pub. 4–2–68. Filed 1–6–67.

850,872. CF AND DESIGN. The Cleveland Fabricating Company. SN 262,025. Pub. 4–2–68. Filed 1–6–67.

850,873. FIBREX AND DESIGN. Midnas Industriaktiebolag. SN 263,223. Pub. 4–2–68. Filed 11–29–66.

850,874. UNIPOD. Cooper Industries, Inc. SN 266,510. Pub. 4–2–68. Filed 3–13–67.

850,875. MISCELLANEOUS DESIGN. Haida Hide, Incorporated. SN 267,749. Pub. 4–2–68. Filed 3–28–67.

850,876. TWO-IN-ONE. National Gypsum Company. SN 270,805. Pub. 4–2–68. Filed 5–5–67.

850,877. LIME-LYTE. York Stone & Supply Company. SN 271,092. Pub. 4–2–68. Filed 5–9–67.

850,878. MIRROR-MAGIC. Daryl Industries, Inc. SN 271,134. Pub. 4–2–68. Filed 5–10–67.

850,879. DELPLY. Jackson Ready-Mix Concrete, d.b.a. Delta Pine Plywood Company. SN 272,382. Pub. 4–2–68. Filed 5–25–67.

850,880. NOISE-LOCK. Industrial Acoustics Company, Inc. SN 274,208. Pub. 4–2–68. Filed 6–19–67.

850,881. SHEATHALL. Weyerhaeuser Company. SN 274,374. Pub. 4–2–68. Filed 6–20–67.

Class 13 — Hardware and Plumbing and Steam-Fitting Supplies

850,882. COLONY HOUSE. The Enterprise Aluminum Company. SN 271,696. Pub. 4–2–68. Filed 5–17–67.

Class 14 — Metals and Metal Castings and Forgings

850,883. MISCELLANEOUS DESIGN. Rigidized Metals Corporation. SN 278,902. Pub. 4–2–68. Filed 6–14–67.

850,884. SUNGRIP. Taiyo Steel Co., Ltd. SN 273,910. Pub. 4–2–68. Filed 6–14–67.

850,885. UNISPAN. Cyclops Corporation. SN 274,310. Pub. 4–2–68. Filed 6–20–67.

Class 16 — Protective and Decorative Coatings

850,886. REPUBLIC. Armstrong Paint & Varnish Works, Inc. MULTIPLE CLASS (Classes 16 and 52). SN 256,341. Pub. 4–2–68. Filed 10–13–66.

850,887. XP 400A ACM. United States Rust Control Corporation. SN 257,217. Pub. 4–2–68. Filed 10–25–66.

Class 17 — Tobacco Products

850,888. EPOCA. Universal Cigar Corporation, assignee of The Antonio Company of Tampa. SN 269,052. Pub. 4–2–68. Filed 4–13–67.

850,889. MISCELLANEOUS DESIGN. Rothmans of Pall Mall Limited. SN 271,520. Pub. 4–2–68. Filed 5–15–67.

850,890. PEACOCK. Conwood Corporation. SN 287,421. Pub. 4–2–68. Filed 12–22–67.

Class 18 — Medicines and Pharmaceutical Preparations

850,891. VITAL. Generic Pharmaceutical Corporation. MULTIPLE CLASS (Classes 18 and 46). SN 229,232. Pub. 4–2–68. Filed 10–4–65.

850,892. BEEF-N-RICH. Vita Plus Corporation. SN 270,443. Pub. 4–2–68. Filed 5–1–67.

850,893. SUREXIN. McNeil Laboratories, Incorporated. SN 270,692. Pub. 4–2–68. Filed 5–4–67.

850,894. SERUMDEX. Ortho Pharmaceutical Corporation, d.b.a. Ortho Diagnostics. SN 270,699. Pub. 4–2–68. Filed 5–4–67.

850,895. RENOGRAFIN-DIP. E. R. Squibb & Sons, Inc. SN 272,864. Pub. 4–2–68. Filed 6–1–67.

850,896. APPRESSAN. Mead Johnson & Company. SN 288,746. Pub. 4–2–68. Filed 1–15–68.

850,897. APPETEX. Mead Johnson & Company. SN 288,748. Pub. 4–2–68. Filed 1–16–68.

Class 19 — Vehicles

850,898. T. David Burdette Blue. SN 257,580. Pub. 4–2–68. Filed 10–31–66.

850,899. PEUGEOT. Societe Industrielle et Commerciale des Automobiles Peugeot. SN 257,727. Pub. 4–2–68. Filed 11–1–66.

850,900. ARC SAFE AND DESIGN. Gabb Special Products, Inc. SN 265,301. Pub. 4–2–68. Filed 2–23–67.

850,901. BRIDGESTONE AND LION DESIGN. Bridgestone Tire Company Limited. SN 266,141. Pub. 4–2–68. Filed 3–7–67.

850,902. MISCELLANEOUS DESIGN. Rolls-Royce Limited. SN 272,752. Pub. 4–2–68. Filed 5–31–67.

Class 21—Electrical Apparatus, Machines, and Supplies

850,903. EMC. Electro Materials Corporation (Delaware corporation), assignee of Electro Materials Corporation (California corporation). SN 235,638. Pub. 11–29–66. Filed 1–3–66.

850,904. DUPAR AND DESIGN. Dewhurst & Partner Limited. SN 265,187. Pub. 4–2–68. Filed 9–27–66.

850,905. ASTRO. Crestworth Limited. SN 260,241. Pub. 4–2–68. Filed 12–7–66.

850,906. AIPHONE. Aiphone Kabushiki Kaisha, d.b.a. Aiphone Co., Ltd. SN 260,636. Pub. 4–2–68. Filed 12–13–66.

850,907. SUMMIT-LITE. Summit International Corp. SN 260,894. Pub. 4–2–68. Filed 12–15–66.

850,908. H AND DESIGN. Federal Cartridge Corporation, d.b.a. Hoffman Engineering Company. SN 264,534. Pub. 4–2–68. Filed 2–13–67.

850,909. POCKET STAR. Mobelec Société Anonyme Holding. MULTIPLE CLASS (Classes 21 and 34). SN 264,949. Pub. 4–2–68. Filed 2–17–67.

850,910. ISC AND DESIGN. Instrument Systems Corporation. SN 265,306. Pub. 4–2–68. Filed 2–23–67.

850,911. THERMALINK. Electro-Therm, Inc. MULTIPLE CLASS (Classes 21, 26, and 34). SN 267,022. Pub. 4–2–68. Filed 3–17–67.

850,912. STATORSTAT. Robershaw Controls Company. SN 270,272. Pub. 4–2–68. Filed 4–28–67.

850,913. CAPRI. Bantam-Lite, Inc. SN 270,342. Pub. 4–2–68. Filed 5–1–67.

850,914. H AND P AND DESIGN. Holderfield and Pinkerton Wholesale Batteries, Inc. SN 272,725. Pub. 4–2–68. Filed 5–31–67.

850,915. AITKEN. Aitken Products, Inc. SN 274,482. Pub. 4–2–68. Filed 6–22–67.

850,916. COUGAR. Tensor Corporation. SN 274,546. Pub. 4–2–68. Filed 6–22–67.

850,917. FIELDMASTER. Charles Messenger. SN 274,568. Pub. 4–2–68. Filed 6–23–67.

850,918. ISOLON. The Duriron Company, Inc. SN 277,352. Pub. 4–2–68. Filed 8–2–67.

850,919. DIAT. American Electronic Laboratories, Inc. SN 279,353. Pub. 4–2–68. Filed 8–30–67.

Class 22—Games, Toys, and Sporting Goods

851,093. (See Class 39 for this trademark.)

850,920. RED FLASH. The Faultless Rubber Company. SN 257,376. Pub. 4–2–68. Filed 10–27–66.

850,921. FAULTLESS BLUE FLASH AND DESIGN. The Faultless Rubber Company. SN 257,379. Pub. 4–2–68. Filed 10–27–66.

850,922. FAULTLESS GOLD FLASH AND DESIGN. The Faultless Rubber Company. SN 257,700. Pub. 4–2–68. Filed 11–1–66.

850,923. GIZZ. Lakeside Industries, Inc. SN 257,965. Pub. 4–2–68. Filed 11–4–66.

850,924. UFO. Styraplane Co. SN 258,610. Pub. 4–2–68. Filed 11–14–66.

850,925. SAYCO. Lawrence J. Sayegh, d.b.a. L. J. Sayegh & Co. SN 260,769. Pub. 4–2–68. Filed 12–14–66.

850,926. ACTION WEB. Wilson Sporting Goods Co., assignee of Wilson Sporting Goods Co. SN 260,901. Pub. 4–2–68. Filed 12–15–66.

850,927. SPEED FLEX. Wilson Sporting Goods Co., assignee of Wilson Sporting Goods Co. SN 261,546. Pub. 4–2–68. Filed 12–27–66.

850,928. THE DIPPSY DOODLER. Rainbow Crafts, Inc. SN 264,163. Pub. 4–2–68. Filed 2–7–67.

850,929. TAP-A-MATIC. American Toy & Furniture Co., Inc. SN 269,157. Pub. 4–2–68. Filed 4–14–67.

850,930. STORYKINS. Hassenfeld Bros. Inc. SN 269,887. Pub. 4–2–68. Filed 4–24–67.

850,931. PLACO TOYS AND DESIGN. Placo Products Company. SN 270,808. Pub. 4–2–68. Filed 5–5–67.

850,932. HONEY BUN. Effanbee Doll Corporation. SN 275,245. Pub. 4–2–68. Filed 7–3–67.

850,933. DYDEE DARLIN'. Effanbee Doll Corporation. SN 275,247. Pub. 4–2–68. Filed 7–3–67.

850,934. CHEMPRO. Chemold Corp. SN 275,629. Pub. 4–2–68. Filed 7–10–67.

850,935. HIDE-TONED. Rexall Drug and Chemical Company, d.b.a. Seamless Rubber Company. SN 275,687. Pub. 4–2–68. Filed 7–10–67.

850,936. COUNTESS. Brunswick Corporation. SN 275,741. Pub. 4–2–68. Filed 7–11–67.

850,937. HOS·TIL'·ITY. Oggi Products. SN 281,485. Pub. 4–2–68. Filed 9–29–67.

850,938. MINI-FLEET. Hassenfeld Bros. Inc. SN 283,797. Pub. 4–2–68. Filed 10–31–67.

850,939. MINI BOGGAN AND DESIGN. Cosom Corporation. SN 285,206. Pub. 4–2–68. Filed 11–20–67.

850,940. CAPT. LAZER. Mattel, Inc. SN 287,857. Pub. 4–2–68. Filed 1–2–68.

850,941. HARRIET HELIDIDDLE. Mattel, Inc. SN 287,858 Pub. 4–2–68. Filed 1–2–68.

850,942. ANABELLE AUTODIDDLE. Mattel, Inc. SN 287,859. Pub. 4–2–68. Filed 1–2–68.

850,943. SISTER SMALL-TALK. Mattel, Inc. SN 287,860. Pub. 4–2–68. Filed 1–2–68.

850,944. ROSCOE. Mattel, Inc. SN 288,057. Pub. 4–2–68. Filed 1–4–68.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

850,945. FINESSE. Washington Forge, Incorporated. SN 238,808. Pub. 4–2–68. Filed 2–14–66.

850,946. SWICK. Okamura Manufacturing Company, Limited. SN 245,608. Pub. 4–2–68. Filed 5–13–66.

850,947. DYDEE TIDY. Dydee-Tidy Corporation. SN 251,291. Pub. 4–2–68. Filed 7–29–66.

850,948. WHEELER AND DESIGN. Wheeler Manufacturing Corp. SN 255,387. Pub. 4–2–68. Filed 9–28–66.

850,949. P.S. Perma Sharp Manufacturing Corp. SN 263,775. Pub. 4–2–68. Filed 2–1–67.

850,950. ARLANS AND DESIGN. Arlan's Dept. Stores, Inc. SN 265,882. Pub. 4–2–68. Filed 3–3–67.

850,951. BENNETT. John Wood Company. MULTIPLE CLASS (Classes 23 and 26). SN 267,376. Pub. 4–2–68. Filed 3–23–67.

850,952. FABCO-AIR. Alfred W. Schmidt. SN 271,531. Pub. 4–2–68. Filed 5–15–67.

850,953. ONEIDA. Oneida Ltd. SN 272,298. Pub. 4–2–68. Filed 5–24–67.

850,954. GYRA-FINISH. The Grav-I-Flo Corporation. SN 272,487. Pub. 4–2–68. Filed 5–26–67.

850,955. BLUE RIBBON. Dayco Corporation. SN 272,713. Pub. 4–2–68. Filed 5–31–67.

850,956. ROTAPOWR. Houdaille Industries, Inc. SN 273,196. Pub. 4–2–68. Filed 6–6–67.

850,957. WAYMARK. Agway, Inc. SN 273,245. Pub. 4–2–68. Filed 6–7–67.

850,958. DICO. Dico Packaging Engineering Limited. SN 273,265. Pub. 4–2–68. Filed 6–7–67.

850,959. SUPER-TENDERMATIC. Jaccard Corporation. SN 274,211. Pub. 4–2–68. Filed 6–19–67.

850,960. VUREFLEX. Pratt Manufacturing Corp. SN 274,344. Pub. 4–2–68. Filed 6–20–67.

850,961. GARDEN GLOW. The Union Fork and Hoe Company. SN 274,362. Pub. 4–2–68. Filed 6–20–67.

850,962. LAWN SQUIRE. The Union Fork and Hoe Company. SN 274,363. Pub. 4–2–68. Filed 6–20–67.

850,963. HOMESTEAD. The Union Fork and Hoe Company. SN 274,364. Pub. 4–2–68. Filed 6–20–67.

850,964. COUNTRY GENTLEMAN. The Union Fork and Hoe Company. SN 274,365. Pub. 4–2–68. Filed 6–20–67.

850,965. GREEN GLEN. The Union Fork and Hoe Company. SN 274,368. Pub. 4–2–68. Filed 6–20–67.

850,966. GREEN GARDEN. The Union Fork and Hoe Company. SN 274,370. Pub. 4–2–68. Filed 6–20–67.

850,967. CPM AND DESIGN. Deering Milliken, Inc. SN 286,017. Pub. 4–2–68. Filed 11–27–67.

850,968. VIPER. U.S.A.P.—Utensileria Speciale Alta Precisione Societa per Azioni. SN 287,996. Pub. 4–2–68. Filed 1–3–68.

850,969. HANDY-WRAP. Ostby & Barton Co. SN 288,064. Pub. 4–2–68. Filed 1–4–68.

850,970. MICROSTEEL. Turf Cutters, Inc. SN 288,996. Pub. 4–2–68. Filed 1–17–68.

Class 24—Laundry Appliances and Machines

850,971. PERMACOTE. McGraw-Edison Company. SN 259,954. Pub. 4–2–68. Filed 12–2–66.

Class 26—Measuring and Scientific Appliances

850,911. (See Class 21 for this trademark.)

850,951. (See Class 23 for this trademark.)

850,972. SENSOTEC. Scientific Advances, Inc. SN 236,521. Pub. 4–2–68. Filed 1–14–66.

850,973. DIALAMATIC. Wavetek. SN 256,162. Pub. 4–2–66. Filed 10–10–66.

850,974. DUOPETTE. American Hospital Supply Corporation, assignee of Dade Reagents, Inc. SN 258,868. Pub. 4–2–68. Filed 11–10–66.

850,975. PONDEROSA. Lee D. Miller. SN 259,257. Pub. 4–2–68. Filed 11–22–66.

850,976. EDWARDSLAB. Edwards Company, Inc. SN 259,719. Pub. 4–2–68. Filed 11–30–66.

850,977. JS AND SCALE (DESIGN). Johnsons of Hendon Limited. SN 261,061. Pub. 4–2–68. Filed 12–29–66.

850,978. SLIMLITE. San Marino Electronic Corporation. SN 267,652. Pub. 4–2–68. Filed 3–29–67.

850,979. ORBIT. Hudson Photographic Industries, Inc. SN 277,285. Pub. 4–2–68. Filed 8–1–67.

850,980. SATELLITE. Kewanee Oil Company, d.b.a. Harshaw Chemical Company. SN 277,287. Pub. 4–2–68. Filed 8–1–67.

850,981. RESPONDER. Vega Precision Laboratories Inc. SN 277,389. Pub. 4–2–68. Filed 8–2–67.

850,982. INTERROSPONDER. Vega Precision Laboratories Inc. SN 277,390. Pub. 4–2–68. Filed 8–2–67.

850,983. TELESPONDER. Vega Precision Laboratories Inc. SN 277,391. Pub. 4–2–68. Filed 8–2–67.

850,984. GAS HOUND AND DESIGN. The Detecto Company. SN 278,094. Pub. 4–2–68. Filed 8–11–67.

850,985. KW AND DESIGN. Kingmann-White, Inc. SN 278,113. Pub. 4–2–68. Filed 8–11–67.

850,986. LA RONDE. Hanimex Pty. Limited. SN 287,548. Pub. 4–2–68. Filed 12–26–67.

Class 27—Horological Instruments

850,987. TD DESTA. Tressa Watches Co., Ltd. SN 254,331. Pub. 4–2–66. Filed 2–6–68.

850,988. LIP. Lip Societe Anonyme d'Horlogerie. SN 260,668. Pub. 4–2–68. Filed 12–13–66.

850,989. THE NON-STOP SHEFFIELD. Sheffield Watch of New York, Inc., by change of name from Sheffield Watch, Inc. SN 272,223. Pub. 4–2–68. Filed 5–23–67.

850,990. MEDI-CHRON. General Time Corporation. SN 280,156. Pub. 4–2–68. Filed 9–12–67.

Class 28—Jewelry and Precious-Metal Ware

850,991. W AND DESIGN. Alex Wellendorff and Hans Peter Wellendorff, d.b.a. Dr. Alex Wellendorff. SN 247,868. Pub. 4–2–68. Filed 6–13–66.

850,992. JF (DESIGN). Jack J. Felsenfeld, Inc. SN 264,669. Pub. 4–2–68. Filed 2–14–67.

850,993. MISCELLANEOUS DESIGN. Sender Ehrman Company, Inc. SN 273,796. Pub. 4–2–68. Filed 6–13–67.

850,994. ROMANIQUE. Textron Inc. SN 274,355. Pub. 4–2–68. Filed 6–20–67.

850,995. THE AVE DUET. Ave Maria, Inc. SN 276,631. Pub. 4–2–68. Filed 7–24–67.

850,996. THE QUINTESSA COLLECTION. Union Carbide Corporation. SN 279,121. Pub. 4–2–68. Filed 8–25–67.

850,997. B (DESIGN). Brite Industries, Inc. SN 280,010. Pub. 4–2–68. Filed 9–11–67.

850,998. SWINGIES. Nomo Products, Inc. SN 280,086. Pub. 4–2–68. Filed 9–11–67.

850,999. LD. Locking Devices, Inc. SN 280,610. Pub. 4–2–68. Filed 9–18–67.

851,000. EARPORT. Coro, Inc. SN 280,861. Pub. 4–2–68. Filed 9–21–67.

851,001. DASS. D. Schenker & Son, Inc. SN 286,484. Pub. 4–2–68. Filed 12–8–67.

Class 29—Brooms, Brushes, and Dusters

851,002. TRIDENT DESIGN. Joseph Lieberman and Sons, Inc. SN 250,907. Pub. 4–2–68. Filed 7–25–66.

851,003. THE SECRET IS IN THE GROOVE. H & G Industries, Inc. SN 269,760. Pub. 4–2–68. Filed 4–21–67.

851,004. PPG INDUSTRIES AND DESIGN. Pittsburgh Plate Glass Company. SN 288,065. Pub. 4–2–68. Filed 1–4–68.

Class 30—Crockery, Earthenware, and Porcelain

851,005. DIAMONDSTONE RG AND DESIGN. Societa Ceramica Italiana Richard-Ginori S.p.A. SN 280,339. Pub. 4–2–68. Filed 9–14–67.

851,006. THE EARL OF HARDWICKE. The Earl of Hardwicke, Limited. SN 283,195. Pub. 4–2–68. Filed 10–24–67.

851,007. ROYSTON ARMS. The Earl of Hardwicke, Limited. SN 283,197. Pub. 4–2–68. Filed 10–24–67.

851,008. COAT OF ARMS (DESIGN). The Earl of Hardwicke, Limited. SN 283,199. Pub. 4–2–68. Filed 10–24–67.

851,009. MISCELLANEOUS DESIGN. The Earl of Hardwicke, Limited. SN 283,201. Pub. 4–2–68. Filed 10–24–67.

Class 31—Filters and Refrigerators

851,010. MR. FREEZ-EE. Oorow Products Company, Inc. SN 267,352. Pub. 4–2–68. Filed 3–22–67.

851,011. CRYODEAN. Dean Products, Inc. SN 269,979. Pub. 4-2-68. Filed 4-25-67.

851,012. CVI. CVI Corporation. SN 282,651. Pub. 4-2-68. Filed 10-17-67.

Class 32 — Furniture and Upholstery

850,831. (See Class 2 for this trademark.)

851,013. AMPLY. American Store Equipment. SN 259,293. Pub. 4-2-68. Filed 11-23-66.

851,014. BULL DOZER. Lear Siegler, Inc. SN 261,089. Pub. 4-2-68. Filed 12-19-66.

851,015. NURSERYFOAM. Nurserytyme Products, Inc. SN 263,599. Pub. 4-2-68. Filed 1-30-67.

851,016. DIAMOND JIM AND DESIGN. Heywood-Wakefield Company. SN 270,916. Pub. 4-2-68. Filed 5-8-67.

851,017. CHASELOUNGER . . . THE SMART WAY TO RELAX AND DESIGN. Schnadig Corporation. SN 274,669. Pub. 4-2-68. Filed 6-23-67.

851,018. VEHO. Blier, Inc. SN 278,629. Pub. 4-2-68. Filed 8-21-67.

851,019. ARISTOCRAT. McDonald Products Corporation. SN 278,976. Pub. 4-2-68. Filed 8-24-67.

851,020. KLING. Baumritter Corporation. SN 279,164. Pub. 4-2-68. Filed 8-28-67.

851,021. NU-LIFE. Iran K. Coatney. SN 279,627. Pub. 4-2-68. Filed 9-5-67.

851,022. CUSH-N-FOAM. Hudson Foam Plastics Corporation. SN 287,618. Pub. 4-2-68. Filed 12-27-67.

Class 33 — Glassware

851,023. SOLOMON GLASS AND DESIGN. Solomon Glass Corp. SN 273,697. Pub. 4-2-68. Filed 6-12-67.

851,024. MISCELLANEOUS DESIGN. Central Glass Co., Ltd. SN 274,409. Pub. 4-2-68. Filed 6-21-67.

Class 34 — Heating, Lighting, and Ventilating Apparatus

850,909. (See Class 21 for this trademark.)

850,911. (See Class 21 for this trademark.)

851,025. AGM. AGM Industries, Inc. SN 229,324. Pub. 6-21-66. Filed 10-5-65.

851,026. HOT-MAMA. B & H Company. SN 261,621. Pub. 4-2-68. Filed 12-29-66.

851,027. COOK CENTRI-PAC AND DESIGN. Loren Cook Company. SN 264,199. Pub. 4-2-68. Filed 2-8-67.

851,028. EXECUTIVE. Rotron Manufacturing Company, Inc. SN 268,622. Pub. 4-2-68. Filed 4-7-67.

851,029. MISCELLANEOUS DESIGN. Carrier Corporation. SN 268,943. Pub. 4-2-68. Filed 4-12-67.

851,030. ROOFPAK. McQuay, Inc. SN 269,200. Pub. 4-2-68. Filed 4-14-67.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

851,031. RK AND DESIGN. Istag AG. SN 237,282. Pub. 4-2-68. Filed 1-26-66.

851,032. ITOMATIC. MacGregor-Comarain. SN 257,638. Pub. 4-2-68. Filed 10-31-66.

851,033. TELSTAR XL-500. The General Tire & Rubber Company. SN 267,031. Pub. 4-2-68. Filed 3-17 67.

851,034. TEXITALLIC. Flexitallic Company. SN 274,608. Pub. 4-2-68. Filed 6-23-67.

851,035. GULFITALLIC. Flexitallic Company. SN 274,609. Pub. 4-2-68. Filed 6-23-67.

851,036. ISOLON. The Duriron Company, Inc. SN 277,358. Pub. 4-2-68. Filed 8-2-67.

Class 36 — Musical Instruments and Supplies

851,037. KALIMBA AND DESIGN. African Musical Instruments (Pty.) Ltd. SN 266,845. Pub. 4-2-68. Filed 3-16-67.

851,038. ADMIRAL. Admiral Corporation. SN 266,985. Pub. 4-2-68. Filed 3-17-67.

851,039. GIDGET. Automatic Radio Mfg. Co., Inc. SN 286,893. Pub. 4-2-68. Filed 12-14-67.

Class 37 — Paper and Stationery

851,040. HI-DRI. Kimberly-Clark Corporation. SN 160,711. Pub. 10-15-63. Filed 1-15-63.

851,041. DUNI. Aktiebolaget Billingsfors-Langed. SN 244,065. Pub. 4-2-68. Filed 4-22-66.

851,042. APPCO. The American Paper Products Company. SN 257,448. Pub. 4-2-68. Filed 10-28-66.

851,043. FLOCKS UNLIMITED. De Soto Chemical Coatings, Inc. SN 258,074. Pub. 4-2-68. Filed 11-7-66.

851,044. PETIT-POINT. Lindy Pen Company Incorporated. SN 258,124. Pub. 4-2-68. Filed 11-7-66.

851,045. BACK-BONE. Research Products Corporation. SN 258,584. Pub. 4-2-68. Filed 11-14-66.

851,046. LAUNDER-NOTS. Arnold J. Weber. MULTIPLE CLASS (Classes 37 and 39). SN 260,491. Pub. 4-2-68. Filed 12-12-66.

851,047. CONTROLMASTER. Coniker Enterprises, Inc. SN 262,402. Pub. 4-2-68. Filed 1-12-67.

851,048. TUCKER. Tuckersharpe Pen Company, Inc. SN 265,665. Pub. 4-2-68. Filed 2-28-67.

851,049. CETS. Royal Business Forms, Incorporated. SN 270,277. Pub. 4-2-68. Filed 4-28-67.

851,050. HYLOX. Union Carbide Corporation. SN 271,193. Pub. 4-2-68. Filed 5-10-67.

851,051. DATA-PEN. Venus Esterbrook Corporation, by merger from The Esterbrook Pen Company. SN 273,879. Pub. 3-19-68. Filed 6-14-67.

851,052. ORGANDIE. Business Supplies Corporation of America. SN 274,128. Pub. 4-2-68. Filed 6-16-67.

851,053. REDWELD. N. L. & E. W. Kruysman, Inc. SN 274,431. Pub. 4-2-68. Filed 6-21-67.

851,054. C-FILM. C-Line Products, Inc. SN 274,709. Pub. 4-2-68. Filed 6-26-67.

851,055. REC-O-PIC AND DESIGN. Hallmark Graphics, Inc. SN 275,138. Pub. 4-2-68. Filed 6-30-67.

851,056. LAMINITE. Tri-Wall Containers, Inc. SN 275,484. Pub. 4-2-68. Filed 7-6-67.

851,057. M.P. AND DESIGN. Clopay Corporation. SN 275,833. Pub. 4-2-68. Filed 7-12-67.

851,058. RECORDPLATE. Recordplate Company Inc. SN 275,958. Pub. 4-2-68. Filed 7-13-67.

851,059. PADDED-PAK. Moore Business Forms, Inc. SN 276,027. Pub. 4-2-68. Filed 7-14-67.

851,060. LOOSE LEAF SYSTEMS AND DESIGN. Loose Leaf Systems. SN 283,390. Pub. 4-2-68. Filed 10-26-67.

Class 38 — Prints and Publications

851,061. THE PROFITMETER WAY AND DESIGN. Elias H. Porter, d.b.a. Profitmeters Systems. SN 245,100. Pub. 4-2-68. Filed 5-6-66.

851,062. U AND DESIGN. MCA Inc. SN 250,849. Pub. 4-2-68. Filed 7-22-66.

851,063. UTA, INC. AND DESIGN. UTA, Inc. SN 254,747. Pub. 4-2-68. Filed 9-19-66.

851,064. DOG (DESIGN). Alice Scott and Robert Scott. SN 255,725. Pub. 4-2-68. Filed 10-4-66.

851,065. PIXIES. United Feature Syndicate, Inc. SN 257,672. Pub. 4-2-68. Filed 10-31-66.

851,066. MAPCHART. Edward J. Jones, d.b.a. Jones Mapchart Company. SN 260,863. Pub. 4-2-68. Filed 12-15-66.

851,067. SAFTI-TAPE. Forbes Labeltape Co. SN 263,265. Pub. 4-2-68. Filed 1-25-67.

851,068. VISUAL I. Nicholas A. D'Angelo, d.b.a. Visual Co. SN 266,010. Pub. 4-2-68. Filed 3-6-67.

851,069. AOC AND DESIGN. Wausau Paper Mills Company. SN 266,817. Pub. 4-2-68. Filed 3-15-67.

851,070. ADORABLES. Hallmark Cards, Incorporated. SN 267,249. Pub. 4-2-68. Filed 3-21-67.

851,071. FAMILY FARE. Family Fare, Inc. SN 268,177. Pub. 4-2-68. Filed 4-3-67.

851,072. VIEW FROM THE BACK PEW. Eugene E. Andereck. SN 269,964. Pub. 4-2-68. Filed 4-25-67.

851,073. CARBON BLACKBOARD. Ashland Oil & Refining Company. SN 270,111. Pub. 4-2-68. Filed 4-27-67.

851,074. IN A WORD BY JOHN KALBACH AND DESIGN. Grafics, Inc. SN 270,379. Pub. 4-2-68. Filed 5-1-67.

851,075. SS AND DESIGN. Simon & Schuster, Inc. SN 270,513. Pub. 4-2-68. Filed 5-2-67.

851,076. BEATNIKS. Jack Gasnik. SN 270,670. Pub. 4-2-68. Filed 5-4-67.

851,077. MD PACIFIC. MD Publications, Inc., assignee of MD International, Inc. SN 270,930. Pub. 4-2-68. Filed 5-8-67.

851,078. SEE-SAW BOOKS AND DESIGN. Scholastic Magazines, Inc. SN 271,072. Pub. 4-2-68. Filed 5-9-67.

851,079. THE COIN COLLECTOR. The Coin Collector Publishing Co. Inc. SN 271,444. Pub. 4-2-68. Filed 5-15-67.

851,080. DESIGN OF CHERUB WITH PENCIL AND HEART. Heart-O-Gold Corporation. SN 272,241. Pub. 4-2-68. Filed 5-24-67.

851,081. TRAVELTIME. Grant-Mann Lithographers Ltd. SN 273,065. Pub. 4-2-68. Filed 6-5-67.

851,082. ET CETERA. Norcross, Inc. SN 273,665. Pub. 4-2-68. Filed 6-12-67.

851,083. POST-DECAL. Chester A. Thomas. SN 274,676. Pub. 4-2-68. Filed 6-23-67.

851,084. MISCELLANEOUS DESIGN. Bishop Industries Corporation. SN 286,790. Pub. 4-2-68. Filed 12-13-67.

851,085. FALCON BOOKS. Noble and Noble Publishers, Inc. SN 287,402. Pub. 4-2-68. Filed 12-22-67.

Class 39 — Clothing

851,046. (See Class 37 for this trademark.)

851,086. MASTER FURRIERS' GUILD OF AMERICA, INC. ETC. AND DESIGN. Master Furriers Guild of America, Inc. SN 243,332. COLLECTIVE MARK. Pub. 4-2-68. Filed 4-13-66.

851,087. EDMONT FOAM-FLEX. Becton, Dickinson and Company, assignee of Edmont Inc. SN 254,038. Pub. 4-2-68. Filed 9-8-66.

851,088. CALIFORNIA LOOK AND DESIGN. California Look. SN 256,522. Pub. 4-2-68. Filed 10-17-66.

851,089. FEATHERSPUN. International Playtex Corporation, by change of name from International Latex Corporation. SN 258,814. Pub. 4-2-68. Filed 11-16-66.

851,090. HEADS & TAILS EITHER WAY YOU WIN! Highlander, Ltd. SN 259,245. Pub. 4-2-68. Filed 11-22-66.

851,091. BIG BEAT BY ARPEGGIOS. Admiral Shoe Corporation, d.b.a. Mutual Shoe Sales Company. SN 260,708. Pub. 4-2-68. Filed 12-14-66.

851,092. SUN AND DESIGN. Nippon Rubber Co., Ltd. SN 261,940. Pub. 4-2-68. Filed 1-4-67.

851,093. SKITIQUE AND DESIGN. Cook's Sporting Goods, d.b.a. Western Wholesale Sporting Goods Co. MULTIPLE CLASS (Classes 22 and 39). SN 263,985. Pub. 4-2-68. Filed 2-6-67.

851,094. KRINKLER. Blairmoor Knitwear Corp. SN 264,295. Pub. 4-2-68. Filed 2-9-67.

851,095. SHIELD. American Hospital Supply Corporation, assignee of Convertors Incorporated. SN 265,178. Pub. 4-2-68. Filed 2-21-67.

851,096. FIORDALISO. Atlas Importing Corp. SN 267,907. Pub. 4-2-68. Filed 3-30-67.

851,097. CHAVALOR. Rhodia Inc. SN 270,417. Pub. 4-2-68. Filed 5-1-67.

851,098. GOLDEN-EASE AND DESIGN. American Argo Corporation. SN 271,419. Pub. 4-2-68. Filed 5-15-67.

851,099. BIQUETTE ORIGINALS. Biquette Originals, Inc. SN 284,274. Pub. 4-2-68. Filed 11-7-67.

851,100. PEBBLE-PARTNERS. Maidenform, Inc. SN 284,278. Pub. 4-2-68. Filed 11-7-67.

851,101. MISCELLANEOUS DESIGN. White Stag Manufacturing Co. SN 286,748. Pub. 4-2-68. Filed 12-12-67.

Class 40 — Fancy Goods, Furnishings, and Notions

851,102. TRY-ME. Mitchellace, Inc. SN 236,911. Pub. 4-2-68. Filed 1-20-66.

851,103. CUORE. Abbott Tresses, Inc. SN 266,848. Pub. 4-2-68. Filed 3-16-67.

851,104. MISCELLANEOUS DESIGN. Komachiya Honten Co., Ltd. SN 270,582. Pub. 4-2-68. Filed 5-3-67.

851,105. WHIPPER-SNAPS. Scovill Manufacturing Company. SN 272,753. Pub. 4-2-68. Filed 5-31-67.

851,106. MEDALOLITE. Gold Medal Hair Products, Inc. SN 278,000. Pub. 4-2-68. Filed 8-10-67.

851,107. BEACHCOMBER. Foster Grant Co., Inc. SN 278,442. Pub. 4-2-68. Filed 8-16-67.

851,108. BEACH COMBER AND DESIGN. Foster Grant Co., Inc. SN 278,443. Pub. 4-2-68. Filed 8-16-67.

851,109. SWITCHERINA. Fashion Tress, Inc. SN 288,573. Pub. 4-2-68. Filed 1-11-68.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

851,110. GABRADAN. Dan River Mills, Incorporated. SN 260,828. Pub. 4-2-68. Filed 12-15-66.

851,111. LUXURY-BLEND. J. P. Stevens & Co., Inc. SN 263,298. Pub. 4-2-68. Filed 1-25-67.

851,112. JUNOTTO. Junior Gallery, Inc. SN 270,924. Pub. 4-2-68. Filed 5-8-67.

851,113. LIGHT & SHADOW. Jens Risom Design, Inc. SN 272,491. Pub. 4-2-68. Filed 5-26-67.

851,114. YVES SAINT LAURENT. Lanvin-Charles of the Ritz, Inc. SN 275,592. Pub. 4-2-68. Filed 7-10-67.

851,115. TEXAMA. The Dobbie Industries Limited. SN 276,741. Pub. 4-2-68. Filed 7-25-67.

851,116. LEES AND DESIGN. Burlington Industries, Inc. SN 277,256. Pub. 4-2-68. Filed 8-1-67.

851,117. KLONDIKE. Burlington Industries, Inc. SN 277,884. Pub. 4-2-68. Filed 8-9-67.

851,118. PRESIDIO. Dan River Mills, Incorporated. SN 277,892. Pub. 4-2-68. Filed 8-9-67.

851,119. WASH EASE. J. P. Stevens & Co., Inc. SN 278,433. Pub. 4-2-68. Filed 8-16-67.

851,120. FUTURA. Chatham Manufacturing Company. SN 278,465. Pub. 4-2-68. Filed 8-17-67.

Class 43 — Thread and Yarn

851,121. MARVELON. Roselon Yarns, Inc. SN 257,891. Pub. 4–2–68. Filed 11–3–66.

851,122. FLEISHER'S AND DESIGN. Indian Head Inc. SN 261,494. Pub. 4–2–68. Filed 12–27–66.

851,123. TENDRELLE. Imperial Chemical Industries Limited. SN 278,106. Pub. 4–2–68. Filed 8–11–67.

Class 44 — Dental, Medical, and Surgical Appliances

851,124. AYRE CERVI-SCRAPER. Clay-Adams, Inc. SN 239,593. Pub. 4–2–68. Filed 2–25–66.

851,125. VAB. American Cyanamid Company. SN 265,383. Pub. 4–2–68. Filed 2–24–67.

851,126. MAMOPLAST. Simaplast, Inc. SN 271,536. Pub. 4–2–68. Filed 5–15–67.

851,127. POSITRON. T.P. Laboratories, Inc. SN 271,545. Pub. 4–2–68. Filed 5–15–67.

851,128. TP. T.P. Laboratories, Inc. SN 271,735. Pub. 4–2–68. Filed 5–17–67.

851,129. DURESIL. Unitek Corporation. SN 272,876. Pub. 4–2–68. Filed 6–1–67.

851,130. MISCELLANEOUS DESIGN. KNY-Scheerer Corporation. SN 274,429. Pub. 4–2–68. Filed 6–21–67.

851,131. HYDRAGRIP. Edwards Laboratories, Inc. SN 274,725. Pub. 4–2–68. Filed 6–26–67.

851,132. FOGARTY HYDRAGRIP. Edwards Laboratories, Inc. SN 274,726. Pub. 4–2–68. Filed 6–26–67.

851,133. ORTHOFLEX. Johnson & Johnson. SN 274,749. Pub. 4–2–68. Filed 6–26–67.

851,134. SOFDENT 27. National Patent Development Corporation. SN 286,974. Pub. 4–2–68. Filed 12–15–67.

Class 45 — Soft Drinks and Carbonated Waters

851,135. CASPRO. Castle Products Company. SN 265,271. Pub. 4–2–68. Filed 2–23–67.

851,136. COME ON STRONG. B & L Sales Associates, d.b.a. Come On Strong Enterprises. SN 265,603. Pub. 4–2–68. Filed 2–28–67.

Class 46 — Foods and Ingredients of Foods

850,891. (See Class 18 for this trademark.)

851,137. RANCH HOUSE MEAL AND DESIGN. Cudahy Company, by change of name from The Cudahy Packing Company. SN 207,575. Pub. 4–5–66. Filed 12–7–64.

851,138. RANCH HOUSE MEAL. Cudahy Company, by change of name from The Cudahy Packing Company. SN 207,577. Pub. 12–6–66. Filed 12–7–64.

851,139. GOOD CHOICE. Butler Wholesale Products, Inc. SN 237,808. Pub. 4–2–68. Filed 2–2–66.

851,140. CREME NORMANDY. Ward Foods, Inc., assignee of Carnation Company. SN 245,909. Pub. 4–2–68. Filed 5–18–66.

851,141. PENOBSCOT. Corn Products Company. SN 250,564. Pub. 4–2–68. Filed 7–19–66.

851,142. TEST RITE. Di Giorgio Corporation, d.b.a. Di Giorgio Fruit Corporation. SN 258,075. Pub. 4–2–68. Filed 11–7–66.

581,143. KOR-VAL. Spartans Industries, Inc. SN 260,684. Pub. 4–2–68. Filed 12–13–66.

851,144. SWEET-MATE. Carnation Company. SN 261,359. Pub. 4–2–68. Filed 12–23–66.

851,145. DRIVE IN. North Pacific Canners & Packers, Inc. SN 262,805. Pub. 4–2–68. Filed 1–18–67.

851,146. ITALSALUMI. Oscar Mayer & Co., Inc. SN 262,951. Pub. 4–2–68. Filed 1–20–67.

851,147. LEPRECHAUN FIGURE AND DESIGN. Ore-Ida Foods, Inc. SN 263,284. Pub. 4–2–68. Filed 1–25–67.

851,148. CREOLE. Winn-Dixie Stores, Inc. SN 263,635. Pub. 4–2–68. Filed 1–30–67.

851,149. DUBON. Fraering Brokerage Co., Inc. SN 263,662. Pub. 4–2–68. Filed 1–31–67.

851,150. WESSANEN. Wessanen's Koninklijke Fabrieken N.V. SN 264,700. Pub. 4–2–68. Filed 2–14–67.

851,151. GIDGETS. Clover Club Foods Company. SN 265,795. Pub. 4–2–68. Filed 3–2–67.

851,152. HAB-ITS. Clover Club Foods Company. SN 265,796. Pub. 4–2–68. Filed 3–2–67.

851,153. ISEX. Amtraco Commodity Corporation. SN 269,392. Pub. 4–2–68. Filed 4–18–67.

851,154. PROVENCE. Gerde Newman & Co., Inc. SN 270,570. Pub. 4–2–68. Filed 5–3–67.

851,155. LUTER ETC. AND DESIGN. The Smithfield Packing Company, Incorporated. SN 270,964. Pub. 4–2–68. Filed 5–8–67.

851,156. COMET AND DESIGN. Comet Rice Mills, Inc. SN 271,923. Pub. 4–2–68. Filed 5–19–67.

851,157. BEL-CAPRI. Losurdo & P.M.J., Inc. SN 272,287. Pub. 4–2–68. Filed 5–24–67.

851,158. SUGAR TWIST. General Foods Corporation. SN 273,887. Pub. 4–2–68. Filed 6–14–67.

851,159. 1880. Carnation Company. SN 274,178. Pub. 4–2–68. Filed 6–19–67.

851,160. FRESH-ETTE. Thomas Candy Corporation. SN 276,187. Pub. 4–2–68. Filed 7–17–67.

851,161. GREAT FORM. Carnation Company. SN 278,871. Pub. 4–2–68. Filed 8–28–67.

851,162. COLA MATES. General Mills, Inc. SN 284,540. Pub. 4–2–68. Filed 11–13–67.

851,163. P-NUTSHELLS. General Mills, Inc. SN 284,543. Pub. 4–2–68. Filed 11–13–67.

851,164. COLA BUDDIES. General Mills, Inc. SN 284,866. Pub. 4–2–68. Filed 11–15–67.

851,165. PARASOLS. General Mills, Inc. SN 284,867. Pub. 4–2–68. Filed 11–15–67.

851,166. STEINS. General Mills, Inc. SN 284,868. Pub. 4–2–68. Filed 11–15–67.

851,167. POOH SNACKS. General Mills, Inc. SN 284,869. Pub. 4–2–68. Filed 11–15–67.

851,168. SKIFFS. General Mills, Inc. SN 284,872. Pub. 4–2–68. Filed 11–15–67.

851,169. DOGS & CATS. General Mills, Inc. SN 284,873. Pub. 4–2–68. Filed 11–15–67.

851,170. GREEN SPOT AND DESIGN. Capitol Food Industries, Inc., d.b.a. Green Spot Co. SN 288,257. Pub. 4–2–68. Filed 1–8–68.

Class 47 — Wines

851,171. DEL MAGNIFTCO. Societa per Asioni Chianti Ruffino Esportazione Vinicola Toscana, d.b.a. I. L. Ruffino. SN 265,218. Pub. 4–2–68. Filed 2–21–67.

851,172. GRAND PRIX AND DESIGN. Michigan Wineries, Inc. SN 277,582. Pub. 4–2–68. Filed 7–6–67.

Class 48 — Malt Beverages and Liquors

851,173. THE CUSTOM BREW. Meister Brau, Inc., by change of name from Peter Hand Brewery Company. SN 236,135. Pub. 4–2–68. Filed 1–10–66.

Class 49 — Distilled Alcoholic Liquors

851,174. POLMOS WODKA WYBOROWA AND DESIGN. Przedsiebiorstwo Handlu Zagranicsnego "Agros." SN 254,800. Pub. 4–2–68. Filed 9–20–66.

851,175. SOUTHERN DEW. Old Boone Distillery Co. SN 272,296. Pub. 4–2–68. Filed 5–24–67.

851,176. SAUZA EXTRA. Destilería de Tequila Sauza, S.A. SN 272,365. Pub. 4–2–68. Filed 5–25–67.

851,177. WESTWOOD. Jas. Barclay & Co. Limited. SN 283,300. Pub. 4–2–68. Filed 10–25–67.

Class 50 — Merchandise Not Otherwise Classified

850,923. (See Class 1 for this trademark.)

851,178. MISCELLANEOUS DESIGN. The National Golden Spike Society. SN 242,633. Pub. 4–2–68. Filed 4–4–66.

851,179. YYSPECTRE. Yamano Sangyo Co., Ltd. SN 265,006. Pub. 4–2–68. Filed 1–24–68.

851,180. STYLE-DYLE. Shrier Enterprises, Inc. SN 271,650. Pub. 4–2–68. Filed 5–16–67.

851,181. VIT-COR. Educational Equipment Corporation. SN 272,597. Pub. 4–2–68. Filed 5–29–67.

851,182. HEIDER. Heider Manufacturing Co. SN 279,944. Pub. 4–2–68. Filed 9–8–67.

Class 51 — Cosmetics and Toilet Preparations

851,183. ALL IT TAKES IS A MINUTE FROM YOU. AND A LITTLE KINDNESS FROM CLAIROL. Clairol Incorporated. SN 246,453. Pub. 4–2–68. Filed 5–24–66.

851,184. SUNSET LIGHT. Clairol Incorporated. SN 254,118. Pub. 4–2–68. Filed 9–9–66.

851,185. SUNSET BLONDE. Clairol Incorporated. SN 254,124. Pub. 4–2–68. Filed 9–9–66.

851,186. SAND DUNE BEIGE. Clairol Incorporated. SN 258,065. Pub. 4–2–68. Filed 11–7–66.

851,187. REVERSE ENGLISH. Yardley of London, Inc. SN 259,040. Pub. 4–2–68. Filed 11–18–66.

851,188. LE MANS. Clairol Incorporated. MULTIPLE CLASS (Classes 51 and 52). SN 261,254. Pub. 4–2–68. Filed 12–22–66.

851,189. GREAT DAY. Clairol Incorporated. MULTIPLE CLASS (Classes 51 and 52). SN 261,256. Pub. 4–2–68. Filed 12–22–66.

851,190. SAV-A-NAIL. Robert James Lappe, d.b.a. Nu-Nails. SN 261,309. Pub. 4–2–68. Filed 12–22–66.

851,191. BAIN D'ARMANCE. Stendhal. SN 262,213. Pub. 4–2–68. Filed 1–9–67.

851,192. SANSEVERINA. Stendhal. SN 262,214. Pub. 4–2–68. Filed 1–9–67.

851,193. COVER GIRL. Noxell Corporation. SN 266,066. Pub. 4–2–68. Filed 3–6–67.

851,194. LOVING CARE. Clairol Incorporated. SN 270,553. Pub. 4–2–68. Filed 5–3–67.

Class 52 — Detergents and Soaps

850,886. (See Class 16 for this trademark.)

851,188. (See Class 51 for this trademark.)

851,189. (See Class 51 for this trademark.)

851,195. LOTION GLO. Calgon Corporation (Delaware corporation), assignee of Calgon Corporation (Pennsylvania corporation). SN 258,040. Pub. 4–2–68. Filed 11–7–66.

851,196. SOFAC. Harry Benet, d.b.a. Bamel Products. SN 272,466. Pub. 4–2–68. Filed 5–26–67.

851,197. GRAND PRIZE. Helene Curtis Industries, Inc. SN 277,046. Pub. 4–2–68. Filed 7–28–67.

851,198. LEGPHENE. Walter G. Legge Company, Inc. SN 277,323. Pub. 4–2–68. Filed 7–21–67.

851,199. JULIE. The Sinclair Manufacturing Company. SN 277,481. Pub. 4–2–68. Filed 8–3–67.

Service Marks

Class 100 — Miscellaneous

851,200. W AND DESIGN. Williams Brothers Company. MULTIPLE CLASS (Classes 100 and 103). SN 253,386. Pub. 4–2–68. Filed 8–29–66.

851,201. EIS AND DESIGN. Emergency Identification Service, Inc. SN 288,053. Pub. 4–2–68. Filed 1–4–68.

Class 101 — Advertising and Business

851,202. MRA AND DESIGN. Marketing-Research Associates. SN 256,758. Pub. 4–2–68. Filed 10–19–66.

851,203. EXCITING THINGS ARE HAPPENING AT DAVISONS AND DESIGN. R. H. Macy & Co., Inc., d.b.a. Davison-Paxon Co. SN 263,397. Pub. 4–2–68. Filed 1–26–67.

851,204. JOBFAX. Industrial Data Processing, Inc. SN 266,767. Pub. 4–2–68. Filed 3–15–67.

851,205. MISCELLANEOUS DESIGN. John Wrage Employment Service, Inc. SN 267,279. Pub. 4–2–68. Filed 3–21–67.

851,206. THE SHACK. Tandy Corporation, assignee of Radio Shack Corporation. SN 268,614. Pub. 4–2–68. Filed 4–7–67.

851,207. MR. LITHO. Weiss Litho Corp. SN 280,678. Pub. 4–2–68. Filed 9–19–67.

Class 102 — Insurance and Financial

851,208. WHITE SYSTEM AND DESIGN. White System Corporation. SN 255,666. Pub. 4–2–68. Filed 10–3–66.

Class 103 — Construction and Repair

851,200. (See Class 100 for this trademark.)

851,209. AAMCO. Aamco Automatic Transmissions, Inc. SN 287,501. Pub. 4–2–68. Filed 12–26–67.

Class 104 — Communication

851,210. THE VOICE OF VIRGINIA. Larus & Brother Company, d.b.a. Radio Station WRVA. SN 271,626. Pub. 4–2–68. Filed 5–16–67.

Class 105 — Transportation and Storage

851,211. AUTO DRIVEAWAY AND DESIGN. Auto Driveaway Company. SN 253,068. Pub. 4–2–68. Filed 11–22–65.

851,212. BIG BOY. Southern Railway Company. SN 233,953. Pub. 4–2–68. Filed 12–3–65.

Class 106 — Material Treatment

851,213. DICRONITE. Lubrication Sciences, Inc. SN 263,676. Pub. 4–2–68. Filed 1–31–67.

Class 107 — Education and Entertainment

851,214. APEX. Kepner-Tregoe and Associates, Inc. SN 245,277. Pub. 4–2–68. Filed 5–10–66.

851,215. OCEAN WORLD. Ocean World, Inc. SN 255,639. Pub. 4–2–68. Filed 10–3–66.

851,216. DESIGN OF A TRUMPET ON A CHAIR. Monterey Jazz Festival, Inc. SN 260,563. Pub. 4–2–68. Filed 12–12–66.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 2 — Receptacles

851,217. Sealright Co., Inc., Fulton, N.Y. SN 251,005. Filed P.R. 7–25–66; Am. S.R. 4–1–68.

CHIPKAN

For Can-Like Bulk Containers Made of Paperboard for Use in Packaging Potato Chips and the Like (Int. Cl. 16).
First use Feb. 23, 1966.

Class 5 — Adhesives

851,218. Rexford Paper Company, Milwaukee, Wis. SN 274,989. Filed P.R. 6–28–67; Am. S.R. 4–12–68.

PULL CLEAN

For Gummed Tape of Paper or the Like With an Adhesive Inner Surface for Box or Carton Sealing and Reinforcing (Int. Cl. 16).
First use Oct. 6, 1966.

Class 6 — Chemicals and Chemical Compositions

851,219. Woods Industries, Inc., d.b.a. Corp King Company and Corp King Chemical, Yakima, Wash. SN 268,636. Filed P.R. 4–7–67; Am. S.R. 3–20–68.

DAMP-DUST

For Dust Type Agricultural Chemicals Including a Moist Type Carrier Substance for Aerial Application (Int. Cl. 5).
First use July 29, 1966.

Class 12 — Construction Materials

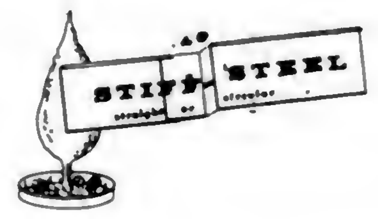
851,220. Marson Corporation, Chelsea, Mass., by change of name and mesne assignment from Marson Corporation, Chelsea, Mass. SN 250,387. Filed P.R. 7–15–66; Am. S.R. 3–21–68.

STEEL SEAL

For Plastic and Metal Repair Products—Namely, an Epoxy Resin Engine Block Mending Composition With an Iron Powder Reinforcement (Int. Cl. 17).
First use June 8, 1966.

Class 13 — Hardware and Plumbing and Steam-Fitting Supplies

851,221. Lawrence C. Dargan, d.b.a. Stiff-Steel Co., Dallas, Tex. SN 235,632. Filed P.R. 1–3–66; Am. S.R. 4–25–68.



For Landscape Edging (Int. Cl. 6).
First use Dec. 27, 1965.

Class 26 — Measuring and Scientific Appliances

851,222. Bulova Watch Company, Inc., Flushing, N.Y. SN 269,951. Filed P.R. 4–25–67; Am. S.R. 4–17–68.

MICRO HANDLER

For Machine for Testing and Classifying Semiconductor Microcircuit Elements in an Individual Chip or Die Form (Int. Cl. 9).
First use Mar. 23, 1967.

Class 32 — Furniture and Upholstery

851,223. Superior Mattress Corp., Evansville, Ind. SN 234,151. Filed P.R. 12–7–65; Am. S.R. 4–15–68.

SUPERIOR

For Mattresses (Int. Cl. 20).
First use July 1, 1965.

851,224. Dolly Madison Industries, Inc., New York, N.Y. SN 268,871. Filed P.R. 4–11–67; Am. S.R. 4–15–68.

CONVERT-2 BEDS

For Sofa Which May Be Changed Into Twin Beds (Int. Cl. 20).
First use Mar. 21, 1967.

Class 38 — Prints and Publications

851,225. Dow Corning Corporation, Midland, Mich. SN 250,943. Filed P.R. 7–25–66; Am. S.R. 9–27–67.

MATERIALS NEWS

For Publication Containing Short Articles About New Materials and Applications for Products Manufactured by Applicant, Such as Silicones, Silicon, Fluorosilicones, and Solid Film Lubricants (Int. Cl. 16).
First use January 1964.

851,226. Product Newscards Company, Chicago, Ill. SN 267,180. Filed P.R. 3–20–67; Am. S.R. 4–8–68.

NEWSCARDS

For Postcards Carrying Advertisements and the Address of the Advertiser (Int. Cl. 16).
First use Feb. 24, 1967.

851,227. Product Newscards Company, Chicago, Ill. SN 272,210. Filed P.R. 5–23–67; Am. S.R. 4–8–68.

OEM PRODUCT NEWSCARDS

For Postcards Carrying Advertisements and the Address of the Advertiser (Int. Cl. 16).
First use Feb. 1, 1967.

851,228. Medical Digest, Inc., Northfield, Ill. SN 281,381. Filed 9–28–67.

GERIATRICS DIGEST

For Controlled Circulation Periodical Publication Presently in the Form of a Pamphlet and Containing Synopses of Current Literature (Int. Cl. 16).
First use July 1, 1963.

Class 39 — Clothing

851,229. The Lovable Company, Atlanta, Ga. SN 268,966. Filed P.R. 4–12–67; Am. S.R. 4–19–68.

TOTAL COMFORT

Owner of Reg. No. 725,670.
For Women's Foundation Garments (Int. Cl. 25).
First use Mar. 21, 1967.

851,230. International Playtex Corporation, Dover, Del. SN 276,560. Filed 7–21–67.

SUDDENLY YOU'RE SHAPELIER

Owner of Reg. No. 830,409.
For Foundation Garments (Int. Cl. 25).
First use Mar. 2, 1965.

851,231. Hickory & Tweed, Inc., Armonk, N.Y. SN 280,949. Filed 9–22–67.

HICKORY & TWEED

For Ski Pants, Ski Jackets, Men's, Women's, and Children's Boots, Sweaters, Headwear, Footwear, Slacks, Jackets, Coats, Scarves, Mufflers, Socks, Gloves, and Earbands (Int. Cl. 25).
First use at least as early as 1961.

Class 46 — Foods and Ingredients of Foods

851,232. S.E.M. Food Products, Inc., Dallas, Tex. SN 244,142. Filed P.R. 4–22–66; Am. S.R. 4–22–68.

PECAN A MEAL

For Food Product, Used for Breading Fish, Shrimp, Fried Chicken, and Other Food Products (Int. Cl. 30).
First use Apr. 1, 1966.

851,233. Bush Brothers and Company, Dandridge, Tenn. SN 244,297. Filed P.R. 4–26–66; Am. S.R. 4–19–68.

WISCONSIN'S FINEST

For Canned Vegetables (Int. Cl. 29).
First use September 1963.

851,234. Bush Brothers and Company, Dandridge, Tenn. SN 244,298. Filed P.R. 4–26–66; Am. S.R. 4–19–68.

ARKANSAS' FINEST

For Canned Pork and Beans and Canned Vegetables (Int. Cl. 29).
First use October 1963.

851,235. L. K. Baker and Company, d.b.a. M & R Food Service Company, Columbus, Ohio. SN 269,845. Filed P.R. 4–24–67; Am. S.R. 4–22–68.

Dustless

For Non-Dairy Creaming Product for Beverages and Culinary Uses (Int. Cl. 29).
First use Apr. 6, 1967.

851,236. S.L.C. Distributors, Inc., Atlantic City, N.J., assignee of Kligerman Dairies, Inc., Atlantic City, N.J. SN 270,579. Filed P.R. 5–3–67; Am. S.R. 3–7–68.

COFFEE TREAT

For Non-Dairy Coffee Whitener Composition Containing a Vegetable Fat in Place of Butter Fat (Int. Cl. 29).
First use September 1964.

851,237. San Antonio Foreign Trading Co., San Antonio, Tex. SN 270,612. Filed P.R. 5-3-67; Am. S.R. 4-16-68.

FROST RIPE

For Frozen Vegetables (Int. Cl. 29).
First use Jan. 27, 1967.

Class 51 — Cosmetics and Toilet Preparations

851,238. Revlon, Inc., New York, N.Y. SN 263,945. Filed P.R. 2-3-67; Am. S.R. 4-15-68.

'PINKFOIL'

For Lipstick and Nail Enamel (Int. Cl. 3).
First use Dec. 13, 1966.

851,239. Revlon, Inc., New York, N.Y. SN 263,946. Filed P.R. 2-3-67; Am. S.R. 4-15-68.

'SNOWBERRY'

For Lipstick and Nail Enamel (Int. Cl. 3).
First use Dec. 13, 1966.

851,240. Revlon, Inc., New York, N.Y. SN 263,947. Filed P.R. 2-3-67; Am. S.R. 4-15-68.

'COPPERFROST'

For Lipsticks and Nail Enamels (Int. Cl. 3).
First use Dec. 13, 1966.

851,241. Revlon, Inc., New York, N.Y. SN 263,948. Filed P.R. 2-3-67; Am. S.R. 4-15-68.

'SILVER PLUM'

For Lipstick and Nail Enamel (Int. Cl. 3).
First use Dec. 13, 1966.

851,242. Revlon, Inc., New York, N.Y. SN 263,949. Filed P.R. 2-3-67; Am. S.R. 4-15-68.

'SNOW ORANGE'

For Lipstick and Nail Enamel (Int. Cl. 3).
First use Dec. 13, 1966.

851,243. Revlon, Inc., New York, N.Y. SN 263,950. Filed P.R. 2-3-67; Am. S.R. 4-15-68.

'GLITTER MELON'

For Lipstick and Nail Enamel (Int. Cl. 3).
First use Dec. 13, 1966.

851,244. Revlon, Inc., New York, N.Y. SN 263,951. Filed P.R. 2-3-67; Am. S.R. 4-15-68.

'STRAWBERRY ICE'

For Lipstick and Nail Enamel (Int. Cl. 3).
First use Dec. 13, 1966.

851,245. Clairol Incorporated, New York, N.Y. SN 264,801. Filed P.R. 2-16-67; Am. S.R. 4-24-68.

VITAL BALANCE

For Hair Conditioner (Int. Cl. 3).
First use Sept. 26, 1966.

851,246. Clairol Incorporated, New York, N.Y. SN 264,802. Filed P.R. 2-16-67; Am. S.R. 4-24-68.

WHITE-ESSENCE

For Developing Lotion for the Hair (Int. Cl. 3).
First use Nov. 10, 1964.

851,247. Clairol Incorporated, New York, N.Y. SN 264,803. Filed P.R. 2-16-67; Am. S.R. 4-24-68.

DOES HE OR DOESN'T HE—NOT EVEN HIS WIFE KNOWS FOR SURE!

For Hair Tinting, Dyeing and Coloring Preparations (Int. Cl. 3).
First use Apr. 23, 1965.

851,248. Revlon, Inc., New York, N.Y. SN 267,674. Filed P.R. 3-27-67; Am. S.R. 4-15-68.

JAMAICA ROSE

For Lipstick and Nail Enamel (Int. Cl. 3).
First use Sept. 16, 1966.

851,249. Monsieur Robaire, Inc., Los Angeles, Calif. SN 269,723. Filed P.R. 4-21-67; Am. S.R. 4-17-68.

GABOR

For Skin Freshener, Eye Oil, Liquid Makeup, Cleansing Liquid, Hand and Body Lotion, Moisturiser, Astringent, Eye Shadow, Translucent Powder, Bath Oil, Cologne, After Shave, Rouge, Lipstick, Eyeliner, and Perfume (Int. Cl. 3).
First use Feb. 10, 1967.

851,250. Clairol Incorporated, New York, N.Y. SN 271,341. Filed P.R. 5-12-67; Am. S.R. 4-18-68.

SOFTLY RED

For Hair Tinting, Dyeing and Coloring Preparation (Int. Cl. 3).
First use Feb. 8, 1967.

851,251. Clairol Incorporated, New York, N.Y. SN 272,353. Filed P.R. 5-25-67; Am. S.R. 4-23-68.

BLUE-ESSENCE

For Developing Lotion for Hair Coloring and Hair Lightening Preparations (Int. Cl. 3).
First use Apr. 20, 1967.

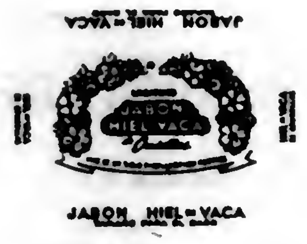
Class 52 — Detergents and Soaps

851,252. Tessco, Inc., d.b.a. Bud Type Cleaner Co., Timonium, Md. SN 266,469. Filed P.R. 3-10-67; Am. S.R. 4-3-68.

PRESS KLEEN

For Typewriter Type Cleaner (Int. Cl. 3).
First use May 18, 1950.

851,253. José Sendra Marti, d.b.a. Crusellas and Crusellas & Co., Miami, Fla. SN 270,589. Filed P.R. 5-3-67; Am. S.R. 4-16-68.



The words "Legitimo," "Jabon," "Hiel de Vaca," "Mas de un Siglo Embelleciendo Rostros," and "Tamaño para el Baño" may be translated as "legitimate or genuine," "soap," "cow's bile," "over a century beautifying faces," and "bath size" respectively. Owner of Reg. Nos. 838,130 and 843,800.
For Toilet Soap (Int. Cl. 3).
First use Dec. 3, 1966.

TRADEMARK REGISTRATIONS RENEWED

65,619. GOODRICH. Cl. 44 (Int. Cl. 5). 10-15-07.
68,523. FLEXIBLE. Cl. 6 (Int. Cl. 3). 4-14-08.
68,539. "LAXOL" AND DESIGN. Cl. 18 (Int. Cl. 5). 4-14-08.
68,671. REPRESENTATION OF A BIRD ETC. Cl. 37 (Int. Cl. 16). 4-21-08.
68,839. "TAURIL." Cl. 35 (Int. Cl. 17). 4-28-08.
70,021. ODOL. Cl. 51 (Int. Cl. 3). 7-21-08.
70,428. "GILLETTE" ETC. AND DIAMOND SHAPED DESIGN. Cl. 29 (Int. Cl. 21). 9-1-08.
70,758. "GILLETTE" ETC. ENCLOSED BY DIAMOND-SHAPED DESIGN. Cl. 52 (Int. Cl. 3). 9-29-08.
234,920. CLAY ADAMS GOLD SEAL NON-CORROSIVE AND DESIGN. Cl. 26 (Int. Cl. 9). 11-8-27.
236,759. ARM-ROY. Cl. 50 (Int. Cls. 22, 26, and 28). 12-20-27.
237,778. ALL-SPORTS. Cl. 39 (Int. Cl. 25). 1-17-28.
239,895. LISTERINE. Cl. 51 (Int. Cl. 3). 3-13-28.
241,186. "SPACKLE" AND RECTANGULAR BACKGROUND. Cl. 16 (Int. Cl. 19). 4-17-28.
241,555. CHROMARD. Cl. 13 (Int. Cl. 11). 5-1-28.
242,263. POT-O'GOLD. Cl. 46 (Int. Cl. 30). 5-22-28.
242,350. "CAPITOL" ETC. AND REPRESENTATION OF THE DOME OF THE UNITED STATES CAPITOL. Cl. 12 (Int. Cl. 19). 5-22-28.
242,487. THE PYRAMID. Cl. 38 (Int. Cl. 16). 5-29-28.
242,597. LUCIDOL. Cl. 6 (Int. Cl. 1). 5-29-28.
243 551. PLASTIKON. Cl. 5 (Int. Cl. 1). 6-26-28.
244,414. DIX RIVER. Cl. 42 (Int. Cl. 24). 7-17-28.
244,676. LISTERINE. Cl. 18 (Int. Cl. 5). 7-24-28.
245,212. CLASSMATE. Cl. 39 (Int. Cl. 25). 8-7-28.
246,286. REPRESENTATION OF RING LINED FOR BLUE. Cl. 13 (Int. Cl. 6). 9-4-28.
246,341. PEAU DE PECHE. Cl. 39 (Int. Cl. 25). 9-4-28.
246,584. "SKOOKUM" AND DESIGN. Cl. 46 (Int. Cl. 30). 9-11-28.
246,697. GOLDEN ROD. Cl. 2 (Int. Cl. 21). 9-11-28.
247,019. SILVER CORD. Cl. 46 (Int. Cl. 31). 9-18-28.
247,023. "K-ZILDJIAN CO." ETC. AND DESIGN. Cl. 36 (Int. Cl. 15). 10-2-28.
247,689. ROYAL FISHER. Cl. 46 (Int. Cl. 29). 10-2-28.
247,766. SOLIPAK. Cl. 46 (Int. Cl. 29). 10-2-28.
436,763. HYDRYLIN. Cl. 18 (Int. Cl. 5). 2-17-48.
436,854. STYLE MANOR. Cl. 39 (Int. Cl. 25). 3-2-48.
436,886. FOREMUL. Cl. 6 (Int. Cl. 1). 3-2-48.
437,086. CARBOLAN. Cl. 6 (Int. Cl. 2). 3-9-48.
437,660. KIOPHYLIN. Cl. 18 (Int. Cl. 5). 3-30-48.
438,029. GATINET. Cl. 46 (Int. Cl. 30). 4-6-48.
438,104. ADORABLE. Cl. 46 (Int. Cl. 30). 4-6-48.
438,156. PASTEL. Cl. 51 (Int. Cl. 3). 4-13-48.
438,188. KORKMASTER. Cl. 23 (Int. Cl. 21). 4-13-48.
438 254. FLINTSEAL. Cl. 12 (Int. Cl. 17). 4-13-48.
438,471. ORTHOLITE. Cl. 16 (Int. Cl. 2). 4-20-48.
438,485. BULKROLL. Cl. 23 (Int. Cl. 8). 4-20-48.
438,486. NUROLL. Cl. 23 (Int. Cl. 8). 4-20-48.
438,577. BIN EYE AND DESIGN. Cl. 26 (Int. Cl. 9). 5-4-48.
438,747. PERMAPAPER. Cl. 26 (Int. Cl. 1). 5-11-48.
438,775. SANFORSET. Cl. 39 (Int. Cl. 25). 5-11-48.
439,039. KOROSEAL. Cl. 32 (Int. Cl. 24). 6-1-48.
439,209. CHIX. Cl. 42 (Int. Cl. 24). 6-8-48.
439,451. KOROSEAL. Cl. 44 (Int. Cl. 10). 6-29-48.
439,681. KOROSEAL. Cl. 35 (Int. Cls. 7 and 17). 7-13-48.
439,688. LAKECOVE. Cl. 46 (Int. Cl. 31). 7-13-48.
439,765. KOROSEAL. Cl. 39 (Int. Cl. 25). 7-20-48.
439,860. DIXON. Cl. 15 (Int. Cl. 4). 7-27-48.
439,931. DIXON. Cl. 37 (Int. Cl. 16). 7-27-48.
440,004. OAK. Cl. 28 (Int. Cl. 14). 8-3-48.
440,600. ARMO DESIGNED WEATHER AND DESIGN. Cl. 34 (Int. Cl. 11). 9-14-48.
440,784. KOROSEAL. Cl. 44 (Int. Cl. 24). 9-28-48.
500,074. ECCO. Cl. 42 (Int. Cl. 24). 4-13-48.
500,124. JISCO. Cl. 14 (Int. Cl. 6). 4-27-48.
500,200. CARDMASTER. Cl. 37 (Int. Cl. 16). 5-11-48.
500 280. IMPERIAL. Cl. 28 (Int. Cl. 14). 5-11-48.
500,379. FLEXIPIPE. Cl. 34 (Int. Cl. 11). 5-18-48.
500,487. VISE. Cl. 37 (Int. Cl. 16). 6-1-48.
500,517. CLIMAX. Cl. 52 (Int. Cl. 3). 6-1-48.
500,533. AEROTUBE. Cl. 12 (Int. Cl. 17). 6-1-48.
500,583. SOHARI AND DESIGN. Cl. 39 (Int. Cl. 25). 6-1-48.
500,702. TRIOTEX. Cl. 2 (Int. Cl. 22). 6-22-48.
500,703. TEXTITE. Cl. 2 (Int. Cl. 22). 6-22-48.
500,705. DUOTEX. Cl. 2 (Int. Cl. 22). 6-22-48.
500,707. PARCHLINED. Cl. 2 (Int. Cl. 22). 6-22-48.
500,708. DURAQUA. Cl. 2 (Int. Cl. 16). 6-22-48.
500,709. ECONOMY. Cl. 2 (Int. Cl. 16). 6-22-48.
500,811. MUCOTIN. Cl. 18 (Int. Cl. 5). 7-6-48.
500,892. KEMTAC. Cl. 5 (Int. Cl. 30). 7-6-48.
501,192. BADGER. Cl. 46 (Int. Cl. 31). 7-27-48.
501,270. LEATHEROID. Cl. 18 (Int. Cl. 1). 7-27-48.
501,284. NS. Cl. 14 (Int. Cl. 6). 8-3-48.
501,291. PIG (DESIGN). Cl. 14 (Int. Cl. 6). 8-3-48.
501,302. DIPLOMAT. Cl. 49 (Int. Cl. 33). 8-3-48.
501,303. KINSEY. Cl. 49 (Int. Cl. 31). 8-3-48.
501,308. LA CONGA. Cl. 49 (Int. Cl. 33). 8-3-48.
501 673. NEOHETRAMINE. Cl. 18 (Int. Cl. 5). 8-17-48.
501,675. GLENEAGLES. Cl. 42 (Int. Cl. 24). 8-17-48.
501,743. AMPCO AND DESIGN. Cl. 23 (Int. Cl. 8). 8-24-48.
501,798. ROYSTON-JR. Cl. 39 (Int. Cl. 25). 8-24-48.
501,799. ROYSTON-HI. Cl. 39 (Int. Cl. 25). 8-24-48.
501,815. STANTOGS. Cl. 39 (Int. Cl. 25). 8-24-48.
502,089. HEALTH-TEX. Cl. 39 (Int. Cl. 25). 9-14-48.
502,133. PRIMATROL. Cl. 16 (Int. Cl. 2). 9-14-48.
502,173. VEE-LOK. Cl. 35 (Int. Cl. 17). 9-14-48.
502,290. FEATHER BED ETC. AND DESIGN. Cl. 39 (Int. Cl. 25). 9-21-48.

502,395. AIRTURNS. Cl. 34 (Int. Cl. 11). 9–21–48.
502,432. HAWKINSON TREAD SINCE 1931 AND DESIGN. Cl. 35 (Int. Cl. 12). 9–21–48.
502,448. STEERO. Cl. 46 (Int. Cls. 29 and 30). 9–28–48.
502,456. WATCH DOG. Cl. 26 (Int. Cl. 9). 9–28–48.
502,507. BERKELEY. Cl. 44 (Int. Cl. 5). 9–28–48.
502,562. MARBRO. Cl. 42 (Int. Cl. 24). 9–28–48.
502,626. NITE-N-DAY. Cl. 39 (Int. Cl. 25). 10–5–48.
502,695. PERFIDE. Cl. 52 (Int. Cl. 3). 10–5–48.
502,941. VANITY FAIR. Cl. 39 (Int. Cl. 25). 10–12–48.

TRADEMARK REGISTRATIONS CANCELED

Section 8

392,532. SUPER-X. Cl. 4. 12–30–41.
392,764. B MATCH-UPS. Cl. 39. 1–13–42.
395,412. LITHE-LINE. Cl. 39. 5–26–42.

The following registrations issued May 1, 1962

730,604. JIFFY. Cl. 1.
730,609. HANSZITE. Cl. 1.
730,614. CAMISA. Cl. 1.
730,619. CROWN BRAND AND CROWN DESIGN. Cl. 4.
730,624. BABY FLUF. Cl. 6.
730,626. SLICK CHICK. Cl. 6.
730,630. SOLO. Cl. 6.
730,643. QUADRILLE. Cl. 12.
730,654. THE ONLEE. Cl. 13.
730,655. ALUMA-LINK. Cl. 13.
730,656. HIDE A RESTER AND DESIGN. Cl. 13.
730,657. BRIDE CRAFT AND DESIGN. Cl. 13.
730,658. DEL MAR AND FISH DESIGN. Cl. 13.
730,663. LUBA-FOAM. Cl. 15.
730,665. METLBOND. Cl. 15.
730,667. MARAGREASE B. Cl. 15.
730,668. MARAFLUID HT. Cl. 15.
730,669. KETCHAM'S. Cl. 15.
730,670. PENTA-MARINE. Cl. 16.
730,674. MARAVILLA. Cl. 17.
730,677. COLPERMA. Cl. 18.
730,680. PRONICOTYL. Cl. 18.
730,681. REPRESENTATION OF A BIRD. Cl. 18.
730,683. LONGATREN. Cl. 18.
730,687. RAFEDRIN. Cl. 18.
730,688. RAUCYLATE. Cl. 18.
730,689. IMMACON. Cl. 18.
730,698. STACK-O-MATIC. Cl. 19.
730,699. VENDMOBILE. Cl. 19.
730,700. BALBOA. Cl. 20.
730,704. TWO CIRCLES (DESIGN). Cl. 21.
730,706. BRU-VUE. Cl. 21.
730,709. LURALIGHT. Cl. 21,
730,711. QUIG. Cl. 21.
730,714. 3–P. Cl. 21.
730,721. FLYING FOX. Cl. 22.
730,722. SLOB. Cl. 22.
730,723. DON ROBIN. Cl. 22.
730,724. SAF JET AND DESIGN. Cl. 22.
730,725. LIF-TUP. Cl. 22.
730,726. MEDI-CYCLE. Cl. 22.
730,727. A–O–K. Cl. 22.
730,728. ASTRONAUT. Cl. 22.
730,731. SCAN-O-SCOPE. Cl. 22.
730,732. TOOLING AIDS. Cl. 23.
730,736. ORBIT AND DESIGN. Cl. 23.
730,737. HURST AND DESIGN. Cl. 23.
730,747. SERVO-VAC. Cl. 23.
730,752. TEMCO. Cl. 24.
730,755. BUCLEAR. Cl. 26.
730,758. ELECTRO-VOICE. Cl. 26.
730,761. SPORT-CLIP. Cl. 26.
730,764. HEATCHECK. Cl. 26.
730,766. TIMER-LESS. Cl. 26.
730,767. ORBIT. Cl. 26.
730,769. TRAFFITROL. Cl. 26.
730,771. CAREFREE WEARER. Cl. 26.
730,773. TELCAR. Cl. 26.
730,776. RECTIPOT. Cl. 26.
730,777. MAG-PAC. Cl. 26.
730,783. GEMFLEX. Cl. 28.
730,787. JEWEL CASE CABINETRY. Cl. 32.
730,789. COAT-N-HATTER. Cl. 32.
730,792. BOOKCLASPS. Cl. 32.
730,794. DARMIN. Cl. 32.
730,796. THRIF-T-GLASS. Cl. 33.
730,797. HOPEWARE. Cl. 33.
730,805. BALL AND DESIGN. Cl. 36.
730,814. CBP IN FANCIFUL FORM. Cl. 37.
730,817. "I CAN READ IT ALL BY MYSELF" ETC. AND DESIGN. Cl. 38.
730,818. CHECKALOG. Cl. 38.
730,822. CURRENTS IN DERMATOLOGY. Cl. 38.
730,828. AQUA-BAR. Cl. 39.
730,835. MARINARKA. Cl. 39.
730,836. MAGIC-EASE. Cl. 39.
730,840. REDOLENCE. Cl. 39.
730,844. ZEPHYR. Cl. 40.
730,851. SHADE AID AND DESIGN. Cl. 41.
730,854. JOTO. Cl. 42.
730,855. GORHAM. Cl. 42.
730,856. KIMBERLY. Cl. 42.
730,861. REVELLA. Cl. 42.
730,863. LOVELIGHT. Cl. 42.
730,864. HAPPY DAY. Cl. 42.
730,865. THERM O TEMP AND DESIGN. Cl. 42.
730,866. ATRONICS AND DESIGN. Cl. 44.
730,869. TEMPO-STAT. Cl. 44.
730,874. HAPPY BIRTHDAY. Cl. 46.
730,882. DESIGN OF DOTS. Cl. 46.
730,883. DESIGN OF DOTS. Cl. 46.
730,884. VEGE-DILL. Cl. 46.
730,885. MRS. TUCKER'S. Cl. 46.
730,887. NUTS-A-POPPIN AND DESIGN. Cl. 46.
730,888. CAL–75. Cl. 46.
730,889. APRI COLA. Cl. 46.
730,892. HEMGLO. Cl. 46.
730,894. CUSTOM-CREST. Cl. 46.
730,895. CUSTOM FARM. Cl. 46.
730,898. PACHANGA. Cl. 47.
730,899. THE BEER WITH THE BUCCANEER AND DESIGN. Cl. 48.
730,906. TRIMBRITE AND DESIGN. Cl. 50.
730,907. PEG A LETTER. Cl. 50.
730,908. DRESS RIGHT AND DESIGN. Cl. 50.
730,910. SPARKLING GOLD AND DESIGN. Cl. 51.
730,915. ABRAC. Cl. 51.
730,920. PINK LADY. Cl. 51.
730,923. MILADY. Cl. 51.
730,924. SUMMER CLOUD. Cl. 51.
730,927. GPD. Cl. 52.
730,928. WASHETTE. Cl. 52.
730,938. SITECOM. Cl. 100.
730,939. STOP'N TREAT. Cl. 100.
730,941. HAND AND CANDLE (DESIGN). Cl. 102.
730,946. BUTACRYL. Cl. 106.
730,947. NATIONAL INVENTORS CLUB. Cl. 200.
730,948. DANISH LINEN AND DESIGN. Cl. A.
730,950. ASPHALT-PAK. Cl. 2.
730,951. NON LEAKER BOTTOM. Cl. 2.
730,958. KRISTINUS ROYAL EXPORT. Cl. 17.
730,959. KRISTINUS EXPORT. Cl. 17.
730,960. RHODE'S 19. Cl. 19.
730,961. IONOZONE GENERATOR Cl. 21.
730,962. TRU-GLASS. Cl. 22.
730,963. DISPENSER-PAK. Cl. 24.
730,964. SUPERGLO. Cl. 28.
730,970. BRENTANO. Cl. 42.
730,972. TATER STIX. Cl. 46.
730,975. JEWELS AND TOOLS. Cl. 50.

Section 18

281,957. HERITAGE. Cl. 28. 4–7–31.
640,316. RED DEVIL. Cl. 29. 1–22–57.
806,136. SUPERB BE. Cl. 18. 3–22–66.

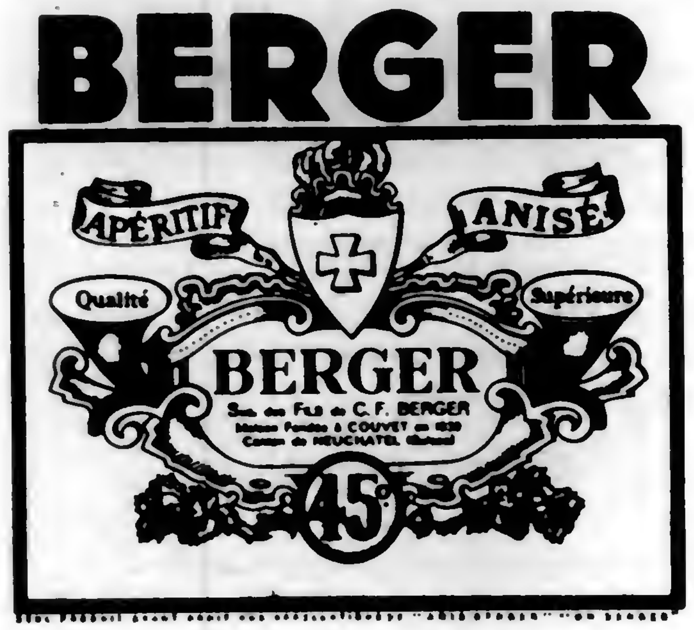
TRADEMARK REGISTRATIONS AMENDED, DISCLAIMED, CORRECTED, ETC.

76,722. PITUITRIN. Cl. 18. 2–8–10. Parke Davis & Co. Parke, Davis & Company, Detroit, Mich. Amended: In the cerificate, line 10, in the drawing, heading and in the statement, column 1, lines 12 and 13, the description of goods is deleted and *extracts of posterior lobe of pituitary glands* is inserted.

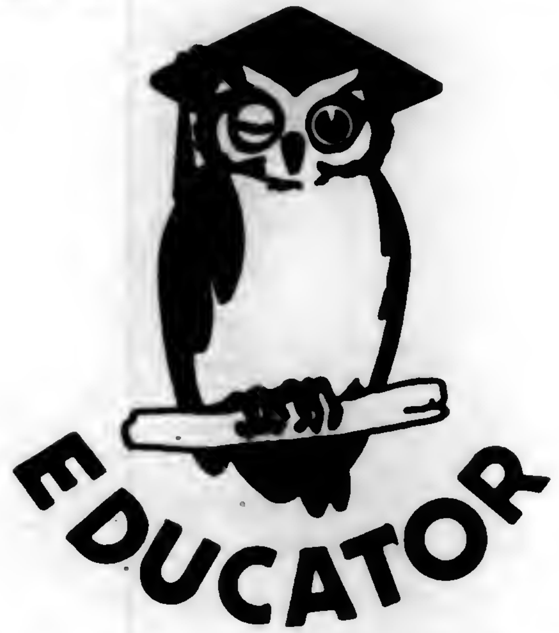
240,429. LINCOLN. Cl. 21. 3–27–28. The Lincoln Electric Company, Cleveland, Ohio. Amended to appear:

LINCOLN

313,402. BERGER ETC. AND DESIGN. Cl. 49. 5–29–34. Ets. C. Berger & Cie, S.A. C. Berger & Cie, S.A., Marseille, France. Amended: In the statement, column 2, line 4, " 'Un Berger,' " is deleted, and the drawing is amended to appear:



435,204. EDUCATOR AND DESIGN. Cl. 39. 12–16–47. The Educator Shoe Corporation of America. Educator Shoe Corporation, New York, N.Y. Amended: In the statement, column 2, lines 6 to 8 are deleted, and the drawing is amended to appear:



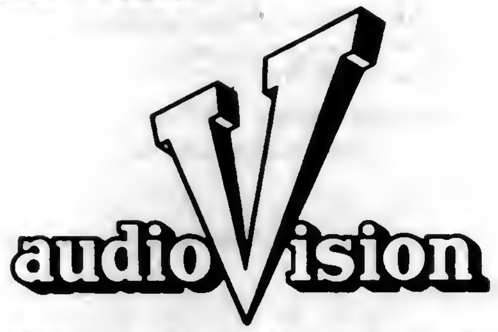
502,315. TONI. Cl. 50. 9–21–48. The Toni Company. The Gillette Company, Boston, Mass. Amended: In the statement, column 1, line 9, "powder" is deleted.

560,441. SPEEDSTAR. Cl. 23. 6–24–52. The Star Drilling Machine Company. Koehring Company, Milwaukee, Wis. Amended to appear:

SPEEDSTAR

734,081. LOGIC LITE. Cl. 21. 7–10–62. Eldema Corporation. Genisco Technology Corporation, Compton, Calif. Amended: In the statement, column 1, before line 1, *Genisco Technology Corporation, by merger from* is inserted.

736,772. AUDIOVISION AND DESIGN. Cl. 26. 8–28–62. Lectron Corporation of America. Ken Cook Co., Milwaukee, Wis. Amended to appear:



741,478. CYMEL. Cl. 6. 12–4–62. American Cyanamid Company, New York, N.Y. Corrected: In the statement, column 2, line 1, the description of goods should be deleted and *hexamethoxymethylmelamine* should be inserted.

745,232. A–1 NURSES REGISTRY. Cl. 101. 2–12–63. Lemax, Inc., doing business as A–1 Nurses Registry, San Francisco, Calif. Amended: In the statement, column 2, lines 1 through 3, the description of goods is deleted and *services in placing nurses with patients and securing nurses for patients* is inserted.

759,838. DAY NITE SERVICE AND DESIGN. Cl. 101. 11–5–63. Lemax, Inc., doing business as A–1 Nurses Registry, San Francisco, Calif. Amended: In the statement, column 2, lines 1 through 3, the description of goods is deleted and *services in placing nurses with patients and securing nurses for patients* is inserted.

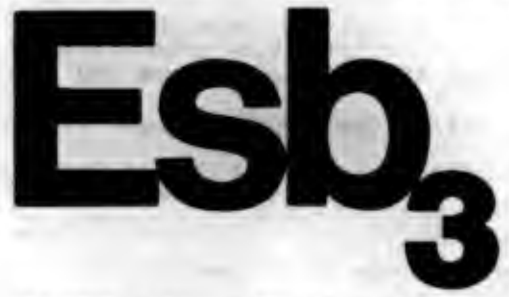
791,879. BUTTE KNIT. Cl. 39. 6–29–65. Jonathan Logan, Inc., North Bergen, N.J. Corrected: In the statement, column 1, line 1, "New York" should be deleted and *Delaware* should be inserted.

808,587. CD (DESIGN). Cl. 43. 5–17–66. M. Caulliez & Delaoutre, Societe en Commandite par Actions, Tourcoing, Nord, France. Corrected: In the statement, column 1, lines 1 and 2, "Societe a responsabilite Limitee" should be deleted and *Societe en Commandite par Actions* should be inserted.

809,709. STREAMLINE AND DESIGN. Cl. 19. 6–7–66. The Streamline Trailer Company of Indiana, Inc., Thorntown, Ind. Corrected: In the statement, column 2, line 2, "Jan. 2, 1963" should be deleted and *Nov. 6, 1957* should be inserted, and "Jan. 10, 1963" should be deleted and *at least as early as Dec. 31, 1957* should be inserted.

812,269. CHANTELAINE. Cl. 43. 8–2–66. M. Caulliez & Delaoutre, Societe en Commandite par Actions, Tourcoing, Nord, France. Corrected: In the statement, column 1, lines 1 and 2, "Societe a Responsabilite Limitee" should be deleted and *Societe en Commandite par Actions* should be inserted.

832,406. ESB₃. Cl. 18. 7–25–67. The Gland-O-Lac Company. Ciba Corporation, Summit, N.J. Amended to appear:



847,879. BETTER LIVING ENCYCLOPEDIA. Cl. 38. 4–23–68. Home Library Press, Inc. Parents' Magazine Enterprises, Inc., New York, N.Y. Corrected: In the statement, column 1, line 1, "Parent's" should be deleted and *Parents'* should be inserted.

TRADEMARK REGISTRATIONS—NEW CERTIFICATES

New Certificates issued under sections 7(c), 7(f), 7(g) of the Trademark Act of 1946 for the unexpired term of the original registrations.

390,513. WELDERS PAL. Cl. 18. Carhoff Company. 9–23–41. New Cert. Sec. 7(c) to Alan G. Darling, Jr., Cleveland Heights, Ohio.

395,735. NO-FOG. Cl. 52. Carhoff Company. 6–9–42. New Cert. Sec. 7(c) to Alan G. Darling, Jr., Cleveland Heights, Ohio.

510,638. REIMERS. Cl. 21. Reimers Electric Appliance Company, Inc. 6–7–48. New Cert. Sec. 7(c) to Reimers Electra Steam, Inc., Clearbrook, Va.

542,473. GLOBETROTTERS. Cl. 107. A. M. Saperstein. 5–15–51. New Cert. Sec. 7(c) to Abe Saperstein Productions, Inc., Chicago, Ill.

542,474. HARLEM GLOBETROTTERS. Cl. 107. A. M. Saperstein. 5–15–51. New Cert. Sec. 7(c) to Abe Saperstein Productions, Inc., Chicago, Ill.

579,858. TROTTERS. Cl. 107. A. M. Saperstein. 9–8–53. New Cert. Sec. 7(c) to Abe Saperstein Productions, Inc., Chicago, Ill.

662,372. MAGICIANS OF BASKETBALL. Cl. 107. A. M. Saperstein, doing business as Abe Saperstein Enterprises. 5–27–58. New Cert. Sec. 7(c) to Abe Saperstein Productions, Inc., Chicago, Ill.

713,232. ANNE FOGARTY. Cl. 39. Saks & Company. 3–28–61. New Cert. Sec. 7(c) to Anne Fogarty, Inc., New York, N.Y.

INDEX OF REGISTRANTS

JUNE 18, 1968

(Registered ; Renewed ; Canceled ; Amended, Disclaimed, Corrected, etc. ; New Certificates ; 12c Publications.)

AGM Industries, Inc., Canton, Mass. 851,025, pub. 6–21–66. Cl. 34.

Aamco Automatic Transmissions, Inc., King of Prussia, Pa. 851,209, pub. 4–2–68. Cl. 103.

Abbott Tresses, Inc., Pittsburgh, Pa. 851,103, pub. 4–2–68. Cl. 40.

Addison Corp., Paterson, N.J. 730,736, canc. Cl. 23.

Admiral Corp., Chicago, Ill. 851,038, pub. 4–2–68. Cl. 36.

Admiral Shoe Corp., d.b.a. Mutual Shoe Sales Co., Manchester, N.H. 851,091, pub. 4–2–68. Cl. 39.

Advance Abrasives Co., Minneapolis, Minn. 850,847, pub. 4–2–68. Cl. 4.

African Musical Instruments (Pty.) Ltd., Roodesport, Transvaal, Republic of South Africa. 851,037, pub. 4–2–68. Cl. 36.

Agway, Inc., De Witt, N.Y. 850,957, pub. 4–2–68. Cl. 23.

Alphone Co., Ltd. : *See*—
Alphone Kabushiki Kaisha.

Alphone Kabushiki Kaisha, d.b.a. Alphone Co., Ltd., Aichi-ken, Japan. 850,906, pub. 4–2–68. Cl. 21.

Aitken Products, Inc., Cleveland, Ohio. 850,915, pub. 4–2–68. Cl. 21.

Aktiebolaget Billingsfors-Langed, Billingsfors, Sweden. 851,041, pub. 4–2–68. Cl. 37.

Allied Stores Corp., Wilmington, Del., d.b.a. The Bon Marche, Seattle, Wash. 395,412, canc. Cl. 39.

American Argo Corp., Schuylkill Haven, Pa. 851,098, pub. 4–2–68. Cl. 39.

American Chicle Co., Long Island City, N.Y. 730,689, canc. Cl. 18.

American Cyanamid Co., New York, N.Y. 741,478, cor. Cl. 6.

American Cyanamid Co., Wayne, N.J. 851,125, pub. 4–2–68. Cl. 44.

American Electronic Lab., Inc., Colmar, Pa. 850,919, pub. 4–2–68. Cl. 21.

American Finishing Co., Memphis, Tenn. 501,270, ren. 6–18–68. Cl. 18.

American Hospital Supply Corp., Evanston, Ill., from Dade Reagents, Inc., Miami, Fla. 850,974, pub. 4–2–68. Cl. 26.

American Hospital Supply Corp., Evanston, Ill., from Convertors Inc., Newark, N.J. 851,095, pub. 4–2–68. Cl. 39.

American Kitchen Products Co., Jersey City, N.J. 502,448, ren. 6–18–68. Cl. 46.

American Nutrition Co. : *See*—
S.C.S. Club, Inc.

American Paper Products Co., The, Youngstown, Ohio. 851,042, pub. 4–2–68. Cl. 37.

American Standard Inc. : *See*—
Standard Sanitary Mfg. Co.

American Store Equipment, Muskegon, Mich. 851,013, pub. 4–2–68. Cl. 32.

American Toy & Furniture Co., Inc., Chicago, Ill. 850,929, pub. 4–2–68. Cl. 22.

Ampco Metal, Inc., Milwaukee, Wis. 501,743, ren. 6–18–68. Cl. 23.

Amtraco Commodity Corp., New York, N.Y. 851,153, pub. 4–2–68. Cl. 46.

Anchor Packing Co., The : *See*—
Ungarische Gummiwaarenfabriks Actiengesellschaft.

Andereck, Eugene E., Trenton, Mo. 851,072, pub. 4–2–68. Cl. 38.

Anderson, Clayton & Co., d.b.a. Paymaster Farms and Paymaster Feed Mills, Houston, Tex. 730,885, canc. Cl. 46.

Antonio Co. of Tampa, The : *See*—
Universal Cigar Corp.

Arlan's Dept. Stores, Inc., New York, N.Y. 850,950, pub. 4–2–68. Cl. 23.

Armacost & Royston, Inc., West Los Angeles, Calif. 236,759, ren. 6–18–68. Cl. 50.

Armo Cooling & Ventilating Co., Inc., New York, N.Y. 440,600, ren. 6–18–68. Cl. 34.

Armour and Co., Chicago, Ill. 730,614, canc. Cl. 1.

Armour and Co., Chicago, Ill. 850,822, pub. 4–2–68. Cl. 1.

Armstrong Cork Co., Lancaster, Pa. 730,700, canc. Cl. 20.

Armstrong Paint & Varnish Works, Inc., Chicago, Ill. 850,886, pub. 4–2–68. Multiple Class (Classes 16 and 52).

Artel Textile Co., Inc., New York, N.Y. 730,865, canc. Cl. 42.

Ashland Oil & Refining Co., Ashland, Ky. 851,073, pub. 4–2–68. Cl. 38.

Associated Dry Goods Corp. : *See*—
Stix, Baer & Fuller Co.

Atlas Importing Corp., Cambridge, Mass. 851,096, pub. 4–2–68. Cl. 39.

Auto Driveaway Co., Chicago, Ill. 851,211, pub. 4–2–68. Cl. 105.

Automatic Radio Mfg. Co., Inc., Melrose, Mass. 851,039, pub. 4–2–68. Cl. 36.

Ave Maria, Inc., Pittsburgh, Pa. 850,995, pub. 4–2–68. Cl. 28.

B & H Co., Wapello, Iowa. 851,026, pub. 4–2–68. Cl. 34.

B & L Sales Associates, d.b.a. Come on Strong Enterprises, Boston, Mass. 851,136, pub. 4–2–68. Cl. 45.

Baar & Beards, Inc., New York, N.Y. 730,828, canc. Cl. 39.

Baker, L. K., & Co., d.b.a. M & R Food Service Co., Columbus, Ohio. 851,285. Cl. 46.

Ball Records, Los Angeles, Calif. 730,805, canc. Cl. 36.

Bantam-Lite, Inc., New York, N.Y. 850,913, pub. 4–2–68. Cl. 21.

Barber-Colman Co., Rockford, Ill. 502,395, ren. 6–18–68. Cl. 34.

Barbizon Corp., The, New York, N.Y. 730,861, canc. Cl. 42.

Barclay, Jas., & Co. Ltd., Peoria, Ill. 851,177, pub. 4–2–68. Cl. 49.

Battle Creek of California, Inc., Los Angeles, Calif. 730,726, canc. Cl. 22.

Baumritter Corp., New York, N.Y. 851,020, pub. 4–2–68. Cl. 32.

Baxter Laboratories, Inc., Morton Grove, Ill. 730,687–8, canc. Cl. 18.

Baxter Laboratories, Inc., Morton Grove, Ill. 850,849, pub. 4–2–68. Cl. 6.

Beacon Mfg. Co., Swannanoa, N.C. 730,855–6, canc. Cl. 42.

Becton, Dickinson, and Co., East Rutherford, N.J., from Edmont Inc., Coshocton, Ohio. 851,087, pub. 4–2–68. Cl. 39.

Beginner Books, Inc. : *See*—
Random House, Inc.

Bemis Bro. Bag Co., St. Louis, Mo., to Bemis Co., Inc., Minneapolis, Minn. 500,379, ren. 6–18–68. Cl. 34.

Bemis Bro. Bag Co., St. Louis, Mo., to Bemis Co., Inc., Minneapolis, Minn. 500,702–3, ren. 6–18–68. Cl. 2.

Bemis Bro. Bag Co., St. Louis, Mo., to Bemis Co., Inc., Minneapolis, Minn. 500,705, ren. 6–18–68. Cl. 2.

Bemis Bro. Bag Co., St. Louis, Mo., to Bemis Co., Inc., Minneapolis, Minn. 500,707–9, ren. 6–18–68. Cl. 2.

Bemis Co., Inc. : *See*—
Bemis Bro. Bag Co.

Benet, Harry, d.b.a. Ramel Products, Norwood, Ohio. 851,196, pub. 4–2–68. Cl. 52.

Biquette Originals, Inc., West New York, N.J. 851,099, pub. 4–2–68. Cl. 39.

Bishop Industries Corp., North Hollywood, Calif. 851,084, pub. 4–2–68. Cl. 38.

Blairmoor Knitwear Corp., Brooklyn, N.Y. 851,094, pub. 4–2–68. Cl. 39.

Blier Inc., Quebec, Canada. 851,018, pub. 4–2–68. Cl. 32.

Bloomingdale Bros., Inc., New York, N.Y. 392,764, canc. Cl. 39.

Blue, David B., Tulsa, Okla. 850,898, pub. 4–2–68. Cl. 19.

Boake, A., Roberts & Co. Ltd., London, England. 730,915, canc. Cl. 51.

Bon Marche, The : *See*—
Allied Stores Corp.

Bond Stores, Inc., New York, N.Y. 436,854, ren. 6–18–68. Cl. 39.

Bowen Electric Manufacturers : *See*—
Bowen, John.

Bowen, John, d.b.a. Bowen Electric Manufacturers, Fort Lauderdale, Fla. 730,663, canc. Cl. 15.

Bride Craft Corp., Union, N.J. 730,657, canc. Cl. 13.

Bridgestone Tire Co. Ltd., Tokyo, Japan. 850,901, pub. 4–2–68. Cl. 19.

Brite Industries, Inc., Providence, R.I. 850,997, pub. 4–2–68. Cl. 28.

British Oxygen Co. Ltd. : *See*—
Korkmaster Co., The.

Brunswick Corp., Chicago, Ill. 850,936, pub. 4–2–68. Cl. 22.

Buchsbaum, S., & Co., Chicago, Ill. 281,957, canc. Cl. 28.

Bud Type Cleaner Co. : *See*—
Tessco, Inc.

Budd Co., The, Philadelphia, Pa. 730,764, canc. Cl. 26.

Bulova Watch Co., Inc., Flushing, N.Y. 851,222. Cl. 26.

Burlington Industries, Bridgeport, Pa. 851,116–17, pub. 4–2–68. Cl. 42.

Bush Brothers and Co., Dandridge, Tenn. 851,233–4. Cl. 46.

Business Supplies Corp. of America, New York, N.Y. 851,052, pub. 4–2–68. Cl. 37.

Butler Wholesale Products, Inc., Adams, Mass. 851,139, pub. 4–2–68. Cl. 46.

C-Line Products, Inc., Des Plaines, Ill. 851,054, pub. 4–2–68. Cl. 37.

CVI Corp., Columbus, Ohio. 851,012, pub. 4–2–68. Cl. 31.

C-Z Chemical Co., Inc., Beloit, Wis. 850,846, pub. 4–2–68. Cl. 4.

Calgon Corp., from Calgon Corp., Pittsburgh, Pa. 851,195, pub. 4–2–68. Cl. 52.

California Canners and Growers : *See*—
Filice & Perrelli Canning Co., Inc.

California Look, Los Angeles, Calif. 851,088, pub. 4–2–68. Cl. 39.

Canoga Electronics Corp., Van Nuys, Calif. 730,773, canc. Cl. 26.

Capitol Food Industries, Inc., d.b.a. Green Spot Co., Chicago, Ill. 851,170, pub. 4–2–68. Cl. 46.

Cardmaster Co. : *See*—
Doppelt, Max J.

Carhoff Co., to Alan G. Darling, Jr., Cleveland Heights, Ohio. 390,513, new cert. Cl. 18.

Carhoff Co., to Alan G. Darling, Jr., Cleveland Heights, Ohio. 395,735, new cert. Cl. 52.

Carnation Co. : *See*—
Ward Foods, Inc.

Carnation Co., Los Angeles, Calif. 851,144, pub. 4–2–68. Cl. 46.

Carnation Co., Los Angeles, Calif. 851,159, pub. 4–2–68. Cl. 46.
Carnation Co., Los Angeles, Calif. 851,161, pub. 4–2–68. Cl. 46.
Carrier Corp., Syracuse, N.Y. 851,029, pub. 4–2–68. Cl. 34.
Carter Corp.: *See*—
  Carter Dry Goods Co.
Carter Dry Goods Co., to Carter Corp., Louisville, Ky. 244,414, ren. 6–18–68. Cl. 42.
Castle Products Co., Irvington, N.J. 851,135, pub. 4–2–68. Cl. 45.
Caulliez, M., & Delaoutre, Societe en Commandite Par Actions, Tourcoing, Nord, France. 808,587, cor. Cl. 43.
Caulliez, M., & Delaoutre, Societe en Commandite Par Actions, Tourcoing, Nord, France. 812,269, cor. Cl. 43.
Central Glass Co., Ltd., Yamaguchi, Japan. 851,024, pub. 4–2–68. Cl. 33.
Chatham Mfg. Co., Elkin, N.C. 851,120, pub. 4–2–68. Cl. 42.
Chemold Corp., Jamaica, N.Y. 850,934, pub. 4–2–68. Cl. 22.
Chicopee Sales Corp., New York, N.Y., to Johnson & Johnson, New Brunswick, N.J. 439,209, ren. 6–18–68. Cl. 42.
Clairol Inc., New York, N.Y. 851,183–6, pub. 4–2–68. Cl. 51.
Clairol Inc., New York, N.Y. 851,188–9, pub. 4–2–68. Multiple Class (Classes 51 and 52).
Clairol Inc., New York, N.Y. 851,194, pub. 4–2–68. Cl. 51.
Clairol Inc., New York, N.Y. 851,245–7. Cl. 51.
Clairol Inc., New York, N.Y. 851,250–1. Cl. 51.
Clay-Adams Co., Inc., to Clay-Adams, Inc., New York, N.Y. 234,920, ren. 6–18–68. Cl. 26.
Clay-Adams, Inc.: *See*—
  Clay-Adams Co., Inc.
Clay-Adams, Inc., New York, N.Y. 851,124, pub. 4–2–68. Cl. 44.
Cleveland Cleaner & Paste Co., The: *See*—
  Climax Industries, Inc.
Cleveland Fabricating Co., The, Cleveland, Ohio. 850,871–2, pub. 4–2–68. Cl. 12.
Climax Industries, Inc., to The Cleveland Cleaner & Paste Co., Cleveland, Ohio. 500,517, ren. 6–18–68. Cl. 52.
Clopay Corp., Cincinnati, Ohio. 851,057, pub. 4–2–68. Cl. 37.
Clover Club Foods Co., Kaysville, Utah. 851,151–2, pub. 4–2–68. Cl. 46.
Cluett, Peabody & Co., Inc., Troy, N.Y. 438,775, ren. 6–18–68. Cl. 39.
Coat Craft Co., Inc., Philadelphia, Pa. 730,835, canc. Cl. 39.
Coatney, Iran K., Oklahoma City, Okla. 851,021, pub. 4–2–68. Cl. 32.
Coin Collector Publishing Co. Inc., The, Kewanee, Ill. 851,079, pub. 4–2–68. Cl. 38.
Come on Strong Enterprises: *See*—
  B & L Sales Associates.
Comet Rice Mills, Inc., Dallas, Tex. 851,156, pub. 4–2–68. Cl. 46.
Compagnie Francaise de Produits Chimiques et Industriels du Sud-Est, Paris, France. 850,855, pub. 4–2–68. Cl. 6.
Coniker Enterprises, Inc., Chicago, Ill. 851,047, pub. 4–2–68. Cl. 37.
Continental Distilling Corp.: *See*—
  Old Hickory Distilling Corp.
  Ron Conga Distilleries, Inc.
Continental Oil Co., Ponca City, Okla. 730,665, canc. Cl. 15.
Control Dynamics Corp., North Hollywood, Calif. 730,704, canc. Cl. 21.
Convertors Inc.: *See*—
  American Hospital Supply Corp.
Conwood Corp., Memphis, Tenn. 850,890, pub. 4–2–68. Cl. 17.
Cook, Loren, Co., Berea, Ohio. 851,027, pub. 4–2–68. Cl. 34.
Cook's Sporting Goods, d.b.a. Western Wholesale Sporting Goods Co., Denver, Colo. 851,093, pub. 4–2–68. Multiple Class (Classes 22 and 39).
Cooper Industries, Inc., Mount Vernon, Ohio. 850,874, pub. 4–2–68. Cl. 12.
Corn Products Co.: *See*—
  National Starch Co.
Corn Products Co., New York, N.Y. 851,141, pub. 4–2–68. Cl. 46.
Coro, Inc., New York, N.Y. 851,000, pub. 4–2–68. Cl. 28.
Corp King Chemical: *See*—
  Woods Industries, Inc.
Corsetry, Inc., New York, N.Y., to True Form Foundations, Inc., Darby, Pa. 502,626, ren. 6–18–68. Cl. 39.
Cosom Corp., Minneapolis, Minn. 850,939, pub. 4–2–68. Cl. 22.
Coty, Inc., to Chas. Pfizer & Co., Inc., New York, N.Y. 438,156, ren. 6–18–68. Cl. 51.
Countess Mara, Inc., New York, N.Y. 730,840, canc. Cl. 39.
Craig, Floyd W., d.b.a. Floyd's Trim and Upholstery Shop, Cordell, Okla. 850,845, pub. 4–2–68. Cl. 3.
Crestworth Ltd., Dorset, England. 850,905, pub. 4–2–68. Cl. 21.
Crocker, Burbank Papers Inc., Fitchburg, Mass. 730,814, canc. Cl. 37.
Crusellas: *See*—
  Marti, Jose S.
Crusellas & Co.: *See*—
  Marti, Jose S.
Cudahy Co., from The Cudahy Packing Co., Omaha, Nebr. 851,137–8, pub. 4–5–66. Cl. 46.
Cudahy Packing Co., The: *See*—
  Cudahy Co.
Curtis, Helene, Industries, Inc., Chicago, Ill. 730,920, canc. Cl. 51.
Curtis, Helene, Industries, Inc., Chicago, Ill. 730,924, canc. Cl. 51.
Curtis, Helene, Industries, Inc., Chicago, Ill. 851,197, pub. 4–2–68. Cl. 52.
Custom Farms, Inc., Trenton, N.J. 730,894–5, canc. Cl. 46.
Cyclops Corp., Pittsburgh, Pa. 850,885, pub. 4–2–68. Cl. 14.
Dade Reagents, Inc.: *See*—
  American Hospital Supply Corp.
Daggett & Ramsdell, Inc., New York, N.Y. 730,910, canc. Cl. 51.
Dan River Mills, Inc., Danville, Va. 851,110, pub. 4–2–68. Cl. 42.
Dan River Mills, Inc., Danville, Va. 851,118, pub. 4–2–68. Cl. 42.
D'Angelo, Nicholas A., d.b.a. Visual Co., Boston, Mass. 851,068, pub. 4–2–68. Cl. 38.
Dargan, Lawrence C., d.b.a. Stiff-Steel Co., Dallas, Tex. 851,221. Cl. 13.
Darling, Alan G., Jr.: *See*—
  Carhoff Co.
Daryl Industries, Inc., Miami, Fla. 850,878, pub. 4–2–68. Cl. 12.
Davison-Paxon Co.: *See*—
  Macy, R. H., & Co., Inc.
Dayco Corp., Dayton, Ohio. 850,955, pub. 4–2–68. Cl. 23.
Dean Products, Inc., Brooklyn, N.Y. 851,011, pub. 4–2–68. Cl. 31.
Deering Milliken, Inc., New York, N.Y. 850,967, pub. 4–2–68. Cl. 23.
Dehra's Magi-Pak, Brookings, Oreg. 850,856, pub. 4–2–68. Cl. 6.
Del Mar Mfg. Co., Gardena, Calif. 730,658, canc. Cl. 13.
Delta Pine Plywood Co.: *See*—
  Jackson Ready-Mix Concrete.
De Soto Chemical Coatings, Inc., Des Plaines, Ill. 851,043, pub. 4–2–68. Cl. 37.
Destileria De Tequila Sauza, S.A., Guadalajara, Jalisco, Mexico. 851,176, pub. 4–2–68. Cl. 49.
Detecto Co., The, Clarion, Iowa. 850,984, pub. 4–2–68. Cl. 26.
Dewhurst & Partner Ltd., Middlesex, England. 850,904, pub. 4–2–68. Cl. 21.
Diamond Shamrock Corp.: *See*—
  Wolf, Jacques, & Co.
Dico Packaging Engineering Ltd., Surrey, England. 850,958, pub. 4–2–68. Cl. 23.
Di Giorgio Corp., d.b.a. Di Giorgio Fruit Corp., San Francisco, Calif. 851,142, pub. 4–2–68. Cl. 46.
Di Giorgio Fruit Corp.: *See*—
  Di Giorgio Corp.
Dixon, Joseph, Crucible Co., The, Jersey City, N.J. 439,860, ren. 6–18–68. Cl. 15.
Dixon, Joseph, Crucible Co., The, Jersey City, N.J. 439,931, ren. 6–18–68. Cl. 37.
Dobbie Industries Ltd., The, Galt, Ontario, Canada. 851,115, pub. 4–2–68. Cl. 42.
Dolly Madison Industries, Inc., New York, N.Y. 851,224, Cl. 32.
Domar Products, Inc., St. Paul, Minn. 730,761, canc. Cl. 26.
Donald, Adam, Philadelphia, Pa. 730,792, canc. Cl. 32.
Doppelt, Hannah, Trust: *See*—
  Doppelt, Max J.
Doppelt, Max J., d.b.a. Cardmaster Co., to Max J. Doppelt & Hannah Doppelt Trust, d.b.a. Cardmaster Co., Chicago, Ill. 500,200, ren. 6–18–68. Cl. 37.
Dormeyer Corp.: *See*—
  Webcor, Inc.
Dow Corning Corp., Midland, Mich. 851,225. Cl. 38.
Duriron Co., Inc., The, Dayton, Ohio. 850,827, pub. 4–2–68. Cl. 1.
Duriron Co. Inc., The, Dayton, Ohio. 850,918, pub. 4–2–68. Cl. 21.
Duriron Co., Inc., The, Dayton, Ohio. 851,036, pub. 4–2–68. Cl. 35.
Dutton-Lainson Co.: *See*—
  Jaden, Fred I.
Dydee-Tidy Corp., Little Rock, Ark. 850,947, pub. 4–2–68. Cl. 23.
Dyno Merchandise Corp., New York, N.Y. 850,851, pub. 4–2–68. Cl. 6.
Dysart Chemical Corp., Columbus, Ohio. 730,927, canc. Cl. 52.
Earl of Hardwicke, Ltd., The, New York, N.Y. 851,006–9, pub. 4–2–68. Cl. 30.
Eastman Kodak Co., Rochester, N.Y. 850,818, pub. 4–2–68. Cl. 1.
Eddies Luncheonette & Cigar Store, Inc., New York, N.Y. 730,674, canc. Cl. 17.
Edmont Inc.: *See*—
  Becton, Dickinson and Co.
Educational Equipment Corp., Kent, Ohio. 851,181, pub. 4–2–68. Cl. 50.
Educator Shoe Corp. of America, The, to Educator Shoe Corp., New York, N.Y. 435,204. Am. 7(d). Cl. 39.
Edwards Co., Inc., Norwalk, Conn. 850,976, pub. 4–2–68. Cl. 26.
Edwards Laboratories, Inc., Santa Ana, Calif. 851,131–2, pub. 4–2–68. Cl. 44.
Effanbee Doll Corp., Brooklyn, N.Y. 850,932–3, pub. 4–2–68. Cl. 22.
Ehrman, Sender, Co., Inc., New York, N.Y. 850,993, pub. 4–2–68. Cl. 28.
Eldema Corp., to Genisco Technology Corp., Compton, Calif. 734,081. Am. 7(d). Cl. 21.
Electro Materials Corp., Wilmington, Del., from Electro Materials Corp., San Diego, Calif. 850,903, pub. 4–2–68. Cl. 21.
Electro-Therm, Inc., Laurel, Md. 850,911, pub. 4–2–68. Multiple Class (Classes 21 26, and 34).
Electro-Voice, Inc., Buchanan, Mich. 730,758, canc. Cl. 26.
Elliott, Arvis F., d.b.a. Seal In Plastic Co., Los Angeles, Calif. 730,604, canc. Cl. 1.
Emergency Identification Service, Inc., Long Beach, Calif. 851,201, pub. 4–2–68. Cl. 100.

Endicott Johnson Corp., Endicott, N.Y. 237,778, ren. 6–18–68. Cl. 39.
Enterprise Aluminum Co., The, Massillon, Ohio. 850,882, pub. 4–2–68. Cl. 13.
Esslinger's, Inc., Philadelphia, Pa. 730,899, canc. Cl. 48.
Esterbrook Pen Co., The: *See*—
  Venus Esterbrook Corp.
Ets. C. Berger & Cie, S.A., to C. Berger & Cie, S.A., Marseille, France. 313,402. Am. 7(d). Cl. 49.
Eveready Canvas Corp., New York, N.Y. 500,074, ren. 6–18–68. Cl. 42.
Family Fare, Inc., New York, N.Y. 851,071, pub. 4–2–68. Cl. 38.
Farbenfabriken Bayer Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. 730,683, canc. Cl. 18.
Fashion-Bilt Shoe Co., Pontiac, Ill. 730,836, canc. Cl. 39.
Fashion Tress, Inc., Miami Beach, Fla. 851,109, pub. 4–2–68. Cl. 40.
Faultless Rubber Co., The, Ashland, Ohio. 850,920–2, pub. 4–2–68. Cl. 22.
Federal Cartridge Corp., d.b.a. Hoffman Engineering Co., Minneapolis, Minn. 850,908, pub. 4–2–68. Cl. 21.
Felsenfeld, Jack J., Inc., New York, N.Y. 850,992, pub. 4–2–68. Cl. 28.
Filice & Perrelli Canning Co., Inc., Gilroy, to California Canners and Growers, San Francisco, Calif. 247,766, ren. 6–18–68. Cl. 46.
Fisher Bros. Co., The, to Fisher Foods, Inc., Cleveland, Ohio. 242,263, ren. 6–18–68. Cl. 46.
Fisher Flouring Mills Co., Seattle, Wash. 246,584, ren. 6–18–68. Cl. 46.
Fisher Foods, Inc.: *See*—
  Fisher Bros. Co., The.
Flexitallic Co., Camden, N.J. 851,034–5, pub. 4–2–68. Cl. 35.
Flintkote Co., The, New York, N.Y. 438,254, ren. 6–18–68. Cl. 12.
Flo-Tronics, Inc., Minneapolis, Minn. 730,777, canc. Cl. 26.
Floyd's Trim and Upholstery Shop: *See*—
  Craig, Floyd W.
Fogarty, Anne, Inc.: *See*—
  Saks & Co.
Forbes Labeltape Co., Grand Rapids, Mich. 851,067, pub. 4–2–68. Cl. 38.
Formica Corp., Cincinnati, Ohio. 730,643, canc. Cl. 12.
Foster Grant Co., Inc., Leominster, Mass. 851,107–8, pub. 4–2–68. Cl. 40.
Fraering Brokerage Co., Inc., New Orleans, La. 851,149, pub. 4–2–68. Cl. 46.
Frank, S. M., & Co., Inc., New York, N.Y. 850,861, pub. 4–2–68. Cl. 8.
Furane Plastics Incorp., Los Angeles, Calif. 850,820, pub. 4–2–68. Cl. 1.
Gabb Special Products, Inc., Windsor Locks, Conn. 850,900, pub. 4–2–68. Cl. 19.
Gasnik, Jack, New York, N.Y. 851,076, pub. 4–2–68. Cl. 38.
Gemex Precision Metals, Inc., Union, N.J. 730,783, canc. Cl. 28.
General Atronics Corp., Bala-Cynwyd, Pa. 730,866, canc. Cl. 44.
General Fireproofing Co., The, Youngstown, Ohio. 850,862, pub. 4–2–68. Cl. 8.
General Foods Corp., White Plains, N.Y. 851,158, pub. 4–2–68. Cl. 46.
General Mills, Inc., Mineapolis, Minn. 851,162–9, pub. 4–2–68. Cl. 46.
General Time Corp., Stamford, Conn. 850,990, pub. 4–2–68. Cl. 27.
General Tire & Rubber Co., The, Akron, Ohio. 851,033, pub. 4–2–68. Cl. 35.
Generic Pharmaceutical Corp., Philadelphia, Pa. 850,891, pub. 4–2–68. Multiple Class (Classes 18 and 46).
Georgia-Pacific Corp., Portland, Oreg. 850,834, pub. 4–2–68. Cl. 2.
Giannini Controls Corp., Duarte, Calif. 730,776, canc. Cl. 26.
Gillette Co., The: *See*—
  Gillette Safety Razor Co.
Gillette Safety Razor Co., to The Gillette Co., Boston, Mass. 70,428, ren. 6–18–68. Cl. 29.
Gillette Safety Razor Co., to The Gillette Co., Boston, Mass. 70,758, ren. 6–18–68. Cl. 52.
Givaudan Corp., Clifton, N.J. 850,848, pub. 4–2–68. Cl. 6.
Givren, E. J., Shoe Co., Inc., Rockland, Mass. 502,290, ren. 6–18–68. Cl. 39.
Gland-O-Lac Co., The, to CIBA Corp., Summit, N.J. 832,406. Am. 7(d). Cl. 18.
Glastic Corp., The, Cleveland, Ohio. 850,821, pub. 4–2–68. Cl. 1.
Gleneagles, Inc.: *See*—
  Lamm Bros., Inc.
Globe Rubber Products Corp., d.b.a. Shayne Products Co., Philadelphia, Pa. 850,831, pub. 4–2–68. Multiple Class (Classes 2 and 32).
Globe Rubber Products Corp., Philadelphia, Pa. 850,837, pub. 4–2–68. Cl. 2.
Gold Medal Hair Products, Inc., Inwood, N.Y. 851,106, pub. 4–2–68. Cl. 40.
Goodrich, B. F., Co., The, to The B. F. Goodrich Co., Akron, Ohio. 65,619, ren. 6–18–68. Cl. 44.
Goodrich, B. F., Co., The, Akron, Ohio. 243,551, ren. 6–18–68. Cl. 5.
Goodrich, B. F., Co., The, Akron, Ohio. 439,039, ren. 6–18–68. Cl. 32.
Goodrich, B. F., Co., The, Akron, Ohio. 439,451, ren. 6–18–68. Cl. 44.
Goodrich, B. F., Co., The, Akron, Ohio. 439,681, ren. 6–18–68. Cl. 35.
Goodrich, B. F., Co., The, Akron, Ohio. 439,765, ren. 6–18–68. Cl. 39.
Goodrich, B. F., Co., The, Akron, Ohio. 440,784, ren. 6–18–68. Cl. 44.
Graff, George B., Co., Somerville, Mass. 500,487, ren. 6–18–68. Cl. 37.
Grafics, Inc., Olympia, Wash. 851,074, pub. 4–2–68. Cl. 38.
Grant-Mann Lithographers Ltd., Vancouver, British Columbia, Canada. 851,081, pub. 4–2–68. Cl. 38.
Grav-I-Flo Corp., The, Sturgis, Mich. 850,954, pub. 4–2–68. Cl. 23.
Green Spot Co.: *See*—
  Capitol Food Industries, Inc.
Gretsch, Fred, Co., Inc., The: *See*—
  Gretsch, Fred., Mfg. Co., The.
Gretsch, Fred., Mfg. Co., The, New York, to The Fred Gretsch Co., Inc., Brooklyn, N.Y. 247,623, ren. 6–18–68. Cl. 36.
Griffith-Hope Co., West Allis, Wis. 850,843, pub. 4–2–68. Cl. 2.
H & G Industries, Inc., Belleville, N.J. 851,003, pub. 4–2–68. Cl. 29.
Haida Hide, Incorp., Edmonds, Wash. 850,875, pub. 4–2–68. Cl. 12.
Haley Excelsior Co.: *See*—
  Haley, Jesse C., Jr.
Haley, Jesse C., Jr., d.b.a. Haley Excelsior Co., Hanover, Va. 850,865, pub. 4–2–68. Cl. 10.
Hallmark Cards, Inc., Kansas City, Mo. 851,070, pub. 4–2–68. Cl. 38.
Hallmark Graphics, Inc., Westbury, N.Y. 851,055, pub. 4–2–68. Cl. 37.
Hand, Peter, Brewery Co.: *See*—
  Meister Brau, Inc.
Hanimex Pty. Ltd., New South Wales, Australia. 850,986, pub. 4–2–68. Cl. 26.
Hanszen, Eugene W., d.b.a. Hanszen Plastics Co., Dallas, Tex. 730,609, canc. Cl. 1.
Hanszen Plastics Co.: *See*—
  Hanszen, Eugene W.
Harrower Laboratory, Inc., The, Glendale, Calif., to Warner-Lambert Pharmaceutical Co., Morris Plains, N.J. 500,811, ren. 6–18–68. Cl. 18.
Harshaw Chemical Co.: *See*—
  Kewanee Oil Co.
Hassenfeld Bros. Inc., Pawtucket, R.I. 850,930, pub. 4–2–68. Cl. 22.
Hassenfeld Bros. Inc., Pawtucket, R.I. 850,938, pub. 4–2–68. Cl. 22.
Hawkinson, Paul E., Co., Minneapolis, Minn. 502,432, ren. 6–18–68. Cl. 35.
Heart-O-Gold Corp., Philadelphia, Pa. 851,080, pub. 4–2–68. Cl. 38.
Hedstrom Union Co., Fitchburg, Mass. 730,724, canc. Cl. 22.
Heider Mfg. Co., Carroll, Iowa. 851,182, pub. 4–2–68. Cl. 50.
Heublein, Inc., Hartford, Conn. 850,842, pub. 4–2–68. Cl. 2.
Hewlett-Packard Co.: *See*—
  Sanborn Co.
Heywood-Wakefield Co., Gardner, Mass. 851,016, pub. 4–2–68. Cl. 32.
Hickory & Tweed, Inc., Armonk, N.Y. 851,231. Cl. 39.
Highlander, Ltd., New York, N.Y. 851,090, pub. 4–2–68. Cl. 39.
Hoffman Candy Co.: *See*—
  Hoffman, E. A., Candy Co. Inc.
Hoffman, E. A., Candy Co. Inc., to Hoffman Candy Co., Los Angeles, Calif. 438,104, ren. 6–18–68. Cl. 46.
Hoffman Engineering Co.: *See*—
  Federal Cartridge Corp.
Holderfield and Pinkerton Wholesale Batteries, Inc., Bowling Green, Ky. 850,914, pub. 4–2–68. Cl. 21.
Holland & Holland Ltd., London, England. 850,864, pub. 4–2–68. Cl. 9.
Home Comfort Products Co., Princeville, Ill. 730,789, canc. Cl. 32.
Home Library Press, Inc., to Parents' Magazine Enterprises, Inc., New York, N.Y. 847,879, cor. Cl. 38.
Hooker Chemical Corp., Niagara Falls, N.Y. 850,870, pub. 4–2–68. Cl. 12.
Houdaille Industries, Inc., Buffalo, N.Y. 850,956, pub. 4–2–68. Cl. 23.
Hudson Foam Plastics Corp., Edgewater, N.J. 851,022, pub. 4–2–68. Cl. 32.
Hudson Photographic Industries, Inc., Irvington-On-Hudson, N.Y. 850,979, pub. 4–2–68. Cl. 26.
Hurst-Campbell, Inc., Glenside, Pa. 730,737, canc. Cl. 23.
Ideal Shoe Mfg. Co., Milwaukee, Wis., to Shoe Corp. of America, Columbus, Ohio. 245,212, ren. 6–18–68. Cl. 39.
Imperial Chemical Industries, Ltd., London, England. 437,086, ren. 6–18–68. Cl. 6.
Imperial Chemical Industries Ltd., Millbank, London, England. 850,850, pub. 4–2–68. Cl. 6.
Imperial Chemical Industries Ltd , London, England. 851,123, pub. 4–2–68. Cl. 43.
Imperial Pearl Syndicate, Inc., Chicago, Ill. 500,280, ren. 6–18–68. Cl. 28.
Indian Head Inc., New York, N.Y. 851,122, pub. 4–2–68. Cl. 43.
Industrial Acoustics Co., Inc., Bronx, N.Y. 850,880, pub. 4–2–68. Cl. 12.
Industrial Data Processing, Inc., Bloomfield Hills, Mich. 851,204, pub. 4–2–68. Cl. 101.
Instrument Systems Corp., Huntington, N.Y. 850,910, pub. 4–2–68. Cl. 21.
Interchemical Corp., New York, N.Y. 850,867, pub. 4–2–68. Cl. 11.
International Cellucotton Products Co., Chicago, Ill., to Kimberly-Clark Corp., Neenah, Wis. 502,507, ren. 6–18–68. Cl. 44.

International Equipment Co., Boston, Mass. 730,755, canc. Cl. 26.

International Latex Corp.: *See*—
International Playtex Corp.

International Playtex Corp., from International Latex Corp., Dover, Del. 851,089, pub. 4–2–68. Cl. 39.

International Playtex Corp., Dover, Del. 851,230. Cl. 39.

International Telephone and Telegraph Corp., Chicago, Ill. 780,938, canc. Cl. 100.

Istag AG, Aargau, Switzerland. 851,031, pub. 4–2–68. Cl. 35.

Jaccard Corp., Buffalo, N.Y. 850,959, pub. 4–2–68. Cl. 23.

Jackson Iron & Steel Co., Jackson, Ohio. 500,124, ren. 6–18–68. Cl. 14.

Jackson Iron & Steel Co., Jackson, Ohio. 501,291, ren. 6–18–68. Cl. 14.

Jackson Ready-Mix Concrete, d.b.a. Delta Pine Plywood Co., Beaumont, Miss. 850,879, pub. 4–2–68. Cl. 12.

Jaden, Fred I., d.b.a. F. Jaden Mfg. Co., to Dutton-Lainson Co., Hastings, Nebr. 246,697, ren. 6–18–68. Cl. 2.

Jeffrey Gallon Mfg. Co.: *See*—
Jeffrey Mfg. Co., The.

Jeffrey Mfg. Co., The, to Jeffrey Gallon Mfg. Co., Columbus, Ohio. 438,577, ren. 6–18–68. Cl. 26.

Jens Risom Design, Inc., New York, N.Y. 851,113, pub. 4–2–68. Cl. 42.

Jewels and Tools: *See*—
Leeder, Calvin C.

Johansen Brothers Shoe Co., Inc., to Johansen Brothers Shoe Co., Inc., St. Louis, Mo. 500,583, ren. 6–18–68. Cl. 39.

Johns-Manville Corp., New York, N.Y. 500,533, ren. 6–18–68. Cl. 12.

Johnson & Johnson: *See*—
Chicopee Sales Corp.

Johnson & Johnson, New Brunswick, N.J. 851,133, pub. 4–2–68. Cl. 44.

Johnsons of Hendon Ltd., London, England. 850,977, pub. 4–2–68. Cl. 26.

Jones, Edward J., d.b.a. Jones Mapchart Co., La Jolla, Calif. 851,066, pub. 4–2–68. Cl. 38.

Jones Mapchart Co.: *See*—
Jones, Edward J.

Junior Gallery, Inc., New York, N.Y. 851,112, pub. 4–2–68. Cl. 42.

KNY-Scheerer Corp., New York, N.Y. 851,130, pub. 4–2–68. Cl. 44.

Kellogg, Spencer, and Sons, Inc., Buffalo, N.Y. 730,882–3, canc. Cl. 46.

Kelly-Wheaton Co., Toledo, to Roll Dippers Inc., Maumee, Ohio. 438,485–6, ren. 6–18–68. Cl. 23.

Kepner-Tregoe & Associates, Inc., Princeton, N.J. 851,214, pub. 4–2–68. Cl. 107.

Ketcham Bros.: *See*—
Ketcham, John R.

Ketcham, John R., d.b.a. Ketcham Bros., Washington, D.C. 730,669, canc. Cl. 15.

Keuffel & Esser Co., The, Hoboken, N.J. 68,671, ren. 6–18–68. Cl. 37.

Kewanee Oil Co., d.b.a. Harshaw Chemical Co., Cleveland, Ohio. 850,980, pub. 4–2–68. Cl. 26.

Kimberly-Clark Corp.: *See*—
International Cellucotton Products Co.

Kimberly-Clark Corp., Neenah, Wis. 851,040, pub. 10–15–63. Cl. 37.

Kingmann-White, Inc., Placentia, Calif. 850,985, pub. 4–2–68. Cl. 26.

Kinsey Distilling Corp., Philadelphia, Pa. 501,303, ren. 6–18–68. Cl. 49.

Kligerman Dairies, Inc.: *See*—
S.L.C. Distributors, Inc.

Klingspor, C., G.m.b.H., Naxos-Schmirgelwerke, Haiger Dillkreis, Germany. 730,619, canc. Cl. 4.

Klugmann, Alfred, Inc., New York, N.Y. 850,824–6, pub. 4–2–68. Cl. 1.

Komachiya Honten Co., Ltd., Tokyo, Japan. 851,104, pub. 4–2–68. Cl. 40.

Korkmaster Co., The, Red Bank, N.J., to The British Oxygen Co. Ltd., London, England. 438,188, ren. 6–18–68. Cl. 23.

Kraft Corrugated Containers, Inc., Bayonne, N.J. 850,833, pub. 4–2–68. Cl. 2.

Krause, Chas A., Milling Co., to Krause Milling Co., Milwaukee, Wis. 500,892, ren. 6–18–68. Cl. 5.

Krause, Chas A., Milling Co., to Krause Milling Co., Milwaukee, Wis. 501,192, ren. 6–18–68. Cl. 46.

Krause Milling Co.: *See*—
Krause, Chas A., Milling Co.

Krauss, Edward D., Burbank, Calif. 730,722, canc. Cl. 22.

Kristinus Kommanditgesellschaft, Munich, Germany. 730,-958–9, canc. Cl. 17.

Kruysman, N. L. & E. W., Inc., New York, N.Y. 851,053, pub. 4–2–68. Cl. 37.

Kurfees, J. F., Paint Co., to Krrfees Paint Co., Louisville, Ky. 502,133, ren. 6–18–68. Cl. 16.

Kurfees Paint Co.: *See*—
Kurfees, J. F., Paint Co.

Kwik-Stok Basket Corp., San Mateo, Calif. 850,844, pub. 4–2–68. Cl. 2.

Lake Cove Growers, Inc., Finley, Calif. 439,688, ren. 6–18–68. Cl. 46.

Lakeside Industries, Inc., Minneapolis, Minn. 850,923, pub. 4–2–68. Cl. 22.

Lambert Pharmacal Co., Wilmington, Del., to Warner-Lambert Pharmaceutical Co., Morris Plains, N.J. 239,895, ren. 6–18–68. Cl. 51.

Lambert Pharmacal Co., Wilmington, Del., to Warner-Lambert Pharmaceutical Co., Morris Plains, N.J. 244,976, ren. 6–18–68. Cl. 18.

Lamm Bros., Inc., to Gleneagles, Inc., Baltimore, Md. 501,675, ren. 6–18–68. Cl. 42.

Lanvin-Charles of the Ritz, Inc., New York, N.Y. 851,114, pub. 4–2–68. Cl. 42.

Lappe, Robert J., d.b.a. Nu-Nails, Chicago, Ill. 851,190, pub. 4–2–68. Cl. 51.

Larus & Bro. Co., d.b.a. Radio Station WRVA, Richmond, Va. 851,210, pub. 4–2–68. Cl. 104.

Lawrence, L., Co.: *See*—
Lawrence, Leonard.

Lawrence, Leonard, d.b.a. L. Lawrence Co., Corona, N.Y. 730,844, canc. Cl. 40.

Lear Siegler Inc., Detroit, Mich. 851,014, pub. 4–2–68. Cl. 32.

Lectron Corp. of America, to Ken Cook Co., Milwaukee, Wis. 736,772. Am. 7(d). Cl. 26.

Leeder, Calvin C., d.b.a. Jewels and Tools, New York, N.Y. 730,975, canc. Cl. 50.

Lees, James, and Sons Co., Bridgeport, Pa. 730,863–4, canc. Cl. 42.

Legge, Walter G., Co., Inc., New York, N.Y. 851,198, pub. 4–2–68. Cl. 52.

Lemax, Inc., d.b.a. A–1 Nurses Registry, San Francisco, Calif. 745,232. Am. 7(d). Cl. 101.

Lemax, Inc., d.b.a. A–1 Nurses Registry, San Francisco, Calif. 759,838. Am. 7(d). Cl. 101.

Les Parfums de Dana, Inc., New York, N.Y. 502,695, ren. 6–18–68. Cl. 52.

Liberal Industries, Inc., Liberal, Kans. 730,654, canc. Cl. 13.

Lieberman, Joseph, & Sons, Inc., Philadelphia, Pa. 851,002, pub. 4–2–68. Cl. 29.

Lily-Tulip Cup Corp., New York, N.Y. 850,835, pub. 4–2–68. Cl. 2.

Limoneira Co.: *See*—
Teague-McKevett Co.

Lincoln Electric Co., The, Cleveland, Ohio. 240,429. Am. 7(d). Cl. 21.

Lindy Pen Co. Inc., North Hollywood, Calif. 851,044, pub. 4–2–68. Cl. 37.

Lingner, Karl A., Dresden, Germany, to Odol Chemical Corp., Plainfield, N.J. 70,021, ren. 6–18–68. Cl. 51.

Lip Societe Anonyme d'Horlogerie, Doubs, France. 850,988, pub. 4–2–68. Cl. 27.

Locking Devices, Inc., Pontiac, Mich. 850,999, pub. 4–2–68. Cl. 28.

Logan, Jonathan, Inc., North Bergen, N.J. 791,879, cor. Cl. 39.

Loose Leaf Systems, Pasadena, Calif. 851,060, pub. 4–2–68. Cl. 37.

Losurdo & P.M.J., Inc., Moonachie, N.J. 851,157, pub. 4–2–68. Cl. 46.

Lovable Co., The, Atlanta, Ga. 851,229. Cl. 39.

Lubrication Sciences, Inc., Mountain View, Calif. 851,213, pub. 4–2–68. Cl. 106.

Lund, Theodore J., d.b.a. Penta-Marine Products, San Francisco, Calif. 730,670, canc. Cl. 16.

MCA Inc., Universal City, Calif. 851,062, pub. 4–2–68. Cl. 38.

MD International, Inc.: *See*—
MD Publications, Inc.

MD Publications, Inc., from MD International, Inc., New York, N.Y. 851,077, pub. 4–2–68. Cl. 38.

M & R Food Service Co.: *See*—
Baker, L. K., & Co.

MacGregor-Comarain, Paris, France. 851,032, pub. 4–2–68. Cl. 35.

MacGregor Sport Products, Inc., Cincinnati, Ohio. 730,962, canc. Cl. 22.

Macy, R. H., & Co., Inc., d.b.a. Davison-Paxon Co., New York, N.Y. 851,203, pub. 4–2–68. Cl. 101.

Maidenform, Inc., New York, N.Y. 851,100, pub. 4–2–68. Cl. 39.

Marcus Brothers Textile Corp., New York, N.Y. 502,562, ren. 6–18–68. Cl. 42.

Marglo, Inc., New Britain, Conn. 730,906, canc. Cl. 50.

Marketing-Research Associates, Hopkins, Minn. 851,202, pub. 4–2–68. Cl. 101.

Marson Corp., from Marson Corp., Chelsea, Mass. 851,220. Cl. 12.

Marti, Jose S., d.b.a. Crusellas, and Crusellas & Co., Miami, Fla. 851,253. Cl. 52.

Martin, Marietta, Corp.: *See*—
Standard Lime & Stone Co., The.

Master Furriers Guild of America, Inc., New York, N.Y. 851,-086, pub. 4–2–68. Cl. 39.

Mattel, Inc., Hawthorne, Calif. 850,940–4, pub. 4–2–68. Cl. 22.

Maul Macotta Corp., Detroit, Mich. 850,868, pub. 4–2–68. Cl. 12.

Mayer, Oscar, & Co., Inc., Chicago, Ill. 851,146, pub. 4–2–68. Cl. 46.

McDonald Products Corp., Buffalo, N.Y. 851,019, pub. 4–2–68. Cl. 32.

McGraw-Edison Co., Elgin, Ill. 850,971, pub. 4–2–68. Cl. 24.

McNeil Laboratories, Inc., Fort Washington, Pa. 850,893, pub. 4–2–68. Cl. 18.

McQuay, Inc., Minneapolis, Minn. 851,030, pub. 4–2–68. Cl. 34.

Mead Johnson & Co., Evansville, Ind. 850,896–7, pub. 4–2–68. Cl. 18.

Meat Industry Suppliers, Inc., Northfield, Ill. 730,892, canc. Cl. 46.

Medical Digest, Inc., Northfield, Ill. 851,228. Cl. 38.

Medicol, Inc., Pittsburgh, Pa. 730,794, canc. Cl. 32.

Meister Brau, Inc., from Peter Hand Brewery Co., Chicago, Ill. 851,173, pub. 4–2–68. Cl. 48.

Messenger, Charles, North Hollywood, Calif. 850,917, pub. 4–2–68. Cl. 21.

Michigan Wineries, Inc., Paw Paw, Mich. 851,172, pub. 4–2–68. Cl. 47.

Midnas Industriaktiebolag, Rengsjo, Sweden. 850,873, pub. 4–2–68. Cl. 12.

Mid-West Abrasive Co., Detroit, Mich. 392,532, canc. Cl. 4.

Miller, Lee D., New York, N.Y. 850,975, pub. 4–2–68. Cl. 26.

Minneapolis-Honeywell Regulator Co., Denver, Colo. 730,769, canc. Cl. 26.

Missouri Metal Products, Inc., Hazelwood, Mo. 730,655, canc. Cl. 13.

Mitchellace, Inc., Portsmouth, Ohio. 851,102, pub. 4–2–68. Cl. 40.

Mobelec Societe Anonyme Holding, Luxembourg-Ville, Luxembourg. 850,909, pub. 4–2–68. Multiple Class (Classes 21 and 34).

Monarch Wine Co., Inc., Brooklyn, N.Y. 730,898, canc. Cl. 47.

Monsanto Co., St. Louis, Mo. 850,823, pub. 4–2–68. Multiple Class (Classes 1 and 50).

Monsieur Robaire, Inc., Los Angeles, Calif. 851,249. Cl. 51.

Monterey Jazz Festival, Inc., Monterey, Calif. 851,216, pub. 4–2–68. Cl. 107.

Monumental Life Insurance Co., Baltimore, Md. 730,941, canc. Cl. 102.

Moore Business Forms, Inc., Niagara Falls, N.Y. 851,059, pub. 4–2–68. Cl. 37.

Mother Seigels Syrup Co., The, New York, N.Y., to Smith Kline & French Overseas Co., Philadelphia, Pa. 68,539, ren. 6–18–68. Cl. 18.

Muralo Co., Inc., The, Bayonne, N.J. 241,186, ren. 6–18–68. Cl. 16.

Muter Co., The, Chicago, Ill. 730,714, canc. Cl. 21.

Mutual Shoe Sales Co.: *See*—
Admiral Shoe Corp.

National Chemsearch Corp. of Texas, Dalls, Tex. 730,626, canc. Cl. 6.

National Dairy Products Corp., New York, N.Y. 730,884, canc. Cl. 46.

National Distillers and Chemical Corp., New York, N.Y. 730,-963, canc. Cl. 24.

National Golden Spike Society, The, Corinne, Utah. 851,178, pub. 4–2–68. Cl. 50.

National Gypsum Co., Buffalo, N.Y. 850,876, pub. 4–2–68. Cl. 12.

National Inventors Club, Inc., Indianapolis, Ind. 730,947, canc. Cl. 200.

National Patent Development Corp., New York, N.Y. 851,134, pub. 4–2–68. Cl. 44.

National-Standard Co., Niles, Mich. 501,284, ren. 6–18–68. Cl. 14.

National Starch Co., Jersey City, N.J., and New York, to Corn Products Co., New York, N.Y. 68,523, ren. 6–18–68. Cl. 6.

Nepera Chemical Co., Inc., Nepera Park, N.Y., to Warner-Lambert Pharmaceutical Co., Morris Plains, N.J. 501,673, ren. 6–18–68. Cl. 18.

Newcomer Corp., The, Columbia, Mo. 730,630, canc. Cl. 6.

Newman, Gerde, & Co., Inc., New Orleans, La. 851,154, pub. 4–2–68. Cl. 46.

Nicholas International Ltd., Ontario, Canada. 730,677, canc. Cl. 18.

Nippon Rubber Co., Ltd., Tokyo, Japan. 851,092, pub. 4–2–68. Cl. 39.

Noble and Noble Publishers, Inc., New York, N.Y. 851,085, pub. 4–2–68. Cl. 38.

Nomo Products, Inc., Johnston, R.I. 850,998, pub. 4–2–68. Cl. 28.

Norcross, Inc., New York, N.Y. 851,082, pub. 4–2–68. Cl. 38.

Nord Aero Products, Inc., Farmingdale, N.Y. 850,838, pub. 4–2–68. Cl. 2.

Norris Candy Co.: *See*—
Norris, Inc.

Norris, Inc., d.b.a. Norris Candy Co., Atlanta, Ga. 730,874, canc. Cl. 46.

North Pacific Canners & Packers, Inc., Portland, Oreg. 851,-145, pub. 4–2–68. Cl. 46.

Northwest-Northern Optical Co., Seattle, Wash. 730,771, canc. Cl. 26.

Novadel Process Corp., Buffalo, N.Y., to Wallace & Tiernan, Inc., East Orange, N.J. 242,597, ren. 6–18–68. Cl. 6.

Noxell Corp., Baltimore, Md. 851,193, pub. 4–2–68. Cl. 51.

Nugget Distributors' Cooperative of America, Inc., d.b.a. Nugget Distributors, Inc., Stockton, Calif. 850,859, pub. 4–2–68. Cl. 6.

Nu-Nails: *See*—
Lappe, Robert J.

Nurserytyme Products, Inc., Brooklyn, N.Y. 851,015, pub. 4–2–68. Cl. 32.

Ocean World, Inc., Fort Lauderdale, Fla. 851,215, pub. 4–2–68. Cl. 107.

O'Day Corp., The, Boston, Mass. 730,960, canc. Cl. 19.

Odol Chemical Corp.: *See*—
Lingner, Karl A.

Oggi Products, New York, N.Y. 850,937, pub. 4–2–68. Cl. 22.

Ohio Oil Co., The, Findlay, Ohio. 730,667–8, canc. Cl. 15.

Okamura Mfg. Co., Ltd., Tokyo, Japan. 850,946, pub. 4–2–68. Cl. 23.

Old Boone Distillery Co., Louisville, Ky. 851,175, pub. 4–2–68. Cl. 49.

Old Hickory Distilling Corp., to Continental Distilling Corp., Philadelphia, Pa. 501,302, ren. 6–18–68. Cl. 49.

Omicron Delta Kappa Society, The, Cincinnati, Ohio. 440,004, ren. 6–18–68. Cl. 28.

Oneida Ltd., Oneida, N.Y. 850,953, pub. 4–2–68. Cl. 23.

Ore-Ida Foods, Inc., from Ore-Ida Potato Products, Inc., Ontario, Oreg. 730,972, canc. Cl. 46.

Ore-Ida Foods, Inc., Ontario, Oreg. 851,147, pub. 4–2–68. Cl. 46.

Ore-Ida Potato Products, Inc.: *See*—
Ore-Ida Foods, Inc.

Ortho Diagnostics: *See*—
Ortho Pharmaceutical Corp.

Ortho Pharmaceutical Corp., d.b.a. Ortho Diagnostics, Raritan, N.J. 850,894, pub. 4–2–68. Cl. 18.

Osrow Products Co., Inc., Glen Cove, N.Y. 851,010, pub. 4–2–68. Cl. 31.

Ostby & Barton Co., Warwick, R.I. 850,969, pub. 4–2–68. Cl. 23.

Overesch & Co., Fairfield, Ohio. 730,787, canc. Cl. 32.

Owens-Illinois Glass Co., Toledo, Ohio. 730,950, canc. Cl. 2.

Owens-Illinois, Inc., Toledo, Ohio. 850,836, pub. 4–2–68. Cl. 2.

Pacific Alaska Fisheries, Inc.: *See*—
Pacific American Fisheries.

Pacific American Fisheries, Chicago, Ill., and South Bellingham, Wash., to Pacific Alaska Fisheries, Inc., Seattle, Wash. 247,689, ren. 6–18–68. Cl. 46.

Pacific Clay Products, Los Angeles, Calif. 850,869, pub. 4–2–68. Cl. 12.

Parke Davis & Co., to Parke, Davis & Co., Detroit, Mich. 76,722. Am. 7(d). Cl. 18.

Paxton, John J., Middlebush, N.J. 730,908, canc. Cl. 50.

Paymaster Farms: *See*—
Anderson, Clayton & Co.

Paymaster Feed Mills: *See*—
Anderson, Clayton & Co.

Peg-A-Letter Co., Portland, Oreg. 730,907, canc. Cl. 50.

Penny, John D., Redlands, Calif. 730,851, canc. Cl. 41.

Penta-Marine Products: *See*—
Lund, Theodore J.

Perma Sharp Mfg. Corp., New York, N.Y. 850,949, pub. 4–2–68. Cl. 23.

Pfizer, Chas., & Co., Inc.: *See*—
Coty, Inc.

Phoenix Closet Accessories, Inc., Newark, N.J. 850,841, pub. 4–2–68. Cl. 2.

Pittsburgh Plate Glass Co., Pittsburgh, Pa. 851,004, pub. 4–2–68. Cl. 29.

Placo Products Co., Gardena, Calif. 850,931, pub. 4–2–68. Cl. 22.

Pollak, Henry, Inc., to Pollak Industrial Corp., New York, N.Y. 246,341, ren. 6–18–68. Cl. 39.

Pollak Industrial Corp.: *See*—
Pollak, Henry, Inc.

Poppin Products: *See*—
Terry, William C.

Porter, Elias H., d.b.a. Profitmeters Systems, Santa Monica, Calif. 851,061, pub. 4–2–68. Cl. 38.

Pratt Mfg. Corp., Milwaukee, Wis. 850,960, pub. 4–2–68. Cl. 23.

Product Newscards Co., Chicago, Ill. 851,226–7. Cl. 38.

Products of Asia, Inc., New York, N.Y. 730,854, canc. Cl. 42.

Profitmeters Systems: *See*—
Porter, Elias H.

Provident Pharmaceuticals, Inc., Chattanooga, Tenn. 730,681, canc. Cl. 18.

Przedsiegiorstwo Handlu Zagrinicznego "Agros," Warsaw, Poland. 851,174, pub. 4–2–68. Cl. 49.

Quick-Set, Inc., Skokie, Ill. 730,767, canc. Cl. 26.

Quigley, Mark F., Boston, Mass. 730,711, canc. Cl. 21.

Radio Shack Corp.: *See*—
Tandy Corp.

Radio Station WRVA: *See*—
Larus & Brother Co.

Radio Steel & Mfg. Co. Chicago, Ill. 730,727–8, canc. Cl. 22.

Rainbow Crafts, Inc., Cincinnati, Ohio. 850,928, pub. 4–2–68.

Ramel Products: *See*—
Benet, Harry.

Random House, Inc., from Beginner Books, Inc., New York, N.Y. 730,817, canc. Cl. 38.

Raybestos-Manhattan, Inc., Manheim, Pa. 502,173, ren. 6–18–68. Cl. 35.

Recordplate Co. Inc., Pasadena, Calif. 851,058, pub. 4–2–68. Cl. 37.

Reimers Electra Steam, Inc.: *See*—
Reimers Electric Appliance Co., Inc.

Reimers Electric Appliance Co., Inc., to Reimers Electra Steam, Inc., Clearbrook, Va. 510,638, new cert. Cl. 21.

Remco Industries, Inc., Newark, N.J. 730,721, canc. Cl. 22.

Research Products Corp., Chicago, Ill. 851,045, pub. 4–2–68. Cl. 37.

Revlon, Inc., New York, N.Y. 851,238–44. Cl. 51.

Revlon, Inc., New York, N.Y. 851,248. Cl. 51.

Rexall Drug and Chemical Co., d.b.a. Seamless Rubber Co., Los Angeles, Calif. 850,935, pub. 4–2–68. Cl. 22.

Rexford Paper Co., Milwaukee, Wis. 851,218. Cl. 5.

Rhodia Inc., New York, N.Y. 851,097, pub. 4–2–68. Cl. 39.

Riegel Paper Corp., New York, N.Y. 850,832, pub. 4–2–68. Cl. 2.

Rigidized Metals Corp., Buffalo, N.Y. 850,883, pub. 4–2–68. Cl. 14.

Robertshaw Controls Co., Richmond, Va. 850,912, pub. 4–2–68. Cl. 21.

Roberstshaw-Fulton Controls Co., Richmond, Va. 730,766, canc. Cl. 26.

Robin, Don, Products Co., College Park, Ga. 730,723, canc. Cl. 22.

Rohm & Haas Co., Philadelphia, Pa. 438,471, ren. 6–18–68. Cl. 16.

Roll Dippers Inc.: *See*—
Kelly-Wheaton Co.

Rolls-Royce Ltd., Derby, England. 850,902, pub. 4–2–68. Cl. 19.

Ron Conga Distilleries, Inc., to Continental Distilling Corp., Philadelphia, Pa. 501,308, ren. 6–18–68. Cl. 49.

- Roselon Yarns, Inc., Philadelphia, Pa. 851,121, pub. 4–2–68. Cl. 43.
- Roskin, I., Co., Inc., New York, N.Y. 730,964, canc. Cl. 28.
- Ross, Milton, Metals Co., Inc., Southampton, Pa. 850,860, pub. 4–2–68. Cl. 7.
- Rothmans of Pall Mall Ltd., Zurich, Switzerland. 850,889, pub. 4–2–68. Cl. 17.
- Rotron Mfg. Co., Inc., Woodstock, N.Y. 851,028, pub. 4–2–68. Cl. 34.
- Royal Business Forms, Inc., Nashua, N.H. 851,049, pub. 4–2–68. Cl. 37.
- Ruffino, R.: *See—*
  - Societa per Azioni Chianti Ruffino Esportazione Vinicola Toscana.
- Ryan, James E., d.b.a. Servo-Vac, Washington, D.C. 730,747, canc. Cl. 23.
- S.C.S. Club, Inc., d.b.a. American Nutrition Co., Chicago, Ill. 730,888, canc. Cl. 46.
- S.E.M. Food Products, Inc., Dallas, Tex. 851,232. Cl. 46.
- S.L.C. Distributors, Inc., from Kligerman Dairies, Inc., Atlantic City, N.J. 851,236. Cl. 46.
- Safetee Glass Co., Philadelphia, Pa. 730,796, canc. Cl. 33.
- Saks & Co., to Anne Fogarty, Inc., New York, N.Y. 713,232, new cert. Cl. 39.
- San Antouio Foreign Trading Co., San Antonio, Tex. 851,237. Cl. 46.
- San Marino Electronic Corp., El Segundo, Calif. 850,978, pub. 4–2–68. Cl. 26.
- Sanborn Co., Cambridge, Mass., to Hewlett-Packard Co., Palo Alto, Calif. 438,747, ren. 6–18–68. Cl. 26.
- Sanders, S. E., Co., Inc., Asheville, N.C. 730,818, canc. Cl. 38.
- Sandtner-Valentine Chemical Co., Seattle, Wash. 850,857, pub. 4–2–68. Cl. 6.
- Saperstein, A. M., to Abe Saperstein Productions, Inc., Chicago, Ill. 542,473–4, new cert. Cl. 107.
- Saperstein, A. M., to Abe Saperstein Productions, Inc., Chicago, Ill. 579,858, new cert. Cl. 107.
- Saperstein, A. M., d.b.a. Abe Saperstein Enterprises, to Abe Saperstein Productions, Inc., Chicago, Ill. 662,372, new cert. Cl. 107.
- Saperstein, Abe, Productions, Inc.: *See—*
  - Saperstein, A. M.
- Sayegh, L. J., & Co.: *See—*
  - Sayegh, Lawrence J.
- Sayegh, Lawrence J., d.b.a. L. J. Sayegh & Co., Cumberland, R.I. 850,925, pub. 4–2–68. Cl. 22.
- Schenker, D., & Son, Inc., New York, N.Y. 851,001, pub. 4–2–68. Cl. 28.
- Schieffelin & Co., New York, N.Y. 730,822, canc. Cl. 38.
- Schmidt, Alfred W., Seville, Ohio. 850,592, pub. 4–2–68. Cl. 23.
- Schnadig Corp., Chicago, Ill. 851,017, pub. 4–2–68. Cl. 32.
- Scholastic Magazines, Inc., New York, N.Y. 851,078, pub. 4–2–68. Cl. 38.
- Scientific Advances, Inc., Columbus, Ohio. 850,972, pub. 4–2–68. Cl. 26.
- Scott, Alice, and Robert Scott, West Los Angeles, Calif. 851,064, pub. 4–2–68. Cl. 38.
- Scott Paper Co., Delaware County, Pa. 850,840, pub. 4–2–68. Cl. 2.
- Scovill Mfg. Co., Waterbury, Conn. 851,105, pub. 4–2–68. Cl. 40.
- Seal In Plastic Co.: *See—*
  - Elliott, Arvis F.
- Sealright Co., Inc., Fulton, N.Y. 851,217. Cl. 2.
- Seamless Rubber Co.: *See—*
  - Rexall Drug and Chemical Co.
- Searle, G. D., & Co., to G. D. Searle & Co., Chicago, Ill. 436,763, ren. 6–18–68. Cl. 18.
- Searle, G. D., & Co., to G. D. Searle & Co., Chicago, Ill. 437,660, ren. 6–18–68. Cl. 18.
- Servo-Vac: *See—*
  - Ryan, James E.
- Sexauer, J. A., Mfg. Co., Inc., White Plains, N.Y. 246,286, ren. 6–18–68. Cl. 13.
- Shayne Products Co.: *See—*
  - Globe Rubber Products Corp.
- Sheffield Watch, Inc.: *See—*
  - Sheffield Watch of New York, Inc.
- Sheffield Watch of New York, Inc., from Sheffield Watch, Inc., New York, N.Y. 850,989, pub. 4–2–68. Cl. 27.
- Shoe Corp. of America: *See—*
  - Ideal Shoe Mfg. Co.
- Shrier Enterprises, Inc., Los Angeles, Calif. 851,180, pub. 4–2–68. Cl. 50.
- Sigma Tau, Lincoln, Nebr. 242,487, ren. 6–18–68. Cl. 38.
- Simaplast, Inc., Yonkers, N.Y. 851,126, pub. 4–2–68. Cl. 44.
- Simon & Schuster, Inc., New York, N.Y. 851,075, pub. 4–2–68. Cl. 38.
- Sinclair Mfg. Co., The, Toledo, Ohio. 851,199, pub. 4–2–68. Cl. 52.
- Smith Kline & French Overseas Co.: *See—*
  - Mother Seigels Syrup Co., The.
- Smithfield Packing Co., Inc., The, Smithfield, Va. 851,155, pub. 4–2–68. Cl. 46.
- Società Ceramica Italiana Richard-Ginori S.p.A., Milan, Italy. 851,005, pub. 4–2–68. Cl. 30.
- Societa per Azioni Chianti Ruffino Esportazione Vinicola Toscana, d.b.a. Ruffino, Brescia, Italy. 851,171, pub. 4–2–68. Cl. 47.
- Societe Anonyme des Etablissements Gringoire, to Societe Anonyme Nouvelle des Etablissements Gringoire, Pithiviers (Loiret), France. 438,029, ren. 6–18–68. Cl. 46.
- Societe Anonyme Nouvelle des Etablissements Gringoire: *See—*
  - Societe Anonyme des Etablissements Gringoire.
- Societe Anonyme: Plastugil, Paris, France. 850,819, pub. 4–2–68. Cl. 1.
- Societe Industrielle et Commerciale des Automobiles Peugeot, Paris, France. 850,899, pub. 4–2–68. Cl. 19.
- Solomon Glass Corp., Cambridge, Mass. 851,023, pub. 4–2–68. Cl. 33.
- Southern Railway Co., Richmond, Va. 851,212, pub. 4–2–68. Cl. 105.
- Spartans Industries, Inc., New York, N.Y. 851,143, pub. 4–2–68. Cl. 46.
- Squibb, E. R., & Sons, Inc., New York, N.Y. 850,895, pub. 4–2–68. Cl. 18.
- Standard Industries, Inc., Minneapolis, Minn. 730,709, canc. Cl. 21.
- Standard Lime & Stone Co., The, Martinsburg, W. Va., and Baltimore, Md., to Martin-Marietta Corp., New York, N.Y. 242,350, ren. 6–18–68. Cl. 12.
- Standard Romper Co., Inc., New York, N.Y. 501,815, ren. 6–18–68. Cl. 39.
- Standard Romper Co., Inc., New York, N.Y. 502,089, ren. 6–18–68. Cl. 39.
- Standard Sanitary Mfg. Co., Pittsburgh, Pa., to American Standard Inc., New York, N.Y. 241,555, ren. 6–18–68. Cl. 13.
- Star Drilling Machine Co., The, to Koehring Co., Milwaukee, Wis. 560,441. Am. 7(d). Cl. 23.
- Sta-Rite Industries, Inc., Delavan, Wis. 850,830, pub. 4–2–68. Cl. 2.
- Stat Corp., Needham, Mass. 730,869, canc. Cl. 44.
- Styraplane Co., Inglewood, Calif. 850,924, pub. 4–2–68. Cl. 22.
- Stendhal, Paris, France. 851,191–2, pub. 4–2–68. Cl. 51.
- Stevens, J. P., & Co., Inc., New York, N.Y. 851,111, pub. 4–2–68. Cl. 42.
- Stevens, J. P., & Co., Inc., New York, N.Y. 851,119, pub. 4–2–68. Cl. 42.
- Stiff-Steel Co.: *See—*
  - Dargan, Lawrence C.
- Stix, Baer & Fuller Co., St. Louis, Mo., to Associated Dry Goods Corp., New York, N.Y. 501,798–9, ren. 6–18–68. Cl. 39.
- Streamline Trailer Co. of Indiana, Inc., The, Thorntown, Ind. 809,709, cor. Cl. 19.
- Summit International Corp., New York, N.Y. 850,907, pub. 4–2–68. Cl. 21.
- Sun Chemical Corp., New York, N.Y. 850,866, pub. 4–2–68. Cl. 11.
- Super Sagless Spring Corp., Bayonne, N.J. 730,656, canc. Cl. 13.
- Superior Mattress Corp., Evansville, Ind. 851,223. Cl. 32.
- Sweetheart Plastics, Inc., Wilmington, Mass. 850,828–9, pub. 4–2–68. Cl. 2.
- Sweetheart Plastics, Inc., Wilmington, Mass. 850,839, pub. 4–2–68. Cl. 2.
- Synthetics Finishing Corp., Philadelphia, Pa. 730,946, canc. Cl. 106.
- T.H.E. Corp., Richmond, Va. 730,797, canc. Cl. 33.
- T.P. Laboratories, Inc., Westville, Ind. 851,127–8, pub. 4–2–68. Cl. 44.
- T and W Products Ltd., Belleville, Ontario, Canada. 730,928, canc. Cl. 52.
- Taiyo Steel Co., Ltd., Tokyo, Japan. 850,884, pub. 4–2–68. Cl. 14.
- Tandy Corp., Fort Worth, Tex. from Radio Shack Corp., Boston, Mass. 851,206, pub. 4–2–68. Cl. 101.
- Teague-McKevett Co., to Limoneira Co., Santa Paula, Calif. 247,019, ren. 6–18–68. Cl. 46.
- Telrex, Inc., Asbury Park, N.J. 730,961, canc. Cl. 21.
- Temco, Inc., Nashville, Tenn. 730,752, canc. Cl. 24.
- Tenneco Chemicals, Inc., New York, N.Y. 850,858, pub. 4–2–68. Cl. 6.
- Tensor Corp., Brooklyn, N.Y. 850,916, pub. 4–2–68. Cl. 21.
- Terry, William C., d.b.a. Poppin Products, St. Petersburg, Fla. 730,887, canc. Cl. 46.
- Tessco, Inc., d.b.a. Bud Type Cleaner Co., Timonium, Md. 851,252. Cl. 52.
- Texize Chemicals, Inc., Greenville, S.C. 730,624, canc. Cl. 6.
- Textilfabrikantforeningen, Copenhagen, Denmark. 730,948, canc. Cl. A.
- Textron Inc., Providence, R.I. 850,994, pub. 4–2–68. Cl. 28.
- Thomas Candy Corp., Lufkin, Tex. 851,160, pub. 4–2–68. Cl. 46.
- Thomas, Chester A., Albuquerque, N. Mex. 851,083, pub. 4–2–68. Cl. 38.
- Tico-Toys, Inc., Pawtucket, R.I. 730,731, canc. Cl. 22.
- Tobacco Guidance Center, Inc., New York, N.Y. 730,680, canc. Cl. 18.
- Toni Co., The, to The Gillette Co., Boston, Mass. 502,815. Am. 7(d). Cl. 50.
- Tooling Aids, Inc., Salem, Ohio. 730,732, canc. Cl. 23.
- Tressa Watches Co., Ltd., Bienne, Switzerland. 850,987, pub. 4–2–68. Cl. 27.
- Tri-Valley Packing Assn., San Francisco, Calif. 730,889, canc. Cl. 46.
- Tri-Wall Containers, Inc., Plainview, N.Y. 851,056, pub. 4–2–68. Cl. 37.
- True Form Foundations, Inc.: *See—*
  - Corsetry, Inc.
- Tuckersharpe Pen Co., Inc., Richmond, Va. 851,048, pub. 4–2–68. Cl. 37.
- Turf Cutters, Inc., Youngstown, Ohio. 850,970, pub. 4–2–68. Cl. 23.
- U.S.A.P. Utensileria Speciale Alta Precisione Societa per Azioni, Como, Italy. 850,968, pub. 4–2–68. Cl. 23.
- UTA, Inc., Wichita, Kans. 851,063, pub. 4–2–68. Cl. 38.
- Ungarische Gummiwaarenfabriks Actiengesellschaft, Budapest, Hungary, to The Anchor Packing Co., Philadelphia, Pa. 68,839, ren. 6–18–68. Cl. 35.

- Union Carbide Corp., New York, N.Y. 850,996, pub. 4–2–68. Cl. 28.
- Union Carbide Corp., New York, N.Y. 851,050, pub. 4–2–68. Cl. 37.
- Union Fork and Hoe Co., The, Columbus, Ohio. 850,961–6, pub. 4–2–68. Cl. 23.
- United Feature Syndicate, Inc., New York, N.Y. 851,065, pub. 4–2–68. Cl. 38.
- United States Rust Control Corp., Miami, Fla. 850,887, pub. 4–2–68. Cl. 16.
- United Steel & Wire Co., Battle Creek, Mich. 730,951, canc. Cl. 2.
- Unitek Corp., Monrovia, Calif. 851,129, pub. 4–2–68. Cl. 44.
- Universal Cigar Corp., New York, N.Y., from The Antonio Co. of Tampa, Tampa, Fla. 850,888, pub. 4–2–68. Cl. 17.
- Universal Mfg. Co., Inc., Bossier City, La. 730,725, canc. Cl. 22.
- Upco Co., The, Cleveland, Ohio. 850,852, pub. 4–2–68. Cl. 6.
- VWR United Corp., Seattle, Wash. 850,853–4, pub. 4–2–68. Cl. 6.
- Vanity Fair Mills, Inc., Reading, Pa. 502,941, ren. 6–18–68. Cl. 39.
- Vega Precision Lab., Inc., Vienna, Va. 850,981–3, pub. 4–2–68. Cl. 26.
- Vendmobile Corp., The, Hempstead, N.Y. 730,699, canc. Cl. 19.
- Vendo Co., The, Kansas City, Mo. 730,939, canc. Cl. 100.
- Venus Esterbrook Corp., from The Esterbrook Pen Co., Cherry Hill, N.J. 851,051, pub. 3–19–68. Cl. 37.
- Visual Co.: *See—*
  - D'Angelo, Nicholas A.
- Vita Plus Corp., Madison, Wis. 850,892, pub. 4–2–68. Cl. 18.
- Wallace & Tiernan, Inc.: *See—*
  - Novadel Process Corp.
- Ward Foods, Inc., New York, N.Y., from Carnation Co., Los Angeles, Calif. 851,140, pub. 4–2–68. Cl. 46.
- Warner-Lambert Pharmaceutical Co.: *See—*
  - Lambert Pharmacal Co.
  - Harrower Laboratory, Inc., The.
  - Nepera Chemical Co., Inc.
- Washington Forge, Inc., Englishtown, N.J. 850,945, pub. 4–2–68. Cl. 23.
- Wausau Paper Mills Co., Brokaw, Wis. 851,069, pub. 4–2–68. Cl. 38.
- Wavetek, San Diego, Calif. 850,973, pub. 4–2–68. Cl. 26.
- Weather Engineering Corp. of Canada Ltd., Dorval, Quebec, Canada. 850,863, pub. 4–2–68. Cl. 9.
- Webcor, Inc., from Dormeyer Corp., Chicago, Ill. 730,706, canc. Cl. 21.
- Weber, Arnold J., New York, N.Y. 851,046, pub. 4–2–68. Multiple Class (Classes 37 and 39).
- Weiss Litho Corp., New York, N.Y. 851,207, pub. 4–2–68. Cl. 101.
- Wellendorff, Alex, Dr.: *See—*
  - Wellendorff, Alex and Hans Peter Wellendorff.
- Wellendorff, Alex and Hans Peter Wellendorff, d.b.a. Dr. Alex Wellendorff, Pforzheim, Germany. 850,991, pub. 4–2–68. Cl. 28.
- Wessanen's Koninklijke Fabrieken N.V., Wormerveer, Netherlands. 851,150, pub. 4–2–68. Cl. 46.
- Western Wholesale Sporting Goods Co.: *See—*
  - Cook's Sporting Goods.
- Weyerhaeuser Co., Tacoma, Wash. 850,881, pub. 4–2–68. Cl. 12.
- Wheeler Mfg. Corp., Ashtabula, Ohio. 850,948, pub. 4–2–68. Cl. 23.
- White Stag Mfg. Co., Portland, Oreg. 851,101, pub. 4–2–68. Cl. 39.
- White System Corp., Metairie, La. 851,208, pub. 4–2–68. Cl. 102.
- Williams Brothers Co., Tulsa, Okla. 851,200, pub. 4–2–68. Multiple Class (Classes 100 and 103).
- Wilson Sporting Goods Co., from Wilson Sporting Goods Co., River Grove, Ill. 850,926–7, pub. 4–2–68. Cl. 22.
- Winn-Dixie Stores, Inc., Jacksonville, Fla. 851,148, pub. 4–2–68. Cl. 46.
- Wolf, Jacques, & Co., Clifton, N.J., to Diamond Shamrock Corp., Cleveland, Ohio. 436,886, ren. 6–18–68. Cl. 6.
- Wolf, John, Textiles, Inc., New York, N.Y. 730,970, canc. Cl. 42.
- Wood, C. W., Mfg. Inc.: *See—*
  - Wood, Robert C.
- Wood, John, Co., East Orange, N.J. 850,951, pub. 4–2–68. Multiple Class (Classes 23 and 26).
- Wood, Robert C., d.b.a. C. W. Wood Mfg. Inc., Cincinnati, Ohio. 730,698, canc. Cl. 19.
- Woods Industries, Inc., d.b.a. Corp King Co., and Corp King Chemical, Yakima, Wash. 851,219. Cl. 6.
- Worthington Corp.: *See—*
  - Worthington-Gamon Meter Co.
- Worthington-Gamon Meter Co., Newark, N.J., to Worthington Corp., Harrison, N.J. 502,456, ren. 6–18–68. Cl. 26.
- Wrage, John, Employment Service, Inc., Madison, Wis. 851,205, pub. 4–2–68. Cl. 101.
- Yamano Sangyo Co., Ltd., Osaka, Japan. 851,179, pub. 4–2–68. Cl. 50.
- Yardley & Co. Ltd., London, England. 730,923, canc. Cl. 51.
- Yardley of London, Inc., Totowa, N.J. 851,187, pub. 4–2–68. Cl. 51.
- York Stone & Supply Co., York, Pa. 850,877, pub. 4–2–68. Cl. 12.

U.S. GOVERNMENT PRINTING OFFICE: O—1968

U.S. DEPARTMENT OF COMMERCE
OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE
June 25, 1968 Volume 851 Number 4

PATENTS

NOTICES

Board of Appeals Decisions Rendered in the Month of May 1968

Examiner affirmed	156
Examiner affirmed in part	13
Examiner reversed	49
Total	218

Non-Elected Claims

In the interest of expediting the prosecution of pending applications, the following change in procedure is made. When preparing a final action in an application where there has been a traversal of a requirement for restriction or election of species, the Examiner should indicate in his action that a complete response must include cancellation of the non-elected claims or other appropriate action (Rule 144).

In the above situations where a response to the final action has otherwise placed the application in condition for allowance, the failure to take appropriate action with respect to the non-elected claims will be construed as authorization to cancel these claims by Examiner's Amendment and pass the case to issue after the expiration of the statutory period.

RICHARD A. WAHL,
May 24, 1968 *Assistant Commissioner.*

Trial Multiple Dependent Claim Practice

For the trial period running from July 1, 1968, through December 31, 1968, all applications and amendments to applications filed in the Patent Office will be permitted to include multiple dependent claims which refer back to any of the preceding claims in the alternative whether independent or dependent. In this manner a claim may have a single number but would effectively be considered and treated as a plurality of claims. Entry into this program will require (1) the filing of a written request in which the applicant agrees to abide by the conditions of the program, and (2) the filing of appropriate fees and a showing of the fee calculation. Although the trial period terminates December 31, 1968, the prosecution of all applications placed in this program will continue under the program guidelines.

A claim dependent upon any of a plurality of preceding claims will be considered in acceptable form and entered provided it is otherwise acceptable and does not (1) cross statutory classes with any of its parent claims, or (2) depend from any other multiple dependent claim, or (3) refer back to preceding claims in the conjunctive rather than the disjunctive form (e.g., "The tool as defined in *any one* of claims 1, 2, and 4 . . ." is acceptable, but "The tool as defined in claims 1 *and* 2 . . ." is not acceptable. Likewise, "The tool as defined in claims 1, 2, *or* 4 . . ." is acceptable, whereas "The tool as defined in claims 1, 2 *and/or* 4 . . ." is not acceptable). Should any dependent claim include a claim association that violates any of the above prohibitions the claim will be rejected as indefinite for failure to comply with 35 U.S.C. 112 and will not be further treated with regard to any other claim association. Also, multiple dependent claims will not be considered for entry after final rejection. Further, during this trial period, for the applications involved in this program the total numbered claims may not exceed ten. Non-compliance with this condition will result in applicant being given one month to reduce the total numbered claims to ten. In newly filed cases, the failure to comply within the one month period will result in loss of filing date. In all other cases the entire amendment will not be entered in the absence of compliance with this requirement.

It is suggested that the claims be arranged in order of narrowing scope whereby the first claim presented is the broadest. Claims dependent upon the broad claim should come next, followed by claims which are dependent upon any of the plurality of preceding claims.

Practice and Rejections

When acting on a multiple dependent claim, the Examiner will consider the patentability of the various claim associations encompassed by said claim and apply any pertinent prior art in the usual manner. Each of these associations should be compared with the prior art, exactly as if it were presented as an independent claim. If a claim having multiple dependency should include both patentable and unpatentable claim associations, the Examiner will identify each of the patentable claim associations and identify and specifically reject each of the unpatentable claim associations. However, mere failure to reject a claim association does not give rise to a presumption of allowability.

For fee purposes every claim which refers to any of the preceding claims will be considered effectively as a dependent claim for each association of claims that it represents, thereby effectively increasing the number of claims in the case. Therefore, in these cases the additional fees required for claims in excess of ten will be two dollars ($2.00) times the total effective number of claims in excess of ten. This fee is based on the fact that such a claim is, in substance and so far as the work of examination is concerned, equivalent to a number of dependent claims each based on a single preceding claim.

In applications not under this program but having multiple dependent claims, it will be assumed that applicant intends these claims as effectively only a single claim. Accordingly, such claims will be considered alternative and therefore indefinite under 35 U.S.C. 112.

Rule 75(c) is hereby suspended for the duration of the trial period in those cases presenting multiple dependent claims under this program insofar as conflict exists between the requisites of the rule and the proposed practice.

RICHARD A. WAHL,
June 4, 1968. *Assistant Commissioner.*

New Applications Received During April 1968

Patents	8060
Designs	494
Plant Patents	6
Reissues	34
Total	8594

Issue—June 25, 1968

Patents	1000	No. 3,389,405 to No. 3,390, 404, incl.
Designs	53	No. 211,503 to No. 211,555, incl.
Reissues	8	No. 26,410 to No. 26,417, incl.
Total	1061	

Patents Available for Licensing or Sale

2,783,579. FISHING LURE. Ellen M. Casper, Keasey Route, Vernonia, Oreg., 97064.

3,204,906. STABILIZED FOUR LEGGED TABLE. Robert Henderson, 40 Mohawk Road, Short Hills, N.J., 07078.

3,369,694. CONTAINER WITH LID CLOSURE. Alfons Mauser et al., Cologne, Germany. Correspondence to: Michael S. Striker, 360 Lexington Ave., New York, N.Y., 10017.

3,366,318. CENTRIFUGE FOR CONTINUOUSLY SEPARATING A LUBRICATING LIQUID FROM METAL SHAVINGS OR THE LIKE. Carl Richard Steimel, Hennef, Germany. Correspondence to: Michael S. Striker, 360 Lexington Ave., New York, N.Y., 10017.

3,375,019. WHEEL DEVICE FOR MOVING PICNIC TABLES. Patrick F. O'Day, P.O. Box 967, Bridgeport, Wash., 98813.

3,378,154. WHEEL JACK AND CARRIER. C. K. Mousel, Edison, Nebr., 68936.

3,379,278. MUFFLER FOR PNEUMATICALLY POWERED TOOLS. Carl Skowron, M.C.1, Damascus Road, Salem, Ohio, 44460.

3,381,883. SANI-SEAL. Claud H. Harris, 9425 Folsom Blvd., Sacramento, Calif., 95826.

3,384,906. FLUSH VALVE ATTACHMENT. William L. Hamilton, 9365 Euclid Chardon Road, Kirtland, Ohio, 44094.

The Radio Corporation of America offers to grant nonexclusive licenses on reasonable terms and conditions under the 16 patents.

Inquiries respecting licenses should be addressed to: Radio Corporation of America, Staff Vice President, Domestic Licensing, 30 Rockefeller Plaza, New York, N.Y., 10020.

3,376,423. LIGHT RESPONSIVE CIRCUIT WHICH PREVENTS PHOTOSENSITIVE DEVICE SATURATION.

3,376,434. PULSE DISTRIBUTION AMPLIFIER.

3,376,435. SYNCHRONIZING CIRCUIT EMPLOYING PLURAL BISTABLE-ELEMENTS FOR PRODUCING LOW FREQUENCY OUTPUT IN SYNCHRONISM WITH LOW AND HIGH FREQUENCY INPUTS.

3,376,478. VOLTAGE REGULATED POWER SUPPLY INCLUDING RAMP VOLTAGE STARTING MEANS AND OVER-CURRENT PROTECTIVE MEANS.

3,376,572. ELECTROACOUSTIC WAVE SHAPING DEVICE.

3,377,512. UNITARY BEAM CONVERGENCE MAGNET STRUCTURE AND CONTROL APPARATUS.

3,378,646. CONTROL SYSTEM FOR HELICAL SCAN RECORDER.

3,378,723. FAST WAVE TRANSMISSION LINE COUPLED TO A PLASMA.

3,377,426. AMPLITUDE LIMITING SIGNAL TRANSLATING CIRCUIT UTILIZING A VOLTAGE DEPENDENT RESISTOR IN THE OUTPUT CIRCUIT.

3,378,783. OPTIMIZED DIGITAL AMPLIFIER UTILIZING INSULATED-GATE FIELD-EFFECT TRANSISTORS.

3,378,843. MONOPULSE TRACKING RADAR SYSTEM CAPABLE OF LOCATING A PLURALITY OF UNRESOLVED TARGETS.

3,379,924. TELEVISION DEFLECTION CIRCUITS.

3,380,473. GAS LEAK VALVE DEVICE.

3,380,926. METHOD FOR PREPARING A EUROPIUM-ACTIVATED YTTRIUM VANADATE PHOSPHOR.

3,381,183. HIGH POWER MULTI-EMITTER TRANSISTOR.

3,381,291. DISPLAY MODULE HAVING ELECTROMAGNETIC COIL SENSING OF ARMATURE POSITION.

General Electric Company is prepared to grant nonexclusive licenses under the following 20 patents upon reasonable terms to domestic manufacturers.

Applications for license under the following 7 patents may be addressed to: General Electric Company, Power Distribution Division, 100 Woodlawn Ave., Pittsfield, Mass., 01201, Attn. Division Patent Attorney.

2,721,236. MECHANICAL INTERLOCK.

2,983,459. METHOD AND APPARATUS FOR WINDING COILS OF WEB MATERIAL.

3,353,142. AUXILIARY TERMINAL FOR METER SOCKETS.

3,365,655. VOLTAGE REGULATORS HAVING VERNIER VOLTAGE CONTROL.

3,366,761. LOADBREAK FOR OPEN TYPE CUTOUTS.

3,366,822. CURRENT REVERSAL COUNTING SPARK GAP.

3,377,447. LOADBREAK FOR OPEN TYPE CUTOUTS.

Applications for license under the following 13 patents may be addressed to: Patent Counsel, Appliance and Television, General Electric Company, Appliance Park, Louisville, Ky., 40225.

3,346,003. WATER SUPPLY MECHANISM FOR WASHING MACHINES.

3,350,729. METHOD OF WASHING CLOTHES.

3,355,111. DISHWASHER POWER UNIT HOUSING AND MOUNTING MEANS.

3,356,431. DISHWASHER HAVING A SUDS SUPPRESSOR.

3,359,907. CENTRA-TURBINE PUMP.

3,362,645. SPRAY MEANS FOR DISHWASHER.

3,367,687. MEANS TO SECURE AN ELEMENT TO A SHAFT.

3,371,535. LIQUID LEVEL INDICATOR FOR DISPENSER IN DISHWASHER DOOR.

3,373,902. LIQUID DISPENSING MEANS.

3,373,905. LIQUID DISPENSING MEANS.

3,374,958. FOOD WASTE DISPOSER.

3,376,087. COMBINED SUPPORTING RACK AND COUNTER-BALANCE FOR DISHWASHER.

3,377,093. LATCH MECHANISM.

Avco Corporation is prepared to grant licenses under the following 50 patents upon reasonable terms to domestic manufacturers.

Applications for license may be addressed to: General Patent Counsel, Avco Corporation, Suite 1800, 1014 Vine St., Cincinnati, Ohio, 45202.

3,209,157. PULSE WIDTH SENSOR.

3,205,499. DUAL POLARIZED HORN ANTENNA.

3,204,207. VOLTAGE CONTROLLED CAPACITANCE DIODE TUNER WITH TEMPERATURE COMPENSATION.

3,202,921. FREQUENCY SENSITIVE DEMODULATOR.

3,193,636. ROTATABLE MULTIPLE LEAD ELECTRICAL CONNECTOR.

3,191,124. AMPLITUDE NOISE CONTROL GATE.

3,189,843. MULTIPLE TUNNEL DIODE RESONANT CAVITY OSCILLATOR.

3,181,134. MOVING EVENTS DISPLAY DEVICE.

3,177,377. AUTOMATIC SIGNAL LEVEL DISCRIMINATOR.

3,176,300. ADJUSTABLE SLOTTED WAVE GUIDE RADIATOR WITH COUPLING ELEMENT.

3,175,650. TRUSSED STRUCTURE.

3,174,272. TIME SITUATION DISPLAY DEVICE FOR ARRIVING AND DEPARTING AIRCRAFT.

3,167,713. ELECTRONIC AUTOMATIC CONTROL CIRCUITRY FOR SATELLITE COMMAND RECEIVER.

3,166,678. SIGNAL-SENSITIVE GATING CIRCUIT CONTROLLED BY A SIGNAL-OPERATED SWITCH HAVING DIFFERENT THRESHOLD LEVELS FOR. TURN OFF AND TURN ON.

3,163,828. GAIN COMPRESSED AMPLIFIER.

3,162,828. CROSS-LINEAR POLARIZATION SYSTEM.

3,158,858. TRACKING SYMBOL FOLLOWER.

3,158,857. ALPHA-NUMERIC DISPLAY SYSTEM.

3,158,820. ELECTRONIC SERVO SYSTEM FOR AUTOMATICALLY LOCKING TWO ALTERNATING CURRENT SOURCES IN PHASE.

3,158,752. FREQUENCY SPECTRUM GENERATOR UTILIZING DIODE AND RC COMBINATION TO EFFECT AMPLIFICATION AND HARMONIC GENERATION.

3,139,533. ALTERNATING CURRENTS PHASE AND FREQUENCY COMPARATOR BRIDGE USING DIODE AMPLIFICATION EFFECT.

3,139,519. PUNCHED CARD READER.

3,137,849. RADAR AIR TRAFFIC CONTROL SYSTEM.

3,135,921. SELF-QUENCHED SUPER-REGENERATIVE CIRCUIT UTILIZING VARIABLE IMPEDANCE DIODE IN QUENCHING CIRCUIT.

3,180,317. PHOTOSENSITIVE LUMINOUS ANNULAR SIGHT.

3,300,011. TUNING SHAFT POSITIONING SYSTEM.

3,296,616. COMBINED FREQUENCY DETERMINING CIRCUIT AND ANTENNA.

3,287,709. HIGH SPEED MEMORY.

3,278,757. DIODE BRIDGE GATE UTILIZING DIODE AMPLIFICATION TO GATE SIGNALS BELOW DIODE THRESHOLD.

3,274,564. DATA PROCESSOR.

3,273,035. SYSTEM OF STABILIZATION FOR A SAMPLE-DATA SERVO USING A VARIABLE GAIN SAMPLED-DATA LOOP AND A PROPORTIONAL LOOP.

3,272,909. PRINTED CIRCUIT PACKAGE WITH INDICIA.

3,271,682. DOPPLER-SHIFT CORRECTOR FOR SINGLE SIDEBAND COMMUNICATIONS SYSTEM.

3,271,681. AUTOMATIC SYSTEM FOR CORRECTING FOR DOPPLER SHIFT IN SINGLE SIDEBAND COMMUNICATIONS EQUIPMENT.

3,268,903. EXTENDABLE DIPOLE ANTENNA.

3,268,898. DEMOUNTABLE VARIABLE LENGTH ANTENNA.

3,262,062. DIRECT CURRENT AMPLIFIER OF THE TYPE COMPRISING TWO CASCADED TRANSISTORS IN SERIES WITH A THIRD TRANSISTOR.

3,261,929. SUB-MINIATURE SELECTOR DEVICE WITH ECCENTRICALLY DISPLACED CONTACT WIPER APPARATUS.

3,259,851. DIGITAL SYSTEM FOR STABILIZING THE OPERATION OF A VARIABLE FREQUENCY OSCILLATOR.

3,259,701. LOCK TYPE SELECTOR SWITCH.

3,246,322. DISTANCE MEASURING EQUIPMENT.

3,243,676. MOTOR DRIVEN AUTOMATIC STEPPING DRIVE FOR A ROTATABLE SHAFT, INCLUDING MEANS FOR POSITIVELY LOCKING THE SHAFT IN A SELECTED POSITION AND DYNAMIC BRAKING FOR THE MOTOR.

3,243,529. CONTACT WAFERS AND BIFURCATED CONTACTS IN HIGH SPEED SELECTOR SWITCHES.

3,239,693. BILATERAL ELECTRONIC GATE.

3,238,298. MULTIPLEX COMMUNICATION SYSTEM WITH MULTILINE DIGITAL BUFFER.

3,230,302. TELEVISION PROGRAM DISTRIBUTION AND METERING SYSTEM.

3,226,643. COMMAND COMMUNICATION SYSTEM OF THE RECTANGULAR WAVE TYPE.

3,222,618. STABILIZED DIRECT CURRENT TO ALTERNATING CURRENT ANALOG CONVERTER.

3,218,571. ELECTRONIC SERVO CONTROLLED AUTOMATIC FREQUENCY SCANNING SYSTEM.

3,210,829. METHOD OF MAKING A SWITCH STATOR.

Errata

In the OFFICIAL GAZETTE, issue of June 18, 1968, page 670, before Patent Number 3,388,500 insert the following:

ERRATUM

For Class 46—76 see:
Patent No. 3,388,651

page 715, before Patent Number 3,388,685 insert the following:

ERRATUM

For Class 116—70 see:
Patent No. 3,388,682

page 725, before Patent Number 3,388,725 insert the following:

ERRATUM

For Class 189—125 see:
Patent No. 3,388,722

page 790, before Patent Number 3,388,994 insert the following:

ERRATUM

For Classes 75—126 Through 128 see:
Patent No. 3,388,986 Through 3,388,988

page 808, before Patent Number 3,389,082 insert the following:

ERRATUM

For Class 252—.5 see:
Patent No. 3,389,124

page 809, before Patent Number 3,389,087 insert the following:

ERRATUM

For Class 252—49.6 see:
Patent No. 3,389,123

page 865, before Patent Number 3,389,350 insert the following:

ERRATUM

For Class 332—44 see:
Patent No. 3,389,327

page 872, before Patent Number 3,389,376 insert the following:

ERRATUM

For Class 340—172.5 see:
Patent No. 3,389,404

PATENT EXAMINING CORPS

R. A. WAHL, Assistant Commissioner

CONDITION OF PATENT APPLICATIONS AS OF MAY 20, 1968

PATENT EXAMINING OPERATIONS AND GROUPS * Denotes date of oldest application for each Operation.	Actual Filing Date of Oldest Case Awaiting Action	
	New	Amended
CHEMICAL EXAMINING OPERATION—I. MARCUS, Director.		
GENERAL CHEMISTRY AND PETROLEUM CHEMISTRY, GROUP 110—R. L. CAMPBELL, Manager Inorganic Compounds; Inorganic Compositions; Organo-Metal and Organo-Metalloid Chemistry; Metallurgy; Metal Stock; Electro Chemistry; Batteries; Hydrocarbons; Mineral Oil Technology; Lubricating Compositions; Gaseous Compositions; Fuel and Igniting Devices.	9- 7-65	4-26-63
GENERAL ORGANIC CHEMISTRY, GROUP 120—M. STERMAN, Manager Heterocyclic; Amides; Alkaloids; Azo; Sulfur; Misc. Esters; Carbohydrates; Herbicides; Poisons; Medicines; Cosmetics; Steroids; Oxo and Oxy; Quinones; Acids; Carboxylic Acid Esters; Acid Anhdrides; Acid Halides.	10- 1-65	*12-28-62
HIGH POLYMER CHEMISTRY, PLASTICS AND MOLDING; GROUP 140—L. J. BERCOVITZ, Manager Synthetic Resins; Rubber; Proteins; Macromolecular Carbohydrates; Mixed Synthetic Resin Compositions; Synthetic Resins With Natural Polymers and Resins; Natural Resins; Reclaiming; Pore-Forming; Compositions (Part) e.g.: Coating; Molding; Ink; Adhesive and Abrading Compositions; Molding, Shaping, and Treating Processes.	10-20-65	1- 6-64
COATING AND LAMINATING, BLEACHING, DYEING AND PHOTOGRAPHY, GROUP 160—J. R. LIBERMAN, Manager Coating; Processes and Misc. Products; Laminating Methods and Apparatus; Stock Materials; Adhesive Bonding; Special Chemical Manufactures; Special Utility Compositions; Bleaching; Dyeing and Photography.	*4- 9-65	2-18-63
SPECIALIZED CHEMICAL INDUSTRIES AND CHEMICAL ENGINEERING, GROUP 170—W. B. KNIGHT, Manager Fertilizers; Foods; Fermentation; Analytical Chemistry; Reactors; Sugar and Starch; Paper Making; Glass Manufacture; Gas; Heating and Illuminating; Cleaning Processes; Liquid Purification; Distillation; Preserving; Liquid and Solid Separation; Gas and Liquid Contact Apparatus; Refrigeration; Concentrative Evaporators; Mineral Oils Apparatus; Misc. Physical Processes.	9- 7-65	1-29-64
ELECTRICAL EXAMINING OPERATION—N. H. EVANS, Director.		
INDUSTRIAL ELECTRONICS AND RELATED ELEMENTS, GROUP 210—J. F. COUCH, Acting Manager Generation and Utilization; General Applications; Conversion and Distribution; Heating and Related Art Conductors; Switches; Miscellaneous.	1- 4-66	2-14-64
SECURITY, GROUP 220—S. BOYD, Manager Ordnance, Firearms and Ammunition; Radar, Underwater Signalling, Directional Radio, Torpedoes, Seismic Exploring, Radio-Active Batteries; Nuclear Reactors, Powder Metallurgy, Rocket Fuels; Radio-Active Material.	1-13-67	11-17-64
INFORMATION TRANSMISSION, STORAGE AND RETRIEVAL, GROUP 230—M. L. LEVY, Manager Communications; Multiplexing Techniques; Facsimile; Data Processing, Computation and Conversion; Storage Devices and Related Arts.	*2-24-65	*6-18-62
ELECTRONIC COMPONENT SYSTEMS AND DEVICES, GROUP 250—W. L. CARLSON, Manager Semi-Conductor and Space Discharge Systems and Devices; Electronic Component Circuits; Wave Transmission Lines and Networks; Optics; Radiant Energy; Measuring.	3- 2-65	8-15-62
PHYSICS, GROUP 280—R. L. EVANS, Manager Photography; Sound and Lighting; Indicators and Optics; Measuring and Testing; Geometrical Instruments.	2-14-66	3-22-65
DESIGNS, GROUP 290—S. BOYD, Manager Industrial Arts; Household, Personal and Fine Arts.	8-16-67	7- 5-66
MECHANICAL EXAMINING OPERATION—F. H. BRONAUGH, Director.		
HANDLING AND TRANSPORTING MEDIA, GROUP 310—A. BERLIN, Manager Conveyors; Hoists; Elevators; Article Handling Implements; Store Service; Sheet and Web Feeding; Dispensing; Fluid Sprinkling; Fire Extinguishers; Coin Handling; Check Controlled Apparatus; Classifying and Assorting Solids; Boats; Ships; Aeronautics; Motor and Land Vehicles and Appurtenances; Railways and Railway Equipment; Brakes; Rigid Flexible and Special Receptacles and Packages.	11-25-66	5- 7-66
MATERIAL SHAPING, ARTICLE MANUFACTURING, TOOLS, GROUP 320—N. BERGER, Manager Manufacturing Processes, Assembling, Combined Machines, Special Article Making; Metal Deforming; Sheet Metal and Wire Working; Metal Fusion—Bonding, Metal Founding; Metallurgical Apparatus; Plastics Working Apparatus; Plastic Block and Earthenware Apparatus; Machine Tools for Shaping or Dividing; Work and Tool Holders Woodworking; Tools; Cutlery; Jacks.	5-23-66	1-15-64
AMUSEMENT, HUSBANDRY, PERSONAL TREATMENT, INFORMATION, GROUP 330—A. RUEGG, Manager Amusement and Exercising Devices; Projectors; Animal and Plant Husbandry; Butchering; Earth Working and Excavating; Fishing, etc.; Tobacco; Artificial Body Members; Dentistry; Jewelry; Surgery; Toiletry; Printing; Typewriters; Stationery; Information Dissemination.	*4-22-66	5-14-64
HEAT AND POWER ENGINEERING, GROUP 340—C. F. GAREAU, Manager Power Plants; Combustion Engines; Fluid Motors; Pumps; Turbines; Heat Generation and Exchange; Refrigeration; Ventilation; Drying; Vaporizing; Temperature and Humidity Regulation; Machine Elements; Power Transmission.	3- 1-67	1-21-66
FIXED CONSTRUCTIONS, SUPPORTS, AND HARDWARE, GROUP 350—T. J. HICKEY, Manager Joints; Fasteners; Rod, Pipe and Electrical Connectors; Miscellaneous Hardware; Locks; Building Structures; Closure Operators; Bridges; Closures; Earth Engineering; Drilling; Mining; Furniture; Receptacles; Supports; Cabinet Structures.	11-30-66	12- 8-64
TEXTILES, CLEANING AND FLUID HANDLING, GROUP 360—W. S. COLE, Manager Fluid Handling, including Valves; Conduits; Filling Receptacles; Lubrication; Joint Packing; Bathroom Fixtures; Centrifugal Separators; Cleaning; Coating; Pressing; Agitating; Foods; Textiles; Apparel and Shoes and their Manufacture; Sewing Machines; Winding and Reeling.	5- 9-66	*5-29-63

Total number of pending applications (excluding Designs)	193, 096
Total number of Design applications pending	3, 486

Expiration of patents: The patents within the range of numbers indicated below expire during June 1968, except those which may have been extended under the provisions of the Veterans Patent Extension Act (64 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 690. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1955.*

Patents	Numbers 2,555,300 to 2,558,715, inclusive
Plant Patents	Numbers 1,013 to 1,018, inclusive

DECISIONS IN PATENT AND TRADEMARK CASES

U.S. Court of Customs and Patent Appeals

JOHN W. ANDERSON *v.* ANTHONY C. SCINTA
ANTHONY C. SCINTA *v.* JOHN W. ANDERSON
ANTHONY C. SCINTA *v.* JOHN W. ANDERSON

Nos. 6941, 6942, and 6943. Decided February 16, 1967

[54 CCPA 1269; 372 F.2d 523; 152 USPQ 584]

1. INTERFERENCE—REDUCTION TO PRACTICE—TESTS.

"It is well established that tests under service conditions are not always necessary for reduction to practice, but as we stated in *Paivinen* v. *Sands*, 52 CCPA 906, 339 F.2d 217, 144 USPQ 1: * * * we did not hold [in *Elmore* v. *Schmitt*, 47 CCPA 958, 278 F.2d 510, 125 USPQ 653] that laboratory testing is unacceptable as a means of proving a reduction to practice, but rather that, for such tests to be acceptable proof of such reduction to practice, a relationship must be established which relates the test conditions to the intended functional setting of the invention. * * *"

2. SAME—SAME—SAME—*Bowers* v. *Valley* v. *Ernst* DISTINGUISHED.

"The authority principally relied on by Scinta in arguing that the count requires reduction to practice on a curved windshield. *Bowers* v. *Valley* v. *Ernst*, 32 CCPA 1039, 149 F.2d 284, 65 USPQ 493, is readily distinguishable from the present case. That case related to a two-piece oil control ring for use on pistons of internal combustion engines for the dual purpose of oil control and breaking up and causing removal of carbon. Testing of the ring in a pump where there was no combustion and therefore no carbon problem similar to that encountered in an internal combustion engine was held insufficicient for reduction to practice. Where, as here, the device is disclosed as suitable for *alternative* uses, a different situation exists. As stated in an excerpt quoted from the Board's decision in *Landon* v. *Ginzton et al.*, 41 CCPA 950, 954, 214 F.2d 160, 163, 102 USPQ 230, 233: The patent application may reveal a number of purposes for the same invention. The inventor need prove only one practical use; only one useful result or effect. * * *"

3. SAME—SAME—SAME—*Swan* v. *Thompson* DISTINGUISHED.

"We agree with the Board. *Swan* v. *Thompson*, 23 CCPA 806, 80 F.2d 374, 28 USPQ 77, cited by Anderson, is not authority for reaching a contrary conclusion. There certain counts to a safety razor were deemed reduced to practice by successful testing of the razor even though it was not tested to demonstrate that recessed portions in the blade would prevent breaking or distorting the blade if a guard corner were bent as recited in the counts. The holding was supported by a finding that the latter capability was self-evident without special testing. In the present case it is not self-evident. The wiping of curved windshields constituted a problem not adequately solved by prior constructions and the flexible-backed blade being tested was a new construction. There thus was no sound reason for concluding that tests showing that Anderson's blade worked successfully on a flat windshield guaranteed that it would operate satisfactorily on a curved windshield."

4. SAME—SAME—SAME.

"There is also evidence that Anderson's blades were tested to a certain extent in the laboratory on flat and curved glass with the blades motor driven and with a water spray and with the glass daubed with other material. However, those tests were not fully described as to structure of blade, time and exact nature of tests, and results obtained. So far as they were described, they were subject to deficiencies similar to the laboratory tests of Scinta which have previously been found insufficient. The same is true of a demonstration made on an experimental car standing still in a garage at the Ford Motor Company, and, in addition, the corroborating witness James could not recall the structure of the blade involved. Tests on a car belonging to Okleja at about the same time as the tests on Krohm's car suffered from the dual deficiencies of being on a flat windshield and involving a blade lacking a feature of the count, the clamp means with longitudinal movement. Thus, Anderson has not proved actual reduction to practice prior to his filing date."

5. Same—Constructive Reduction to Practice—Timely Reliance on Prior Application—Rule 224.

"Anderson also contends that he is entitled to constructive reduction to practice on the basis of his Patent No. 2,596,063, issued on his application of December 13, 1945. That point was first raised in a request for reconsideration of the Board's original decision. The Board noted that Anderson had not complied with the requirement of the Rules of Practice effective March 1, 1949 (Rule 224) 'A party will not be permitted to rely on a prior application to obtain the benefit of its filing date unless the prior application is specified in the notice of interference or is set forth in the preliminary statement.' We agree that Anderson's belated request was correctly denied."

6. Same—Conception—Disclosure to Patent Attorney.

"After consideration of the evidence, the Board concluded that Scinta established conception and disclosure of the structure of the count by September 28, 1944, the date on which Scinta's patent attorney Brooks docketed the patent case which resulted in filing of the earlier Scinta sole application Serial No. 636,548, filed December 22, 1945, and involved in the other two appeals here. Brooks testified that on that date he had in his possession a model wiper from which the drawing of the earlier application was made, and that the model was identical with that in evidence as Scinta Exhibit 2 except for a detail immaterial here. The Board noted that such construction permits movement between the rubber wiping element and the clamping means, and our own inspection of Exhibit 2 verifies that conclusion. That testimony, together with other evidence, establishes beyond a reasonable doubt that Scinta conceived the subject matter in issue by September 28, 1944."

7. Same—Dilligence.

"The period over which Anderson must show reasonable diligence thus extends from just prior to September 28, 1944 [date of conception of Scinta], to his filing on August 7, 1947. We find that Anderson has failed to establish diligence, either his own or on his behalf, over the required period. After conception in 1944, the development of the Anderson blade was put in charge of Smulski, an Anderson Company engineer. However, except for some work on some very early blades, which did not meet the count, Krohm did the development work and in June of 1945 took over completely. Although the count recites 'all said clamp means having longitudinal sliding movement with respect to said unit,' Krohm testified that it was not until September or October of 1945 that he first experimented with a superstructure where both ends slid on the flexors. Krohm stated that the reason for his delay in trying this essential feature was that it was his own belief that the flexors should be held firm. While Anderson mentioned the sliding feature to Krohm many times, he consented to Krohm's experimenting with his own work on his own idea first."

8. Same—Same.

"* * * it is clear that the two persons assigned to develop Anderson's invention put but limited time into the project prior to the summer of 1945 and, what is more important, worked during that period on constructions lacking one or more essential features of Anderson's disclosure. Anderson has failed to show diligence for the critical period and cannot prevail over Scinta, who was first to file his application.

9. Same—Res Judicata—Estoppel by Judgment—*International Cellucotton Products Co.* v. *Coe* Construed.

"In the Patent Office as elsewhere there must be an end to litigation. Therefore, estoppels in the nature of those known to the doctrine of res judicata have been applied to Patent Office proceedings. In the case of *International Cellucotton Products Co.* v. *Coe*, 66 App. D.C. 248, 85 F.2d 869, 30 USPQ 366, the Court of Appeals for the District of Columbia took the view that the estoppel was limited strictly to matter which would have been barred by estoppel by judgment. Thus the court held that no estoppel arose where the applicant against whom estoppel was asserted could not have made the challenged count in the prior interference because there was no support in his application for it."

10. Same—Same—Estoppel in Pais—*Avery* v. *Chase* Construed.

"The Court of Customs and Patent Appeals disagreed [with the decision in *International Cellucotton Products Co.* v. *Coe*] and expanded, rather than limited, the estoppel by holding, in *Avery* v. *Chase*, 26 CCPA 823, 101 F.2d 205, 40 USPQ 343, that an estoppel in pais would be applied against an applicant who had failed to act under former Rule 109 in a previous interference. Although his application in that interference did not support the count, the application of at least one other party thereto did. The rule thus would have permitted him to successfully move to establish the second interference involving a different application of his and that of such other party."

11. Same—Same—*Avery* v. *Chase* Distinguished.

"* * * we do not think the holding of *Avery* v. *Chase*, supra, is controlling. The subject matter of the present interference was not before the Patent Office in the earlier interference, and former Rule 109 was not construed in the case of *Avery* v. *Chase* to require that matter foreign to all applications in a pending interference be brought into it by amendment. Under our view of the holding in that case, there is no estoppel upon the facts of the case before us. We, therefore, affirm the Board's denial of Anderson's motion based on res judicata."

12. Same—Questions Ancillary to Priority.

"It is firmly established that * * * questions of patentability are not ancillary to priority and are not to be considered in deciding priority."

AFFIRMED.

Richard R. Trexler, *Lloyd W. Mason*, *William A. Smith*, *Jr.*, for appellant in No. 6941.

Dos T. Hatfield, *Edwin T. Bean* for appellant in Nos. 6942 and 6943.

Dos T. Hatfield, *Edwin T. Bean* for appellee in No. 6941.

Richard R. Trexler, *Lloyd W. Mason*, *William A. Smith*, *Jr.* for appellee in Nos. 6942 and 6943.

Before Rich, *Acting Chief Judge*, Martin, Smith, and Almond, *Associate Judges*, and Judge William H. Kirkpatrick [1]

Kirkpatrick, *J.*, delivered the opinion of the court.

These consolidated appeals are from decisions of the Board of Patent Interferences in three interferences involving the same parties on a single count in each interference. The interferences relate to windshield wiper blades and involve different combinations of two Scinta applications assigned to Trico Products Corporation and two Anderson applications assigned to The Anderson Company.

The same record and briefs are relied on by the parties in all three cases.

The appeals will be considered here in the sequence, 6942, 6943, 6941, which order we find the most convenient in dealing with the numerous issues presented by the voluminous record.

PA 6942

This appeal is directed to Interference No. 85,878 bringing into issue the earliest filed of the parties' applications, Anderson application Serial No. 634,729, filed December 13, 1945, and Scinta application Serial No. 636,548, filed December 22, 1945. Anderson thus is the senior party. The basis of our decision in this appeal is such that the details of the structures need not be set forth other than as will appear in the following discussion.

The Board held Anderson to be the prior inventor on the basis that he was first to conceive and first to reduce to practice. It found that he conceived the subject matter of the count by July 27, 1944, prior to any date that Scinta asserts for his own conception, and that Scinta has not proved actual reduction to practice prior to the constructive reduction to practice resulting from the filing of the Anderson application on December 13, 1945.

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[1] Senior District Judge, Eastern District of Pennsylvania, sitting by designation.

Scinta argues before us that the Board erred in its conclusions as to both Anderson's conception and Scinta's alleged reduction to practice.

We consider the evidence that Anderson conceived by July 27, 1944, to be so conclusive that it is unnecessary for us to consider the point raised by Anderson questioning Scinta's right to question the Board's finding to that effect. A sketch bearing the date of July 27, 1944, plainly discloses all of the features required by the count, and Anderson's testimony regarding his making it and sending it to Okleja, an Anderson Company employee who identified his signature thereon as made on that date, is fully corroborated by Okleja and Krohm, another Anderson employee who ultimately was put in charge of developing the Anderson blade.

Among the matters relied on by Scinta to show that Anderson did not have conception of all of the material shown on the sketch by the date in question are a statement in a speech by Anderson in October of 1946 describing the development of his blade as involving many experiments over a period of years, the fact that the blade shown in the sketch was not used to solve a problem associated with aircraft windshields which the Anderson Company faced in 1944, and the fact that the sketch shows all the details of the Anderson commercial blade on which the patent application was not filed until August 7, 1947. In our opinion, these relatively remote circumstances do not cast doubt on the clear direct evidence that the Anderson sketch in question was made and shown to others on the date indicated. Thus, we find no occasion to discuss other evidence which further reinforces his claim of prior conception.

Scinta claims reduction to practice (1) in August and September of 1944 on a mock-up using a Hudson curved windshield, (2) in the fall of 1944 on a Packard mock-up having a curved windshield, and (3) in May 1945 on the mock-up having a Hudson curved windshield. The blades in those tests are not in evidence, but witnesses described them as "identical" or "similar" to blades introduced in evidence as Scinta Exhibits 2, 3, 4, and 15. They are referred to in the record as "Scinta sole" blades.

No written reports giving the results of the tests of these blades are in evidence, the description of the tests being solely in oral testimony. Scinta himself described the first mentioned test on the Hudson curved glass as follows:

> * * * we mounted the glass onto a frame and rigged a motor on there, and operated the motor with vacuum, just the same as it would on a car, and by using a spray nozzle that I made up, using air, I sprayed water, fine mist on it, the motor kept working the same as it would on a car in actual operation.

He further testified that the blade was of the Scinta sole type and that the test was started around August or September of 1944 and carried on continuously for 24 hours a day for possibly two weeks to see "how long it (the blade) would hold up." [2] Scinta testified:

> In my opinion, it operated, I would say, as good as you could expect on anything that was—I would say it was all right for actual use.

All of the tests consisted of squirting water onto the windshield and operating the wiper blades. There was testimony from witnesses that the blades wiped the water from the windshields satisfactorily.

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[2] The Scinta sole structure comprised a hollow rubber wiping member with spring elements inside, although such hollow structure is not required by the count. The hollow rubber differing from the solid rubber commonly used in the art, it may well be that durability tests of that feature were deemed necessary irrespective of tests of other blade features for operability.

The Board said concerning these tests (references to record omitted):

> * * * we believe that conditions encountered in actual driving in the rain were not reproduced in the test, which was apparently to see how long the rubber blade and associated parts would hold up. * * * Anderson's statement that there is no evidence of a fan being used is apparently unchallenged and we have previously pointed out that elsewhere Scinta has frankly admitted he ran no wind lift tests.
>
> The evidence concerning the tests of the blades corresponding to Exhibits 3, 4 and 15 (it may be noted that this last was only "pretty good" according to Scinta) is equally deficient in failing to establish that conditions were present reasonably simulating the vibration caused by the engine, the jars caused by travel along a road, and the wind that a windshield is provided to deflect. In view of the novel features previously pointed out, we believe that those conditions should be present in a test to establish an actual reduction to practice of the present invention. Moreover, it must be remembered that the alleged reductions to practice took place before the widespread use of the modern windshield wipers marketed since the Anderson address, differing much from the simple strip of rubber with a rigid backing, attached at its center to an oscillating arm. We do not believe that in 1944 and 1945 laboratory tests of the kind utilized on the blades similar to Exhibits 2 to 4 and 15 would convincingly demonstrate that those devices, having blades flexible in one plane and with superstructure between the blade and operating arm, would operate satisfactorily on the road. * * *

The Board also considered testimony of John R. Oishei, Trico president, that a relatively small number of Scinta sole blades were made from temporary tooling as samples for experimental car use and quoted further Oishei testimony as follows:

> A. In the normal course of procedure we would naturally have had word that these blades, A-1 and A-2, as they were delivered, were put in service and during that period we were not being encouraged to tool. We had, of course, reports from time to time of the use made of the blades we were sampling.
>
> Q. That was entirely oral; you have no record whatsoever of any report of any of these blades being actually used on cars, had you? A. I had no written reports.

The Board also noted that Trico decided to "abandon" the Scinta sole blade with its hollow rubber construction in 1947 and ultimately turned to the Rainbow blade, which had solid rubber wiping means with an external flexible backing and a triple yoke, as its production model. Even when a stop-gap supply of blades was needed in the fall of 1947 on an order for Rainbow blades, Trico resorted to a much older split back blade rather than the Scinta sole type.

Scinta contends that the count requires a blade capable of wiping a curved windshield, and that since no cars having curved windshields were available at the time of his tests on the mock-ups, his tests were the only practical means of reducing the invention to practice.

For reasons to be discussed hereinafter in considering PA No. 6943, we do not regard the present count as limited to a wiper for curved windshields. The only tests Scinta relies on here for reduction to practice prior to Anderson's filing date were on mock-ups employing curved windshields, and we think they would be inadequate even if the count were limited to a blade for such windshields.

[1] It is well established that tests under service conditions are not always necessary for reduction to practice, but as we stated in *Paivinen* v. *Sands*, 52 CCPA 906, 339 F.2d 217, 144 USPQ 1:

> * * * we did not hold [in *Elmore* v. *Schmitt*, 47 CCPA 958, 278 F.2d. 510, 125 USPQ 653] that laboratory testing is unacceptable as a means of proving a reduction to practice, but rather that, for such tests to be acceptable proof of such reduction to practice, a relationship must be established which relates the test conditions to the intended functional setting of the invention. * * *

We are not satisfied from the record here that Scinta's tests on mock-ups with curved windshields established the relationship to service conditions necessary to reduce the present invention to practice, nor does his assignee's subsequent conduct indicate that it did. The principal test was primarily a test of durability, and the later tests appeared to be of the same nature although of shorter duration. Apparently water alone[3] was used in most of the tests. However, the obvious possibility that the flexible blade of the count would be more subject to difficulties from wind lift than the previous rigid backed blades cannot be ignored. There is ample evidence that wind lift was a factor to be considered. Thus Scinta, while stating that he gave consideration to the "problem of wind lift," conceded that he did not run any tests for that condition or consider the problem with respect to Scinta sole exhibit blades until either late 1946 or 1947. Also, Oishei regarded wind resistance or lift as a matter to be considered.[4] Considering, among other things, the absence of evidence of tests for wind lift, we agree with the Board that those tests were inadequate.

Moreover, the record leaves considerable basis for doubt that the Scinta sole blades actually would operate satisfactorily. Thus Rodak, the only one outside of Trico who testified as to testing a Scinta sole blade, found the blade "so obviously deficient" on a mere preliminary check that he did not subject it to the usual further checks which it was the practice of Ford to make if a blade showed "evidence of merit." The absence of evidence that the Scinta sole blade was ever put in production or put on an automobile for test, coupled with the fact that the blade was supplanted by the Rainbow blade, leaves it doubtful that the tests were such as to demonstrate that the Scinta sole blade was ever advanced to a condition where it was capable of satisfactory operation.

From the foregoing we conclude that Scinta did not reduce the subject matter of the count to practice prior to Anderson's filing date of December 13, 1945, which fact makes Anderson in contemplation of the law the first to reduce to practice as well as the first to conceive. That conclusion compels the award of priority to Anderson in Interference No. 85,878.

Certain motions, denied by the Board, by which Anderson seeks judgment on various grounds do not require consideration at this point.

PA 6943

Scinta is the senior party in Interference No. 88,638 of this appeal which involves his application Serial No. 636,548, filed December 22, 1945, and Anderson's application Serial No. 766,956, filed August 7, 1947. The Scinta application is the one in Interference 85,878 (PA 6942) while that of Anderson is a later one showing a refined triple yoke construction substantially the same as the construction adopted by the Anderson Company for production of commercial blades.

The Board awarded priority to Anderson on the basis that the record shows him to be first to conceive, as established by evidence of his complete sketching and description of the invention by July 27, 1944, and first to reduce to practice by field testing on a flat windshield in November 1945. The Board further held that the tests of Scinta in connection with the mock-ups utilizing curved windshields in August 1944 through May 1945 did not constitute actual reduction to practice.

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[3] The record shows that other laboratory tests which were used in the art employed other materials in addition to or in place of water. Thus Anderson Company conducted laboratory tests using "what is known in automotive engineering circles as 'Arizone muck' " which Anderson regarded as a "standard material" for testing blades in demonstrations. James, the director of research at Ford Motor Company, subjected an Anderson blade submitted to him to a test removing "Bon Ami" from the windshield of automobile. Volcanic dust was used as a test medium in laboratory tests made by Trico in 1947 to compare the performance of Trico and Anderson blades.

[4] Additionally, Scinta Patent No. 2,649,605, issued on an application filed May 12, 1947, recognizes the factor of wind lift in connection with an improvement in the original Rainbow blade stating that the improvement provides "a low-setting wiper structure that will more effectively resist the lifting action of the wind currents flowing over and across the windshield."

While the present count differs from that in Interference No. 85,878, the difference does not affect the applicability of the evidence with respect to the conception by Anderson and the alleged actual reduction to practice by Scinta. For reasons set forth in considering Interference No. 85,878, we agree with the Board that Anderson was first to conceive and that the tests on mock-ups by Scinta did not constitute reduction to practice.

The remaining priority issue then is whether Anderson reduced the subject matter of the count to practice on a flat windshield in November 1945.

The testimony is clear that Krohm, who was engaged in product development work for the Anderson Company, installed a windshield wiper blade corresponding to the count on his car in November 1945 and that it remained on the car until May 1948. Scinta does not appear to question that the blade was used as stated and performed satisfactorily. His position is that the language of the count requires a reduction to practice on a curved windshield rather than a flat one. The count reads:

> 1. A windshield wiper unit comprising an elongated resilient flexible body having a back portion and a wiping edge conformable to a surface to be wiped, a pair of spaced transversely aligned grooves formed in the body extending substantially throughout the length thereof and positioned between said back portion and said wiping edge, elongated backing means flexible in a plane substantially perpendicular to the surface to be wiped and substantially inflexible in a plane at right angles to said first-mentioned plane, said backing means having a pair of spaced longitudinally extending marginal edges positioned in said transversely aligned grooves, said backing means in its entirety being positioned below said back portion and being normally generally flat and lying in a plane generally parallel to the surface to be wiped and normally generally at right angles to said wiping edge, in combination with a superstructure for said unit for applying pressure thereto to cause the wiping edge of the flexible body to conform to the surface being wiped, said superstructure including longitudinally spaced apart holder means and a yoke extending lengthwise of the medial portion of said unit, each of said holder means being pivotally connected intermediate its ends to a respective end portion of said yoke and each extending inwardly and outwardly in the direction of the length of said unit from its medial pivotal connection with said yoke, each end portion of each of the holder means including oppositely laterally projecting side portions rigidly related to each other positioned to overlie portions of said backing means inwardly and outwardly of said pivotal connections for exerting downward pressure on the outer portions of said backing means, inwardly and outwardly of the pivotal connections, said laterally projecting side portions having extremities extending downwardly and inwardly below the opposite outer portions of said backing means to straddle the same inwardly and outwardly of said pivotal connections for retaining said marginal edges of said backing means in said grooves, the inner ends of each of said holder means being spaced apart a substantial distance to provide a freely flexible medial span of said backing means.

The Board did not accept Scinta's interpretation of the count. The Board said (references to record and briefs omitted):

> • • • Anderson's application, however, points out that the wiper provides "superior wiping operation against a substantially planar surface to be cleaned" corresponding to the similar statement in his application filed December 13, 1945 involved in companion Interference 85,878 as to the wiper disclosed therein. In our decision of even date herewith in Interference 85,878 we pointed out that

> the Trico Rainbow blade was tested by Scinta in a 1940 Ford with a standard windshield. The Anderson address of October 24, 1946 states that the new blade reaches and cleans the low spots in a flat windshield more effectively than they ever before have been cleaned and a similar statement is in the brochure effective November 1, 1946. The conception sketch dated July 27, 1944 refers to "a better job on flats." Well over a million Anderson blades were sold in 1946 and 1947, the great majority being for use on the so-called flat windshields. Since the blade was priced considerably higher than the flat or rigid back blade it obviously was recognized by customers as having utility on the so-called flat windshields.
>
> As distinguished from the count in prior Interference 83,363, which was for "A wiper for cleaning a curved surface . . ." the count of the present interference is for "A windshield wiper unit comprising an elongated resilient flexible body having a back portion and a wiping edge conformable to a surface to be wiped . . ." containing no reference to curved surfaces, and obviously a flat windshield has a surface to be wiped. Since the "body" is flexible, the count later provides for a superstructure for applying pressure "to cause the wiping edge of the flexible body to conform to the surface being wiped." The so-called triple yoke arrangement obviously provides for such conformity to the surface of a so-called flat windshield, as evidence by the large number of these devices sold for that purpose. Accordingly, and for the reasons previously stated, it is believed that the present invention can be reduced to practice on a "flat" windshield.

We find no error in the Board's interpretation. **[2]** The authority principally relied on by Scinta in arguing that the count requires reduction to practice on a curved windshield, *Bowers* v. *Valley* v. *Ernst*, 32 CCPA 1039, 149 F.2d 284, 65 USPQ 493, is readily distinguishable from the present case. That case related to a two-piece oil control ring for use on pistons of internal combustion engines for the dual purpose of oil control and breaking up and causing removal of carbon. Testing of the ring in a pump where there was no combustion and therefore no carbon problem similar to that encountered in an internal combustion engine was held insufficient for reduction to practice. Where, as here, the device is disclosed as suitable for *alternative* uses, a different situation exists. As stated in an excerpt quoted from the Board's decision in *Landon* v. *Ginzton et al.*, 41 CCPA 950, 954, 214 F.2d 160, 163, 102 USPQ 230, 233:

> The patent application may reveal a number of purposes for the same invention. The inventor need prove only one practical use; only one useful result or effect.* * *

We are satisfied that Anderson has proved reduction to practice of his blade on the windshield of Krohm's car in November 1945. Thus Anderson was, as the Board held, the first to reduce to practice as well as first to conceive so that discussion of Anderson's other activities in reducing the invention to practice is unnecessary.

Various motions raised by Anderson do not require determination here.

Anderson must prevail in Interference No. 88,638 as the first to conceive and the first to reduce to practice.

PA 6941

Scinta is also senior party in the interference of this appeal, No. 86,266, involving his application Serial No. 676,974, field June 15, 1946, and Anderson application Serial No. 766,956, filed August 7, 1947. This Scinta application discloses a wiper comprising a plurality of flexible metallic members disposed within a hollow rubber wiping member as in Scinta's earlier application although there are differences in details. Anderson's application is the one in Interference No. 88,638, showing the advanced construction corresponding substantially to the commercial form of his blade.

The single interference count is as follows, emphasis being added to words critical in the determination of the appeal:

> 1. A windshield wiper unit comprising an elongated resilient flexible body having a back portion and a wiping edge conformable to a surface to be wiped, a pair of transversely aligned grooves formed in the body extending substantially throughout the length thereof and positioned between said back portion and said wiping edge, elongated backing means flexible in a plane substantially perpendicular to the surface to be wiped and substantially inflexible in a plane at right angles to said first mentioned plane, said backing means having a pair of longitudinally extending edges positioned in said pair of transversely aligned grooves, in combination with a superstructure, said superstructure including spaced apart integral clamp means having their end portions partially surrounding parts of said back portion and said backing means for retaining said backing means in lateral engagement with said grooves, the end portions of each of said clamp means being longitudinally rigidly aligned with each other, and all said clamp means having longitudinal sliding movement with respect to said unit, *whereby said unit in adjusting to surface curvature is free to slide with respect to all clamp means*, and means for applying pressure at spaced apart points to said unit to conform the wiping edge thereof to the surface being wiped, said pressure applying means including an elongated bridge member rockably connected adjacent its ends with said clamp means substantially medial the ends of each of the latter, *said unit intermediate said clamp means providing a free medial span capable of elongation in conforming to irregular curvatures by lengthwise movement of said unit in said clamp means.*

The Board held that Scinta was prior by reason of his constructive reduction to practice and that Anderson, although first to conceive, did not prove the exercise of reasonable diligence for the period beginning just prior to Scinta's conception and extending until he filed his application.

We agree with the Board that Anderson was the first to conceive and that Scinta has not proved reduction to practice prior to his filing date. However, this appeal raises the additional issues, whether Anderson has proved actual reduction to practice of the count, the date of conception by Scinta, and whether Anderson has proved diligence.

In construing this count the Board held that it defines a wiper blade for wiping a curved windshield and that the use of a blade on the flat windshield of Krohm's car beginning in November 1945 did not reduce the invention of the count to practice. The Board said (with references to record omitted):

> Scinta urges that the count of this interference requires the unit to conform to a regular curvature. Actually, the count recites, "all said clamp means having longitudinal sliding movement with respect to said unit, whereby said unit in adjusting to *surface curvature* is free to slide with respect to all clamp means" and "said unit intermediate said clamp means providing a free medial span capable of elongation in conforming to *irregular curvatures* by lengthwise movement of said unit in said clamp means" [emphasis added in both instances]. Such expressed language of function, capacity or capability has been held to be a material part of a count (*McKee* v. *Noonan* 24 CCPA 784, 86 F.(2) 986, 1937 C.D. 178, 479 O.G. 277; see also the means plus function limitation referred to above in connection with *Collins* v. *Lotz* [56 App. D.C. 239, 12 F.2d 180], etc.). Scinta

> with whom the language originated states at the beginning of his specification that the invention has particular reference to a wiper for curved windshields. Similarly, Anderson's specification states that the invention "more particularly is directed to a device adapted to clean or wipe a curved surface as well as a substantially plane surface." In view of these statements of a primary object of the invention and the explicit language in the count here in issue, we believe that to establish a reduction to practice, the wiper should be used on a windshield having "surface curvature" and "irregular curvatures" on the surface being wiped. (Compare the requirement of the use of a meter for a reduction to practice of "means for spacing the two service pipes of a meter" in *McKee* v. *Stevens* 23 CCPA 701, 79 F.(2) 914, 1936 C.D. 51, 462 O.G. 673.) Krohm merely states that the car the blade was used on had "a flat windshield," and does not establish that the surface wiped had the "surface curvature" and "irregular curvatures" recited in the count. Accordingly, his testimony does not establish facts demonstrating that in the device tested the wiper unit satisfactorily adjusted to surface curvature or satisfactorily conformed to irregular curvatures. In view of the principles previously stated *we hold that the test of this blade has not been proven to be a reduction to practice of the invention here in issue.* [Last emphasis added.]

[3] We agree with the Board. *Swan* v. *Thompson*, 23 CCPA 806, 80 F.2d 374, 28 USPQ 77, cited by Anderson, is not authority for reaching a contrary conclusion. There certain counts to a safety razor were deemd reduced to practice by successful testing of the razor even though it was not tested to demonstrate that recessed portions in the blade would prevent breaking or distorting the blade if a guard corner were bent as recited in the counts. The holding was supported by a finding that the latter capability was self-evident without special testing. In the present case it is not self-evident. The wiping of curved windshields constituted a problem not adequately solved by prior constructions and the flexible-backed blade being tested was a new construction. There thus was no sound reason for concluding that tests showing that Anderson's blade worked successfully on a flat windshield guaranteed that it would operate satisfactorily on a curved windshield.

[4] There is also evidence that Anderson's blades were tested to a certain extent in the laboratory on flat and curved glass with the blades motor driven and with a water spray and with the glass daubed with other material. However, those tests were not fully described as to structure of blade, time and exact nature of tests, and results obtained. So far as they were described, they were subject to deficiencies similar to the laboratory tests of Scinta which have previously been found insufficient. The same is true of a demonstration made on an experimental car standing still in a garage at the Ford Motor Company, and, in addition, the corroborating witness James could not recall the structure of the blade involved. Tests on a car belonging to Okleja at about the same time as the tests on Krohm's car suffered from the dual deficiencies of being on a flat windshield and involving a blade lacking a feature of the count, the clamp means with longitudinal movement. Thus, Anderson has not proved actual reduction to practice prior to his filing date.

[5] Anderson also contends that he is entitled to constructive reduction to practice on the basis of his Patent No. 2,596,063, issued on his application of December 13, 1945. That point was first raised in a request for reconsideration of the Board's original decision. The

Board noted that Anderson had not complied with the requirement of the Rules of Practice effective March 1, 1949 (Rule 224)

> A party will not be permitted to rely on a prior application to obtain the benefit of its filing date unless the prior application is specified in the notice of interference or is set forth in the preliminary statement.

We agree that Anderson's belated request was correctly denied.

With Anderson first to conceive but last to reduce to practice, the determination of Scinta's conception date becomes necessary before considering whether Anderson exercised requisite diligence.

[6] After consideration of the evidence, the Board concluded that Scinta established conception and disclosure of the structure of the count by September 28, 1944, the date on which Scinta's patent attorney Brooks docketed the patent case which resulted in filing of the earlier Scinta sole application Serial No. 636,548, filed December 22, 1945, and involved in the other two appeals here. Brooks testified that on that date he had in his possession a model wiper from which the drawing of the earlier application was made, and that the model was identical with that in evidence as Scinta Exhibit 2 except for a detail immaterial here. The Board noted that such construction permits movement between the rubber wiping element and the clamping means, and our own inspection of Exhibit 2 verifies that conclusion. That testimony, together with other evidence, establishes beyond a reasonable doubt that Scinta conceived the subject matter in issue by September 28, 1944.

[7] The period over which Anderson must show reasonable diligence thus extends from just prior to September 28, 1944, to his filing on August 7, 1947. We find that Anderson has failed to establish diligence, either his own or on his behalf, over the required period. After conception in 1944, the development of the Anderson blade was put in charge of Smulski, an Anderson Company engineer. However, except for some work on some very early blades, which did not meet the count, Krohm did the development work and in June of 1945 took over completely. Although the count recites "all said clamp means having longitudinal sliding movement with respect to said unit," Krohm testified that it was not until September or October of 1945 that he first experimented with a superstructure where both ends slid on the flexors. Krohm stated that the reason for his delay in trying this essential feature was that it was his own belief that the flexors should be held firm. While Anderson mentioned the sliding feature to Krohm many times, he consented to Krohm's experimenting with his own work on his own idea first.

Smulski testified that he spent very little time on the development because he had many other jobs and that he "didn't want to go to the whiffle tree" (the triple yoke structure of Anderson's blade), because he thought it would not be useful for aircraft with which he seemed to be principally interested. The early experiments by Smulski and Krohm utilized a rubber wiper that was used in the rigid back blade made by the Anderson Company. Although Krohm thought the development had reached a point to justify ordering a mold for a new rubber by late 1944, he did not talk to Smulski about doing so until the early part of 1945. Even then Smulski decided to wait longer.

[8] From the foregoing, it is clear that the two persons assigned to develop Anderson's invention put but limited time into the project prior to the summer of 1945 and, what is more important, worked during that period on constructions lacking one or more essential features of Anderson's disclosure. Anderson has failed to show diligence for the critcial period and cannot prevail over Scinta, who was first to file his application.

However, various motions by Anderson, some corresponding to motions brought in the other interferences but not requiring consideration there, do require determination in this interference.

Anderson moves for judgment in his favor on the ground of res judicata, by reason of the fact that he prevailed in Interference No. 83,363, *Scinta and Rappl* v. *Anderson*, between the same parties in interest, but involving different applications. In that earlier interference the present count was not involved.

[9] In the Patent Office as elsewhere there must be an end to litigation. Therefore, estoppels in the nature of those known to the doctrine of res judicata have been applied to Patent Office proceeding. In the case of *International Cellucotton Products Co.* v. *Coe*, 66 App. D.C. 248, 85 F.2d 869, 30 USPQ 366, the Court of Appeals for the District of Columbia took the view that the estoppel was limited strictly to matter which would have been barred by estoppel by judgment. Thus the court held that no estoppel arose where the applicant against whom estoppel was asserted could not have made the challenged count in the prior interference because there was no support in his application for it.

[10] The Court of Customs and Patent Appeals disagreed and expanded, rather than limited, the estoppel by holding, in *Avery* v. *Chase*, 26 CCPA 823, 101 F.2d 205, 40 USPQ 343, that an estoppel in pais would be applied against an applicant who had failed to act under former Rule 109 in a previous interference. Although his application in that interference did not support the count, the application of at least one other party thereto did. The rule thus would have permitted him to successfully move to establish the second interference involving a different application of his and that of such other party. In the present case Anderson's application in the earlier interference, No 83,363, would not support the present count. The same is true of Trico's Scinta and Rappl application then in interference.

We find no error in the finding of the Board that the Anderson case does not meet the limitation in the count of "all said clamp means having longitudinal sliding movement with respect to said unit." Scinta argues in his brief that the only modification shown in the former Anderson case which discloses any sliding movement between the clamp means and the unit is FIGURE 11 of the drawings where the two clamp means which are in the center are staked to the backing strip and cannot slide relative thereto. Anderson's brief before us does not set forth any convincing reason why the position of the Board and Scinta on this point is not correct and we find none. Scinta also urges in his brief that the Scinta and Rappl application in the earlier interference fails to disclose the clamp means as serving the purpose of retaining and backing means "in lateral engagement with said grooves" as required by the present count. That position also appears to us to be sound and is not directly controverted.

[11] On these facts we do not think the holding of *Avery* v. *Chase*, supra, is controlling. The subject matter of the present interference was not before the Patent Office in the earlier interference, and former Rule 109 was not construed in the case of *Avery* v. *Chase* to require that matter foreign to all applications in a pending interference be brought into it by amendment. Under our view of the holding in that case, there is no estoppel upon the facts of the case before us. We, therefore, affirm the Board's denial of Anderson's motion based on res judicata.

Anderson also moved to dissolve the present interference on grounds of lack of support for the count in the Scinta application and delay in claiming by Scinta. The Board declined to disturb the action of the Examiner denying those motions.

In urging lack of support Anderson raises two contentions. One is that the Scinta application does not support the portion of the count reciting "all said clamp means having longitudinal sliding movement with respect to said unit, whereby said unit in adjusting to surface curvature is free to slide with respect to all clamp means." The Board noted that Anderson urged that movement of the link members relative to the rubber wiping element does not result in a force tending to cause the clamp means to move. However, the Board observed that the count does not require that the clamp must always be moved but only that the body or "unit" is free to slide with respect thereto.

Finding, as did the Examiner, that there is such freedom to slide in the wiper blade that Scinta discloses, the Board held that the application as filed supports the count. We find no error in that holding. The application specifically states that the side flanges or jaws on the clamp means "slidably embrace" the rubber blade or wiping element and the structure illustrated clearly does not bar such relationship.

Anderson's motion also advances the contention that Scinta's application lacks support for the count recitation of "a pair of transversely aligned grooves formed in the body," which body is the flexible rubber wiping means. It is in these grooves that the elongated flexible backing means or flexors are stated to be disposed. It is true that the Scinta sole structure differs greatly from Anderson's blade, the former employing a hollow rubber member of triangular cross-section with the flexors disposed at the top of the hollow portion against the flat inner top side thereof. However, there is a recessed shoulder below each end of the top side contacting the lower surface of the edge of the flexors. Thus, Scinta has means which receive and confine the edges of the flexors within the rubber members to conform to the broad requirement of the count which is met by the external grooves of Anderson. We thus agree with the Board that Scinta meets the recitation of aligned grooves in the count.

One final question raised by Anderson's motion to dissolve involves the contention that Scinta has no right to contest priority because no claim directed to the subject matter of the count was made in the Scinta application until more than one year subsequent to the date that the subject matter in issue was disclosed in printed copies of

Anderson's speech of October 1946, which copies have a publication date of November 1, 1946. The Board held that this question is not ancillary to priority and thus cannot be considered in these proceedings. We agree.

The present contention questions whether the count is patentable to Scinta but it does not affect the issue of whether Scinta is the prior inventor. **[12]** It is firmly established that such questions of patentability are not ancillary to priority and are not to be considered in deciding priority. *Hendrickson* v. *Ronning*, 22 CCPA 1040, 76 F.2d 137, 25 USPQ 42; *Loukomsky* v. *Gerlich*, 46 CCPA 805, 264 F.2d 907, 121 USPQ 213.

The decision of the Board in PA 6941 is affirmed.

In summary, the decisions of the Board awarding priority to Anderson in PA 6942 and 6943 are affirmed and the decision awarding priority to Scinta in PA 6941 is affirmed.

AFFIRMED.

MARTIN, *J.*, participated in the hearing of these cases but died before a decision was reached.

U.S. Court of Customs and Patent Appeals

EWALD A. KAMP *v.* JOHN J. HOUGHTALING

No. 7752. Decided May 11, 1967

[54 CCPA 1354; 376 F.2d 971; 153 USPQ 634]

1. INTERFERENCE—RIGHT TO MAKE—STRUCTURAL CAPACITY TO FUNCTION IS SUFFICIENT

"We do not consider that we are concerned with expressions of intention in Kamp's specification but only with *structure* disclosed and its *capacity* to function as described in the counts * * *."

REVERSED.

Olson, Trexler, Wolters & Bushnell, Richard R. Trexler (*Charles L. Sturtevant*, of counsel) for appellant.

Lawrence Greenapple for appellee.

Before WORLEY, *Chief Judge*, RICH, SMITH, and ALMOND, *Associate Judges*, and Judge WILLIAM H. KIRKPATRICK [1]

RICH, *J.*, delivered the opinion of the court.

Kamp, the senior party in Interference No. 93,983, appeals from the decision of the Board of Patent Interference awarding priority to Houghtaling on the ground that the three counts in issue are not supported by Kamp's reissue application.[2] The counts were copied from Houghtaling Patent No. 3,035,572,[3] count 1 verbatim and counts 2 and 3 in modified form.

The invention is a motor-driven, eccentric weight vibrator for attachment to coil-spring assemblies of furniture, such as beds and chairs.

The main issue is Kamp's right to make the counts. Substantially the same language is involved as to all three counts. That language is

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[1] Senior District Judge, Eastern District of Pennsylvania, sitting by designation.

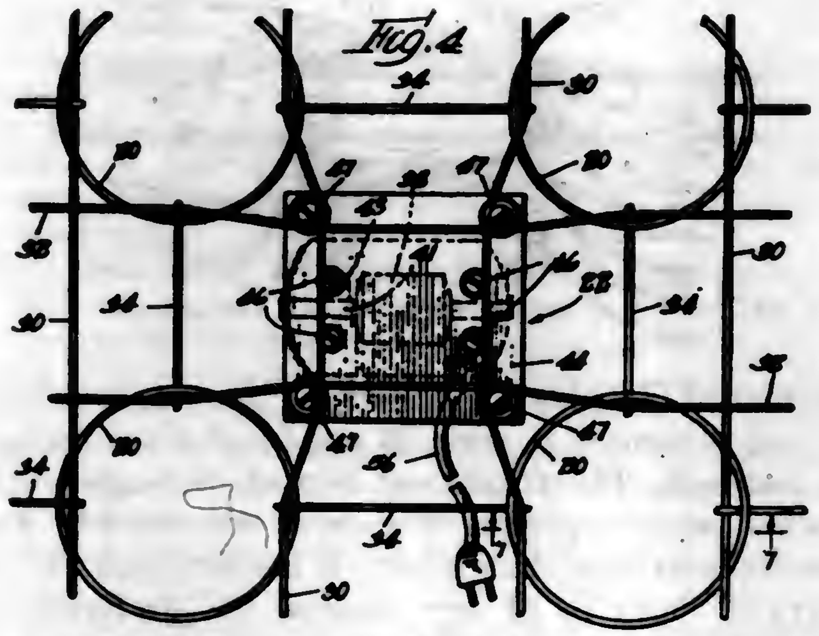
[2] Serial No. 280,173, for reissue of Patent No. 3,048,168, granted on application Serial No. 731,518, filed April 28, 1958.

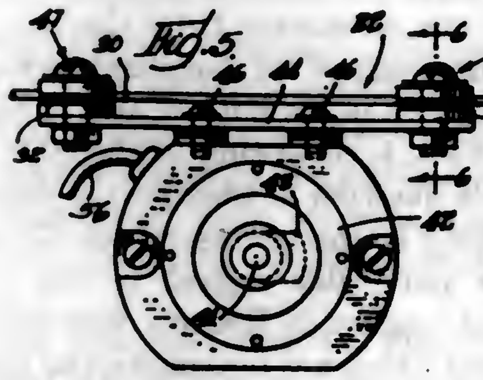
[3] Granted on application Serial No. 37,429, filed June 20, 1960. For a suit involving this patent, see *Magic Fingers, Inc.* v. *Auger*, 282 F. Supp. 372, 142 USPQ 207 (D. Me.), affirmed 339 F.2d 604, 144 USPQ 114 (1st Cir. 1964).

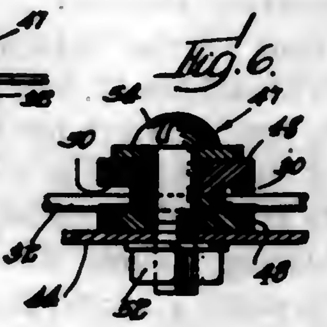
italicized in count 1 below, which was copied verbatim from the Houghtaling patent:

> *A vibrator for attachment* to the wires of coil spring construction of furniture and the like comprising a plate; an electric motor mounted on said plate with an output shaft; an eccentric weight mounted on said output shaft for rotation therewith; and a plurality of attaching means, each attaching means having *a slot with normally fixed opening space substantially equal to the thickness of the wire of said spring construction to be engaged thereby*, the attaching means being radially located relative to the center of said plate on a locus slightly greater than the distance between portions of wires to be engaged by said slots and the center of said plate when held in operating position by said wires, *so that said attaching means can be slipped over said wires which will spring into place in said slots* and thereby hold said vibrator in operating position.

Kamp's construction is shown in the figures of his drawings set out below:







In the drawings, 20 represents the coils of a box spring secured to its frame through means including parallel lateral connecting wires 30 and longitudinal connecting wires 32. An electric motor 38, having an eccentric weight 43 on its shaft is held suspended from a vibrator plate 44 by four spaced bolts 46. The vibrator plate is attached to the box spring at a location intermediate four adjacent coil springs by four spaced attachment means. Each attachment means comprises a split mount which includes a pair of mounting buttons 48, which buttons have contiguous portions of reduced diameter. The lateral and longitudinal connecting wires are located in the groove 50 formed by the buttons. The buttons are each held together by a nut and bolt 52 and 54, respectively, with the bolt extending through a hole in the vibrator plate 44 to attach the vibrator to the wires of the spring.

The Houghtaling constructions are shown in FIGS. 1, 3 and 4 as follows:

Fig. 1

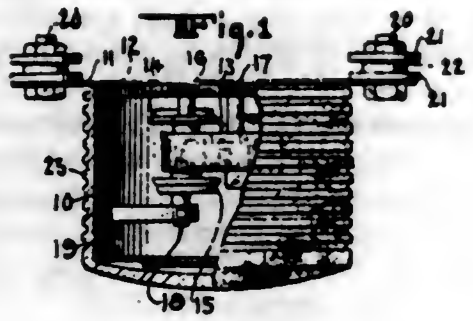


Fig. 4

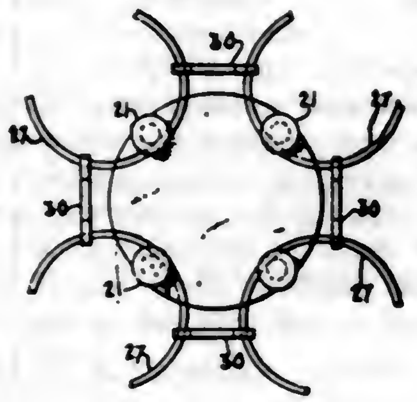
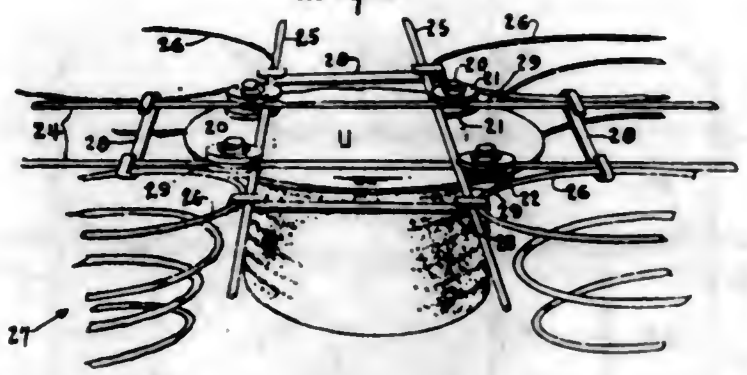


Fig. 3



The vibrator of Houghtaling is mounted below a mounting plate 11 which in turn is secured to wires 24 and 25 of a box spring between four adjacent coils. The attachment is made through bolts 20 fixed to the plate 11 and supporting washers 21 separated by a spacer 22 of smaller diameter than the washers. It is stated that the washers 21 and spacers 22 "may be of any material but preferably of sound deadening material such as a solid, non-metallic material."

The important elements of the structures from the standpoint of the legal issue are the "attaching means" of the counts which consist of Kamp's assemblies 47, best shown in his FIG. 6, and Houghtaling's assemblies, best shown in his FIG. 1, consisting of the bolts 20, washers 21, and spacers 22. The sole question is whether the definitions of these parts and their functioning in the counts, which all originated as Houghtaling claims, with particular regard to the words emphasized in count 1, supra, find support in Kamp's disclosure.

After Kamp copied the claims which are the counts, the interference was declared. Houghtaling filed no preliminary statement and hence was placed under an order to show cause, as junior party, why judgment should not be entered against him.

Houghtaling thereupon, by way of response, moved to dissolve the interference on the ground, inter alia, that Kamp has no right to make the counts by reason of the above-emphasized limitations. This motion, according to usual practice, was considered and decided by the Primary Examiner who filed a written opinion. Before him, Houghtaling made substantially the same arguments he is making here and also made before the Board. The Examiner's very lucid opinion states that Houghtaling urged granting of the motion since the following features are absent from the Kamp disclosure:

> (1) The Houghtaling device is intended to be installed in an existing coil spring unit whereas the Kamp device is installed at the factory.
>
> (2) Kamp does not have a slot with a normally fixed opening.
>
> (3) Kamp cannot meet the limitation, "so that said attaching means can be slipped over said wires which will spring into place in said slots and thereby hold said vibrator in operating position."

In ruling against the motion, the Examiner answered Houghtaling's arguments as follows:

> With respect to argument (1) it is the Examiner's position that whether the device is installed at the factory or elsewhere is immaterial since the counts do not restrict the locale of assembly. The broad recitation "for attachment" is clearly supported by the Kamp disclosure in which the mounting buttons shown in FIGS. 4 and 6 are shown connected to the coil spring construction to thereby satisfy the functional limitation that the vibrator of Kamp is "for attachment to the wires of coil spring constructions."
>
> With respect to argument (2) that Kamp does not show a slot with a normally fixed opening, it is the Examiner's position that this argument [is] clearly refuted by the showing of the slot 50 in FIGS. 4 and 6 of Kamp in which the free edges are shown to be unsupported and yet spaced from each other. Further, the draftsmen's symbol employed indicates that the material is plastic having substantial thickness which would inherently possess sufficient rigidity to support the relative phrase "normally fixed." In the Houghtaling disclosure, the washers and spacers 21 and 22 are described as being formed of "any material" but preferably of sound deadening material such as a solid, non-metallic material. Since plastics are obviously contemplated, it appears that the vibrator support elements of each party are substantially identical and therefore the broad limitation "normally fixed opening space" is held to be clearly readable on the disclosures of either party.
>
> With respect to argument (3) that the Kamp disclosure cannot support the functional limitation that the "attaching means can be slipped over said wires," it is the Examiner's position that FIG. 4 of Kamp clearly refutes this argument. The functional recitation "so that said attaching means can be slipped over said wires which will spring into place in said slots and thereby hold said vibrator in operating position" is predicated on the structural limitation set forth in the counts that the attaching means is (being) ["]radially located relative to the center of said plate on a locus slightly greater than the distance between portions of wires to be engaged by said slots and the center of said plate when held in operating position by said wires." The Kamp disclosure and specifically FIG. 4 supports the structural limitations set forth above and therefore inherently supports the functional statement dependent therefrom.

We agree with the reasoning of the Examiner, a person presumably familiar not only with the application and the patent here involved but with the related art generally.

Following the denial of the motion to dissolve, Houghtaling asked that the question of right to make, together with judgment on the order to show cause, be considered and determined by the Board at final hearing.

The Board disagreed with the Examiner and held that Kamp had not sustained the burden of providing his right to make the counts, making a pro forma award of "priority" to the junior party Houghtaling.[4] This appeal followed.

The Board summarized the views of the Examiner in the following passage from its opinion:

> In holding that Kamp could make the counts * * * the Primary Examiner held that (1) Kamp's invention includes "a vibrator for attachment," since it has mounting buttons for that very purpose, that (2) the slot 50 in FIGURES 4 and 6 of Kamp obviously has a normally fixed opening space substantially equal to the wire thickness which it receives, and that (3) since the functional statement at the end of the count is based upon the preceding structural limitations Kamp obviously can make it.

We agree with that summary. Nevertheless, the Board concluded, for reasons we do not agree with, that Kamp cannot make the counts.

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[4] The award of "priority" is pro forma because if the Board's decision on right to make is correct, then the interference would be dissolved and there being no interference, there is no proceeding in which "priority" can realistically be awarded to anyone.

The principal reason for the Board's conclusion appears to be that expressed as follows:

> We note first that there is nothing in his [Kamp's] disclosure that *indicates an intention* of supplying a vibrator having a combination of elements "so that said attaching means can be *slipped over* said wires which will *spring into place* in said slots and thereby hold said vibrator in operating position." [Emphasis ours.]

[1] We do not consider that we are concerned with expressions of intention in Kamp's specification but only with *structure* disclosed and its *capacity* to function as described in the counts, assuming the "so that" clause to be a limitation of the count without necessarily deciding whether it is or not.

Having carefully studied the record, we agree with the Examiner and with appellant that the Kamp specification and drawings clearly disclose a structure in which the attaching means is one "having a slot with normally fixed opening space substantially equal to the thickness of the wire of said spring construction," as specified in count 1. We disagree with the Board in that we think the Kamp structure *is capable* of being slipped over spring wires which will spring into place in the slots, as specified in the "so that" clause. There is no limitation in the counts with respect to *two* wires simultaneously slipping into one slot, as shown in Kamp's drawings. For example, if Kamp's vibrator were to be mounted in a bedspring in the manner shown in Houghtaling's FIG. 4, supra, there would be only one spring wire to snap into each slot and the vibrator would surely be secured according to the functional as well as structural terms of the counts. Even as shown in Kamp's FIG. 4, it would be secured if either the pair of wires 32 *or* the pair of wires 30 snapped into the slots, without the other pair doing so, which would mean a single wire in each slot.

It is apparent from the drawings reproduced above that the mounting post assemblies 47 of Kamp and 20–22 of Houghtaling are so similar that anything one will do the other will do. The Board discusses the obvious fact that the space between the buttons 48 of Kamp will be variable until the assembly is completed by tightening the bolts 52, 54 and that he does not say when the bolts are tightened. We see no relevance in this consideration. The same is true of Houghtaling's disclosure. It would appear that both parties considered the structure and use of the mounting assemblies to be of such mechanical simplicity as not to require detailed explanation to those skilled in the art of assembling nuts, bolts, and washers since neither says much about them in his specification. Clearly when the bolts are tightened in either structure, a normally fixed opening results which will receive a spring wire.

We therefore hold that the counts are fully supported by Kamp and that he has a right to make them.

The only other issue in the case involves Houghtaling's argument that there is no interference in fact with respect to counts 2 and 3. Houghtaling's claims 2 and 4, of which those counts are modified copies, contain the following limitation:

> * * * each attaching means comprising a pair of *rigid* [insulating] washer means * * * to provide a slot with a [normally] fixed opening space * * *. [Emphasis ours.]

Kamp omitted "rigid" in copying those claims. The counts, therefore, are not so limited.

The Primary Examiner and the Board held that there was no distinction between the disclosures on this point. Houghtaling's disclosure describes the washers as "of any material but preferably of sound deadening material, such as a solid, non-metallic material." Kamp's FIGURE 6 shows the use of a plastic or synthetic resin. The term "rigid" is, of course, a relative term. In this context therefore, we agree with the Examiner and the Board that "rigid" is not a material limitation and that an interference in fact does exist with respect to counts 2 and 3.

Kamp, the senior party, is therefore entitled to the award of priority.

The decision of the Board is reversed.

REVERSED.

KIRKPATRICK, *J.*, dissenting.

In *Guyer* v. *Cramer*, 50 CCPA 1386, 318 F.2d 757, 138 USPQ 125, this court stated, with respect to the question of support for interference counts, that "the minimum legal requirement is that support for count limitations be clear." I think it far from clear that the Kamp reissue application supports the three limitations emphasized in the count as reproduced in the majority opinion.

The application does not disclose that the nut and bolt assemblies of the attaching means are tightened to provide fixed spaces between the washers before the wires of the coil spring construction are brought into their final position between the washers. There is thus no suggestion of a vibrator wherein each of the attaching means has a slot with a normally fixed opening space such as to permit attachment to the wires of a coil spring construction with the spring action required by the counts. Moreover, those features of the counts, which the record indicates were relied upon to obtain their allowance in the Houghtaling patent, plainly are not inherent in the Kamp disclosure. See also *McKee* v. *Noonan*, 24 CCPA 784, 86 F.2d 986, 32 USPQ 44.

It seems to me that the majority has stretched the language of the counts and gratuitously attributed to Kamp the basic concept embodied in that language. Such treatment is not sound even as a means of protecting Kamp, as senior party, from losing protection for something he might have previously overlooked claiming. Under Rule 257 of the Patent Office, a senior party who loses an interference on the basis that he lacks support for particular recitations in a count is not thereby precluded from obtaining allowance of any broader claims which he can support and are otherwise patentable.

I would affirm the Board's decision.

PATENT SUITS

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2,690,518, Fyler and Rowe, COLOR PICTURE TUBE; 3,179,836, J. Giuffrida, COMPENSATOR FOR EARTH'S MAGNETIC FIELD BY COLOR DOT DISPLACEMENT; 3,222,172, same, METHOD FOR MAKING COLOR TELEVISION PICTURE TUBES, filed Feb. 8, 1968, D.C. Mass. (Boston), Doc. CA68–119–C, *Columbia Broadcasting System* v. *Lechmere Tire and Sales Company.*

2,715,231, O. F. Marston, FLEXIBLE BUOYANT ARTICLE, filed Aug. 21, 1967, D.C. Va. (Richmond), Doc. 5390, *Oliver F. Marston* v. *Henrico Furniture Co., Inc.* Held claims 1 and 2 of patent are good and valid in law; defendant has infringed claims 1 and 2; defendant, Henrico Furniture Company, Inc., its workmen, agents, attorneys, servants, associates and employees, and each of them, be, and they are hereby perpetually restrained and enjoined from directly or indirectly infringing upon claims 1 and 2 of said patent, Feb. 9, 1968.

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3,179,836. (See 2,690,518.)

3,196,506, Operhall, Schwartz and Van Scholk, METHOD OF MAKING A SHELL MOLD BY LOST WAX PROCESS, **filed** Feb. 12, 1968, D.C., N.D.N.Y. (Utica), Doc. 68–CV–50, *Howmet Corporation* v. *Cast Technology Incorporated.*

3,222,935. (See 3,126,683.)

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3,272,172. (See 2,690,518.)

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REISSUES

JUNE 25, 1968

Matter enclosed in heavy brackets [ ] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

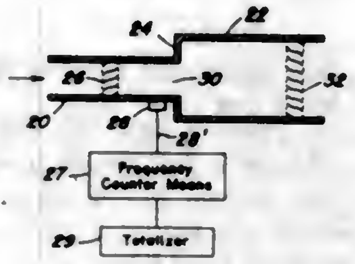
26,410

PRECESS FLOW METER

Robert C. Chanaud, West Lafayette, Ind., assignor to American Radiator & Standard Sanitary Corporation, New York, N.Y., a corporation of Delaware

Original No. 3,279,251, dated Oct. 18, 1966, Ser. No. 316,640, Oct. 16, 1963. Application for reissue Mar. 20, 1967, Ser. No. 626,640

24 Claims. (Cl. 73—194)



A fluid flow meter in which a fluid is caused to precess at a rate which is related to the flow rate of the fluid. The fluid is first caused to swirl by means of a fixed deflector such as a blade and then the swirling fluid is caused to precess by subjecting the fluid to an expansion. A sensor which is responsive to the fluctuations of a fluid parameter such as pressure, temperature, velocity or the like, is used to indicate the rate of precession.

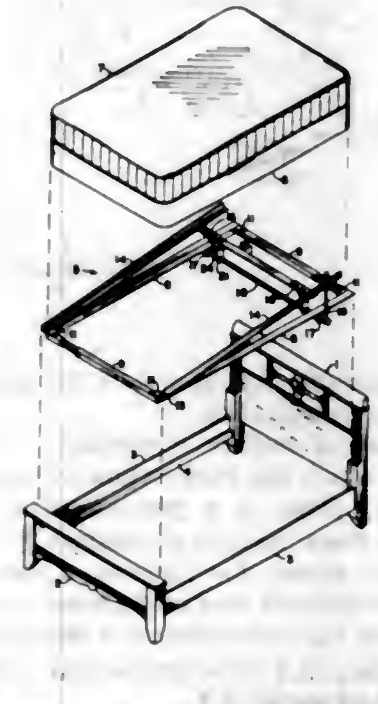
26,411

TILTING ACCESSORY FOR STANDARD BED AND TILTING HOLLYWOOD BED FRAME

James Samuel Alsobrook, Jr., Fairyland, Ga., assignor to ADX Corporation, Chattanooga, Tenn., a corporation of Tennessee

Original No. 3,259,921, dated July 12, 1966, Ser. No. 428,338, Jan. 27, 1965. Application for reissue Aug. 22, 1967, Ser. No. 663,457

11 Claims. (Cl. 5—62)



A tilting accessory for a standard bed and a tilting Hollywood type bed frame formed with a pair of rails which are raised and lowered at one end by a lever mechanism in order to elevate one end of the bedding supported thereon with respect to the other end.

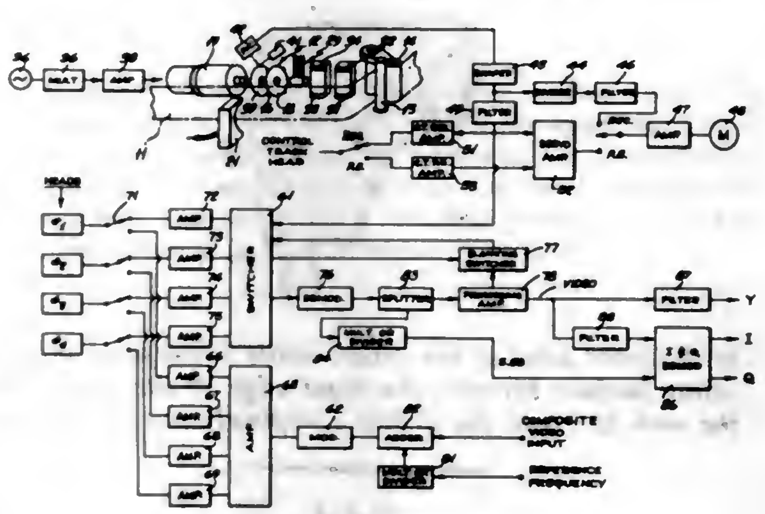
26,412

VIDEO RECORDING SYSTEM AND METHOD

Ray M. Dolby, Louis J. Kabell, Howard E. Murphy, and Harold L. Walsh, by Ampex Corporation, Redwood City, Calif., a corporation of California, assignee

Original No. 3,095,472, dated June 25, 1963, Ser. No. 739,051, June 2, 1958. Application for reissue May 16, 1967, Ser. No. 664,893

10 Claims. (Cl. 178—5.4)



A video recording system is provided which includes means for reducing frequency and/or phase errors in a reproduced color video signal introduced by changes in relative speed between a transducing head and the recording medium during reproducing as compared to recording. A pilot signal is recorded upon the recording medium simultaneously with a signal which has been modulated with the composite color video signal. During reproduction, the pilot signal, which possesses similar frequency and/or phase errors to those in the chrominance signal, is separated from the modulated signal. The pilot signal is then used to cancel the frequency and/or phase errors in the chrominance signal so that the chrominance signal is substantially free of hue error.

26,413

FORMING METHOD

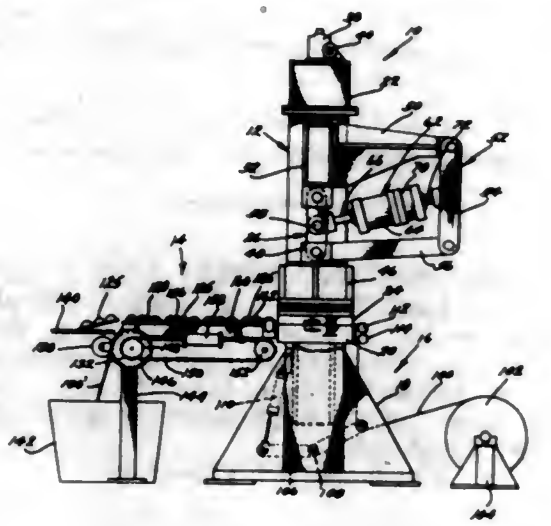
Raymond S. Keyes, Kalamazoo, Mich., by Kirkhof Manufacturing Corporation, Grand Rapids, Mich., a corporation of Michigan, assignee

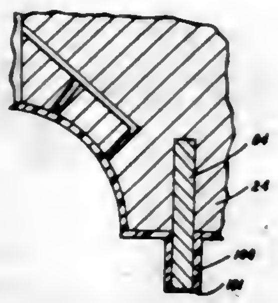
Original No. 3,190,946, dated June 22, 1965, Ser. No. 356,348, Mar. 13, 1964, which is a division of Ser. No. 160,057, Dec. 18, 1961. Application for reissue June 27, 1966, Ser. No. 615,856

(Filed under Rule 47(b) and 35 U.S.C. 118)

4 Claims. (Cl. 264—89)

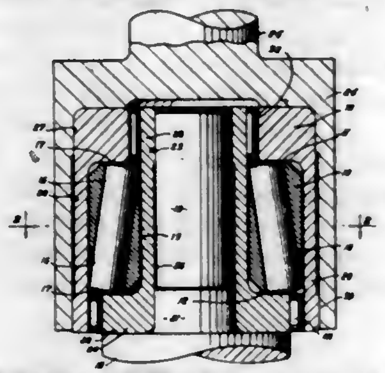
A method of forming separate, individual, three-dimensional, plastic articles from a generally continuous plastic web or sheet by first forcibly forming the articles into the web, preferably by pressing a peripheral blade into peripheral sealing engagement with the web and applying a pressure differential across the web within the confines of the blade, when the web is heated, then pressing the *peripheral blade further into the web around the article to crease it but not sever it, then conducting the cooling web and article in a non-linear path to break the brittle crease at the front edge of the article while introducing a separating surface between the front edge of the article and the web to break the article completely out of the web.*





26,414
ANTI-FRICTION BEARINGS

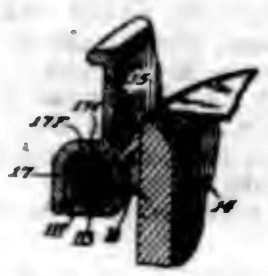
John D. Hamaker, 10126 S. 27th St.,
Oak Creek, Wis. 53154
Original No. 3,194,618, dated July 13, 1965, Ser. No. 283,256, May 27, 1963. Application for reissue May 17, 1967, Ser. No. 646,749
19 Claims. (Cl. 308—231)



1. An anti-friction load-sustaining bearing including a plurality of elongated roller-shaped bearing members of circular cross-section having substantially spherical bearing load-sustaining end bearing faces on each end for carrying substantially the entire bearing load, the end faces having a general radius of curvature of the magnitude of one-half the axial length of the bearing members, the bearing members being of much greater length than diameter, a cage member for the bearing members of generally ring shape having end faces and an axial bore forming an internal face, the cage member having an outer longitudinal face and a plurality of bearing bores receiving the bearing members in rotatable relationship, the bearing bores being inclined at an oblique angle with respect to one axis of the cage member and opening through opposed faces of the cage member, the bearing bores having axial lengths less than the axial lengths of the bearing members.

26,415
DRUMHEAD CONSTRUCTION

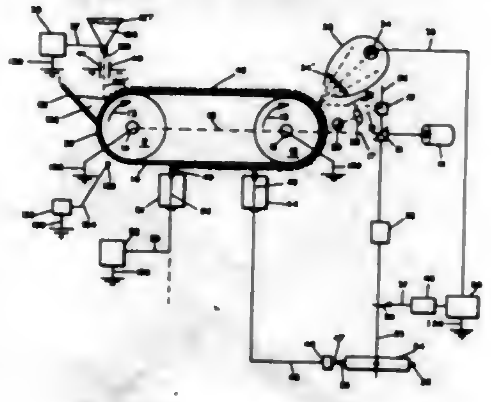
William Fredrich Ludwig, Chicago, Ill., assignor to Ludwig Drum Co., a corporation of Illinois
Original No. 2,979,981, dated Apr. 18, 1961, Ser. No. 44,929, July 25, 1960. Application for reissue Oct. 23, 1965, Ser. No. 506,146
7 Claims. (Cl. 84—411)



An adhesive-free drumhead construction comprising a pair of nested inner and outer rings of conforming, generally rectangular cross-section, the outer of said rings having a channel with a full length access opening in a direction generally normal to the plane of the ring for receiving the margin of a plastic drumhead sheet spanning said ring, the marginal edge flange of the sheet lining and in direct contact with the walls of the channel, the outer ring having initially a longer outer wall the free edge portion of which projects radially inwardly over the inner ring and overlies the marginal edge flange of said drum sheet to establish said rings in tight fit compressional engagement exerting clamping pressure against said marginal edge flange of said drum sheet and thereby gripping the same against slippage even when the drumhead sheet is subjected to high tension shock loads.

26,416
EXAMINING-SORTING SYSTEMS

Daniel Silverman, 5969 S. Birmingham,
Tulsa, Okla. 74105
Original No. 3,187,893, dated June 8, 1965, Ser. No. 184,282, Apr. 2, 1962. Application for reissue June 7, 1966, Ser. No. 562,046
35 Claims. (Cl. 209—111.7)



1. An examining-sorting system for granular materials comprising in combination

[(1) a moving surface, comprising a surface of rotation for which the intersection of said surface with a diametral plane is a portion of a circle, concave outward from the axis of rotation,]

(*1*) *surface means for forming a moving two-dimensional monolayer array of granular materials,*

[(2) means for removably and temporarily holding to said surface in a two-dimensional array a multiplicity of grains of material,]

(*2*) *means for removably and temporarily holding a multiplicity of grains of material in said monolayer array,*

(3) said two-dimensional array of grains comprising substantially a pattern of columns and rows, said columns being oriented substantially in the direction of *travel of said array* [motion of said surface] and said rows being oriented substantially perpendicular to the direction of *travel of said array* [motion of said surface],

(4) inspection means for examining sequentially each grain in a row and sequentially each row over said *array* [surface] for at least one physico-chemical property,

(5) said inspection means *rotating in a plane substantially perpendicular to said array, and* adapted to scan along a line coincident sequentially with each of said rows of grains,

(6) *a single rotating* grain rejection [means comprising] electrophysical means for displacing *any grain in a row of grains* [at least one grain] of said material from said *array* [surface],

(7) said rejection means constrained to *operatively scan in a plane substantially perpendicular to said array, and* [operate] along a rejection line coincident sequentially with each of said rows of grains,

(8) said *rotating* inspection means and said *rotating* rejection means synchronized with each other *in their rotation* and with the movement of said *array* [surface],

(9) control means responsive to said *inspection* [inspecting] means,

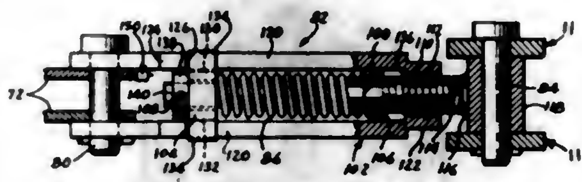
(10) said rejection means responsive to said control means,

(11) and means for removing all said grains from said *monolayer array* [surface],

whereby, when said inspection means finds a grain of anomalous property said control means will control said rejection means to remove said anomalous grain.

26,417
SHOCK ABSORBING LINKAGE MECHANISM

Louis G. Kaplan, Evanston, Ill., assignor to Cullen-Friestedt Company, Chicago, Ill., a corporation of Illinois
Original No. 2,959,411, dated Nov. 8, 1960, Ser. No. 704,385, Dec. 23, 1957. Application for reissue Aug. 7, 1967, Ser. No. 663,461
1 Claim. (Cl. 267—71)



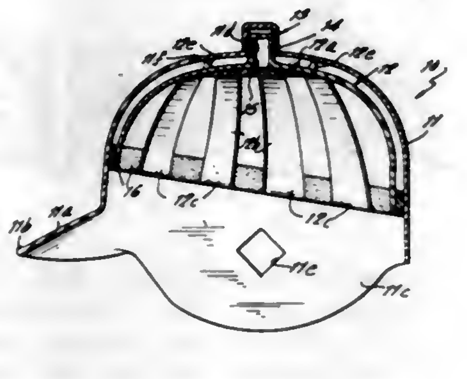
A shock absorbing, spring-biased, linkage assembly adapted for interpositioning between the opposed jaws of a lifter, the assembly being of an extensible and contractible nature and being spring-biased in both directions so that it will assimilate shock resulting from either an outside or an inside impact on either lifter jaw.

PATENTS

GRANTED JUNE 25, 1968

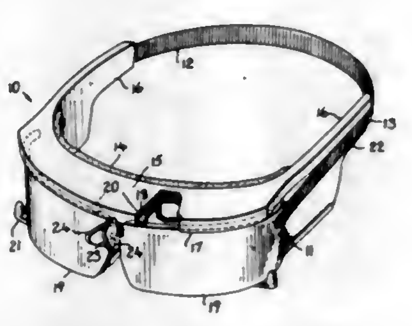
GENERAL AND MECHANICAL

3,389,405
HELMET HAVING RAPID HEADSIZE ADJUSTABILITY
Lazzaro A. Fattori, 84 Rose Ave.,
Woodcliff Lake, N.J. 07047
Filed Dec. 12, 1966, Ser. No. 601,101
5 Claims. (Cl. 2—3)



A protective headgear comprising a plastic molded outer protective shell and an inner relatively resilient head fitting and gripping member having a plurality of spaced free ended head gripping fingers extending radially and curved downwardly from a central portion. The latter coacts with the shell for expansion and contraction of the fingers for varying the headsize upon manual adjustment of a rotatable means located on the top of the shell.

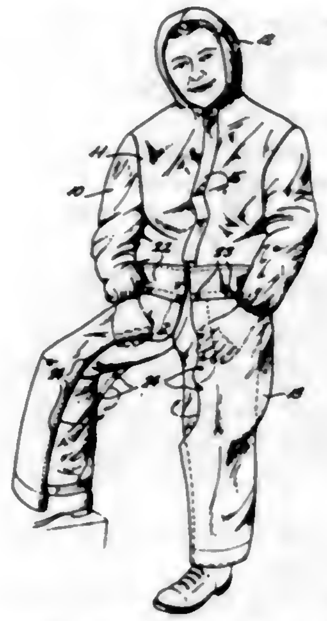
3,389,406
RETRACTABLE MUD VISOR FOR GOGGLES
Eugene V. Mitchell, 145 Arlington Ave.,
Toronto, Ontario, Canada
Filed July 28, 1966, Ser. No. 568,636
9 Claims. (Cl. 2—14)



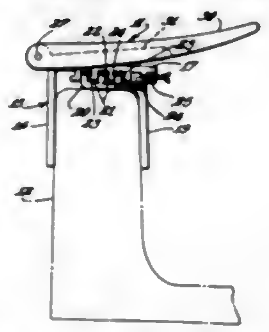
Goggles comprising a frame and an eye piece carried thereby are provided with a transparent shield which shields the eye piece and which can be quickly retracted. The shield comprises a pair of transparent visors slidable along a guide in the frame.

3,389,407
RAIN GARMENTS
Richard H. Morrison, 3239 S. 3rd W.,
Missoula, Mont. 59801
Filed May 26, 1967, Ser. No. 641,675
7 Claims. (Cl. 2—84)

A lightweight, waterproof garment including connected jacket, trousers and head covering parts and including compartments on the jacket part into which the head covering and trousers can be placed for storage.



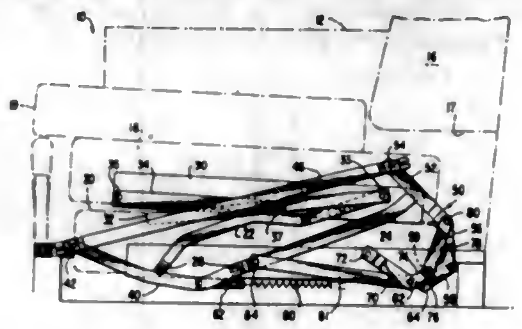
3,389,408
BATH TUB SEAT
August G. Pearson, 1162 Jeannette,
Des Plaines, Ill. 60016
Filed Feb. 21, 1966, Ser. No. 529,026
7 Claims. (Cl. 4—185)



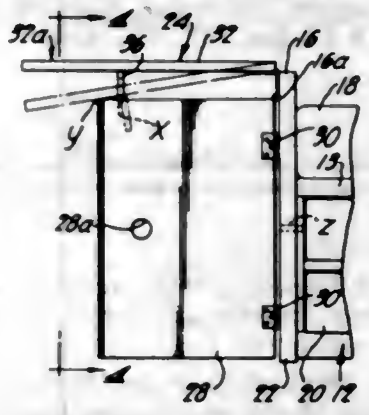
1. A bath tub seat adapted to fit over the side of a bath tub and the like comprising,
  a clamp resting on the top of a side wall of the tub and including two clamping parts relatively movable with respect to each other to clampingly engage the inner and outer sides of the side wall of the tub,
  a seat pivoted to one of said clamping parts for movement about an axis extending longitudinally of and above the tub and positionable about said longitudinally extending axis to extend over the tub for use and to depend along the outside of the tub when not in use.

3,389,409
SOFA BED
Walter C. Rogers, Jr., High Point, N.C., assignor to Royal Development Company, Inc., High Point, N.C., a corporation of North Carolina
Filed Nov. 23, 1966, Ser. No. 596,651
28 Claims. (Cl. 5—17)

In a sofa bed having two mattress sections which are movable between overlying, fully retracted positions for use as a sofa, and extended side by side positions for use as a bed; a linkage system which mounts the mattress sections relative to the sofa bed frame such that the mattress sections swing together in generally overlying relationship into or out of their fully retracted positions at an angle to the horizontal.

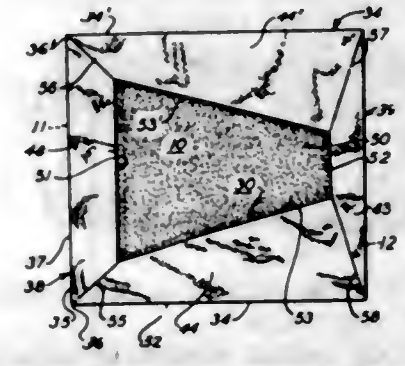


3,389,410
CHEST BED
John G. Weigel, 10334 Mull Ave.,
Riverside, Calif. 92505
Filed Mar. 11, 1966, Ser. No. 533,487
3 Claims. (Cl. 5—308)



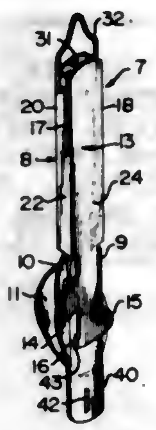
A chest bed comprising a box-like frame suitable for the support of a polyurethane mattress for sleeping purposes and having built-in drawers for the storage of clothing, or the like, in the space underneath the mattress. The chest bed has a folding desk attached to at least one of its end boards which can be folded flat thereagainst when not in use and opened to provide an outwardly extending writing and drawing surface as the need arises.

3,389,411
COVER FOR FOAM WEDGE
William M. Emery, 44 Pittsford Way,
New Providence, N.J. 07974
Filed Apr. 7, 1967, Ser. No. 629,296
7 Claims. (Cl. 5—339)



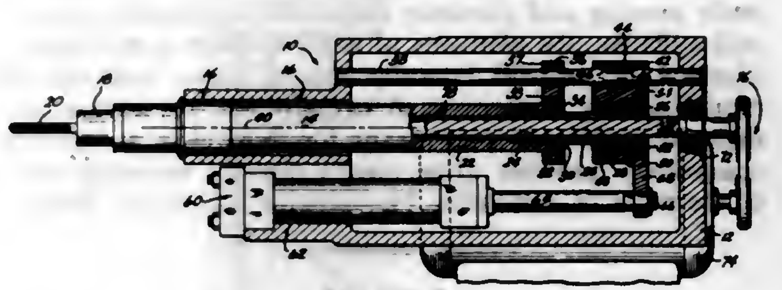
A slip-on cover for a wedge of plastic-like foam to utilize its high coefficient of friction to maintain its stability while sleeping, providing simplified design therefor utilizing the inflexibility and flexibility portions of said wedge and the selvage edges of the cover material and an undersize trapezoidal opening to both insert and expose said foam.

3,389,412
CUTLERY UTILITY ASSEMBLY
Jack D. Emmons, Waco, Tex., assignor to
Leo Bradshaw, Waco, Tex.
Filed May 31, 1966, Ser. No. 554,158
13 Claims. (Cl. 7—14.25)



A combination knife, fork, spoon and container opener is provided, which may be assembled as a compact unit, with various of the members being held together in locking engagement. The container opener has a handle portion and bottle and can opener portions. The handle portion of the container opener receives the handle of each of a fork and spoon, and the blade of a knife. Fork prongs are received within the bowl of a spoon, and the forward tip of the spoon bowl is engaged against a groove in the handle of a knife. Means are provided for lockingly engaging the handle of the knife with the container opener, utilizing the resilence of the members, particularly the spoon to maintain the members in a desired engagement. Means are also provided for locking the spoon against lateral movement within the handle of the container opener. The container opener handle portion is constructed of sheet metal, into a box-like configuration and has a drainage opening at one end thereof, adjacent means for facilitating the hanging of the container opener. The can opener portion of the container opener is adapted to be engaged within slots in the handles of each of the knife, fork and spoon, to facilitate the sterilization thereof.

3,389,413
SINGLE SPINDLE TAP UNIT
Johannes L. van den Kieboom, Mount Clemens, Mich., assignor to La Salle Machine Tool, Inc., Warren, Mich., a corporation of Michigan
Filed July 11, 1966, Ser. No. 564,261
6 Claims. (Cl. 10—139)

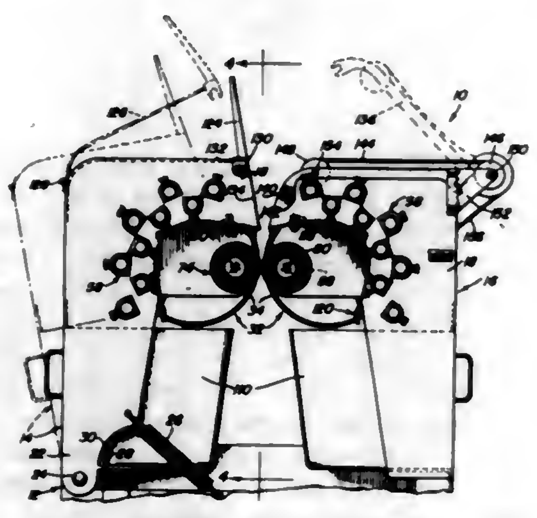


1. A single spindle tap unit comprising a support, a spindle adapted to have a tapping tool attached thereto and rotatably mounted on said support for rotation about an axis, guide means carried by said support and disposed parallel to said axis, nut means guidably mounted on said guide means and arranged in a coaxial relation with said spindle, screw means secured to said spindle and threadably supported in said nut means, a drive shaft for said

spindle arranged in a telescoping relation therewith and operable upon rotation to rotate said screw means in said nut means so as to advance said spindle with respect to said nut means, and means mounted on said support and connected to said nut means providing for translatory movement of said nut means on said guide means to move said spindle along said axis.

3,389,414
AUTOMATIC MEAT HANDLING AND CLEANING MACHINE

Herman F. Russell, 13900 Cherrylawn St.,
Detroit, Mich. 48238
Filed Sept. 30, 1966, Ser. No. 583,206
15 Claims. (Cl. 15—3.17)

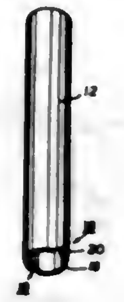


1. A meat cleaning machine for receiving and automatically cleaning a cut of meat, said machine including a support structure, meat gripping and moving means movably mounted on said structure for engaging a cut of meat and moving the meat along a specific path through said structure, and means mounted on said structure for engaging and cleaning the meat at it is moved along the path, said gripping and moving means comprising a pair of opposed gripping members in facing relation to each other on opposite sides of said path, the facing portions of said gripping members being movable in a common direction along said path, said cleaning means comprising a pair of cleaning members mounted outward of the facing portions of said gripping members and projecting inward thereof into said path, and means for adjusting the amount of projection of said cleaning members into said path, said opposed gripping members defining elongated cylinders, each of said cylinders comprising a plurality of spaced wire-like elements, and means for simultaneously moving said elements about the longitudinal axis of said cylinder, the elements of each cylinder comprising a plurality of coaxial laterally spaced rings, and means mounting the rings of each cylinder for rotation about their common axis, said means for moving said elements comprising movable drive means directly engaging each of the rings of a cylinder for inducing a rotation thereof.

3,389,415
CHIP REMOVING TOOL

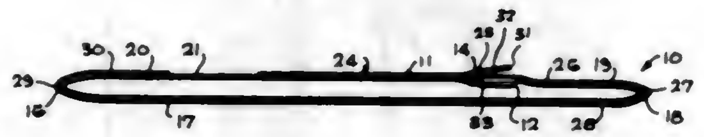
August J. Heisler, Jr., 525 Pines Lake Drive E.,
Wayne, N.J. 07470
Filed Apr. 13, 1966, Ser. No. 542,402
6 Claims. (Cl. 15—104)

A tool for removing the chips produced in the tapping of blind holes in metal, plastic, etc., in which the tool is a tubular member having a relatively thin wall such as thirty to sixty thousandths of an inch in thickness. The tool is made of a length sufficient to reach the bottom of the hole being tapped. The outside diameter of the tool is a few thousandths of an inch smaller than the root diameter of the hole being tapped, and the entering end of the tool is formed with a non-cutting chamfered or notched edge adapted to engage the grouping of spring-like chips and direct them into the interior of the tool as the tool is rotatably advanced to the bottom of the hole being tapped.



3,389,416
LINT REMOVER

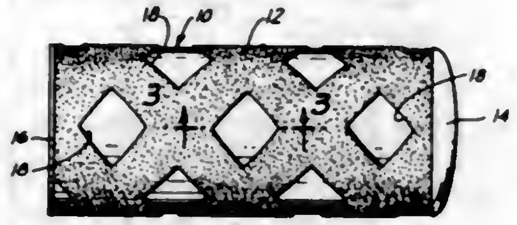
Leon M. Timms, 636 Amherst Drive,
Burbank, Calif. 91504
Filed Oct. 28, 1966, Ser. No. 590,321
10 Claims. (Cl. 15—104)



A lint remover formed of two superimposed strips of paper or other sheet material secured in a condition forming a loop into which the fingers of a user may be inserted, with the outer strip of paper being removable from the inner strip to expose adhesive thereon which can then be brought in contact with a garment or the like to remove lint from the garment. Preferably, the two strips of paper have edges at corresponding first ends of these strips which are received between two edges formed at the opposite ends of the strips, in a manner adhesively securing the strips in the desired loop form, and leaving an end of the outer strip free of contact with any of the adhesive to serve as a pull tab for removing the outer strip from the inner strip.

3,389,417
PIPELINE SWIPE

Mary M. Knapp, 1209 Hardy St. 77020, and Harry J. Girard, 1947 W. Gray 77003, both of Houston, Tex.
Filed Oct. 7, 1966, Ser. No. 585,156
6 Claims. (Cl. 15—104.06)



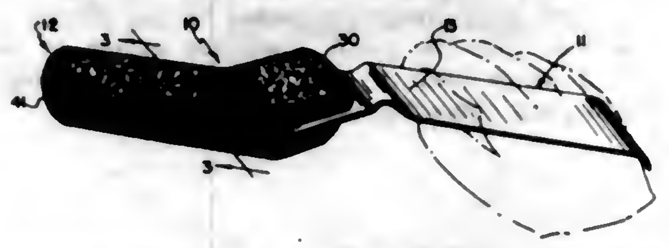
1. In a pipeline swipe adapted to be propelled through a pipe by a pressure gradient

a cylindrical body formed of resilient material, and

a covering for said body having portions extending continuously about the periphery of the body to form a seal between the body and the surrounding wall of a pipe, said covering having spaced apart openings through which the body may expand into contact with the pipe upon longitudinal compression of the body.

3,389,418
APPLICATOR AND MASSAGE DEVICE

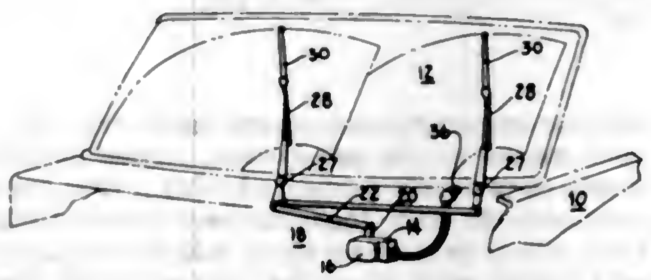
Dwight M. Sencabaugh, 15319 Edgewater Drive,
Lakewood, Ohio 44107
Filed Oct. 1, 1965, Ser. No. 492,029
3 Claims. (Cl. 15—244)



An applicator has a body member for holding a compressible applicator member. The body member has a slot therethrough with at least one enlarged portion and restricted portion and a barb for retaining the applicator member.

3,389,419
WINDSHIELD WIPER

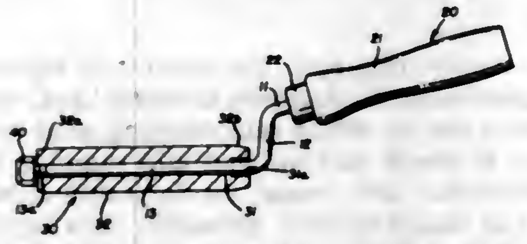
John R. Oishei and Frederick R. Weymouth, Jr., Buffalo, N.Y., assignors to Trico Products Corporation
Filed Aug. 27, 1965, Ser. No. 483,040
6 Claims. (Cl. 15—250.12)



A clutch transmits rotary motion from a rotating motor output to oscillating motion in a pair of windshield wiper arms when the motor is rotated in one direction and intermittent oscillating with a dwell period at the end of each cycle when the motor is rotated in the opposite direction. During intermittent dwell operation, a cam associated with a Geneva wheel maintains the clutch disengaged during dwell periods. The Geneva wheel indexes the cam in response to motor rotation. A manual control switch having a park position, a continuous run position and an intermittent dwell position is provided; it includes an elongated contact between the park position and the intermittent dwell position to assure operation of at least one cycle in the continuous run position prior to switching to intermittent dwell.

3,389,420
JOINTER WITH REPLACEABLE FINISHING MEMBER

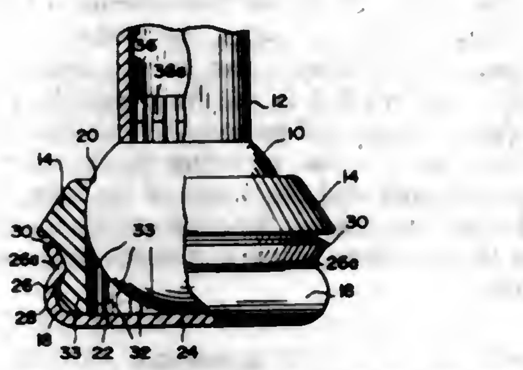
Ronald W. Pryor, 2839 12th St.,
Cuyahoga Falls, Ohio 44223
Filed May 17, 1966, Ser. No. 550,802
4 Claims. (Cl. 15—235.3)



A mason's tool comprising a generally S-shaped support member with a handle on one leg of the support member and a replaceable finishing member freely journaled on the remaining leg of the support member.

3,389,421
FURNITURE GLIDE

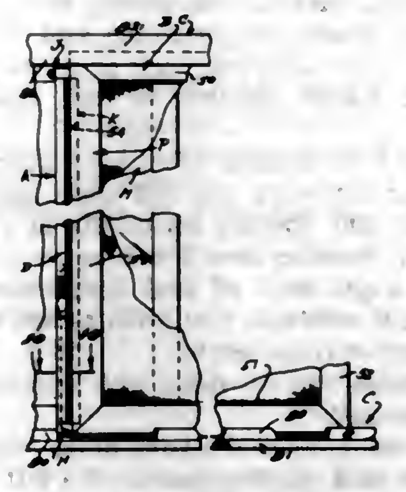
Kenneth L. Wheeler, Kalamazoo, Mich., assignor to Brunswick Corporation, a corporation of Delaware
Filed May 17, 1966, Ser. No. 550,723
8 Claims. (Cl. 16—42)



A furniture glide for use in connection with a leg of furniture to permit the furniture to be tilted while in contact with a supporting surface. The glide includes a ball member adapted to be secured to the end of the furniture leg and received in a socket member permitting universal movement. A floor engaging shoe member is secured solely about the bottom of the socket member and the socket member has a bottom opening located to permit the ball to rest on the central portion of the shoe member so that thrust from the furniture is transmitted directly to the shoe. The socket member has resilient fingers which permit the shoe member to be snap fitted into the socket. In one form of the invention, the ball member has an interior cavity for receiving a slightly enlarged portion at the end of the furniture leg with the ball member having resilient fingers about the mouth to permit the enlarged leg end to snap fit into the cavity. In another form of the invention, the ball has an annular groove extending into the interior thereof for wedgingly receiving a tubular furniture leg, the annular groove forming a central shank portion which extends into the tubular leg.

3,389,422
SPRING MOTOR DOOR CLOSER

Edward R. Glenn, Costa Mesa, Calif., assignor to Fabmagic, Inc., Santa Ana, Calif., a corporation of California
Filed Oct. 22, 1965, Ser. No. 500,588
12 Claims. (Cl. 16—78)

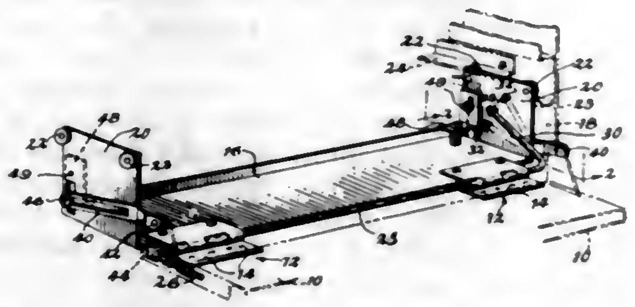


A spring motor including, an elongate tube, an anchor block engaged in and closing one end of the tube, a guide block engaged in the other end of the tube, an elongate, helical tension spring arranged in and extending longitudinally through the tube and having one end coupled with the anchor block, a traveling block slidably engaged in the tube and coupled to the other end of the spring, and an elongate tow line having one end fixed to the guide block, extending longitudinally in the tube through the traveling block, thence longitudinally through the tube and the guide block to the exterior of the tube, and governing means to buffer the action of the spring including, an air bleed valve in the anchor block and a valve means related to the traveling block and which is operable to open and permit the free flow of air through the tube and by the traveling block when the block is moved towards said other end of the tube, and to prevent the flow of air through the tube and by the traveling block when the traveling block moves towards said one end of the tube.

3,389,423

CLOSURE HINGING AND COUNTERBALANCE DEVICE

John H. Johnson, Jamestown, N.Y., assignor to Art Metal, Inc., Jamestown, N.Y.
Filed Oct. 20, 1965, Ser. No. 498,925
1 Claim. (Cl. 16—75)



A cradle and a drawer slidably mounted in a cabinet, the cradle carrying a closure panel for the drawer opening and movable between horizontal and vertical positions. The closure panel is mounted on the cradle by a torsion spring to allow the cradle and horizontally swung closure panel to clear the drawer.

3,389,424

REVERSIBLE HINGES FOR REFRIGERATOR DOOR

Charles G. Fellwock, Evansville, Ind., assignor to Whirlpool Corporation, a corporation of Delaware
Filed Nov. 14, 1966, Ser. No. 593,802
9 Claims. (Cl. 16—170)

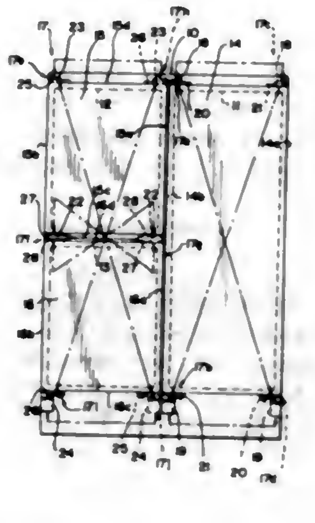
1. In a refrigerator structure having wall means defining opening means, and having door means, a reversible hinge system for mounting said door means on said wall means for selectively left or right-hand swinging of said door means relative to said opening means, comprising:

a first hinge butt defining a first pivot connector means; means for mounting said first hinge butt on said wall means at said opening selectively at a left position or a right position corresponding respectively to the left and right sides of said door means above the top thereof with said first pivot means being pivotally engageable from below;

a second hinge butt provided with a second pivot connector means;

means for mounting said second hinge butt on said wall means at said opening means at a left position or a right position corresponding to that in which said first hinge butt is mounted to the left or right side of said door means and below the bottom thereof with said second pivot connector means being pivotally engageable from above;

a first hinge leaf having a third pivot connector means; means for mounting said first hinge leaf on said door means at the left top thereof with said third pivot connector means thereof having pivotal engagement with the pivot connector means of said first hinge butt or at the right bottom of said door means with said third pivot connector means having pivotal engagement with the pivot connector means of said second hinge butt; a second hinge leaf having a fourth pivot connector means; and

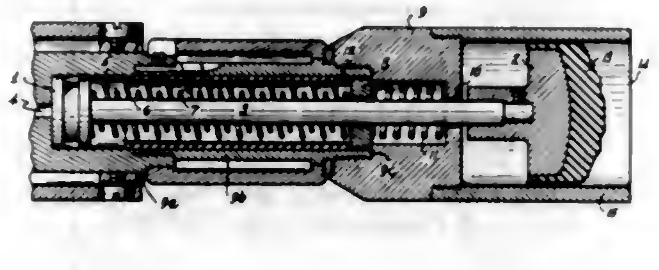


means for mounting said second hinge leaf on said door means at the left bottom thereof with said fourth pivot connector means having pivotal engagement with the pivot connector means of said second hinge butt or at the right top of said door means with said fourth pivot connector means having pivotal engagement with the pivot connector means of said first hinge butt.

3,389,425

DEVICE FOR SLAUGHTERING SMALL ANIMALS FOR FOOD

Pierre Michel Termet, Impasse Belloeuf, Lyon, Rhone, France
Continuation-in-part of application Ser. No. 388,528, Aug. 10, 1964. This application Aug. 19, 1966, Ser. No. 573,616
Claims priority, application France, Aug. 14, 1963, 944,795
6 Claims. (Cl. 17—1)

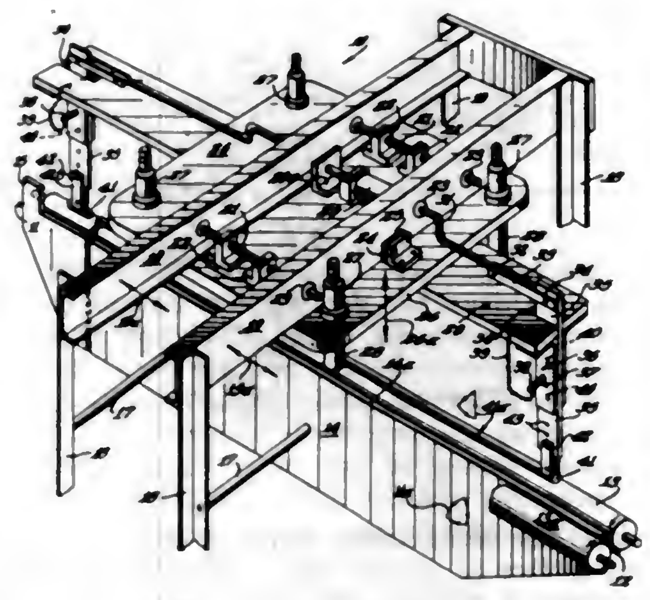


1. In a slaughtering pistol for small food animals, having a longitudinally displaceable stunning head, said pistol comprising a rod on which said stunning head is carried, a chamber in which said rod and said stunning head are slidably mounted, and means for forceably driving said rod and rod slaughter-head forwardly into impact with the skull of the animal, said stunning head being covered by a cushion of elastomeric material of sufficient thickness to produce on impact of stunning magnitude, a concussion devoid of structural damage to the skull of said animal.

3,389,426

SHRIMP PROCESSING MACHINE

Clyde J. Welcker and Roland L. Welcker, both of 1334–36 St. Bernard Ave., New Orleans, La. 70116
Continuation-in-part of application Ser. No. 536,690, Mar. 23, 1966. This application Nov. 29, 1966, Ser. No. 597,737
11 Claims. (Cl. 17—2)

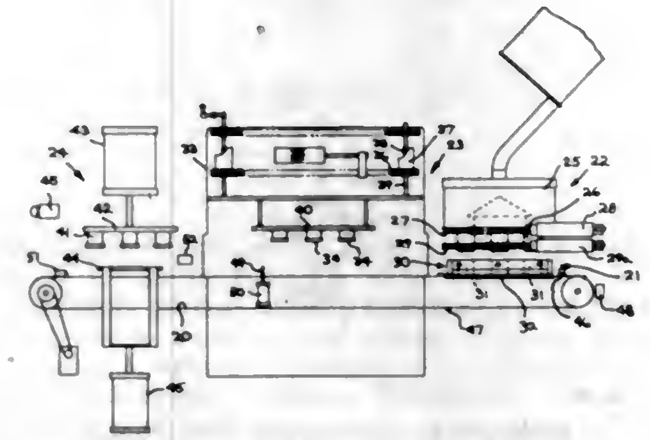


The present invention is directed to the concept of providing a method and apparatus for processing shrimp and like marine life wherein the outer shell and other inedible matter, including veins, are removed in a single operation by the cooperative effect of a pair of rollers, an undulating center plate and an opposingly undulating top impeller member. This abstract is intended only for the purpose of enabling the public to quickly determine from a cursory inspection the nature and gist of the present disclosure and the abstract shall not be used to limit or interpret the scope of the claims.

3,389,427

APPARATUS FOR MOLDING PREFORMS OF THERMOSETTING PLASTICS

Nathaniel R. Reyburn, Erie, Pa., assignor to Owens-Illinois, Inc., a corporation of Ohio
Filed Oct. 23, 1965, Ser. No. 503,420
18 Claims. (Cl. 18—4)

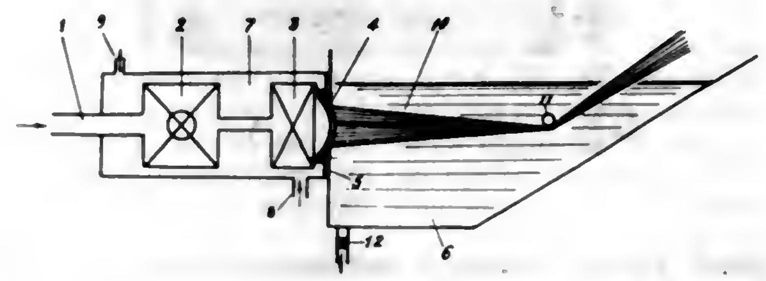


In the apparatus disclosed herein, predetermined charges of granular thermosetting plastic material such as melamine are fed to nonmetallic cavities which are subsequently heated, preferably by dielectric heating, while pressure is being applied to the charges to soften the material and thereafter are pressed in the cavities by the use of plungers having nonmetallic surfaces and stripped from the cavities. The resultant preforms are uniform in size and quality so that they can be used directly in a finished mold to produce the desired melamine article.

3,389,428

APPARATUS FOR THE WET EXTRUSION OF SOLUTIONS OF POLYMERS OF VINYL CHLORIDE EXHIBITING A HIGH DEGREE OF SYNDIOTACTICITY

Francesco Denti and Vittorio Rocco Viscontini, Mestre, Venezia, Italy, assignors to Chatillon Società Anonima Italiana per le Fibre Tessili Artificiali S.p.A., Milan, Italy
Filed Sept. 24, 1963, Ser. No. 310,992
Claims priority, application Italy, Sept. 27, 1962, 19,068/62
1 Claim. (Cl. 18—8)



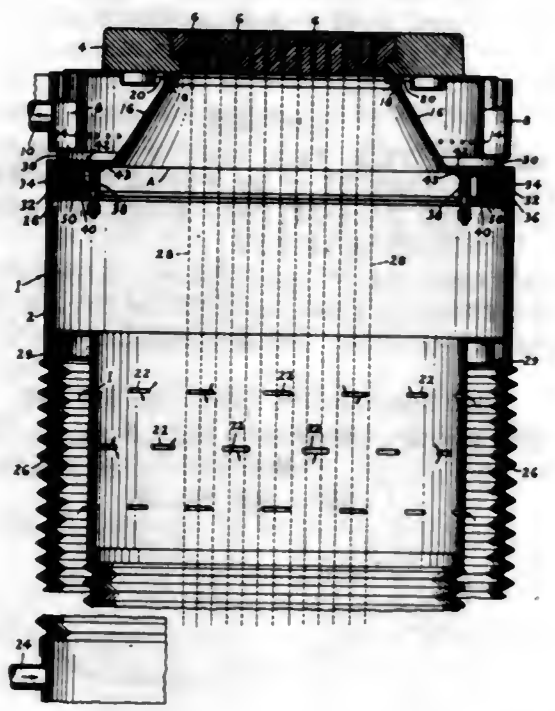
1. Apparatus for forming fibres, filaments and yarns by wet-spinning of solutions of polymers of vinyl chloride having a degree of syndiotacticity greater than 2, wherein the polymer solution must be maintained at a temperature higher than that of the coagulum bath, comprising a tank for holding the coagulum bath provided with an opening in its side wall; a sleeve fixed to said tank side wall and having an end in registry with the opening in said side wall; a metering pump for the spinning solution, a filter and a spinneret connected in sequence and enclosed by said sleeve with the spinneret directed to deliver the spinning solution through said opening in the tank side wall; means securing the spinneret in the end of said sleeve and in relation to the opening in the tank side wall so that the surface contact between the spinneret and coagulum bath is limited only to the external frontal surface of the spinneret; and means for circulating a heat transfer fluid through said sleeve in heat transfer relationship with said metering pump, filter and spinneret.

3,389,429

SPINNING APPARATUS

Everett Gray Montgomery, Hopewell, Va., assignor to Allied Chemical Corporation, New York, N.Y., a corporation of New York
Filed Sept. 13, 1966, Ser. No. 579,151
4 Claims. (Cl. 18—8)

Volatile materials such as monomer and oligomer vapors are removed from the vicinity of a spinneret employed for filament extrusion in an improved manner through the use of a frusto-conical baffle element having the smaller circumference end positioned from $\frac{1}{32}$ to $\frac{1}{2}$ inch from the spinneret whereby the flow of gas employed to remove the volatile materials is conveyed in equal distribution in the immediate vicinity of the filament extrusion and withdrawn through the space between said spinneret and said frusto-conical element adjacent to the spinneret face and downwardly through an intermediate chamber before being discharged into a plenum chamber maintained at a pressure lower than in the spinning chamber to facilitate the removal of said gas and volatile materials without creating a turbulent environment in the area of filament extrusion.



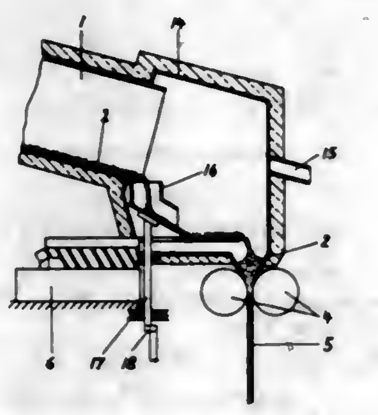
3,389,430
APPARATUS FOR DISTRIBUTING METAL PARTICLES OVER THE ROLL GAPS OF ROLLING MILLS

Eckard Gehring, Dusseldorf, Kaiserswerth, Karl-Heinz Bernhardt, Hilden, and Ulf Geier, Osterrath-Bovert, Germany, assignors to Schloemann Aktiengesellschaft, Dusseldorf, Germany, a German company

Filed Feb. 14, 1966, Ser. No. 526,990

Claims priority, application Germany, Feb. 15, 1965, Sch 36,540

2 Claims. (Cl. 18—9)



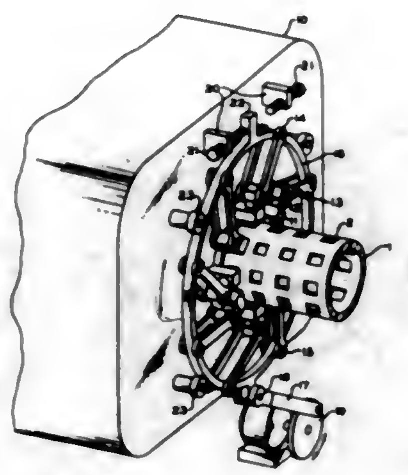
Apparatus for the uniform distribution of hot metal particles over the length of the roll gap of a rolling mill for the production of strips or sections from metal particles, wherein the metal particles are supplied to the roll gap by a preferably roof-shaped swinging conveyor channel or shaker-loader, arranged with its discharge end (the breadth of which corresponds to the roll breadth) above the roll gap, and a preferably wedge-shaped plate is mounted above the swinging conveyor channel, to limit the depth of flow of the particles.

3,389,431
THERMOPLASTIC ARTICLES AND PROCESS AND APPARATUS FOR MAKING SAME

Harold S. Kelly, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Filed Mar. 12, 1965, Ser. No. 439,181

2 Claims. (Cl. 18—14)



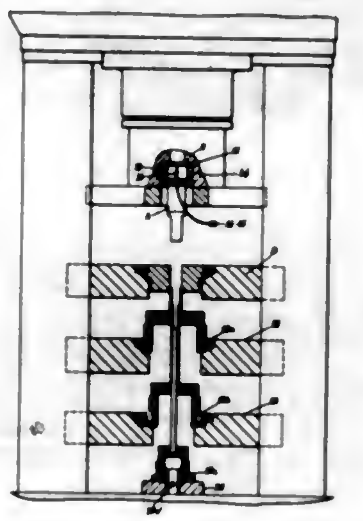
At least one reciprocating piston is positioned to contact the surface of an extruded article while the surface of the article is still in a deformable condition to cause an indentation in the surface. Various means are provided to actuate the piston or pistons, such as a rotatably reciprocating ring member with connecting bars between the ring member and the pistons.

3,389,432
LOAD INDICATING DEVICE FOR COMPACTING PRESS

Richard E. Griesheimer, Cincinnati, and Richard L. Cahall, Jr., Batavia, Ohio, assignors to The Cincinnati Shaper Company, Cincinnati, Ohio, a corporation of Ohio

Filed Apr. 18, 1966, Ser. No. 543,186

10 Claims. (Cl. 18—16.7)



1. In a multi-platen compacting press having a ram, a fixed die platen, and a plurality of load bearing floating die platens, means to measure the density being produced in the compacted workpiece in the annular portions thereof between the ram and each of said dies, comprising a transducer associated with said ram and a transducer associated with each of said load bearing die platens to sense the pressure exerted thereby, and means for indicating the pressure sensed by each of said transducers.

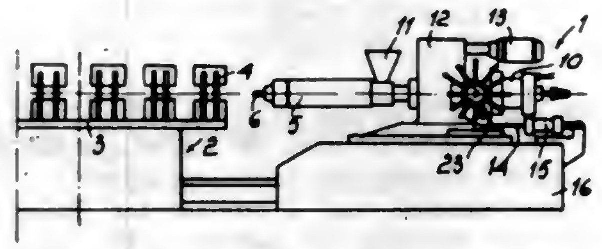
3,389,433
AUTOMATIC FEED METERING DEVICE FOR INJECTION MOULDING MACHINES

Dino Vicini, Milan, Italy, assignor to M.A.S. Hydraulic and Vulcanizing Machinery Co. S.r.L., Milan, Italy, a corporation of Italy

Filed Oct. 23, 1965, Ser. No. 503,616

Claims priority, application Italy, Feb. 9, 1965, 2,724/65, Patent 751,564

7 Claims. (Cl. 18—30)



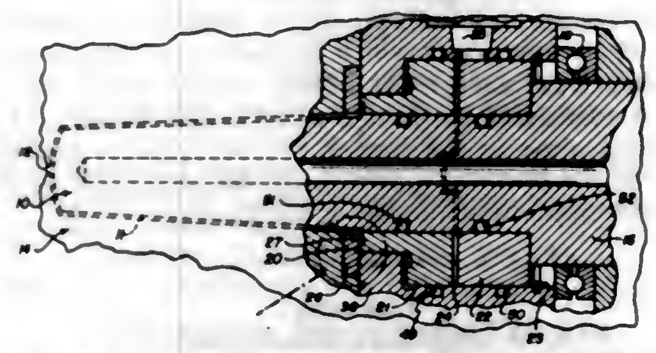
This disclosure relates to an injection moulding machine including an injection unit and a plurality of movable moulds, wherein the moulds are alternatively brought in the reach of the injection unit and wherein the injection unit has a cylinder and a piston by means of which the filling and the injection operations are performed and wherein the injection unit may be moved towards and away from the moulds. The machine comprises limit switches controlling the movement of the injection unit and the filling thereof.

3,389,434
MECHANICAL SEAL FOR USE IN MOLDING APPARATUS

Kenneth J. Cleereman, Midland, and Edward R. Sederlund, Saginaw, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Continuation-in-part of application Ser. No. 501,713, Oct. 22, 1965. This application Sept. 20, 1966, Ser. No. 580,697

11 Claims. (Cl. 18—42)



In plastic molding apparatus wherein one mold element rotates, a mechanical seal comprising a rotating seal element and a stationary seal element, the seal being separated from the mold cavity by a reservoir and an annular gap leading into said reservoir.

3,389,435
APPARATUS FOR OPENING BALES OF FIBRES AND IN PARTICULAR FOR OPENING COMPRESSED AND UNTREATED BALES OF FIBRES

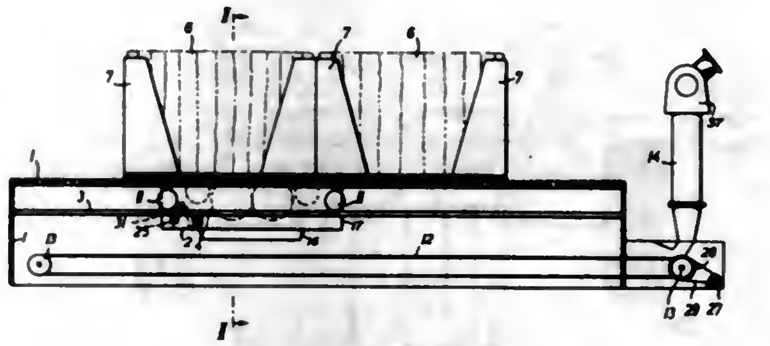
Bruno Schwab, Dulmen, and Günter Eckrodt, Coesfeld, Germany, assignors to Hergeth K.G., Maschinenfabrik und Apparatebau, Dulmen, Westphalia, Germany, a corporation of Germany

Filed Sept. 15, 1964, Ser. No. 396,547

Claims priority, application Germany, Sept. 21, 1963, H 50,329

8 Claims. (Cl. 19—80)

1. An apparatus for removing fibres from bales of fibre material, comprising in combination, a fixed frame adapted to support at least two bales of fibre material, a carriage reciprocally movably mounted in said fixed frame, fibre removing means operatively mounted on said carriage and adapted to engage the bottom layer of said bale of fibre material and thereby remove fibre therefrom, conveyor means operatively mounted in said fixed frame for transporting said removed fibres, fibre collection means mounted contiguously to said conveyor means for receiving and mixing said removed fibres, and first, second and third independent driving means respectively operatively connected to said carriage, fibre removing means and conveyor means for independently driving them; wherein the first driving means of said carriage comprises an electric motor mounted thereon, a gear wheel and cooperating rail operatively mounted to said electric motor, said rail being mounted on said fixed frame.

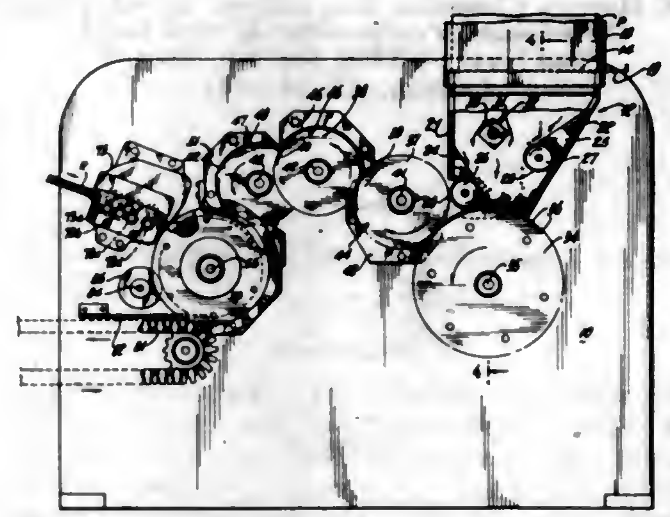


3,389,436
MACHINES FOR MAKING SWABS WITH COTTON TIPS

Harry E. Alden, Plainfield, N.J., assignor to Johnson & Johnson, a corporation of New Jersey

Filed July 21, 1964, Ser. No. 384,118

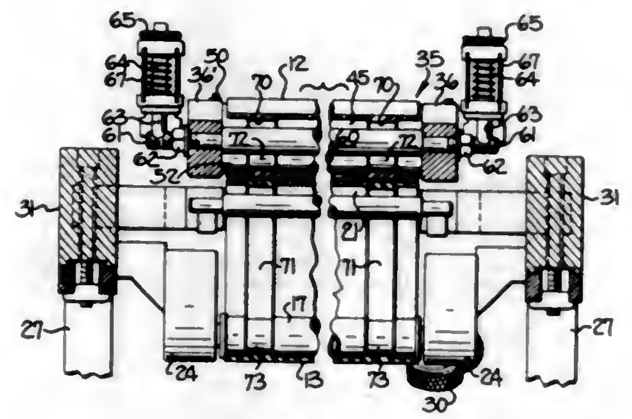
6 Claims. (Cl. 19—145.3)



This application discloses a machine for making fibrous tipped swabs. The machine includes a hopper having agitating and gravity relief devices to assure positive and properly aligned delivery of sticks to a rotating pick-up wheel positioned below and adjacent to the hopper delivery throat. From the hopper pick-up wheel the sticks are transported at high speeds through the machine by a series of transfer wheels to a rotating wheel having a plurality of fibrous tip forming stations at equally spaced intervals around its periphery. On this latter wheel the sticks are sequentially introduced to wads of fibrous material at their ends following which the sticks are further sequentially rotated about their longitudinal axis to form the wads into formed fibrous tips on the sticks by tip forming cavities or molds.

3,389,437
RIBBED DRAFTING APRONS WITH RECESSED SUPPORTING ROLLS

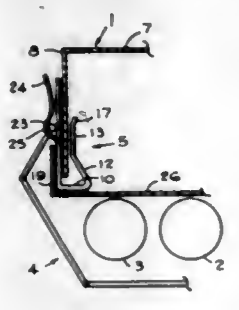
Eugenio Andreani, Bergamo, Italy
Continuation-in-part of application Ser. No. 518,863, Jan. 5, 1966. This application Oct. 11, 1966, Ser. No. 585,831.
4 Claims. (Cl. 19—252)



A pair of engagingly cooperating endless pliable drafting aprons each having a pair of ribs projecting inwardly from the inner surface of the apron and spaced inwardly from the sides of the apron and received by annular grooves in supporting rollers to increase traction between the aprons and the supporting rollers and to eliminate slippage therebetween during rotation, and wherein the corresponding ribs on the pair of aprons are arranged in cooperating pairs so that each rib of one of the aprons is in opposing relation to a corresponding rib of the other apron and lies in a common plane therewith.

3,389,438
HINGE CLIP

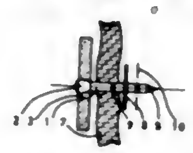
Joe R. Haynes, Chamblee, Ga., assignor to Fisher-Haynes Corporation, a corporation of New Jersey
Filed Nov. 14, 1966, Ser. No. 594,006
1 Claim. (Cl. 24—84)



A wire guard for a fluorescent lamp fixture is removably mounted on the fixture by means of a hinge clip of generally J-shaped configuration. The hinge clip comprises a base plate to the opposite side edges of which a biasing plate and a hinge plate are integrally secured. A hinge backing part is integrally secured to the hinge plate and disposed in spaced relation to a swivel part which also is integrally formed with the hinge plate so as to define therebetween a looped configuration for receiving a part of the wire guard. A clamping plate is integrally formed with the biasing plate and is arranged to grip a part of the fluorescent fixture between the biasing plate and the hinge backing part whereby a disjointable connection is provided between the hinge clip and the fluorescent fixture and a swivel hinge-like connection is provided between the hinge clip and the wire guard.

3,389,439
RAPIDLY SECURED BUTTON

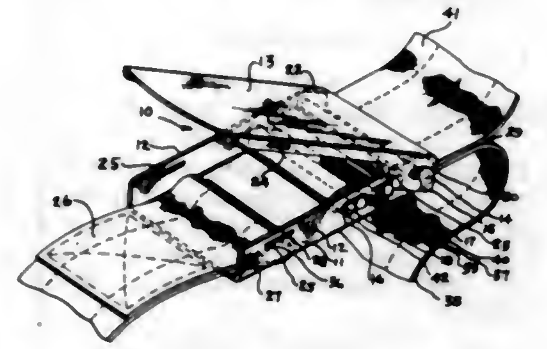
Zareh Papazian, Annecy, France, assignor to Societe d'Exploitation des Brevets Industriels SEBI, Annecy, France, a French company
Filed May 8, 1967, Ser. No. 636,918
Claims priority, application France, May 11, 1966, 958
1 Claim. (Cl. 24—90)



In combination a button having a shank either forming a part of or separate from the button, the shank having a point for piercing the fabric and adapted to be sectioned after insertion and a retainer for fitting round the shank for securing the button to the fabric lying between the retainer member and the button.

3,389,440
TIEDOWN BUCKLE

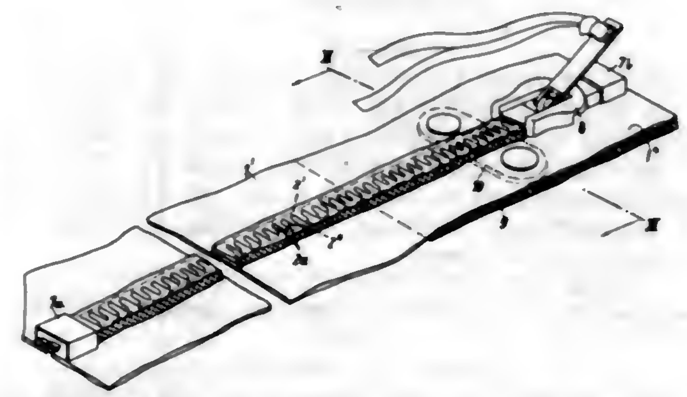
George H. Jantzen, New York, N.Y., assignor to M. Steinthal & Co. Inc., New York, N.Y., a corporation of New York
Filed Dec. 6, 1965, Ser. No. 511,699
10 Claims. (Cl. 24—196)



A buckle for tensioning belts. A belt passes between a pair of clamping bars which are each movable towards and away from each other and is looped about one of them. Actuation of the buckle cover brings the other bar sufficiently close to the looped one to facilitate snubber action on the belt and a stop facilitates separation of the bars upon opposite actuation of the cover.

3,389,441
FLUID-TIGHT SLIDE FASTENER

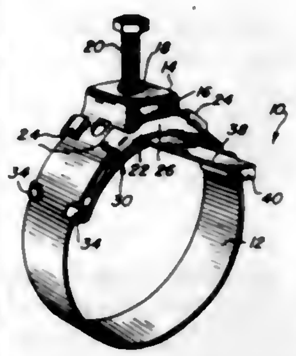
Helmut Heimberger, Essen, Germany, assignor to Firma Opti-Holding A.G., Glarus, Switzerland
Filed Mar. 15, 1966, Ser. No. 534,356
Claims priority, application Germany, June 5, 1965, O 10,910
7 Claims. (Cl. 24—205.1)



A water-tight slide fastener in which helicoidal or meandering continuous coupling elements have spaced convex heads engaging respective continuous strips of elastomeric material along the other coupling element having outwardly concave portions between the heads and dished sockets complementarily engaging the heads of the other coupling element and resiliently compressible thereby.

3,389,442
HOSE CLAMP WITH LOAD DISTRIBUTING MEMBER

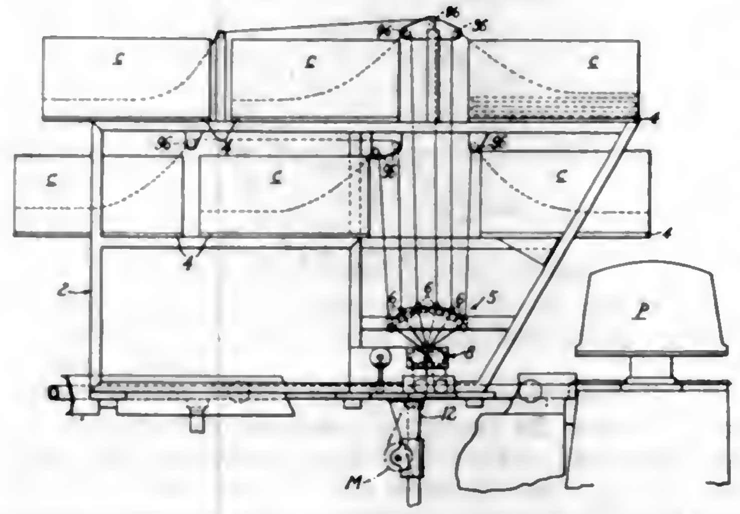
Clarence C. Tetzlaff, River Forest, Ill., assignor to Wittek Manufacturing Co., Chicago, Ill., a corporation of Illinois
Continuation-in-part of application Ser. No. 447,014, Apr. 9, 1965. This application May 13, 1966, Ser. No. 549,980
2 Claims. (Cl. 24—278)



2. A hose clamp of the radial type having a band looped upon itself, a radially outwardly formed projection, a nut in the projection, a radial screw passing into the nut, a bridge permanently secured across the inner open end of the projection and the screw bearing on the bridge, an arcuate load-distributing member having its ends slidably mounted to the band to dispose said member beneath the bridge, said load-distributing member being completely disconnected from said bridge, and spacing means extending in an axial direction laterally of and integral with the load-distributing member.

3,389,443
FEEDING DEVICE FOR TUBULAR KNITTED FABRIC

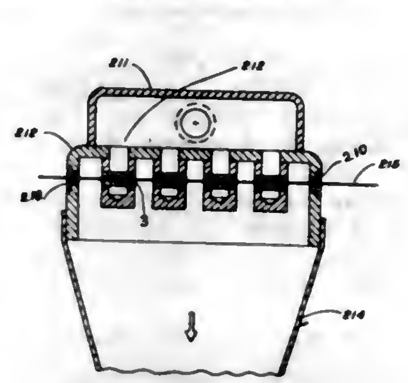
Joseph Barker, Leicester, England, assignor to United Shoe Machinery Corporation, Boston, Mass., a corporation of New Jersey
Filed Jan. 21, 1966, Ser. No. 522,125
Claims priority, application Great Britain, Feb. 19, 1965, 7,165/65
3 Claims. (Cl. 26—55)



An apparatus for providing a uniform multi-ply lay of tubular fabric upon a work surface. A frame supports a plurality of sources of tubular fabric. A continuous piece of tubular fabric is fed from each of the sources through a stretching device where the several pieces are stretched to a uniform width and then led as a contiguous unit through a pair of feed rolls from which they emerge together and thence onto a work surface.

3,389,444
APPARATUS FOR ENTANGLING MULTIFILAMENT YARNS

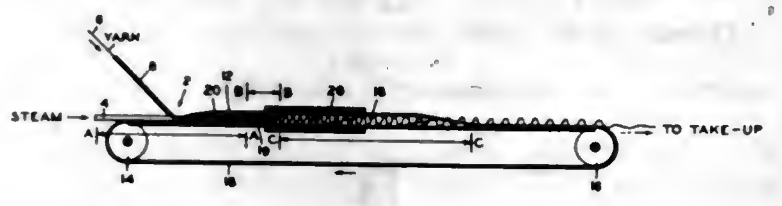
Charles A. Fletcher and Richard F. Dyer, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Application Nov. 22, 1963, Ser. No. 325,719, now Patent No. 3,286,321, which is a continuation-in-part of application Ser. No. 183,448, Mar. 29, 1962. Divided and this application Nov. 15, 1965, Ser. No. 516,820
1 Claim. (Cl. 28—1)



A multifilament entanglement jet assembly which includes plural jets mounted within a housing that is designed for both supplying and exhausting the fluid treating media to the jets.

3,389,445
MOVING SIDE WALL CRIMPING PROCESS AND APPARATUS THEREFOR

Robert Z. Schreffler, Chesterfield, Va., assignor to Allied Chemical Corporation, New York, N.Y., a corporation of New York
Filed Mar. 31, 1966, Ser. No. 539,104
11 Claims. (Cl. 28—1)

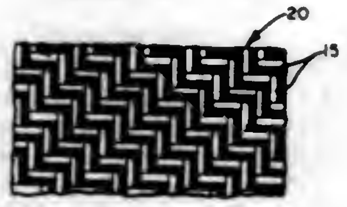


A process and apparatus for texturing continuous yarns using a fluid medium such as steam to heat plasticize and advance the yarn into a tubular enclosure which is formed by a circular member employed to converge a moving conveyor-type foraminous belt until the edges thereof meet to form said tubular enclosure wherein a jet is positioned to aspirate the plasticized yarn into the tubular enclosure at a rate faster than the removal rate thereof to cause the yarn to accumulate in the form of a plug to impart a helical crimp to the yarn when in said plug. The crimped yarn is advanced from the crimping zone upon the belt and taken up by conventional means.

3,389,446
PROCESS FOR PRODUCING FOAM FABRICS

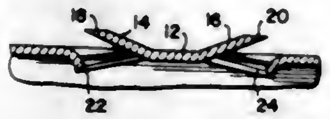
Robert Guy Parrish, Sharpley, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Jan. 25, 1966, Ser. No. 522,935
5 Claims. (Cl. 28—76)

Foam fabrics are produced by a process which includes the steps of flash-extruding a solution of an organic polymer to form closed-cell, gas-inflated foam filaments, collapsing the filaments by reducing the quantity of gas within the cells, forming the filaments while collapsed into a fabric, then re-inflating the filaments by introducing gas into the cells.



3,389,447
OMNIDIRECTIONAL CUTTING TOOL

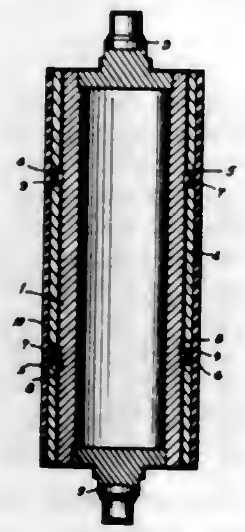
Elwin Theobald, 4631 Solano St., Fair Oaks, Calif. 95628, and Phillip R. Andrews, 5700 55th St., Sacramento, Calif. 95824
Filed May 26, 1967, Ser. No. 641,527
8 Claims. (Cl. 29—78)



A cutting tool comprising a hollow member having sharpened arcuate lips extending toward the respective ends of the cutting tool and a depression for receiving material into the interior of the hollow member and hollow members of a plurality of ornamental and useful configurations are disclosed.

3,389,448
ROLLER FOR UNIFORM PRODUCTION OF PRESSURE

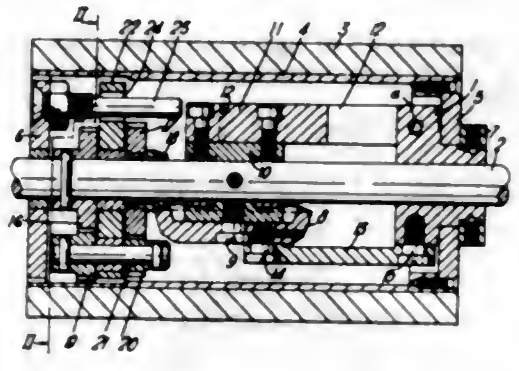
Heinrich Buysch, Aachen-Sors, Germany, assignor to H. Krantz, Aachen, Germany, a corporation of Germany
Filed Apr. 21, 1966, Ser. No. 544,136
Claims priority, application Germany, Apr. 21, 1965, K 55,864
4 Claims. (Cl. 29—110)



The present disclosure sets forth a high pressure roller having a base cylinder with end shaft mounts, having an outer shell spaced therefrom connected thereto by means of spaced studs which are welded to the outer shell and have extensions into recesses in the base cylinder. The outer shell is encircled by a cylinder of hard or soft rubber or other suitable material.

3,389,449
ROLLERS

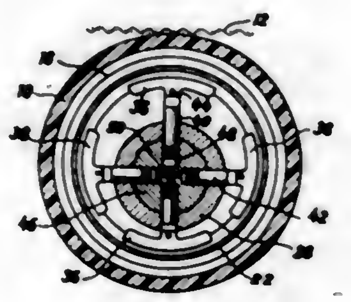
Donald Ross Fyfe, Middlesex, England, assignor to The Metal Box Company Limited, London, England, a British company
Filed May 17, 1966, Ser. No. 550,780
Claims priority, application Great Britain, June 2, 1965, 23,555/65
6 Claims. (Cl. 29—116)



Roller structure which is reciprocable axially while being rotated by frictional peripheral contact, the roller being hollow and surrounding a stationary shaft and rotatable about a bearing block which is slidable on the shaft but restrained against rotary movement with the roller, there being included a bevel gear housed within the hollow roller and supported for rotation about an axis at right angles to that of the shaft, a crank coupling the bevel gear with the bearing block to effect reciprocation of the block axially of the shaft, an epicyclic gear train mounted within the roller and meshing with the bevel gear to effect rotation thereof, and driving means housed within the roller for rotation therewith and coupling the roller with the epicyclic gear train to effect operation thereof on rotation of the roller.

3,389,450
NON-DEFLECTING ROLL

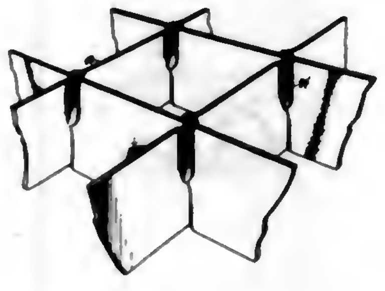
John D. Robertson, Taunton, Mass., assignor, by mesne assignments, to Mount Hope Machine Company, Incorporated, Taunton, Mass., a corporation of Massachusetts
Filed May 20, 1966, Ser. No. 551,676
3 Claims. (Cl. 29—116)



A roll comprising a support and a sleeve rotatable thereon, has means for removing transverse deflection or sag. Bearings at the ends of the sleeve are fixed, but intermediate bearings are mounted on supports movable transversely of the support in either of two directions, perpendicular to one another and to the axis of rotation of the sleeve. The bearing supports are positioned by shoes, expansible-chamber devices, cams, or the like, for independent positioning in either of the perpendicular directions to straighten the sleeve.

3,389,451
METHOD OF MAKING AN INTERLOCKING STRIP STRUCTURE

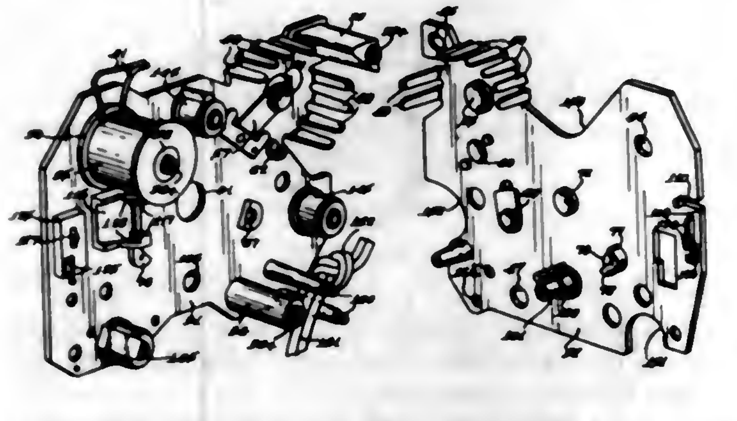
Elio J. Speca, Wellsville, N.Y., and Lyle R. Slingerland, Genesee, Pa., assignors to The Air Preheater Company, Inc., New York, N.Y., a corporation of Delaware
Filed Dec. 20, 1965, Ser. No. 514,788
7 Claims. (Cl. 29—160)



An effective method of making an internally braced wall of the "honeycomb" type in which the internal structure thereof is readily formed and provides great strength.

3,389,452
METHOD OF MAKING CLOCK MOTOR AND MOVEMENT

Ivar Jepson, South Duxbury, Mass., and John W. Morgan and James W. Richmond, Elmhurst, Ill., assignors to Sunbeam Corporation, Chicago, Ill., a corporation of Illinois
Original application Nov. 7, 1963, Ser. No. 322,218, now Patent No. 3,248,867, dated May 3, 1966. Divided and this application Aug. 18, 1965, Ser. No. 480,578
6 Claims. (Cl. 29—177)

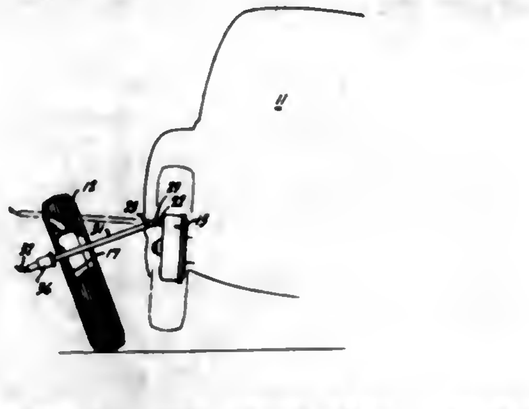


Method of making a motor by forming a pair of magnetic plates with openings therein and also forming field poles at certain edges of the plates, then injection molding plastic bearings to the plates so the bearings are interlocked with the plates. Thereafter shaft members and the like are assembled to the bearings in the plates and the plates are joined in spaced parallel relation.

3,389,453
TIRE INSTALLATION TOOL

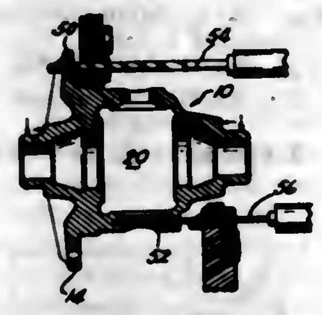
Carl M. Tarter, 3275 Wallace Creek Road, and Walter J. Walker, 5774 W. Dry Creek Road, both of Healdsburg, Calif. 95448
Filed Feb. 1, 1967, Ser. No. 613,275
5 Claims. (Cl. 29—273)

A rod-like tool has a threaded end for engagement with the threads in a brake drum or studs provided for securing an automobile wheel in place. A flexible joint is spaced a short distance from the end. The diameter of the tool is sufficiently small to pass through a bolt hole in the wheel. When an automobile wheel is to be installed, the threaded end is engaged with the drum and the rod passed through one of the holes in the wheel disk, the flexible joint bending downward when the wheel is on the ground. By lifting up on the outer end of the tool, the wheel slides into place with little manual effort. A slidable handle is used to hold the wheel in position while the lug studs or nuts are being installed.



3,389,454
METHOD OF MACHINING A GEAR CASE

Robert I. Sattler, St. Clair Shores, Mich., assignor to La Salle Machine Tool, Inc., Warren, Mich., a corporation of Michigan
Continuation-in-part of application Ser. No. 356,794, Apr. 2, 1964. This application June 27, 1966, Ser. No. 560,668
4 Claims. (Cl. 29—406)



1. The method of machining a gear case having an internal cavity, an external bearing shoulder, side gear thrust faces on a first pair of opposite sides of said cavity substantially parallel to said shoulder, and pinion gear spherical seats on a second pair of opposite sides of said cavity, said method comprising the steps of:

(a) machining one of said thrust faces so that it is located a predetermined distance from said bearing shoulder;

(b) machining the other one of said thrust faces so that it is located directly a predetermined distance from said one thrust face;

(c) drilling a hole through said case so that said hole is parallel to and is disposed equal distances between said thrust faces; and

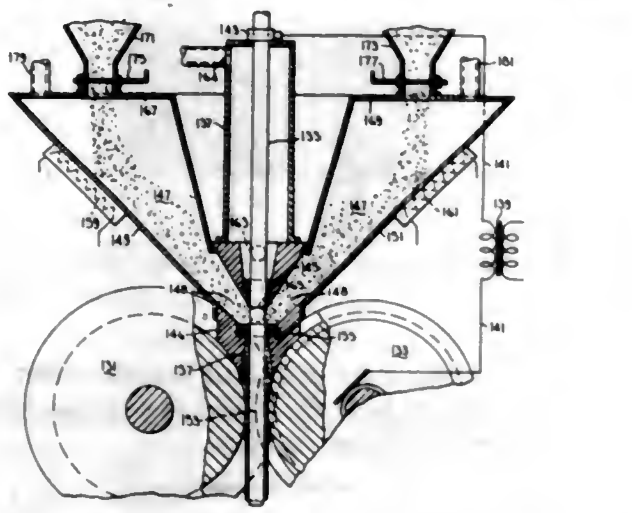
(d) machining said spherical seats so that they are concentric with said hole and are a predetermined distance from each other.

3,389,455
METHOD OF MAKING CLAD RODS AND TUBING

Kenneth B. Clark, Spragueville, R.I., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware
Continuation-in-part of applications Ser. No. 63,678, Oct. 19, 1960, and Ser. No. 93,513, Mar. 6, 1961. This application Sept. 20, 1965, Ser. No. 488,332
10 Claims. (Cl. 29—420)

4. The method of producing clad cylindrical products, comprising heating a core, feeding said core between tangently related grooves of tangently rotating rolls,

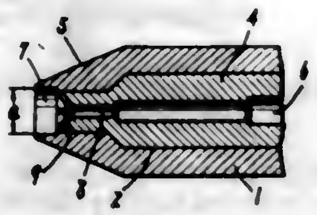
feeding material in powder form between the core and said grooves for squeezing thereof against the core by the rolls to compact the powder and effect a partial bond between the powder particles and between some of them and said core, and thereafter sintering the core with the partially bonded powder thereon to increase the bonds between the powder particles and between them and the surface of the core.



3,389,456

METHOD OF MAKING BALL PENS

Kazuo Ishizuka, Tokyo, Japan, assignor to Mitsu-bishi Pencil Company Limited, Tokyo, Japan
Filed June 16, 1966, Ser. No. 557,936
Claims priority, application Japan, Oct. 2, 1965, 40/59,984
2 Claims. (Cl. 29—441)



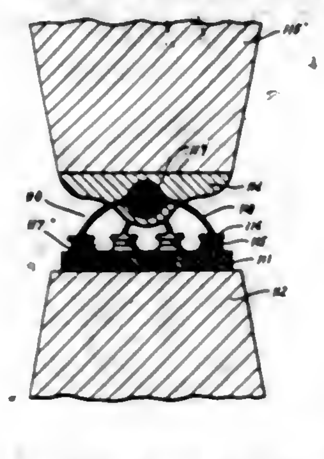
1. A method of making ball pens comprising steps of making a hole in the axis part of a round-sectioned metallic bar having high ductility and machinability, forming a female screw at least in a part of said hole, filling said hole with a receiving seat material having a wear-resistance and low in the friction so as to integrally form a tip member, making an ink hole and a ball fitting hole in said tip member by machining, fitting a ball in said fitting hole formed of the metal having high ductility in the peripheral edge part and of the receiving seat material in the bottom part and contracting said ball fitting hole on the peripheral edge.

3,389,457

FABRICATION OF SEMICONDUCTOR DEVICE

Richard L. Goldman, Chalfont, Pa., William R. Kritzler, Newton Center, Mass., and Victor C. Sirvydas, Hatboro, Pa., assignors to Philco Ford Corporation, a corporation of Delaware
Original application Apr. 3, 1964, Ser. No. 357,087, now Patent No. 3,283,218, dated Nov. 1, 1966. Divided and this application Feb. 16, 1966, Ser. No. 544,048
1 Claim. (Cl. 29—580)

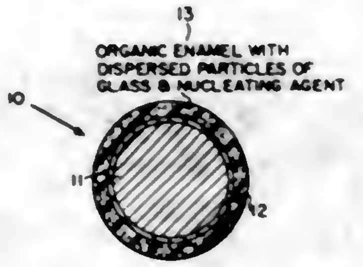
1. A method of fabricating semiconductive diodes comprising the steps of: preparing surfaces of semiconductive bodies for use in mesa semiconductors; providing thin metal wires with small beads at ends thereof; bonding such wires by their said beads to said surfaces; thereafter applying to said surfaces, with wires so bonded thereto, an etchant capable of removal of semiconductive material but not of wire metal, several of said wires being provided for each semiconductive body and bonded thereto, so that said applying of etchant produces an array of mesas on said body, each mesa having a wire bonded thereto; said method also including the steps of providing each of said wires with a bead at its free end, fusing the several beads into a single sphere, and attaching the sphere to a solder stud before applying said etchant.



3,389,458

CRYSTALLIZED GLASS CERAMIC COATINGS

George W. Ostrander, Muskegon Heights, and Wesley W. Pendleton, Muskegon, Mich., assignors to Anaconda Wire and Cable Company, a corporation of Delaware
Filed May 21, 1964, Ser. No. 369,126
7 Claims. (Cl. 29—605)


13
ORGANIC ENAMEL WITH DISPERSED PARTICLES OF GLASS & NUCLEATING AGENT
10
11
12

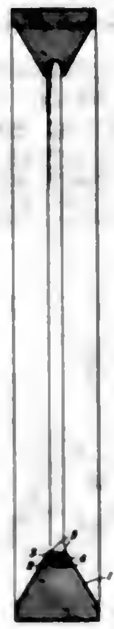
1. The method of coating an article with a continuous coating of crystallized glass comprising the steps of:

(A) forming a glass melt
  (a) free from effective amounts of dissolved nucleating agents and
  (b) capable of crystallization upon the addition of a nucleating agent, and
(B) effecting diminution of said glass melt to form a glass powder,
(C) suspending said glass powder in a liquid medium along with particles of a nucleating agent for said glass in an amount sufficient to perform a nucleating function,
(D) intimately mixing said glass powder and said particles in said medium to form a uniform dispersion,
(E) coating said article with said dispersion,
(F) heating said article to remove said liquid medium,
(G) further heating said article to fuse said glass powder into a continuous coating,
(H) holding said coating at a temperature sufficient to dissolve said nucleating agent particles in said glass, and dissolving said agent,
(I) cooling said coating so as to precipitate said nucleating agent in the form of nuclei in said glass, and
(J) heating and thereby crystallizing said glass around said nuclei to form a ceramic coating on said article.

3,389,459

STRAIN GAGE INSTALLATIONS

John D. Russell, Malibu, Calif., assignor to Microdot, Inc., South Pasadena, Calif., a corporation of California
Continuation-in-part of application Ser. No. 37,016, June 8, 1960. This application Sept. 19, 1963, Ser. No. 310,073
3 Claims. (Cl. 29—610)

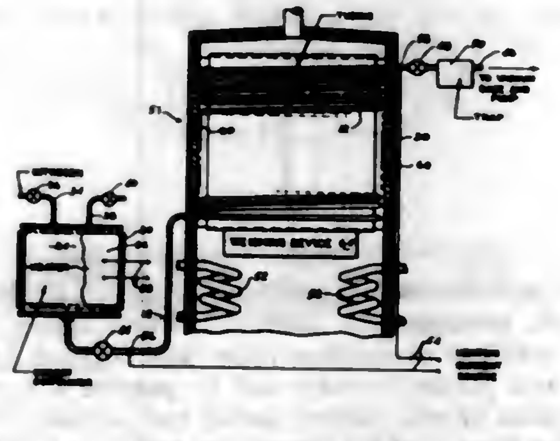


This invention relates to improvements in the installations of strain gages into a body subjectable to stress. A strain gage consisting of a strain-sensing means having lead wires attached thereto, compactable insulating material and a closed, tubular shell is placed beneath the surface of the body which is to be subjected to stress and secured for use in that position. In a preferred embodiment of the invention the strain gage is installed into a groove cut in the surface of a force ring, and the ring is mechanically deformed adjacent the gage to elongate the gage and lock the same within the groove.

3,389,460

MANUFACTURE OF BARE OR PRE-INSULATED METAL CLAD SODIUM CONDUCTOR

Solomon Rubinstein, Fanwood, and George S. Eager, Jr., Upper Montclair, N.J., assignors to General Cable Corporation, New York, N.Y., a corporation of New Jersey
Filed July 7, 1966, Ser. No. 563,531
11 Claims. (Cl. 29—624)

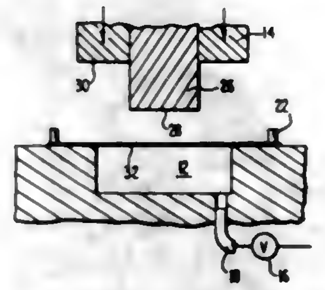


1. The method of making a metal clad sodium conductor which comprises melting the sodium and establishing a reservoir of liquid sodium, placing one end of a preformed electrically conductive tube that forms the cladding for the sodium in communication with the reservoir, heating the tube to above the melting point of sodium, flowing sodium into the tube by establishing a differential between the pressure over the sodium in the reservoir and the pressure at the opposite end of the tube, continuing the sodium flow until the cladding tube is filled for a predetermined length across the full inside diameter of the cladding tube and sealing the tube to prevent escape of the sodium.

3,389,461

MOLDED INSULATOR BASE HAVING EMBEDDED TERMINALS AND METHOD OF FORMING THE SAME

Alfred T. Hardardt, Wappingers Falls, N.Y., assignor to International Business Machines Corporation, Armonk, N.Y., a corporation of New York
Filed Apr. 8, 1965, Ser. No. 446,663
4 Claims. (Cl. 29—625)

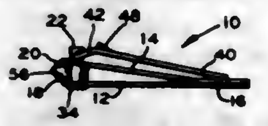


1. A method of forming a molded insulative base member having spaced, embedded, integral terminals and welding pads molded therein comprising: forming a series of metal wire convolutions across an open mold cavity, displacing the intermediate portions of said wire convolutions into said cavity and coining said intermediate portions by flattening them against said cavity wall, and filling said mold cavity with plastic insulative material to embed said intermediate portions of said wires within said base member with the outer surface of said intermediate portion exposed along one surface of said molded base member to provide a welding pad area, cooling said plastic material to solidify the same, removing the molded assembly and severing the outer ends of said wire convolutions exterior of said molded base member to provide spaced, insulated terminals.

3,389,462

WIPING, HONING, AND/OR INDEXING DEVICE FOR CLIPPERS

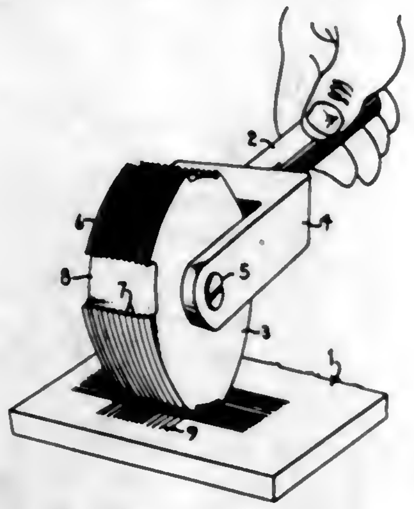
Thomas S. Bowers, 3544 Grantley Road, Toledo, Ohio 43606
Filed Apr. 26, 1967, Ser. No. 633,928
17 Claims. (Cl. 30—28)



This disclosure pertains to a conventional fingernail clipper wherein a flexible wiping member is secured for rotation with the pin of the clipper when the pressure lever of the clipper is rotated from its closed carrying position to an open position ready for operation by the user. The wiping member may also be of such a material and construction that the cutting edges of the clipper blade members are honed by the wiping member to sharpen the cutting edges. Furthermore, the disclosure sets forth a resilient pin, either in the form having a longitudinal slot with resilient bifurcations or a hollow cylindrical member with longitudinally extending indexing flanges, which cooperate with appropriate openings in the blade member to releasably index the lever means in its closed carrying position or open operating position so that the lever does not pivot upon operation thereof. Such indexing means may alternatively be provided by appropriate projections and indents on the internal portion of the head of the pin and the undersurface of the bottom blade member.

3,389,463
SCORING DEVICE FOR COATINGS

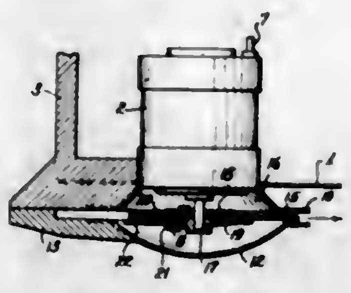
Gene Gerek, 114-A Shady Ave., Cheswick, Pa. 15024, and Ralph R. Cicerchi, R.D. 1, Renfrew, Pa. 16053
Filed Oct. 7, 1966, Ser. No. 585,170
3 Claims. (Cl. 30—164.9)



1. A tool for scoring solid material comprising a handle and a cutting head, said cutting head defining an enlarged member having a pair of side surfaces and an arcuate peripheral surface disposed therebetween, said peripheral surface having a plurality of V-shaped cutting elements, a notch formed in said cutting head across the cutting elements thereof, the boundaries of said notch with said cutting elements defining cutting edges, whereby when the cutting head is drawn across the solid material in the direction of the cutting elements with the cutting edges in contact with the surface of the solid material, the surface is uniformly and reproducibly scored.

3,389,464
HEDGE CLIPPER

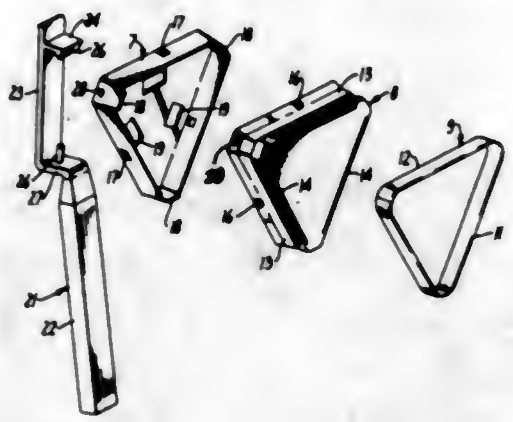
Gianfranco Pederzoli, Reggio Emilia, and Luigi Fornaciari, Modena, Italy, assignors to Emme di Emme
Filed May 10, 1966, Ser. No. 548,932
Claims priority, application Italy, May 10, 1965, 10,520/65
7 Claims. (Cl. 30—264)



1. A portable rotary cutting machine comprising two plates having concave portions and registering parallel projecting portions extending outward from the edges of said concave portions, said projecting portions being fastened together with the concave sides of said concave portions facing and spaced from one another to define a central chamber surrounded by an annular slot, a motor mounted on one of said plates, a drive shaft driven by said motor extending centrally into said chamber, a cutting blade carried by said shaft, means mounting said blade on said shaft and constraining said blade to rotate with said shaft in the plane of said slot but permitting said blade to slide radially with respect to said shaft until it projects from said slot, and resilient means urging said blade toward a radially inward position relative to said shaft, in which position said blade is retracted within said slot.

3,389,465
MAGAZINE HAVING A RIBBON-LIKE SHAVING BLADE

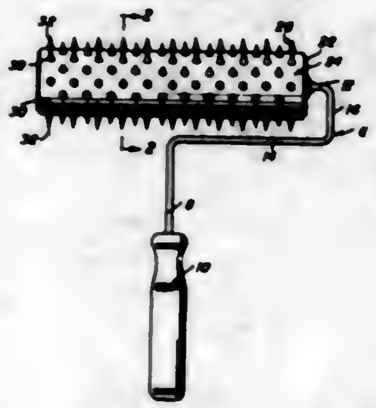
William C. Pattiani, 811 York St., Oakland, Calif. 94610
Filed Apr. 19, 1967, Ser. No. 631,945
1 Claim. (Cl. 30—346.5)



A magazine for use in a razor, wherein the magazine has a continuous ribbon-like blade.

3,389,466
WALL SURFACE SCARIFYING AND PREPARING TOOL

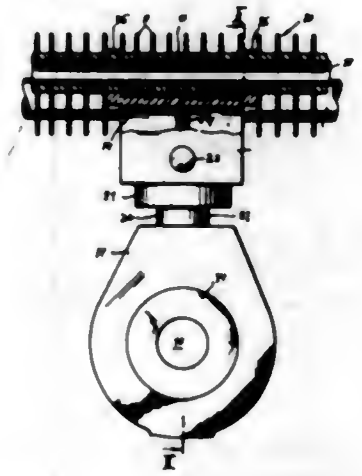
Horace T. Parris, 704 N. 74th St., East St. Louis, Ill. 62203
Filed May 25, 1967, Ser. No. 641,242
3 Claims. (Cl. 30—366)



The tool disclosed is designed for use by paperhangers, painters, plasterers or assistants when called upon to gouge into and to roughen room wall surfaces (plastered walls and plaster board) and to prepare the same for application of new plaster, inside and outside corner and patching tapes, and for ultimate papering or painting. The tool proper comprises a manually manipulable paint applying roller on a handle-equipped frame and having a cushioned periphery (mohair padding). An adapter sleeve is snugly retentively fitted over the padded surface and has radial distributively arranged conical pointed scarifying prongs, as hereinafter set forth.

3,389,467
DRY SHAVER HAVING A SPRING BIASED ROCKING LEVER TO RECIPROCATE A CUTTER BLOCK

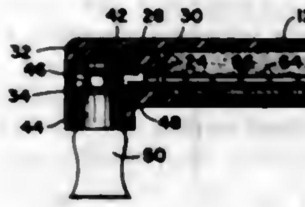
Kurt Baumann, Solingen-Merscheid, Germany, assignor to Robert Krups, Solingen-Wald, Germany, a corporation of Germany
Filed June 9, 1966, Ser. No. 556,510
Claims priority, application Germany, June 10, 1965, K 56,343; Mar. 3, 1966, K 58,625
2 Claims. (Cl. 30—43.92)



A shearing head for electric razors which comprises a rocking lever, a cutter block, and a shearing comb sheet having an inner face. The cutter block reciprocates by the rocking lever urged by a spring towards the inner face of the shearing comb sheet. A driving pin is provided on the rocking lever. A sliding guide bushing is provided and a bearing member is swingably mounted on the sliding guide bushing having a pivot pin. The cutter block is operatively connected with the driving pin by means of the guide bushing and the bearing member. A ram having an end face is disposed in the center of the bearing member, as well as projects into the space defined between the pivot pin. The driving pin includes a piston having a supporting face, the end face of the ram forcibly engages the supporting face of the piston by means of the spring, and the engaging point of the end face of the ram with the supporting face of the piston is disposed at the center of the pivot axis defined by the pivot pins.

3,389,468
DISPOSABLE PRE-CHARGED DENTAL HANDPIECE

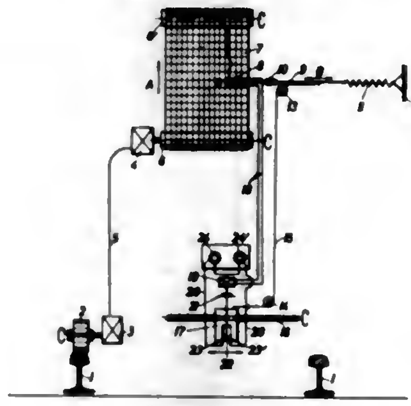
Eugene W. Lewis, Fuller Warden, and Jack H. Mills, all of 3233 E. 31st St. 74105, and Bernard F. McNickle, 5417 E. 37th St. 74135, all of Tulsa,, Okla.
Filed Dec. 23, 1964, Ser. No. 420,495
16 Claims. (Cl. 32—59)



A dental handpiece comprising a disposable cartridge preloaded with a quantity of paste-like material and having means for ejecting the paste from the cartridge and into a rotatable cup whereby the paste material may be applied to the teeth of a patient by the cup for cleaning or otherwise treating the teeth.

3,389,469
MOBILE TRACK CORRECTION APPARATUS

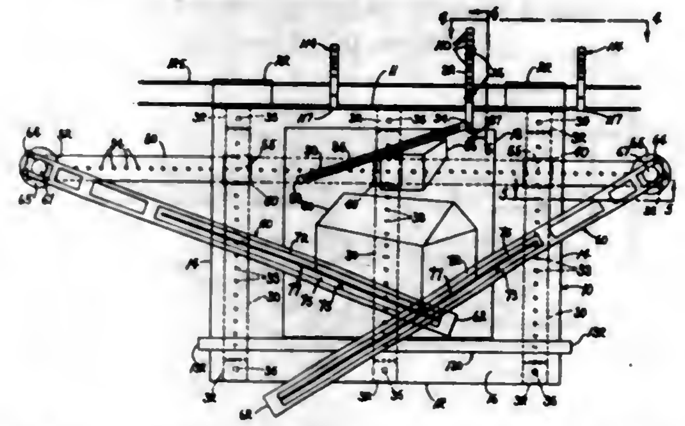
Franz Plasser and Josef Theurer, both of Johannesgasse 3, Vienna, Austria
Filed June 8, 1966, Ser. No. 556,003
Claims priority, application Austria, July 5, 1965, A 6,104/65
9 Claims. (Cl. 33—1)



The movement of a track section during a lining or grading operation in relation to a reference is visibly recorded on a traveling chart moving synchronously with the forward movement of the track correction apparatus.

3,389,470
DRAFTING DEVICE FOR CONSTRUCTING PERSPECTIVE DRAWINGS

James R. Johnson, 1554 N. 4th St., Fresno, Calif. 93703
Filed July 10, 1967, Ser. No. 652,134
6 Claims. (Cl. 33—77)

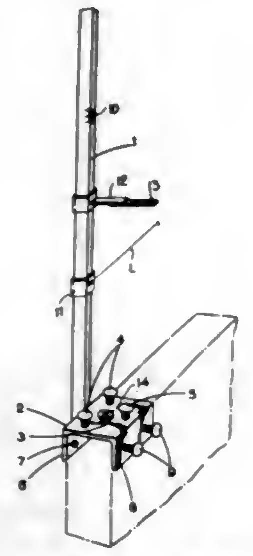


A substantially flat drawing board having a pair of marker guide members disposed on the board for individual swinging movement about respective axes providing vanishing points for the guide members in adjusted positions spaced outwardly from the board for constructing two dimensional figures and a third marker guide member adjustably mounted on the board for swinging movement about an axis providing a vanishing point for the third guide member in adjusted positions upon the board for the construction of single dimensional figures.

3,389,471
GUIDE DEVICE FOR ATTACHMENT TO THE WALL OF A BUILDING UNDER CONSTRUCTION

George T. Blake, Orchard Dene, Station Road, Padworth, near Reading, Berkshire, England
Filed Aug. 4, 1967, Ser. No. 658,409
Claims priority, application Great Britain, Aug. 26, 1966, 38,415/66
3 Claims. (Cl. 33—85)

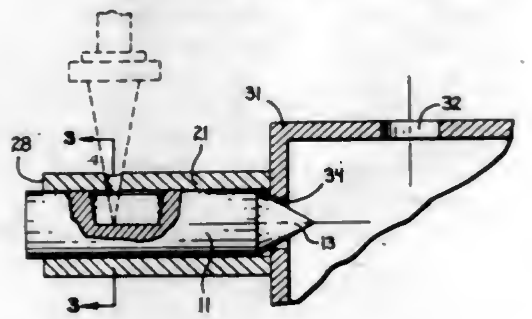
This disclosure relates to a guide device for facilitating the construction of brickwork buildings and includes a vertical bar secured to a generally U-shaped channel member defined by a pair of legs and a bight portion, the bight portion including adjusting means in the form of triangularly arranged screws engageable with the brickwork from above for placing the vertical bar in plumb condition in a vertical plane which is both normal to the horizontal and parallel to the brickwork, the adjusting means further being operative for bodily shifting the bar vertically upwardly and downwardly, and one of the legs further including means for releasably clampingly securing the U-shaped member upon the brickwork.



3,389,472

HOLE-CENTERING ADAPTER

Elmer R. Poland, 843 W. 5th St.,
Greenfield, Ind. 46140
Filed Sept. 9, 1966, Ser. No. 578,395
6 Claims. (Cl. 33—174)



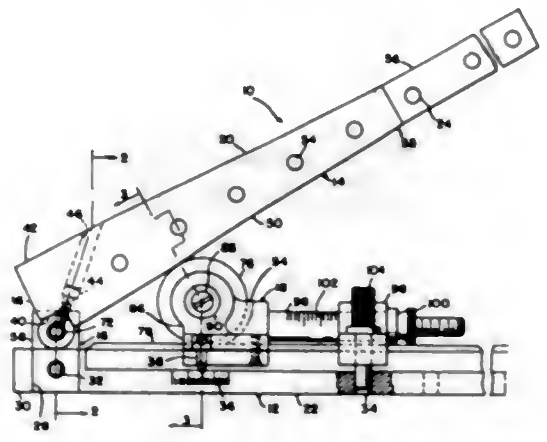
A hole-centering adapter for locating and extending the centerlines of holes oriented perpendicularly to the stylus of a two- or three-dimensional coordinate measuring machine, the hole-centering adapter having a plunger with a tapered end portion symmetrical about a major axis, a sleeve within which the plunger is slidable parallel to the major axis and which has a face perpendicular to the major axis, a tapered groove in the plunger perpendicular to the major axis for receiving the stylus of the coordinate measuring machine and positioning the point of the stylus on the major axis and a tapered opening in the sleeve so that the stylus may pass therethrough and enter the tapered groove in the plunger.

3,389,473

SINE BAR

Thomas J. O'Connor, 100 Morgan Road,
Ann Arbor, Mich. 48104
Continuation of application Ser. No. 289,875, June 24, 1963. This application Apr. 17, 1967, Ser. No. 631,565
3 Claims. (Cl. 33—174)

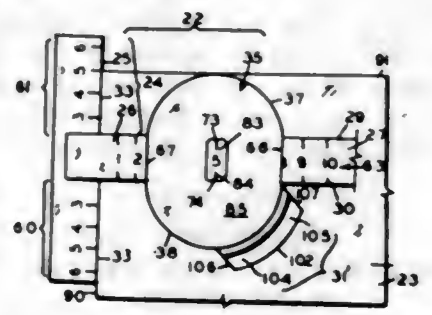
A sine bar including means for first adjusting the angular position of the angle plate relative to the base plate of the sine bar in coarse adjustments and separate means for subsequently adjusting the angular position of the angle plate in fine adjustments, including an angle varying member movable along the base plate of the sine bar toward the pivoted side thereof, pin and slot means for securing the member in coarse predetermined positions and screw and nut means for subsequently moving the member into any position between the coarse adjustment positions. In one embodiment of the invention the angle varying member is a roller positioned between the base plate and angle plate of the sine bar, while in another embodiment the movable member is an inclined plane. Pegs are provided extending horizontally from the angle plate of the sine bar at predetermined locations therealong for determination of height with the angle plate in different angular positions.



3,389,474

DECORATIVE MOLD GUIDE APPARATUS

Kenneth Linn, Amarillo, Tex., assignor to Maywood, Inc., Amarillo, Tex., a corporation
Filed May 10, 1967, Ser. No. 637,453
4 Claims. (Cl. 33—174)

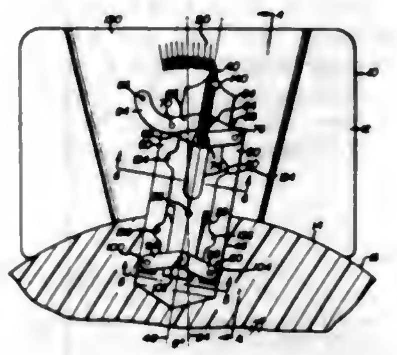


Apparatus for aligning and locating curved molding elements on a structure such as a door. This apparatus comprises a T square with a blade: the blade is calibrated and an edge of the head is calibrated and the calibrations on the head are arranged in predetermined and fixed relation to the edges of the blade attached thereto; each of a plurality of sliding templates providing curved surfaces are made to be movably and removably locatable on the blades and are each provided with a slot for indexing and orientating the curved surface thereof with respect to the edge and head of the T square. These templates have curved outer surfaces which match the shapes of curved molding element to be used therewith. The center of curvature of the curved outer surfaces are in fixed relation to although spaced away from the index point in the index slot of the template and the edge of the blade and head. Further still, the invention comprises one or more templates of a variety of sizes and arc shapes for concurrent use with the blade and each other.

3,389,475

GAUGE FOR MEASURING PITCHES OF HOLES IN BOWLING BALLS

Stephen W. Sapelak, 602 Westbrook Ave.,
Pontiac, Mich. 48058
Filed June 26, 1967, Ser. No. 648,786
5 Claims. (Cl. 33—174)

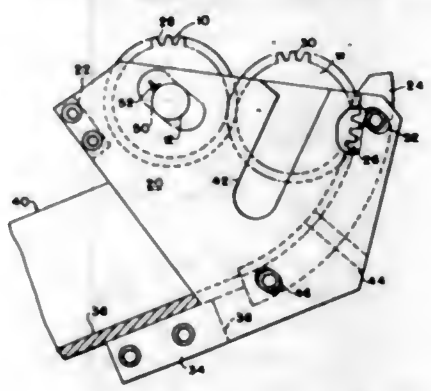


A gauge is provided for accurately measuring the pitch in a bowling ball wherein an indicator is pivoted at the arcuate surface of the ball and includes opposed gauge bars arranged with parallel sides for engagement with the ball in its hole regardless of the diameter and depth of the hole.

3,389,476

GATE DEVICE FOR GEARS

Richard W. Tersch, Grosse Pointe Woods, Mich., assignor, by mesne assignments, to Lear Siegler, Inc., Santa Monica, Calif., a corporation of Delaware
Filed Oct. 18, 1965, Ser. No. 497,041
9 Claims. (Cl. 33—179.5)



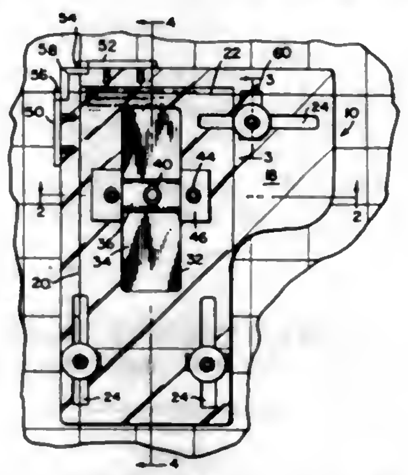
1. A device of the character described for checking gears or for preventing entry of oversized or faulty gears into a gear finishing machine or gear checker or the like comprising a rotatable gear, a circularly arcuate rack section substantially concentric with said rotatable gear and spaced therefrom a distance to permit passage of a work gear in mesh simultaneously with said rotatable gear and rack, the angular extent of said rack being at least equal to one half the circumference of said work gear such that each tooth of the work gear meshes with teeth either on said rotatable gear or arcuate rack.

3,389,477

PRINTING PLATE ALIGNMENT DEVICE

John De Maria and Harlan A. Bentzinger, Rehoboth, Mass., assignors to Chemical Products Corporation, East Providence, R.I., a corporation of Rhode Island
Filed Sept. 24, 1965, Ser. No. 489,962
6 Claims. (Cl. 33—184.5)

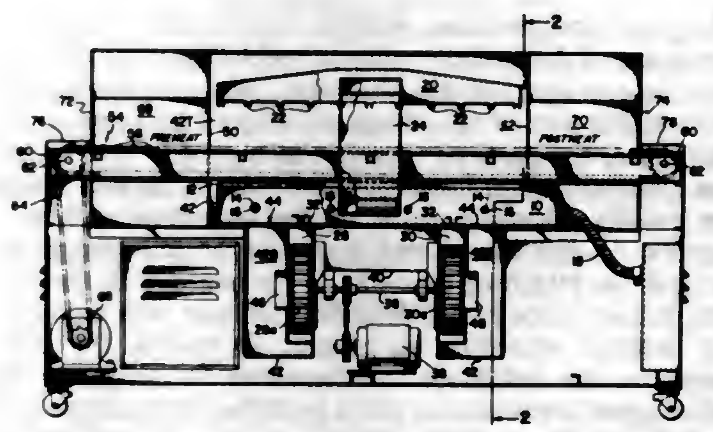
A plate aligning device for precisely positioning printing plates on a carrier sheet. The device comprises a transport frame having reference lines scribed on its surface, and feet for supporting the frame adjustably secured thereto. Resiliently mounted in the center of the frame is a rectangular plate having a sealing gasket about its periphery adapted to form a vacuum chamber when engaged with the printing plate. In operation, the plate is aligned with and secured to the frame. The frame is then aligned with the carrier sheet, thereby aligning the plate with the carrier sheet. After alignment, the plate is then released from the frame and secured to the carrier sheet.



3,389,478

APPARATUS FOR THERMALLY CONDITIONING ARTICLES AND THE LIKE

Leslie W. Cline, Brockton, Mass., assignor, by mesne assignments, to Anderson Electric Corporation, Leeds, Ala., a corporation of Alabama
Filed Mar. 3, 1966, Ser. No. 531,385
2 Claims. (Cl. 34—216)



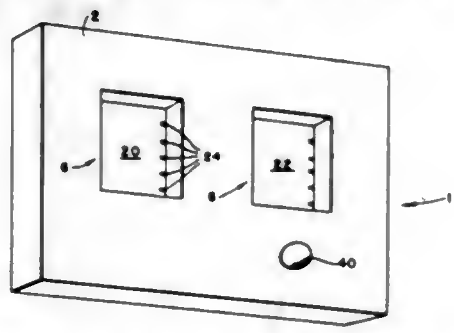
A heat shrink tunnel is herein disclosed for heat shrinking plastic film wrappers about articles and the like. The tunnel has a pair of vertically spaced plenum chambers defining a passage therebetween for the passage of the articles. The upper plenum chamber is provided with a plurality of elongate slot nozzles extending transversely of the passage and the lower plenum chamber is provided with a plurality of elongate slot nozzles extending longitudinally of the passage, the nozzles directing heated air towards the articles from both above and below the articles in a criss-cross lattice pattern. Pre- and post-heat chambers are respectively located at the entrance and exit of the passage for gradually increasing and decreasing the temperature of the articles to prevent thermal shock.

3,389,479

TEACHING AND TESTING DEVICE

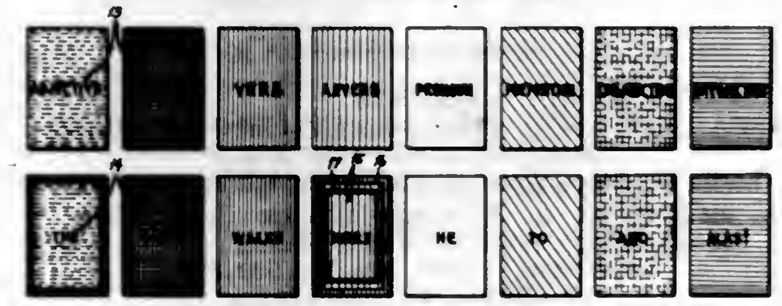
Philip Gross, 1374 Ocean Ave.,
Brooklyn, N.Y. 11230
Filed Aug. 3, 1965, Ser. No. 476,853
5 Claims. (Cl. 35—9)

A teaching and testing device in which a dielectric support, having a pair of electrically connected recessed areas, receives a pair of matching question and answer plaques to complete a circuit through an electric power source and indicating means, each plaque having exposed conductive and non-conductive strips on the rear surface



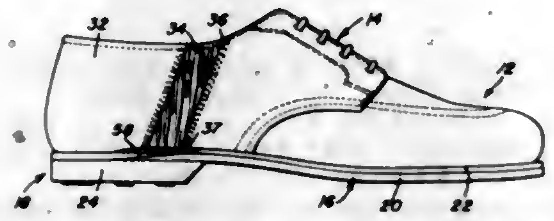
thereof, the two types of strips being visually indistinguishable with respect to color and composition.

3,389,480
GAME AND TEACHING METHOD
L. Virginia Holland, 6112 Kingsbury,
St. Louis, Mo. 63112
Filed Oct. 22, 1965, Ser. No. 500,761
10 Claims. (Cl. 35—35)



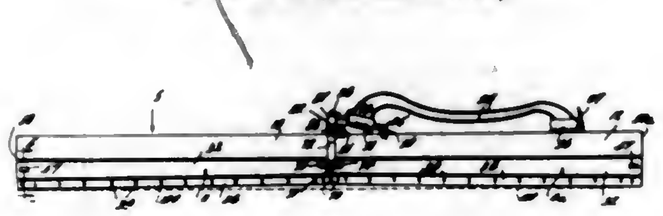
A game and teaching method for teaching the parts of speech and their relationship to each other using colored cards. In one form of the invention, the cards having the words of one part of speech are all colored the same color. In addition, the parts of speech which modify each other have color markings indicating the parts of speech which they modify. Another form of the invention utilizes a magnetic or felt board and magnetic or felt means on the cards for attaching the same to the board. Still another form utilizes cards having sentences thereon with markers, each colored according to its part of speech, for positioning on the words of the sentences to designate the part of speech which that word is. Expansible clause and phrase isolating means having slots to make the words of the clauses and phrases of a sentence beneath these means visible, and colored to correspond to the type of clause or phrase, and to the parts of speech which the clause modifies, also are used. Still another form utilizes cards with color markings to show both kind and function of such complex language structures known technically as the participle and the gerund.

3,389,481
EXPANDABLE SHOE
Harold H. England, 14616 88th Ave.,
Edmonton, Alberta, Canada
Filed Oct. 31, 1966, Ser. No. 590,603
13 Claims. (Cl. 36—2.5)



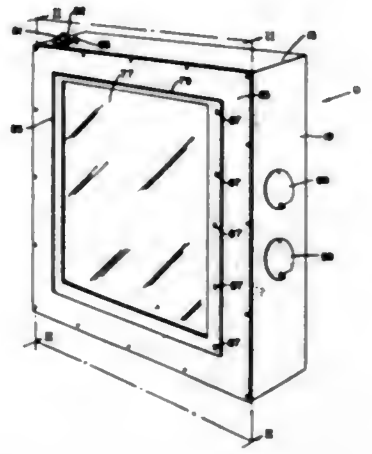
The invention disclosed herein invloves a shoe for children which can be expanded one size increment for extending the useful life of the shoe. The expanding feature may be incorporated into various styles and types of shoes without altering their appearance and retaining sound orthopedic principles for properly supporting the foot at all times.

3,389,482
ADJUSTABLE SCRAPER BLADE FOR ROAD MOTOR GRADERS
Vincent Schiavi, P.O. Box 1087,
Wilmington, Del. 19899
Filed June 25, 1965, Ser. No. 466,973
2 Claims. (Cl. 172—664)



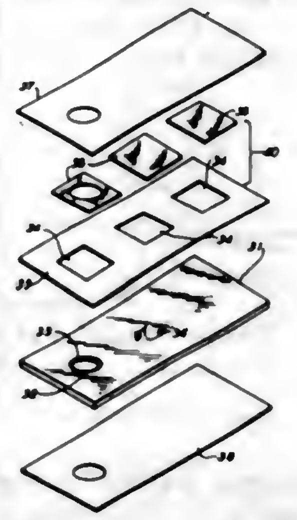
The invention comprises motive means for the adjustable scraper blade of road motor graders whereby the pivoted scraping edges of the scraper blade may be more expeditiously actuated, particularly when the scraper blade is being operatively moved by the motor grader over a road surface being treated.

3,389,483
ILLUMINATED SIGN
William B. Piper, 1472 Carruthers Place,
Memphis, Tenn. 38112
Filed Oct. 27, 1966, Ser. No. 589,926
8 Claims. (Cl. 40—32)



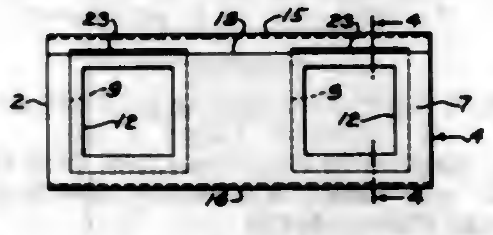
1. An illuminated sign comprising a housing therefor, beam means within the said housing, bearing means attached to the upper and lower ends of the said beam means, rollers journally carried by the said bearing means, belt means mounted upon the said rollers having a plurality of display panels, means for driving the said rollers and the said belt means mounted thereupon, intermittent means for step-by-step energizing and de-energizing the said means for driving the said rollers and the said belt means, said intermittent means carried by one of the said beams, a contact portion of said intermittent means overlying the surface of the said belt means, electrical means for connecting the said intermittent means and the said means for driving the said rollers and the said belt means to a source of power, a series of lights in the said housing illuminating the said belt means and a window formed in the face of the said housing for successively viewing the illuminated panels of the said belt means therein.

3,389,484
INSTRUMENT PANEL LIGHTING
George Mullins, West Caldwell, N.J., assignor to Panelgraphic Corporation, Caldwell, N.J., a corporation of New Jersey
Filed Jan. 28, 1966, Ser. No. 523,635
11 Claims. (Cl. 40—130)



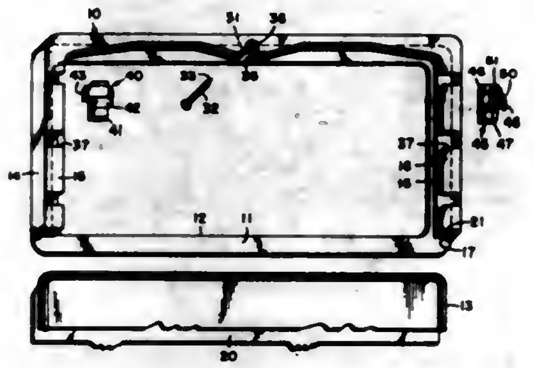
Articles of manufacture which are dead front and hide substantially all evidence of read out information until back lit and when back lit reveal well defined visible illuminated areas of certain colors. The articles of manufacture comprise a member which is transparent and tinted gray and therefore neutral so that a color hue is not imparted to the light transmitted thereby and is also characterized by having a light transmittance value of at least 5% and no greater than 30% of that from standard Source A; the percent transmission of light waves in the spectrum of 500–580 millimicrons (green light) and that of light waves in the spectrum of 580–640 millimicrons (orange and yellow light), both averaging at least 5% and no greater than 30% and that in the spectrum of 640–700 millimicrons (red light) averaging at least 5% and no greater than 35%; an opaque coat adjacent the rear face of said member and having an opening therein, a colored indicia coat adjacent the face at said opening and capable of transmitting light in the visible spectrum and of diffusing light, so that when not back lit, the article of manufacture is dead front, but when back lit the colored indicia coat presents a well defined visible illuminated area. The front face of the member carries a light transmitting and diffuse coat having white, red, yellow and orange and green light transmittance values of at least 90% and the front face of the article of manufacture having a gloss value in the range of 5–55 units as determined by using 60 degree Specular Gloss Test in accordance with ASTM D523–53T method.

3,389,485
FILM STRIP MOUNT
Joseph J. Roubal, 5135 W. 22nd Place,
Cicero, Ill. 60650
Filed Mar. 2, 1966, Ser. No. 541,876
3 Claims. (Cl. 40—159)



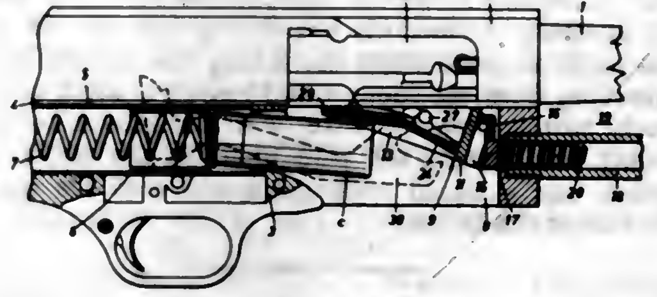
In a film strip mount a cardboard sheet or the like provides a film strip carrying and confining cavity and provides marginal framing of a film strip as such locates in the carrying and confining cavity. A terminal edge cooperates to form an opening in connection with the carrying and confining cavity for acceptance thereby of the film strip.

3,389,486
VEHICLE LICENSE PLATE HOLDERS
Earl M. Trammell, Jr., 39 Salem Estates Drive,
Ladue, Mo. 64758
Filed Dec. 31, 1964, Ser. No. 422,648
13 Claims. (Cl. 40—209)



A license plate holder including a frame having inturned flanges at opposite sides. A fastening means, such as a hook or snap fastener is located in a compatible recess formed in each inturned flange, the fastening means being adapted to fix the frame to a supporting member. The frame is of substantially an E-shaped cross section which is open at one side and which has a pair of separate channels. One channel receives the license plate through the open side, while the other separate channel receives the supporting member through the open side without disturbing the license plate. A screw punctures the license plate and fixes the plate to the frame. The fastening means can be slidably mounted to a bar that is fixed to opposite sides of the frame, the fastening means being adjustable to different positions to interfit coacting openings provided in the supporting member.

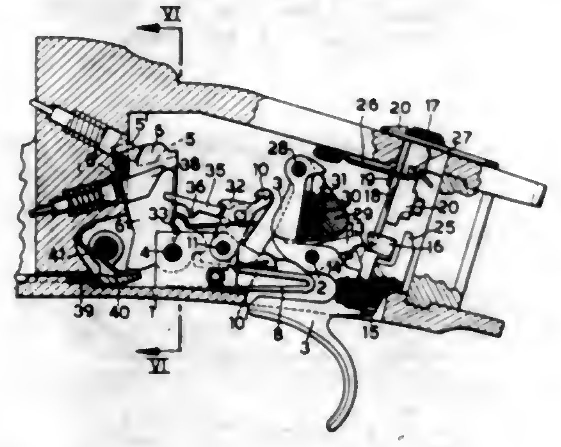
3,389,487
AUTOMATIC SHOTGUN
Giovanni Benelli, Pesaro, Italy, assignor to S.A.S. F.lli Benelli G.F. & C., Pesaro, Italy, a corporation of Italy
Filed May 26, 1966, Ser. No. 553,168
Claims priority, application Italy, Aug. 6, 1965, 17,802/65
1 Claim. (Cl. 42—17)



A shotgun having a cartridge-loading mechanism relocated on the stock rather than on the barrel or casing to improve the balance of the weapon and wherein such mechanism consists of two pivotally connected sections effective, when moved through relative pivotal movement, to raise cartridges, one at a time, into firing position within the shotgun firing chamber.

3,389,488
SINGLE-TRIGGER RELEASE MECHANISM FOR A DOUBLE-BARRELED SHOTGUN

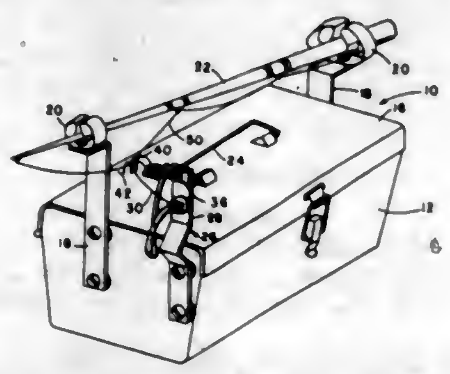
Carlo Pietro Beretta, Gardone Val Trompia, Brescia, Italy, assignor to Fabbrica Darmi Pietro Beretta S.p.A., Gardone Val Trompia, Brescia, Italy
Filed Feb. 28, 1967, Ser. No. 619,456
Claims priority, application Italy, Mar. 3, 1966, 15,157
2 Claims. (Cl. 42—42)



A release device, actuated by a single trigger, for gunlocks is disclosed as consisting of an oscillating mass connected to a selection mechanism to obtain the action of a single hammer at a time and permitting to select either hammer, at will, as the first to be operative in firing.

3,389,489
FISHING ROD ALARM ACCESSORY

William M. Burns, 1418 Gelena Road, Baltimore, Md. 21221
Filed Oct. 12, 1965, Ser. No. 495,202
2 Claims. (Cl. 43—17)

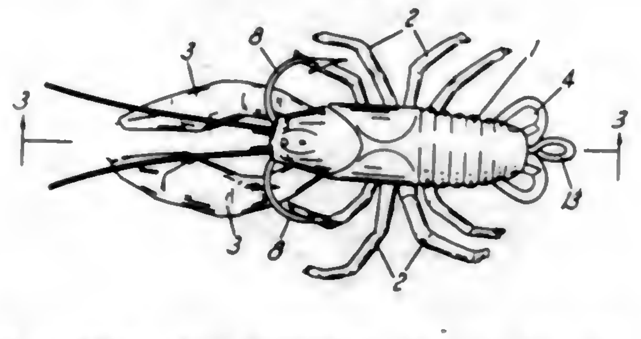


A tackle box is provided having a hingedly mounted lid, a pair of spaced clips mounted to the box clear of the lid for releaseably anchoring a fishing rod to the box, a support mounted to the box, a small diameter wire extending from the support and having a hook at its extremity resting on the fishing line of the fishing rod so as to move when the fishing line moves, a spring extending from the support and having a notch at its end freely surrounding the wire, with the movement of the fishing line causing the wire to touch the notch of the spring, and a signal system responsive to the touch of the wire to the spring.

3,389,490
FISHING LURES

John K. Peters and Bingham A. McClellan, Traverse City, Mich., assignors to Burke Flexo Products Company, Traverse City, Mich.
Filed July 12, 1965, Ser. No. 471,324
3 Claims. (Cl. 43—42.1)

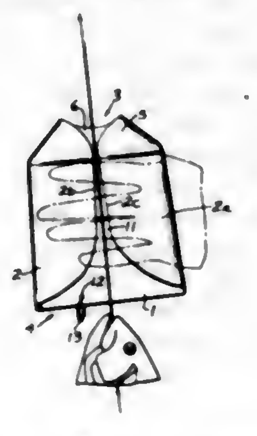
A solid body of springable thermoplastic material simulating the three dimensional shape of a crayfish including body, head, legs, claws and rearwardly tapering tail with laterally flared ends, a three gang hook having the joined shanks of three hooks extending from the head to an eye located at the rear of the body below the tail, the hooks on the upper two shanks extending laterally outwardly and upwardly from the body and having barbed ends spaced from the sides of the head, the hook of the third shank extending downwardly in relatively closely spaced relation to the bottom of the body, an elongated weight attached to the lower hook below the body and covering the end of the hook; and a connector link extending upwardly and rearwardly through the tail, the link having an eye on the front end engaged through the eye on the front of the shanks of the treble hook, and another eye on its upper rear end attachable to a line, the position of the connector link through the tail acting to hold the tail down.



As a modification, the ends of an opposed pair of the legs being enlarged and adapted to be impaled on the pointed barbs of the upper two hooks to act as weed guards.

3,389,491
DEVICE FOR HOLDING A FISH, ESPECIALLY FOR USE IN CONNECTION WITH ICE FISHING

Walter E. Lowrey, 1940 W. Ontario Ave., Dayton, Ohio 45414
Filed July 25, 1966, Ser. No. 567,593
9 Claims. (Cl. 43—53.5)

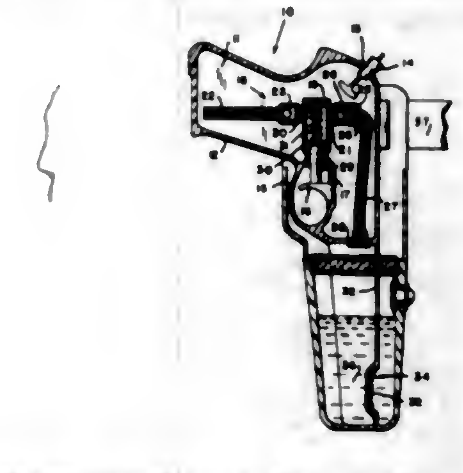


A fish holder in the form of a flat channel of approximately oval cross-section having an approximately plane surface bottom and having oppositely located thereto bendable resilient top sections defining with each other a slot extending from one end to the other end of said fish holder. The front end of said fish holder is formed by a forwardly tapering head section adapted to permit a portion of a head of a fish to pass therethrough.

3,389,492
TOY

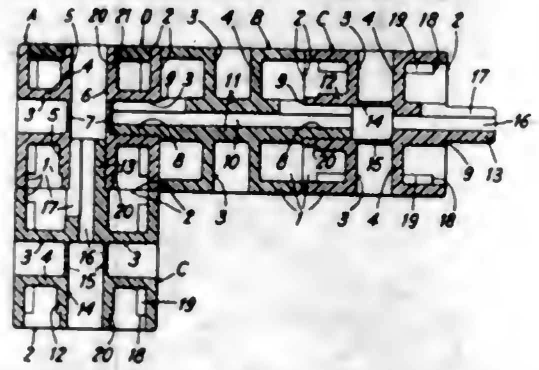
Leroy J. Sullivan, 24 Woodward Ave., New Haven, Conn. 06512, and Christy Cashavelly, 290 Eastfield Drive, Fairfield, Conn. 06604
Filed Oct. 5, 1965, Ser. No. 493,159
6 Claims. (Cl. 46—7)

This invention relates to the combination of a water gun including a bubble forming device, and a holster for containing the bubble forming solution. The gun is inserted into the holster containing the bubble solution and withdrawn therefrom to form bubbles which may thereafter be burst by an ejection of water from the gun.



3,389,493
BUILDING BLOCK TOY SET

Karl Zysset, Hauptstrasse 31, Lyss, Bern, Switzerland
Filed Mar. 24, 1966, Ser. No. 537,211
Claims priority, application Switzerland, Feb. 8, 1966, 1,653/66
3 Claims. (Cl. 46—25)

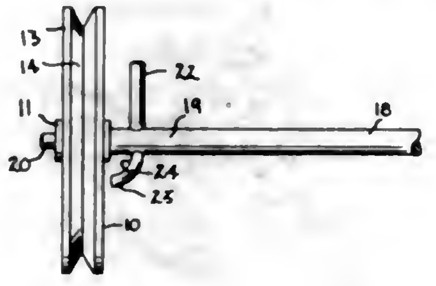


1. In a building block toy set, a plurality of equi-sized blocks of thermoplastic die-cast material, each comprising a tubular element of square cross-section and having open ends spaced from each other a distance substantially equal to the side of the square cross-section, a socket extending inwardly from each side surface of said tubular element concentrically with the central perpendicular axis of the respective side surface and having a wall thickness substantially equal to that of the tubular element, a first number of said tubular elements each having a centrally located passage therethrough from end to end of each tubular element, a second number of said tubular elements each having a hollow socket pin extending centrally therethrough from end to end of the tubular member and being provided with an extension at each end of a length at least equal to the diameter of said socket pin, and a third number of said tubular elements each having one end formed as an end of said first number of tubular elements and the other end formed as an end of said second number of tubular elements, each of said socket pin extensions fitting snugly in any one of said sockets and passages.

3,389,494
RECREATIONAL DEVICE IN THE FORM OF A SKILL WHEEL

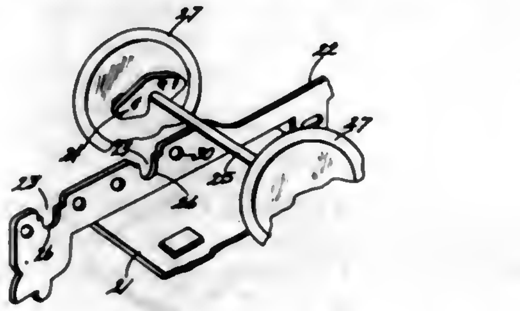
Michael Blau, 3383 Colwyn Road, Shaker Heights, Ohio 44120
Filed Oct. 21, 1965, Ser. No. 499,286
1 Claim. (Cl. 46—220)

A recreational device for testing skills in the manipulation of a wheel. The device includes the combination of a spoked wheel having an annular circumferential groove in the rim thereof and a manipulating stick having a first and second axle thereon for selective journalling in the hub of the wheel. One of such axles is a longitudinal extension of the manipulating stick and the other extends in a direction normal to the first. The stick also includes a hook which is selectively engageable with the rim or spokes of the wheel during the manipulation thereof. The stick provides a track on which the wheel can roll.



3,389,495
PLASTIC AXLE KEEPERS FOR USE ON TOY VEHICLES

Robert L. Cremer, Freeport, Ill., assignor to King-Seeley Thermos Co., Ann Arbor, Mich., a corporation of Michigan
Filed Dec. 28, 1965, Ser. No. 516,958
13 Claims. (Cl. 46—221)



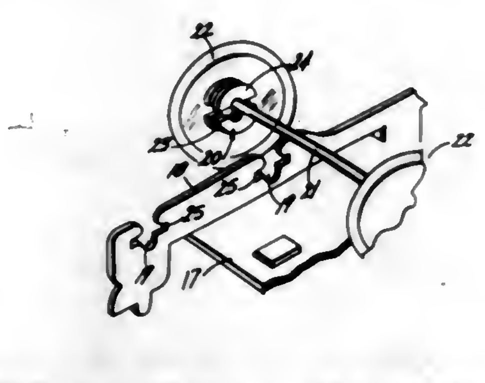
1. An axle keeper construction for axles on toy vehicles comprising, in combination, a bearing support having a generally rectangular slot provided therein with an entrance at one edge of said support for entry of an axle therein in transverse relationship to said support, said support having a substantially semi-circular metallic bearing provided therein at the inner end of said slot to receive said axle, an axle keeper of non-metallic bearing material having a slot opening therein from one edge to a substantially semi-circular bearing portion at the inner end of said slot last named permitting application of said keeper over said axle for engagement of the axle in the bearing portion thereof, and means for securing said keeper to said support keeping said axle in place in the first mentioned bearing while preventing displacement of said keeper from assembled relationship to said support.

3,389,496
PLASTIC AXLE BEARINGS FOR USE ON TOY VEHICLES

Robert L. Cremer, Freeport, Ill., assignor to King-Seeley Thermos Co., Ann Arbor, Mich., a corporation of Michigan
Filed Dec. 28, 1965, Ser. No. 516,960
8 Claims. (Cl. 46—221)

1. An axle bearing construction for toy vehicles comprising, in combination, a bearing support having a bearing recess provided therein in which an axle may be disposed in transverse relationship to said support, a circular bearing of flexible resilient non-metallic bearing material made in two halves to permit assembling thereof on

opposite sides of said axle with each half giving substantially semi-circular bearing engagement on said axle, means for holding the two halves together and against axial and transverse displacement from said bearing recess after assembly therein with the axle disposed between the two halves.

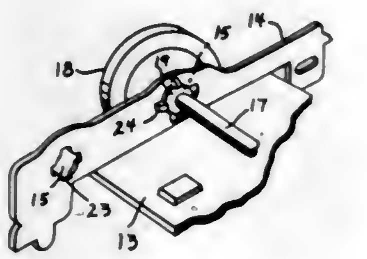


3,389,497
PLASTIC AXLE BEARINGS FOR USE ON TOY VEHICLES

Robert L. Cremer, Freeport, Ill., assignor to King-Seeley Thermos Co., Ann Arbor, Mich., a corporation of Michigan

Filed Dec. 28, 1965, Ser. No. 516,961

8 Claims. (Cl. 46—221)



1. An axle bearing construction comprising in combination a bearing support, a bearing member of flexible, resilient, non-metallic bearing material having a circular hole provided therein for rotary bearing support of an axle extending therethrough in transverse relationship to said support, said support having an opening provided therein in which there are notches on diametrically opposite sides, and means on said bearing member engageable in said opening to mount the axle on said support, said means including diametrically opposed projections entered in said notches to prevent disengagement from said opening to mount said bearing member on said support while leaving said axle free to turn and move endwise relative to said bearing.

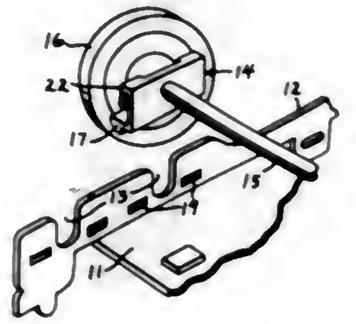
3,389,498
PLASTIC AXLE BEARINGS FOR USE ON TOY VEHICLES

Robert L. Cremer, Freeport, Ill., assignor to King-Seeley Thermos Co., Ann Arbor, Mich., a corporation of Michigan

Filed Dec. 28, 1965, Ser. No. 516,959

9 Claims. (Cl. 46—221)

1. An axle bearing construction for toy vehicles comprising, in combination, a bearing support having a generally rectangular slot provided therein opening from one edge thereof for entry of an axle therein in transverse relationship to said support, a generally rectangular bearing member of flexible, resilient, non-metallic bearing material having a substantially central bearing hole provided therein to receive the axle for rotation, means at two corners of said rectangular bearing member having abutment with the edge of said support on opposite sides of said slot for support of said bearing thereon, and means at the other two corners of said rectangular bearing member for anchoring said bearing member to said support and against axial displacement with respect to said axle.

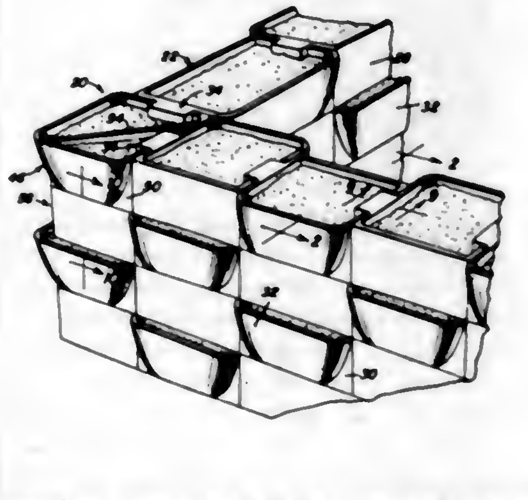


3,389,499
PLANTING WALL

Ernest Halle, 30 Cadwalader Terrace,
Trenton, N.J. 08618

Filed Oct. 20, 1966, Ser. No. 588,112

7 Claims. (Cl. 47—33)



This invention comprises a planting wall having vertically spaced blocks adapted to contain soil and plants. The blocks are laterally staggered, locked together, and form a wall that may be planted on both sides, to provide a sturdy but attractive structure.

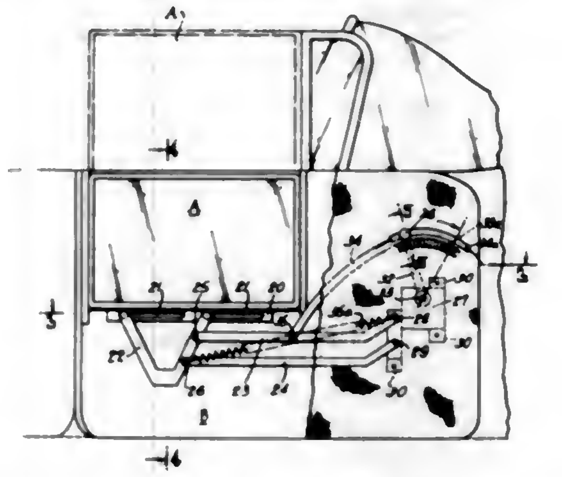
3,389,500
WINDOW REGULATING MECHANISM

Milton Schonberger, Westwood, N.J., assignor to I.N.M. Industries Corporation, New York, N.Y., a corporation of Delaware

Continuation of application Ser. No. 133,752, June 28, 1961. This application Mar. 24, 1966, Ser. No. 537,245

4 Claims. (Cl. 49—351)

1. A window regulating mechanism comprising a supporting plate, a pair of parallel levers pivoted at spaced points on said plate, a window supporting member to which the other ends of the levers are pivoted, an operating arm pivotally connected with one of the levers, at a point spaced from the pivots thereof, means for locking said arm against movement, a shaft passing through the plate, said operating arm being loosely mounted on the shaft, a coupling arm rigidly connected with the shaft and acting to couple the operating arm to the shaft at the end of an initial small angular movement of the shaft, and a handle connected to said shaft for rotating the same in opposite directions.

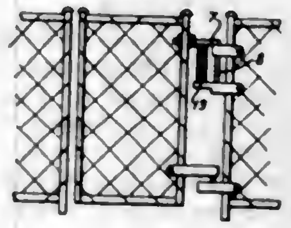


3,389,501
COMBINATION GATE HINGE AND AUTOMATIC CLOSER

Arizona Bill Harmon, 1821 N. 35th St.,
Phoenix, Ariz. 85008

Filed June 14, 1966, Ser. No. 557,451

1 Claim. (Cl. 49—386)



An improved hinge and automatic closer including a pair of vertically spaced hinge-eyes attached to a gate post to form a clevis and having an L-shaped rod with one leg thereof extending through the hinge as a clevis pin; a torsion coil spring is mounted adjacent the vertical portion of the L-shaped rod and is secured to the hinge-eye at one end and to the horizontal leg of the L-shaped rod at the other end.

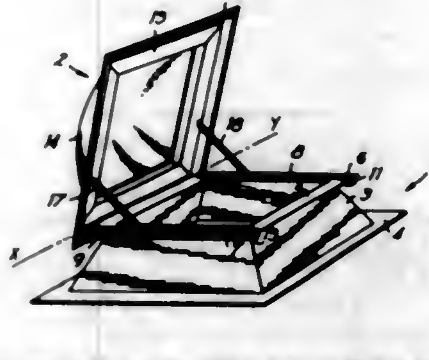
3,389,502
SKYLIGHTS, CUPOLAS AND THE LIKE

Ghislain Leurent, Mouscron, Belgium, assignor to Societe Industrielle de Transformation des Plastiques, Societe Anonyme, Tourcoing, Nord, France, a company

Filed Mar. 8, 1966, Ser. No. 532,612

Claims priority, application Belgium, Mar. 9, 1965, 660,816

3 Claims. (Cl. 49—388)



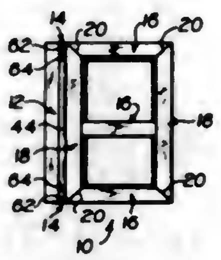
A skylight, cupola or the like has a fixed bottom header part, an opening top part and a controlling mechanism. Parallel edges of either the header part or the opening part have the shape of a trough closed at both ends. The controlling mechanism consists of two levers connected with the two parts and slidably mounted in the troughs so that they are completely enclosed when the top part is in its closed position.

3,389,503
DOOR HINGE AND ASSEMBLY THEREFOR

John A. Goess, 2464 Abbey Lane, Seaford, N.Y. 11783, and Clarence Maron, 203 Maytime Drive, Jericho, N.Y. 11753

Filed Aug. 18, 1966, Ser. No. 573,341

4 Claims. (Cl. 49—396)



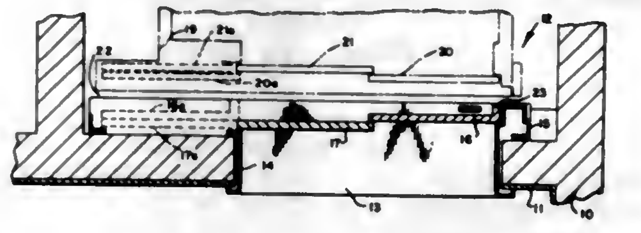
A door hinge and hinge assembly having unitarily formed vertically and horizontally extending hinge arms with means extending from the door hinge for engagement by a hinge pin to secure the hinge in assembly between the door and the door buck.

3,389,504
ELEVATOR DOOR CONSTRUCTION

Ernst Halpern, Plainview, N.Y., assignor to Williamsburg Steel Products Company, Brooklyn, N.Y., a corporation of New York

Filed May 4, 1966, Ser. No. 547,528

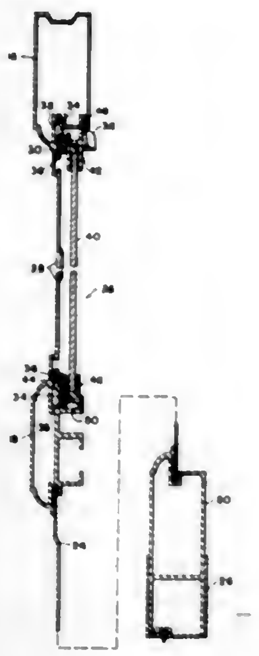
3 Claims. (Cl. 49—406)



An elevator door construction that has support means adjacent an elevator shaft and a door frame mounted on the support means that provides an entrance into an elevator in the shaft. An elevator door of hollow metal construction is mounted on the support means and is movable into an open and closed position relative to the door frame. Advantageously the door has a wing thereon disposed along the vertical edge of the door positioned adjacent the entrance when the door is in the open position. The wing extends toward the elevator to conceal the clearance space between the elevator and the door. The wing has a leg extending generally perpendicular from the plane of the door and has a lip portion. The leg has a lip portion with its free end extending away from the entrance. Advantageously a reinforcing member is provided that extends between the door and the wing. The reinforcing member has a portion extending in a direction perpendicular to the leg and disposed adjacent the side of the leg opposite to the entrance.

3,389,505
FRAME CONSTRUCTION FOR STORM AND SCREEN DOORS

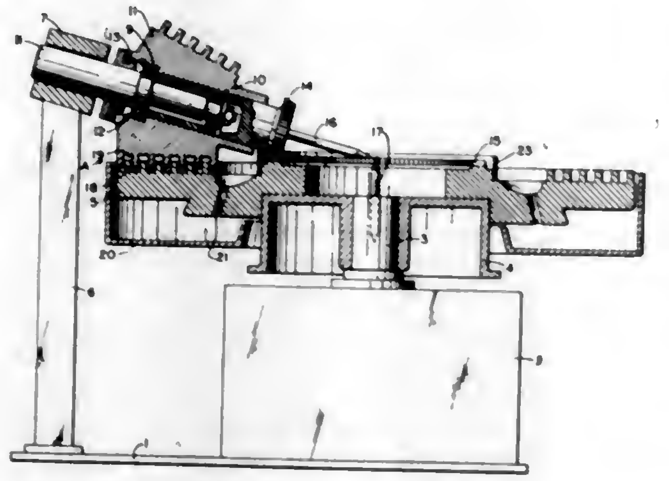
Abe Zitomer, Detroit, Mich., assignor to Feather-Lite Manufacturing Co., Division of National Brands, Inc., Detroit, Mich., a corporation of Michigan
Filed Dec. 29, 1966, Ser. No. 605,886
7 Claims. (Cl. 49—463)



A door having a storm window or screen insert, trim panels secured to the door frame around the opening for the insert and carrying a seal engaged by the insert, and means for removably securing the insert to the door in engagement with the seal.

3,389,506
TWO SIDE SHARPENING OF CUTTERS

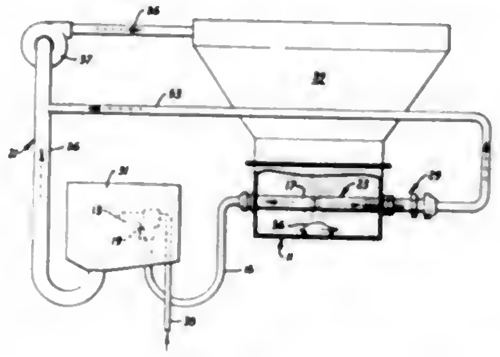
James W. Ij. Heijnis, Arnhem, Netherlands, assignor to American Enka Corporation, Enka, N.C., a corporation of Delaware
Filed Sept. 2, 1965, Ser. No. 484,634
Claims priority, application Netherlands, Sept. 19, 1964, 6410973
2 Claims. (Cl. 51—3)



Apparatus for honing, grinding, lapping, polishing and/or sharpening cutting devices comprising a pair of relatively adjustable rotatable members in frictional intermeshing engagement with each other acting to form a throat into which the cutting device such as a knife, blade or the like to be sharpened may be inserted.

3,389,507
ABRADING APPARATUS

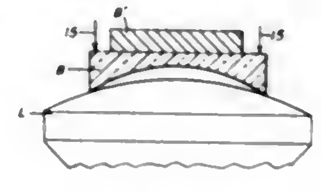
Raymond A. Flaig, San Mateo, Calif., assignor to Flaig Enterprises, Incorporated, San Francisco, Calif., a corporation of California
Filed Oct. 21, 1965, Ser. No. 500,413
11 Claims. (Cl. 51—8)



An abrasive apparatus having an adjustable orifice for admitting abrasive from a hopper to a delivery line, the adjustable orifice being provided by a tapered conical member movable axially toward and away from the open end of the delivery line, the orifice being kept open by applying suction at the orifice through an axial passage in the conical member which communicates with the intake side of the fan used to circulate the abrasive laden air from the abrasive blasting station to the hopper.

3,389,508
CYLINDER GRINDER

Jack M. Suddarth, Fort Gibson, and Dolph L. Gray, Muskogee, Okla., assignors to Coburn Manufacturing Company, Inc., Muskogee, Okla., a corporation of Oklahoma
Filed July 1, 1964, Ser. No. 379,509
7 Claims. (Cl. 51—60)



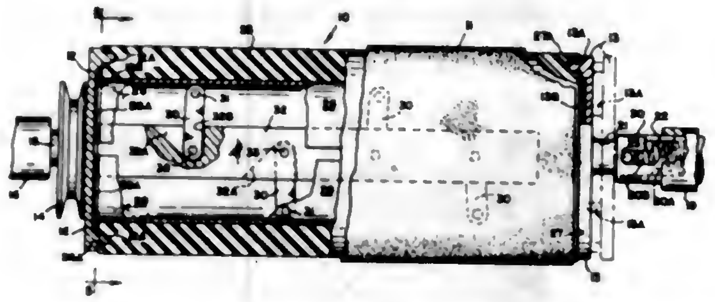
1. A lens surfacing machine of the type having an abrading lap receiving irregular movements in a common plane and a lens blank supporting structure for maintaining the blank in engagement with the lap, the improvement in said structure comprising a framework forming a part of the machine, a supporting head assembly disposed above said lap and having an uppermost end slidably received in said framework, a cradle at the lower end of said assembly, means to lower said assembly until said cradle engages said blank, pneumatic means for maintaining a desired pressure on said cradle, a resilient universal joint intermediate the ends of said assembly between said cradle and that portion of said framework slidably receiving said shaft.

3,389,509
ABRADING MACHINE

Michael W. Brodigan, 416 Fillmore St., Cottage Grove, Oreg. 97424
Filed Dec. 20, 1965, Ser. No. 515,135
5 Claims. (Cl. 51—176)

1. An abrading machine comprising:
a housing having a motor mounted therein,
support means for said housing engageable with a work surface,

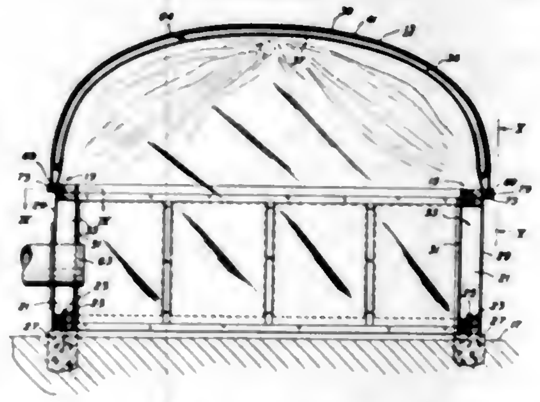
a drum assembly comprising a flexible drum and including expandable means carried within and engageable along the inner periphery of said drum for the circumferential expansion of said drum for engagement with a circumposed abrading sleeve,



a pair of cooperating end plates rotatably mounted within said housing and engageable with said drum at the ends thereof separate of and spaced from said expandable means, one of said end plates in driven engagement with said motor, and
spring biased means bearing upon at least one of said end plates urging the latter into drum engagement.

3,389,510
SHELTER

Richard R. Stock, 765 Rozelle, Memphis, Tenn. 38104
Filed Apr. 6, 1966, Ser. No. 540,662
7 Claims. (Cl. 52—2)

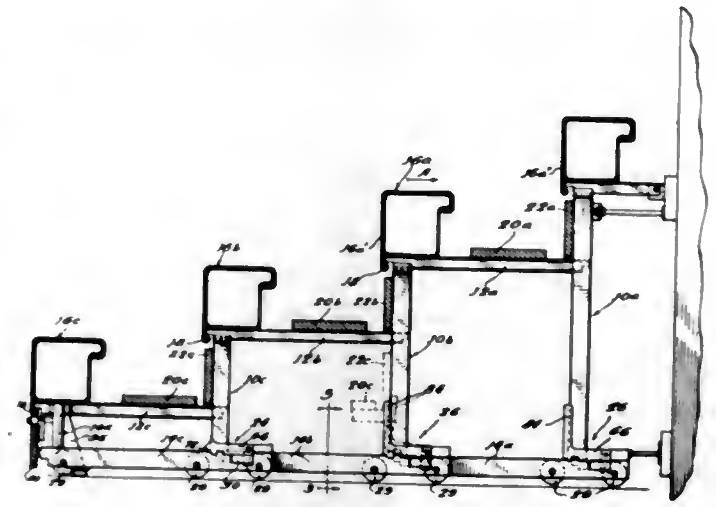


A lightweight shelter that includes a transparent enclosure that is particularly adapted for use in growing crops, with swimming pools, to enclose playgrounds for children, and for other uses where it is desirable to let sunlight into the interior of the shelter. The enclosure is of composite construction, which includes inner and outer sheets of plastic with ribs between the sheets which are formed from sleeves of plastic stuffed with pieces of expanded plastic. A netting of plastic is preferably provided on top of the ribs. A blower provides air to the interior of the shelter to force the inner sheet against the rib means, and the space between the inner and outer sheets is communicated with the outside atmosphere whereby the outer sheet is deflated to allow the outer sheet to be supported by the netting and/or the rib means.

3,389,511
TELESCOPING GYMNASIUM SEATING UNITS

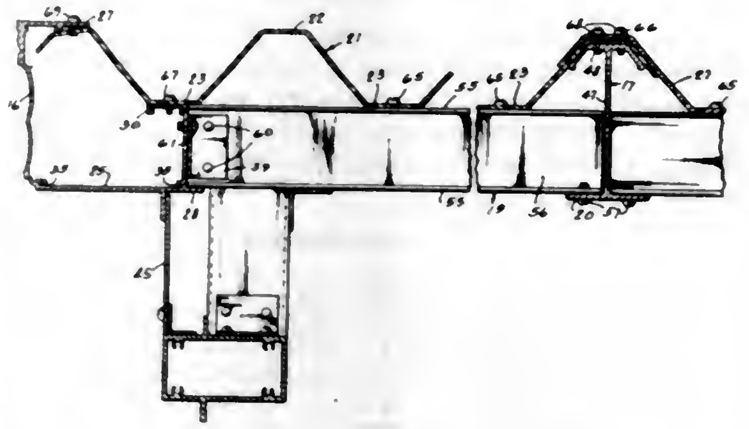
William E. Drehobl, Kalamazoo, Mich., assignor to Brunswick Corporation, a corporation of Delaware
Filed Mar. 8, 1966, Ser. No. 532,725
8 Claims. (Cl. 52—9)

A telescopic bleacher construction which includes a plurality of movable upright frames nested one in the other beginning with a forwardmost frame until the bleacher construction is fully telescoped. Lower horizontal support members are rigidly mounted to and extend forwardly from each of the upright frames. The support members have side walls in close parallel relation to the side walls of the adjacent support member when the construction is fully telescoped and move with their respective upright frames from the fully telescoped position to an extended position with the support members positioned in successively rearwardly adjacent relation to each other. Complementary catch members extend away from each of the adjacent side walls of adjacent support members and face each other at similar acute angles with the respective side walls of adjacent support members so that movement of the upright frames from the fully telescoped position will cause the catch members to be successively engaged and prevent relative lateral movement of adjacent upright frames. Means are provided to lock the forwardmost upright frame and the adjacent upright frame immediately to the rear of the forwardmost frame in an extended position, and a brake member is mounted on the forwardmost upright frame and movable into engagement with the subjacent floor to lock the forwardmost frame thereto. A kickboard is pivotally mounted at the front end of the forwardmost frame and movable between a normally downwardly depending position to an elevated position. Link means are provided between the kickboard, the lock means, and the brake member such that movement of the kickboard to its elevated position moves the brake member out of engagement with the floor and also unlocks the forwardmost frame member with the immediately adjacent frame member to the rear thereof.



3,389,512
ROOF STRUCTURE

Dominick J. Sarlo, River Grove, and Burton L. Siegal, Skokie, Ill., assignors to Kenron Aluminum & Glass Corporation, Niles, Ill., a corporation of Illinois
Filed Oct. 28, 1966, Ser. No. 590,313
10 Claims. (Cl. 52—11)

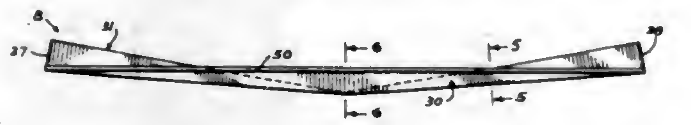


A roof structure has a generally rectangular marginal frame comprising rain gutters. The rafters located between side beam portions of the frame have their ends fixedly secured to the front and rear beams of the frame and with their tops above the inner walls of the gutters. Corrugated roof panels have overlapping margins supported on the rafters and extend at their front and rear margins over the inner walls of the front and rear gutter beams. At their respective ends the rafters and the adjacent portions of the panels are secured to inwardly extending overlying flanges on the outer walls of the gutter beams. Purlins extending between the rafters have valley portions of the roof panels secured thereto.

3,389,513

STRUCTURAL PANELS AND STRUCTURES CONTAINING SUCH PANELS

Donald H. Ruggles, 2819 S. Sheridan,
Tulsa, Okla. 74129
Filed July 7, 1966, Ser. No. 563,554
6 Claims. (Cl. 52—82)

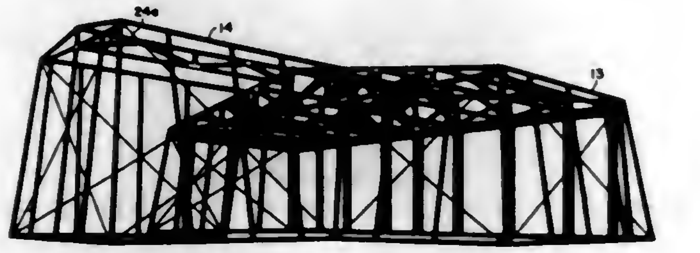


Roofing panels provided from sheets of suitable material folded into watershed areas and dual-function flange areas which provide overlaps to the panels and cooperate with portions of the watershed areas to provide narrow gutters extending along side edge portions of the panels. The disclosure also includes building structures which include a plurality of the panels with their flanges overlapping and providing a plurality of such gutters to augment the number of areas which are adapted to shed water from the roofs of the building structures.

3,389,514

TUBULAR FRAME SHELTER

Louis W. Horvath, 3306 Hutchens Ave.,
Huntsville, Ala. 35801
Continuation-in-part of application Ser. No. 297,527, July 25, 1963. This application June 3, 1966, Ser. No. 555,109
4 Claims. (Cl. 52—90)



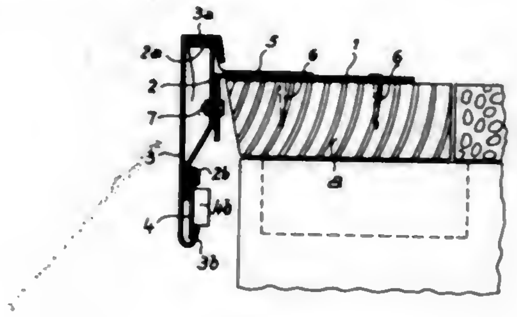
A tubular frame structure consisting of a plurality of tubular members generally end-connected to define sidewall supporting means and roof-supporting trusses. Four tubular members are connected at each truss corner by a four-receptacle fitting, and four tubular members are connected to define the truss ridge by another four-receptacle fitting. The tubular members are secured in the fittings by pins which extend through aligned openings in the members and fittings.

3,389,515

EDGE SECTION FOR FLAT ROOFS WITH INTERNAL DRAINAGE

Otto Hellebrand, 12 Heldenbergenerstrasse,
Frankfurt am Main, Germany
Filed Feb. 16, 1966, Ser. No. 527,949
7 Claims. (Cl. 52—94)

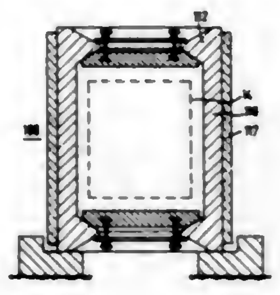
An edge section for flat roofs having a covering sheeting wherein the said edge section includes a holding means and a covering means. The holding means has a first portion secured to the roof edge underneath the said sheeting which overlaps the roof edge and a second portion extending downwardly over the roof edge. The covering means has a first portion which is placed on top of said overhanging sheeting and overlaps the first portion of said holding means. The covering means further includes a second portion which extends downwardly and overlaps the second portion of said holding means. A wedging means is placed between the said second portions of said holding and covering means to cause said overlapping first portions to be forced together. In this way, the overhanging sheeting is firmly anchored in place at the roof edge between said holding and covering means.



3,389,516

PRESTRESSED CONCRETE PRESSURE VESSEL FOR NUCLEAR REACTORS

Albert Ziegler, Erlangen, Germany, assignor to Siemens Aktiengesellschaft, Munich, Germany, a corporation of Germany
Filed Mar. 4, 1965, Ser. No. 437,321
Claims priority, application Germany, Mar. 6, 1964, S 89,874
2 Claims. (Cl. 52—224)



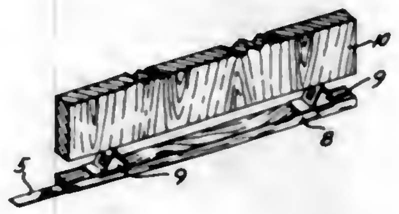
Prestressed concrete pressure vessel for nuclear reactors and the like has a cylindrical wall open at both ends thereof formed by an assembly of prefabricated concrete segments spaced circumferentially one from the other so as to define a plurality of gaps therebetween filled with pressure-resistant material, and annular prestressing means for prestressing the concrete segments. The cylindrical wall has a cylindrical outer surface on which the annular prestressing means are disposed and a cylindrical inner surface located intermediate to respective regions adjacent the open ends of the cylindrical wall, the prefabricated concrete segments at those regions being formed with bracing surfaces. Also provided are wedge-shaped support members having surfaces engageable with the bracing surfaces and extending radially inwardly of the cylindrical wall, the support members being also formed with bearing contact surfaces, and end blocks are inserted in the open ends and are provided with conical surfaces engageable with the bearing contact surfaces for closing the open ends of the cylindrical wall. The bracing surfaces are in substantially stepwise

arrangement and are at least partly parallel to the conical surfaces of the end blocks. At least one of the wedge-shaped support members may consist of two side portions and a middle portion, the middle portion lying substantially in a plane passing through the longitudinal axis of the cylindrical wall and having parallel side surfaces respectively adjacent the side portions.

3,389,517

INSTALLATION METHOD FOR PARTITIONS

Jon B. Dunnington, Mercer Island, Wash., assignor to Weyerhaeuser Company, Tacoma, Wash., a corporation of Washington
Filed June 30, 1965, Ser. No. 468,511
3 Claims. (Cl. 52—238)

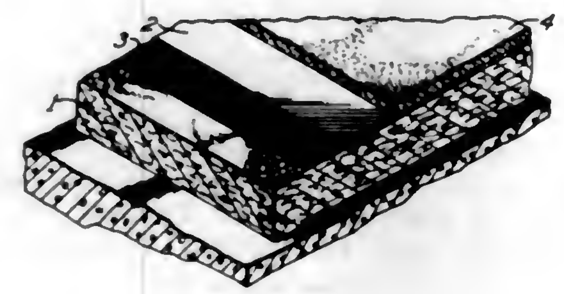


A method of installing movable partitions utilizing cohesive tapes to hold the top and bottom of the partitions against the ceiling and floor. The weight of the partition against the bottom tape and the pressure of the upper edge of the partition against the top tape insure that the cohesive properties of the tape will be adequate to resist dislocating forces applied against the partition. When a change of position of the partitions is desired, they can be disassembled and removed without damage to the floor or ceiling.

3,389,518

RESILIENT CELLULAR WALL COVERING AND APPLYING IT

Edwin Horbach, Bruhlbachweg 10,
Stuttgart-Rohr, Germany
Filed June 9, 1964, Ser. No. 373,678
4 Claims. (Cl. 52—309)

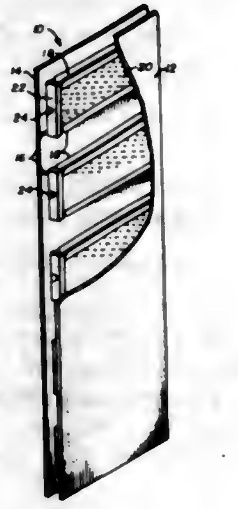


1. A wall covering comprising; in combination, a resilient thermo-insulating cellular polystyrene layer adapted to be adhered to a supporting wall member and to take up any cracks forming in said wall member; a continuous solid outer coating formed of finely subdivided mineral aggregate dispersed in a binder material; and a continuous intermediate layer consisting essentially of a polyvinyl chloride having quartz powder distributed therethrough and of a propionic acid ester binder and having a reinforcing fabric embedded therein interposed between and firmly adhering to said cellular layer and said continuous solid outer coating, whereby said continuous outer coating will remain unaffected by any movement or cracks formed in the supporting wall member due to the resilient absorption of such movement and the taking up of such cracks by said resilient cellular layer.

3,389,519

SPACED FOAM CORE PANELS

David H. Williams, Sunnyvale, and Ernest C. Pellaton, Larkspur, Calif., assignors to Fibreboard Paper Products Corporation, San Francisco, Calif., a corporation of Delaware
Filed Mar. 9, 1966, Ser. No. 532,941
9 Claims. (Cl. 52—309)

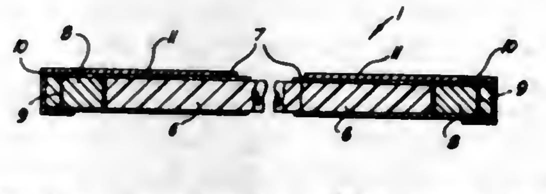


A prefabricated, structural panel comprising first and second surface panels rigidly bonded together and spaced apart by a series of discontinuous spaced core portions. Said cores are comprised of expendable forms which serve to contain a rigid adhesive foamable material therein. The foamable material bonds the first and second surface panels together to form the structural unit.

3,389,520

SANDWICH DRAFTING BOARD STRUCURE

Harold W. Gray, Toronto, Ontario, and Arthur L. W. Watt, Willowdale, Ontario, Canada, assignors to The Hughes-Owens Company Limited, Montreal, Quebec, Canada
Filed Apr. 6, 1966, Ser. No. 540,628
3 Claims. (Cl. 52—309)



The invention comprises a drafting board having a core formed of expanded plastic composition foam, a rigid cover sheet is applied to each major side surface of the foam core and, on one side of the board a sheet of resilient material, such as linoleum, is fixed to constitute the drafting surface.

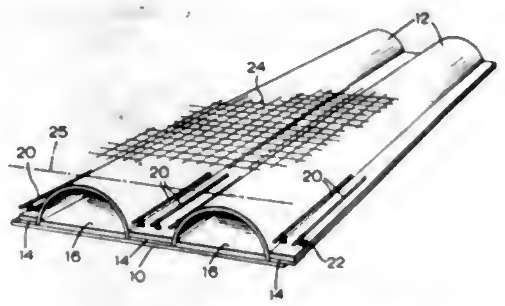
3,389,521

CONCRETE FORM STRUCTURE FOR FLOORS

Werner K. H. Gregori, 121 Allen St.,
Oakville, Ontario, Canada
Filed Aug. 3, 1966, Ser. No. 569,865
Claims priority, application Canada, June 2, 1966, 961,887
10 Claims. (Cl. 52—309)

1. A preassembled concrete form structure for use in the construction of a concrete floor and intended to be left within the poured floor and to provide a finished ceiling surface for the under side of the poured floor, said structure comprising a panel element of a material suitable as a finished ceiling surface and carrying on its top face at least one semi-tubular member of a rigid material, said semi-tubular member having its convex surface facing upwardly and its lower edges adhesively fixed to said top face of said panel element, and a layer

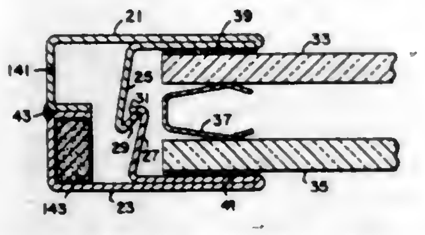
of insulating material overlying and adhesively fixed to said panel element around said semi-tubular element, said



insulating material consisting of a rigid self-extinguishing, thermal insulating plastic foam.

3,389,522
GLASS UNIT AND METHOD

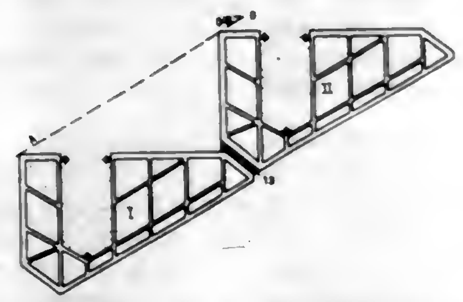
Victor A. Hordis, Riverton, N.J., assignor to Hordis Brothers, a partnership, Pennsauken, N.J.
Filed Apr. 20, 1966, Ser. No. 543,929
25 Claims. (Cl. 52—401)



A hermetically-sealed, multiple-pane insulating glass unit and method of making it including forming a first half-frame having a snap-action locking means extending therefrom, forming a second half-frame having a snap-action locking means extending therefrom, applying a sealant along the inner face of each half-frame, setting a first glass sheet on the sealant of the first half-frame, setting a second glass sheet on the sealant of the second half-frame, laying a glass-separating member along the edge of one of the glass sheets, and pressing the half-frames together to cause the locking means to snap together and lock the unit into a complete assembly. The half-frames have outer edges which abut, and the method further includes the steps of exerting an outward pressure on the inner faces of the glass sheets by means of the glass-separating member, and transferring that locking pressure through the locking means to exert an inward pressure on the abutting edges of the half-frames to force them together.

3,389,523
SHELL STRUCTURE FOR STAIRSTEPS

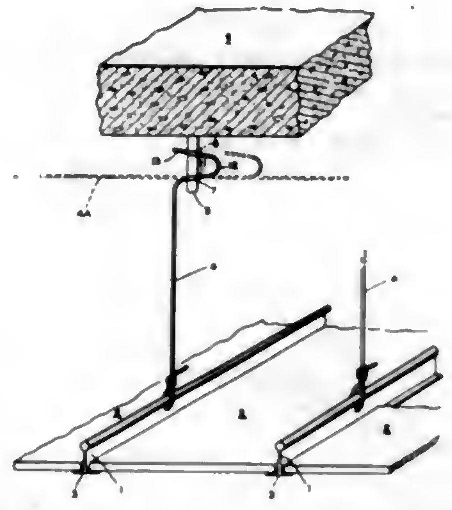
Ubaldo Bertelé, Via Garibaldi 19, Verona, Italy
Filed Dec. 14, 1964, Ser. No. 418,109
Claims priority, application Italy, Oct. 26, 1964, 23,078/64
2 Claims. (Cl. 52—606)



1. In a staircase step shell of cementitious material, having a reticulated hollow interior and being cross-sectionally polygonally shaped, the improvement consisting of a leak-proof, longitudinal chamber located barycentrically within said reticulated interior and having an opening on the tread side of said step shell for the admission of concrete and metallic reinforcing elements.

3,389,524
TWO HOLER SUPPORT

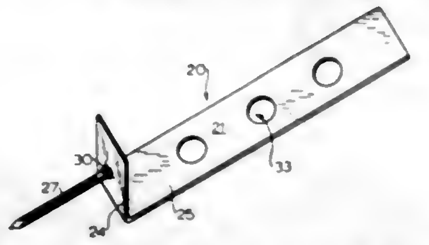
Robert Weber, 38 Skipper Drive, West Islip, N.Y. 11795
Filed Mar. 5, 1965, Ser. No. 437,525
8 Claims. (Cl. 52—713)



A nail or threaded member having two apertures extending transverse to its longitudinal axis. A member, having a pair of leg portions, is secured to the nail with leg portions extending through the apertures. The leg portions are spring biased to frictionally lock the member against longitudinally and lateral movement.

3,389,525
PREFABRICATED WALL NAIL-TIE ASSEMBLY

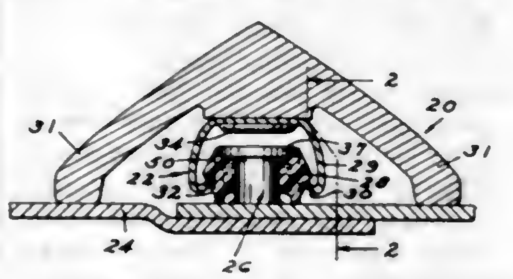
Willard Bruce Moody, 1711 Hillcrest Drive, Durham, N.C. 27705
Continuation-in-part of application Ser. No. 407,189, Oct. 28, 1964. This application Feb. 23, 1967, Ser. No. 617,992
2 Claims. (Cl. 52—714)



A wall tie for a brick veneer wall is preformed to the final shape required and comes provided with an integral and properly positioned nail to eliminate the usual tie bending and separate nail locating and positioning.

3,389,526
MOLDING ASSEMBLY

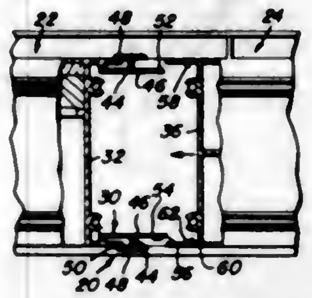
Engelbert A. Meyer, Union Lake, Mich., assignor to Warren Fastener Corporation, Mount Clemens, Mich., a corporation of Michigan
Filed Aug. 29, 1966, Ser. No. 576,513
7 Claims. (Cl. 52—718)



This disclosure relates to a molding assembly, including a support having a button extending therefrom, an adapter releasably retained on the support by the button, a retainer in the form of an inverted U-shaped channel having inturned flanges tensioned beneath the opposed side walls of the adapter, and a longitudinal molding device received over the retainer and secured thereto.

3,389,527
SNAP-TOGETHER WINDOW WALL FRAMING AND JOINING CONSTRUCTION

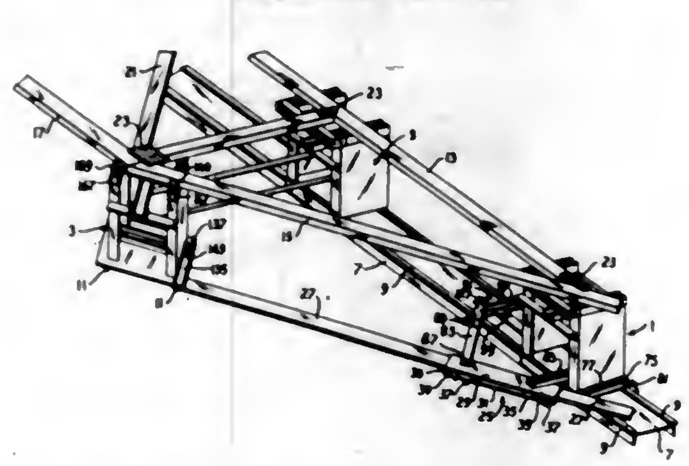
Earl W. Collard, 2714 Mountain Ave., El Paso, Tex. 79930
Filed Apr. 30, 1965, Ser. No. 452,068
4 Claims. (Cl. 52—731)



A window wall unit wherein opposed generally U-shaped rails have the corresponding flanges thereof interlocked by a pair of elongated joining strips consisting of web-connected laterally projecting parallel plates which receive therebetween the flanges of the adjoining rails. The portion of one of the strip plates associated with each rail flange is provided with a locking projection thereon constructed to, through a slight flexing of the plate, engage behind a similar locking projection on the flange upon a movement of the rails toward each other so as to effect a permanent locking of the rails to each other.

3,389,528
METHOD AND FIXTURE FOR TRUSS FABRICATING

Walter G. Moehlenpah, Ladue, Mo., assignor, by mesne assignments, to Hydro-Air Engineering, Inc., St. Louis, Mo., a corporation of Missouri
Filed Oct. 31, 1966, Ser. No. 596,039
9 Claims. (Cl. 52—741)



7. A method for fabricating a hip truss or the like, the truss having upper chords each of which is connected at one end to the ends of a lower chord to form therewith heel angles, the method comprising,

separating two heel pedestals by a distance substantially equal to the length of the lower chord of the truss so that the heel pedestals may support the ends of the lower chord and one end of each upper chord of the truss,

swinging two panel point pedestals about axis substantially passing through the lower chord and the heel pedestal until the desired heel angles of the truss are formed by a line between the heel pedestals and lines between the panel point pedestals and the heel pedestals,

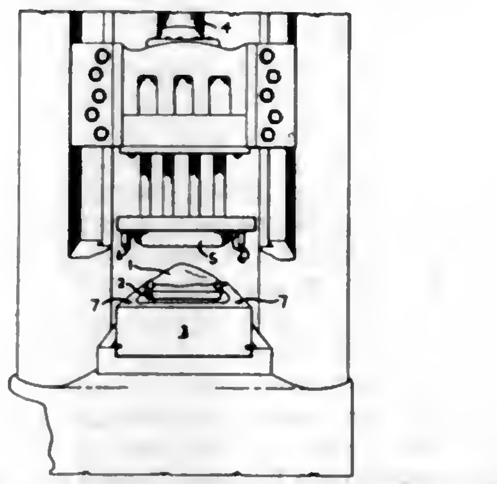
adjusting the spacing between the panel point pedestals and the respective heel pedestals until they are separated by distances substantially equal to the length of the upper chords of the truss being fabricated,

positioning wood members substantially in abutting relation on the pedestals to form a lower chord between the heel pedestals and upper chords between the heel and panel point pedestals,

and securing the wood members together.

3,389,529
PROCESS FOR PACKAGING SILICEOUS PIGMENTS

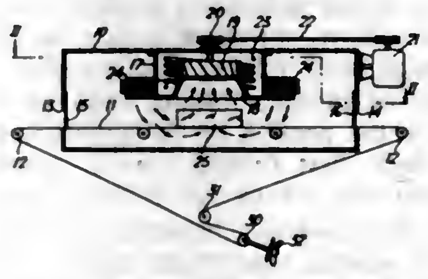
Edward M. Allen, Doylestown, and Cloyde G. Dye, Barberton, Ohio, and Joseph A. Smrdel, Beaumont, Tex., assignors to Pittsburgh Plate Glass Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Feb. 14, 1964, Ser. No. 344,964
6 Claims. (Cl. 53—24)



A package of a finely divided siliceous pigment material having an average ultimate particle size of below about 1 micron is pressed in a confined space defined by wall surfaces by applying pressure to at least one surface for a period of at least about 10 seconds, the ultimate pressure being up to about 1000 p.s.i. and applied for at least about 0.5 second to provide a package of at least 10 percent less volume and at least 1 percent more surface area than the filled unpressed bag of pigment, the bulk density of the densified pigment being 5 to 70 percent greater than the unpressed pigment.

3,389,530
METHOD AND APPARATUS FOR HEAT SHRINKING PACKAGING FILM

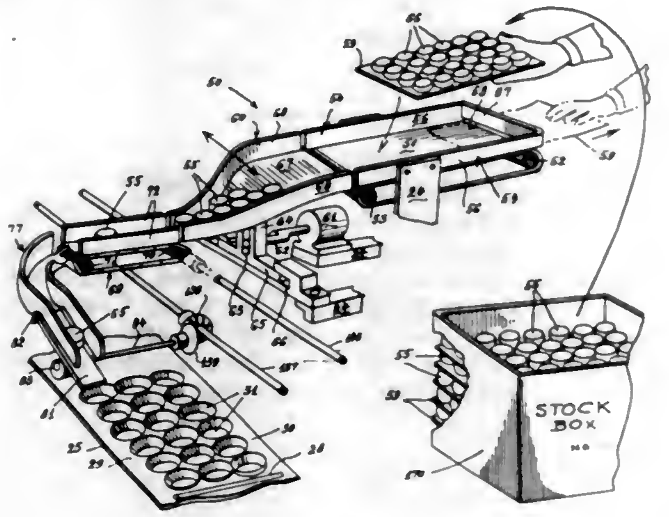
Ronald Arthur Yates, Park Royal, London, England, assignor to W. R. Grace & Co., Cambridge, Mass., a corporation of Connecticut
Filed Feb. 10, 1964, Ser. No. 343,590
Claims priority, application Great Britain, Feb. 12, 1963, 5,689/63
13 Claims. (Cl. 53—30)



A heated gas moving in a recirculating vortex as packages wrapped in heat shrinkable film pass therethrough.

3,389,531
CANDY PACKAGING MACHINE

Albert L. Ehe, Bayside, and Charles T. Milligan, Richmond Hills, N.Y., assignors to Multicup Automation Company, Inc., Woodside, N.Y.
Filed Sept. 2, 1965, Ser. No. 484,596
13 Claims. (Cl. 53—126)

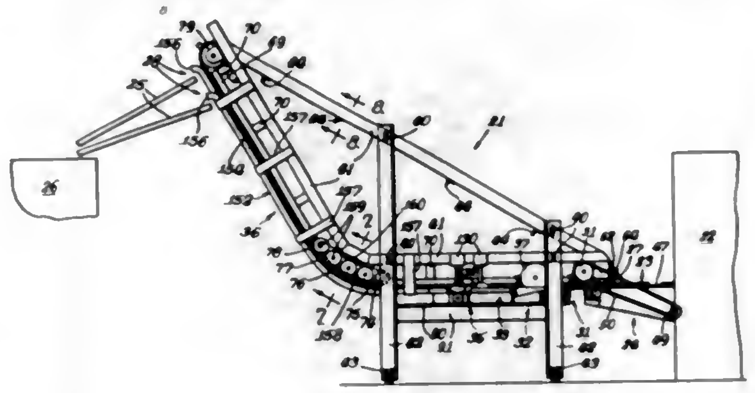


1. In a candy box filling machine the combination of a tray loading mechanism, a candy loading mechanism and drive means for said tray loading mechanism and said candy loading mechanism, said tray loading mechanism comprising a first endless belt upon which cup trays are placed at one end of said machine, and carried thereacross beneath said candy loading mechanism, said candy loading mechanism comprising a plurality of loading assemblies, each of said loading assemblies having means for receiving a flat tray loaded with the same kind of candy pieces from a stock box and for discharging individually each candy piece in timed sequence into a particular cup of one of said cup trays when said cup trays are at intermediate points between the ends of said machine, said candy loading mechanism also comprising means for loading candy filled cup trays into candy boxes, and a second endless belt between opposite ends of said machine, said second belt being below said first belt, said second belt receiving said candy boxes thereupon at one end of said machine and carrying said candy boxes thereacross to the opposite end of said machine, said candy boxes at an intermediate point between the opposite ends of said machine receiving therein the candy filled cup trays from said candy loading mechanism.

3,389,532
PACKAGING SYSTEM

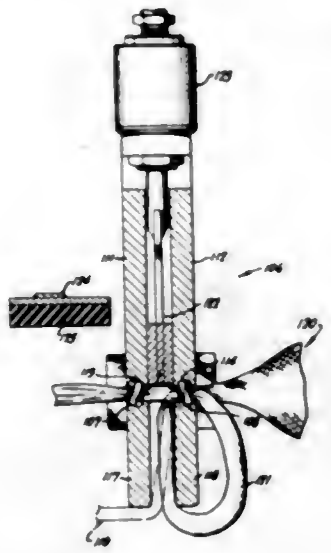
James S. Stelzer, Fort Wayne, Ind., assignor to Peter Eckrich & Sons, Inc., a corporation of Indiana
Filed May 7, 1964, Ser. No. 365,612
17 Claims. (Cl. 53—128)

3. A device for folding opposing envelope edges beneath the envelope along desired fold lines, which device comprises means defining a folded zone, means defining a creasing zone, conveyor means for conveying an envelope through said folding and creasing zones, first supporting means in said folding zone of a width for supporting only the portion of the envelope between the desired fold lines, first folding means cooperating with said first supporting means for folding portions of the envelope extending laterally beyond said first supporting means as flaps, second supporting means in the form of a plate member having a width generally the same as the width of said first supporting member, second folding means cooperating with said second supporting means for folding said flaps beneath said plate number with the envelope disposed on said plate member, third supporting means for supporting the envelope with the flaps folded beneath the envelope against the bottom of the envelope, means cooperating with said third supporting means for creasing the resulting folds of the flaps along at least a portion of the fold lines, and means for driving the envelope over said first, second and third supporting surfaces sequentially, said first and second folding means and said creasing means each being operable responsive to passage of an envelope over the respective cooperating supporting surface.



3,389,533
PACKAGING APPARATUS AND METHOD

Maynard J. G. Tipper, Oakland, and James W. Marietta, Jr., San Leandro, Calif., assignors to Rheem Manufacturing Company, New York, N.Y., a corporation of California
Filed Feb. 9, 1966, Ser. No. 526,301
3 Claims. (Cl. 53—134)

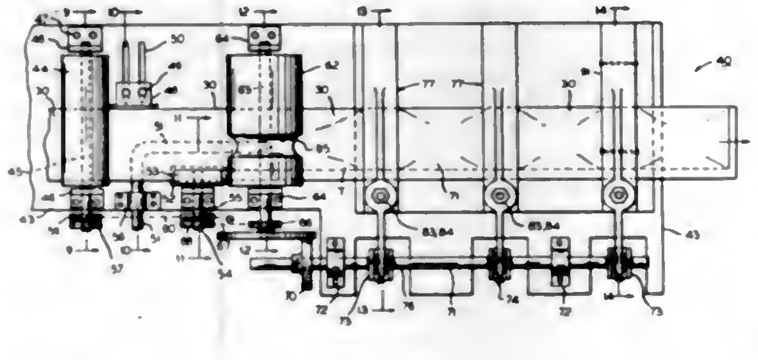


1. Packaging apparatus comprising:
an elongated feeding means having a discharge end and adapted to support products for successive movement longitudinally therealong and out of said end,
a length of tubular packaging material stored in shirred condition around said feeding means,
said packaging material being adapted to be removed from said feeding means as a product is discharged out of said end for enveloping such product,
a pair of clipping devices adjacent said discharge end,
said devices being spaced apart a relatively short distance and adapted to provide a pair of deformed clips surrounding said material and in tight frictional gripping relation therewith,

cutting means for severing said material intermediate said clipping devices after such clipping has been performed,
one of said clipping devices including an upwardly projecting portion around which said material may be wound to form a loop, and
said one clipping device applying a longer clip than the other device and clamping a double thickness of material together at a point on said loop to form a carrying means for each package.

3,389,534
MACHINE FOR MAKING CUSHIONING PACKAGING MATERIAL OR THE LIKE

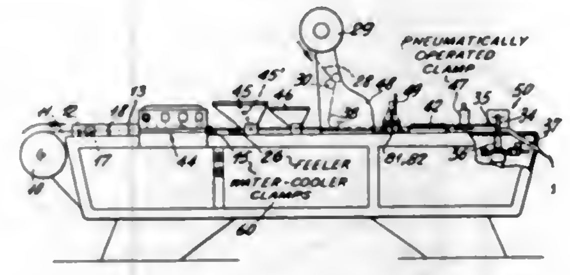
John M. Pendleton, Shorewood, Wis.
(5080 Maplewood Court, Milwaukee, Wis. 53220)
Filed Sept. 16, 1965, Ser. No. 487,848
2 Claims. (Cl. 53—180)



A machine for making a strip of connected capsules containing a strip of connected capsules containing occluded air, whereby the strip may be used for dunnage, or severed into discrete capsules for dunnage use, said machine being characterized by structure for readily varying the length of the capsules of such strip, and for severing the strip into discrete capsules.

3,389,535
PROTECTIVE PACKAGING OF PLASTIC MATERIAL FOR VIALS AND THE LIKE, AS WELL AS PROCESS AND EQUIPMENT FOR OBTAINING IT

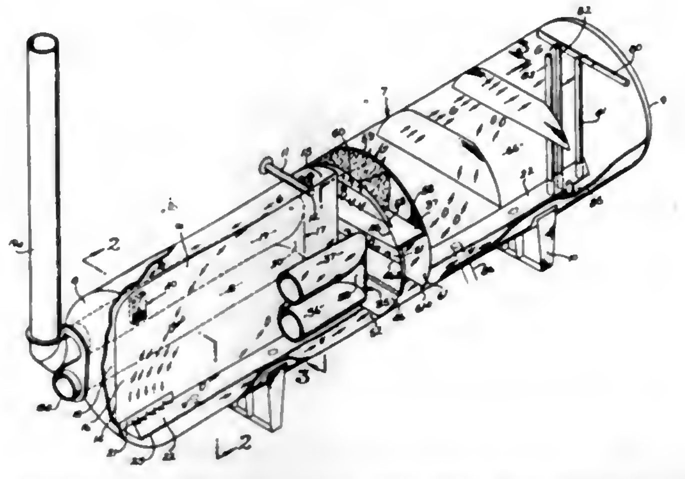
Massimo Armetti, Via Gallino 10, Milan, Italy
Filed Apr. 6, 1965, Ser. No. 446,026
Claims priority, application Italy, June 3, 1964, 725,044
4 Claims. (Cl. 53—184)



The invention relates to a machine for packaging vials or small bottles between two layers of thermoplastic material by hot-molding a series of trough-like recesses in a lower web that is moved stepwise along a working table by reciprocating gripping clamps, filling the recesses with vials or small bottles, placing over the lower web and its filled recesses a thermoplastic cover sheet, adhering the cover sheet to the web around the margins of the filled recesses to produce a series of sealed containers, and cutting off terminal portions of the series.

3,389,536
EMULSION TREATER TANK

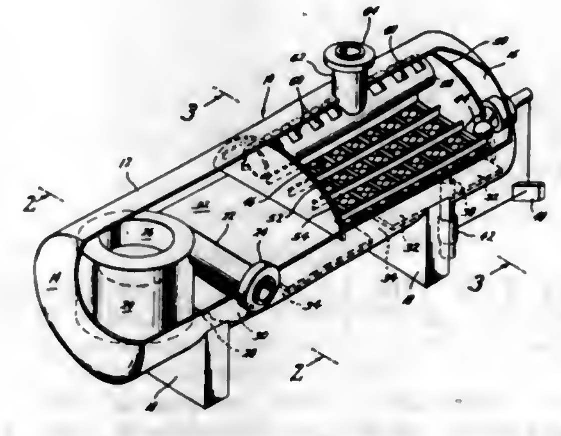
Hendrix R. Bull, Whittier, Calif., assignor to Rheem Manufacturing Company, New York, N.Y., a corporation of California
Filed Sept. 27, 1966, Ser. No. 582,429
12 Claims. (Cl. 55—174)



The emulsion treater tank has first and second compartments at one end of the tank separated by a longitudinal, substantially vertical partition. A transverse, substantially vertical partition is located intermediate the ends of the tank and extends from one side of the tank to the end of the longitudinal partition in order to close the end of the first compartment. A pair of transverse distributing plates extend from the other side of the tank to close the end of the second compartment. Crude oil is introduced to the first compartment near the top of the tank adjacent the transverse partition and flows downwardly around the lower edge of the longitudinal partition at the one end of the tank into the second compartment and both compartments containing heaters. The distributing plates provide a top gas passage, an intermediate oil passage and a lower water passage leading from the second compartment toward the other end of the tank. The gas and oil are removed near the top of the other end of the tank and the water is removed at the bottom at the other end of the tank.

3,389,537
PIPELINE SCRUBBER

Robert E. McMinn, Oklahoma City, Okla., assignor to Black, Sivalls & Bryson, Inc., Kansas City, Mo., a corporation of Delaware
Filed Oct. 28, 1966, Ser. No. 590,271
4 Claims. (Cl. 55—337)



Apparatus for separation of liquid from gas comprising a vessel containing a slug knockout means, a slug dam, anti-reentrainment baffles disposed above a maintained liquid level and a mist extractor enclosing the gas outlet in the vessel.

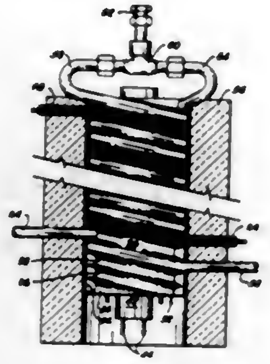
3,389,538

SAMPLE VAPORIZING APPARATUS

Alfred B. Carel, Ponca City, Okla., assignor to Continental Oil Company, Ponca City, Okla., a corporation of Delaware

Filed Aug. 9, 1965, Ser. No. 478,307

18 Claims. (Cl. 55—386)



Sample vaporizing apparatus is provided comprising a continuous conduit in thermal contact with a heated core, and means for introducing a sample at a point intermediate those portions in contact with the core.

3,389,539

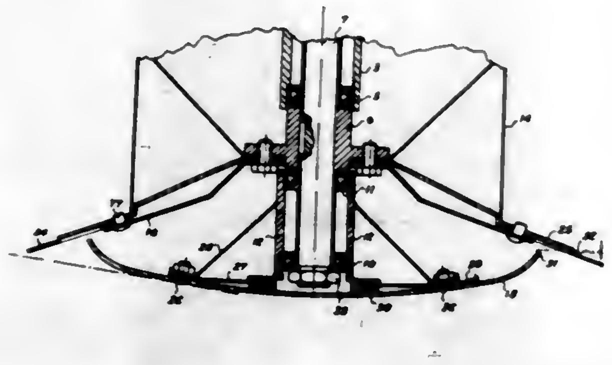
MOWING MACHINES

Petrus Wilhelmus Zweegers, Eindhovenscheweg 2, Geldrop, Netherlands

Filed July 6, 1965, Ser. No. 469,394

Claims priority, application Netherlands, July 11, 1964, 6407939; Oct. 9, 1964, 6411816; Feb. 19, 1965, 6502084

8 Claims. (Cl. 56—6)



Mowing machine having at least one rotatable drum, each carrying an outwardly projecting flange at its lower end and cutters spaced apart around the periphery of the flange. A saucer-like ground-engaging support is mounted beneath each drum and is rotatable with respect to the drum about the axis of rotation of the latter. The margin of the support extends upwardly toward the flange and prevents dirt and cut crop from entering between the flange and support.

3,389,540

DEVICE FOR THE LATERAL SUSPENSION OF A MOWING BAR OR THE LIKE FROM A TRACTOR

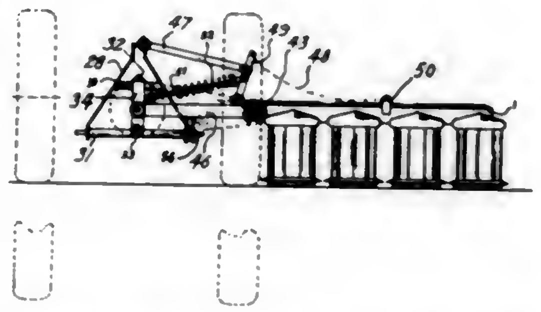
Petrus Wilhelmus Zweegers, Eindhovenscheweg 2, Geldrop, Netherlands

Filed July 6, 1965, Ser. No. 469,392

Claims priority, application Netherlands, July 11, 1964, 6407939; Oct. 9, 1964, 6411816; Feb. 19, 1965, 6502084

11 Claims. (Cl. 56—25.4)

Triangular subframe pivotally attachable to three point linkage of a tractor. Intermediate beam pivoted at one end to subframe on axis parallel to longitudinal axis of tractor, and at other end to mowing beam carrying mowers. Normally slack linkage between subframe and mowing beam becomes taut as subframe is lifted, thus elevating mowing beam.



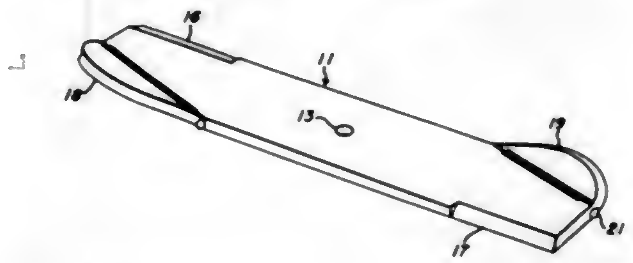
3,389,541

FLEXIBLE LAWNMOWER BLADE

Abraham L. Freedlander, Dayton, Ohio, and Wayne C. Garrett and Robert E. Matthews, Waynesville, N.C., assignors to Dayco Corporation, Dayton, Ohio, a corporation of Delaware

Filed July 21, 1967, Ser. No. 655,194

4 Claims. (Cl. 56—295)



A flexible elastomeric lawnmower blade having arms with cutting edges and portions opposite the cutting edges extending angularly upward to form a scoop shape. The upwardly extending portions are retained in place by means of a pin which is mounted in the blade at an angle with the longitudinal axis of the blade.

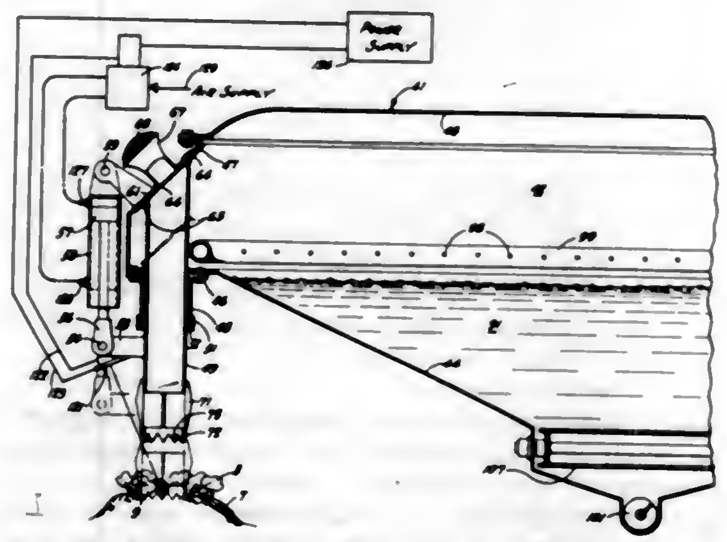
3,389,542

STRAWBERRY HARVESTER

Carl E. Rasmussen, 2175 5th St., Atwater, Calif. 95301

Filed Aug. 3, 1965, Ser. No. 476,799

14 Claims. (Cl. 56—331)



1. A strawberry harvester comprising a main frame, means for supporting said main frame for advancement along a row of strawberries, a subframe, means for connecting said subframe to said main frame advancement therewith and for rising and falling movement with respect thereto, a reservoir on said subframe, means for subjecting said reservoir to subatmospheric pressure, a tube, means for mounting said tube on said subframe for motion in a path toward and away from a strawberry in said row, means for establishing and interrupting communication between said tube and said reservoir, means for moving said tube in said path, a light-sensitive device on said subframe, and means controlled by said device for operating said tube moving means.

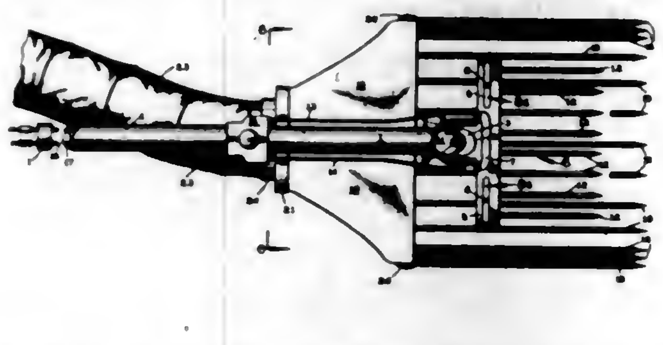
3,389,543

FRUIT PICKING APPARATUS

Joseph C. Clark, 4843 Bachacher Lane, Orlando, Fla. 32806

Filed Aug. 31, 1965, Ser. No. 484,051

4 Claims. (Cl. 56—337)



A device for harvesting fruit, having a pair of spaced multi-tine forks adapted and constructed for mutual lateral oscillation and driven by a motor means for picking fruit positioned between the forks for gravitation into a conveyor tube attached to the device.

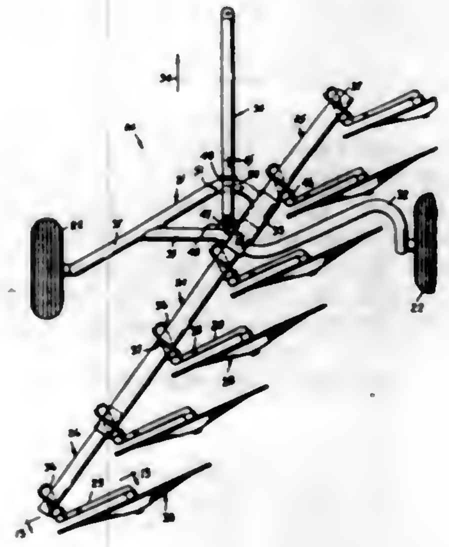
3,389,544

SIDE DELIVERY RAKE ASSEMBLY KIT

George C. Wood, % Darf Corporation, Edenton, N.C. 27932

Filed Mar. 29, 1967, Ser. No. 626,853

10 Claims. (Cl. 56—377)



In a rotary side delivery rake assembly, the combination of a chassis having traveling wheels and including a horizontal socket disposed obliquely to the direction of rake travel, said socket having front and rear ends, a plurality of selectively usable tubular frame sections received rotatably and selectively in the front and rear ends of said socket in axial alignment therewith, and a plurality of raking wheels mounted on each of said frame sections.

3,389,545

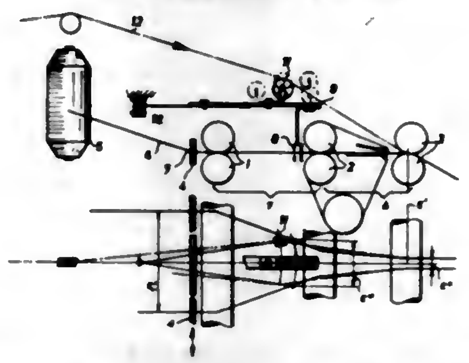
APPARATUS AND METHOD FOR SPINNING CORE-YARN

Hans-Rudolf Grunder, Winterberg, and Franz Merz, Frauenfeld, Switzerland, assignors to Maschinenfabrik Rieter A.G., Winterthur, Switzerland, a corporation of Switzerland

Filed Apr. 18, 1966, Ser. No. 543,310

Claims priority, application Switzerland, May 7, 1965, 6,515/65

14 Claims. (Cl. 57—12)



A method for spinning core yarn in which a roving is introduced and drawn by a previously imparted transverse movement into a main drafting zone of a drawing frame and in which a core is united with the roving by being subjected to the draft directly in front of the pair of delivery or feed rollers and subsequently is covered so that the transverse motion is transferred from the moving roving, which prior to entering the drawing frame was transversed, to the core directly in front of or in the main drafting zone.

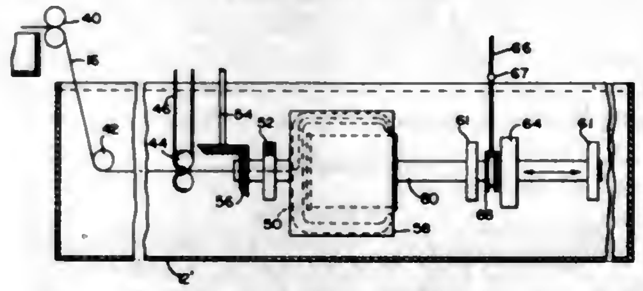
3,389,546

PROCESS AND APPARATUS FOR MAKING CONTINUOUS STRINGS FROM ANIMAL GUT

Jerry R. Reeder and Raymond W. Bergman, Lockport, Ill., assignors to Ethicon Inc., a corporation of New Jersey

Filed Oct. 20, 1965, Ser. No. 498,975

17 Claims. (Cl. 57—35)



Continuous strings of indefinite length are made from short ribbons of animal gut by joining the ribbons end to end, feeding them (either continuously or intermittently) through a bath which may be water or some liquid which gives the desired permanent property to the gut, and twisting the gut into a round string while submerged in the bath. The twisting may be intermittent or continuous depending on whether the feed of the ribbon is intermittent or continuous. A number of parallel strips of joined ribbon may be twisted into a single round multiply string.

3,389,547

FLIER FOR ROVING MACHINES

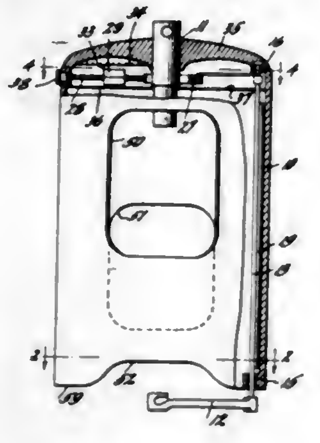
Hans Kühl, 16 Urbanstr., 731 Kornbergweg, Germany

Filed June 3, 1966, Ser. No. 555,033

11 Claims. (Cl. 57—117)

A roving machine flier having a swinging pressure finger to guide the roving to the spool and an automatic mechanism for regulating the pressure exerted by the finger, such mechanism comprising two devices, each operatively connected to the finger and adapted to generate

torque in response to centrifugal force, the first of these devices functioning to at least partially compensate for the effect of momentum on the finger due to flier rotation and changing finger position, and the second device being effective to apply a generally predetermined bias to the finger and including a weight movable between fixed limits on a part of the flier and producing a force under rotation, and connection which may include a crank lever pivoting as a unit with the pressure finger, between the finger and the weight to transmit force therebetween over the full range of weight positions between such limits.



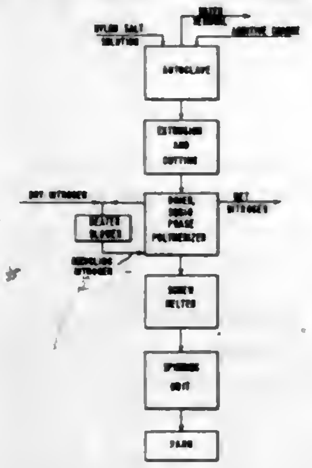
3,389,548
CORDS

Henri Lachaussee and Gilbert Morieras, Lyon, France, assignors to Societe Rhodiaceta, Paris, France, a French body corporate
No Drawing. Filed Jan. 10, 1966, Ser. No. 519,470
Claims priority, application France, Jan. 13, 1965, 1,774
5 Claims. (Cl. 57—140)

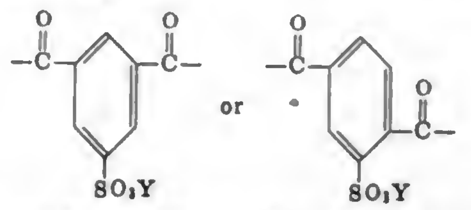
Twine, especially for agricultural use, comprises hollow man-made filaments, e.g. of nylons, polyesters or polyolefins, in which the volume of the hollow channel is at least 30% of that of the filament as a whole. Normally the twine will have a denier of 5000 or more, and the individual filaments of 20–120. The twine may contain also solid man-made filaments. The twine has good bulk, a high knotted strength, excellent dynamometric properties, and good resistance to weathering and water.

3,389,549
AROMATIC DICARBONYL SULFONATE MODIFIED POLYCARBONAMIDES

Israel A. David, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Jan. 17, 1966, Ser. No. 520,956
6 Claims. (Cl. 57—140)



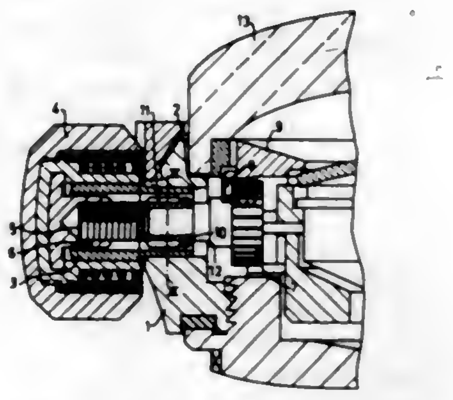
A linear polycarbonamide fiber exhibiting improved dyeability has as an integral part of the polymer chain from 60 to 80 gram equivalents per 10^6 grams of polymer of the recurring units



where Y can be ammonium, sodium, lithium or potassium. The polymer also has from 10 to 30 gram equivalents of amine ends per 10^6 grams of polymer. The molecular weight can vary from 13,000 to 23,000.

3,389,550
WATCH STEM

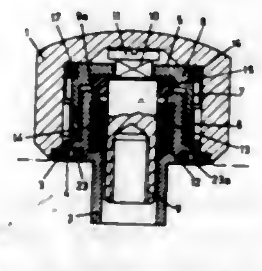
Ervin Piquerez, Bassecourt, Switzerland
Filed July 1, 1966, Ser. No. 562,278
Claims priority, application Switzerland, July 14, 1965, 9,851/65
9 Claims. (Cl. 58—63)



In a watch case, a case-band having a radial opening in which is driven a tube, a knob is mounted in the part of the tube located outside the case-band, a stem is screwed in a part of the knob and penetrates inside the tube, the stem terminating at its inner end by a pinion meshing with the teeth of a ring rotatably mounted on the watch glass. The inner wall of the tube has on a part of its length flutes having a diameter less than the bore of the tube while the stem has also grooves on a part of its length whose diameter is greater than that of the stem, there being a shoulder for limiting the axial movement.

3,389,551
HERMETIC CONTROL DEVICE FOR A WATCHMAKER'S MOVEMENT IN A CASING

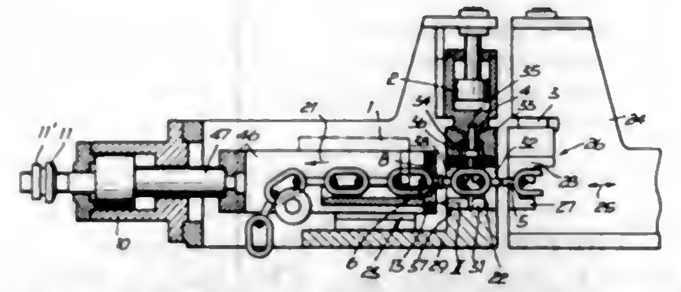
Rodolphe Wyssen, Geneva, Switzerland, assignor to Fabrique de Couronnes Boninchi S.A., Geneva, Switzerland, a company of Switzerland
Filed Dec. 16, 1966, Ser. No. 602,240
Claims priority, application Switzerland, June 14, 1966, 8,575/66
4 Claims. (Cl. 58—90)



A waterproof winding assembly for a timepiece in which a hollow crown has a socket axially slidable therein coupled by axial splines to the crown for rotation therewith upon actuation of the crown. A pendant is disposed in the socket and a stem holder is disposed internally of the socket and coupled thereto for rotation therewith. Waterproof packing is disposed circumferentially of the stem holder made of compressible rings or sleeve seals that cause the crown to be biased to a position decoupled from said pendant. The crown is operable axially relative to the pendant and socket for coupling or decoupling the crown for making time settings on and winding a timepiece when in use.

3,389,552
AUTOMATIC CHAIN WELDING MACHINE

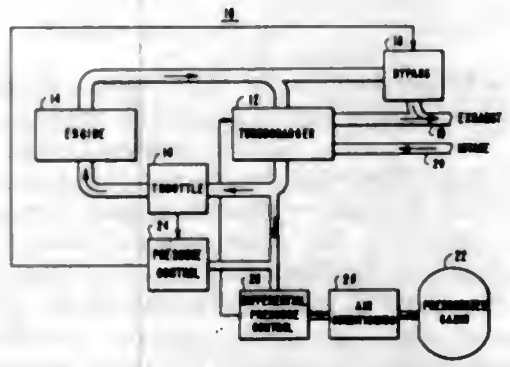
Karl Kleine-Weischede, Hauptstrasse 40, Gersweiler-Saarbrucken, Germany
Filed June 10, 1966, Ser. No. 556,650
Claims priority, application Germany, June 15, 1965, K 56,381
8 Claims. (Cl. 59—16)



1. In an automatic chain welding machine for welding together the two ends of each open link of a round-link chain connecting two other links of said chain to each other, wherein said chain is fed in a step-by-step movement in one direction and, while the feeding movement is interrupted, the two ends of each link to be welded are first welded together and the weld bead is then trimmed off, and wherein said machine comprises clamping means for holding the link to be welded in a fixed position during the welding operation and during the trimming operation, electrodes for supplying an electric welding current to said link, and an upsetting slide for pressing the two ends of said link against each other at least during a part of the welding operation, the improvement comprising two separate stations located behind each other in the feeding direction of said chain and including means in the first of said stations for welding together the ends of a first of said open links, and means in the second station for trimming the weld bead off a second previously welded link simultaneously with the welding of said first link.

3,389,553
COMBINED SYSTEM FOR AIRCRAFT ENGINE AND CABIN SUPERCHARGING

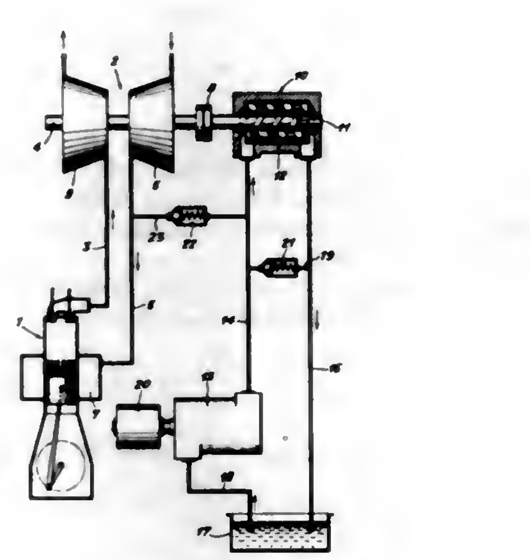
James A. Hardy, Playa Del Rey, and Robert L. Cholvin, Santa Monica, Calif., assignors to The Garrett Corporation, Los Angeles, Calif., a corporation of California
Filed Mar. 7, 1966, Ser. No. 532,277
15 Claims. (Cl. 60—13)



An engine exhaust driven turbocharger system for supplying pressured air to both an engine and an aircraft cabin utilizing a variable power turbine and providing means for controlling the turbine power in response to demand for pressurized cabin air.

3,389,554
SUPERCHARGED INTERNAL COMBUSTION PISTON ENGINE

Gottlieb Wolf, Winterthur, Switzerland, assignor to Sulzer Brothers Limited, Winterthur, Switzerland, a Swiss company
Filed Aug. 30, 1967, Ser. No. 664,401
Claims priority, application Switzerland, Sept. 9, 1966, 13,106/66
12 Claims. (Cl. 60—13)



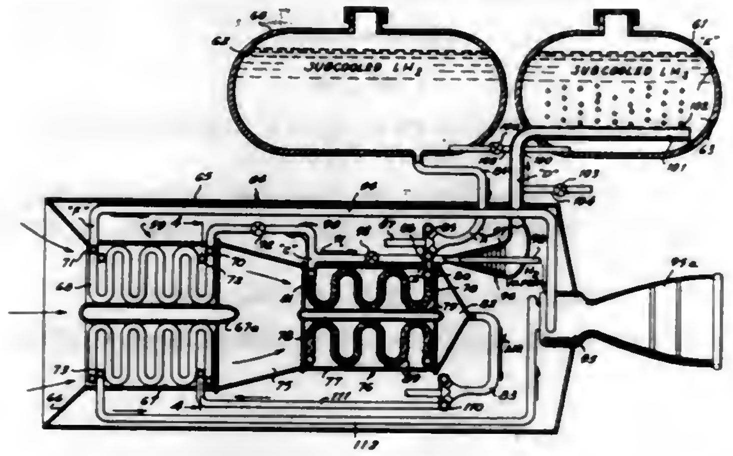
A supercharged internal combustion piston engine having at least one exhaust-driven turbo compressor for supplying combustion air to the engine is disclosed. The turbo compressor is provided with an auxiliary drive for supplying additional power thereto, the auxiliary drive comprising a hydraulic volumetric motor unit coupled directly to the turbo compressor, and a power driven pump unit connected by appropriate hydraulic conduits to the hydraulic motor unit and to a reservoir for hydraulic fluid. The hydraulic conduit leading to the hydraulic motor unit is connected to a source of air by means of an air conduit. The air conduit is provided with a normally closed pressure actuated valve which is adapted to open when the pressure on the pressure-responsive actuating mechanism of the valve reaches a predetermined value. When the pressure actuated valve is thus opened, air or a mixture of air and hydraulic fluid flows through the motor unit.

3,389,555
HYDROGEN CONVERSION AND RESTORAGE WORK CYCLE

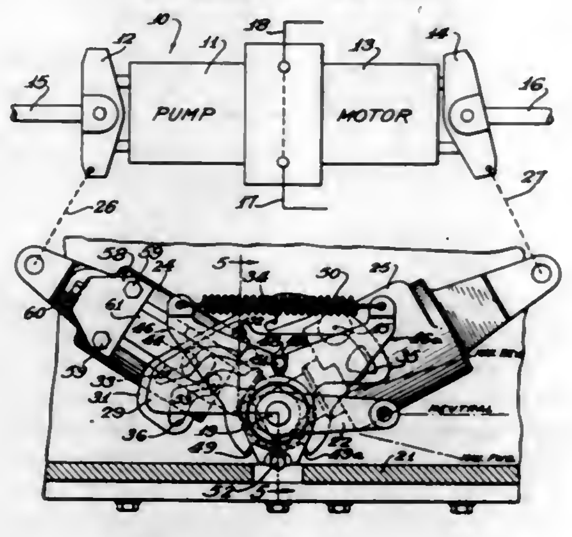
Allen E. Goldstein, Granada Hills, Robert W. Rouse, Northridge, and Thomas T. Schroeter, Granada Hills, Calif., assignors to The Marquardt Corporation, Van Nuys, Calif., a corporation of California
Filed Jan. 22, 1962, Ser. No. 167,823
11 Claims. (Cl. 60—39.46)

1. A work cycle comprising the steps of introducing liquid parahydrogen into a heat exchanger containing a catalyst in order to cool incoming ambient air and simultaneously maintain the hydrogen in its equilibrium composition of para and ortho hydrogen compatible with its temperature as it passes through said catalyst, adiabati-

cally expanding gaseous hydrogen leaving the heat exchanger to reduce the temperature thereof, and introducing the expanded hydrogen directly into subcooled liquid hydrogen in order to reliquefy the hydrogen.



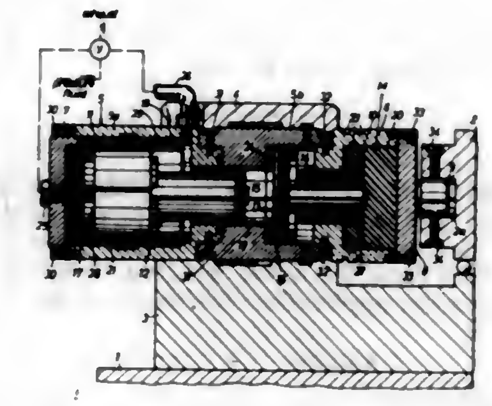
3,389,556
ORIFICE ADJUSTING MECHANISM
William C. Swanson, Clarendon Hills, Ill., assignor to International Harvester Company, Chicago, Ill., a corporation of Delaware
Filed July 5, 1966, Ser. No. 562,888
10 Claims. (Cl. 60—53)



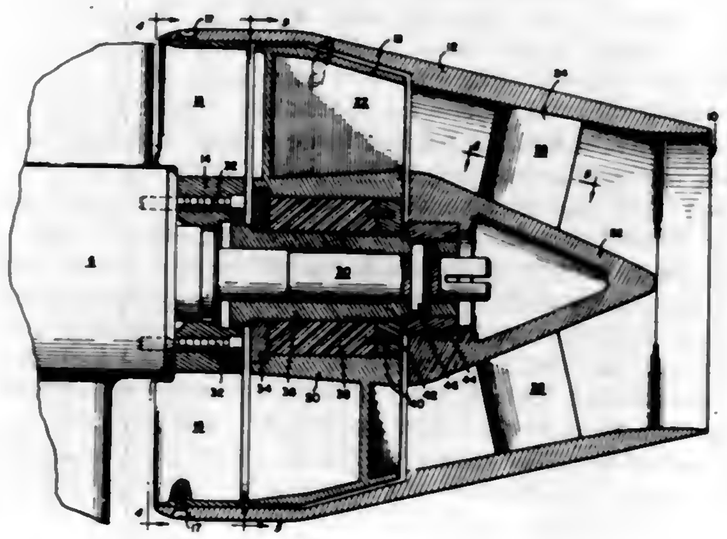
An orifice adjusting means for a servo cylinder to permit correlation between the neutral position for a hydrostatic transmission controlled by a cam plate with a valving slot and the swash plate position necessary for zero stroke, which means has a guide track on the servo cylinder, a manifold adapter slidably mounted in the track, passage means in the manifold adapter communicable with the working surfaces of the servo cylinder and the valving slot, bracket means carried by the servo cylinder and an adjustment bolt extending through the bracket means and threadedly engaging the adapter.

3,389,557
METHOD OF AND DEVICE FOR PRODUCING VERY FINE ADJUSTMENTS FOR TOOL CARRIERS AND THE LIKE
Wolfgang Backé, Dortmund-Lottringhausen, Hans-Gerold Möbius, Aachen, Ernst-August Becker, Haaren, near Aachen, and Norbert Jeschke, Urberach, Germany, assignors to Samson Apparate-Bau AG., Frankfurt am Main, Germany
Filed Jan. 10, 1966, Ser. No. 519,671
Claims priority, application Germany, Jan. 14, 1965, S 95,008
11 Claims. (Cl. 60—54.5)

An apparatus for producing minute adjustments of tools subjected to great reaction forces, having stepped and hydraulically coupled and serially related pistons for transmitting an applied control force at a stepped-up ratio to an expandable bushing in a manner substantially free of play, hysteresis and friction so that a continuous proportional relationship is obtained between the applied control force and the corresponding displacement of the tool associated with the bushing.



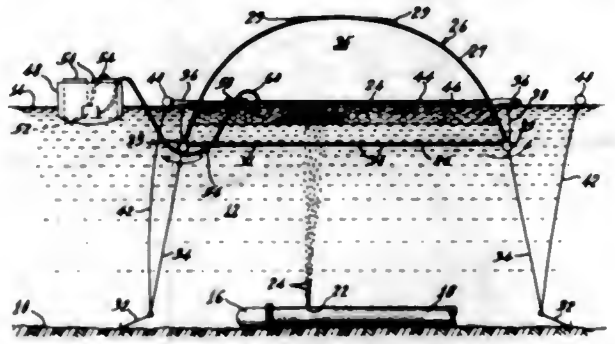
3,389,558
JET PROPULSION APPARATUS
Kimball P. Hall, Shoreham, N.Y., assignor to Hall Marine Corporation, Princeton, N.J., a corporation of New Jersey
Filed Dec. 15, 1966, Ser. No. 601,942
9 Claims. (Cl. 60—221)



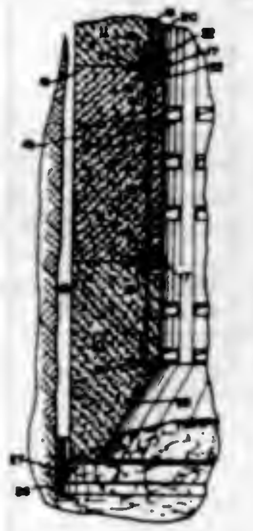
The present invention relates to a shrouded impeller type, hydraulic jet propulsion unit and attachment apparatus for converting a propeller drive to a propulsion system.

3,389,559
FLUID RECOVERY SYSTEM AND METHOD
Campbell F. Logan, 1127 Brookwood Road, Jacksonville, Fla. 32207
Filed May 17, 1965, Ser. No. 456,263
11 Claims. (Cl. 61—1)

A method and apparatus for recovering a fluid, having a specific gravity lower than the specific gravity of water and immiscible therewith, which is leaking from a fracture in the flow line submerged in open water including the steps of locating the leak in the submerged flow line, centering with respect to the point where the fluid rises to the water surface a flexible air-impervious sheet on and just below the water surface for confining the fluid to a specific area on the water surface, floating the sheet adjacent the water surface to stabilize the sheet, weighting the sheet along its peripheral edge portion to maintain the edge portion a predetermined distance below the water surface, anchoring the sheet in a position generally vertically with respect to the leak, inflating the sheet with a gas between the sheet and the water surface to maintain the central portion of the sheet above the water surface, withdrawing the fluid confined between the sheet and the water surface, and storing the withdrawn fluid.



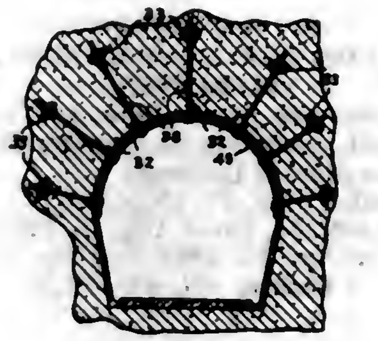
3,389,560
DIFFUSION WELL CONSTRUCTION
Calvin L. Zemsky, Jericho, N.Y., assignor to Martin Concrete Products Corp., Jericho, N.Y., a corporation of New York
Filed May 20, 1966, Ser. No. 551,510
7 Claims. (Cl. 61—41)



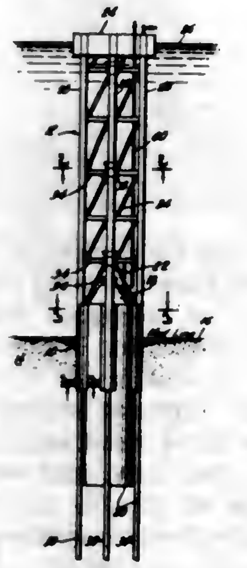
Concrete casing sections are joined in end-to-end relationship by a plurality of connecting means, including a connecting bar embedded in the walls of the concrete sections along the longitudinal axis and terminated by connecting members which are also at least partially embedded in the end of the concrete sections and having another portion of the connecting member disposed at right angles to the connecting bar extending toward the external surface of the concrete sections in contact both radially and longitudinally with the end of the concrete sections.

3,389,561
METHOD OF AND APPARATUS FOR PROVIDING ANCHORS IN EARTH AND/OR ROCK FORMATIONS
Kenneth Ray Taylor, Renton, Wash., assignor to The English Electric Company Limited, London, England, a British company
Substituted for abandoned application Ser. No. 279,913, May 13, 1963. This application May 23, 1966, Ser. No. 587,938
7 Claims. (Cl. 61—45)

A hollow cable insertable into a ground opening. Detonating an explosive within such cable to form an enlargement in an inner portion of the narrow hole, and cause the wire strands of the cable to fan out into the enlargement. Anchoring the fanned out cable in place by introducing concrete or the like into the enlargement through the hollow interior of the cable.



3,389,562
SALVAGEABLE MULTI-WELL OFFSHORE WELL PROTECTOR PLATFORM
George E. Mott, Metairie, and John T. Loggins, New Orleans, La., assignors to Texaco Inc., New York, N.Y., a corporation of Delaware
Filed Oct. 31, 1966, Ser. No. 590,929
10 Claims. (Cl. 61—46.5)

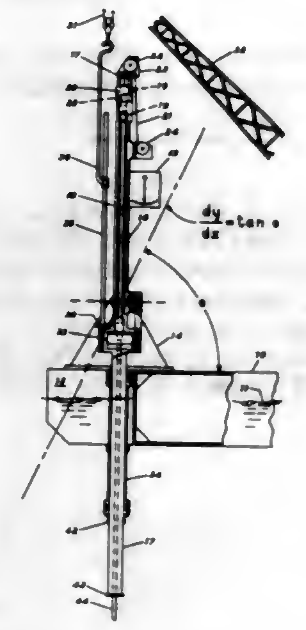


1. A salvageable offshore well protector platform for drilling a plurality of underwater wells from the same location into the ocean bottom comprising a caisson having a closed upper end and an open lower end, a jacket structure having at least three parallel hollow legs located along the circumference of a circle whose center corresponds to the center of said jacket structure, rigid connecting means comprising truss members for connecting said legs together, said legs extending below the top of said caisson, means for rigidly connecting the lengths of said legs extending below the top of said caisson to the outer wall of said caisson parallel to the longitudinal dimension thereof thereby transferring the loads and moments from the jacket structure to the caisson, a deck supported at the upper end of said packet structure, means for sinking the open end of said caisson into said ocean bottom, said caisson being sunk in said ocean bottom to a depth which in conjunction with the length of the jacket structure will maintain the deck at the desired height above the water surface, valve means located on the top of said caisson for releasing the water from within said caisson during sinking of the caisson into the ocean bottom, and means

for pressurizing the interior of the caisson to provide an upward force on said caisson to aid in removal thereof from the ocean bottom.

3,389,563
APPARATUS FOR LAYING SUBMARINE PIPELINES

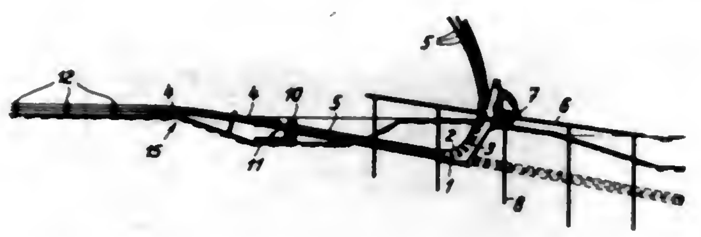
William R. Postlewaite, Menlo Park, and Milton Ludwig, Berkeley, Calif., assignors to Chevron Research Company, a corporation of Delaware
Original application Mar. 27, 1963, Ser. No. 268,368, now Patent No. 3,266,256, dated Aug. 16, 1966. Divided and this application Apr. 11, 1966, Ser. No. 557,847
3 Claims. (Cl. 61—72.3)



1. Apparatus for use on a pipeline laying barge, comprising means on said barge forming laterally spaced apart horizontal bearings, an elongated frame supported between said bearings for rotation in a vertical plane, a welding head mounted in said frame intermediate the ends thereof, a first pipe engaging means mounted on said frame above said welding head and movable along said frame toward and away from said welding head, means for supplying lengths of pipe to said first pipe engaging means, means for selectively operating said first pipe engaging means to supply said lengths of pipe to said welding head in sequential relationship, means for operating said welding head to weld said lengths of pipe together end to end to form a pipeline, a second pipe engaging means mounted on said frame below said welding head and movable along said frame toward and away from said welding head, means for selectively operating said second pipe engaging means to lower intermittently said pipeline from said frame, said frame being constructed and arranged to rotate in said vertical plane an amount which is in accordance with the slope of the portion of said pipeline at said frame.

3,389,564
METHOD AND DEVICE FOR INSTALLATION OF STEEL PIPE BELOW THE BOTTOM OF A BODY OF WATER

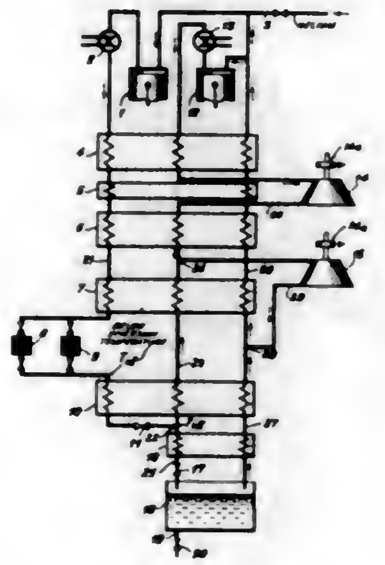
Rudolf Harmstorf, Schillerstr. 45, Hamburg-Altona, Germany
Filed Nov. 22, 1965, Ser. No. 508,968
Claims priority, application Germany, Jan. 4, 1965, H 54,754
14 Claims. (Cl. 61—72.4)



The invention pertains to the installation of steel pipe below the bottom of a body of water wherein the steel pipe is inserted into plastic pipe flush embedded in position, and the steel pipe is forwardly fed into the plastic pipe at a rate equal to the forward motion of the flushing apparatus wherein the forward terminal end of the steel pipe is maintained adjacent the flushing apparatus to aid in its guidance.

3,389,565
PROCESS FOR LIQUEFACTION OF HELIUM BY EXPANSION

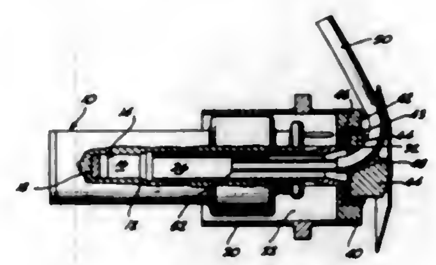
Sahabettin Ergenc, Zollikerberg, Zurich, Switzerland, assignor to Sulzer Brothers Limited, Winterthur, Switzerland, a Swiss company
Filed Apr. 21, 1965, Ser. No. 449,744
Claims priority, application Switzerland, Apr. 29, 1964, 5,628/64
9 Claims. (Cl. 62—9)



There is disclosed a process for the liquefaction of gases of low boiling point such as helium in which the gas to be liquefied is compressed to supercritical pressure and then cooled below its inversion temperature at least in part by passage in heat exchange relation with previously compressed, cooled and expanded gas. After further cooling the gas is expanded in a first throttling step, without liquefaction, to an intermediate pressure above the liquefaction pressure of the gas. The gas is then divided into two streams. One stream is returned through one or more of the heat exchangers through which the compressed gas flows prior to throttling, and is raised in temperature in the process. This one stream is then passed through an expansion turbine wherein its pressure is lowered to the vicinity of the liquefaction pressure of the gas, whereafter it is heated substantially to room temperature by heat exchange with compressed gas which has not been throttled, being then recycled to the compressor. The other stream of gas, after further cooling, is further expanded in a second throttling step, undergoing partial liquefaction in the process. Unliquefied gas and liquefied gas which undergoes revaporization is combined with that flowing through the expansion turbine for return to the compressor.

3,389,566
CRYOGENIC FLASK ARRANGEMENT

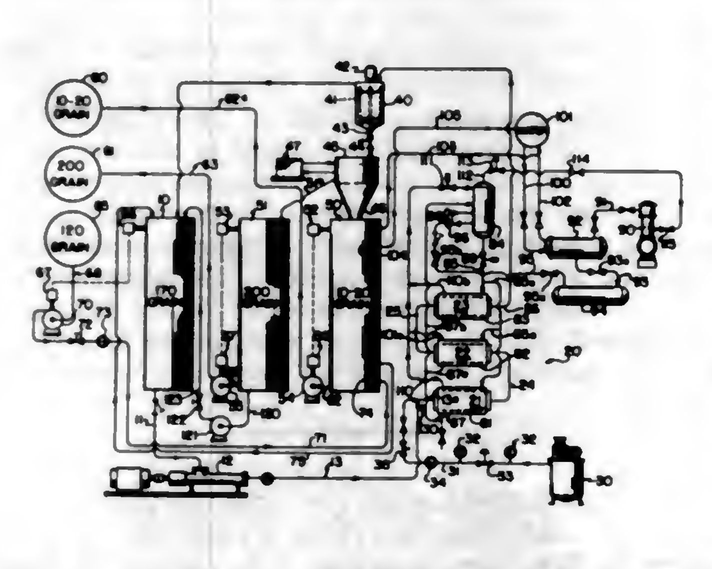
Peter J. Walsh, Los Angeles, Calif., and Patrick N. Byrd, North Palm Beach, Fla.; said Walsh assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed Jan. 30, 1967, Ser. No. 612,450
4 Claims. (Cl. 62—45)



A flask formed of thermally insulating material is provided with a central cavitied cooling finger to receive liquid cryogenic fluid from a remote source via a transfer line. The arrangement structurally includes a centering tube partially disposed within the finger and formed of a material having a relatively high thermal conductivity. The opposite end of the centering tube projects from the arrangement and is in thermal contact with ambient whereby some heat is transferred into the cavitied finger to maintain a temperature profile therein at the proper level, avoid over-cooling and yet minimize the loss of cryogenic fluid due to vaporization.

3,389,567
METHOD OF CRYSTALLIZING FLUIDS

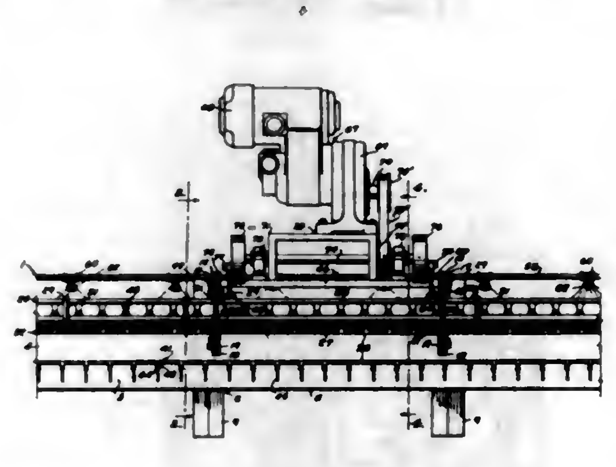
Henry W. Bevarly and Leo C. Schuhmann, Louisville, Ky., assignors to Chemetron Corporation, Chicago, Ill., a corporation of Delaware
Continuation of application Ser. No. 300,225, Aug. 6, 1963, which is a continuation of application Ser. No. 100,191, Apr. 3, 1961. This application Nov. 23, 1966, Ser. No. 611,189
4 Claims. (Cl. 62—58)



1. Method of concentrating vinegar by slush freezing which comprises cooling the vinegar, passing a stream of air concurrently into a stream of cooled vinegar to form a fluid containing small air bubbles which are uniformly mixed with the vinegar, the flow rate of the air stream being in the range of one-half to five times the flow rate of the vinegar stream, passing the resulting fluid mixture of vinegar and air into a heat transfer cylinder surrounded by refrigeration means, said heat transfer cylinder having a rotatable shaft internally disposed axially thereof, thereby defining an elongated narrow annular space through which said fluid mixture is passed, said shaft having scraper blades affixed thereto and adapted to move throughout the annular space containing the fluid mixture between the shaft and the inner surface of the heat transfer cylinder and scrape the inner surface of said heat transfer cylinder, agitating said fluid mixture of air and vinegar in the annular space between said shaft and the inner surface of said heat transfer cylinder, cooling the heat transfer cylinder to a temperature below the freezing point of the vinegar to cause formation of porous ice on said inner surface of said heat transfer cylinder, removing ice from said surface by means of said scraper blades, discharging the resulting mixture of vinegar, air and ice from said heat transfer cylinder, centrifuging said mixture to separate ice from the concentrated vinegar, and recovering the concentrated vinegar.

3,389,568
METHOD AND APPARATUS FOR REMOVING PROCESSING HEAT FROM A FOOD PRODUCT IN FILLED AND CLOSED CONTAINERS

Jack M. Miller, Shawnee Mission, and Clarence B. Masoner, Lenexa, Kans., assignors, by mesne assignments, to Carnation Company, Los Angeles, Calif., a corporation of Delaware
Filed Feb. 14, 1966, Ser. No. 527,133
11 Claims. (Cl. 62—63)

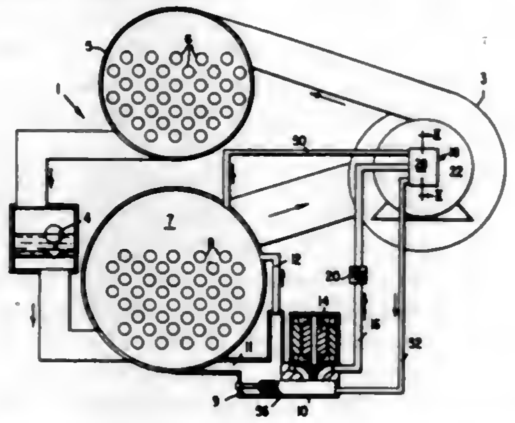


This invention comprises an improved method of rapidly removing processing heat from a food product in filled and closed containers, and improved apparatus for accomplishing the same. In the method, the containers are rocked about the center of their longitudinal axis and a cooling medium is applied to their exterior while the containers travel along a linear path, the rocking being essentially zero at the entry point of the path and increasing progressively to a maximum at about the mid-point of the path and decreasing progressively to zero at the exit point of the path. This is accomplished by employing means which include a torsionally twistable container guide means held in registry at the entry and exit points of the path and oscillated by application of torsional oscillating force at about the mid-point thereof. Associated components are included in the apparatus. The net effect is continuously and progressively varying oscillation of each container along said path for automatic, yet efficient, heat transfer.

3,389,569
METHOD AND APPARATUS FOR REFRIGERATION MACHINE LUBRICATION

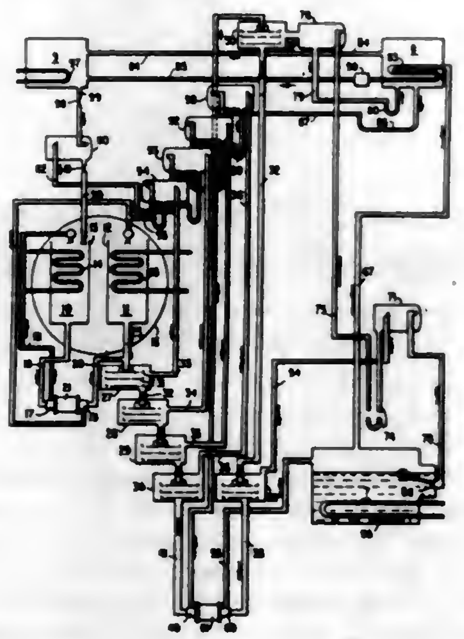
James W. Endress, Syracuse, N.Y., assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware
Filed Oct. 27, 1966, Ser. No. 590,005
5 Claims. (Cl. 62—84)

Means for cooling and lubricating a refrigeration machine bearing by providing a refrigerant-lubricant mixture to internal passages in the bearing support for cooling the bearing by vaporizing the refrigerant in the mixture, thereby assuring refrigerant-free lubricant for passage to the bearing surface to avoid the deleterious effects of vapor erosion of the bearing surfaces.



3,389,570
REFRIGERANT CONDENSATE CIRCUIT IN MULTIPLE-EFFECT ABSORPTION REFRIGERATION SYSTEMS

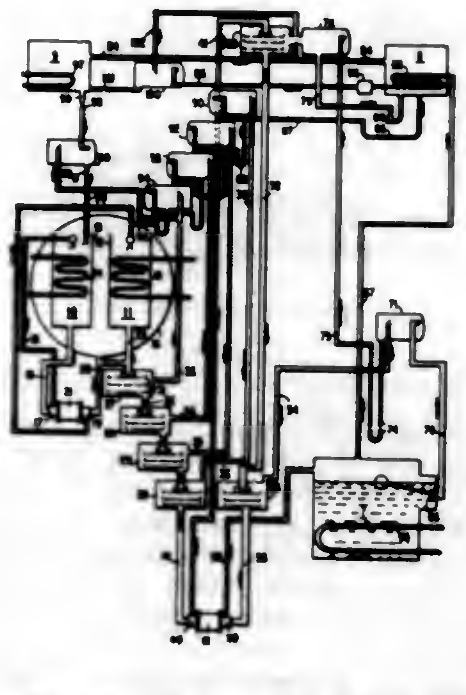
William L. McGrath, Syracuse, N.Y., assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware
Filed May 31, 1967, Ser. No. 642,368
5 Claims. (Cl. 62—101)



A double-effect absorption refrigeration system having a primary absorber, a primary evaporator, a high pressure generator, a low pressure generator, a high pressure condensing section, and a low pressure condenser, connected to provide refrigeration. A plurality of auxiliary absorber stages are connected in a weak solution line between the primary absorber and the high pressure generator. A plurality of auxiliary evaporator stages are connected in an intermediate solution line between the high pressure generator and the low pressure generator, and a plurality of auxiliary evaporator stages are connected in a strong solution line between the low pressure generator and the primary absorber. Stages of the auxiliary evaporators are connected by refrigerant vapor passages with the auxiliary absorbers so as to simultaneously concentrate and cool absorbent solution leaving the generator while also simultaneously heating and diluting weak solution passing to the generators. A low pressure refrigeratant economizer is employed to evaporate a portion of the refrigerant condensed in the low pressure condenser to cool the remaining refrigerant therein prior to passage to the primary evaporator, and the refrigerant vapor is passed to one of the auxiliary absorbers for absorption therein.

3,389,571
MULTIPLE-EFFECT ABSORPTION REFRIGERATION SYSTEMS

William L. McGrath, Syracuse, N.Y., assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware
Filed May 31, 1967, Ser. No. 642,369
16 Claims. (Cl. 62—101)

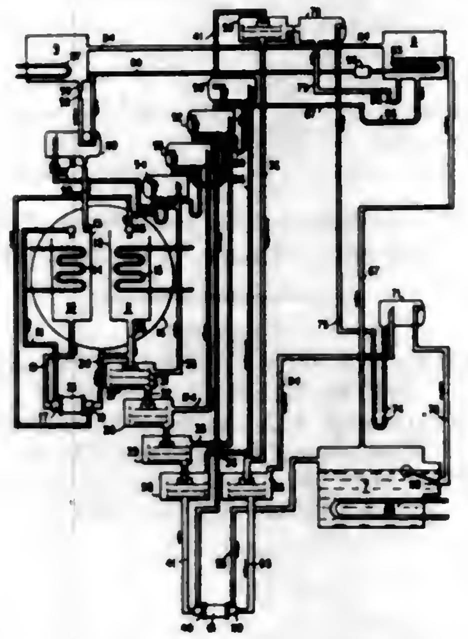


A double-effect absorption refrigeration system having a primary absorber, a primary evaporator, a high pressure generator, a low pressure generator, a high pessure condensing section, and a low pressure condenser, connected to provide refrigeration. A plurality of auxiliary absorber stages are connected in a weak solution line between the primary absorber and the high pressure generator. A plurality of auxiliary evaporator stages are connected in an intermediate solution line between the high pressure generator and the low pressure generator, and a plurality of auxiliary evaporator stages are connected in a strong solution line between the low pressure generator and the primary absorber. Stages of the auxiliary evaporators are connected by refrigerant vapor passages with the auxiliary absorbers so as to simultaneously concentrate and cool absorbent solution leaving the generator while also simultaneously heating and diluting weak solution passing to the generators. A high pressure refrigerant economizer is employed to evaporate a portion of the refrigerant condensed in the high pressure condenser to cool the remaining refrigerant therein, and the refrigerant vapor is passed to one of the auxiliary absorbers to further dilute and cool solution therein. A low pressure refrigerant economizer is employed to evaporate a portion of the refrigerant condensed in the low pressure condenser to cool the remainder thereof, and the vapor formed therein is passed to another auxiliary absorber to cool and dilute weak solution.

3,389,572
MULTIPLE-EFFECT ABSORPTION REFRIGERATION SYSTEMS

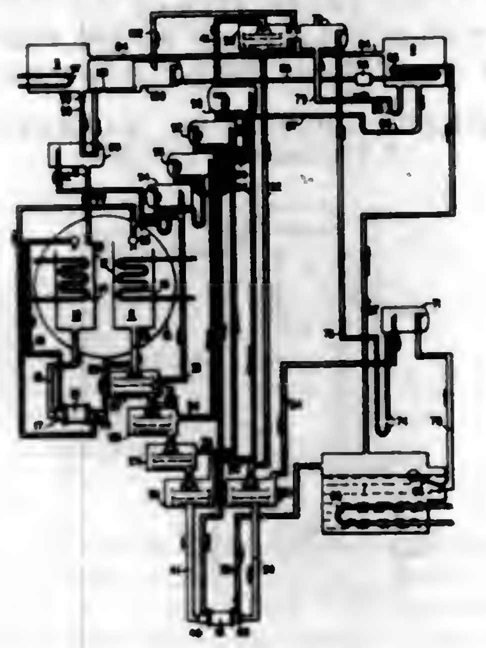
James A. Papapanu, Syracuse, N.Y., assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware
Filed May 31, 1967, Ser. No. 642,370
2 Claims. (Cl. 62—101)

A double-effect absorption refrigeration system having a primary absorber, a primary evaporator, a high pressure generator, a low pressure generator, a high pressure condensing section, and a low pressure condenser, connected to provide refrigeration. A plurality of auxiliary absorber stages are connected in a weak solution line between the primary absorber and the high pressure generator. A plurality of auxiliary evaporator stages are connected in an intermediate solution line between the high pressure generator and the low pressure generator, and a plurality of auxiliary evaporator stages are connected in a strong solution line between the low pressure generator and the primary absorber. Stages of the auxiliary evaporators are connected by refrigerant vapor passages with the auxiliary absorbers so as to simultaneously concentrate and cool absorbent solution leaving the generator while also simultaneously heating and diluting weak solution passing to the generators. A low pressure refrigerant economizer is employed to evaporate a portion of the refrigerant condensed in the low pressure condenser to cool the remainder thereof. High pressure refrigerant liquid is passed directly from the high pressure condenser into the low pressure refrigerant economizer to evaporate a portion thereof and cool the remainder. The vapor formed in the economizer is passed to another auxiliary absorber to cool and dilute weak solution.



3,389,573
REFRIGERANT CONDENSATE CIRCUIT IN MULTIPLE-EFFECT ABSORPTION REFRIGERATION SYSTEMS

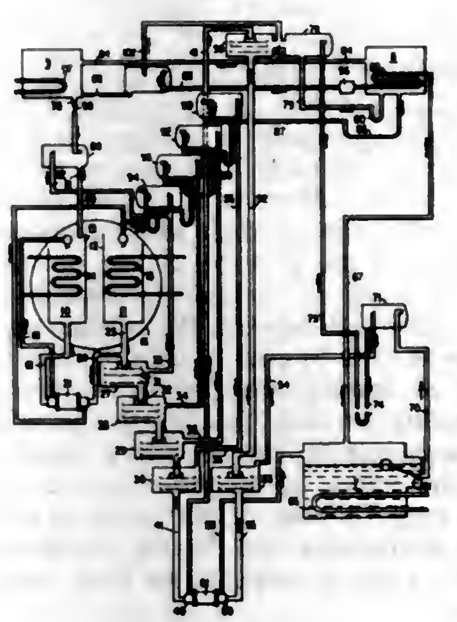
James A. Papapanu and Frank N. Decker, Jr., Syracuse, N.Y., assignors to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware
Filed May 31, 1967, Ser. No. 642,371
2 Claims. (Cl. 62—101)



A double-effect absorption refrigeration system having a primary absorber, a primary evaporator, a high pressure generator, a low pressure generator, a high pressure condensing section, and a low pressure condenser, connected to provide refrigeration. A plurality of auxiliary absorber stages are connected in a weak solution line between the primary absorber and the high pressure generator. A plurality of auxiliary evaporator stages are connected in an intermediate solution line between the high pressure generator and the low pressure generator, and a plurality of auxiliary evaporator stages are connected in a strong solution line between the low pressure generator and the primary absorber. Stages of the auxiliary evaporators are connected by refrigerant vapor passages with the auxiliary absorbers so as to simultaneously concentrate and cool absorbent solution leaving the generator while also simultaneously heating and diluting weak solution passing to the generators. A high pressure refrigerant economizer is employed to evaporate a portion of the refrigerant condensed in the high pressure condenser to cool the remaining refrigerant therein, and the refrigerant vapor is passed to one of the auxiliary absorbers to further dilute and cool solution therein. A low pressure refrigerant economizer is employed to evaporate a portion of the refrigerant condensed in the low pressure condenser to cool the remainder thereof, and the vapor formed therein is passed to another auxiliary absorber to cool and dilute weak solution. Refrigerant liquid cooled in the high pressure refrigerant economizer is passed directly therefrom into the low pressure refrigerant economizer for further cooling.

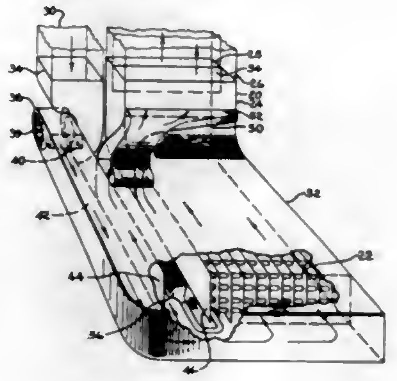
3,389,574
MULTIPLE-EFFECT ABSORPTION REFRIGERATION SYSTEMS WITH REFRIGERANT ECONOMIZERS

William L. McGrath, Syracuse, N.Y., assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware
Filed May 31, 1967, Ser. No. 642,405
8 Claims. (Cl. 62—101)



A double-effect absorption refrigeration system having a primary absorber, a primary evaporator, a high pressure generator, a low pressure generator, a high pressure condensing section, and a low pressure condenser, connected to provide refrigeration. A plurality of auxiliary absorber stages are connected in a weak solution line between the primary absorber and the high pressure generator. A plurality of auxiliary evaporator stages are connected in an intermediate solution line between the high pressure generator and the low pressure generator, and a plurality of auxiliary evaporator stages are connected in a strong solution line between the low pressure generator and the primary absorber. Stages of the auxiliary evaporators are connected by refrigerant vapor passages with the auxiliay absorbers so as to simultaneously concentrate and cool absorbent solution leaving the generator while also simultaneously heating and diluting weak solution passing to the generators. A high pressure refrigerant economizer is employed to evaporate a portion of the refrigerant condensed in the high pressure condenser to cool the remaining refrigerant therein, and the refrigerant vapor is passed to one of the auxiliary absorbers to further dilute and cool solution therein. A low pressure refrigerant economizer is employed to evaporate a portion of the refrigerant condensed in the low pressure condenser to cool the remainder thereof, and the vapor formed therein is passed to another auxiliary absorber to cool and dilute weak solution.

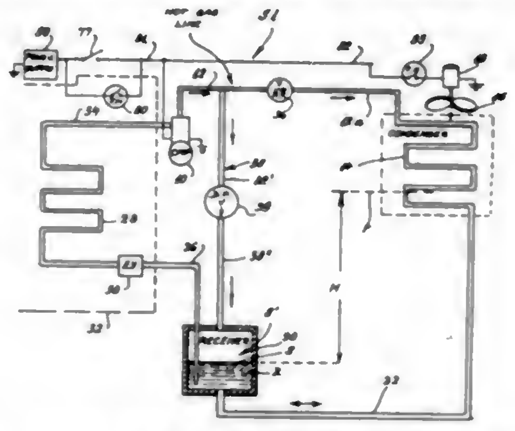
3,389,575
PROPORTIONED AIR CONTROL FOR REFRIGERATOR-FREEZER
Edwin H. Frohbieter, Stevensville, Mich., assignor to Whirlpool Corporation, Benton Harbor, Mich., a corporation of Delaware
Filed Mar. 1, 1967, Ser. No. 619,683
10 Claims. (Cl. 62—190)



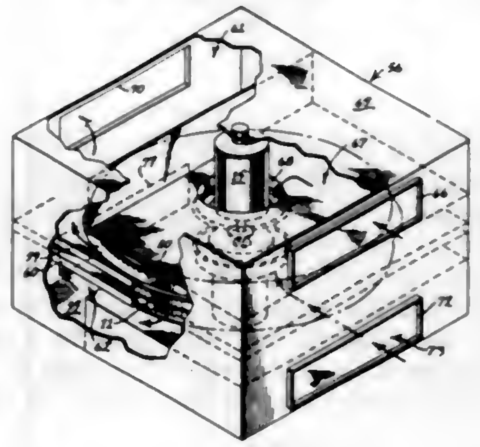
A combination refrigerator-freezer of the forced air type having an air duct for by-passing a varying portion of air around an evaporator in response to frost build up on the evaporator. Frost build up on the evaporator is accompanied by a decrease in the temperature and volume of the main stream of air which requires that a greater proportion of the available air be provided to the refrigerator in order to maintain a desired constant temperature differential between the refrigerator and freezer compartments. The by-passed air is directed into the main stream of air leaving the evaporator adjacent a divider wall separating air ducts leading to the refrigerator and freezer compartments. The impinging stream of by-passed air alters the course of the main stream of air to effect a desired proportioning of the main stream of air between the refrigerator and freezer compartments, which proportion varies in response to frost build up on the evaporator.

3,389,576
SYSTEM FOR CONTROLLING REFRIGERANT CONDENSING PRESSURES BY DYNAMIC HYDRAULIC BALANCE
William V. Mauer, 7 E. 14th St.,
New York, N.Y. 10003
Filed Nov. 14, 1966, Ser. No. 593,886
10 Claims. (Cl. 62—196)

A condensing-pressure control system for air cooled and similar condensers wherein the amount of condenser surface required to maintain constant minimum pressure is automatically provided by flooding the unneeded condenser surface with liquid reverse-flow supplied from the receiver; no check or other control valves are required in the condenser-receiver pipe line; the condensed liquid may optionally be partially or fully reheated. Control, being by dynamic hydraulic balance, is virtually instantaneous.

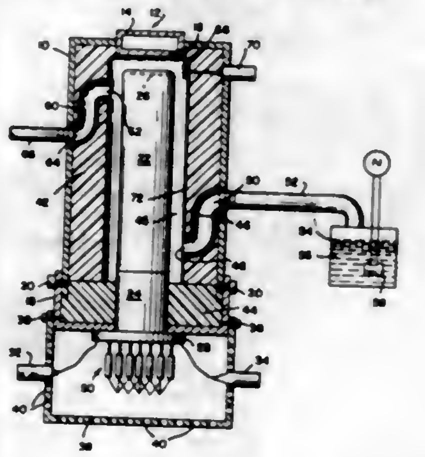


3,389,577
CENTRIFUGAL REFRIGERATION MACHINE WITH PLURAL MOTORS
Bobbie G. Kemp, 113 Cumberland Shores Drive,
Hendersonville, Tenn. 37075
Filed Dec. 30, 1966, Ser. No. 606,233
10 Claims. (Cl. 62—499)



A refrigeration machine having a rotatable refrigerating housing. A drive motor rotates the housing while a compressor motor fixed upon and rotatable with the housing rotates a centrifugal compressor member within the housing relative to the rotation of the housing.

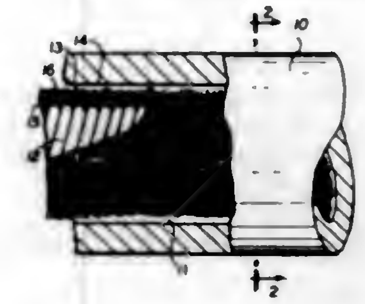
3,389,578
REFRIGERATOR FOR MULTIPLIER PHOTOTUBES
Slava A. Pollack, Palos Verdes Estates, Calif., assignor to TRW Inc., Redondo Beach, Calif., a corporation of Ohio
Filed Sept. 30, 1966, Ser. No. 583,285
5 Claims. (Cl. 62—514)



A multiplier phototube is mounted within a cryogenic cooler or refrigerator that is constructed with an internal

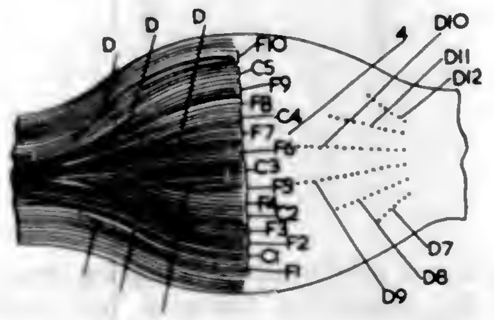
cavity that forms an annular chamber surrounding the phototube. Coolant gas flows into the annular chamber through one angularly bent passageway and exits from the chamber through a second angularly bent passageway so as to surround the phototube completely with coolant gas except for its base structure.

3,389,579
SHAFT GUIDED IN A PROTECTION TUBE
Johannes Werner, Offenbach am Main, and Hans Golde and Horst Schlick, Frankfurt am Main, Germany, assignors to VDO Tachometer Werke Adolf Schindling G.m.b.H., and H. T. Golde G.m.b.H., Frankfurt am Main, Germany, both corporations of Germany
Filed Apr. 1, 1966, Ser. No. 539,495
Claims priority, application Germany, Apr. 2, 1965, V 28,191
9 Claims. (Cl. 64—2)



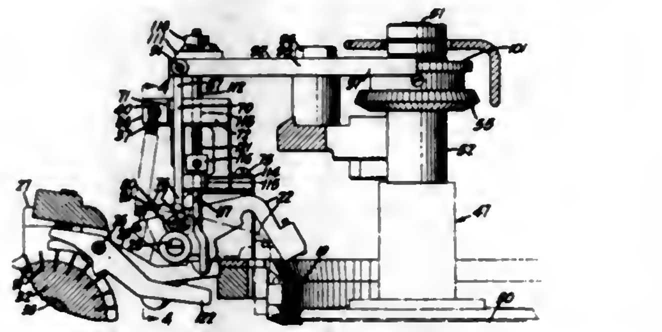
A power transmission device, and a method for making same, comprising an outer protective tubing means having a bore, shafting means extending through the bore and having an outside diameter less than the inside diameter of the bore in the tubing means providing an interspacing therebetween, positioning means for maintaining the shafting means out of contact with the tubing means, and the positioning means comprises at least one layer of a plurality of discrete, elongated resilient elements projecting substantially radially in its elongated dimension relative to the shafting means or the tubing means and disposed in said interspacing in spaced relationship.

3,389,580
PRODUCTION OF ARTICLES ON STRAIGHT BAR KNITTING MACHINES
William Bentley, Woodhouse Eaves, and Ernest Start, Ruddington, England, assignors to William Cotton Limited
Filed Apr. 12, 1965, Ser. No. 447,161
Claims priority, application Great Britain, Apr. 18, 1964, 16,164/64
7 Claims. (Cl. 66—89)



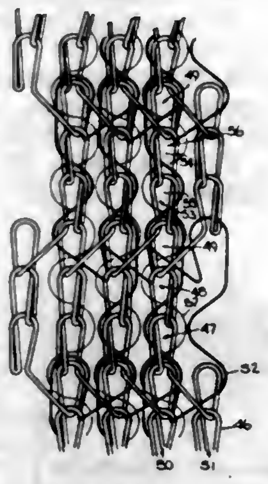
A pouch is formed in a fabric on a straight bar knitting machine by knitting a series of courses of increasing length followed by a series of courses of decreasing length, spaced from at least one similar series of increasing and decreasing courses by a plurality of courses which run the full width of the fabric.

3,389,581
YARN FEED CONTROLLING MEANS FOR KNITTING MACHINES
Robert L. Sterner, Reading, Pa., assignor to Textile Machine Works, Wyomissing, Pa., a corporation of Pennsylvania
Filed Oct. 19, 1965, Ser. No. 497,760
10 Claims. (Cl. 66—133)



Control means for a yarn finger of a circular knitting machine including pattern means for controlling the movement of the finger between active and inactive positions, a first lever movable from inactive position to active position to hold the finger in inactive position after the finger is released for movement to active position by the pattern means, and a second lever having a first position for holding the first lever in inactive position and a second position in which the first lever is permitted to move to its active position. The second lever is maintained in its first position by latching means which is released by the pattern means for the finger to permit movement of the second lever to its second position and movement of the first lever to active position and a cam rotatable with the dial mechanism of the machine moves the second lever to its first position to move the first lever to inactive position.

3,389,582
TEXTILE FABRIC
Norman J. Alexander, New York, N.Y., assignor to Liberty Fabrics of New York, Inc., New York, N.Y., a corporation of New York
Continuation of application Ser. No. 380,554, July 6, 1964. This application Dec. 4, 1967, Ser. No. 693,042
4 Claims. (Cl. 66—192)



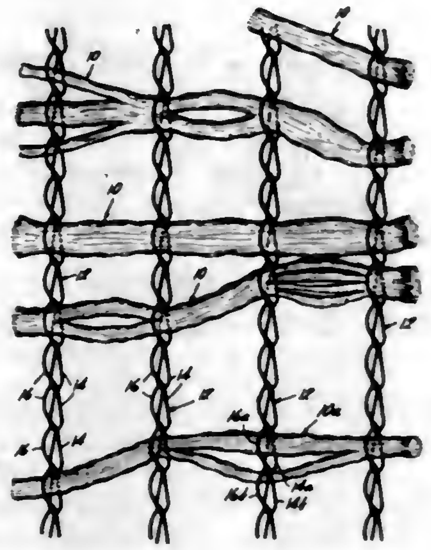
A warp knit textile fabric having a repetitive base net configuration including in the parallel wales of the base net, inlaid yarns that are alternated between adjacent wales in a repetitive pattern coincident with the repeated base net pattern, said repeat of the inlaid yarns constituted by a succession of inlays then a knitted stitch followed by a crossover portion extending into the adjacent wale to provide increased dimensional stability and tensile strength of the fabric.

3,389,583
OPEN-MESH FABRIC

Daniel Duhl, New Hyde Park, N.Y., assignor to Indian Head Mills Inc., New York, N.Y., a corporation of Massachusetts

Filed Aug. 13, 1965, Ser. No. 479,492

1 Claim. (Cl. 66—193)



An open-mesh fabric made on a stitch-through machine and consisting of a plurality of coarse filling yarns criss-crossing as a group back and forth across the entire width of the fabric in generally parallel relation to each other along each width-wise traverse, the filling yarns of the plurality, in the portions thereof in each width-wise traverse, crossing each other. The filling yarns are bound and held by spaced apart, substantially non-shifting chain-stitched longitudinal elements disposed substantially parallel to each other and transverse to the filling. The filling yarns are bound and held by spaced looped portions of the chains by piercing of the chain-stitched elements through the individual filling yarns at a substantial number of random points in the fabric and are also held at other points by being embraced by loops of the chain-stitched elements.

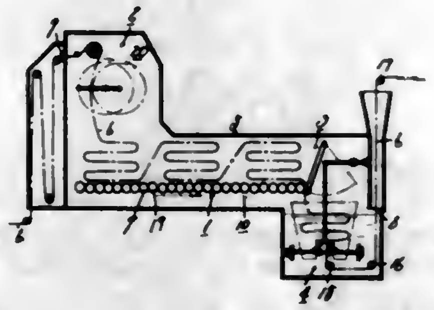
3,389,584
APPARATUS FOR CONTINUOUSLY TREATING TEXTILE FABRICS

Narukazu Okazaki and Hiroshi Azuma, Wakayama-shi, Japan, assignors to Wakayama Tetsuko Kabushiki Kaisha, Wakayama-shi, Japan

Filed Apr. 4, 1966, Ser. No. 539,763

Claims priority, application Japan, Apr. 13, 1965, 40/21,960; Apr. 30, 1965, 40/25,695; Feb. 16, 1966, 41/9,593; Feb. 28, 1966, 41/12,494

5 Claims. (Cl. 68—177)



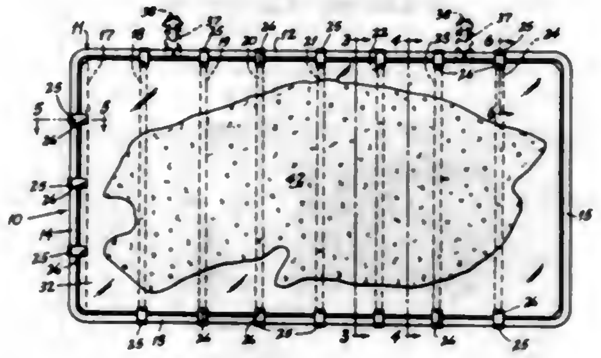
An apparatus for chemically treating textile fabrics, disadvantages of size, damage and wrinkling are reduced by providing a treating apparatus comprising intermittent feeding means for conveying stacks of folded fabric, shaking off means for folding and stacking fabric thereon, means for dropping the stack of fabric into the treating bath and for maintaining the stack horizontal therein, and lead-out means which stretches the fabric throughout its width, each of said means being of a form adapted to newly cooperate in the entire combination of the apparatus.

3,389,585
TANNING BOARD ASSEMBLY

Frank L. Collins, Bolivar, Tenn., assignor to International Shoe Company, St. Louis, Mo., a corporation of Delaware

Filed Feb. 28, 1966, Ser. No. 530,531

1 Claim. (Cl. 69—19.1)



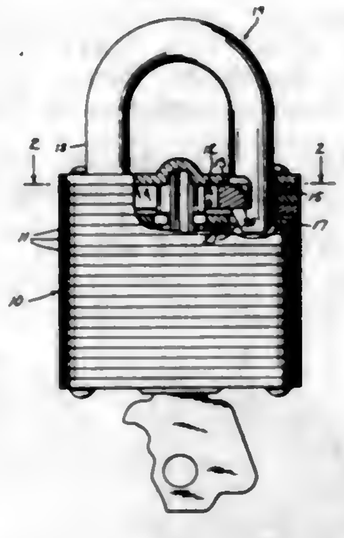
A tanning or pasting board assembly having spaced boards facing one another with outer exposed surfaces against which wet leather is mounted, the space between the boards providing an area for circulation of heating air.

3,389,586
NON-BINDING LOCKING LEVERS FOR PADLOCKS

Daniel J. Foote, Wauwatosa, Wis., assignor to Master Lock Company, Milwaukee, Wis., a corporation of Wisconsin

Filed June 13, 1966, Ser. No. 557,263

7 Claims. (Cl. 70—38)



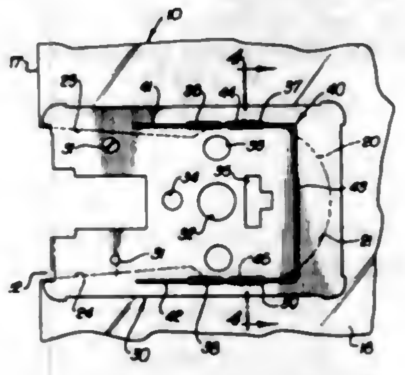
A spring-loaded, axially-movable locking lever in a padlock body for releasably engaging and holding the notched leg of a reciprocatable shackle leg in its closed position which lever has a portion of its shackle-engaging edge convexly curved in transverse planes to form a cam surface engageable with said shackle leg, said cam surface causing said locking lever to move smoothly into and out of said shackle leg notch without binding or wedging.

3,389,587
LOCK CASE RETAINER

Fred J. Russell, 8635 Otis St., South Gate 90280; Richard L. Armstrong, Santa Fe Springs; and Harold W. Falk, Inglewood, Calif.; said Armstrong and said Falk, assignors to said Fred J. Russell

Filed July 19, 1966, Ser. No. 566,380

5 Claims. (Cl. 70—451)



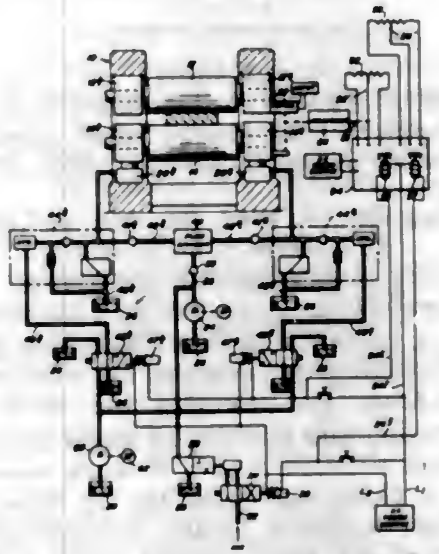
1. A mounting assembly for mounting a lock structure on a relatively thin door, wherein the door has a mounting hole therethrough at a selected distance from the free edge of the door, a passage extending from the free edge of the door to a point which intersects said mounting hole in such manner as to leave at least one shoulder in said mounting hole adjacent such intersection, said assembly comprising a mounting plate adapted to lie against a side face of the door at a location overlying at least part of the side walls of said mounting hole and said passage, said mounting plate having an aperture therein positioned to overlie said mounting hole adjacent said shoulder, a spacer adapted to overlie said mounting plate said spacer having projection means thereon, said projection means extending into said aperture and engaging said shoulder of said mounting hole when the spacer is in position, thereby to secure the mounting assembly in a selected location in relation to the free edge of the door.

3,389,588
APPARATUS FOR CONTROLLING THE POSITION OF WORK ROLLS

Anthony D. Reinhardt, South Holland, and Robert C. Slifka, Cicero, Ill., assignors to United States Steel Corporation, a corporation of Delaware

Filed Mar. 9, 1965, Ser. No. 438,274

3 Claims. (Cl. 72—8)



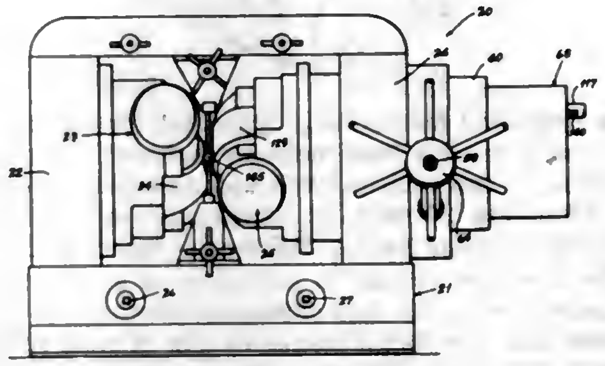
An apparatus for controlling the position of work rolls in a mill is disclosed which includes means to obtain a signal related to the spacing between the work rolls, means to provide a command signal proportional to desired roll spacing and means to operate a fluid system responsive to a signal related to the deviation between actual and desired roll spacing so as to adjust the roll spacing.

3,389,589
STRAIGHTENING MACHINE

Walter L. Siegerist and Harvard K. Hecker, St. Louis, Mo., assignors to The Medart Engineering & Equipment Company, St. Louis, Mo., a corporation of Missouri

Filed May 16, 1966, Ser. No. 550,221

6 Claims. (Cl. 72—164)



1. A straightening machine comprising a frame, a first roller supported by the frame, a crosshead supported by the frame, a second roller supported by the crosshead in opposing relationship to the frame, the crosshead comprising a cylindrical member slidable within a recess in the frame, the cylindrical member having a recess in it, the frame having a large hub of size and shape complementary to the recess and extending into the recess, whereby the crosshead can slide axially within the frame recess and about the large hub, means defining opposing walls on the crosshead recess and the large hub, means to introduce hydraulic fluid into the space between the opposing walls to urge the walls apart and cause the crosshead to slide relative to the frame in a direction to move the second roller toward the first roller, and lug and face means between the crosshead and the frame to act as stops to limit the movement of the crosshead.

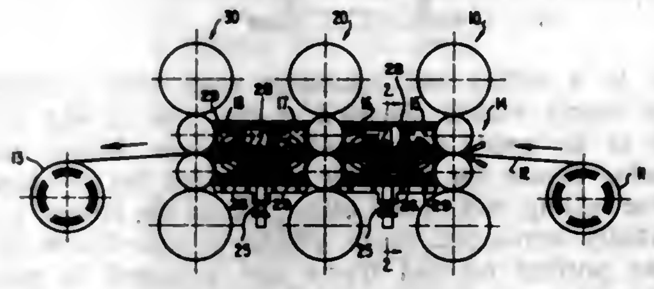
3,389,590
COOLING ATTACHMENT FOR HIGH SPEED REVERSING MILL

Lucien Diolot, Neuilly-sur-Seine, France, assignor to Societe Nouvelle Spidem, Paris, France, a corporation of France

Filed Aug. 19, 1965, Ser. No. 481,018

Claims priority, application France, Aug. 25, 1964, 986,140

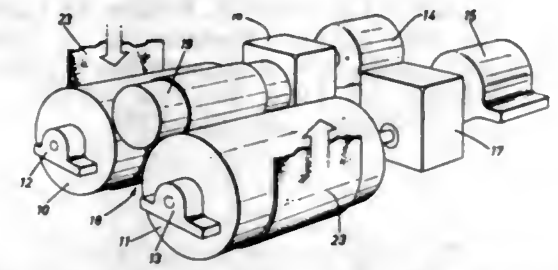
7 Claims. (Cl. 72—201)



A receptacle disposed between two stands of a rolling mill; the said receptacle is provided with a horizontal bottom and upstanding side walls; the terminal edges of the side walls are arcuate to conform to the faces of the vertically arranged lower and upper work or strip engaging rolls; the strip between said stands as well as said faces of the rolls are submerged in a coolant medium contained in said receptacle during operation.

3,389,591
BRIDLE

David A. Moline, Hamilton, Ontario, Canada, assignor to The Steel Company of Canada, Limited, Hamilton, Ontario, Canada, a Canadian company
Filed Dec. 27, 1965, Ser. No. 516,551
3 Claims. (Cl. 72—205)

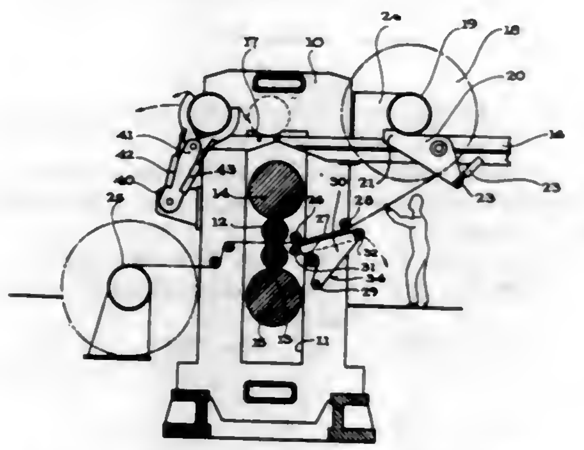


An improved method and apparatus for use in a line in which strip travels longitudinally between a pair of line components and such method and apparatus dividing the strip extending between the components into first and second strip portions having differential tensions therein.

The invention resides in providing of a pair of rolls in engagement with the strip extending between the line components and applying a torque to one of such rolls to develop a differential between the tension in the first strip portion and the tension in the second strip portion. The strip is pinched between the rolls of said roll pair and the magnitude of pinching force exerted by the rolls is a function of the differential tension between that existing in the first strip portion and that existing in the second strip portion.

3,389,592
ROLLING MILL FOR PROCESSING COLD METAL STRIP

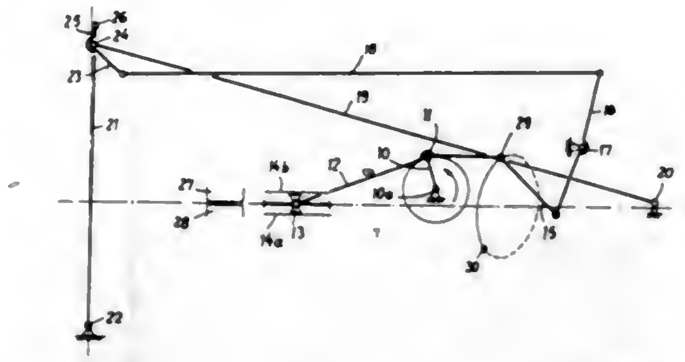
Lucien Bournez, Paris, and Louis R. Clement, Vincennes, France, assignors to Societe Nouvelle Spidem, Paris, France
Filed Oct. 22, 1965, Ser. No. 500,714
Claims priority, application France, Dec. 17, 1964 999,042
6 Claims. (Cl. 72—250)



1. In a rolling mill including work rolls comprising strip supply means disposed at one side of the rolling mill at an upper portion of the frame thereof and a winding means for the strip adjacent to the roll portion of the rolling mill at the other side of the frame, a substantially horizontal ramp affixed to said frame at the upper portion of said frame and arranged to support said strip supply means, and unwinding means for the strip mounted adjacent to the ramp, means to deposit a coil reel of said strip on said ramp, means to place said reel of strip in said unwinding means in such a manner that the trailing end thereof depends below the ramp, and a conveyor including feed means positioned adjacent to the point of introduction of the strip between the work rolls of the rolling mill, whereby the trailing end of the strip from the reel by slow unwinding thereof may thus be manually advanced onto the feed means and thence between the work rolls of the rolling mill.

3,389,593
HORIZONTAL FORGING AND UPSETTING MACHINE

János Szakácsi, Leverkusen, Germany, assignor to Eumuco Aktiengesellschaft fur Maschinenbau, Leverkusen, Germany
Filed Apr. 6, 1965, Ser. No. 445,948
Claims priority, application Germany, Apr. 7, 1964, E 26,778
3 Claims. (Cl. 72—417)

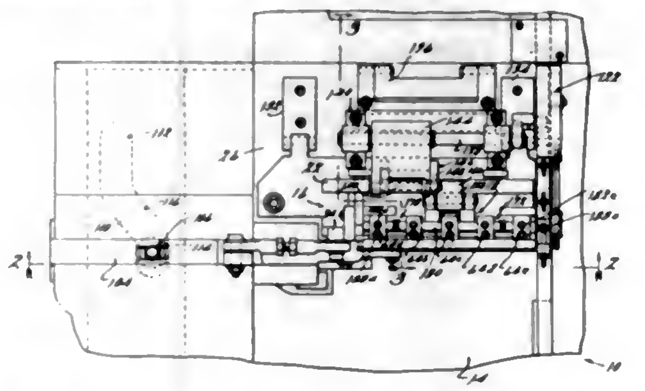


An improvement in drive transmissions for a horizontal forging and upsetting machine such as disclosed in U.S. Patent 3,280,616. In this type of machine a pair of clamping jaws positioned forwardly of an upsetting slide securely clamps a workpiece. A horizontally moving upsetting slide carries the rams, mandrels or other conventional tools which operate on the work. The drive transmission correlates movement of the clamping dies with movement of the upsetting slide in such a manner that the clamping dies remain closed during the portion of the cycle that the upsetting slide is operating on the work. In the present construction the clamping drive is formed of a connecting strap pivotally connected to a double arm connecting rod provided for the upsetting slide and a two-arm lever connected to an inner connecting rod and the connecting rod cooperates with a crank drive which is offset in a direction toward the clamping arm in relation to the plane of movement of the upsetting slide. The clamping force, as a result, remains constant for a considerable period of time, fluctuations of said force are reduced to a minimum, steadiness in the operation of the transmission members is insured, and friction and wear is reduced.

3,389,594
MULTIPLE STATION TRANSFER DEVICE

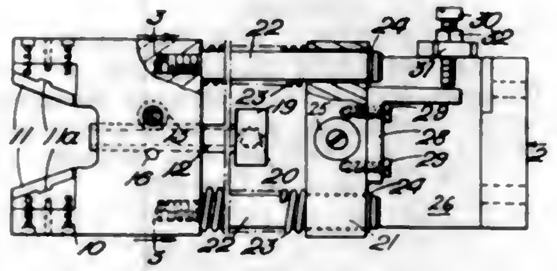
Arvine W. Seppi, St. Clair Shores, Mich., assignor to Huck Manufacturing Company, Detroit, Mich., a corporation of Michigan
Filed Dec. 2, 1964, Ser. No. 415,441
15 Claims. (Cl. 72—419)

1. A transfer mechanism for transferring work-pieces from one work station to another in a multiple stage die, comprising: a plurality of finger assembly means actuable to one condition for gripping the workpieces and to another condition for releasing the workpieces, first means for moving said plurality of finger assembly means back and forth between a pair of work stations along a first path in a plane, second means for moving said plurality of finger assembly means translationally towards and away from the work stations along a second path in said plane transversely to said first path in said plane, and actuating means for actuating said finger assembly means to said one condition as said second means moves said plurality of finger assemblies towards the work stations along said second path and to said other condition as said second means moves said plurality of finger assemblies away from the work stations along said second path, said actuating means including a fixed cam member and cam surfaces on said finger assembly means.



3,389,595
GAUGING APPARATUS

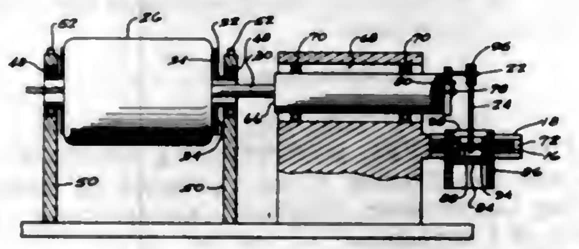
Michael Ernest Saxby, Old Fletton, England, assignor to The Newall Engineering Company Limited, Peterborough, England, a British company
Filed Feb. 3, 1966, Ser. No. 524,943
6 Claims. (Cl. 73—37.5)



A gauging device having a jaw block providing a pair of jaws inclined to each other with the line of contact of the planes containing the jaw faces being parallel to the axis of a cylindrical workpiece disposed between the jaws. A hollow tube which is moveable is disposed at a point along the line of contact. Air under pressure is passed along the said moveable hollow tube and the pressure at the end facing the workpiece is sensed. The sensed air pressure is used to guide an indication of the size of the workpiece and also to trip an automatic switch to cease a guiding operation when the workpiece has reached a predetermined size.

3,389,596
VISCOSITY MEASUREMENT

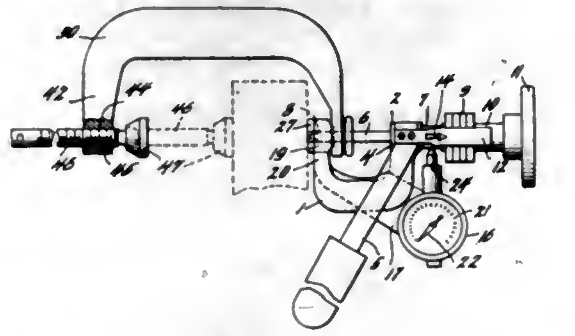
William D. Lion and Ross M. Stewart, Pittsburgh, Pa., assignors to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware
Filed Apr. 29, 1965, Ser. No. 451,708
10 Claims. (Cl. 73—60)



Oil viscosities are measured under low temperature conditions and the measurements correlate to a high degree with the cranking properties of internal combustion engines under low temperature conditions. The viscometer utilizes as a sensing assembly a cylinder secured in a fixed position and a moveable piston with a small annular space therebetween. A film of the test oil is applied to the annular space. Constant speed motor means reciprocates the piston within the cylinder. The resistance of the test oil to the reciprocating action is determined by measuring the reaction to said resistance at the motor.

3,389,597
HARDNESS TESTER

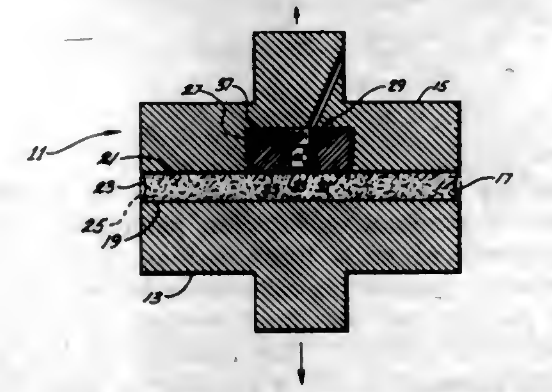
William A. Williams, 316 E. Wadsworth St., Philadelphia, Pa. 19119
Filed July 15, 1964, Ser. No. 382,767
6 Claims. (Cl. 73—81)



1. In a hardness tester, a C-shaped frame, having a test-piece penetrator, and a penetrator actuator mounted on one end portion of said C-frame, means for measuring the amount of pressure applied to the work piece, means for measuring the amount of penetration of the work piece mounted on said frame; the other end portion of said frame having an anvil mounted thereon, said anvil being provided with a front face facing in the direction of movement of said penetrator when moving to apply pressure to the test-piece and against which front face the test-piece is held when being tested, means encompassing at least part of the test-piece and holding said test-piece against said front face of said anvil, said piece-holding means being flexibly connected to the other end of said C-frame at a position opposite said front face of said anvil so that the test-piece is pressed against said anvil uniformly, said anvil being formed with a passageway through which said penetrator extends to contact the test-piece, whereby the pressure applied to the test-piece, in being tested, is applied to said other end portion of said C-frame and causes flexing of said C-frame, said pressure measuring means performing its operation by measuring the flexure caused in said C-frame by said pressure, said means holding and pressing the test-piece on the anvil being a C-shaped clamp having one end connected to said C-frame, and the other end provided with a screw device engaging the test-piece on the side thereof opposite said anvil.

3,389,598
LOAD FAILURE DETECTOR DEVICE

Bobby C. Harbert, Waco, Tex., assignor to North American Rockwell Corporation, a corporation of Delaware
Filed Mar. 28, 1966, Ser. No. 537,822
6 Claims. (Cl. 73—88.5)

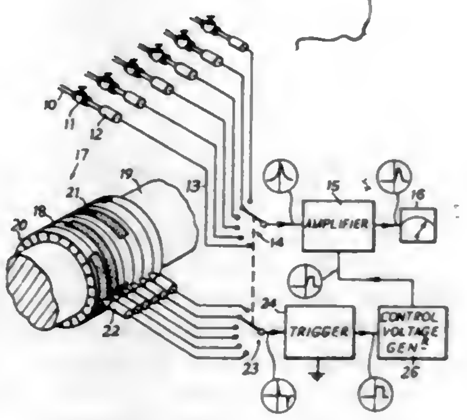


1. Apparatus for assisting in the investigation of the load failure properties of viscoelastic material, comprising;

a platen formed with an opening,
a flat disc inserted in the opening,
a shaft affixed normal to one face of said disc,
strain gages mounted on said shaft, and
means for maintaining said flat disc in contact with the viscoelastic material to be investigated.

3,389,599
ENGINE-CYLINDER PRESSURE INDICATORS

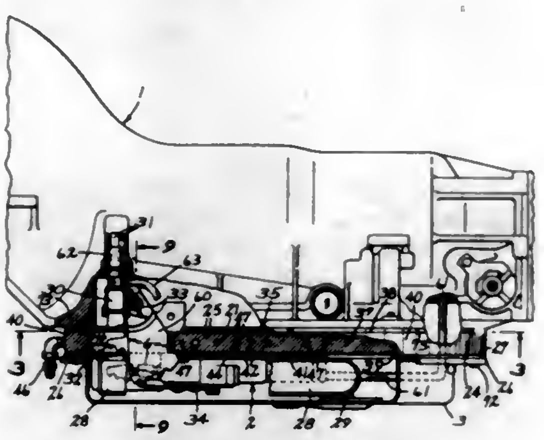
Evelyn Stewart Lansdowne Beale, Whitehall, Wraysbury, Buckinghamshire, England
Filed May 20, 1965, Ser. No. 457,300
Claims priority, application Great Britain, June 1, 1964, 22,605/64
10 Claims. (Cl. 73—115)



An engine-cylinder pressure indicator which comprises an indicating meter operated by a voltage produced by multiplying a voltage dependent on the pressure in the cylinder by a signal proportional to piston speed.

3,389,600
FLUID PRESSURE TESTING APPARATUS FOR AUTOMATIC VEHICLE TRANSMISSIONS

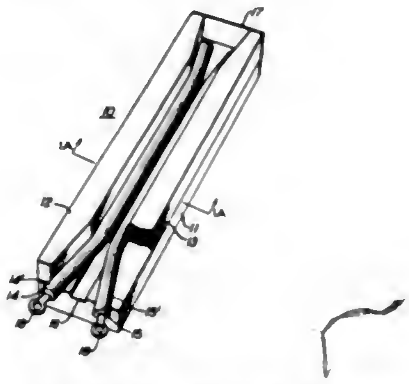
Mathias Rau, 16340 S. Temple, Minnetonka, Minn. 55343
Filed Apr. 24, 1967, Ser. No. 632,970
8 Claims. (Cl. 73—118)



Apparatus for diagnosing malfunctions in automatic transmissions of automotive vehicles, particularly in the hydraulic systems of such transmissions. Insert means mounted between cooperating assemblies having interconnected fluid passages, provides fluid passage extensions for the interconnected passages, the passages in the insert means having connection with a plurality of gages which indicate operating characteristics of different fluid circuits and fluid pressure control elements of the transmission mechanism.

3,389,601
VARIABLE CAPACITANCE LIQUID FLOW GAUGE

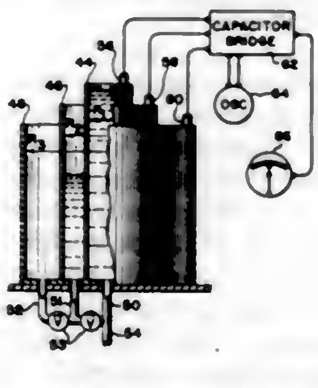
Ralph A. Semplak, Shrewsbury, N.J., assignor to Bell Telephone Laboratories, Incorporated, Berkeley Heights, N.J., a corporation of New York
Filed June 29, 1966, Ser. No. 561,425
3 Claims. (Cl. 73—171)



A flow measuring device in which the volume of liquid flowing between two parallel capacitor plates is sensed by a measuring circuit.

3,389,602
FUEL GAUGING SYSTEM FOR WEIGHTLESS TANKAGES

John E. Clemens, Xenia, Ohio, assignor to Industrial Nucleonics Corporation, a corporation of Ohio
Filed Apr. 20, 1964, Ser. No. 361,060
18 Claims. (Cl. 73—290)

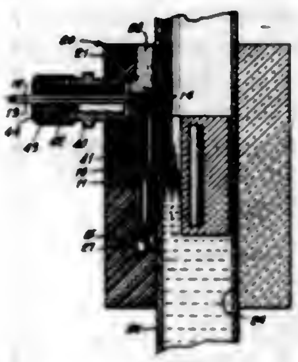


A fuel gauge for a fuel tank intended for use in a zero gravity environment. The tank is of the type having one or a plurality of baffles near the outlet of the tank so that when the tank is nearly empty the remnant fuel because of the effect of capillary attraction collects within the confines of the baffles. A liquid level probe is located within each baffle so that an accurate summation of the remaining fuel can be made. The probes can be of a known type such as capacitance, sonic or radiation attenuation or of a special ionization gauge disclosed herein. When the latter type is used the structure of the guage itself can form the baffle structure of the tank.

3,389,603
LIQUID LEVEL RESPONSIVE DEVICE

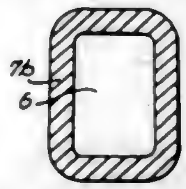
John Jacobs III, Darien, Conn., assignor to Sonic Engineering Corporation, Fairfield County, Conn., a corporation of Connecticut
Filed June 16, 1966, Ser. No. 557,972
2 Claims, (Cl. 73—308)

A liquid level controller or a device responsive to the level of a liquid within a sight glass is provided by a reed switch encapsulated within a glass envelope which, in turn, is provided and sealed within an adjustable housing. The housing is made up of two parts, one part being transparent and the parts being contoured so as to be adjustably fitted around the sight glass. A magnetic float is provided within the sight glass responsive to the liquid level therein such that when the magnetic float comes opposite the reed switch the reed switch is actuated.



3,389,604
TEMPERATURE SENSING DEVICE

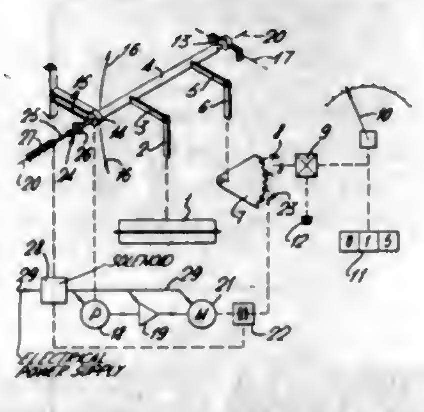
George B. Williams, New Bedford, Mass., assignor to Buzzards Corporation, Marion, Mass., a corporation of Massachusetts
Filed Nov. 5, 1965, Ser. No. 506,489
2 Claims. (Cl. 73—362)



1. A device for sensing the temperature of a medium comprising; a body portion having corners, accurate surfaces and discontinuities thereover, and a coating of poly-para-xylylene deposited over said body, said coating being of equal thickness at each portion of said body and extending over the entire surface thereof, said coating also being of sufficient thickness to electrically insulate said device from said medium and to maintain substantial thermal continuity therebetween.

3,389,605
INSTRUMENTS FOR PROVIDING A REPRESENTATION DEPENDENT UPON THE VALUE OF A PREDETERMINED VARIABLE

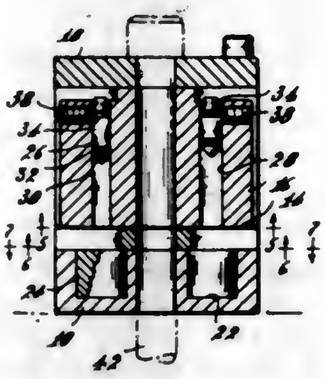
John Rickard Holtam, Stroud, England, assignor to Smiths Industries Limited, London, England, a British company
Filed Oct. 19, 1966, Ser. No. 587,888
Claims priority, application Great Britain, Oct. 19, 1965, 44,263/65
16 Claims. (Cl. 73—386)



1. An instrument for providing a representation dependent upon the value of a predetermined variable, comprising a member mounted for angular displacement about each of two mutually perpendicular axes, a sensor responsive to the value of said variable to apply to said member drive having moment about each of the two axes, means for deriving said representation from angular displacement of said member about a first of the two axes, and servo means for assisting the sensor to drive the said member to an angular displacement about said first axis in accord with the sensed value of said variable, said servo means being means for responding to angular displacement of said member about the second of the two axes to drive said member about said first axis to reduce the displacement about said second axis to zero.

3,389,606
TIME RESOLVING MECHANICAL ACCELEROMETER

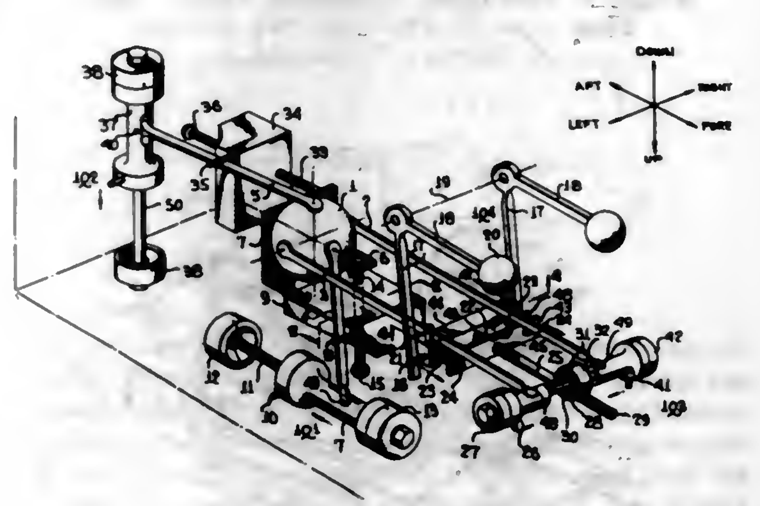
Barron C. Watson, Cambridge, Mass., assignor, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission
Filed Jan. 29, 1965, Ser. No. 428,998
11 Claims. (Cl. 73—492)



1. An accelerometer comprising an anvil, a weight adapted to make a permanent impression on the surface of the anvil by impact therewith, and means supporting the weight at a predetermined distance from the anvil, said means being adapted to release the weight when a predetermined threshold acceleration is exceeded; characterized in that there is means situated in the path of movement of the weight toward the anvil, movable into a position in response to movement of the weight to a position in contact with the anvil to trap the weight at the place of impact of the anvil to prevent reactivation of the weight.

3,389,607
TRI-AXIAL IMPACT INDICATOR

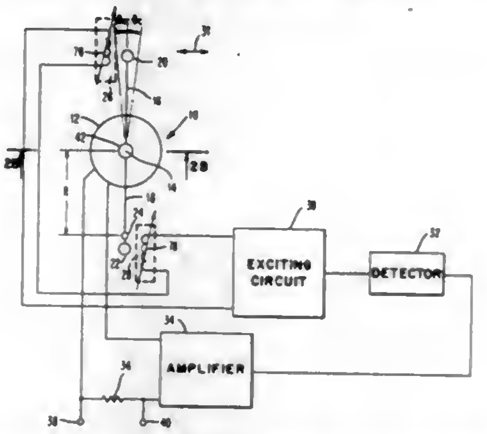
Joseph F. Kishel, Springfield, N.J., assignor to Weston Instruments, Inc., Newark, N.J., a corporation of Texas
Filed Oct. 7, 1965, Ser. No. 493,623
15 Claims. (Cl. 73—492)



A tri-axial acceleration responsive device used in conjunction with aircraft landing gear to determine when predetermined or critical stresses have been exceeded upon impact. Said device being of the go, no-go variety wherein an inertial mass in response to acceleration forces will act upon a plurality of pivotal levers, each of them responsive to movement in only one plane, and each having a magnetic switching means positioned at the other end of the lever pivot point from said inertial mass.

3,389,608
ACCELEROMETER

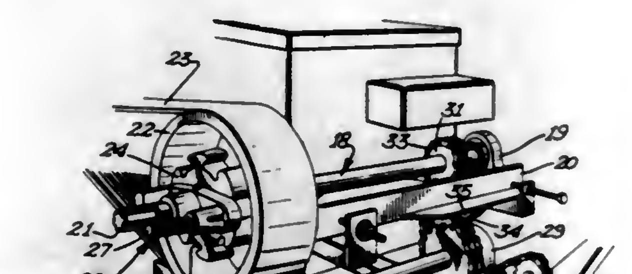
Lawrence Moskowitz, Camden, N.J., assignor to Schaevitz Engineering, a corporation of New Jersey
Filed Aug. 10, 1964, Ser. No. 388,451
7 Claims. (Cl. 73—517)



1. An accelerometer comprising a coil, a pair of bearing elements, a pair of pivot elements connected to said coil and disposed within said bearing elements to permit rotation of said coil, the end clearance between said bearing and pivot elements being relatively large, a pair of sensing elements for producing electrical signals to detect the degree of rotation of said coil, a pair of coupling elements disposed to be moved relative to respective sensing elements as said coil is rotated or displaced to vary the electrical signals in said sensing elements, a weight associated with one of said coupling elements to cause rotation of said coil and said coupling elements when said accelerometer is accelerated in a linear direction, said end clearance being such that said weight causes said coil to shift to a second position when the linear acceleration exceeds a certain point causing one of said coupling elements to be moved away from its associated sensing element and the other coupling element to be moved towards its associated coupling element.

3,389,609
POWER TRANSMISSION SYSTEM FOR TRACTOR POWERED IMPLEMENTS

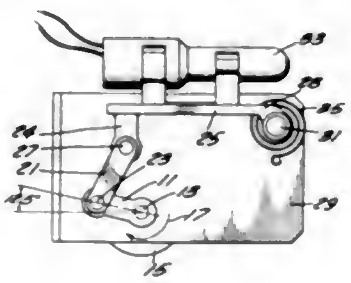
Arthur J. Luscombe, Armstrong, Iowa 50514
Filed Apr. 28, 1967, Ser. No. 634,559
4 Claims. (Cl. 74—15.2)



A mobile feed mixer has a pair of input driven shafts, each being differently splined and each shaft being connectible to only one of the sockets of a power takeoff shaft. The power takeoff shaft also has its sockets differently splined to fit either of the differently splined power takeoff shafts of commercial tractors. One of the splined conventional power takeoff output shafts revolves at approximately 540 r.p.m., and the other splined conventional power takeoff output shaft revolves at approximately 1,000 r.p.m. The power takeoff shaft requires the user to turn the shaft end for end when used with different power takeoff output shafts.

3,389,610
SWITCH ACTUATING DEVICE

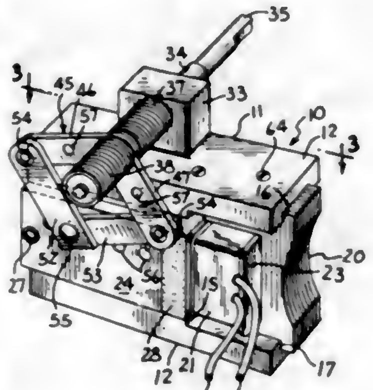
Clarence B. Knudson, 9627 2nd Ave., Inglewood, Calif. 90305
Filed Feb. 23, 1966, Ser. No. 529,506
7 Claims. (Cl. 74—42)



A mechanism is disclosed for operating an electrical switch, such as a mercury switch, but sequentially turning it into its "on" and "off" conditions. The device utilizes a crank and a link with a tilting mechanism to provide a non-linear action, thereby causing a slowdown in the rate of tilt-angle change for different crank positions, as a consequence of which the switch can have different switch-open and switch-closed times.

3,389,611
ELECTRIC MOTOR

Ahmet K. Bey, Chicago, Ill., assignor of one-half to Frances Budreck
Continuation-in-part of application Ser. No. 489,178, Sept. 22, 1965. This application Dec. 6, 1965, Ser. No. 511,760
6 Claims. (Cl. 74—88)

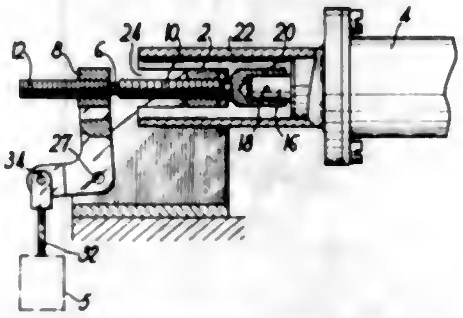


The leg members of a vibratory motor alternately attract and repel a pivoted permanent magnet member when a coil wound around the leg members is coupled to a source of alternating current. A pair of scissors-like linkages translate the oscillatory motion of the permanent magnet member to a pair of oppositely wound spring clutches which alternately engage an output shaft to produce uni-directional rotation.

3,389,612

DEVICE FOR EFFECTING THE ACCURATE POSITIONAL ADJUSTMENT OF A COMPONENT

Rémy Thireau, Garches, France, assignor to Commissariat à l'Energie Atomique, Paris, France
Filed Nov. 22, 1966, Ser. No. 596,200
Claims priority, application France, Dec. 3, 1965, 40,925
5 Claims. (Cl. 74—89.15)

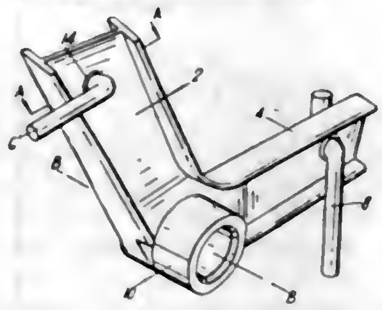


1. A device for the accurate positional adjustment of a component, said device comprising a movable rod provided with two threaded portions of different pitch, a first nut secured against both translational motion and rotational motion and engaged with the first threaded portion of said rod, a second nut for imparting motion to the component to be displaced, said second nut being secured against rotational motion alone and engaged with the second threaded portion of said rod, a stationary bracket for supporting said first nut, a motor which controls the displacement of the rod and the rotating shaft of which is fixed to said rod and a guide means which is fixed on said motor and adapted to slide over said first nut at the time of translational motion of said rod which causes the translational motion of said motor.

3,389,613

LEVER AND LINK MECHANISMS

Albert Edward Turnbull, Old Windsor, England, assignor to Illinois Tool Works Inc., Chicago, Ill., a corporation of Delaware
Filed July 14, 1966, Ser. No. 565,313
9 Claims. (Cl. 74—110)



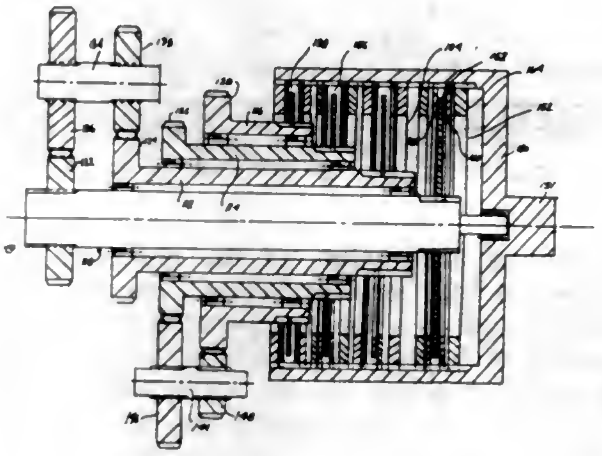
A linkage mechanism in which a pivotally mounted lever is engaged by a link, with the link having a cranked terminal portion passing through a hole in an arm of the lever and with the cranked portion of the link and a straight principal portion making forcible contact with the arm to torsionally stress and twist the arm about an imaginary line passing through both the hole and the pivotally mounted axis of the arm to provide resilient connection between the link and arm.

3,389,614

TRANSMISSION

Shmuel Shiber, 18 Tamar St., and Benjamin Fishler, 113 Weizmann St., both of Tel Aviv, Israel
Filed Apr. 14, 1966, Ser. No. 542,600
Claims priority, application Israel, Apr. 19, 1965, 23,382; Feb. 14, 1966, 25,169
1 Claim. (Cl. 74—330)

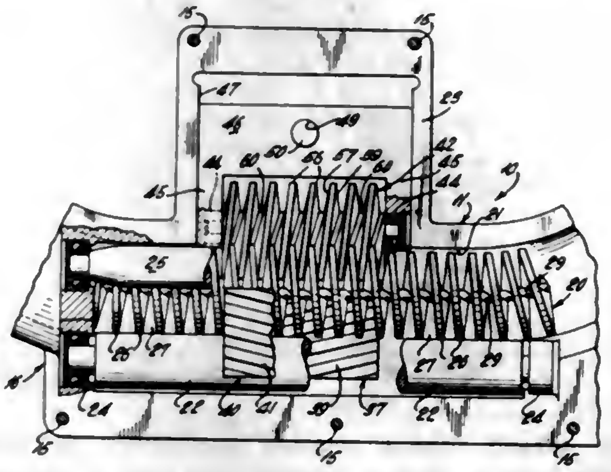
A transmission having a central shaft and three nested sleeve shafts, as well as at least two counter shafts one of which is power-transmittingly connected to the central shaft and to one of the sleeve shafts by different transmission ratios and the other of which counter shafts is power-transmittingly connected to the remaining sleeve shafts by different transmission ratios. A rotary cage is arranged coaxially with the central and sleeve shafts, there being a plurality of selectively actuable clutches for power-transmittingly coupling the cage either to the central shaft or to the sleeve shaft to which the one counter shaft is connected and for also power-transmittingly coupling the cage to either of the remaining sleeve shafts. In this way, the counter shafts may, depending on which two of the clutches are actuated, be power-transmittingly coupled to each other by any one of several different transmission ratios.



3,389,615

VARIABLE SPEED SPIRAL GEARING MECHANISM

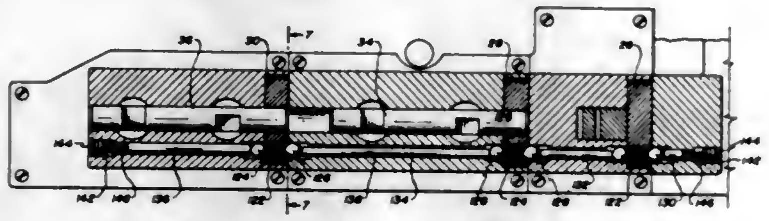
William J. Roantree, Port Washington, N.Y., assignor to Roantree Electro-Mech Corporation, Port Washington, N.Y., a corporation of New York
Filed Sept. 20, 1967, Ser. No. 669,229
11 Claims. (Cl. 74—424.7)



An infinitely variable speed rotary gearing mechanism of the differential type. An intermediate gear means has two sets of helical gear teeth of opposite hand thereon. One set of the gear teeth on the intermediate gear means mesh with helical gear teeth on an input gear and the other set of the gear teeth on the intermediate gear means mesh with an output gear disposed at a driving zone of the mechanism. The output gear is thus positively geared to the input gear through the intermediate gear means, which rotates about its longitudinal axis. Longitudinal movement of the intermediate gear means changes the angular relationship between the input and output gears.

3,389,616
LEVER INTERLOCK

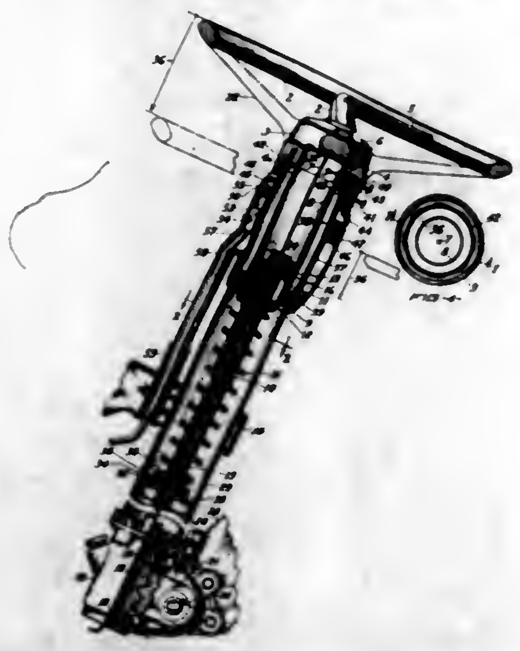
Stephen Emery Farekas, South Bend, Ind., assignor to Amsted Industries Incorporated, Chicago, Ill., a corporation of New Jersey
Filed May 24, 1966, Ser. No. 552,469
16 Claims. (Cl. 74—483)



1. Interlock mechanism of the character disclosed, comprising, a body member having a plurality of cavities therein arranged in a line, an operating member movably mounted in each cavity, the operating members each having a neutral position and an active position, the body member having a cell extending along said line of cavities, extending longitudinally beyond outermost ones thereof, the operating members having apertures therein in alignment with said cell when the operating members are in neutral position, locking pins in said apertures, rigid interlock means in said cell engaging said locking pins in mutual camming surfaces, and yieldable means interposed between the outer ends of the interlock means and the ends of the cell.

3,389,617
IMPACT CUSHIONING STEERING MECHANISM

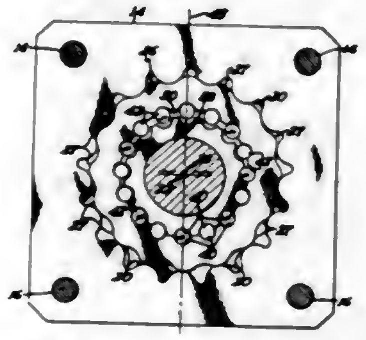
John Pavlecka, 8797 Capital, Oak Park, Mich. 48237
Filed Oct. 22, 1965, Ser. No. 501,478
35 Claims. (Cl. 74—492)



The subject vehicle steering mechanism cushions the driver's impact upon a descendable unit of the mechanism gradually, not by destroying the mechanism but by compressing a spring, or air in a cylinder and piston chamber, or both; another cylinder and piston chamber displaces a fluid—either air or a liquid—through a check valve by the impact, and the ensuing vacuum in the chamber arrests the descended unit against a dangerous rebound; for a slow ascent of the unit to its normal position by the stored impact energy, the fluid is bled restrictedly back into the chamber; alternate central and annular outer locations of the fluid-displacing and air-compressing chambers are optionally usable, and two embodiments of horn and turn signal control connections are provided between the turnable and descendable steering unit and the vehicle structure.

3,389,618
TORQUE TRANSMITTING DEVICE

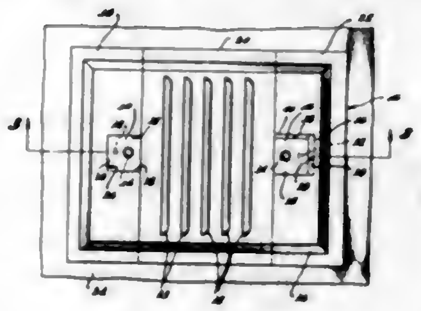
Hugh L. McDermott, Minneapolis, Minn., assignor to Char-Lynn Company, Eden Prairie, Minn., a corporation of Minnesota
Filed May 11, 1966, Ser. No. 549,240
1 Claim. (Cl. 74—804)



A drive mechanism for transmitting torque between two relatively orbital members, the mechanism comprising a plurality of circumferentially arranged articulated holes, with each hole being formed partly in one member and partly in the other, and a like number of rollers respectively and loosely disposed in the articulated holes.

3,389,619
ADJUSTABLE JIG OR DIE BUSHING

Gordon P. Del Faro, 23529 Dolorosa, Woodland Hills, Calif. 91364
Filed Apr. 25, 1966, Ser. No. 545,139
1 Claim. (Cl. 76—107)



A method of mounting and relocating a flat-sided bushing within a die block wherein a flat-sided opening is formed in the die block, the bushing is then temporarily inserted in the opening and thereafter removed, the sidewall of the opening is ground to properly position the bushing, the bushing is reinserted within the opening, and finally a shim is inserted between the ground sidewall and the adjacent side of the bushing.

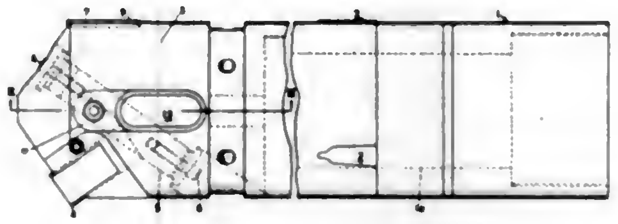
3,389,620
APPARATUS FOR MAKING GROOVES IN DEEP BORES IN A WORKPIECE

Martial Berruyer, Rives, Isere, and Pierre Menissier, Grenoble, Isere, France, assignors to Commissariat à l'Energie Atomique, Paris, France
Filed Aug. 2, 1966, Ser. No. 569,678
Claims priority, application France, Aug. 16, 1965, 28,433
3 Claims. (Cl. 77—3)

1. Apparatus for making a groove in a deep bore in a rotatable workpiece, comprising a tool-holder body constituted by a laterally deformable beam, fixable by one of its ends to a machine tool turret, and carrying at its other end a fixed support and a movable support, said fixed support being provided with a support member capable of being brought into contact with the wall of the bore, in which said groove is to be machined, and with a cutting tool fixed in front of said support member and passing beyond said latter by a distance equal to that of the depth of the groove to be machined, said movable support comprising two support members on the wall of said bore situated respectively at an equal angular distance with respect to said first fixed support member, said movable support being movable parallel to the diametrical plane of said tool holder body passing through the centre of the said fixed support member by a drive means.

3,389,621
BORING TOOLS

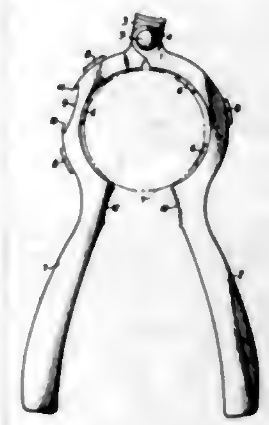
Richard Eric Wear, Biggin Hill, Kent, England, assignor to Secretary of State for Defence in Her Britannic Majesty's Government of the United Kingdom of Great Britain and Northern Ireland, London, England
Filed Dec. 1, 1965, Ser. No. 511,301
7 Claims. (Cl. 77—58)



This invention relates to a cutting head for machining deep bores which has a plurality of burnishing inserts located in its surface, at least one of the inserts being movable radially outward by fluid pressure against the action of a spring. Each such movable insert may be attached to a piston, slidable in a radial bore in the cutting head; the pressure fluid having access to the radial bore on the inner side of the piston to move the piston outward. The piston is biased inwardly by a spring also located in the radial bore.

3,389,622
TONGS-LIKE GADGET FOR LOOSENING SCREW CAPS OF CONTAINERS

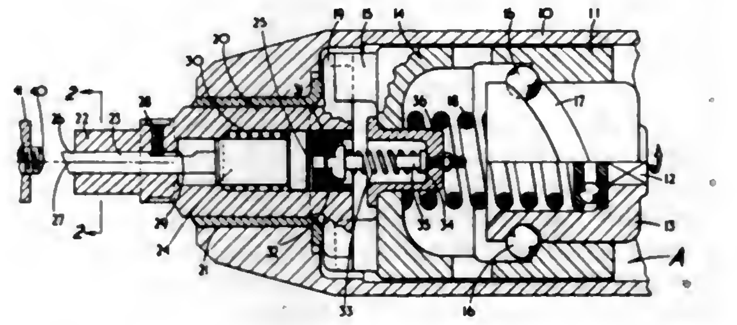
Günter Flügel, 3 Kopernikusweg, Solingen, Germany
Filed Feb. 7, 1967, Ser. No. 614,451
Claims priority, application Germany, Feb. 12, 1966, F 48,412
5 Claims. (Cl. 81—3.1)



A tongs-like gadget for loosening screw caps of containers. The device includes a pair of arms bent outwardly at their upper ends to form an annular head. A plurality of projections are connected at the inner and outer circumferences of the head. The projections at the inner circumference extend at substantially right angles to the arms and all extend in the same direction to form a first set of clamping jaws. A second set of clamping jaws is formed by the plurality of projections all extending in the same direction at the outer circumference of the annular head.

3,389,623
METHOD OF TIGHTENING HIGH STRENGTH BOLTS AND APPARATUS FOR USE THEREIN

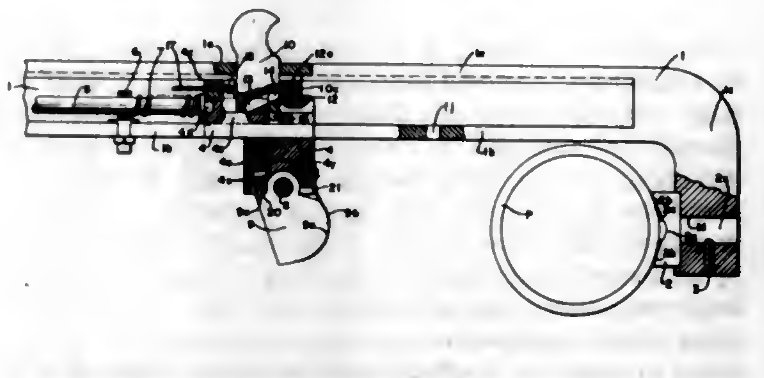
Peter J. Gill, Codsall, Wolverhampton, England, assignor to G.K.N. Group Service Limited, London, England, a British company
Filed Jan. 18, 1966, Ser. No. 521,377
5 Claims. (Cl. 81—52.3)



Apparatus for tightening a nut upon a bolt and giving a visual indication that tightening has achieved a predetermined tension in the bolt shank, comprising an impact wrench in which a motor applies torque to a nut engaging socket through a disengageable drive which includes a hammer device connected to the motor and an anvil device connected to the socket, and in combination therewith a marking tool connected to the anvil device for rotation therewith and also being slidable axially in relation to the nut engaging socket and means for moving said marking tool into engagement with the shank of the bolt to make a mark thereon, said means being operated by a relative movement between the hammer device and the anvil device when the wrench is impacting.

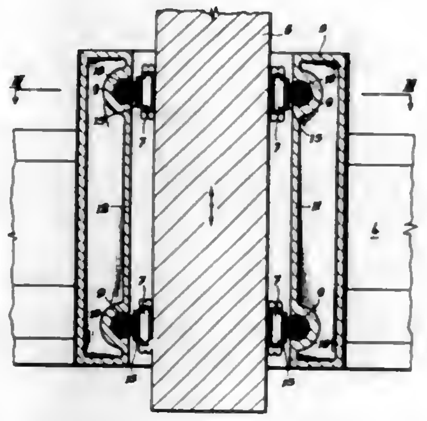
3,389,624
SLIDING JAW PIPE WRENCH HAVING AUTOMATICALLY ACTING PIN AND HOLE ADJUSTMENT MEANS

Carroll Everrett Pooler, Jr., Rte. 1, Box 133–F, Lafayette, La. 70501
Filed Sept. 1, 1967, Ser. No. 668,988
18 Claims. (Cl. 81—129)



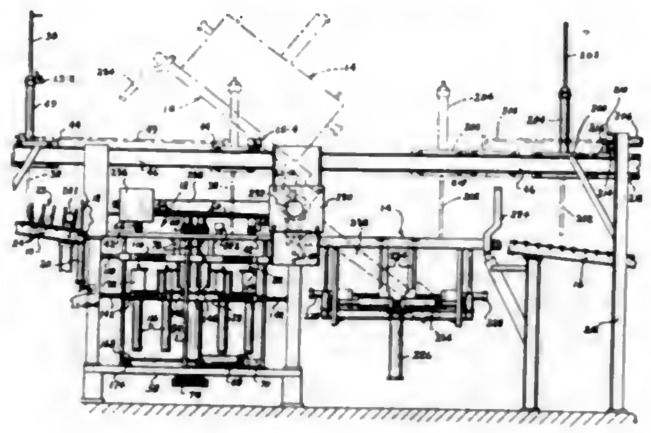
A pipe wrench comprising a handle having a web and having an upper flange and a lower flange, and having a lateral extension at one end; a fixed jaw on said extension; a reciprocable slide block underlying and embracing the lower flange; a movable jaw eccentrically pivotally mounted on the slide block opposite the fixed jaw; rods extending rearwardly of and anchored in the slide block at each side of the web; guides for said rods mounted on said lower flange; coiled springs on said rods interposed between the guides and slide block for forcibly projecting the movable jaw towards the fixed jaw to clamp the work therebetween; a pair of handle blocks independently slidably mounted on the top of the slide block at each side of the web, and having recesses in their inner faces receiving and interlocking with the top flange and web of the beam to prevent removal therefrom, the handle blocks having portions forming handles for retracting the slide block; means for normally locking each handle block to the slide block; the lower flange having a series of holes therethrough; an inclined cam slot in each block, a cam slidable in each slot; an offset pin carried by each cam slidable in a bore therefor in the slide block and adapted to enter one of said holes in the flange when same register; means for normally urging the handle blocks forwardly of the slide block when the locking means is released; whereby when the handle blocks are retracted the springs will be compressed and the pins will be raised out of the holes in the flange, and the locking means of the handle blocks will be engaged, and when the handle blocks are released the springs will force the slide block carrying the movable jaw into contact with the work, jolting the locking means into inoperative position, permitting the urging means to shift the handle blocks forwardly on the slide block thereby lowering the pins into the aligned hole in the lower flange.

3,389,625
DEVICE FOR STRAIGHTENING A RECTILINEARLY DISPLACEABLE TOOL RECIPROCATING MEMBER OF MACHINE TOOLS
Hans Wagner, Dusseldorf, Germany, assignor to Schiess Aktiengesellschaft, Dusseldorf, Germany
Filed May 23, 1966, Ser. No. 552,269
Claims priority, application Germany, May 28, 1965, Sch 37,135
5 Claims. (Cl. 82—2)



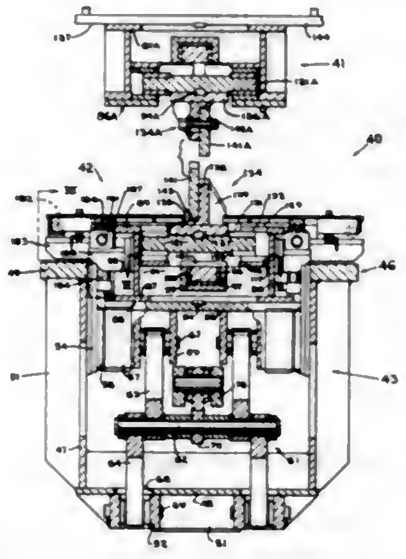
1. In combination; a first member reciprocable in a first direction; a second member in the form of a tool support supported by said first member for reciprocation thereon in a second direction at an angle to said first direction, and guiding means interposed between said members for guiding said second member on said first member while providing for adjustment of the path taken by said second member, said guiding means comprising at least two roller guiding elements on each of two opposite sides of said second member, said roller guiding elements being arranged in opposed pairs along said second member with the pairs spaced in the direction of movement of said second member, a tiltable support body on said first member for each said roller guiding element and tiltable about a tilt axis generally parallel to the guide path established by the pertaining roller guiding element and transverse to said first direction, and means for adjusting the said support bodies of said pairs of roller guiding elements relatively in a direction toward away from said second member.

3,389,626
METHOD AND APPARATUS FOR AWLING TIRES
Ralph M. Wise, Milford, Conn., assignor to The Armstrong Rubber Company, West Haven, Conn., a corporation of Connecticut
Filed Apr. 5, 1966, Ser. No. 540,292
16 Claims. (Cl. 83—2)



A method and apparatus for awling pneumatic tires in which the tires are clamped to an awling platform by several hook-shaped members which move into the center of the tire and then outwardly against the bead, gripping it at several places therealong. These clamping members act as positioning guides for a plurality of awls that are disposed about the central axis of the platform and mounted independently of the clamping members for movement radially outward into engagement therewith for locating the awls at the proper position radially of the tire. The awls are then operated in order to perforate the tire. In addition the awls are mounted for rotary movement about the central axis so that after one set of perforations have been made in the tire, the awls are shifted a predetermined distance about said axis and operated again in order to form another set of perforations. When the desired number of perforations have been made in one side of the tire in this step-by-step fashion, the tire may be turned over on the platform in order to awl the opposite side.

3,389,627
TRIMMING MECHANISM FOR STRIP WELDER
John D. Morley, Bay City, Mich., assignor to National Electric Welding Machines Company, Bay City, Mich., a corporation of Michigan
Filed Aug. 31, 1966, Ser. No. 576,410
15 Claims. (Cl. 83—34)



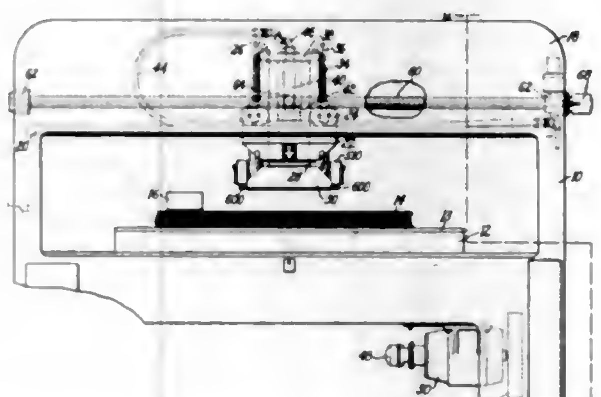
1. A method for trimming adjacent ends of successive strips to be welded, comprising the steps:

effecting a shearing operation by a pair of blades disposed on opposite sides of one of said strips, at least one of said blades being movable to effect cutting, said one blade being on the same side of the other blade as the free end of said one strip;

reversing the relative positions of said blades for cutting of the other strip, said one blade again being on the same side of said other blade as the free end of said other strip;

whereby the adjacent ends of said strips are trimmed with a high degree of precision with respect to each other.

3,389,628
CONTROLS FOR CUTTING PRESSES
David E. Banks, Hamilton, Donald F. Herdeg, Beverly, Ralph E. Karcher, Jr., and Abdullah A. Khambaty, Magnolia, and William B. Mercaldi, Beverly, Mass., assignors to United Shoe Machinery Corporation, Boston, Mass., a corporation of New Jersey
Filed Apr. 15, 1966, Ser. No. 542,954
13 Claims. (Cl. 83—62)



13. In a die cutting press having a platen, a work support, means for supporting the platen for movement toward and away from the work support and for movement transversely of said support, power means for providing said movements of the platen, in combination therewith, control means for said power means comprising means for initiating movement of said platen transversely of said support to a predetermined position to bring said platen over a die positioned on the work support, sensing means operative in response to disposition of a body portion in a zone adjacent said platen for temporarily interrupting said transverse movement of the platen until said body portion is out of said zone, means comprising a die sensor operative responsively to movement of the platen over a die on the work support and operative at said predetermined position for initiating downward movement of the platen toward the work support to press said die through a work piece, stroke terminating means responsive to a predetermined electrical signal for interrupting the movement of the platen toward the work support and means acting in response to said last signal for thereafter effecting movement of the platen away from the work support and transversely thereof.

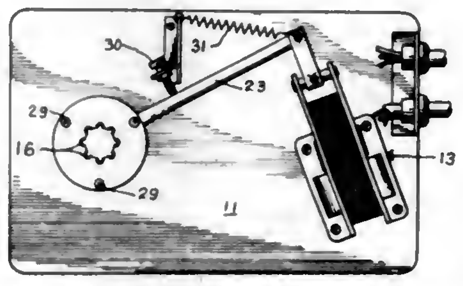
3,389,629
MULTIPLE LEAD CUTTER
Owen Tamburr, 22 Caton Ave., Colonia, N.J. 07067
Filed Aug. 30, 1966, Ser. No. 576,096
6 Claims. (Cl. 83—200)

1. A multiple lead cutter comprising

(a) an upper and a lower cutter disposed in juxtaposition,

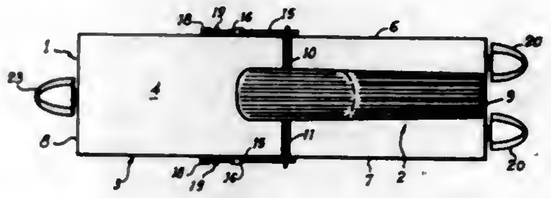
(b) a plurality of openings in the upper cutter intersecting with a central opening in the cutter,

(c) a plurality of openings in the lower cutter in general registration with the openings in the upper cutter,



(d) the openings in the lower cutter communicating with generally radial slots intersecting with a central opening in the cutter, and the slots tapering toward the central opening.

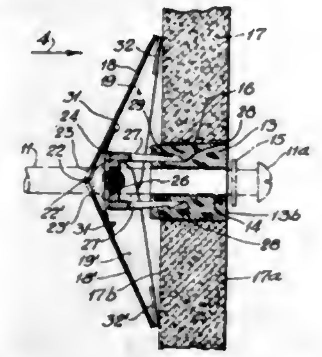
3,389,630
REED FACER
Walter S. Browder, 125 Dallas Ave., Weatherford, Tex. 76086
Filed Sept. 26, 1966, Ser. No. 582,062
2 Claims. (Cl. 84—458)



1. In a planing device for facing and refacing the reeds of musical reed instruments, the combination of an elongated rectangular body of molded, hollow construction characterized by its small size and its light weight, and having a length not substantially greater than twice the length of a reed, adapted to be arranged horizontally on a supporting surface in its operative position, the body having a planar top surface and being open on its under side, and having a transverse partition extending between its two opposite sides, intermediate its ends, and having a transverse slot intermediate its ends extending downwardly from its top surface, a razor type blade received bodily in the slot with its cutting edge facing upwardly and extending slightly above the top surface, and with the ends of the blade extending laterally outwardly beyond the sides of the body, a pair of adjusting screws arranged longitudinally of the body, on one side of the transverse partition, threadedly engaging openings therefor in the adjacent end of the body and having pointed inner ends received in openings therefor in the transverse partition communicating with the slot and engageable under opposite end portions of the blade, between the blade and the bottom of the slot, and a locking screw arranged longitudinally of the body, on the side of the transverse partition opposite the adjusting screws, threadedly engaging an opening therefor in the corresponding end of the body and having a blunt inner end received in an opening therefor in the transverse partition communicating with the slot for abutting, clamping engagement with the adjacent side of the blade.

3,389,631
TOGGLE BOLT WITH TOGGLE SUPPORT MEANS
Walter J. Vaillancourt, 15 Grant Ave., White Plains, N.Y. 10603
Filed Oct. 6, 1966, Ser. No. 584,724
8 Claims. (Cl. 85—3)

In a toggle bolt assemblage having toggle means pivotally movable from a position of collapsed orientation in alignment with a bolt to an operative position substantially perpendicularly thereof, the improvement that comprises a unitary hinge-pin, nut and hook element having threaded engagement with said bolt and a tapered plug of yieldable material having an axial passage slideably engaging the bolt between said element and the bolt head, and hook portions of said element being oriented to penetrate and interlock with the yieldable material of said plug when said toggle means is in said operative position. The tapered plug is of a size to firmly engage the hole drilled in a partition means to receive the collapsed toggle means of the toggle bolt assemblage.



A detail of the construction which is also applicable to toggle bolt assemblages generally in which the toggle means are of channeled structure with channel edges operatively engaging partition means, is the provision of lateral offsets extending from said channel edges to provide bearing surfaces limiting penetration into the partition means.

3,389,632

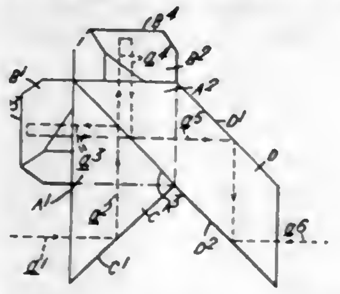
DOUBLE INVERTED IMAGE OPTICAL ALIGNMENT TESTING APPARATUS

Dexter R. Plummer, Leicester, England, assignor to Rank Precision Industries Limited, trading as The Rank Organisation, Rank Taylor Hobson Division, Leicester, England, a British company

Filed Apr. 20, 1964, Ser. No. 361,087

Claims priority, application Great Britain, Apr. 23, 1963, 15,962/63

10 Claims. (Cl. 88—14)



This invention relates to an optical beam splitter for alignment testing wherein a polarizing semi-reflector is used to form two polarizing beams on axes at right angles and two roof prisms are used to return the polarized beams to the semi-reflector after rotating the planes of polarization of said beams by 90 degrees, whereby two coincident exit beams are formed which are respectively inverted about planes at right angles, the arrangement having the advantage of being a unitary structure wherein loss of light is substantially avoided.

3,389,633

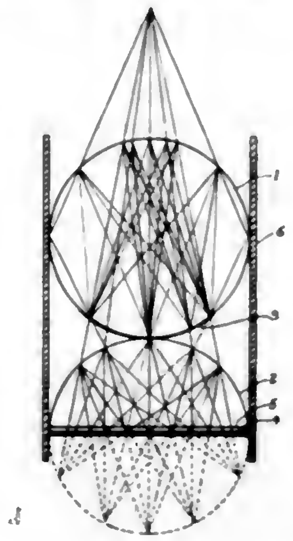
OPTICAL SYSTEMS

John Jacob Vanderhooft, 121 Lincoln Ave., Brooklyn, N.Y. 11208

Filed Dec. 17, 1964, Ser. No. 419,119

8 Claims. (Cl. 88—24)

This invention consists of a simplified means for providing an eye piece for an optical system, comprising an objective element and a corrective element, each being a sphere or a portion of a sphere or a plano-convex element, with a photographic impression being obtainable from the



corrective element by placing a photosensitive medium in close contact with the plano surface of the corrective element. The unique nature of this invention is its capacity for maintaining focus from object to infinity.

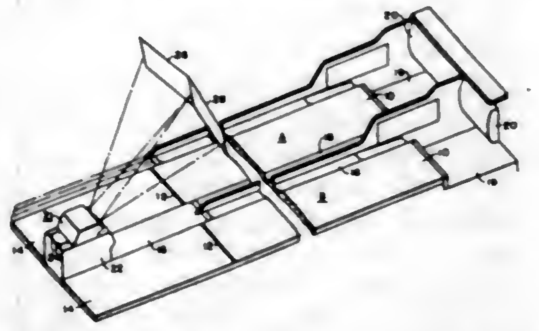
3,389,634

APPARATUS FOR PROJECTING PRINTED BOWLING GAME SCORES

Ernest C. Webb, Bay Village, Ohio, assignor, by mesne assignments, to The Cleveland Trust Co., Cleveland, Ohio (trustee), a banking institution

Original application June 6, 1962, Ser. No. 200,555, now Patent No. 3,257,898, dated June 28 1966. Divided and this application May 24, 1965, Ser. No. 458,262

7 Claims. (Cl. 88—24)



Apparatus for projecting onto a screen scores printed on a bowling game score sheet by an automatic printing mechanism that is operatively connected to apparatus for automatically detecting pinfall and for totalizing the score, without the introduction of the printing mechanism itself into the projected image. This is accomplished by positioning a bowling game score sheet on the surface of a transparent member. The score sheet has characters printed on one side of the sheet by the automatic printing mechanism and the characters are projected from the other side of the score sheet as an image formed by reflected light passing through the transparent member. Optical projection apparatus focuses an image of the printed score formed by reflection onto a projection screen.

3,389,635

ELECTROSTATIC COPIER

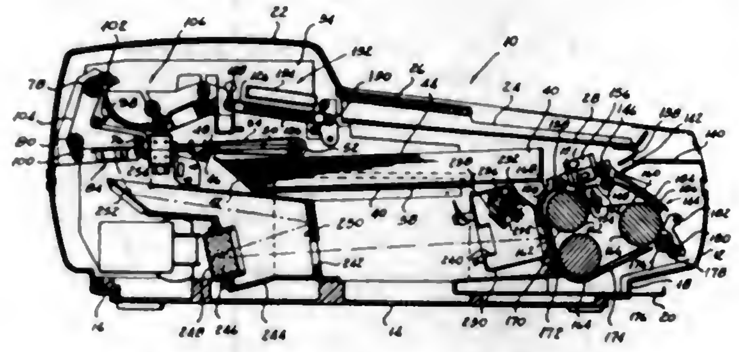
Marvin W. Teutsch, Phoenix, Ariz., assignor to Nuclear Corporation of America, Phoenix, Ariz., a corporation of Delaware

Original application Oct. 30, 1963, Ser. No. 320,159, now Patent No. 3,272,100, dated Sept. 13, 1966. Divided and this application Dec. 3, 1965, Ser. No. 529,165

4 Claims. (Cl. 88—24)

A copying machine for making multiple copies of an original in which the original is fed along a path from an

entry location past an exposure window to a return location and wherein means located along the path is adapted to be actuated selectively to direct the original to the



return location or back to the entry location. The actuatable means in manually set by rotation of a cam in a given direction and is reset upon further rotation of the cam in the same direction.

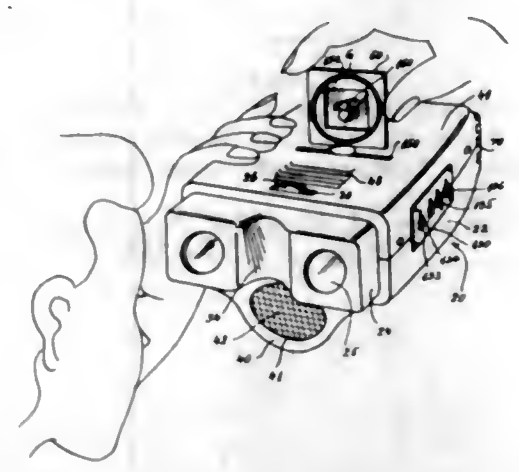
3,389,636

COMBINED VIEWER AND AUDIO RECORDER FOR OPTICAL SLIDE CARRYING RECORD MEDIUM

Dorothea M. Weltzner, 8 E. 62nd St. 10021, and Laforest S. Saulsbury, 35 E. 38th St. 10016, both of New York, N.Y.

Filed Dec. 14, 1965, Ser. No. 523,820

4 Claims. (Cl. 88—28)



A unit in which an optical slide carrying a recording mechanism surrounding the optical image on the slide can be inserted. In the unit, is optical means for viewing the image and audio transducer means for recording and reproducing audio signals relating to the image on the slide. A motor driven rotatable barrel in the unit carries the audio transducer which can be a magnetic head or an electromechanical stylus. A loudspeaker and microphone are connected via selective switch means in circuit with the audio transducer.

3,389,637

FIRING AND GUIDING MECHANISM FOR JET-PROPELLED MISSILES LAUNCHED FROM LAUNCHER TUBES

Ernst Beier, Munich, Theodor Bornhoft, Vaterstetten, Josef Durner, Ottobrunn-Riemerling, Heinrich Kasper, Munich, Eicke Maus, Ottobrunn, Erich Planitzer, Neubiberg, and Fritz Zeyher, Ottobrunn, Germany, assignors to Bolkow Gesellschaft mit beschrankter Haftung, Ottobrunn, Germany

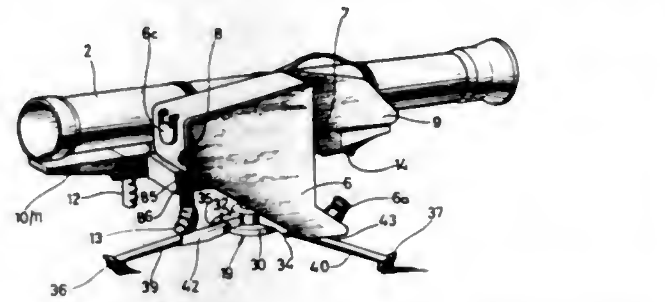
Filed June 7, 1967, Ser. No. 644,237

Claims priority, application Germany, June 15, 1966, B 87,562

10 Claims. (Cl. 89—1.815)

A firing and guiding mechanism for jet-propelled missiles, launched from a launcher tube, is disclosed as including an undercarriage having a part adjustable laterally and vertically. This part disengageably supports a sight carrier, having the general form of a shaft, and carrying all the devices required for launching, tracking and guiding the missile. The sight carrier extends parallel to the axis of the launcher tube, and disengageably supports the launcher tube.

A damping unit is included in the undercarriage and controls the speed of traverse, and a self-locking, no-play



gear means is provied for elevation of the launcher tube. The sight carrier carries an optical sight for precision long range sighting, tracking and guiding, and also carries a coarse sight for short range sighting.

The sight carrier is provided with a support surface conforming to a human shoulder, so that the sight carrier may be disengaged from the undercarriage and supported on the shoulder of the operator for so-called "shoulder shots."

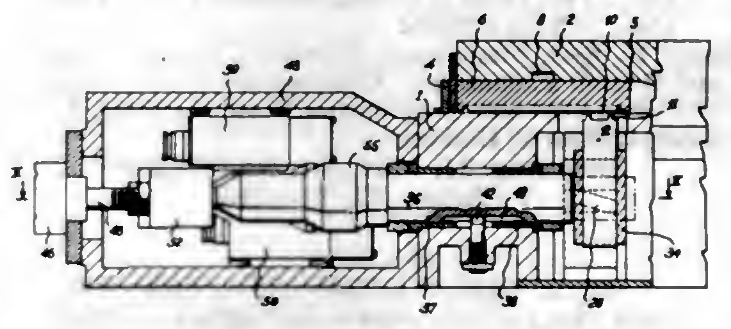
3,389,638

LINEAR DIVIDER

Pierre Portal, Bologne, and Jacques Rouchard, Limoges, France, assignors to Commissariat à l'Energie Atomique, Paris, France

Filed Apr. 29, 1966, Ser. No. 546,452

4 Claims. (Cl. 90—56)



1. A linear divider particularly for a machine tool, comprising a table arranged to receive a part to be machined, a frame, means for sliding said table in said frame, a toothed rack at one end of said table, said rack having teeth co-operable with a driving pin and a locking pin, each of said pins having teeth adapted alternately to engage said toothed rack; said pins being mounted to slide perpendicularly to said toothed rack, and being connected by guide members to a locking rod mounted to slide parallel to said table in said frame, said drive pin itself also being secured to a drive rod sliding parallel to said table in said frame, by a yoke fixed at one of the ends of said rod in which it is mounted to slide perpendicularly to said table.

3,389,639

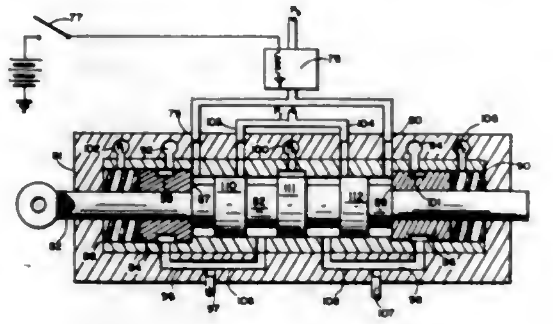
DUAL-MODE TRANSFER VALVE

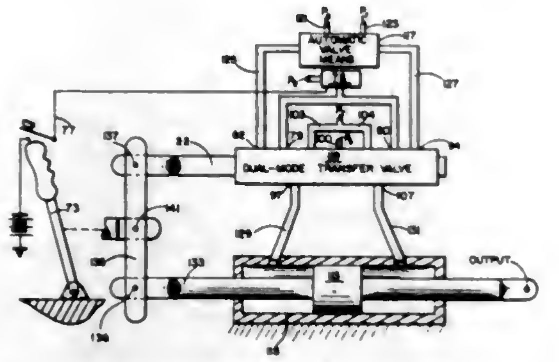
Clarence W. Asche, Placentia, Calif., assignor to North American Rockwell Corporation, a corporation of Delaware

Filed Apr. 20, 1966, Ser. No. 544,021

12 Claims. (Cl. 91—33)

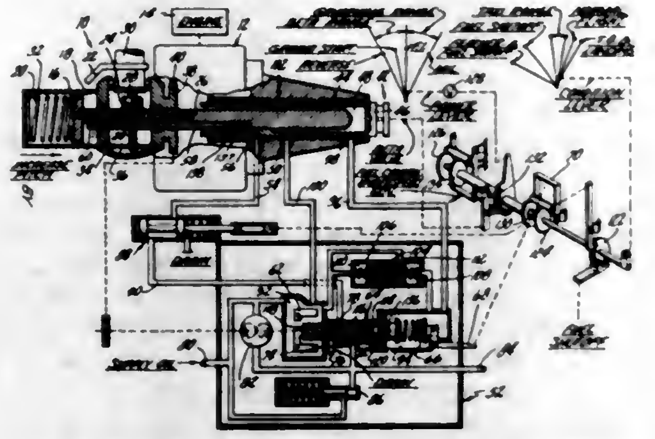
Monostable fluid transfer valve means for providing automatically metered fluid flow to a load during a stable unactuated state thereof and for providing manual metering of fluid flow to a load during an unstable actuated state of the valve. In the unactuated state of the valve means, preloaded slidable lands provide a fluid communication path between an input and an output for the automatically metered fluid, and the lands also provide a stabilizing force acting to maintain a valve spool in a stable state. In the actuated state, the stabilizing force is removed and the valve spool becomes subject to manual control.





3,389,640
HYDRAULIC CONTROL MECHANISM HAVING VISCOSITY INDEPENDENT RESTORING MECHANISM

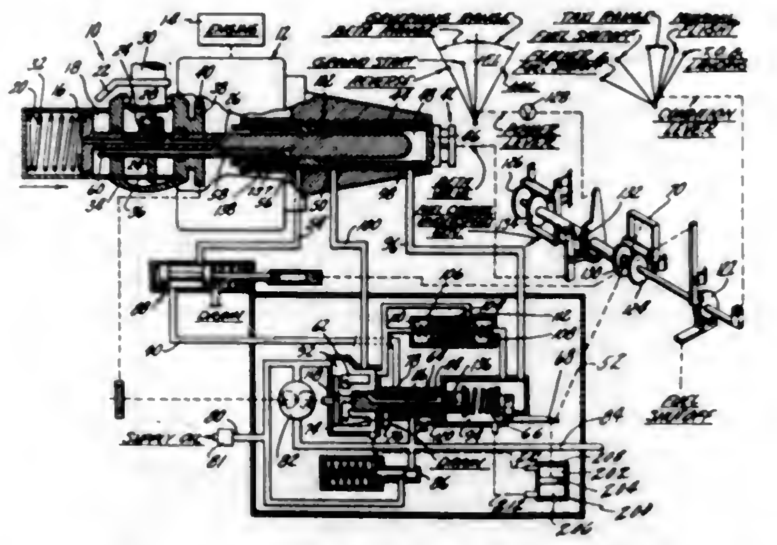
Stanley G. Best, Manchester, Kermit I. Harner, Windsor, and Donald P. Ramaker, Glastonbury, Conn., assignors to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Aug. 31, 1966, Ser. No. 576,299
7 Claims. (Cl. 91—366)



A hydraulic flyball governor for propeller pitch changing mechanism having a hydraulic feed back from the pitch changing mechanism which changes the pressure on one side of the governor pilot valve to restore the valve to a null position by opposing the governor action. A by-pass passage across the pilot valve gradually restores the equal pressure on opposite sides of the pilot valve. A chopper valve in the by-pass passage is opened periodically for a time less than that required for the fluid to attain terminal velocity in the passage so that the restoring rate is independent of viscosity variation of the hydraulic fluid.

3,389,641
HYDRAULIC CONTROL MECHANISM WITH HYDRAULIC DELAYED RESET

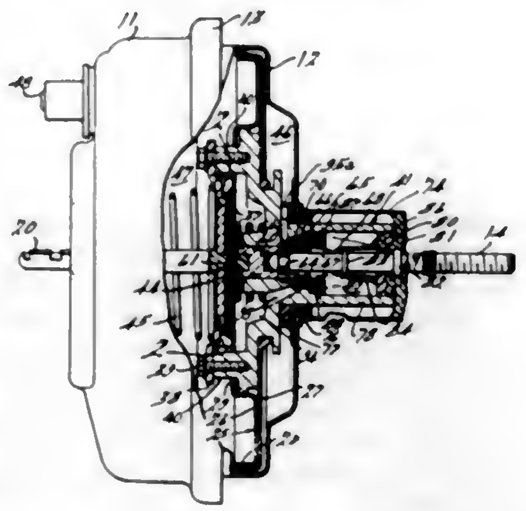
Philip E. Barnes, North Granby, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Oct. 24, 1966, Ser. No. 588,930
9 Claims. (Cl. 91—366)



A reset piston is hydraulically coupled to the pilot valve of a speed governing hydraulic system and rests the governor speeder spring as a function of the pressure drop across the pilot valve.

3,389,642
POWER BOOSTER FOR BRAKES

Richard T. Robinette, St. Clair Shores, Mich., assignor to Kelsey-Hayes Company, Romulus, Mich., a corporation of Delaware
Filed June 22, 1966, Ser. No. 559,587
5 Claims. (Cl. 91—369)



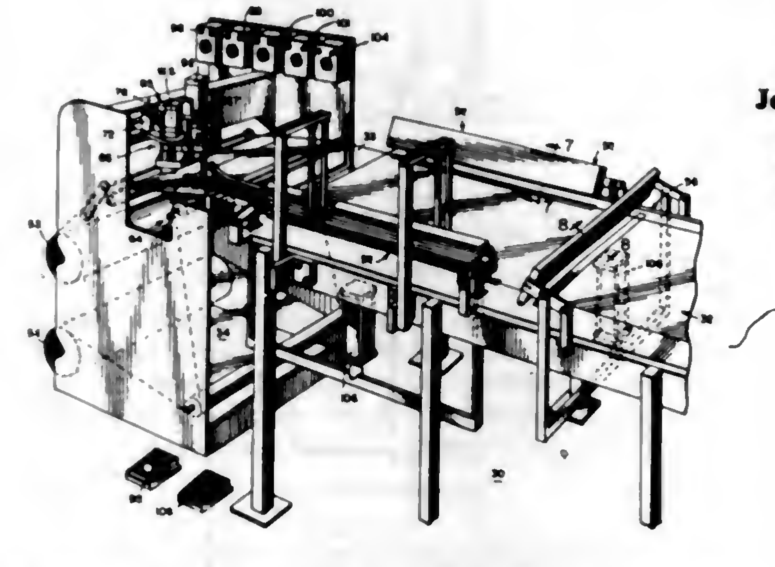
This invention relates to motor mechanism for operating vehicle hydraulic brakes and, particularly to a mechanism providing a reactive force to the foot operated brake pedal which is proportionate to the amount of braking power being applied to the vehicle.

3,389,643
BAG MAKING APPARATUS AND METHOD

George A. Lemcke and Peter A. Tucher, Indianapolis, Ind., assignors to Parish Manufacturing & Distributing Corporation, Indianapolis, Ind., a corporation of Indiana
Filed July 22, 1966, Ser. No. 567,166
17 Claims. (Cl. 93—8)

1. Apparatus for securing a tube assembly to a thin sheet of plastic and like material, the tube assembly including a tube grommet having a stem extending through an opening in the sheet and sealed thereto and a tube section assembled over the stem, said apparatus including:

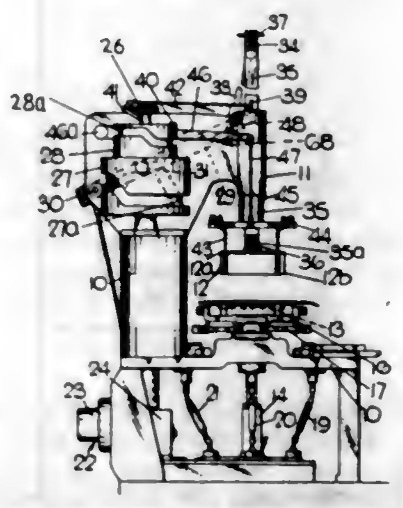
a machine bed for receiving a sheet of material extending across a work axis defining a work station;
a grommet spindle along said work axis for receiving a grommet;
means for moving said grommet spindle along said work axis to drive the stem of a grommet through the sheet;



a movable turret having a plurality of workheads selectively alignable along said work axis;
a first one of said workheads including means for forming a seal between the grommet and the sheet;
a second one of said workheads including means for assembling a tube section over the stem of the grommet; and
means for selectively moving said turret for alternately aligning said first and said second workheads with the grommet spindle.

3,389,644
BOX-WRAPPING APPARATUS

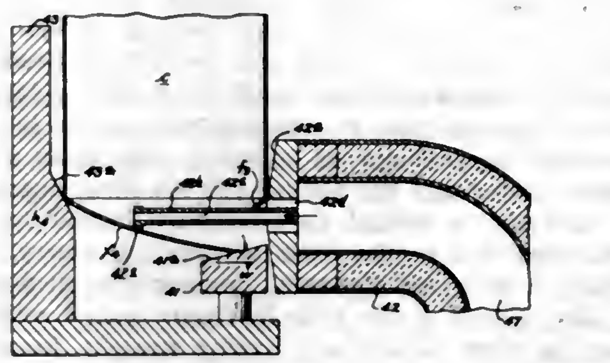
Albert Henry Williams, Stanton-on-the-Wolds, England, assignor to Caledex Machine Company Limited
Filed June 8, 1965, Ser. No. 462,301
Claims priority, application Great Britain, June 10, 1964, 23,966/64
10 Claims. (Cl. 93—40)



A box-wrapping apparatus in which an assembly, consisting of a box superimposed mouth-upwards on a wrapper having an adhesively-coated upper surface and protruding margins, is disposed above a vertically-reciprocably form block and by descent of the form block is forced down past wrapper-applying tools; the provision of a form block consisting of upper and lower members and of block-reciprocating mechanism incorporating an adjustment of the length of stroke of the block in such manner that the lower position of the top member of the block remains substantially unchanged but the upper position of the top member is changed, so that the apparatus may readily be adapted to boxes of differing depth by employing a lower member of appropriate depth and adjusting the stroke.

3,389,645
APPARATUS AND METHOD FOR FOLDING AND SEALING CARTONS

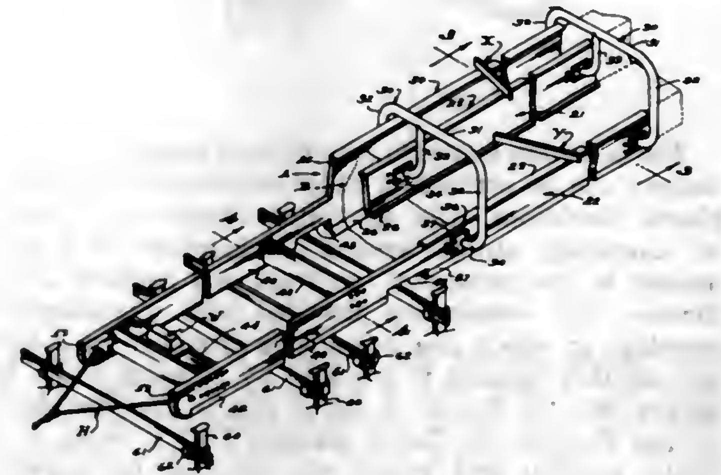
John D. Winters, Oakland, Simon Visser, Walnut Creek, Basil L. Kristoff, San Mateo, and Jack G. Herring, Fremont, Calif., assignors to Fibreboard Corporation, a corporation of Delaware
Filed Apr. 19, 1965, Ser. No. 457,893
45 Claims. (Cl. 93—44)



Apparatus for progressively folding and sealing adhesively treated flaps of a carton including a conveyor for moving the cartons in a line of flight, folding means including spinning fingers and wobble bars for folding the flaps into superimposed positions and a flap sealer including an end edge contact device for guiding the carton flaps and a heated fluid discharge means which extends across the support.

3,389,646
CURB AND GUTTER SLIP FORM

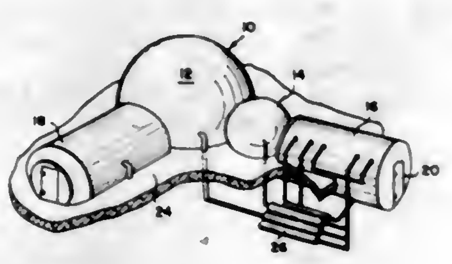
Norman T. Ruggles, 1418 E. Pacific Coast Hwy., Wilmington, Calif. 90744
Filed Apr. 26, 1965, Ser. No. 450,853
5 Claims. (Cl. 94—46)



A slip form for establishing concrete curbs and gutters on a prepared bed comprising, an elongate framework with front and rear ends, inner and outer sides, and top and bottom planes, said framework including an elongate inner form board having a laterally outwardly disposed curb back forming surface, a top screed edge and a bottom edge, an elongate outer form board having a laterally inwardly disposed gutter edge forming surface, a top screed edge and a bottom edge, said inner and outer form boards being in lateral spaced, parallel relationship with their bottom edges in a common plane, the top screed edge of the outer form board being on a plane spaced below the plane in which the top screed edge of the inner form board occurs, an intermediate form board having a laterally inwardly disposed curb face forming surface, a top screed edge and a bottom edge with a laterally outwardly projecting screed flange, said intermediate form board being arranged in spaced, parallel relationship between the inner and outer form boards with its top screed edge in a common plane with the top screed edge of the inner form board and with the screed flange at its bottom edge in a common plane with the top screed edge of the outer form board, a plurality of longitudinally spaced, transversely extending support means arranged in spaced relationship above the several form boards and having means fixed to said form boards to hold said boards in fixed, predetermined related relationship with each other, said related form boards being adapted to accommodate and to be slidably supported by a slurry of concrete, and guide means to support and direct the several related form boards when the structure is shifted longitudinally forwardly relative to the bed and to the mass of concrete slurry, and including a pair of elongate, horizontally disposed and laterally spaced guide rails in fixed, spaced relationship from the form boards and having straight, longitudinally extending bottom edges to slidably engage carrier means arranged in predetermined position on the bed and in advance of the slip form structure.

3,389,647
HYPERBARIC APPARATUS AND JOINT CONNECTION MEANS THEREFOR

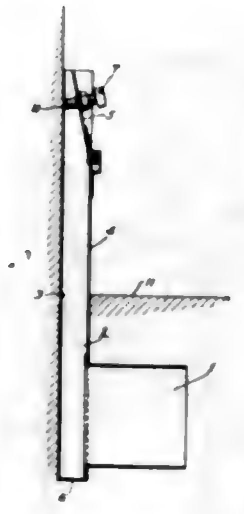
Russell C. Wolfe, Baltimore, Md., assignor to Dixie Manufacturing Company, Inc., Baltimore, Md., a corporation of Maryland
Filed Oct. 22, 1965, Ser. No. 501,006
7 Claims. (Cl. 98—1.5)



The invention relates to a hyperbaric apparatus in which surgery can be performed under conditions above atmospheric conditions. The apparatus comprises a plurality of completely airtight vessels or chambers or large diameter so that personnel can work and perform surgery therein. The vessels are provided with interconnecting openings in which one opening is provided by a flange and another opening is provided by a sleeve which telescopes into the flange. A metal ring is provided for insertion through the flange member into a recess in the sleeve member and means are provided for supplying air under pressure, which is above atmospheric pressure, so as to provide a fluid-tight seal between the vessels and to eliminate the necessity for using a bolt and flange method of connecting the two members.

3,389,648
DEVICE FOR THE SUPPLY OF VENTILATING AIR IN ROOMS

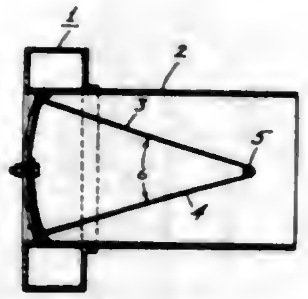
Birger Lärkfeldt, Odensjo, Barnarp, and Joel Rosenberg, Jonkoping, Sweden, assignors to Aktiebolaget Svenska Flaktfabriken, Stockholm, Sweden
Filed July 11, 1966, Ser. No. 564,230
Claims priority, application Sweden, July 12, 1965, 9,148/65
4 Claims. (Cl. 98—41)



Apparatus for injecting ventilating air into premises including a rectangular box having upstanding side and end walls and a bottom wall, the side walls being spaced apart between 17 and 21 mm. The ventilating air enters the box for injection into the premises, adjacent the bottom wall of the box through one of the side walls. At the upper end of the box is a laterally extending damper which is hingedly mounted on one of the side walls and which forms, with the other side wall, a slot of variable width. Regulating means, connected to the damper permit selective variation of the slot width.

3,389,649
VALVE FOR SUPPLIED OR EXHAUSTED ROOM AIR

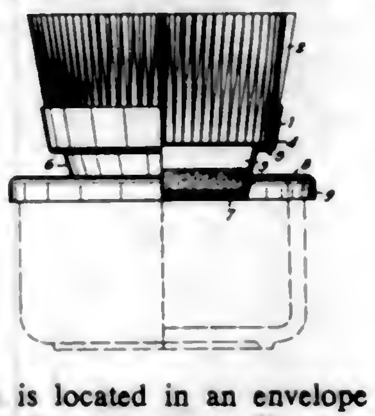
Birger Lärkfeldt, Odensjo, Barnarp, and Anders Svensson, Jonkoping, Sweden, assignors to Aktiebolaget Svenska Flaktfabriken, Stockholm, Sweden
Filed Nov. 25, 1966, Ser. No. 596,917
Claims priority, application Sweden, Nov. 29, 1965, 15,370/65
4 Claims. (Cl. 98—41)



A device for regulating the volume and direction of air flow supplied or exhausted through an opening including a substantially closed sector-shaped valve element having overlapping arcuate edge portions mounted in the opening to regulate the direction of flow. A strap mounted on the frame overlaps and maintains the edge portion in the set position.

3,389,650
PACKING-FILTERS AND DEVICE FOR USING SUCH PACKING-FILTERS

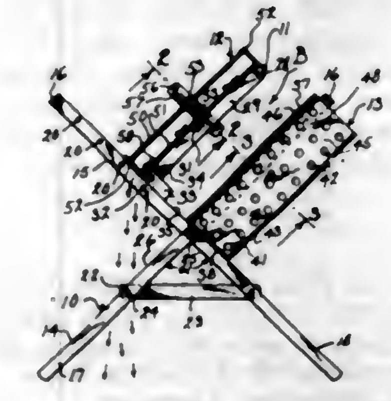
Franciscus Michielsen, Turnhout, Belgium, assignor to Miko P.V.B.A., Turnhout, Belgium, a company of Belgium
Filed Apr. 14, 1965, Ser. No. 448,184
Claims priority, application Belgium, Apr. 21, 1964, 646,823, 646,824; Mar. 24, 1965, 661,534
5 Claims. (Cl. 99—295)



Ground coffee is located in an envelope having two sides or discs which may serve as filters and which are pervious to water. The envelope is preferably combined with a vessel for water which may have pleated walls providing a firm connection with the envelope.

3,389,651
PORTABLE CHARCOAL BROILER

Dale G. Schultz, 2332 W. Kilbourn, Milwaukee, Wis. 53233
Continuation-in-part of application Ser. No. 324,978, Nov. 20, 1963. This application Mar. 8, 1966, Ser. No. 543,759
8 Claims. (Cl. 99—393)



A portable charcoal broiler of the type adapted to have an operative position and collapsible inoperative position. The operative position having means for supporting a firebox below the food holding grid in such a position that both the firebox and grid are at an angle from the horizontal the grid being so constructed and arranged that grease and fats emanating from the food will move by gravity and molecular adhesion to the lowermost point of the grid. The lowermost point of the grid extending beyond the corresponding lowermost point of the firebox so that the grease and fats dripping therefrom will not enter the coals and touch the firebox.

3,389,652
APPARATUS FOR THE CHARGING OF MULTIPLATEN PRESSES

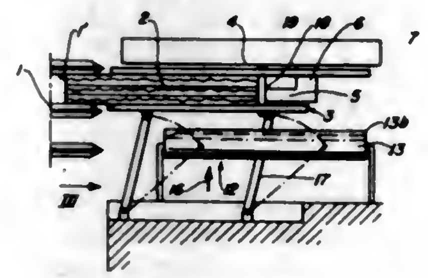
Karl Bruder, Krefeld, and Walter Hüsges, Dulken, Germany, assignors to Firma G. Siempelkamp & Co., Krefeld, Germany, a corporation of Germany
Filed Mar. 14, 1966, Ser. No. 534,231
Claims priority, application Germany, Mar. 12, 1965, S 95,919
10 Claims. (Cl. 100—137)

1. In an apparatus for the charging of a multiplaten press, in combination:

a vertically shiftable charging station disposed adjacent said press and having a plurality of vertically spaced stages for receiving respective bodies to be compressed in said press and delivering said bodies to said platens thereof;

means forming an infeed surface for a succession of said bodies;

an elevatable feed table adjacent said charging station and shiftable between a lower position for lifting a body from said infeed surface and an upper position for discharging a body located on said table onto a respective stage of said charging station;

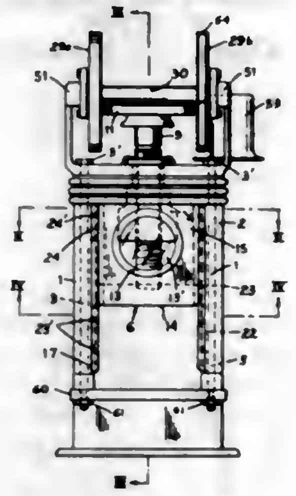


guide means above said table and forming a stop therefor at said upper position while engaging a body thereon from above whereby said body is precompressed between said table and said guide means; and

shifting means engageable with said body disposed between said table and said guide means in the upper position thereof for advancing the body between said guide means and said table into said charging station and upon the respective stage thereof.

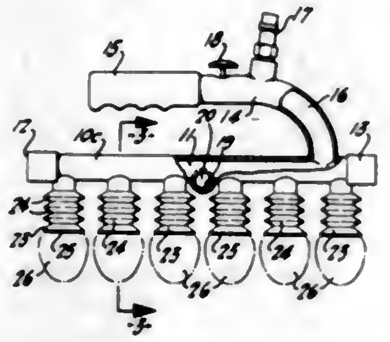
3,389,653
SPINDLE PRESS

Harald Hany, Kassel-Wilhelmshohe, Germany, assignor to Firma Franz Berrenberg, Haan, Rhineland, Germany, a corporation of Germany
Filed Oct. 4, 1966, Ser. No. 584,269
Claims priority, application Germany, Oct. 16, 1965, B 84,133
7 Claims. (Cl. 100—214)



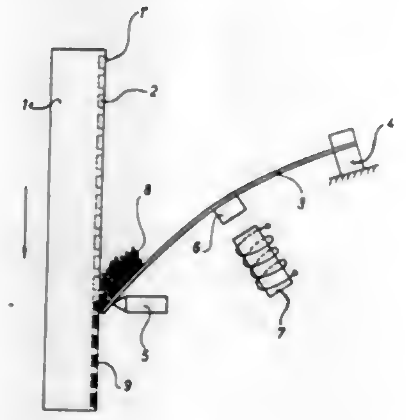
A spindle press in which a ram has upstanding front and rear wings which bracket a cross-piece of the frame and have vertical edges in sliding contact with that cross-piece; these wings have a height greater than a vertical ram stroke to straddle the cross-piece in top and bottom positions of the spindle, the frame having a pair of uprights with the cross-piece attached to their upper ends. The uprights and cross-piece have aligned front and rear shoulders constituting vertical guideways for the ram.

3,389,654
ARTICLE-LIFTING AND STAMPING APPARATUS
Edwin R. Hirt, Orinda, Calif., assignor to Food Systems, Inc., Berkeley, Calif., a corporation of California
Filed Jan. 25, 1967, Ser. No. 611,640
11 Claims. (Cl. 101—35)



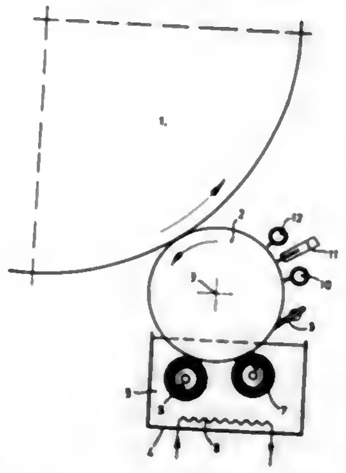
A device for engaging individual shell eggs to apply an identifying stamp or legend thereto and to grip the egg so that it can be lifted from a support therefor and moved from one location to another. The device includes a handle-equipped tube structure forming a manifold for connection to a vacuum source, and which tube structure has one or more resilient and compressible egg-engageable vacuum cups carried thereby and in flow communication with the manifold. A stamping component is located within each vacuum cup, and when a cup is brought into engagement with an egg, the vacuum developed within the cup causes the egg to be clamped thereto and the cup to be compressed to the extent that the egg is brought into legend-receiving engagement with the stamping component within the cup. The device can then be moved to cause the egg to be deposited at a different location upon termination of the reduced vacuumizing pressure within the cup.

3,389,655
VIBRATING SCRAPER FOR INKING INTAGLIO PRINTING MOLDS WITH DRY POWDER
Rainer Lorenz and Klaus Witter, Hamburg, and Jens Schonefeldt, Hamburg-Eidelstadt, Germany, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Mar. 6, 1967, Ser. No. 620,733
Claims priority, application Germany, Mar. 5, 1966, P 38,909
1 Claim. (Cl. 101—157)



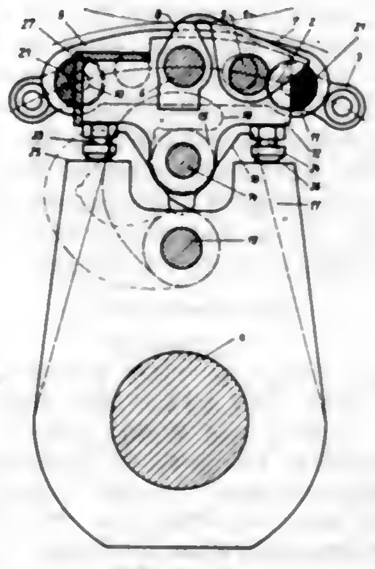
This disclosure relates to a device for dry powder inking a printing mold. A mechanically or electromechanically vibrated plate is aligned with the face of the mold to define a wedge shaped cavity for containing the powder. As the mold passes the edge of the plate the vibrations force the powder into the ink receiving recesses of the mold.

3,389,656
PROCESS FOR REMOVING INTAGLIO INK FROM A WIPING CYLINDER
Gualtiero Giori, 4 Rue de la Paix, Lausanne, Switzerland
Continuation-in-part of application Ser. No. 411,807, Nov. 17, 1964. This application Oct. 24, 1965, Ser. No. 504,492
Claims priority, application Switzerland, May 14, 1965, 5,263/65
3 Claims. (Cl. 101—170)



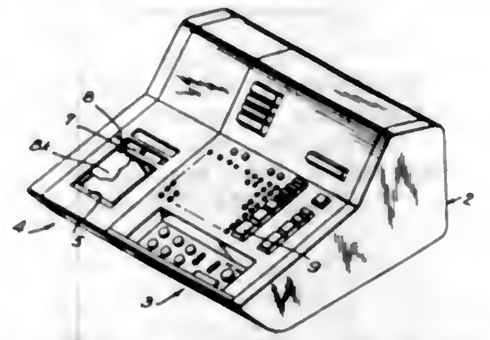
A process for removing single or multicolor intaglio printing ink from the outer surfaces of a rotating wiping cylinder which cleans the engraved surfaces of single or multicolor intaglio printing presses during use thereof by sequentially passing the surface of the wiping cylinder in an aqueous solution at 30° to 80° C., which solution consists of 1 to 5% by weight of sodium hydroxide, potassium hydroxide or ammonium hydroxide, from about 2 to 10% by weight of trisodium phosphate, from about 0.3 to 10% by weight of sulphonated castor oil, the balance water, brushing the surface of the cylinder while it is in contact with the solution; scraping the surface and spraying the same with water to remove the solution from it and again scraping the surface to remove excess water from it.

3,389,657
APPARATUS FOR TRANSFERRING SHEETS IN REGISTER WITHIN A PRINTING PRESS
Teo Schwabach, Wurzburg, Germany, assignor to Schnellpressenfabrik Koenig & Bauer Aktiengesellschaft, Wurzburg, Germany
Filed June 2, 1966, Ser. No. 554,738
6 Claims. (Cl. 101—232)



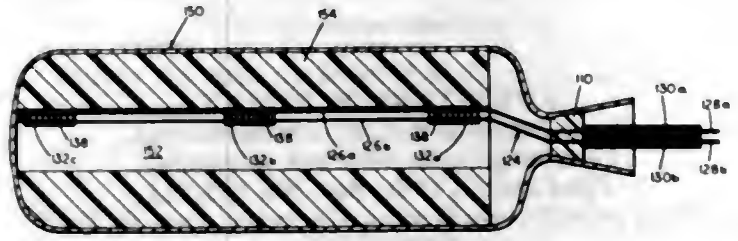
The invention consists of a gripper unit for sheets mounted on a link chain conveyor, which unit can be rigidly latched to the chain sprocket drive shaft during sheet transfer. This is done by holding a roller attached to the gripper unit in a three point contact by V-shaped supports attached to arms mounted on the drive shaft and by a moveable hook. The gripper unit also has set screws on either side of the roller to engage the arms and prevent rocking.

3,389,658
DOCUMENT POSITIONING AND FEEDING CONTROL FOR PRINTERS
Morton P. Matthew, Norwalk, Conn., assignor to Bunker-Ramo Corporation, Stamford, Conn.
Filed Feb. 18, 1966, Ser. No. 528,427
13 Claims. (Cl. 101—287)



A printer, the carriage of which may be initially positioned under manual control and which may be advanced a fixed distance to a printing position by engaging a clutch in response to the energization of a prime mover. When the carriage has been advanced a predetermined distance to the desired position the carriage is automatically stopped. When printing is completed, the prime mover is reenergized to return the carriage to a home position. The stopping of the carriage at its home position results, through appropriate hardware, in the disengaging of the clutch permitting the carriage to again be positioned under manual control.

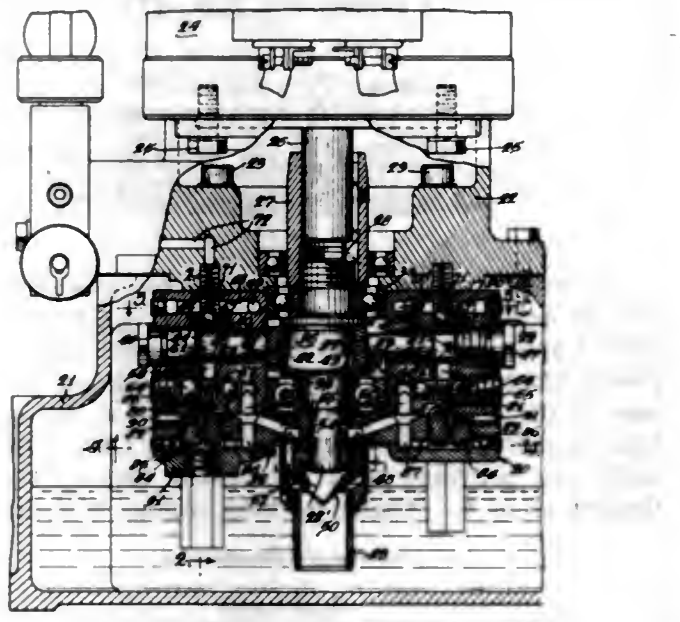
3,389,659
IGNITION APPARATUS FOR ROCKET MOTORS
Herbert Wesley Dwight Cassidy, Elkton, Md., and Jules Jacob Schwartz, Wilmington, Del., assignors to Thiokol Chemical Corporation, Bristol, Pa., a corporation of Delaware
Filed Apr. 5, 1966, Ser. No. 546,116
3 Claims. (Cl. 102—70)



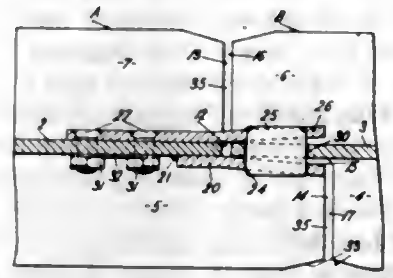
Ignition apparatus for ignition of a rocket motor having a casing nestable in the exit cone of the motor and provided with internal passages for passing a fuse cord therethrough into the chamber of the motor. The cord is connected to a combustible charge abuttingly adjacent the propellant charge of the motor.

3,389,660
PUMP WITH PRESSURE RELIEF
Rudolph E. Herrstrum, Rockford, and Richard F. Van Allen, Loves Park, Ill., assignors to Greenlee Bros. & Co., a corporation of Illinois
Filed Aug. 15, 1966, Ser. No. 572,533
4 Claims. (Cl. 103—5)

A hydraulic power system including a main pump having opposed cylinders and a secondary rotary pump in the same housing for supplying fluid to the main pump, in which a piston and cylinder operated relief valve is provided adjacent the inlets of both cylinders, the relief valves being positioned opposite from each other and adjacent the rotary pump outlet so that the relief valves open the cylinders when flow from the rotary pump ceases.



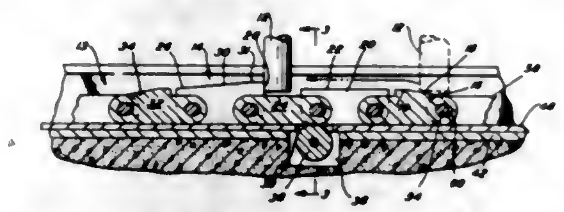
3,389,661
MONORAIL TRACKWAY
Ralph Wainwright, Wakefield, and Alan Archer, Barnsley, England, assignors to Qualter, Hall & Co. (Sales) Limited, Barnsley, England, a company of Great Britain and Northern Ireland
Filed Nov. 15, 1966, Ser. No. 596,387
Claims priority, application Great Britain, Nov. 17, 1965, 48,859/65
(Filed under Rule 47(a) and 35 U.S.C. 116)
10 Claims. (Cl. 104—106)



There is provided a monorail trackway with a plurality of flanged elongate rail sections the adjacent rail sections of which are coupled together at their adjacent ends for pivotal movement about an axis perpendicular to their web. Pivoting is made possible by passing a pivot pin through interleaving bearing elements at those adjacent ends, one bearing element being provided by the web itself of one rail section and the other by a pair of mouth-forming members secured to the web of the other rail section. Adjacent track sections each have cut-back portions of flange at the adjacent ends whereby longitudinally overlapping laterally side-by-side tongues are formed on the end portions of the flange, the tongue of one rail section being fast with the web along its inner edge and the tongue of the other rail section being fast with one of the mouth-forming members along its inner edge so that there is an angle section formed at each tongue.

3,389,662
LOW PROFILE CONVEYOR

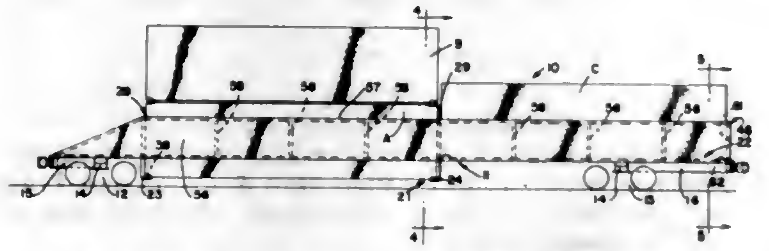
Charles E. Jacoby, Bethlehem, Pa., assignor to SI Handling Systems, Inc., Easton, Pa., a corporation
Continuation of application Ser. No. 405,951, Oct. 23, 1964. This application May 31, 1967, Ser. No. 642,609
16 Claims. (Cl. 104—172)



A conveyor chain is constructed for pushing the tow pin on a vehicle to cause the vehicle to move along a guided path. The conveyor includes dog sections at spaced points therealong with each dog section being an integral link of the chain recessed with a notch at its upper surface so as to provide a pushing surface. Other links of the chain are provided with a blocking surface at the top thereof so as to prevent pushing contact with the chain.

3,389,663
CONTAINER CAR CONSTRUCTION

Jack E. Gutridge, Dyer, Ind., assignor to Pullman Incorporated, Chicago, Ill., a corporation of Delaware
Filed Aug. 1, 1966, Ser. No. 569,215
5 Claims. (Cl. 105—366)

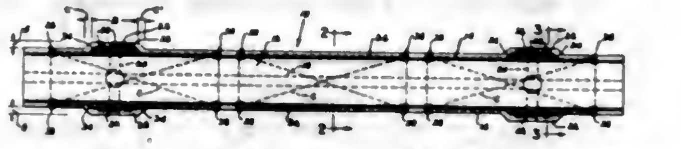


1. A railway car for transporting a plurality of loaded van type cargo carrying containers adapted for stacking solely in corner to corner relationship and having a total length in excess of the length of said car and a total gross weight substantially equal to the load carrying capacity of said car, said containers being disposed in end-to-end relationship along the length of said car in dual stacked position in the general area containing the center of gravity of said car and in a single level adjacent one end of said car, said ratio of the gross weight of said dual stacked containers to said single level containers being at least 2:1, said car comprising an underframe having a container supporting surface for supporting said single level containers from one end thereof and a dual stacked container supporting surface adjacent said single level of containers, a pair of lengthwise spaced trucks supporting said underframe, one of said trucks being located in close proximity to the outboard end of said stacked containers and the other of said trucks underlying said single level containers and being spaced from said one truck so that the center of gravity of said car and the resultant center of gravity of said dual and said single level containers lies approximately midway between the center line of said trucks.

3,389,664
RAILWAY FLAT CAR FOR TRANSPORTING CONTAINERS

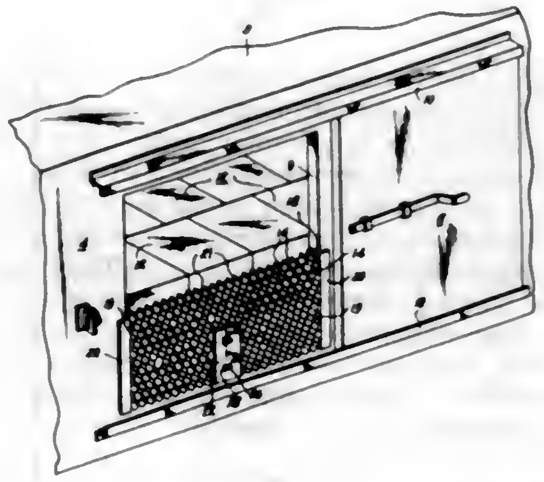
Frank C. Pulcrano, St. Charles, and Tom C. Buckthorpe, St. Louis County, Mo., assignors to ACF Industries, Incorporated, New York, N.Y., a corporation of New Jersey
Filed Sept. 16, 1966, Ser. No. 579,958
7 Claims. (Cl. 105—366)

A railway flat car for carrying containers and having a laterally extending deck area at each bolster structure to provide an increased width thereat. A guideway structure for container supports extends along each side of the car and a storage guideway portion at each increased width deck area permits container supports to be moved into the storage guideway portions and remain in a generally erect position extending above the deck when in an inoperable position and containers are not being transported.



3,389,665
DOORWAY VOID FILLER

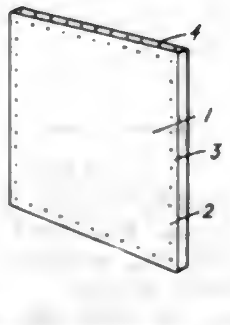
Robert J. Kauffman, Plymouth, Mich., assignor to Narad, Inc., Wayne, Mich.
Filed July 6, 1966, Ser. No. 563,131
9 Claims. (Cl. 105—369)



An expandable honeycomb structure formed of strips of corrugated paper board and positioned in a freight container doorway to fill the void between an outer door and articles of freight stacked in the container. Tab means on opposite sides of the honeycomb are fastened to the edges of the doorway and an upstanding support holds intermediate cells of the honeycomb against vertical sagging.

3,389,666
FURNITURE ELEMENT

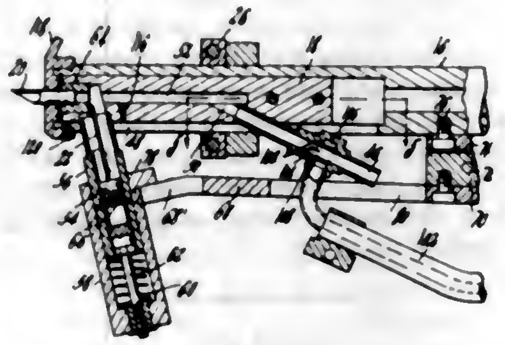
Heinz Schultze-Bonatz, 1 Schefflerweg, Hamburg-Gross Flottbek, Germany
Filed Oct. 7, 1966, Ser. No. 585,022
Claims priority, application Germany, Oct. 9, 1965, Sch 37,853
2 Claims. (Cl. 108—17)



A furniture element comprising a plane rectangular slab having hole-like recesses at least in its border regions and at least in two opposite adjoining edges. The furniture element may be joined to other furniture elements including use of particular connection means. The connection means include pegs and associated locking pins which connect to each other after placing the pegs in one set of hole-like recesses and the locking pins in the hole-like recesses on the opposite adjoining edge. The pegs and associated locking pins are joined at the intersection of the hole-like recesses at the border regions of the plane rectangular slab.

3,389,667
METHOD AND APPARATUS FOR CUTTING PILE YARNS

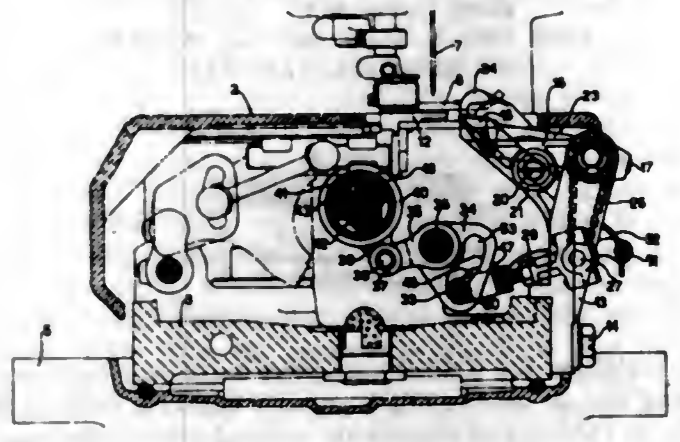
Helmut C. Mueller, Springfield, Mass., assignor to Bigelow-Sanford, Inc., Thompsonville, Conn., a corporation of Delaware
Filed Dec. 23, 1965, Ser. No. 515,985
12 Claims. (Cl. 112—79)



The method of making a pile fabric floor covering which comprises inserting a pile yarn from one side of a backing through the backing to the other side thereof, cutting the yarn on said one side of the backing, feeding the yarn and inserting both cut ends of the yarns through the backing from said one side to the other side at a point on the backing spaced from the point of said first mentioned insertion, and apparatus for performing the method; the method and apparatus may employ a hollow needle through which a blast of air is blown to feed the pile yarn.

3,389,668
SEWING MACHINE PROVIDED WITH A CUTTING DEVICE

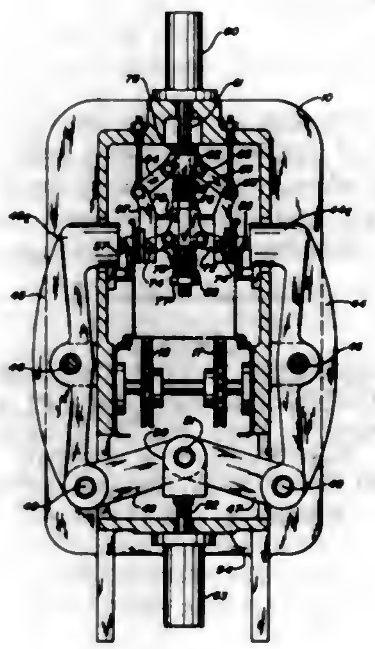
Nerino Marforio, Milan, Italy, assignor to S.p.A. Virginio Rimoldi & C., Milan, Italy
Filed Oct. 12, 1965, Ser. No. 495,213
Claims priority, application Italy, Nov. 16, 1964, 24,868/64
6 Claims. (Cl. 112—125)



A sewing machine having a main drive shaft arranged beneath a work table is provided with a cutting device for trimming seamed material near the seam. The cutting device comprises a stationary cutter having a cutting edge near the work table and a movable cutter having a cutting edge which at least partially overhangs the work table during its cutting movements. Mechanism is provided for displacing the movable cutter from its operative position during operation of the machine and for simultaneously stopping movement of the blade so that the operator of the machine can discontinue the trimming operation from time to time, for example to avoid cutting portions which it is desired to leave.

3,389,669
EAR SHAPING APPARATUS

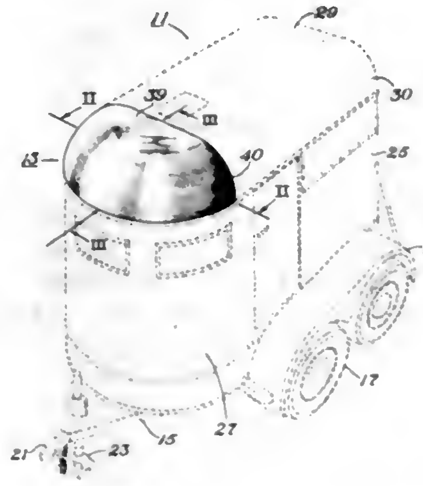
Raymond A. Heisler, 657 Dakota Trail, Franklin Lakes, N.J. 07417
Filed Sept. 1, 1966, Ser. No. 576,651
16 Claims. (Cl. 113—1)



The method and apparatus of this disclosure contemplates the feeding or transporting of eared containers on a conveyor of the type shown in my U.S. Patent 3,241,578 issued Mar. 22, 1966. Encompassing this conveyor is a frame having a pair of ear stops movable into and away from the path of the ears. These stops are provided with a sensing means which are adapted to be engaged by the ears of the advancing container and in response thereto to cause a cycle of operation to be performed by the apparatus. A pair of lifting arms engage the ears and by a cradling means engage these ears to lift the container to a predetermined height and position whereupon a pair of oppositely disposed reshaping dies are advanced to and beyond the first originally-formed surface of the ears. At the same time, the container is being lifted to the reshaping station, a bolster is moving into the interior of the container and is expanded so as to tightly engage and support the wall of the container at least at those portions of the container where the ear is attached. After the ears have been reshaped the dies are moved away from the container; the bolster is collapsed and moved from inside the container; the lift arms are lowered to bring the container to the conveyor, and the stops are moved from in the way of the ears whence the container is moved from the apparatus. A more complete description of the preferred embodiment and method is provided in the description to follow.

3,389,670
TRAILER CLOSURE MANUFACTURING METHODS

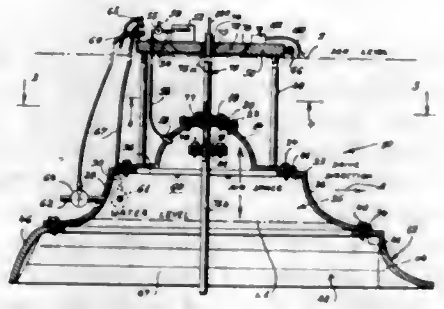
John W. Caple, 6420 Rosemont,
Fort Worth, Tex. 76116
Filed Oct. 15, 1964, Ser. No. 404,070
4 Claims. (Cl. 113—116)



Method of forming a closure between the roof and front end wall of certain specialized type trailers, for example, horse trailers, which method involves spinning a cup-shaped part, and dividing it into two symmetrical parts, each of which becomes a said closure.

3,389,671
FLOATING ASSEMBLY FOR OFF-SHORE DRILLING, MINING OR FISHING PLATFORM

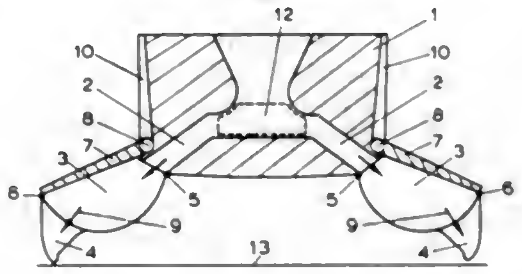
Oscar A. Yost, 302 W. 22nd St.,
New York, N.Y. 10010
Filed Jan. 3, 1967, Ser. No. 607,069
8 Claims. (Cl. 114—.5)



The disclosure describes a floating assembly including a large platform mounted on a large tapered buoyant dome wholly immersed in a body of water. The platform is supported above the water surface. An air filled compartment is maintained in the dome to control buoyancy and position of the assembly. The assembly can be self propelled to a site of deep sea operations by air jets emitted from the dome which is supplied with air under pressure. The assembly can be used for well drilling operations, or with proper attachments for surface mining, fishing, ocean bed farming, scientific studies and explorations, and related purposes.

3,389,672
VEHICLES

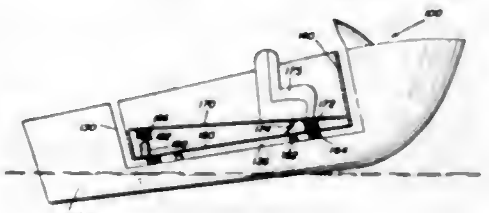
Anthony Winter, Seaview, Isle of Wight, England, assignor to Westland Aircraft Limited, Yeovil, Somerset, England
Filed Aug. 1, 1966, Ser. No. 569,244
Claims priority, application Great Britain, Sept. 24, 1965, 40,885/65
10 Claims. (Cl. 114—67)



A vehicle capable of operating as a gaseous cushion borne craft, or in an alternative mode as a displacement vessel, the vehicle having retractable and extendable structure which supports skirting in order to contain the gaseous cushion and provide an increased cushion area relative to the hull planform area. The structure and skirting, when extended, provide means for delivering gas from the ducts in the hull to the cushion and, when retracted, provide means for sealing the ducts.

3,389,673
ARTICULATED BOATS

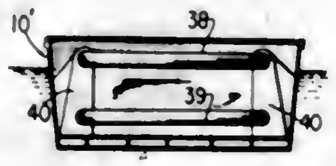
Antonio Cuesta, 2155 SW. 5th St.,
Miami, Fla. 33135
Filed July 19, 1965, Ser. No. 472,763
12 Claims. (Cl. 114—71)



Boats having hulls with relatively low freeboard amidships and having watertight cabins resiliently supported above the center of the hull and having variable angle decks resiliently supported within the cabins are described.

3,389,674
LIQUID GYRO STABILIZER

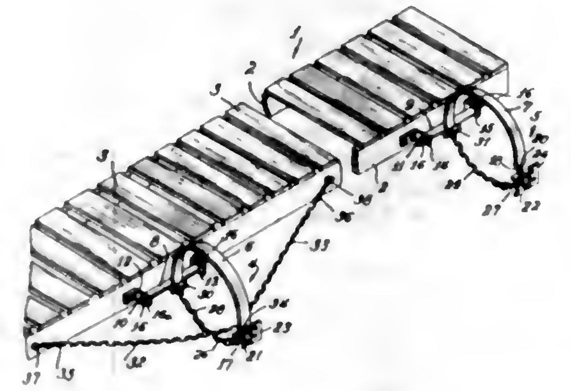
Houston W. Pratt, 90 Duck Pond Road,
Glen Cove, N.Y. 11542
Filed Feb. 1, 1966, Ser. No. 524,039
3 Claims. (Cl. 114—122)



A stabilizer for a fluid-supported body or vehicle comprising one or more endless annular conduits fixed to the body or vehicle and containing a liquid mass, with means for causing said mass to flow in said conduit or conduits the gyroscopic inertia of said mass being used directly for the stabilization of the body or vehicle to which the conduit is fixed.

3,389,675
BOAT DOCK ASSEMBLY

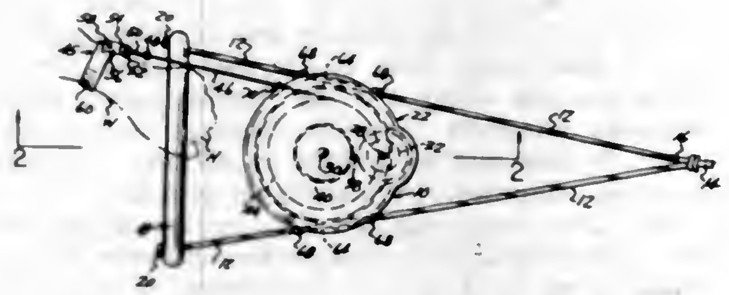
Roy T. Kieft, Kalamazoo, Mich. (2326 N. 57th Place, Scottsdale, Ariz. 85257), and John M. Roeh, R.F.D. 1, Shelbyville, Mich. 49344)
Filed Sept. 27, 1966, Ser. No. 582,356
7 Claims. (Cl. 114—230)



A boat mooring assembly comprising a non-linear, preferably arcuate or semi-circular, strap-form spring, a hinge pivotal about a substantially horizontal axis and adapted to be mounted on a fixed surface such as a pier, one end of the spring being affixed to the pivotal portion of the hinge and having its other end adapted to be attached to a boat hull or to a pontoon of a deck boat which is to be moored, thereby providing both lateral and longitudinal springing support for the boat or pontoon.

3,389,676
TOW ROPE RETRIEVING DEVICE FOR WATER SKIERS

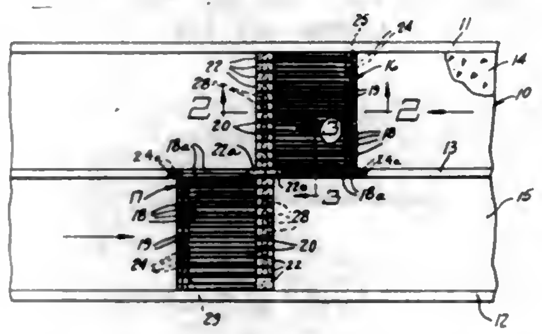
John R. Sims, 35930 Rewa Ave.,
Mount Clemens, Mich. 48043
Filed Apr. 26, 1967, Ser. No. 633,876
8 Claims. (Cl. 115—6.1)



A tow rope retrieving device is mounted between and secured to the branches which extend from the tow rope to the handle bar. It contains a constant-torque spring-winding appliance having a spring storage drum on which a band spring normally tends to coil itself but which is unwound onto a smaller diameter spring wind-up hub portion of a double drum in response to the pull, on the larger drum portion, of a retrieving line or cable wound thereon and releasably secured to the wrist of the water skier who has fallen off his skis into the water. In so doing, he relinquishes his grip upon the handle bar, whereupon the spring winding appliance pays out the retrieving line while it winds up the band spring from the spring storage drum onto the spring wind-up drum and thereby builds up and stores torque force. As the towing motor boat halts and backs toward the skier, the retrieving line maintains his connection with the branches of the tow rope. At the same time, the stored torque force winds up the retrieving line and maintains the tow rope and its branches in a taut condition, eliminating any danger of their being fouled by the propeller of the towing boat.

3,389,677
TRAFFIC CONTROL DEVICE

Leo J. Dunne, 15368 Lindsay, Detroit, Mich. 48227
Filed Dec. 16, 1966, Ser. No. 602,374
6 Claims. (Cl. 116—114)

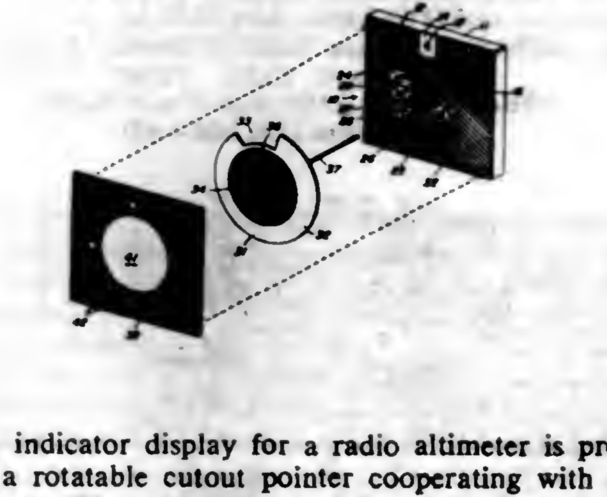


1. A traffic control apparatus for indicating excessive speed of vehicles over a roadway, comprising:

(a) a plurality of closed, elongated, flexible air tubes;
(b) said plurality of air tubes being disposed parallel to the direction of flow of vehicular traffic over said roadway, and in a side-by-side relationship across said roadway;
(c) a plurality of closed, inflatable post-like tubular barrier members disposed at one end of said plurality of elongated air tubes, at right angles to the length of said tubes, and in alignment transverse of said roadway;
(d) each of said plurality of tubular barrier members being in fluid communication with at least one of said elongated air tubes; and,
(e) the other end of said plurality of elongated air tubes being disposed toward the approaching vehicular traffic on said roadway, whereby the wheels of said vehicular traffic pass lengthwise over some of said elongated tubes causing the air in said tubes to be forced forwardly into respective tubular barrier members inflating said members to provide a momentary flexible barrier across said roadway in the path of said wheels.

3,389,678
DISPLAY FOR RADIO ALTIMETER

Charles A. Fenwick, Cedar Rapids, Iowa, assignor to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa
Filed Nov. 26, 1965, Ser. No. 509,991
3 Claims. (Cl. 116—129)



An indicator display for a radio altimeter is provided with a rotatable cutout pointer cooperating with cutout numerals. The rear mounting plate is color-coded such that as the altimeter reading changes, a different color appears through the cutout portion of the pointer and numerals to indicate at a glance that there has been a change in altitude.

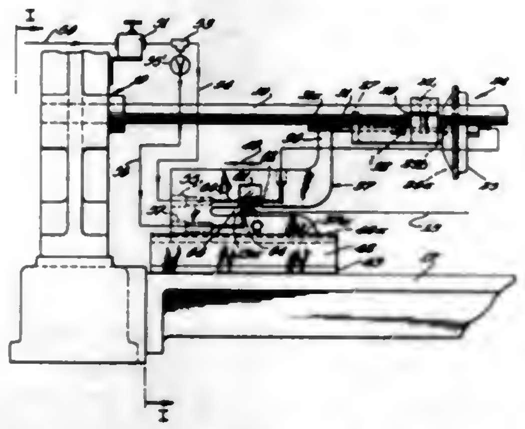
3,389,679

PILOT FOR GLUE DETECTOR PROBE AND FOR LOCATING GLUE LINE ON A MOVING AND WEAVING WEB

Herbert H. Weber, Sheboygan, and Paul W. Jacobsen, Kiel, Wis., assignors to H. G. Weber and Company, Inc., Kiel, Wis., a corporation of Wisconsin

Filed June 6, 1966, Ser. No. 555,500

7 Claims. (Cl. 118—8)



Device for sensing the edge of a traveling web and locating a glue line on the web parallel to the edge of the web. The sensing device extends over and under the web and is mounted for movement transversely of the web. A fluid orifice in the sensing device is located to one side of the edge of the web and directs a control jet perpendicular to the plane of the web. This jet is intercepted by the web, when the web is misaligned. A working jet is also carried by the sensing device and directs a jet parallel to the plane of the web across a gap formed in the sensing device and opening toward the control jet. The working jet is connected with an actuator downstream of the gap, to supply pressure to operate the actuator to maintain the sensing device in alignment with the edge of the gap. The working jet is of a much higher pressure than the control jet. As the control jet impinges on the working jet, the pressure to the actuator will be reduced and an equilibrium will be maintained to maintain the sensing device in position. As, however, the control jet is intercepted by the web, the pressure supplied to the actuator will be increased and cause the sensing device to position the control jet to again intercept the working jet and bring the actuator into equilibrium. The sensing device carries a glue nozzle applying a line of glue to the web. A glue detector probe is also carried by the sensing device to detect the glue and to provide a signal in the event a break should occur in the glue line.

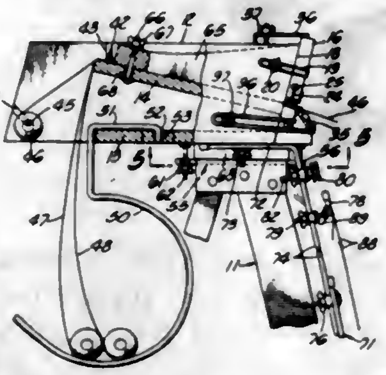
3,389,680

PASTING MACHINE FOR WALL COVERING MATERIAL

Alfred A. Moore, 5602 N. Burton Ave., San Gabriel, Calif. 91776

Filed May 8, 1967, Ser. No. 636,833

21 Claims. (Cl. 118—42)



Apparatus for applying paste to a strip of wall covering material including a shallow trough filled with paste which may be detachably mounted on a ladder. The strip travels along the bottom of the trough, through the paste, and outward through a dispensing slot in the bottom of one wall. The lower portion of the slot is in the form of a flexible and resilient pressure plate which holds the strip material pressed upwardly against a fabric mesh which forms the upper edge of the slot.

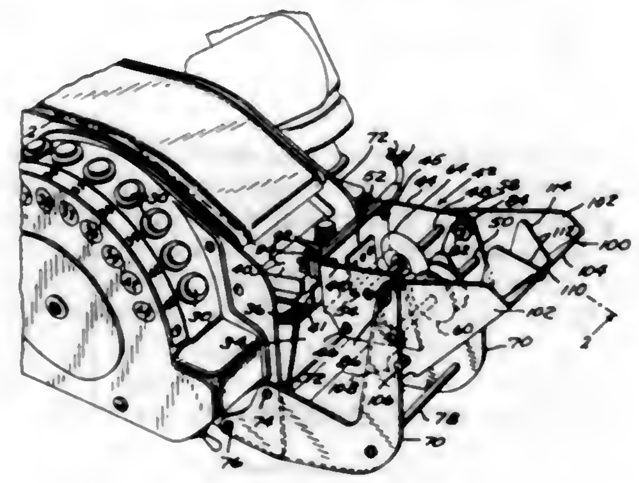
3,389,681

DISPENSER FOR GUMMED TAPE

Theodore H. Krueger, Stratford, and Everett E. Sharpe, Shelton, Conn., assignors to Better Packages, Inc., a corporation of Delaware

Continuation of application Ser. No. 311,542, Sept. 25, 1963. This application Mar. 8, 1967, Ser. No. 621,712

9 Claims. (Cl. 118—44)



A device for dispensing selected lengths of tape includes means for orienting a creasing attachment in respect to the moistening element of the dispenser. In one embodiment of the invention the creasing attachment is mounted between a support extending outwardly from the tape dispenser and an attachment directly to a pressure plate which is pivoted over the moistening element and beneath which the tape is fed. In addition to the creasing attachment there is provided means for supporting the tape along with the creasing means so that it extends outwardly from the dispenser in a position so that the tape may be grasped by the user. The creasing means comprises only a single set of rollers with one of the rollers being engaged in a groove of the other roller so that when the tape is fed therebetween, it causes a creasing of the tape in a longitudinal direction substantially centrally between the sides thereof. The single roller set also holds the tape in conjunction with a simple support plate which is mounted so that the tape may be fed to extend outwardly to relatively great length. The support plate includes two plate elements which engage the tape on opposite sides of the crease line and provide a support therefor.

3,389,682

HIGH SPEED VACUUM CHUCK

Lawrence D. Gardner, Bloomfield, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Mar. 14, 1966, Ser. No. 533,897

6 Claims. (Cl. 118—52)

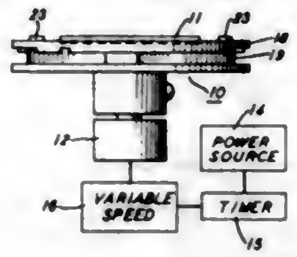
1. A device for distributing a thin liquid film over a top surface of a member comprising:

a cover plate having a cavity in a top surface thereof for receiving the member;

the cavity having a depth that is smaller than the thickness of the member, whereby the inserted member protrudes upwardly from the cover plate;

an aperture within the cavity that extends through the cover plate;

a centrifugal impeller mounted below the cover plate; means associated with the impeller adapted to secure the cover plate to the impeller; and



means for rotating the cover plate and impeller at a high speed, thereby to develop a suction force on the member for holding it in place on the cover plate while rotating it to distribute liquid over the top surface of the member.

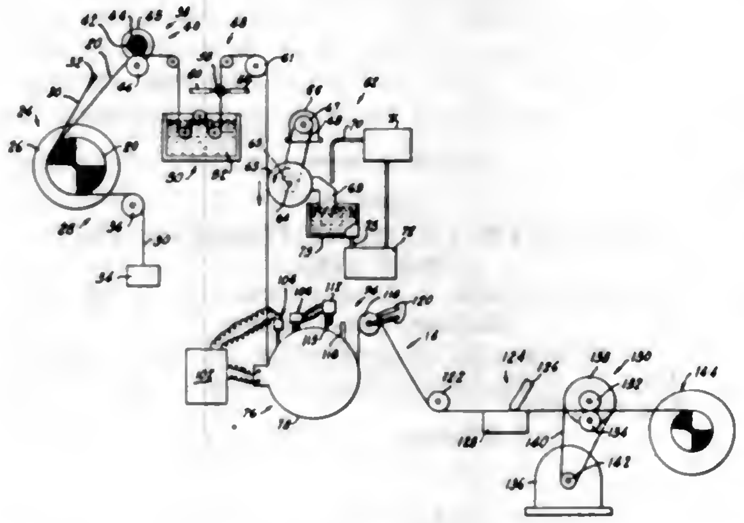
3,389,683

SOLDER STRIPING APPARATUS

Thomas Earl Gannoe, Warren, Pa., assignor to Sylvania Electric Products Inc., a corporation of Delaware

Filed Feb. 23, 1966, Ser. No. 529,503

5 Claims. (Cl. 118—69)



Apparatus for continuously applying to a parent strip a stripe of solder of sufficient thickness to allow an electrical connection to be made thereto when the strip is subsequently formed into individual electrical connectors. Means are provided for continuously abrasively cleaning the strip, chemically cleaning the strip and for accurately fluxing and applying the layer of solder thereto.

3,389,684

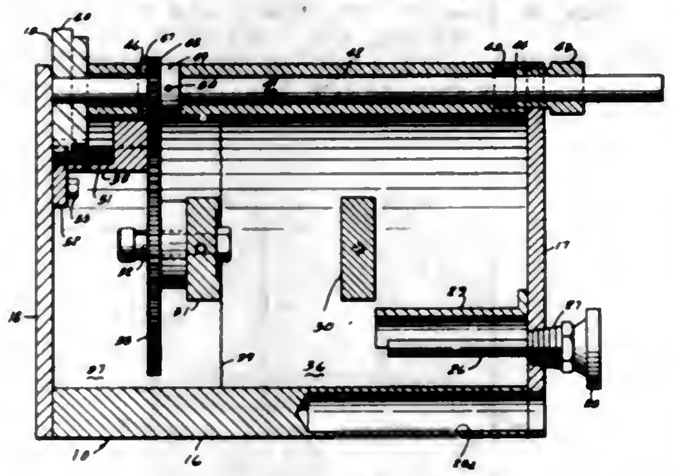
HOT MELT GLUE APPLICATOR

Richard C. Talbot, Skokie, Ill., assignor to Peters Machinery Company, Chicago, Ill., a corporation of Illinois

Continuation of application Ser. No. 463,807, June 14, 1965. This application Sept. 19, 1967, Ser. No. 669,363

17 Claims. (Cl. 118—202)

Glue applicator for applying hot melt glue to a succession of traveling articles. A thick walled barrel-like glue pot has a glue supply opening at its top to supply hot melt glue to the glue pot. Electric heating elements are recessed in and extend along the thick barrel-like wall of the glue pot at circumferentially spaced locations and a thermostat out of contact with the glue is recessed in the wall of the glue pot between the heating elements, to control the heating elements under the same conditions as the heating elements and to thereby prevent overheating of the glue. A glue trough is mounted in the glue pot on one end wall of the pot above the bottom of the pot and has a wiper on its inner side having wiping engagement with a pick-up gear rotatably driven about the axis of the barrel-like wall of the glue pot to pick up melted glue from the bottom of the glue pot, which is wiped from the side wall of the gear by the wiper. A glue applicator roll is rotatably driven by the means rotatably driving the pick-up gear to move its circumferential periphery into and out of the glue pot to apply glue supplied by the glue trough, to the traveling articles to be glued.



3,389,685

FISH CULTURE BY SQUAWFISH POPULATION ERADICATION

Craig MacPhee, Moscow, Idaho, and Richard Ruelle, Grand Island, Nebr., assignors to the United States of America as represented by the Secretary of the Interior

No Drawing. Filed Sept. 12, 1966, Ser. No. 580,561

11 Claims. (Cl. 119—3)

1. A method of fish culture comprising controlling the squawfish population in an aqueous habitat comprising squawfish and at least one member selected from the group comprising coho salmon, chinook salmon, steelhead trout, rainbow trout, cutthroat trout, crappies, perch, dace, suckers, shiners, catfish, and sculpin, by treating the aqueous habitat with 1,1′-methylenedi-2-naphthol in an amount from about 0.004 to 0.100 p.p.m. which is lethal to the squawfish but not lethal to said selected members of said group.

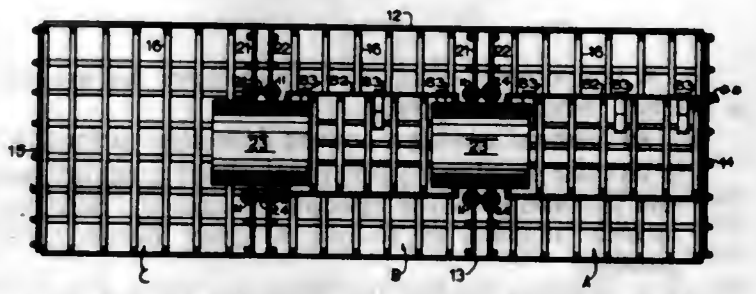
3,389,686

CHINCHILLA CARE CAGE

Donald M. Taylor, Council Bluffs, Iowa, and Paul D. Martz, Omaha, Neb., assignors, by mesne assignments, to T & T Chinchilla Inc., Council Bluffs, Iowa, a corporation of Iowa

Filed Mar. 25, 1966, Ser. No. 537,457

9 Claims. (Cl. 119—17)

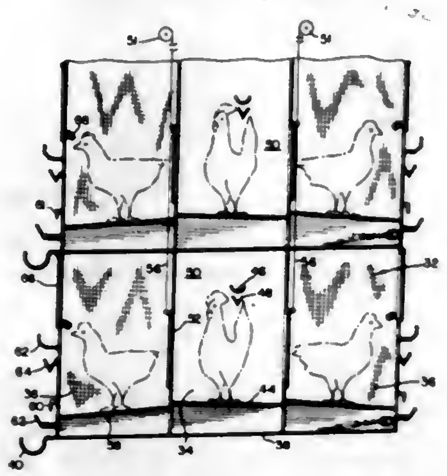


This invention relates to portable multi-compartment cages for small animals, and in particular this invention provides a multi-compartment cage which includes several novel features especially adapted to the care, raising and polygamous breeding of chinchillas. The cage includes dual-panel partitions means having tubular liners positioned within openings provided in the partitions to provide passageway means between the multi-compartments.

3,389,687

POULTRY BREEDING APPARATUS

Harry B. Trussell, 609 Stokeswood Ave. SE.,
Atlanta, Ga. 30316
Filed Aug. 12, 1965, Ser. No. 479,077
2 Claims. (Cl. 119—21)

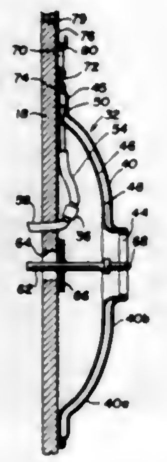


A unit for controlled breeding of poultry including a rooster-containing enclosure, a plurality of hen-containing enclosures disposed adjacent the rooster-containing enclosure and normally closed access means between each of the hen-containing enclosures and the rooster-containing enclosure which are selectively opened to provide access therebetween.

3,389,688

POULTRY EGG HATCHER

Charles Robert Springer, Westlake, Ohio, assignor to Chick Master Incubator Corporation
Filed May 18, 1966, Ser. No. 558,156
17 Claims. (Cl. 119—35)



15. A temperature controlled air deflector for use with a hatcher, which comprises:

(a) an element having a convex deflecting surface that is circular in plan, symmetrical about a central axis and includes a central opening through the deflecting surface adapted to receive a spray nozzle therethrough,

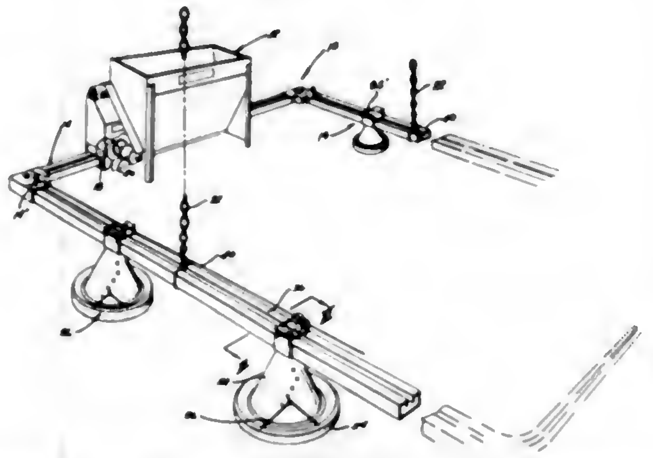
(b) a chamber behind the deflecting surface for circulating fluid in heat transfer relationship with the element, and

(c) means to introduce and withdraw fluid to and from the chamber.

3,389,689

POULTRY FEEDER AND SUSPENDED UNIT SUPPORT

Robert L. van Huis, Zeeland, Mich., assignor to Big Dutchman, Inc., Zeeland, Mich., a corporation of Michigan
Continuation-in-part of application Ser. No. 499,251, Oct. 21, 1965. This application Oct. 20, 1966, Ser. No. 597,188
13 Claims. (Cl. 119—52)

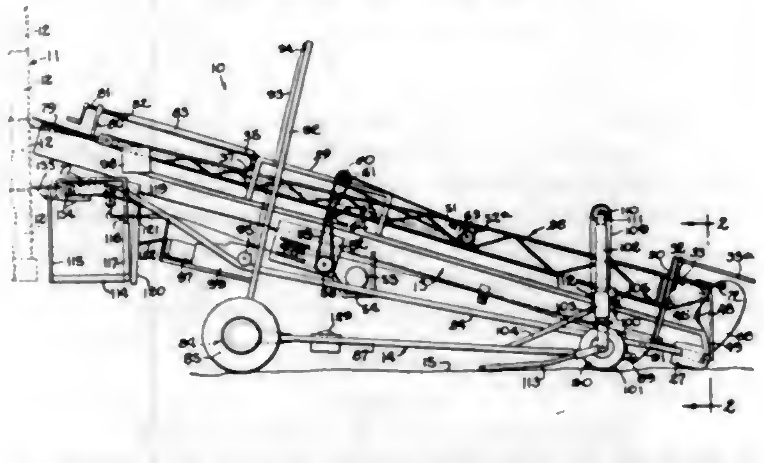


A suspended unit for poultry feeding comprising an elongated conduit having a narrow slot along the major portion of its length. The conduit has a feed advancing chain connected in recirculatory fashion with a suitable supply hopper passing therethrough. A plurality of feed units, communicating with the conduit via orifices in the bottom thereof, are suspended from the conduit by means of resilient clips. It is understood that this abstract is not to be utilized to limit the scope of this invention.

3,389,690

METHOD OF LOADING TURKEYS AND THE LIKE

Wallace H. Jerome, % Jerome Foods, 34 N. 7th St., Barron, Wis. 54812
Continuation-in-part of application Ser. No. 574,078 Aug. 22, 1966. This application Sept. 14, 1967, Ser. No. 667,802
3 Claims. (Cl. 119—82)

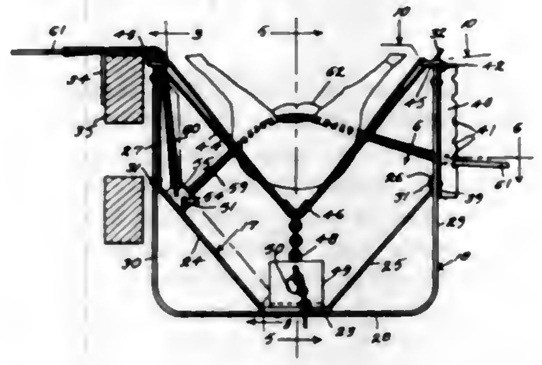


A method of loading turkeys and the like with a conveyor comprising two interfitting U-shaped troughs providing an enclosed passage with a conveyor belt supported on the lower trough to carry poultry through the passage and a hold-down belt supported on the upper trough to cooperate with the lower belt in carrying poultry through the passage. The upper trough is supported for selective adjustment relative to the lower trough to vary the height of the passage and the hold-down belt is driven at a faster speed than the conveyor belt to maintain the poultry in sitting positions. The chute is supported on a frame for selective adjustment of the height of the upper or discharge end with a cable and drum arrangement, and an operator platform is pivoted on the chute adjacent the discharge end and maintained horizontal during adjustment of the angle of the chute. Pivoted on the chute above the discharge end and extending outwardly therefrom is an angularly adjustable grid covering the path of poultry leaving the chute. The passage is divided longitudinally into two sections by a central plate. Turkeys are loaded into the lower end of the chute, urged into a sitting position by the hold-down belt, and maintained quietly in the sitting position as a result of the unbalancing effect of this belt.

3,389,691

ANIMAL HOLDER AND POSITIONER

Jesse L. Poage, R.F.D. 2, Perry, Mo. 63462
Filed Aug. 5, 1966, Ser. No. 570,555
7 Claims. (Cl. 119—103)

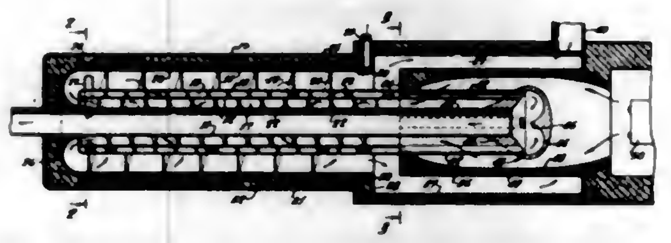


1. An animal holder and positioner comprising an elongated rigid frame of channel-shaped cross section having an open top and open ends, and a yieldable cradle-like support disposed lengthwise within and suspended by said frame and of substantially V-shape cross section said cradle-like support comprising a plurality of elastic straps each disposed crosswise of the frame and in spaced apart relation to one another, and hold down means extending longitudinally of the frame and engaging intermediate portions of said straps.

3,389,692

FLASH BOILER

Don E. Johnson, 524 W. 6th Drive, and Elmo A. Porter, 1025 E. Jarvis Ave., both of Mesa, Ariz. 85201
Filed Dec. 13, 1966, Ser. No. 601,455
11 Claims. (Cl. 122—41)

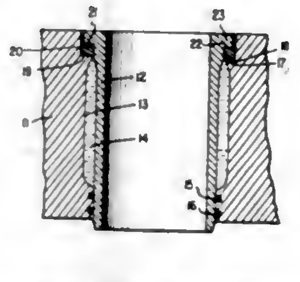


A flash boiler including a series of concentric tubular members alternately interconnected to provide two flow paths, one path receiving feedwater from the radial outer portion, which is discharged as steam from a central tube, the other path receiving hot gases which pass a chamber where the water is flashed into steam and enter the other flow path around the central tube, each of the paths having a helical baffle therein, the baffles being oppositel wound in the two flow paths.

3,389,693

METAL RING FOR POSITIONING THE CYLINDER SLEEVE IN THE CYLINDER BLOCK OF A LIQUID-COOLED PISTON TYPE INTERNAL COMBUSTION ENGINE

Otto Herschmann, Fellbach, Wurttemburg, and Herbert Deutschmann, Stuttgart-Bad Cannstatt, Germany, assignors to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany
Filed Aug. 12, 1966, Ser. No. 572,091
Claims priority, application Germany, Aug. 12, 1965, D 47,948
14 Claims. (Cl. 123—41.84)

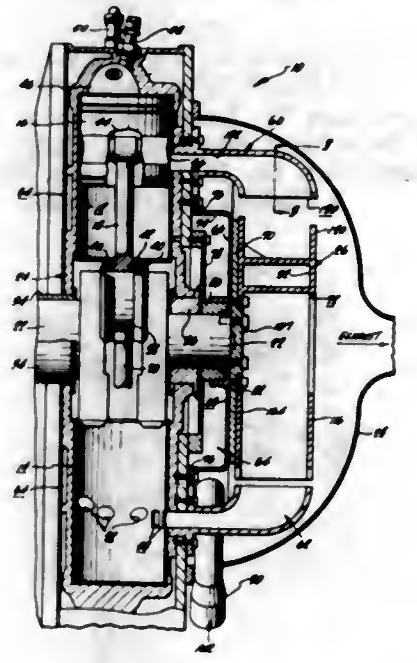


7. In a liquid-cooled piston internal combustion engine, a cylinder-crankcase forming a cooling jacket, a cylinder liner having a collar, said cooling jacket being provided on the inside thereof with ring-shaped abutment surface means, said cylinder liner being provided also with ring-shaped abutment surface means, a metal ring arranged between the abutment surface means at the cooling jacket and at the collar of the cylinder liner, and said ring having approximately a rectangular cross section whose height is related to its width at the ratio of about 2.5:1 to 1:1.

3,389,694

EXHAUST CHARGED INTERNAL COMBUSTION ENGINE

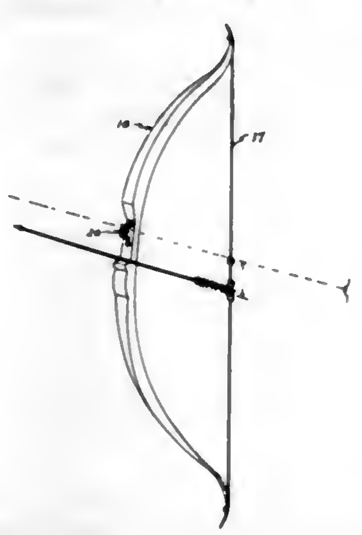
James L. Dooley, Santa Monica, Calif., assignor to McCulloch Corporation, Los Angeles, Calif., a corporation of Wisconsin
Filed Mar. 14, 1967, Ser. No. 623,064
27 Claims. (Cl. 123—65)



An internal combustion engine which uses the exhaust energy of one cylinder to charge another cylinder with air during the inlet portion of the latter's cycle. A duct filled with fresh air communicates the exhaust ports of two cylinders with the exhaust of one cylinder forcing the air through the exhaust port of the other cylinder. The duct is mounted to effect this exhaust port communication between each cylinder in the exhaust portion of its cycle and each cylinder in the inlet portion of its cycle.

3,389,695
SIGHTING ELEMENT FOR BOW FOR ARCHERY

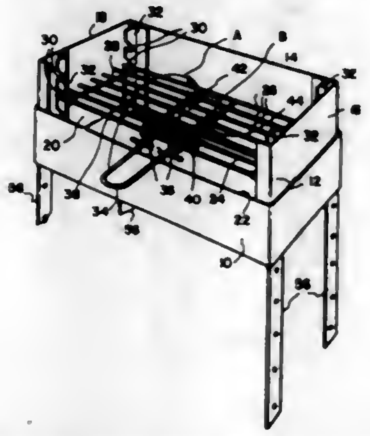
August F. Roloff and Mina S. Roloff, both of R.D. 1,
Box 182H, Morganville, N.J. 07751
Filed Mar. 7, 1966, Ser. No. 532,208
2 Claims. (Cl. 124—24)



1. In combination with an archery bow and string having a handle portion, a sighting portion above the handle portion, an arrow guide shelf, horizontally positioned, between the handle portion and the sighting portion, a sill vertically positioned within the sighting portion and rising from the arrow guide shelf, a sighting device permanently mounted to said sill and a sighting grommet affixed to said string, said sighting device comprised of a wire formed with two ends bent to lay against said sill for attachment to said sill, said wire formed to extend at a right angle to said sill and form two joined squares, to provide three horizontal bars and two vertical bars as sighting references, said sighting device positioned on said sill at a predetermined distance above said arrow guide shelf and said sighting grommet positioned on said string at the same predetermined distance above the point on said string that is in alignment with said arrow shelf.

3,389,696
BARBEQUE STRUCTURE AND MOUNTING MEANS

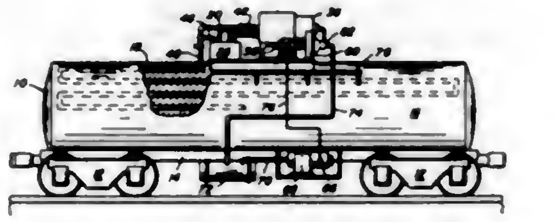
Abraham W. Lake, Scottsdale, Ariz.
(235 Broadway, San Diego, Calif. 92101)
Filed Nov. 14, 1966, Ser. No. 593,877
5 Claims. (Cl. 126—25)



1. In a barbeque structure and mounting means, the combination of: a box-shaped fire box having an upper open portion; a grill frame positioned in said fire box and having three walls extending upwardly therein to an elevation above the upper open edge of the fire box; a barbeque grill supported in said frame; means for adjustably supporting said grill at various elevated positions in said grill frame; and an inverted box-shaped cover adapted to fit over said grill frame, said inverted box-shaped cover having a lower open end and surrounding edges; said fire box having an upper open end and surrounding edges adapted to support the lower edges of said inverted box-shaped cover to provide a tight enclosure of said fire box and said grill and grill frame.

3,389,697
TANK-CAR HEATING SYSTEM

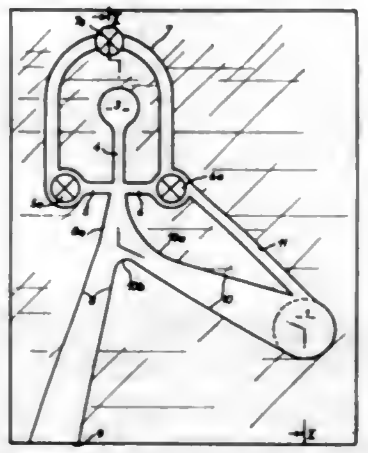
Joseph S. Giunta, Turtle Creek Borough, Pa., assignor to United States Steel Corporation, a corporation of Delaware
Filed Dec. 14, 1966, Ser. No. 601,788
1 Claim. (Cl. 126—343.5)



A novel tank-car heating system keeps pitch or the like molten during transit. Heated liquid is circulated through a tank, a heater and a coil in the car by a motor-driven pump. A burner in the liquid heater is supplied with fuel by a pump and combustion air by a blower. A motor drives pump and blower through a common shaft. The heating-system units are mounted on top of the car, whereas a fuel tank and an engine-generator set are mounted below on the car frame in order that engine vibration will not affect heater operation and the controls.

3,389,698
FLUIDIC DEVICE FOR ALTERNATELY FILLING AND EMPTYING AN ENCLOSURE

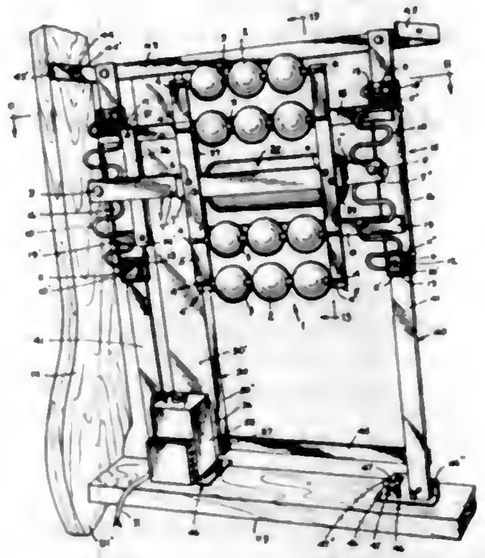
Marcel Kadosch, Paris, Cyrille François Pavlin, Cormeilles-en-Parisis, and Edouard Mace, Meudon-la-Foret, France, assignors to Societe Bertin & Cie, Paris, France, a company of France
Filed July 29, 1965, Ser. No. 475,696
Claims priority, application France, Aug. 5, 1964, 984,284
16 Claims. (Cl. 128—1)



A fluidic device for alternately filling and emptying an enclosure comprising a motive fluid supply duct leading from an intake to a zone at opposite sides of which open two control nozzles adapted to deflect the motive fluid from the axis of the duct in either one of two opposite directions, the motive fluid supply duct being extended beyond the zone by two branched ducts, at different angular inclinations with respect to the axis of the duct, namely, an exhaust duct inclined at a relatively small angle and adapted to collect motive fluid deflected in one direction and a load duct inclined at a relatively large angle and adapted to collect motive fluid deflected in the other direction, the load duct leading into the enclosure and being connected to the supply duct along a curved convex wall and being further permanently connected with one of the control nozzles through a feedback passage.

3,389,699
ROLLER MASSAGE ASSEMBLY

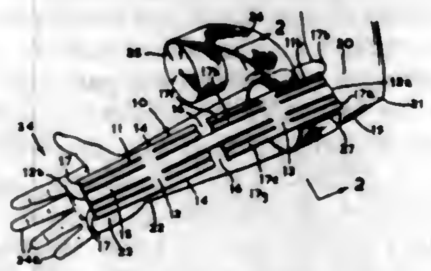
Kenneth R. Mathers, Fredonia, N.Y., assignor to Niagara Therapy Manufacturing Corporation, Adamsville, Pa., a corporation of Delaware
Filed Apr. 11, 1966, Ser. No. 541,605
19 Claims. (Cl. 128—33)



A therapeutic message assembly designed for association with a flexible body supporting cushion and operative to apply therapeutic massage over a selected area and length of the flexible cushion supported body; the massage assembly embracing one or more rows of resilient massage applicators rotatably mounted in cantilever suspension on a resiliently flexible frame fixed to a vibratory motor suspension bar, the ends of the bar being attached to the mid-sections of a pair of arched springs whose terminal ends are secured to a rigid baseframe, and which cooperate to provide an applicator supporting carriage which is resiliently flexible in vertical, longitudinal and transverse directions and operates to maintain the resilient applicators in uniform pressure contact with the undulating body supporting cushion; together with a carriage supporting tracking frame having means for adjustably securing the same to the cushion framework to thereby maintain the applicators in rolling contact with the flexible body supporting cushion, the tracking frame also including spaced guide rails and associated means for slidably supporting the carriage baseframe for smooth reciprocating movement thereon.

3,389,700
METHOD OF FORMING SURGICAL CAST, AND SPLINT THEREFOR

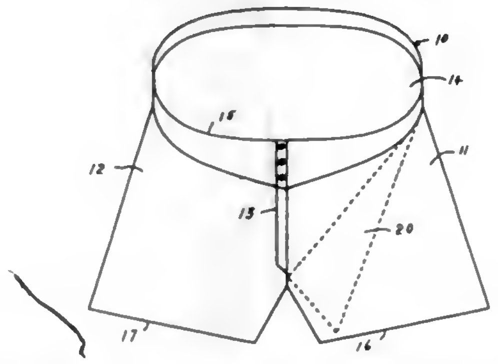
Francis Whyte, Bedford, Nova Scotia, Canada
Filed June 21, 1965, Ser. No. 465,677
9 Claims. (Cl. 128—91)



A method and device for forming a surgical cast, and a cast itself, in which the set bandage material forms a circumferentially discontinuous wall rendered continuous by a longitudinal connecting splint having tongues symmetrically disposed about a central rib, the bandage material being looped over the tongues. The splint is severable to remove the cast.

3,389,701
UNDERSHORTS CONSTRUCTION FOR MEN

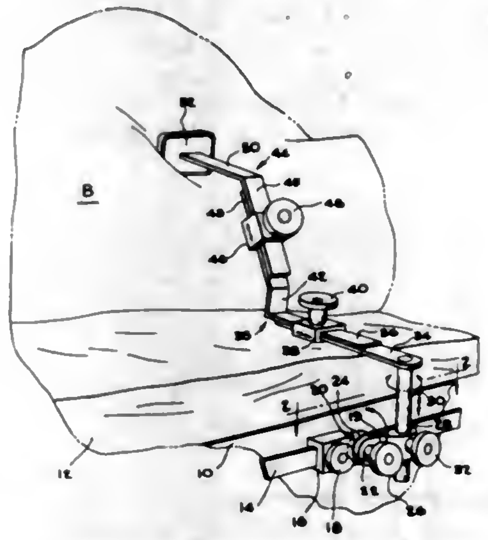
Alvin W. Slayden, 3905 Morrison St. NW., Washington, D.C. 20015
Filed Oct. 24, 1965, Ser. No. 504,950
4 Claims. (Cl. 128—159)



A supensory support for men's conventional undershorts comprising a fabric panel applied to the inside of one leg in such manner that one edge is attached downwardly to the leg of the undershorts starting from a first point adjacent the front portion of the crotch line and the lower portion of the fly opening, and an upwardly positioned edge extends diagonally upwardly from said first point and is attached to the undershorts at at least one other point spaced diagonally upwardly from said first point.

3,389,702
DEVICE FOR PREVENTING HYPOTENSION SYNDROME OF LATE PREGNANCY

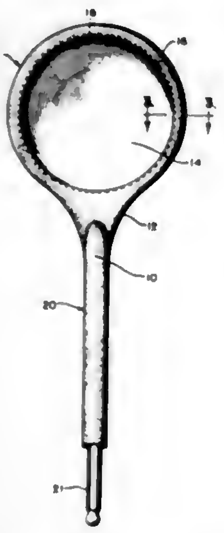
Roland L. Kennedy, 3426 Orchard Trail, Toledo, Ohio 43606
Filed Mar. 7, 1966, Ser. No. 532,328
4 Claims. (Cl. 128—361)



A device for maintaining normal blood pressure during late pregnancy comprising a pad for engaging the body of a woman to displace the uterus to the left to prevent the inferior vena cava from compression to permit normal cardiac output. Linkage means are provided to interconnect the body engaging pad with the side rail of an operating table to enable adjustment of the pad relative to the patient.

3,389,703
DEFIBRILLATOR ELECTRODE OR THE LIKE

Byron R. Criswell, Arlington Heights, and Howard Primack, Cicero, Ill., assignors to Zenith Radio Corporation, Chicago, Ill., a corporation of Delaware
Filed Feb. 3, 1966, Ser. No. 524,895
4 Claims. (Cl. 128—404)



1. A defibrillator electrode or the like capable of withstanding repeated autoclaving, comprising:

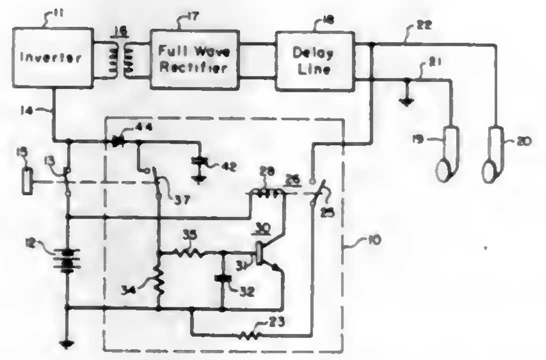
a rigid electrically conductive base having a back portion and having a front face portion divided into an inner segment and an outer segment separated from said inner segment by a groove of predetermined width and depth;

a handle extending from said base and provided with a hand-grip portion;

and a continuous adherent electrically insulative coating covering said back portion, said outer segment of said face portion, and said hand-grip portion of said handle and terminating in said groove between said inner and outer segments, said coating having a thickness approximating the width of said groove, and being captivated by said groove to prevent separation of said insulative coating from said base on autoclaving.

3,389,704
DISCHARGE CIRCUIT FOR A DEFIBRILLATOR

Roman Buchowski, Wheeling, and Louis L. Kocsis, Elmhurst, Ill., assignors to Zenith Radio Corporation, Chicago, Ill., a corporation of Delaware
Filed Dec. 6, 1965, Ser. No. 511,832
5 Claims. (Cl. 128—419)



1. In an electronic defibrillator of the type employing first capacitor means for storing high voltage electrical energy supplied from a direct current energy source and electrode means for discharging said stored electrical energy through a patient, the improvement comprising:

second capacitor means;

a relay including an energizing coil and a pair of normally open contacts;

a resistance coupled in series with said normally open contacts across said first capacitor means;

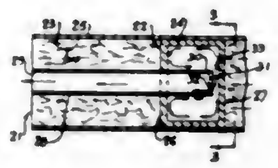
a discharge circuit for said second capacitor means;

an on-off switch for said defibrillator and including means for coupling said second capacitor means to said direct current source only when said on-off switch is in its "on" position;

and further means for coupling said second capacitor means to said discharge circuit only when said on-off switch is in its off" position and for energizing said relay coil from said second capacitor means for a predetermined interval of time.

3,389,705
CIGARETTE SMOKE FILTER DEVICE

David Levavi, 4980 Fulton St., Montreal, Quebec, Canada
Filed Apr. 29, 1966, Ser. No. 546,324
5 Claims. (Cl. 131—10.5)



A cigarette filter having a cylindrical condensing chamber positioned within the cigarette paper casing in sealing engagement therewith and an axially positioned smoke tube of relative small diameter with one end open and extending to the rearward end of the cigarette and the other end extending into the condensing chamber close to its forward end. There are misaligned perforations in the forward end walls of the chamber and the tube through which the smoke flows.

3,389,706
TOBACCO PRODUCT

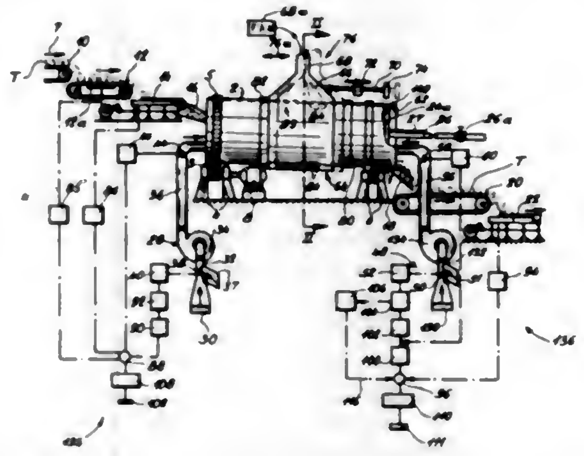
Joseph N. Schumacher, Winston-Salem, N.C., assignor to R. J. Reynolds Tobacco Company, Winston-Salem, N.C., a corporation of New Jersey
No Drawing. Filed Nov. 8, 1965, Ser. No. 506,863
3 Claims. (Cl. 131—17)

1. A tobacco product having added thereto 2,3,6,7,8,8a - hexahydro - 7 - oxo - 2,5,5,8a - tetramethyl - 5H - 1-benzopyran in an amount sufficient to alter the flavor or aroma of the tobacco product.

3,389,707
METHOD AND APPARATUS FOR EXPELLING MOISTURE FROM TOBACCO

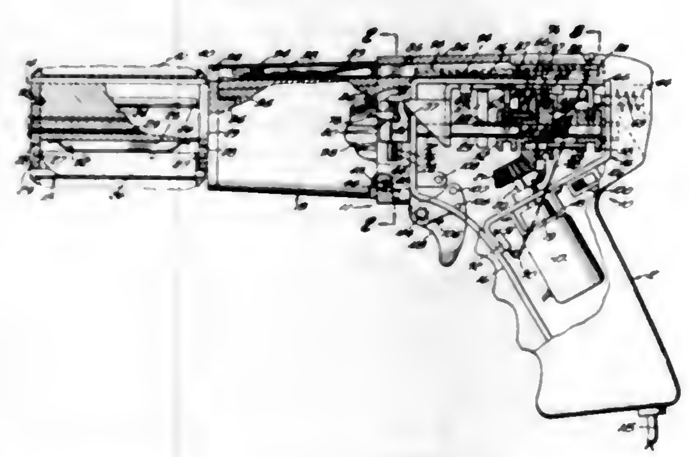
Waldemar Wochnowski, Hamburg, Germany, assignor to Hauni-Werke Koerber & Co., KG, Hamburg-Bergedorf, Germany
Filed July 15, 1966, Ser. No. 565,426
Claims priority, application Great Britain, July 22, 1965, 31,264/65
31 Claims. (Cl. 131—135)

29. A method of conditioning tobacco, comprising the steps of conveying a continuous stream of moist tobacco lengthwise along a predetermined path toward, through and beyond an elongated continuous conditioning zone having a first section which is first to receive successive increments of tobacco and a second section which receives successive increments from said first section; admitting into said first section a first current of hot fluid and conveying such fluid concurrent with the stream so that the fluid expels moisture from tobacco; admitting into said second section a second current of hot fluid and stream toward said first section so that the second current expels additional moisture from tobacco; and evacuating and expelling said currents from said conditioning zone in the region between said sections.



3,389,708
POWER-DRIVEN SEMI-AUTOMATIC HAIR CURLER

Robert M. Reyes, 614 Forest Ave., Los Angeles, Calif. 90033
Filed Apr. 4, 1966, Ser. No. 540,011
12 Claims. (Cl. 132—34)

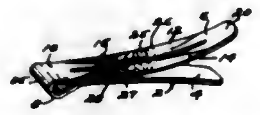


1. A self-contained power-driven hair curler having an elongated main body with an electric motor carried in the handle end thereof, a hairpin magazine, a rotary roller chucking device projecting axially forwardly of said magazine, a hollow roller adapted to be telescopically mounted over said chucking device, power-driven means for transferring a hairpin from said magazine lengthwise of said hollow roller and so that the hairpin embraces the adjacent rim edge of the hollow roller, means operatively connecting said electric motor to said chucking device and operator-controlled means for selectively driving said chucking device and said hairpin transfer means from said motor at the operator's selection.

3,389,709
SNAP ACTION HAIR HOLDING MEANS

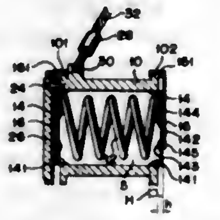
Abraham Sidelman, 13 Doctor Frank Road, Spring Valley, N.Y. 10977
Continuation-in-part of application Ser. No. 265,383, Mar. 15, 1963. This application Mar. 4, 1966, Ser. No. 531,668
4 Claims. (Cl. 132—46)

Easily manipulated and easily operated snap action bobby pins, comfortable for wearing and economically manufactured, and pleasingly and neatly appearing at all times, comprising a pair of opposing arms and a loop connection normally urging the arms towards each other, one of said arms having two spaced apart strips and a longitudinal segment at one edge thereof being under an expanding tension in relation to the adjacent segment of the same strip, said longitudinal segment being thinner than said adjacent strip and said strips having substantially smooth surfaces.



3,389,710
COIN HOLDER

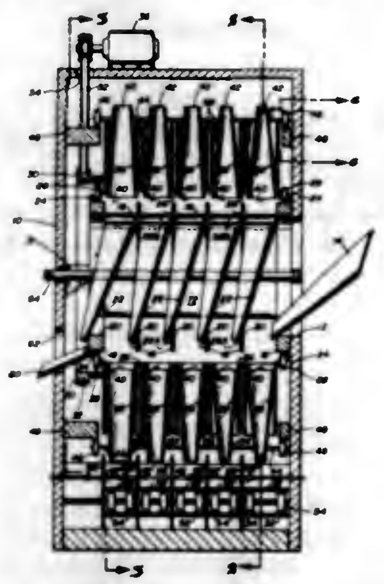
Yoshiko Ishikawa, 26 Umayabashi 3-chome, Sumida-ku, Tokyo, Japan
Filed Nov. 23, 1966, Ser. No. 596,597
1 Claim. (Cl. 133—6)



A suspendible coin holder in the form of a tubular casing having a coin receiving plate slidable in each end and a coin guide element fixed on each end, a coil spring in the casing biasing each plate against its adjacent guide element, boss elements on the plate to align the coil spring on the guide element to prevent accidental coin removal, and a pivoted cover on one end of the casing to cover the adjacent guide element.

3,389,711
SILVERWARE SORTING MACHINE

Claude J. Slayton, 1931 N. Lewis Place, Tulsa, Okla. 74110
Filed July 7, 1966, Ser. No. 563,562
8 Claims. (Cl. 134—63)



1. A silverware sorting machine for sorting silverware into types according to the width of each type comprising:

a base having an inlet opening to receive mingled silverware therein and a discharge opening to discharge sorted silverware thereout;

a horizontal cylindrical cone supporting frame rotatably supported in said base having a plurality of openings therein arranged in a plurality of spaced vertical planes the openings in each plane being substantially contiguous to each other, the opening of each plane being substantially contiguous to each other;

a multiplicity of truncated hollow conical members each having a large diameter internal base opening converging to a smaller internal diameter opening at the opposite truncated end, the base of each conical member being received by and closing a said cone supporting frame opening, said conical members being thereby supported in a plurality of spaced paralleled planes and extending radially from said cylindrical cone support frame, the smaller opening of each of said conical members of each plane being of equal size and the smaller diameter opening of each plane increasing in internal diameter as each plane is advanced from said base inlet opening;

receiving means beneath each plane of conical members to receive silverware falling therefrom;

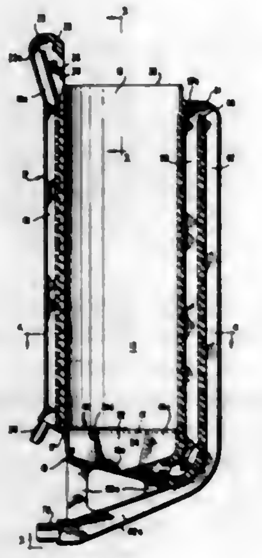
means of rotating said cylindrical cone support frame: and

a plurality of vertical spaced apart slide members supported within said cone supporting frame, each of said slide members having an upper and a lower end, the upper end of one of said slide members being positioned below each of said planes of conical members and the lower end thereof terminating above the next adjacent plane of conical members next advanced away from said base inlet opening, whereby silverware passing into said inlet opening falls sequentially into said conical members of the first plane, those pieces of silverware having a width less than the diameter of the truncated end of said conical members of the first plane falling therethrough and into said receiving means beneath such plane, those pieces of silverware having a width greater than the diameter of said conical members of the first plane being carried by the rotation of said cone supporting frames to the top where the silverware falls out of the base end of said cones onto a said slide member whereby the silverware is discharged into conical members of the next adjacent plane, the silverware being thereby advanced from one plane of conical members to another until a plane is reached wherein the diameter of the smaller diameter openings in said cones is greater than the silverware width.

3,389,712

RINSER

Frederick W. John, Rochester, N.Y., assignor to The Nalge Company, Inc., Rochester, N.Y., a corporation of New York
Filed Sept. 9, 1966, Ser. No. 578,351
12 Claims. (Cl. 134—166)

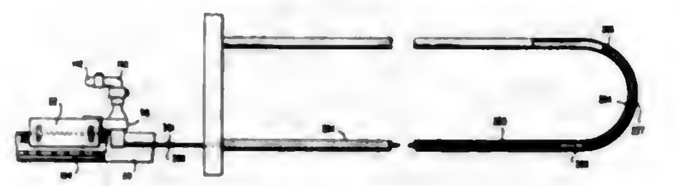


1. A rinser apparatus comprising: a main rinser chamber adapted to receive objects to be rinsed; a well below said main rinser chamber having a floor with a plurality of support means extending upward from said floor and adapted to support objects disposed in said main rinser chamber; water inlet means for supplying water to said main chamber; siphon means including a first siphon tube having its lower end connected to said well through an aperture therein and a second siphon tube connected to the upper end of said first tube and extending downwardly therefrom, the cross-sectional area of each of said siphon tubes being greater than the cross-sectional area of said water inlet means, and the volume of said rinser well below the level of said support means being greater than the volume of said first siphon tube.

3,389,713

APPARATUS FOR CLEANING THE INTERIOR OF CURVED CONDUITS

Forrest C. Pittman, Duncan, Okla., assignor to Halliburton Company, Duncan, Okla., a corporation of Delaware
Filed May 5, 1966, Ser. No. 547,890
3 Claims. (Cl. 134—167)



An industrial cleaning device for cleaning the interior of curved tubes, which device includes a straight, rigid portion, an armored, laterally flexible portion, and a nozzle. A swivel assembly is connected to the rigid portion and serves to supply high-pressure cleaning fluid to its interior.

3,389,714

TRANSPORTATION OF LIQUIDS AND SLURRIES

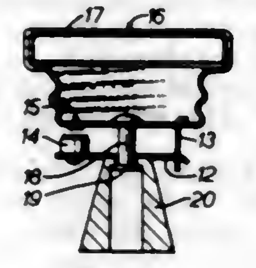
Ralph C. Hughes and Richard L. Every, Ponca City, Okla., assignors to Continental Oil Company, Ponca City, Okla., a corporation of Delaware
No Drawing. Filed Nov. 18, 1965, Ser. No. 508,554
10 Claims. (Cl. 137—13)

Difficultly pumpable fluids such as viscous liquids and liquid-solid slurries are treated to reduce viscosity by dissolving therein an inert gas.

3,389,715

SELF-CLOSING VENTING DEVICE FOR LIQUID CONTAINERS

Hugh Charles Hebard, High Wycombe, and Bertram Stanley Dearing, Ickenham, England, assignors to Aladdin Industries Limited, Greenford, England, a British company
Filed June 3, 1965, Ser. No. 461,005
Claims priority, application Great Britain, June 16, 1964, 24,909/64
3 Claims. (Cl. 137—43)

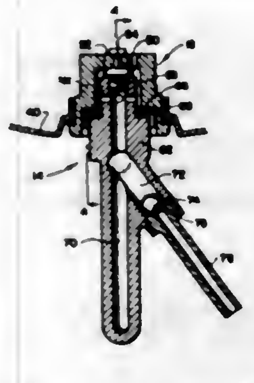


A valve arrangement for preventing leakage from the vented cap of an accidentally tilted or overturned container comprises a normally open movably mounted valve element moved to closed position in response to movement of a weight caused by tilting of the container. In each embodiment the valve is in the filler cap for the container. In one embodiment the valve is centered by a spring and its generally vertical stem extends through a concave surface where it is frictionally engaged by a weight in the form of a free ball movable along that surface. When the container is vertical the weight of the ball which maintains contact with the stem is sufficient to rockably displace the stem from vertical and hold open the valve, but when the container is tilted the ball rolls laterally with respect to the stem and the stem rocks to close the valve under influence of the spring. In another embodiment a weight hangs on a pin extending through a slotted pivoted lever, and when the container is tilted the weight moves to tilt the lever and close a vent in the cap.

3,389,716

DRAFT BEER CLEANING AND FLUSHING APPARATUS

Sampson Wilburn, 2421 Poze Blvd., Thornton, Colo. 80229
Filed July 19, 1965, Ser. No. 472,922
3 Claims. (Cl. 137—240)

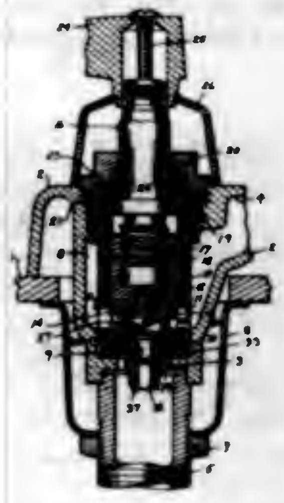


A semi-automatic cleaning and flushing apparatus for a draft beer system having valve means at the end of the wash line to completely isolate the wash line from the flowing beer, which valve means is adapted to seat before the tap is removed from the keg.

3,389,717

REMOVABLE VALVE UNIT WITH FLOW CONTROL DEVICE

Eugene A. Povalski and Edwin F. Bolgert, Kohler, Wis., assignors to Kohler Co., Kohler, Wis., a corporation of Wisconsin
Filed July 15, 1966, Ser. No. 565,516
4 Claims. (Cl. 137—315)

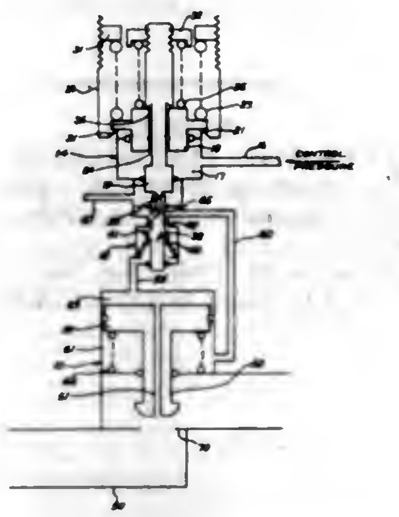


1. In a valve unit adapted to be inserted into and removed from a valve body and including a tubular open-ended cage, a valve plunger mounting a valve lid and reciprocally movable in the cage toward and away from the open end, and actuating means for the plunger, the combination therewith of: a seat member removably mounted on the cage at the open end thereof that has an orifice adapted to be opened and closed by the lid; a retainer removably mounted on the cage beyond the seat member, said retainer having an opening therethrough that is in alignment with the seat member orifice and an inwardly extending annular lip extending around the opening; and a resilient flow control device having a passage therethrough that is in alignment with the orifice and opening, said device being provided with an external annular groove that receives the retainer lip to removably mount the flow control device on the retainer.

3,389,718

HIGH AND LOW PRESSURE WELLHEAD SHUT-IN VALVE

Cecil M. Johnson, Marshalltown, Iowa, and Shelby E. Ross, Houston, Tex., assignors to Fisher Governor Company, a corporation of Iowa
Filed Sept. 16, 1966, Ser. No. 579,994
11 Claims. (Cl. 137—492.5)



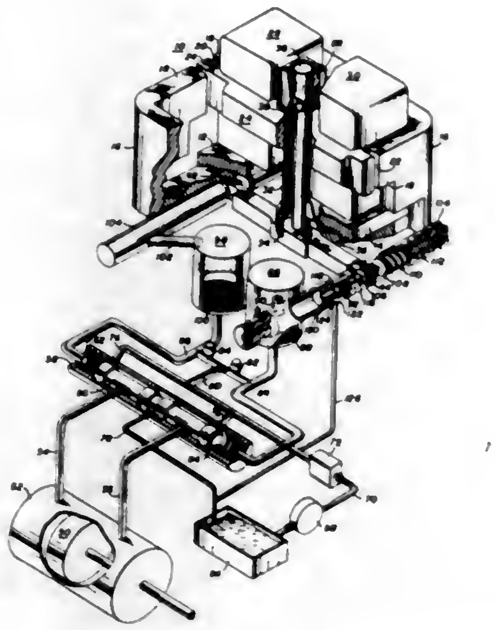
This invention is directed to a high and low pressure shut-off valve, wherein a small and a large piston are coupled together and control pressure is applied between the pistons. Both high and low control pressures cause movement of the small piston in the same direction to operate a three-way pilot valve means to close the shut-off valve.

3,389,719

ELECTROHYDRAULIC SERVOVALVE HAVING MINIMUM FLOW DURING QUIESCENT OPERATION

Robert K. Van Ausdal, La Crescenta, Donald V. Healy, Newhall, and John P. Anderson, Van Nuys, Calif., assignors to The Bendix Corporation, a corporation of Delaware
Filed Oct. 18, 1965, Ser. No. 497,196
9 Claims. (Cl. 137—625.61)

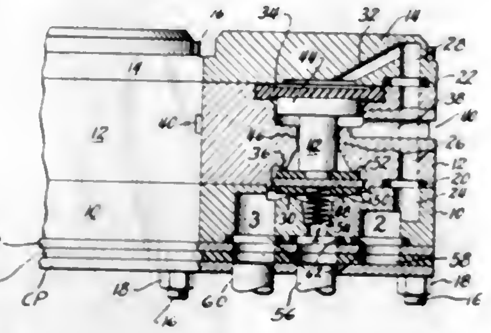
An electrohydraulic servovalve including a torque motor with an armature and a flapper member attached at its center and movable with the armature for varying the flow of control fluid to one side or the other of a spool valve which, in turn, controls the application of fluid pressure to a hydraulic motor. The flapper member is attached to a shaft rotatable along the axis of rotation of the armature. A spring-loaded poppet valve is attached at each end of the flapper member to block the flow of fluid to the spool valve in the absence of a control signal such that there will be minimum flow and minimum noise generated when there is no input signal or an input signal below a specific level.



3,389,720
NOT VALVE FOR FLUID LOGIC CIRCUITS

Karl A. Brandenberg, Hayward, Calif., assignor to The Aro Corporation, Bryan, Ohio, a corporation of Delaware

Filed June 28, 1966, Ser. No. 561,143
6 Claims. (Cl. 137—625.66)

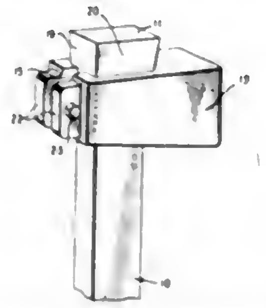


1. A NOT valve for fluid logic circuits comprising a valve body having a pair of inlets, an outlet and an exhaust passageway, an outlet valve seat for said outlet, an exhaust valve seat for said exhaust passageway, said valve seats being opposed to each other, an outlet valve for coaction with said outlet valve seat, an exhaust valve for coaction with said exhaust valve seat, one of said valves being closed against its seat when the other is spaced from its seat and vice versa, a diaphragm for actuating said valves, said diaphragm being subject to pressure from one of said inlets, the other of said inlets communicating with said outlet when said outlet valve is spaced from said outlet valve seat and cutting off flow between said other of said inlets and said outlet when said outlet valve is seated on said outlet valve seat whereby the absence of a fluid pressure signal to said one of said inlets when fluid pressure is supplied to said other of said inlets will open said outlet valve relative to said outlet valve seat and close said exhaust valve relative to said exhaust valve seat to pressurize said outlet from said other of said inlets.

3,389,721
LOOM PICKER STICK AND PICKER JOINT OR CONNECTION

Charles F. Travis, Greenville, S.C., assignor to Tranoco, Inc., Travelers Rest, S.C., a corporation of South Carolina

Filed Sept. 27, 1966, Ser. No. 582,329
8 Claims. (Cl. 139—157)

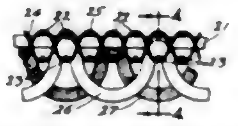


A picker stick and picker construction in which the picker stick is enlarged in cross section toward its top end from a point somewhat below the top end, and the picker is formed with a through opening which fits the enlargement so that the picker cannot migrate upwardly on the picker stick during loom operation.

3,389,722
STRETCHABLE ANCHOR BAND

Robert C. Howard, Wyomissing, Pa., assignor to Wyomissing Corporation, Reading, Pa., a corporation of Pennsylvania

Filed Apr. 7, 1966, Ser. No. 540,962
3 Claims. (Cl. 139—423)

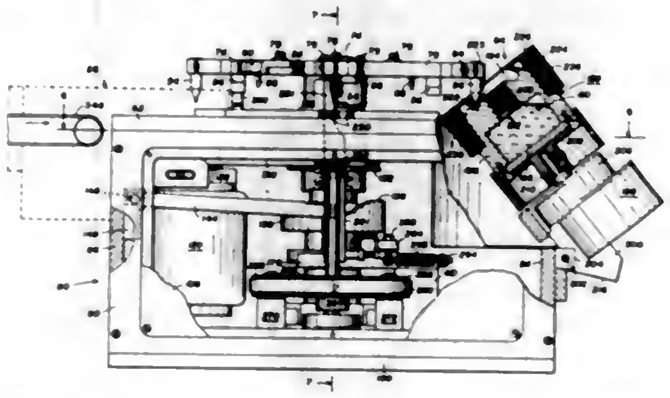


A woven stretchable anchor band for attachment to garments and the like to prevent slippage in which the non-slip characteristics are provided by a formed elastomeric material woven into the fabric as floats on one surface thereof and caused to project from the surface by reason of the body fabric being stretchable in the direction of the floats and having relatively stiff, firm, monofilamentary wefts.

3,389,723
LIQUID INSERTION AND MACHINE

Ralph S. Litterst and Francis M. Brennan, Richardson, Tex., assignors to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware

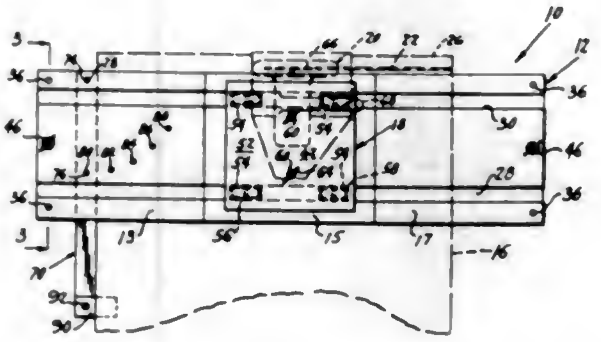
Filed Feb. 16, 1966, Ser. No. 527,838
14 Claims. (Cl. 141—90)



Disclosed is an apparatus for inserting a small predetermined volume of liquid into a small receptacle, the apparatus including a supply of liquid and a means for picking the liquid up by capillary action between fingers, and means for transporting the fingers to the receptacle in order to deposit the liquid therein.

3,389,724
SAW GUIDE

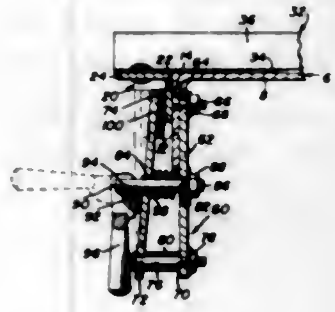
**Bryant M. Paul, 6830 Silverthrone Circle,
North Highlands, Calif. 95660
Filed June 27, 1966, Ser. No. 560,567
9 Claims. (Cl. 143—160)**



1. A saw guide comprising
a pair of saw guiding plates spaced apart for receiving the work therebetween, each plate having at least one guide means aligned with guide means on the other plate;
means for securing the plates to the work;
means, releasably engaged with the guide means on the first plate, for carrying a power saw in a predetermined path for cutting a first groove in the work, the carrying means being removable from the first plate and engageable with the second plate guide means for cutting a second groove in the work aligned with the first groove.

3,389,725
TABLE SAW GUIDE

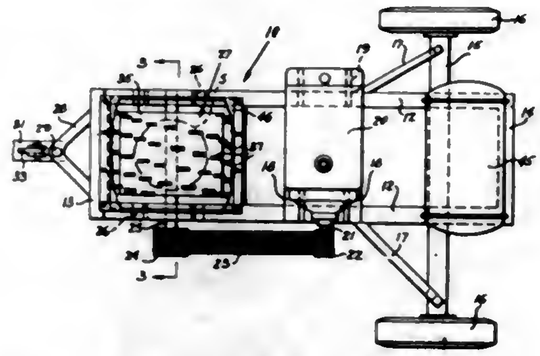
**Carl H. Tidwell, Rte. 3, Bon Aqua, Tenn. 37025
Filed Feb. 3, 1966, Ser. No. 524,940
8 Claims. (Cl. 143—169)**



The invention shown lends itself to use on any make or model of a table saw providing it has a depending rim-like flange of the type illustrated. A simple and practical twin jaw spring-opened and cam-closed clamp has one jaw bolted to an interior surface of the flange so that the other jaw can clampingly engage one of the legs of the T-shaped work guide. This guide embodies a first angle iron bodily attachable and detachable and held against the flange by a jaw of the clamp. The other angle iron or leg rests atop the work surface in a position cooperable with the power driven saw. Linkage means provides an adjustable connection between the horizontal flanges of the two angle irons.

3,389,726
STUMP PULVERIZING APPARATUS

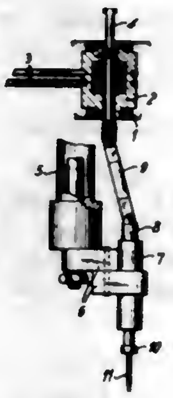
**Jack L. Good, Star Rte., Palestine, Ark. 72372
Filed July 10, 1964, Ser. No. 381,830
4 Claims. (Cl. 144—2)**



1. A stump pulverizing device comprising a wheeled frame, means adapted for attaching one end of said frame to the hydraulically actuated lift bar of a tractor, a rotatable stump pulverizing drum mounted transversely of the frame, power means carried by said frame for rotating said drum and pulverizing teeth on said drum, said teeth being elongated in the direction of rotation of said drum and provided with sharp points and concaved front stump impacting surfaces, the teeth being arranged in staggered rows with the teeth of one row offset relative to the teeth of an adjacent row, and arranged spirally relative to the axis of said drum.

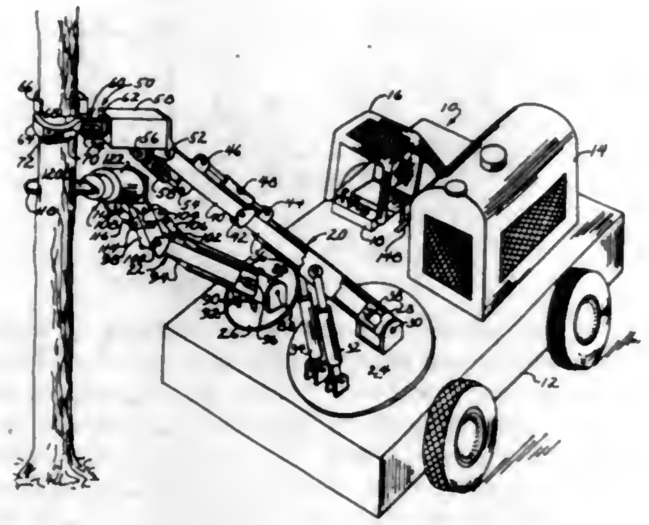
3,389,727
TOOL WITH A WORKING SPINDLE, PARTICULARLY A SCREW DRIVING TOOL

**Hugo Feldpausch, Ludenscheid, Westphalia, Germany, assignor to Feldpausch & Co., Ludenscheid, Westphalia, Germany
Filed Dec. 21, 1965, Ser. No. 515,323
Claims priority, application Germany, Dec. 23, 1964,
F 44,789
3 Claims. (Cl. 144—32)**



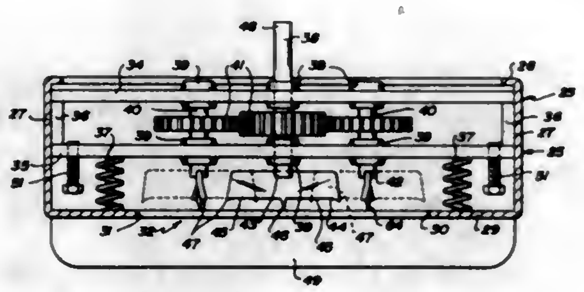
1. A tool used for a screw driving machine comprising:
(a) a working spindle including a work engaging means, a drive shaft having a direction of rotation, a head casing, a cylindrical rotatable ball cage containing balls, thrust bearings, and an axially movable sleeve having helically pitched grooves; and
(b) a multiple-disk clutch between a power source and said spindle, said clutch including means controlling rotary movement of said drive shaft and a casing anchored against movement relative to said machine;
(c) said spindle further including means fixedly attaching said ball cage to said drive shaft inside said head casing between said thrust bearings, means for axially feeding said head casing, and
(d) said grooves being pitched in a direction opposite the direction of rotation of said drive shaft and said balls of said ball cage being engaged with said helically pitched grooves of said sleeve, and means connecting said sleeve to said work-engaging means.

3,389,728
TREE HARVESTER MACHINE
Alex J. Galis, Box 480, Rte. 3, Albany, Ga. 31701
Filed Mar. 7, 1966, Ser. No. 532,403
10 Claims. (Cl. 144—34)



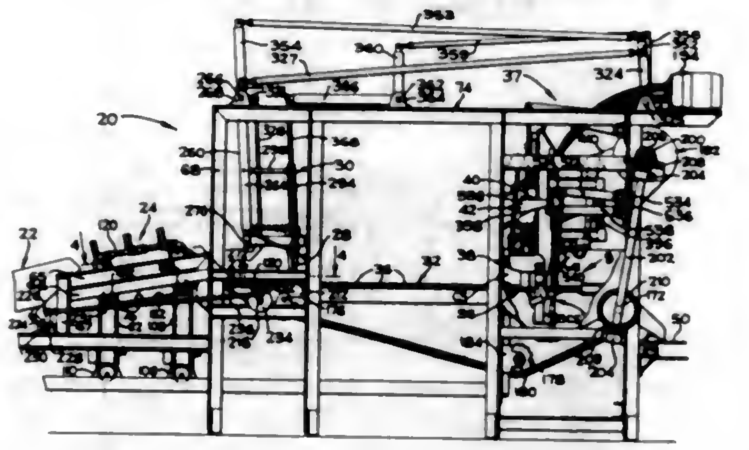
1. A tree harvester machine comprising,
support means,
tree holding means revolvably mounted on the support means, said tree holding means includes a tree clamp mounted at one end of the tree holding means and revolvable about an axis of revolution passing through the clamp,
tree cutting means revolvably mounted on the support means,
means mounted on the support means and connected to the tree holding means for actuation of the tree holding means,
means mounted on the support means and connected to the tree cutting means for actuation of the tree cutting means,
said tree holding means and tree cutting means being constructed and arranged for operation separately and simultaneously in cooperation with each other.

3,389,729
HINGE PLATE RECESSING DEVICE
John Macala, Box 111, Kamsack, Saskatchewan, Canada
Filed Jan. 10, 1966, Ser. No. 519,713
1 Claim. (Cl. 145—60.5)



A casing containing a slidable frame which carries a set of geared together shafts equipped with cutters. The casing has a bottom wall with an opening through which the cutters are projected to an operative position when the frame is lowered in the casing, the frame being biased upwardly by springs. Adjustable stop elements on the frame are engageable with the bottom wall of the casing to limit the extent of projection of the cutters from the casing when the frame is lowered.

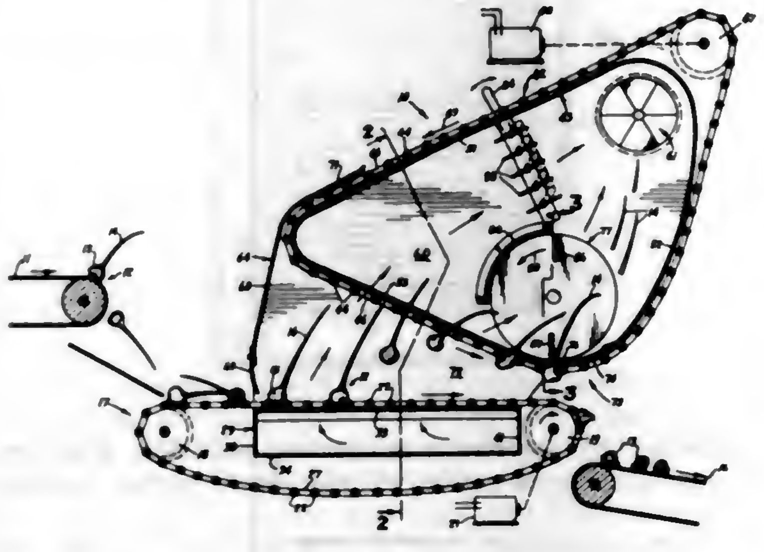
3,389,730
APPLE ORIENTING AND CORING MACHINE
Gerald R. Anderson, Campbell, and Sherman H. Creed and John T. Parker, San Jose, Calif., assignors to FMC Corporation, San Jose, Calif., a corporation of Delaware
Original application Mar. 2, 1964, Ser. No. 348,485, now Patent No. 3,310,084, dated Mar. 21, 1967. Divided and this application Nov. 16, 1966, Ser. No. 606,487
7 Claims. (Cl. 146—52)



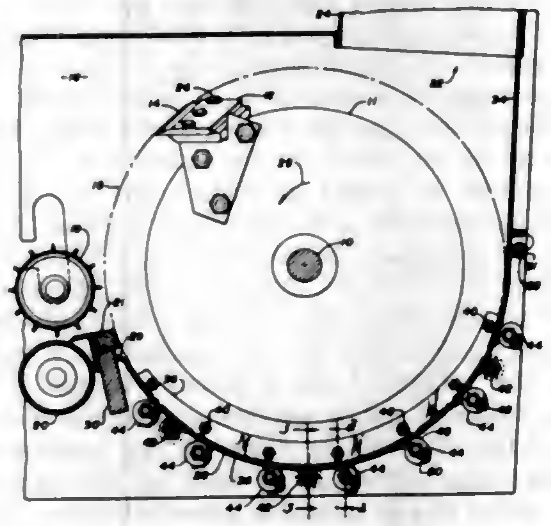
2. In a machine for processing apples or the like, the combination of a conveyor, a plurality of pockets on said conveyor each having a centrally disposed aperture therein, each pocket having an apple supported on one of its ends therein, means for moving said conveyor along a predetermined path, support means disposed above said conveyor and moving in the same direction and at the same speed as said conveyor, a frusto-conical centering mechanism supported by said support means and having its axis coincident with the axis of the aperture in a first one of said pockets, carrier means on said support means and movable relative thereto for lowering said mechanism onto an apple in said first pocket to center said apple, a rod carried by said carrier means and concentric with the aperture in a second pocket, said rod being supported by said carrier means and being lowered thereby into the upper end cavity of a second apple in the second pocket to accurately locate the upper end of the stem-blossom axis of said second apple, a centering pin carried by said support means and disposed below said conveyor, and means for moving said pin through the aperture in said second pocket to engage the lower end cavity of the apple for accurately locating the lower end of the stem-blossom axis of the second apple and to support the apple above the surface of said pocket, a stemming tube slidably received around said rod and rigidly connected to said carrier means to be moved thereby through said second apple to sever the stem material therefrom, said means for moving said pin being maintained in position to support the apple while said stemming tube is being moved through a sufficient portion of said second apple to maintain alignment of said stem-blossom axis and thereafter retract said pin below said conveyor to cause the stemming tube to be moved completely through the second apple while the apple is seated in said second pocket.

3,389,731
APPARATUS FOR TOPPING ONIONS
Ferdinand Austin Teigen, Minneapolis, Minn., assignor to Dorothy Russell, Teigen, Minneapolis, Minn.
Filed May 11, 1966, Ser. No. 549,351
13 Claims. (Cl. 146—83)

A machine for topping onions having a first conveyor for moving onions into an erection chamber formed by a tunnel-like enclosure. A second conveyor having spaced transverse rod members moves adjacent the ceiling of the tunnel-like enclosure having an opening into an amputation chamber. The rods of the second conveyor are spaced apart to allow tops of the onions to pass through the second conveyor but prohibit the onion bulbs from passing through the second conveyor to the amputation chamber. Located within the amputation chamber is a rotary shear operative to amputate the onion tops which project through the spaces between the rods of the second conveyor. A suction fan withdraws air from the housing whereby air flows upwardly through the erection chamber to erect the onions and carry the onions upwardly into engagement with the second conveyor.

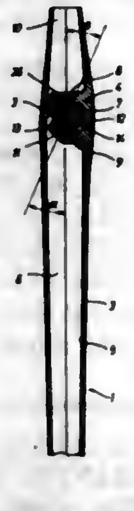


3,389,732
FORAGE CHOPPER
Thomas W. Waldrop, Ronks, Pa., assignor to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware
Filed Oct. 5, 1966, Ser. No. 584,440
3 Claims. (Cl. 146—117)



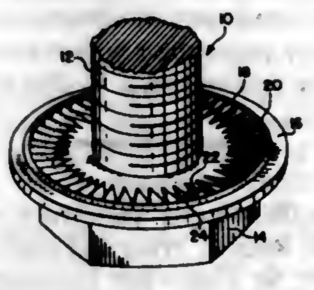
1. In combination with a forage chopper cutterhead having a central shaft and knives mounted on said shaft, said knives having cutting edges rotatable in a predetermined circular path about the axis of said shaft, a housing having a pair of planar parallel side walls between which said shaft extends, said housing having a forward inlet, a rearward outlet and a separable arcuate peripheral wall disposed between said inlet and outlet and extending between said side walls, said arcuate wall having a position requirement of being parallel and closely spaced relative to said predetermined circular path of rotation of said cutting edges, improved means for mounting said arcuate wall on said side walls comprising, a pair of arcuate guide plates, each of said guide plates having an arcuate outer surface whose radius of curvature exceeds that of the circular path of travel of said cutting edges by a predetermined amount corresponding to the required position of said arcuate wall, means fixedly mounting said guide plates respectively on the inward sides of said parallel side walls with said arcuate surfaces concentric relative to the axis of said cutterhead shaft, and means interengaging said arcuate wall and said side walls and forcing said arcuate wall radially inwardly against said arcuate surfaces to clamp said arcuate wall in its required position.

3,389,733
FLEXIBLE CONTAINER OF PLASTIC MATERIAL
Karl-Heinz Siegel, Schwaig via Nurnberg, Germany, assignor to ASF Gleitverschluss G.m.b.H., Nurnberg, Germany
Filed June 6, 1966, Ser. No. 555,378
Claims priority, application Germany, July 7, 1965, S 98,059
3 Claims. (Cl. 150—3)



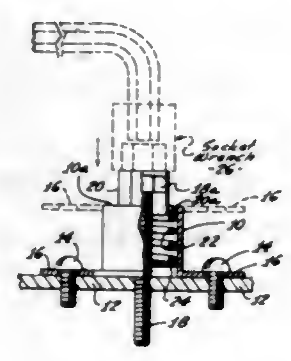
A closure for a bag of plastic material of the type comprising complementary profiled strips longitudinally provided within the bag opening and which can be closed with one another by pressure and which can be opened at the opening of the bag by pulling apart the walls thereof. The improved closure comprises one strip having a cross section including only one hook facing the interior of the bag. The complementary strip is secured to the other wall of the bag and includes a double strip comprising a first strip portion having a flat surface resting against the back of the hook when the strips are closed together and a second strip portion provided with a hook profile which is complementary to and engages when closed the hook of the first-mentioned strip.

3,389,734
LOCKING AND SEALING SCREW
Charles E. Gutshall, Roselle, Ill., assignor to Illinois Tool Works Inc., Chicago, Ill., a corporation of Delaware
Filed Mar. 28, 1967, Ser. No. 626,607
7 Claims. (Cl. 151—37)



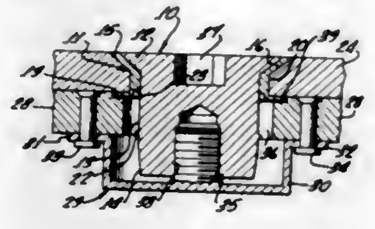
A locking sealing threaded fastener having a plurality of teeth, integral with the clamping face of the head, and biased in a direction to resist removal of the fastener with an annular ring defining the radial extremities of said teeth and projecting axially from the clamping surface a distance equal to or slightly greater than said teeth.

3,389,735
RETAINER ASSEMBLY
Jack Katz, 6630 W. Colgate Ave., Los Angeles, Calif. 90048
Filed July 17, 1967, Ser. No. 653,711
4 Claims. (Cl. 151—41.76)



A retainer assembly for preventing rotational movement of a bolt, comprising an outer housing for attachment to a work piece and a spring biased socket element having configurations common with an aperture in the housing and the head of the bolt. The socket is movable into and out of engagement with bolt head against the bias of the spring so as to allow or prevent rotation of the bolt.

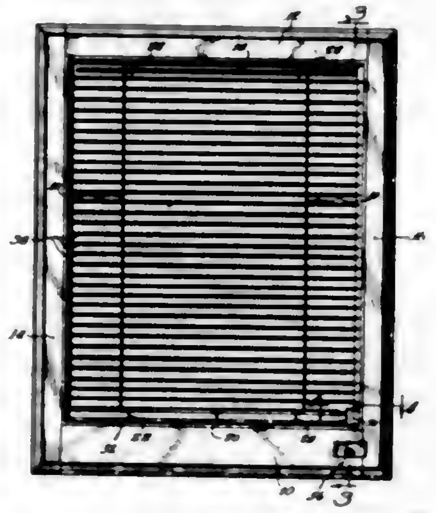
3,389,736
FASTENER RETAINER ARRANGEMENT
Bulent Gulistan, Malibu, Calif., assignor to Deutsch Fastener Corp., Los Angeles, Calif., a corporation
Filed May 26, 1966, Ser. No. 553,240
6 Claims. (Cl. 151—69)



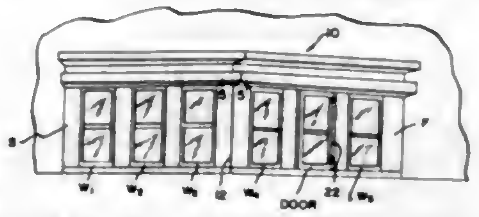
A fastener device in which a sleeve is received in an opening in a workpiece, the sleeve having an outwardly projecting portion at either end overlapping surfaces of the workpiece to retain the sleeve within the opening. A nut is received in the sleeve, the nut having an outwardly projecting head at one end and a threaded opening extending inwardly in the other. An integral outwardly projecting portion on the shank of the nut beyond the sleeve is dimensioned to interferingly engage with the sleeve, thereby preventing withdrawal of the nut from the sleeve so that it is retained by the sleeve to the workpiece.

3,389,737
VENETIAN BLIND FOR DOUBLE GLAZED SASH
Bruce C. Arnold, Racine, Wis., and Robert S. Evers, Pella, Iowa, assignors to Rolscreen Company, Pella, Iowa, a corporation of Iowa
Filed Dec. 7, 1965, Ser. No. 512,098
2 Claims. (Cl. 160—107)

A Venetian blind to be mounted between two panes of a double glazed sash. The head and sill slats of the blind are designed for pivoting on hooks carried by upper and lower supporting members, and tape ladders for the blind slats have knotted ends coacting with slots to retain the tape ladders assembled relative to the head and sill slats.

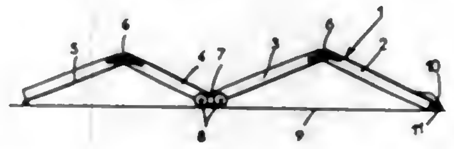


3,389,738
WINDOW SHADE APPARATUS
Leo Roth, 11950 S. 71st Ave., Palos Heights, Ill. 60463
Filed Feb. 23, 1967, Ser. No. 618,143
3 Claims. (Cl. 160—120)



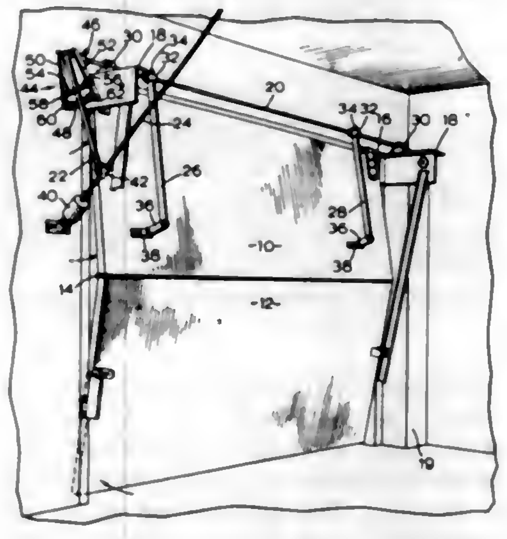
This invention relates to window shades and more particularly to a retractable window shade installation for simultaneously raising and lowering the shades of a plurality of windows arranged in a horizontal series such as in sun rooms or enclosures for patios, porches and the like. The windows and door each have a roller mounted by end brackets to the framework above each window and to the top of the door on the exterior of the room. A flexible shade is wound on each roller for raising and lowering in response to rotation of the roller. The invention relates principally to means for connecting the rollers of adjacent windows and the door roller for simultaneous rotation to simultaneously raise and lower all the shades of the installation. The structure includes a coupling connecting the rollers of the adjacent windows for simultaneous rotation and a universal means connecting the roller of the door to the roller of the window adjacent the hinged edge portion of the door for simultaneous rotation. A drive rod is rotatably mounted above the rollers out of the path of movement of the door and is connected by appropriate gears to the rollers of the extreme opposite windows of the series for simultaneous rotation. A motor is mounted on the interior of the room and has a drive shaft which extends through the room's framework in driving connection with one of the window rollers to rotate the same and thereby simultaneously rotate the remaining rollers of the windows and door to raise and lower all of the shades of the installation. One of the end brackets of one of the rollers comprises a gear box for receiving the drive shaft from the motor and to drivingly connect the same to the window roller supported by the bracket. The remaining end brackets of adjacent window rollers comprise coupling means with which the window rollers are readily disengageable such that each individual roller and the shade wound thereon may be removed for repair or replacement.

3,389,739
CLOSING DEVICE FOR HATCH COVERS AND THE LIKE
Henri Kummerman, Paris, France, and Urban Joseph Beas, Scotch Plains, N.J., assignors to MacGregor & Company (Naval Architects) Ltd., Monkseaton, Northumberland, England
Filed Feb. 20, 1964, Ser. No. 346,279
Claims priority, application France, Mar. 1, 1963, 926,518; June 19, 1963, 938,666; Jan. 28, 1964, 961,811
32 Claims. (Cl. 160—188)



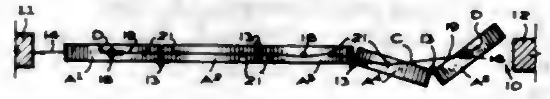
1. In combination with a hinge system pivotally interconnecting two hatch cover panel elements at least one of which is angularly movable with respect to the other between two end positions thereof, power-operated means supported by the panel elements for effecting pivotal movement of said elements in two directions, a resiliently loadable device for assisting pivotal movement of at least said one element in at least one direction during at least one portion of its relative rotation, comprising at least one torsion spring assembly consisting of at least two substantially straight torsion bars adapted to jointly store energy during at least one portion of said pivotal movement in the opposite direction, at least one of which is tubular whereas the other is rotatably mounted and extends coaxially within said outer tubular bar, both bars having their opposite ends each one integral with a transverse arm-like member which are connected to said elements respectively at least in a relative end position thereof and at least during twisting of said bars.

3,389,740
DOOR OPERATORS
Allan Moyer Buehler, 160 Fountain St., Preston, Ontario, Canada
Filed Feb. 7, 1966, Ser. No. 525,586
1 Claim. (Cl. 160—188)



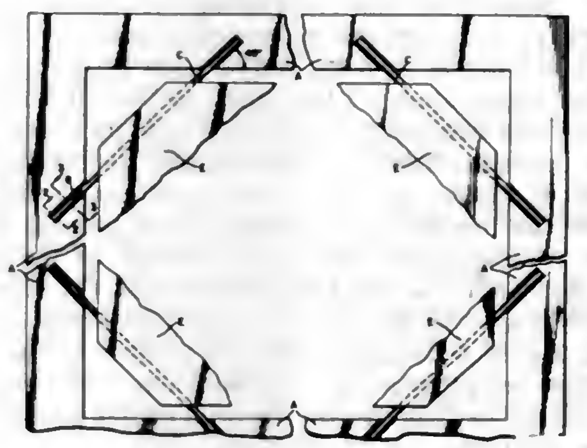
This invention provides an operator for a two-piece garage or the like door which is characterized by a transverse shaft across the top of the doorway opening, a link member fixed at its upper end to the shaft and at its lower end to the top section of the door and a lever arm connected to the shaft at one side of the doorway opening in such a way that the door can be opened by swinging the lever arm; the arrangement also including a reversible electric motor for swinging the lever arm and a safety device for interrupting current to the electric motor should something interfere with the opening or closing of the door.

3,389,741
FOLDING PARTITION
Rufus C. Bean, P.O. Box 25, Clipper Mills, Calif. 95930
Filed Sept. 20, 1966, Ser. No. 580,687
4 Claims. (Cl. 160—199)



A folding partition having a plurality of upright panels that are hinged together so that the panels may be moved between folded and fully extended positions, with a non-stretchable cable secured to these panels so as to hold the latter in straight alignment with one another, when the partition-forming panels are fully extended, and further holding the joints tight between adjacent panels.

3,389,742
UPHOLSTERY SUPPORTS
Francesco Lurani Cernuschi, Repton, England, assignor to Pirelli Limited, London, England, a British company
Filed Apr. 4, 1966, Ser. No. 539,897
Claims priority, application Great Britain, Apr. 21, 1965, 16,863/65
3 Claims. (Cl. 160—371)



An upholstery support of elastomeric material is carried under tension within a planar frame. The frame is made up of four or more elements attached at their ends forming corners. Each element adjacent its attached end has a slot in the planar face thereof. The adjacent corner slots are in alignment across the corner and receive the ends of a rod extending thereacross. The medial portion of the rod is secured to the upholstery support in supporting relation thereto and under tension therewith.

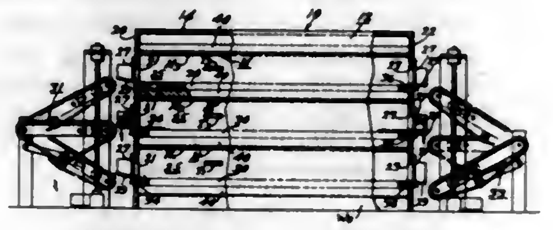
3,389,743
METHOD OF MAKING RESINOUS SHELL MOLDS
Evgeny Ilich Morozov, Leninsky prospect 40, kv. 279; Alexei Mikhailovich Khromov, Tankovy proezd, poselok "Leninets," 2/8, kv. 1; Anatoly Ivanovich Ivanov, 13 Parkovaya ulitsa 38, Korpus 1, kv. 52; and Alexander Sergeevich Goloschekov, 1 Juzhno-Portovy proezd 18/60, kv. 50, all of Moscow, U.S.S.R.
No Drawing. Filed July 12, 1965, Ser. No. 471,457
3 Claims. (Cl. 164—43)

A method of making molds, for example, foundry molds, by depositing a graphite-containing suspension on the pattern to be cast. The suspension comprises a solution of a resol resin, for instance, phenolbaryta resin, which upon calcining decomposes producing elementary carbon. Apart from a solution of the resol resin, the suspension may contain powdered titanium as a carbide-forming element enhancing the strength and refractoriness of the mold.

3,389,744
FREEZING METHOD AND APPARATUS

Joseph G. Sullivan and Lawrence A. Soffa, Pueblo, Colo., and John R. Eagleson, Oreland, Pa., assignors to Acme Markets, Inc., Philadelphia, Pa., a corporation of Delaware

Filed May 18, 1966, Ser. No. 551,049
7 Claims. (Cl. 165—2)

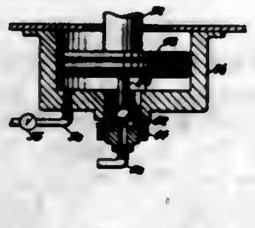


An improved method and apparatus for freezing food items especially food products contained in packages having a transparent cover comprising cooling means, for example, a freezer plate on which the side of the package remote from the transparent cover engages and maintains the cooling means at a temperature substantially below the freezing temperature of the product and heating means spaced from and confronting the transparent cover adapted to maintain the temperature adjacent the cover slightly above the freezing temperature of the product so that the temperature of the outer surface of the product is above the dew point of the surrounding air at the top of the package. After a predetermined freezing cycle, the product is frozen by conduction to the freezer plate. Further by this method the moisture in the package migrates to the coldest point, that is, the bottom of the package with the result that no frost develops on the transparent top cover of the package and additionally it has been found that in accordance with the process of the present invention dehydration and discoloration of the food product is eliminated and hence, the product has a substantially longer shelf life.

3,389,745
HYDROSTATIC BEARING AND AXIAL ADJUSTING MEANS FOR THE SIMULTANEOUS ROTARY AND AXIAL MOVEMENT OF THE ROTOR IN A ROTARY REGENERATIVE AIR PREHEATER

Ira H. Wahlbeck, Wellsville, N.Y., assignor to The Air Preheater Company, Inc., Wellsville, N.Y., a corporation of New York

Filed Aug. 23, 1966, Ser. No. 580,557
4 Claims. (Cl. 165—9)

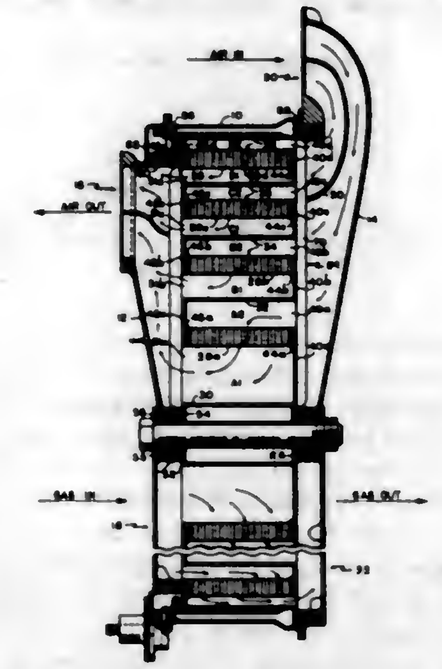


A rotary regenerative heat exchanger having a rotor mounted on a hydraulically actuated piston that may be simultaneously rotated and moved axially thereby to provide optimum clearance space between the rotor and its surrounding housing.

3,389,746
ROTARY REGENERATOR HAVING CONCENTRIC CYLINDRICAL MATRICES

Salvatore Straniti, Orange, and Richard E. Kish, Trumbull, Conn., assignors to Avco Corporation, Stratford, Conn., a corporation of Delaware

Filed June 21, 1967, Ser. No. 647,664
3 Claims. (Cl. 165—9)

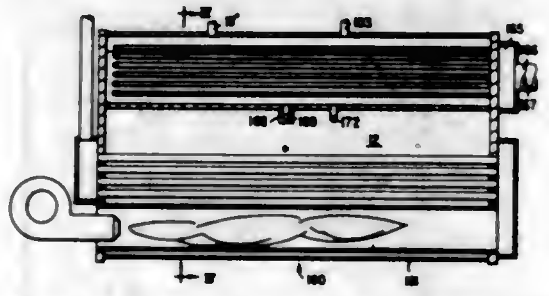


A heat exchanger is constructed with a plurality of concentrically positioned rotating matrices. Each matrix is divided circumferentially into a plurality of segments and the mounting for the matrices provides for the radial flow of fluids therethrough. The hot and cold gases passing through the heat exchanger are maintained separated, except for minimum crossover, by means of face contact running seals.

3,389,747
HEATING AND COOLING SYSTEM

Louis H. Leonard, Jr., De Witt, N.Y., assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware

Original application June 23, 1964, Ser. No. 377,314, now Patent No. 3,289,745, dated Dec. 6, 1966. Divided and this application May 23, 1966, Ser. No. 552,257
1 Claim. (Cl. 165—39)



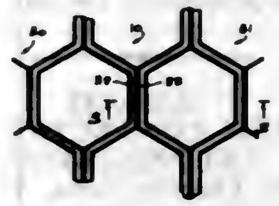
A heat exchanger for circulating heating medium for heating a load. The heating medium is heated by steam. A trough surrounds a tube bundle and contains water about the tube bundle for regulating the heating capacity of the tube bundle. The amount of water is varied to regulate the heating capacity of the heat exchanger.

3,389,748
CELLULAR CORE INCLUDING PERIMETER PASSAGEWAY MEANS

Aaron L. Hitchens, P.O. Box 456, Northridge, Calif. 91324

Filed June 28, 1966, Ser. No. 561,093
6 Claims. (Cl. 165—170)

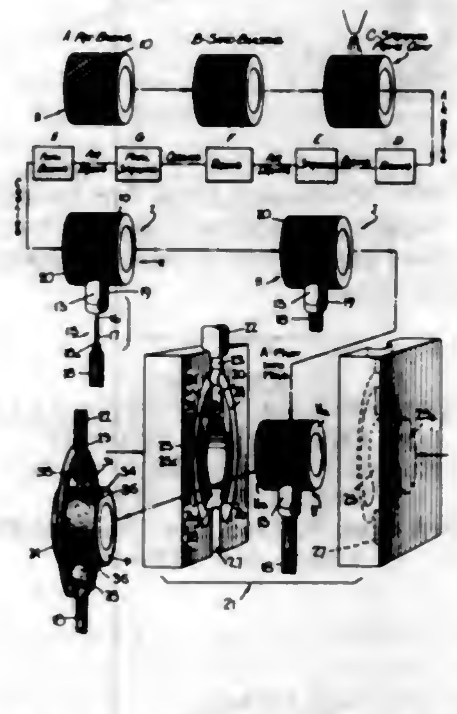
A plurality of hollow strips are secured together and are formed into closed cells by displacing each strip on each side of a median plane. Each closed cell is bounded on its perimeter by passageways which are adapted to convey a fluid as in a heat exchanger or to have a temperature reacting plastic therein as in a structural support.



3,389,749
PROCESS FOR MOLDING FLUOROCARBON RESIN MATERIAL TO AN ARTICLE

Edward J. Towns, 53 Mount Haven Drive, Livingston, N.J. 07039, and Stephen Rudowsky, Sr., Pine Brook Road, Towaco, N.J. 07082

Filed June 15, 1964, Ser. No. 374,977
10 Claims. (Cl. 156—245)



A process is described for applying a layer of FEP-fluorocarbon resin to an article by coating the article with a film of FEP-fluorocarbon resin and molding a layer of FEP-fluorocarbon resin to the film coated on the article. Also disclosed is an article to which the above-described process has been applied after first applying a film of TFE-fluorocarbon to the article.

3,389,750
PROCESS FOR MAINTAINING THE PERMEABILITY OF CLAYEY PETROLIFEROUS FORMATIONS DURING WATERFLOODING

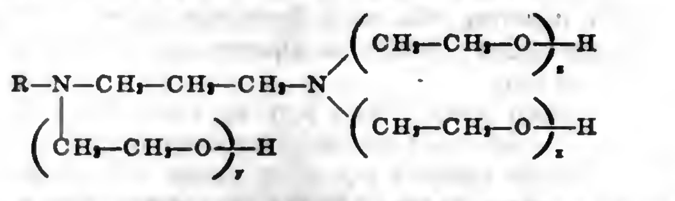
Bruce F. Bohor, Ponca City, Robert B. Cronin, Blackwell, and Carroll F. Knutson, Ponca City, Okla., assignors to Continental Oil Company, Ponca City, Okla., a corporation of Delaware

Filed Sept. 30, 1964, Ser. No. 400,423
10 Claims. (Cl. 166—9)

1. A process for maintaining permeability while waterflooding a petroliferous subterranean formation which comprises injecting into the formation an effective amount of an aqueous solution comprising:

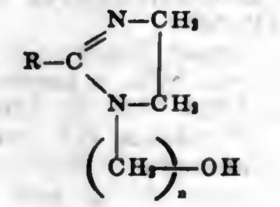
from about 100 p.p.m. to about 500,000 p.p.m. of a water-soluble potassium salt;

from about 1 p.p.m. to about 5,000 p.p.m. of a relatively high molecular weight, cationic, trimethylene diamine having the general structural formula

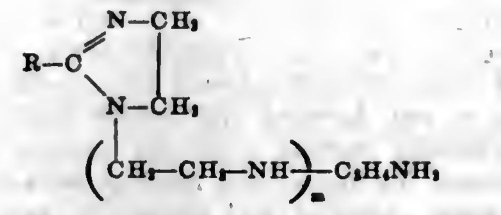


where R is an alkyl group derived from a fatty acid and contains from about 12 to about 20 carbons atoms, and $x+y+z$ equals from about 5 to about 25; and

from about 1 p.p.m. to about 25 p.p.m. of a relatively high molecular weight imidazoline selected from the group consisting of imidazoline compounds having the general structural formulae



and



where R is an alkyl group derived from a straight chain fatty acid and containing from about 14 to about 22 carbon atoms, *n* is an integer of from 1 to 3 and *m* is an integer of from 0 to 2.

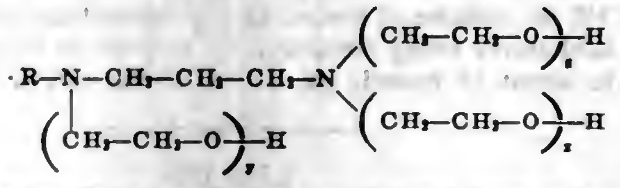
4. A process for waterflooding a petroliferous formation which comprises:

(a) injecting into the formation, a concentrated spearhead of aqueous solution comprising:

water;

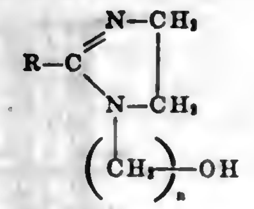
from about 5,000 p.p.m. to about 500,000 p.p.m. of a water-soluble potassium salt;

from about 5 p.p.m. to about 5,000 p.p.m. of a high molecular weight, cationic, trimethylene diamine having the structural formula

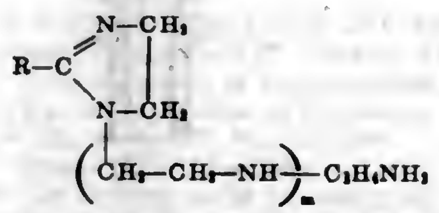


where R is an alkyl group derived from a fatty acid and contains from about 12 to about 25 carbon atoms and where $x+y+z$ equals from about 5 to about 25; and

from about 5 to about 25 p.p.m. of an imidazoline compound selected from the group consisting of the structural formulae



and



wherein R is a hydrocarbon group derived from a straight chain fatty acid and containing from about 14 to about 22 carbon atoms, *n* is an integer of from 1 to 3 and *m* is an integer of from 0 to 2;

(b) injecting into said formation after said aqueous spearhead solution, an aqueous solution comprising:
  water;
  from about 500 p.p.m. to about 5,000 p.p.m. of said water-soluble potassium salt;
  from about 5 p.p.m. to about 200 p.p.m. of said trimethylene diamine compound; and
  from about 5 p.p.m. to about 15 p.p.m. of said imidazoline compound.

3,389,751
METHOD AND COMPOSITION FOR CONSOLIDATING INCOMPETENT OIL-CONTAINING FORMATIONS

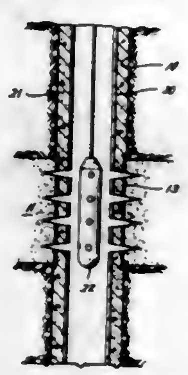
Bobby G. Harnsberger, Houston, Tex., assignor to Texaco Inc., New York, N.Y., a corporation of Delaware
No Drawing. Filed Nov. 29, 1966, Ser. No. 597,556
10 Claims. (Cl. 166—12)

1. A method of treating an oil-containing incompetent formation penetrated by a well bore to prevent the movement of unconsolidated sand particles from said incompetent formation to the well bore as the oil is recovered from said formation which comprises forming a slurry of sand, cement and a sufficient amount of water to wet the sand and cement particles, suspending the resulting wetted sand and cement particles in a petroleum fraction carrier medium thickened with a gelling agent, injecting said suspension against the unconsolidated formation at a pressure sufficient to force the suspension against the unconsolidated formation, permitting the cement to set to form a permeable cement, and recovering oil from said formation through the formed permeable cement.

8. A sand-cement slurry suspended in a gelled petroleum oil carrier medium fraction for use in forming a permeable cement barrier film against a sand-containing, unconsolidated-oil producing formation which comprises from about 3 to about 12 parts by weight of sand particles having an average mesh size of from about 20 to about 80 mesh, from 0.8 to about 0.9 part by weight of water and from 1.3 to 1.9 parts by weight of a petroleum oil fraction each per part by weight of cement and 5% by volume of the oil of a polybutylene gelling agent, said slurry being present in an amount of from about 10 to about 18 pounds per gallon of the carrier medium.

3,389,752
ZONE PROTECTION

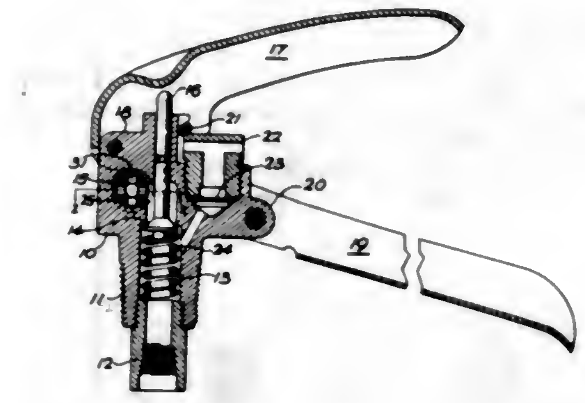
Maurice P. Lebourg, Houston, Tex., assignor, by mesne assignments, to Schlumberger Technology Corporation, Houston, Tex., a corporation of Texas
Filed Oct. 23, 1965, Ser. No. 503,471
4 Claims. (Cl. 166—46)



Methods for completing wells having permeable and porous formation zones which may be damaged by invasion of cement including steps of forcing an impermeable lining into intimate contact with filter cake on the formation wall, permitting differential sticking of the lining on the wall, then running and cementing casing in the well bore, and perforating through the casing, cement and lining.

3,389,753
SWIVEL TUBE CONNECTION FOR FIRE EXTINGUISHERS

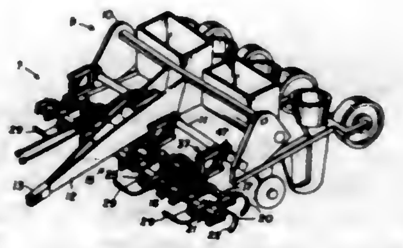
John W. Howard, Charles Town, W. Va., assignor to Automatic Sprinkler Corporation of America, Youngstown, Ohio, a corporation of Ohio
Filed Dec. 30, 1965, Ser. No. 517,622
3 Claims. (Cl. 169—30)



A swivel tube connection for a fire extinguisher head positioning, supporting and establishing communication between a valved passageway in said fire extinguisher head and said swivel tube.

3,389,754
HARROW FOR USE WITH FARM PLANTING EQUIPMENT

Ronald J. Allison, 108 S. 4th St., Wolcott, Ind. 47995
Filed Sept. 9, 1965, Ser. No. 486,092
1 Claim. (Cl. 172—389)

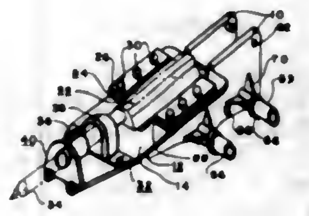


A harrow for attachment to farm planting equipment. The harrow has skid runners supporting a horizontal bar with depending spaced teeth, the harrow being attached to the farm planting equipment through an adjustable attachment device.

3,389,755
DEMOLITION TOOL CRADLE

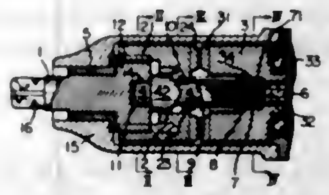
Louis A. Grant, 7886 Saltsburg Road, Allegheny County, Pa. 15239
Filed Jan. 7, 1966, Ser. No. 519,211
11 Claims. (Cl. 173—44)

A cradle is disclosed for supporting a demolition tool upon a conventional demolition or excavating machine. The cradle is constructed for securance to the demolition machine boom structure in a variety of modes in order to allow a full range of angular adjustment of the cradle relative to the boom structure. The cradle, according to the invention, is provided with a number of pivot structures and a number of actuating rod connection means. By connecting the boom pivot and actuating rod to selected ones of the cradle pivots and rod connection means the cradle is capable of differing ranges of angular adjustments relative to the boom structure but can be manipulated in the usual manner from conventional boom structure in each range of adjustment. Accordingly, a full range of angular adjustment can be attained without the provision of specialized and complicated boom structure for supporting and manipulating the tool cradle.



3,389,756
IMPACT WRENCH

Mitsugi Kawamoto, 23 Mizuhai, Kawachi-shi, Osaka-fu, Japan
Filed Oct. 21, 1965, Ser. No. 499,302
Claims priority, application Japan, Aug. 9, 1965, 40/48,058
7 Claims. (Cl. 173—93.5)

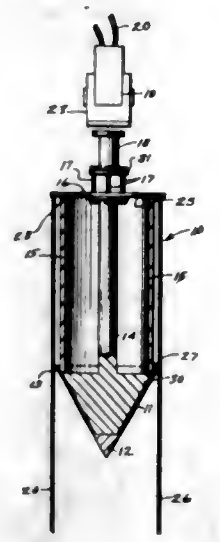


An impact wrench has a rotating hammer with at least one impact jaw, a rotatable anvil coaxial with and spaced from the hammer, a central shaft extending between the hammer and anvil and rotatable with the hammer and a dog surrounding the shaft between the anvil and the hammer. The dog has at least one impact jaw and is rotatable with the anvil while being movable axially between a first position in which the jaw on the dog is clear of the dog on the hammer and a second position in which the jaw on the dog is engageable with the jaw on the hammer. Spring means biases the dog to said first position and cam means is provided for moving the dog axially to said second position upon predetermined rotational movement of said anvil and dog relative to the hammer. The jaw on the dog is thereby brought into position for impacting by the jaw on the hammer.

3,389,757
PIPE CASING DRIVING MACHINE

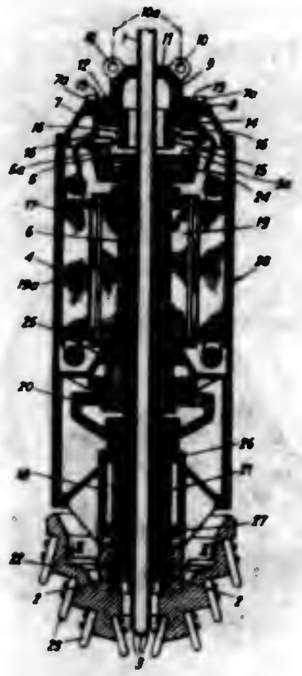
Harry I. Teter, Rte. 1, Box 9, New Ringgold, Pa. 17960
Filed Oct. 24, 1965, Ser. No. 504,758
2 Claims. (Cl. 175—22)

A machine for driving a pipe casing, the machine including a conical driving head of solid metal against the rear end of which a pipe casing may be positioned, the opposite end of the pipe casing being secured by a plate fastened to one end of a shaft that is enlarged at its other end to form a solid metal filler for the conical driving head. In summary, a driving force from a hammer toward the plate is transmitted through the shaft to the driving head at the opposite end of the shaft.



3,389,758
DEEP-BORING APPARATUS INCORPORATING AN ELECTRICAL BORING UNIT

Markus Bühler, Aeschi, near Spiez, Switzerland
Filed Oct. 20, 1965, Ser. No. 498,320
1 Claim. (Cl. 175—104)

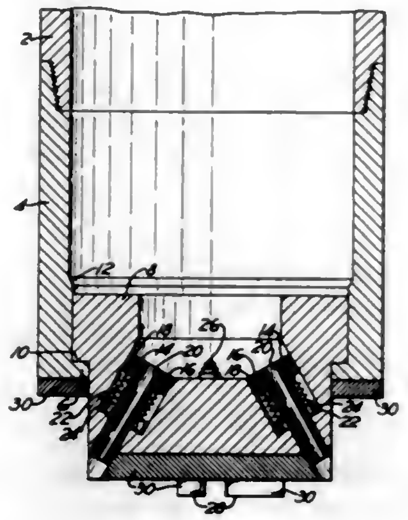


Deep-boring apparatus comprising bore hole tubing means secured against rotation and an electrical boring unit, wherein the electrical boring unit can be raised to the surface for the purpose of changing the boring head without removing the tubing means. The electrical boring unit is removably mounted upon the tubing means and is provided with eyelets to which are attached tension cable means for raising the electrical boring unit when desired.

3,389,759
RETRIEVABLE PISTON ADVANCE JET BITS

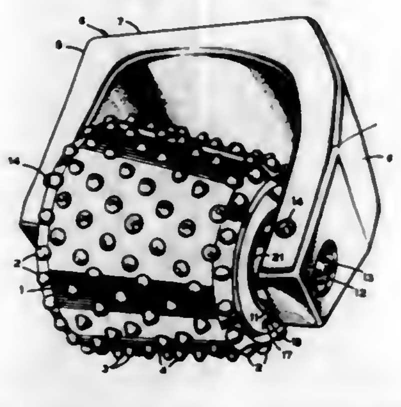
Ernest A. Mori, Glenshaw, and Paul W. Schaub, Verona, Pa., assignors to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware
Filed Nov. 16, 1966, Ser. No. 594,899
7 Claims. (Cl. 175—258)

A retrievable bit for drilling wells by means of high-velocity streams of abrasive-laden liquid in which a nozzle holder which can be pumped down drill pipe engages an inwardly extending shoulder at the lower end of the drill pipe to hold the nozzle holder within the drill pipe. Outwardly slanting nozzle wells in the nozzle holder receive nozzles which are held in an upper withdrawn position by resilient means. When the abrasive-laden liquid is pumped down the drill pipe during the drilling operation, the nozzles are forced down into the wells to direct abrasive-laden liquid against the bottom of a borehole at a distance from the center of rotation of the drill bit to cut a borehole of larger diameter than the drill pipe.



3,389,760
ROLLING CUTTERS FOR ROCK FORMATIONS MOUNTED ON SIMPLE BEAM BEARINGS

Wilford V. Morris, Houston, Tex., assignor to Hughes Tool Company, Houston, Tex., a corporation of Delaware
Filed Sept. 1, 1966, Ser. No. 576,650
3 Claims. (Cl. 175—371)



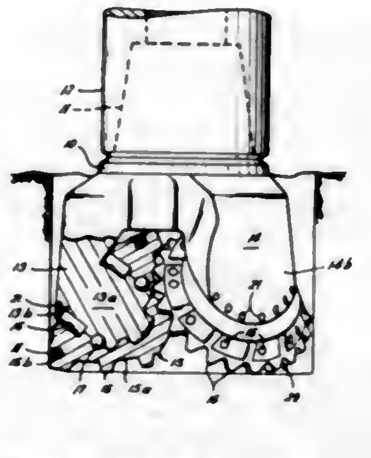
A sealed and lubricated assembly wherein a load pin is the central member and extends between two saddle arms, each end being received in an opening in one of the arms. An inner bearing in the form of a bushing fits snugly over the load pin, and is prevented from rotating by a shoulder fit with the inside surface of one or both of the saddle arms. The cutter, in the form of an approximately cylindrical shell having cutting structure on its outer surface, is rotatably mounted on the inner bearing and is fixed axially thereon by a thrust element of the bearing between the two members.

In this assembly the load pin is locked to both saddle arms by transverse keeper pins, thereby avoiding the possibility of arm bending which could bind the cutter or could cause the inner bearing to disengage from one of the saddle arms. A wear bushing fits between the end of the load pin and the opening in each saddle arm so that such openings do not become wallowed out, making the saddle reuseable with many cutter assemblies. Additional saddle arm protection is provided by the outward radial projection of the cutter and inner bearing, beyond the corresponding outward projection of the outer saddle arm.

The seal rings are interposed between cutter and inner bearing member at opposite ends of the bearing, and such seals are protected from erosion by the drilling fluid and cuttings, at one end by a labyrinth and at the other by a protective washer. The seal rotates with the cutter and makes only double line sealing contact with the inner bearing.

3,389,761
DRILL BIT AND INSERTS THEREFOR

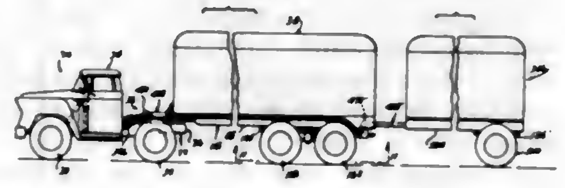
Eugene G. Ott, Dallas, Tex., assignor to Dresser Industries, Inc., Dallas, Tex., a corporation of Delaware
Filed Dec. 6, 1965, Ser. No. 511,954
11 Claims. (Cl. 175—374)



A rotary drill bot including a rolling cutter having sintered metallic carbide inserts located in the cutter surface. The inserts include a plurality of alternate ridges and valleys on the side surface thereof that are sized to engage the walls of the holes in the rolling cutter whereby the inserts are retained in the rolling cutter against both longitudinal and rotational movement relative to the cutter.

3,389,762
POWER-OPERATED MECHANICAL STEERING APPARATUS FOR TRAILERS AND SEMI-TRAILERS

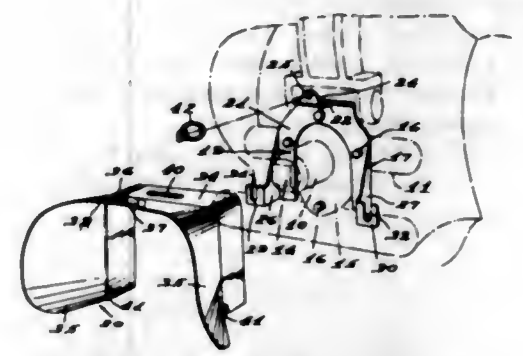
Anthony V. Mandekic, 1549 Rendall Place, Los Angeles, Calif. 90026
Filed Aug. 19, 1966, Ser. No. 573,615
9 Claims. (Cl. 180—79.2)



Power steering means for a wheeled vehicle having a chassis, means connecting and supporting said chassis on said wheels disposed, respectively, on opposite sides of said chassis and means connected to each of said wheels to change the angularity thereof relative to said chassis to effect a steering of said vehicle, said connected means including axles mounting said wheels for rotation thereon and a steering lever for each axle, means mounted on said chassis for selective movement transversely thereof in either direction relative thereto, hydraulic power means connected with and extending between said steering levers and said chassis, valve means for each of said hydraulic power means, valve-control means operatively-connected with said selectively-movable means, said valve-control means controlling fluid flow to and from said hydraulic power means actuating said hydraulic power means to move said steering levers and consequently said wheel axles to effect steering of said vehicle in response to movement of said power steering means, and a source of fluid under pressure connected with said valve means, a cylindrical member mounted for rotation on said chassis, lever means having an end fixedly-secured on said cylindrical member and a second end connected to said selectively-movable means whereby movement of said selectively-movable means causes said cylindrical member to rotate in the direction of the movement, and a connection between said cylindrical member and said valve control means whereby to effect control of said valve-control means.

3,389,763
GUARD FOR TRACTOR POWER TAKEOFF SHAFT

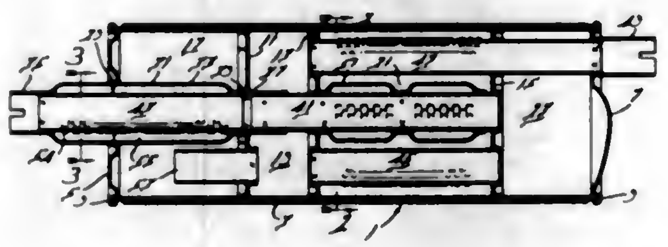
Harold W. Meinert, Birmingham, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Mar. 31, 1966, Ser. No. 539,141
2 Claims. (Cl. 180—82)



A quick detachable tractor PTO shaft guard has an inverted U-shaped flange member attached to the tractor and extending about the top and sides of the shaft. A U-shaped guard member interfitting with the flange member extends outwardly from the wall of the tractor about the tractor about the top and sides of the shaft. The interfitting portions of the flange and the guard include an upstanding tab of the flange extending through a slot in the guard member and a quick detachable pin connector extends through the hole in the tab to hold the parts in assembled relation.

3,389,764
MUFFLER WITH EXTENDED CHAMBER

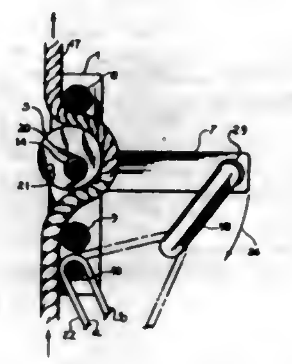
Leo J. Kelso, Michigan Center, Mich., assignor to Walker Manufacturing Company, Racine, Wis., a corporation of Delaware
Filed July 18, 1966, Ser. No. 565,828
3 Claims. (Cl. 181—48)



An exhaust gas muffler has a shell that extends around the inlet tube outside of the housing and acts with perforations in the tube to form a silencing chamber outside the housing. The shell extends to and is connected to an internal partition and has reduced ends that serve as bushings for attachment to other conduits.

3,389,765
CAM TYPE ROPE CLAMP

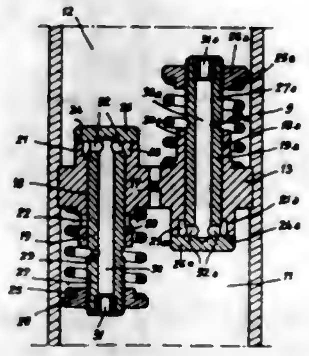
William I. Pressley, Sr., 8375 Elati St., Adams County, Colo.
Filed Oct. 18, 1965, Ser. No. 497,315
4 Claims. (Cl. 188—65.5)



A mechanical safety device comprised of a pair of parallel posts connected by side rails and an eccentrically-mounted cam pivotably mounted between the side rails intermediate the pair of posts. The cam has an attached control lever permitting an operator to control its eccentric motion and selectively close the space between cam and one post. The device is adapted to be used with non-metal rope to facilitate either descent or ascent when used singly or in pairs respectively. The eccentric cam is spring biased towards a clamping direction and attachment means are provided.

3,389,766
HYDRAULIC SHOCK ABSORBERS WITH COMMUNICATION SLIDE-VALVES

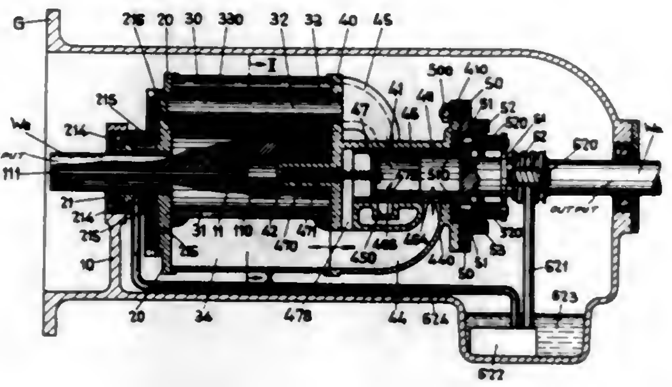
Edmond Henry-Biabaud, Paris, France, assignor to Societe Anonyme Andre Citroen, Paris, France, a corporation of France
Filed Dec. 1, 1966, Ser. No. 598,350
Claims priority, application France, Dec. 7, 1965, 41,264, Patent 1,467,818
3 Claims. (Cl. 188—88)



A hydraulic shock absorber wherein two compartments are filled with a fluid and are separated by means of a partition. On the partition two valves are mounted operable in opposite directions. Each valve comprises a rod sliding in a guide cylinder and the rod is pierced longitudinally with a conduit opening into the compartment located at the open end of the rod. Transverse holes of two kinds are provided in the rods. The first kind connects the longitudinal conduit to the compartment located on the side of the valve head when the valve is lifted and the second connects the conduit to the compartment located on the side of the free extremity of the rod when the lift of the valve is less than a predetermined value. At least one hole of the second kind forms a supplementary passage which is closed by means of the lateral wall of the guide cylinder for the rod when the lift of the valve is lower than a predetermined value.

3,389,767
FLUID COUPLING

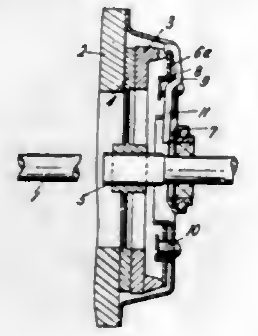
Jakob Burkart, 2 Allmendstr., 6048 Horw, Switzerland
Filed Dec. 15, 1966, Ser. No. 601,940
12 Claims. (Cl. 192—61)



Fluid coupling wherein a gear pump having meshing gears respectively carried by the input and output shafts circulates oil in a closed hydraulic circuit. The flow of oil is throttled if the input shaft is to transmit torque to the output shaft. Such throttling is effected by a regulating system including a first valve member which can be adjusted by hand to control the flow of oil to the suction side of the gear pump and by a second valve member which controls the flow of fluid from the pressure side of the pump and is responsive to changes in fluid pressure.

3,389,768
CLUTCH WITH LEVER-OPERATED DISC SPRING

Ronald Alan Cook, Hockley, England, assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Nov. 14, 1966, Ser. No. 594,023
8 Claims. (Cl. 192—70.27)

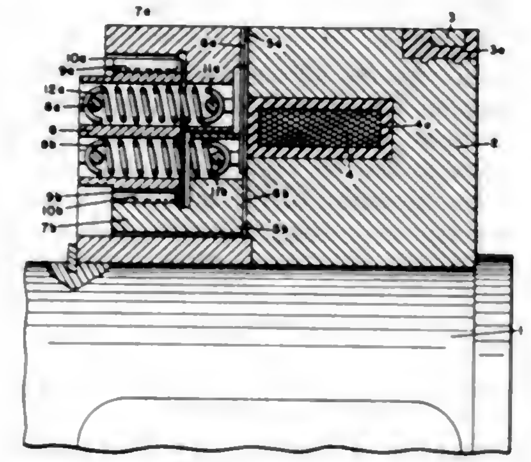


A clutch mechanism for a motor vehicle having, in its presently preferred embodiment, an annular flat clutch spring engaging relatively movable clutch input members. Clutch release levers engage the outer periphery of the spring and are constructed to bend it in a direction away from its engagement with one of the input members.

3,389,769
ELECTROMAGNETIC GEAR COUPLING HAVING MEANS PRECLUDING MALFUNCTIONING THEREOF

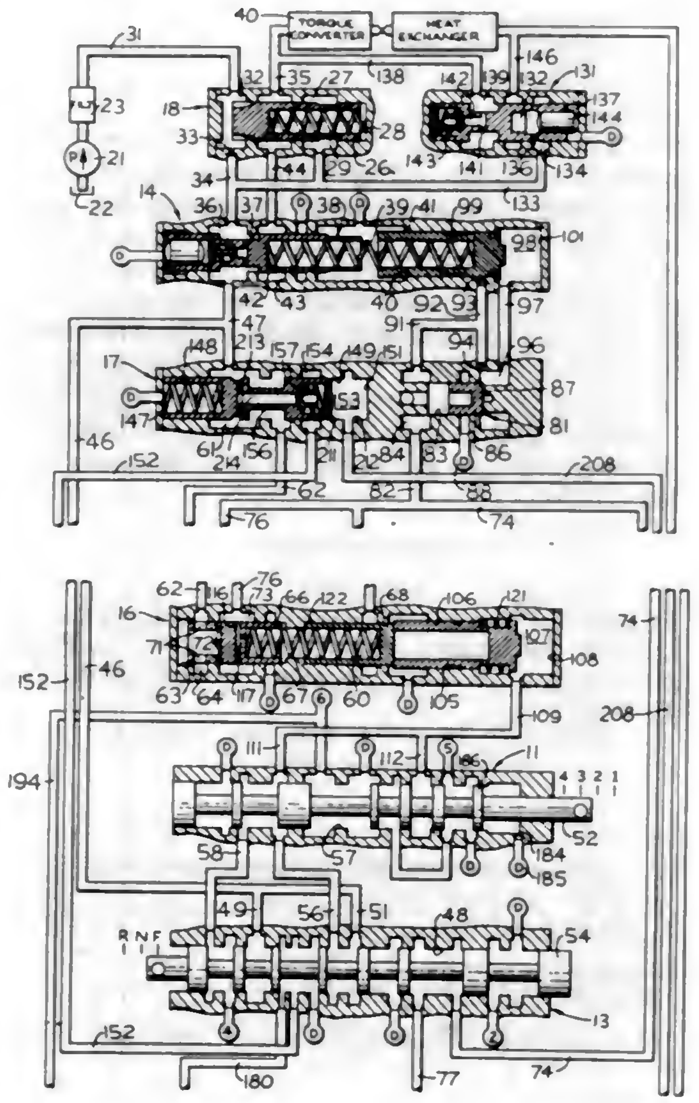
Dieter Heinz Bohm, Frondenberg, Germany, assignor to Maschinenfabrik Stromag G.m.b.H., Unna, Westphalia, Germany
Filed Feb. 18, 1966, Ser. No. 528,538
Claims priority, application Germany, Feb. 19, 1965, M 64,230
7 Claims. (Cl. 192—84)

Disclosed is an electromagnetic gear coupling including two pairs of spur gears angularly related in such a way that when one pair is in a position precluding torque-transmitting engagement thereof, the other pair is in a position allowing torque-transmitting engagement thereof, and vice versa.



3,389,770
TRANSMISSION HYDRAULIC CONTROL

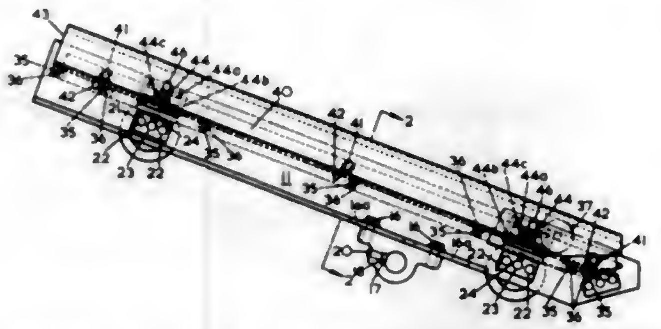
Kenneth F. Golan, Pekin, David S. Ohaver, Farmington, Shairyl I. Pearce, East Peoria, and Gerald D. Rohweder, Peoria, Ill., assignors to Caterpillar Tractor Co., Peoria, Ill., a corporation of California
Filed Feb. 1, 1966, Ser. No. 523,980
6 Claims. (Cl. 192—87.13)



A hydraulic control which effects drive ratio changes in a planetary transmission of a wheel loader provides for smoother shifts by increasing the fluid pressures applied to the clutches or brakes which are actuated to accomplish the shift at two different rates during the modulation period. The system further maintains a pressure differential between a pair of the clutches and brakes which increases during a first portion of the modulation period and remains constant during a subsequent portion thereof.

3,389,771
MAGAZINE FOR FEEDING A PLURALITY OF IDENTICAL ARTICLES TO A DELIVERY POINT

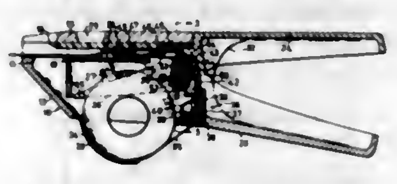
Charles P. Sanders, Foleshill, Coventry, England, assignor to Alfred Herbert Limited, Coventry, England
Filed Dec. 30, 1966, Ser. No. 606,075
Claims priority, application Great Britain, Jan. 19, 1966, 2,434/66
6 Claims. (Cl. 193—15)



A magazine for feeding a machine too successively with identical articles each having different diameters in different axial positions, has vertically and laterally adjustable tracks for rolling engagement by the different diameter portions, and also has adjustably spaced side walls for aligning the ends of the articles.

3,389,772
PROPORTIONAL SPACING TAPE EMBOSSING TOOL

Dick Sjogren, Bergsundsstrand 17, and Rolf Rickard Akeby, Norr Malarstrand 74, both of Stockholm, Sweden
Filed Dec. 13, 1966, Ser. No. 601,504
Claims priority, application Sweden, Dec. 17, 1965, 16,392/65
14 Claims. (Cl. 197—6.7)

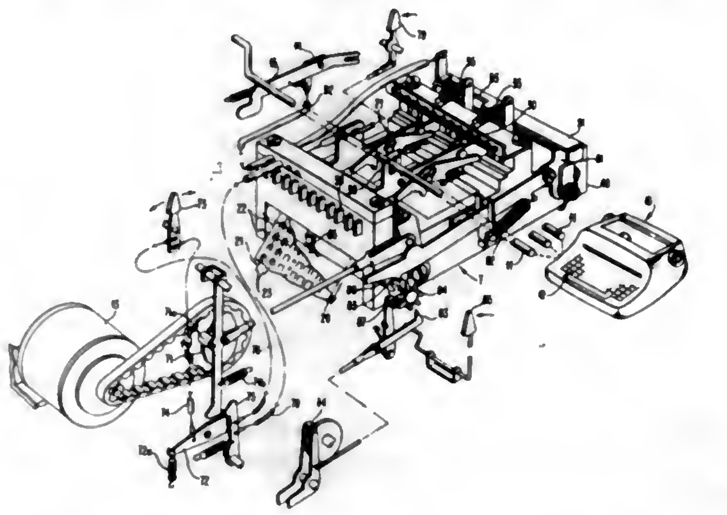


As shown in FIG. 1 in the enclosed drawing the tape **35** passes a first guide **36** in the handle **23** which is integral with the tool body **10**, and then a second guide **43** in the pivotal handle **24**. The second guide has a spring biased feeding knife **50** resting at an oblique angle against the tape. When squeezing the handles the feeding knife slides along the tape which is held stationary by a brake **40**, **41** at the first guide, and upon a subsequent release of the handles the feeding knife will slightly bite into the surface of the tape to withdraw it a feeding step against the action of the brake **40**, **41**.

3,389,773
PRINTER WITH MECHANICAL READ-WRITE TRANSDUCER AND SELECTIVELY RESETTABLE INFORMATION STORAGE TAPE

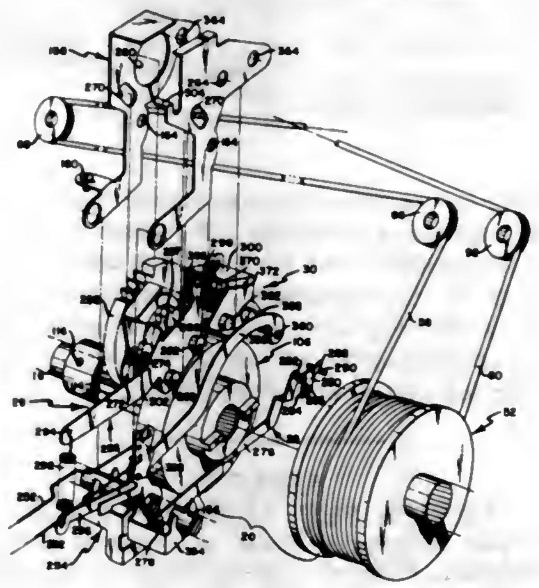
Donald C. Roller, Lexington, Ky., assignor to International Business Machines Corporation, Armonk, N.Y., a corporation of New York
Filed July 14, 1967, Ser. No. 653,365
8 Claims. (Cl. 197—20)

A unique record probe construction is provided to both read data from, and write data into a preperforated record tape. Advantage is taken of the precision quality of preperforated tape as well as its ability to receive information at a low energy level to minimize the cost of performing simple input/output tasks in a typewriter or similar printer.



3,389,774
TYPEWRITER CARRIAGE CONTROL

Joseph P. Barkdoll, Sun City Center, Fla., assignor to SCM Corporation, New York, N.Y., a corporation of New York
Filed Oct. 5, 1965, Ser. No. 493,138
5 Claims. (Cl. 197—64)

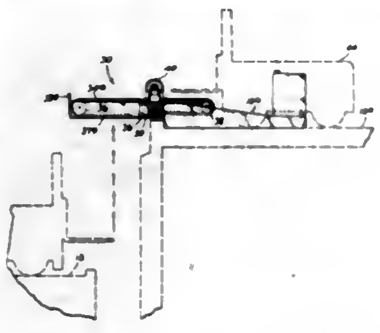


Typewriters or the like having a carriage movable transversely of a print point and a non-stepping carriage return mechanism operatively connected to a power source for moving the carriage in the return direction at a rate less than a normal carriage return rate. The non-stepping carriage return mechanism includes a continuously rotating gear train, a normally idle wheel connected to the carriage and a key operable linkage for frictionally coupling the rotating gear train to the wheel for moving the carriage in the return direction.

3,389,775
LOAD-HANDLING DEVICE

Henry Sause, Jr., 3829 NE. Flanders, Portland, Oreg. 97232
Filed Nov. 14, 1966, Ser. No. 594,196
8 Claims. (Cl. 198—1)

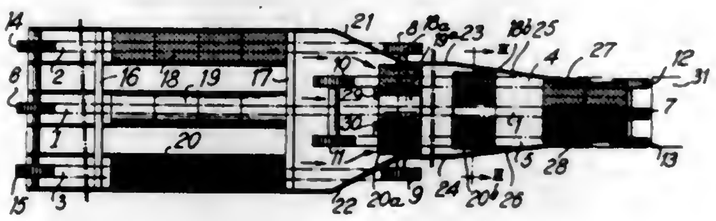
Portable load-support apparatus for supporting a load during transshipment between adjacent locations having different elevations including a pair of parallel, laterally spaced-apart, elongated ground-engaging beam members connected adjacent one set of ends by a cross member. A pair of parallel, laterally spaced-apart, elongated load-



support members join to the cross member and project outwardly therefrom to form cantilivers defining a load-support platform.

3,389,776
CONVEYOR APPARATUS AND MORE PARTICULARLY TO CONVEYORS FOR FOODSTUFF CONTAINERS

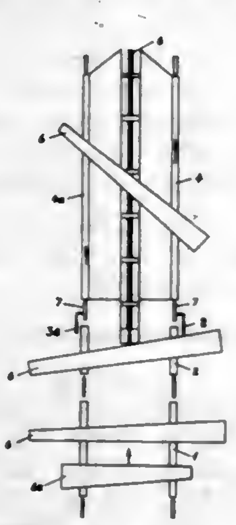
Pierre Carvallo, Amposta, Tarragone, Spain
Filed June 27, 1966, Ser. No. 560,525
Claims priority, application France, June 28, 1965, 22,543, Patent 1,449,779
9 Claims. (Cl. 198—30)



Container conveying apparatus in which a first conveyor axially transports a plurality of containers in endwise abutment in spaced rows to a second conveyor wherein a guide acts on the containers and juxtaposes the rows of containers while they are axially advancing to deliver the rows in a configuration having an outline in which they can be inserted into a cylindrical basket.

3,389,777
DEVICE FOR TURNING LOGS

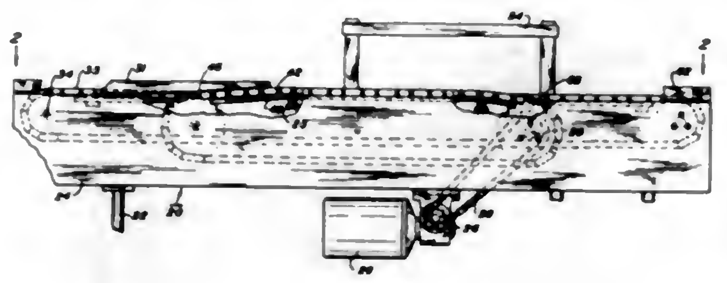
Alpo Rysti, Frisans, Finland, assignor to Sateko Oy, Helsinki, Finland, a corporation of Finland
Filed Oct. 12, 1966, Ser. No. 586,118
1 Claim. (Cl. 198—33)



A device for turning logs includes a log lift transporting the logs to a sloping ramp from which they roll to two parallel transporting conveyors. Log engaging feelers are situated in front of each conveyor and are coupled with means driving the conveyors in such manner that the relative speeds of the two conveyors are varied depending upon the position of the logs until they assume the proper required position.

3,389,778
APPARATUS FOR ORIENTING EARED CONTAINERS

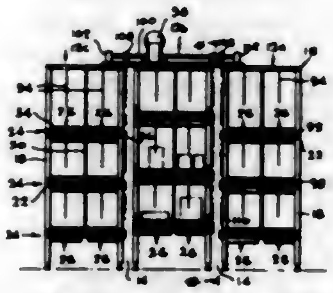
Lorand Kovacs, New Milford, and Raymond A. Heisler, Franklin Lakes, N.J., assignors to The Heisler Company, Fairfield, N.J., a partnership
Filed Apr. 20, 1967, Ser. No. 632,330
15 Claims. (Cl. 198—33)



An orienting device for circular objects having protrusions thereon such as eared containers. The device is essentially a conveying mechanism in which differentially speeded chains and edge engaging means are used to cause the containers to separate and rotate as they are advanced. Upon a pair of slower moving chains an eared or like container fed to a pair of chains traveling at a higher rate of speed—one of these chains preferably being higher than the other. As the container is advanced on the higher speed chains, one edge is brought in the way of a dead plate so that the container is lifted from the lower of the high speed chains, whereupon the container is caused to rotate until an ear or protrusion of the container comes in the way of a contact rail. As its ear engages the contact rail the container is pushed laterally on the chains to move the container from the rub rail. The container is now transported upon the two higher speed chains in a precisely oriented manner after which it is transferred from the high speed conveyor chains and onto the regular conveyor chains or to other operations.

3,389,779
STORAGE CONVEYER

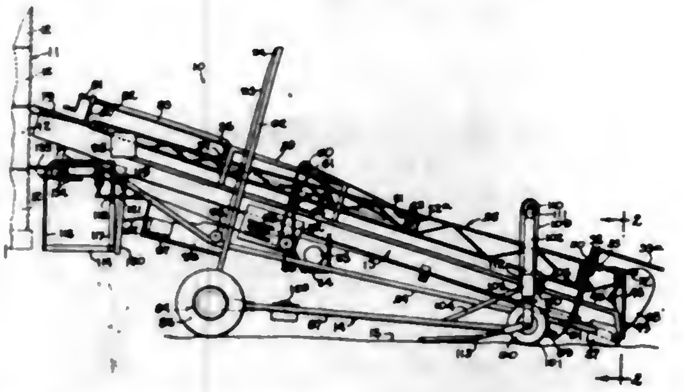
Donald G. Cowlin, 1521 Pueblo Drive, Glendale, Calif. 91207
Filed Sept. 27, 1965, Ser. No. 490,182
11 Claims. (Cl. 198—75)



A combined article conveyer and storage apparatus having a loading end, a delivery end, and a number of generally parallel conveyers extending between said ends for storing and transporting the various articles to be handled. These conveyers are arranged in several horizontal tiers located one over the other and each containing a number of conveyers disposed side by side. Associated with the conveyers are drive means for independently driving each conveyer in a direction to move the articles thereon from the loading end to the delivery end of the apparatus. The ends of the conveyers are exposed at the loading and delivery ends, respectively, of the apparatus in such manner as to facilitate placement of the articles to be handled on the loading end of the conveyers and removal of selected articles from the delivery ends of the conveyers.

3,389,780
POULTRY LOADING DEVICE

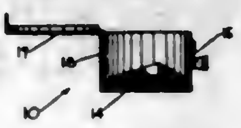
Wallace H. Jerome, % Jerome Foods, 34 N. 7th St., Barron, Wis. 54812
Filed Aug. 22, 1966, Ser. No. 574,078
5 Claims. (Cl. 198—165)



A poultry loading conveyor comprising two interfitting U-shaped troughs providing an enclosed passage with a conveyor belt supported on the lower trough to carry poultry through the passage and a hold-down belt supported on the upper trough to cooperate with the lower belt in carrying poultry through the passage. The upper trough is supported for selective adjustment relative to the lower trough to vary the height of the passage and the hold-down belt is driven at a faster speed than the conveyor belt to maintain the poultry in sitting positions. The chute is supported on a frame for selective adjustment of the height of the upper or discharge end with a cable and drum arrangement, and an operator platform is pivoted on the chute adjacent the discharge end and maintained horizontal during adjustment of the angle of the chute. Pivoted on the chute above the discharge end and extending outwardly therefrom is an angularly adjustable grid covering the path of poultry leaving the chute. The passage is divided longitudinally into two sections by a central plate, and an alternate form of the chute is adjustable in width as well as in height to suit the size of poultry being handled. Also, a special scraping device is provided for cleaning the supporting rolls of the conveyor belt.

3,389,781
NURSE'S CAP BOX

Elizabeth G. Henke, P.O. Box 4809, Tucson, Ariz. 85719
Filed June 21, 1966, Ser. No. 559,221
2 Claims. (Cl. 206—8)



1. A container for a nurse's cap comprising a box, a cover for said box, hinge means interconnecting said box and said cover, and latch means interconnecting said box and said cover; said box having a bottom wall, an upstanding rounded knob-like form secured to said bottom wall, a bobby-pin box recessed into said upstanding rounded knob-like form, a curvilinear front side wall, identification-card-holding means and a carrying handle on the front side wall of said box, a curvilinear right side wall, a curvilinear left side wall, and a rectilinear back side wall; said cover having a top wall, a curvilinear right side wall, a curvilinear left side wall, and a rectilinear back edge.

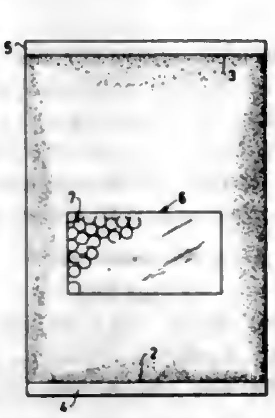
3,389,782
LIGHTING UTENSIL, IN PARTICULAR FOR SMOKERS

Werner Achermann and Franz Achermann, both of 71 Rumlangstrasse, 8052 Zurich, Switzerland
Filed Aug. 15, 1967, Ser. No. 660,752
Claims priority, application Switzerland, Aug. 16, 1966, 12,043/66
1 Claim. (Cl. 206—29)

A paper match booklet to which spaced transparent selfsticking adhesive strips are secured to a back wall thereof for mounting on a cigarette package with a removable cover foil overlying the spaced adhesive strips that is removable from the match booklet to permit its attachment to a cigarette package.

3,389,783
MATERIAL INTENDED FOR A FREEZING PACKAGE, AND SUCH A PACKAGE

Carl-Axel Bjorkengren, Akarp, Sweden, assignor to AB Akerlund & Rausing, a Swedish joint-stock company
Filed Mar. 23, 1967, Ser. No. 625,346
Claims priority, application Sweden, Apr. 7, 1966, 4,827/66
4 Claims. (Cl. 206—46)



A material for use in packaging deep-frozen food goods which enables the goods to be observed within the package comprises a base foil of an essentially transparent plastic material such as polyethylene or the like and a layer of an opaque heat conductive material such as an aluminum-bronze is applied thereto to substantially equalize temperatures of the food goods within the package. The layer of heat conductive material covers the entire area of the package except for a comparatively small "window" area which enables one to observe the food goods through the transparent base foil.

As an alternative, the heat conductive layer may cover the entire area of the package but can be made thinner in those areas where observation windows are desired, these thinned areas being substantially transparent.

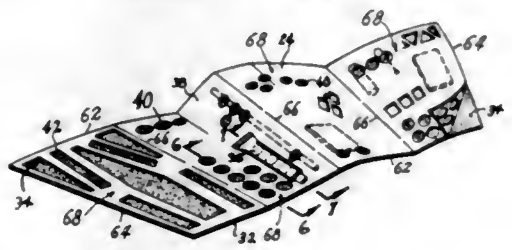
The packaging material may consist of a single base foil and heat conductive layer thereon, or it may consist of two base foils between which the heat conductive material is dispersed in the adhesive which bonds the two base foils together.

3,389,784
PACKAGE KIT

Klaas Hendricks, Granada Hills, and John T. Soja, Sherman Oaks, Calif., assignors to Rocket Jet Engineering Corporation, Glendale, Calif., a corporation of Delaware

Continuation of application Ser. No. 550,225, May 16, 1966. This application Oct. 20, 1967, Ser. No. 676,981

3 Claims. (Cl. 206—47)



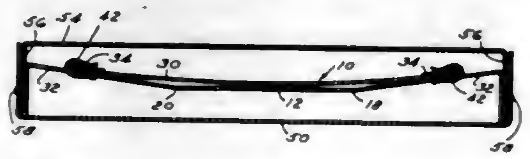
A survival kit is described herein which constitutes a package of different items necessary for survival. The package is formed by a folded flexible web, and the items are mounted on the web by means of an adhesive coating. An apertured foam plastic pad is provided between the items and the adhesive coating so that the amount of adherence between the individual items and the adhesive coating can be controlled.

3,389,785
SHIPPING CONTAINER FOR FRANGIBLE MATERIAL

Edward J. Lidgard, Lathrup Village, Mich., assignor to Flotepak Corporation, Southfield, Mich., a corporation of Michigan

Filed May 5, 1967, Ser. No. 636,292

2 Claims. (Cl. 206—62)



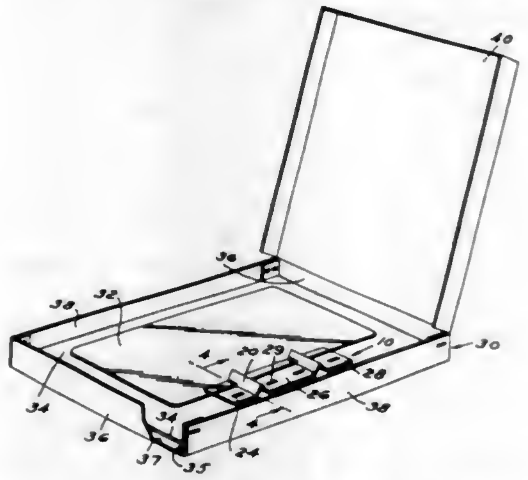
A packaging unit for relatively flat frangible material wherein the material can be confined against any possible edge damage within the packaging unit and also protected from impact, the main feature being a panel which is spaced from the walls of the enclosure and which contains integral units for securely locating the panel.

3,389,786
PACKAGING FOR FRANGIBLE SHEETS

Edward J. Lidgard, Lathrup Village, Mich., assignor to Flotepak Corporation, Southfield, Mich., a corporation of Michigan

Filed May 5, 1967, Ser. No. 636,388

4 Claims. (Cl. 206—62)



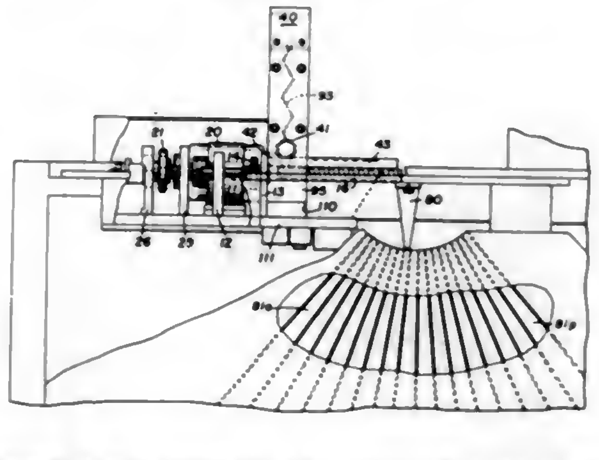
A packaging device for handling individual frangible plates such as glass which comprises an enclosure and a supporting panel within the enclosure carrying unique locking devices engageable with the edge of the plates for spacing the plates from the walls of the enclosure and also assuring against side or endwise displacement such that the edges of the plate are well protected within the enclosure.

3,389,787
UNMOUNTED COMPONENT TRANSPORT

Ramon W. Wilks, Richardson, Tex., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware

Filed Feb. 16. 1966, Ser. No. 527,957

10 Claims. (Cl. 209—73)



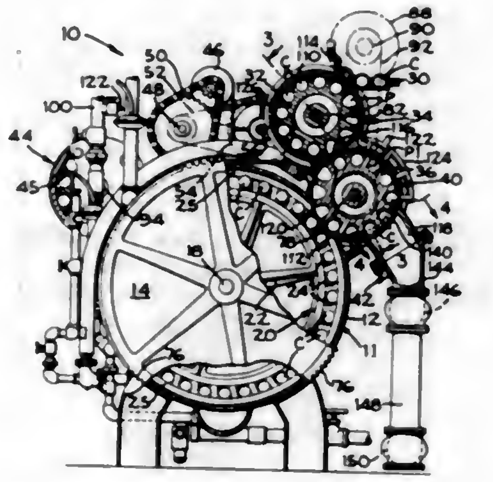
Disclosed is an apparatus for conveying an electrical component by means of oppositely threaded screws with means of supporting the screws at one end in a substantially horizontal, parallel, spaced-apart relation. Electrical components such as resistors, capacitors, diodes having a central body section with axial leads may be transported by the apparatus and classified according to the characteristics of each component.

3,389,788
APPARATUS FOR PROCESSING PRODUCTS IN FRANGIBLE CONTAINERS

Samuel A. Mencacci, Wilrijk, Antwerp, Belgium, assignor to International Machinery Corporation S.A., St. Niklaas-Waas, Belgium, a corporation of Belgium

Filed Mar. 18, 1966, Ser. No. 535,533

9 Claims. (Cl. 209—74)



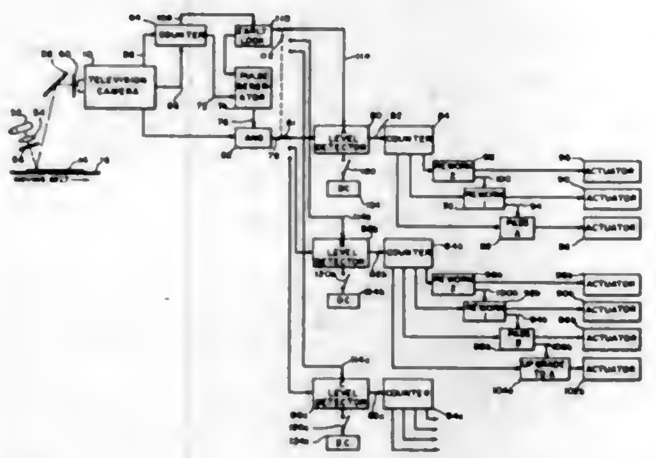
1. An apparatus for detecting and separating defective frangible containers from sound containers comprising means for supporting and continuously moving the frangible containers along a predetermined path past a restricted broken container opening and through a sound container inlet opening, means for subjecting the containers to a heat treatment medium while moving along said path for imparting a thermal shock to the containers sufficient to break the defective containers prior to movement of the containers past said restricted opening, means at said restricted broken container opening for controlling the discharge of the broken containers from said path through said restricted opening while permitting the sound containers to move therepast and means for maintaining the containers under superatmospheric pressure when moving along said predetermined path.

3,389,789
DETECTING AND SORTING MEANS FOR SHEETS HAVING FLAWS

Gerald L. Watson, Portland, and Donald L. Stradley, Sherwood, Oreg., assignors to Moore Vue, Inc., Portland, Oreg., a corporation of Oregon

Filed Dec. 10, 1965, Ser. No. 512,874

8 Claims. (Cl. 209—75)



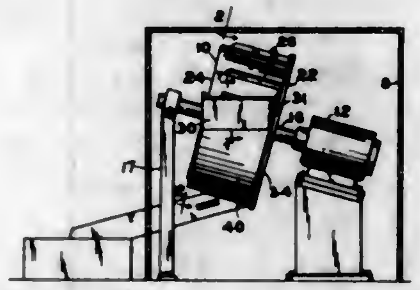
A flaw detector for inspecting material such as, for example, wood products and the like, includes a television camera for scanning across the material as such material is moved relative to the camera on a conveyor. The camera produces an output indicative of flaws or imperfections therein, and the number of flaw indications is totaled in a counter. As plural scans intersect the inspected material within a predetermined distance along the material, indicating a flaw bridging such distance, an additional value is added to the cumulative count. Plural actuating means responsive to the counter classify the material according to flaw content.

3,389,790
UTENSIL SORTING APPARATUS

Stephen T. Braunheim, 4328 Los Feliz Blvd., Los Angeles, Calif. 90027, and George J. Rebane, 3216 Sherwood Ave., Alhambra, Calif. 91801

Filed Apr. 15, 1966, Ser. No. 542,868

7 Claims. (Cl. 209—97)



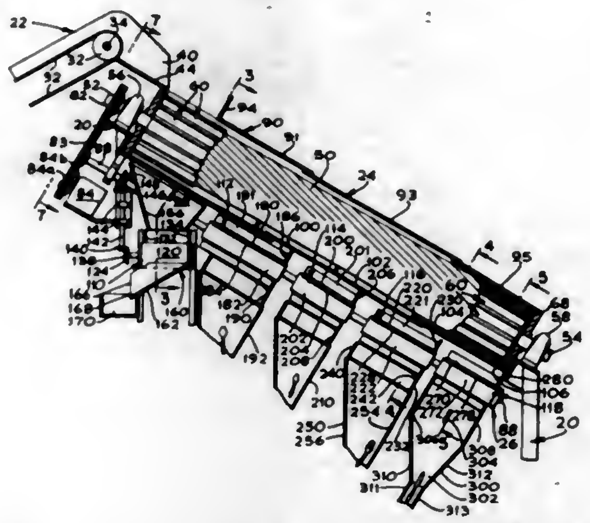
Apparatus for receiving assorted utensils and for sorting them as to type and to polarity of each type, so that each output hopper will contain a plurality of only one type of utensil with all handles adjacent one end of the hopper. A drum classifier picks up a single utensil and, by passing it over a multi-slotted shield, sorts out each type according to its length. The utensil then passes into a polarizer that sorts the handle end from the working end by the position of the center of gravity of the utensil.

3,389,791
FLATWARE SORTER

Erik Naslund and Frank S. Chytil, Santa Clara, Calif., assignors to FMC Corporation, San Jose, Calif., a corporation of Delaware

Continuation of application Ser. No. 414,339, Nov. 27, 1964. This application July 14, 1966, Ser. No. 565,321

15 Claims. (Cl. 209—99)



1. A device for sorting a random assortment of articles according to size comprising means for supplying the articles in a single row, an inclined rotatable drum having at least one longitudinal groove positioned for slidably receiving the articles from said supplying means, said groove being provided with a first step for intercepting a portion of the articles of a first size and a second step for intercepting the articles of a size less than said first predetermined size, means positioned for retaining the articles within said groove during rotation of said drum through a first zone and for discharging the articles in a second zone, means positioned for collecting the articles discharged at said second zone, and means for rotating said drum whereby the articles sliding within said groove are separated into at least two portions of different predetermined sizes.

3,389,792
PROTECTING SORTING DEVICE OPTICS

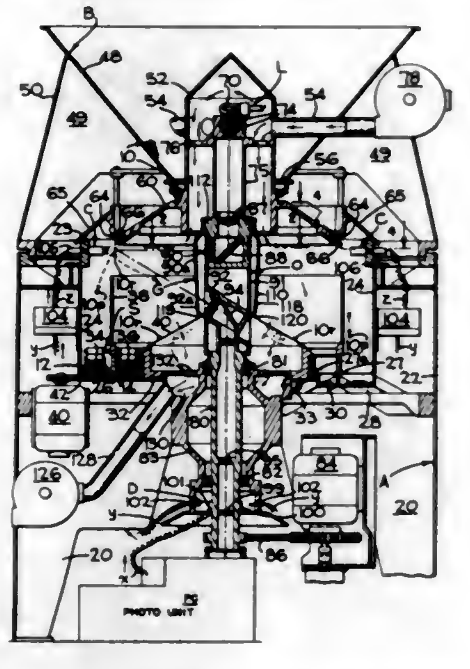
Gerald R. Anderson, Campbell, Calif., assignor to FMC Corporation, San Jose, Calif., a corporation of Delaware

Filed Nov. 25, 1966, Ser. No. 597,068

10 Claims. (Cl. 209—111.6)

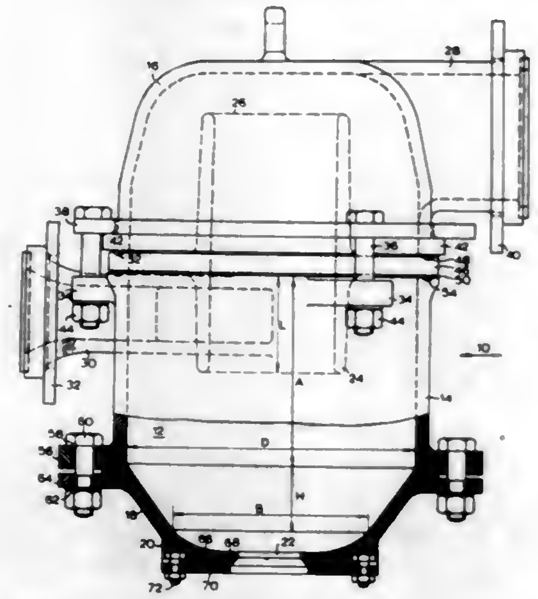
A high speed rotary optical head scans a multi-channel ring of freely falling articles (e.g. rice), for color. A phototube unit provides signals for activating air jet sorting nozzles at each article drop channel. The air jets blow some of the sorted articles toward the optical head lenses but under the invention, these are deflected by a circumferential guard having open, unobstructed windows in front of and rotating with the lenses. The guard windows each having a leading edge which is spaced from the lens by at least a certain critical distance. This distance exceeds article travel along its trajectory during a certain period of time. The articles referred to are articles whose path, if not intercepted, would permit them to strike the lens. The period of time referred to is that time required for the optical head to sweep through the angular extent of the window.

In the preferred embodiment, the guard is in the form of a generally cylindrical plate. The plate has a spiral portion of slightly less than 360° angular extent. The ends of the spiral portion of the guard are joined by a



chord section to complete the circumferential extent of the guard.

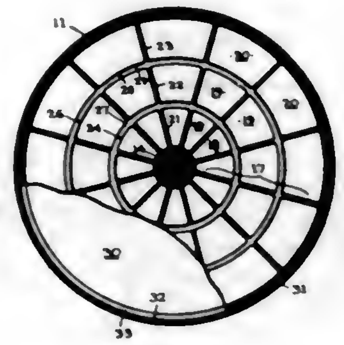
3,389,793
CYCLONE WASHER WITH WATER ONLY
Jan N. J. Leeman, Heerlen, Netherlands, assignor to Stamicarbon N.V., Heerlen, Netherlands
Filed Apr. 12, 1967, Ser. No. 630,364
5 Claims. (Cl. 209—211)



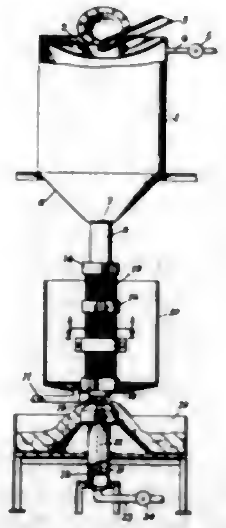
A hydrocyclone for separating particles of different specific gravity having a cylindrical portion merging with an intermediate annular portion, which in turn merges with a frusto conical portion, the included apex angle of which lies between 50° and 90°. The narrow end of the frusto conical portion of the hydrocyclone merges with a concave portion which terminates in an orifice outlet.

3,389,794
MAGNETIC SEPARATOR
Saburo Miyata, 58 Shimo Takanawa, Minato-ku, Yokohama, Japan
Filed Apr. 12, 1965, Ser. No. 447,189
3 Claims. (Cl. 209—219)

The invention comprises a magnetic filter taking here two forms. First there is a pulley having a non magnetic surface layer, within which is a magnet system comprising a plurality of magnetic discs, pairs of which are spaced by magnetizable mild steel discs of slightly greater diameter than the magnetic discs. The steel discs are rabbeted to receive rings of non magnetic material over the magnet discs. By this means, areas of concentrated flux density are provided on the surface at the peripheries of the pole pieces. End pole pieces similar to the intermediate pole pieces are provided each having but one rabbet. In another form the magnets are bars and they are separated by pole pieces over which strips of non magnetic material are placed. A sheet of non magnetic material is above and below the assembly of bars.



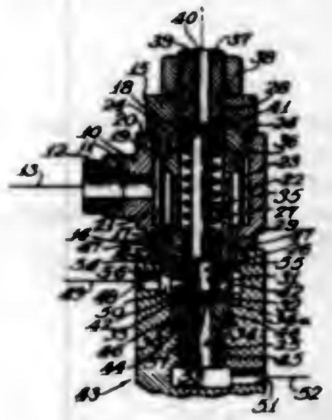
3,389,795
GAS PRESSURE TANKAGE PRESS
Frederick S. Wintzer, Wapakoneta, Ohio, assignor to G. A. Wintzer & Son Company, Wapakoneta, Ohio, a corporation of Ohio
Filed Oct. 8, 1965, Ser. No. 493,980
5 Claims. (Cl. 210—112)



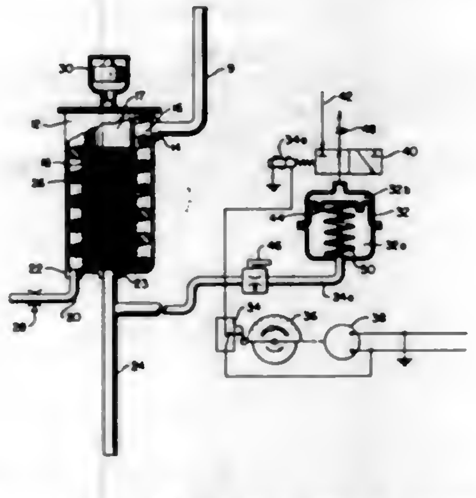
This invention relates to apparatus and method for use in the treatment of animal and poultry by-products in the production of fat and pressed tankage or meat meal as an incident of a rendering operation. More specifically, the invention is concerned with a system using a pressure vessel, press section and a vat, whereby a gaseous medium is employed as the means for exerting pressure on the material to be treated.

3,389,796
BALANCED PRESSURE RELIEF VALVE
George T. Fiala, Clarendon Hills, and Sterling W. Pelton, La Grange, Ill., assignors to International Harvester Company, a corporation of Delaware
Filed Jan. 13, 1966, Ser. No. 520,431
9 Claims. (Cl. 210—130)

8. A pressure regulator comprising a housing having an inlet adapted for fluid flow connection with a source of fluid pressure, a first outlet adapted for fluid flow connection with a fluid source and a second outlet adapted for fluid flow connection with a hydraulic work device, said housing having a bore extending inwardly from one end thereof, first and second means in said housing forming separate passages communicating said bore respectively with said inlet and with said first outlet, third means forming a passage continuously communicating said second outlet with said first passage means, fluid filter means disposed in said third passage means, poppet valve means slidably disposed in said bore and having an annular groove thereon fashioned to provide a chamber between said poppet and said bore communicating with said first passage means, means closing an open end of said bore, means proximate an inner end of said bore forming a valve seat for said poppet, resilient means compressibly positioned in said bore between said poppet and closure means normally urging said poppet into a closed position on said seat, said poppet having a bore extending inwardly from one end thereof, piston means slidably disposed within said poppet bore, said poppet having an orifice opening communicating at opposite ends of said opening respectively with the interior of said poppet bore and with said outlet.

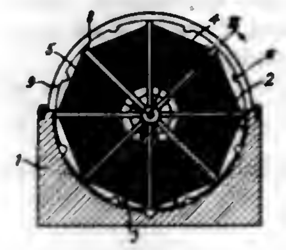


3,389,797
FILTERING SYSTEM HAVING DUAL CLEANING MEANS
Dante S. Giardini, Dayton, Ohio, assignor to The Bendix Corporation, a corporation of Delaware
Filed Dec. 20, 1965, Ser. No. 514,896
1 Claim. (Cl. 210—138)



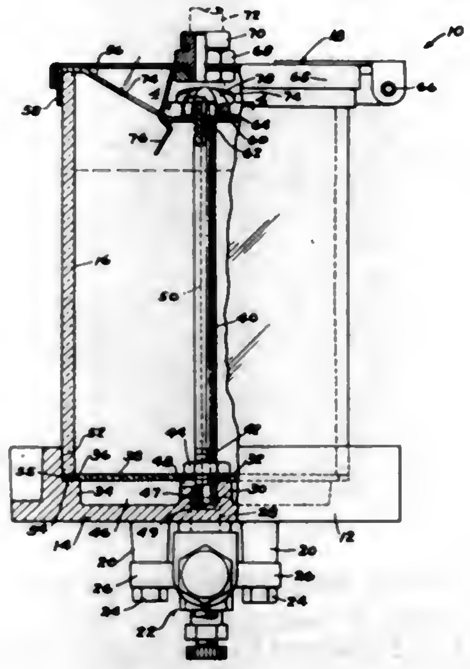
An improved filtering system which provides a continuous uninterrupted supply of filtered liquid downstream of the filter and includes dual co-acting filter cleaning operations which do not effect the downstream filtered liquid discharge flow. Upstream cleaning means provide a flow path traversing the upstream side of the filter element wherein fluid flow continually washes and cleans the upstream surface of the filter during operation. Downstream cleaning means provide a periodic back flow through the filter element and at the same time maintains a constant flow at the discharge outlet.

3,389,798
APPARATUS FOR THE BIOLOGICAL PURIFICATION OF WASTE WATER
Hans Hartmann, Cadolzburgerstr. 14, Furth, Germany, and Johann Conrad Stengelin, Obere Vorstadt 21, Tuttlingen, Germany
Filed Nov. 4, 1966, Ser. No. 592,195
Claims priority, application Germany, Nov. 4, 1965, H 57,594
25 Claims. (Cl. 210—150)



1. An apparatus for the biological purification of waste water which comprises a tank, at least one immersion drum element longitudinally and rotatably disposed within said tank such that a portion of the drum element extends above the water level of the tank, said drum element being disposed on a longitudinal shaft within the tank and comprising pairs of struts directed radially from the shaft, said pairs being connected to each other by connecting rods disposed substantially parallel to the shaft, at least one band extending a distance from and around the shaft and placed on the connecting rods to form together with said struts a drum-shaped body, means for rotating the drum elements within the tank, inlet means for introducing the water to be treated into the tank and means for removing the purified water from the tank.

3,389,799
LUBRICANT RESERVOIR STRUCTURE WITH VENT MEANS
George E. Thrasher, Jr., Pontiac, Mich., assignor to Master Pneumatic-Detroit, Inc., Utica, Mich., a corporation of Michigan
Filed Mar. 14, 1966, Ser. No. 534,160
8 Claims. (Cl. 210—251)

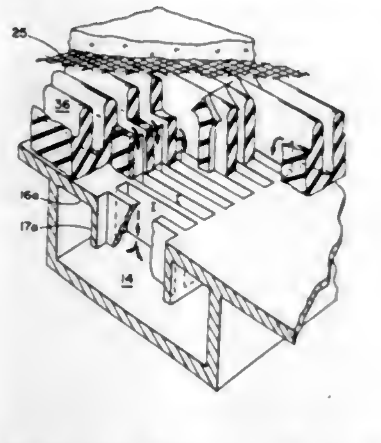


A lubricant reservoir structure having a filter element sealed to the side walls thereof, the filter element being spaced from a base element by means of a central boss. A vent tube is provided to vent the space between the filter and base element and is in fluid flow communication with said space through a passageway in the boss.

The inlet to the reservoir has an apertured cover member which is held in place by the cooperation of the vent tube and a fastener. The fastener further prevents lubricant from entering the vent tube at the top thereof while at the same time allowing venting from the inside of the tube.

3,389,800
TILTING PAN FILTER RESIDUAL FILTRATE TRAP

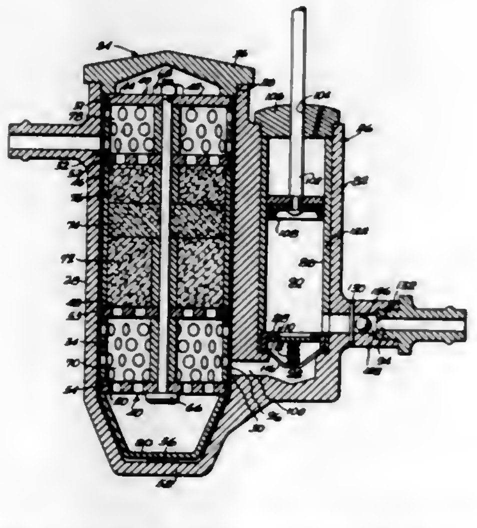
John Treymann Roos, Westwood, Mass., assignor to Bird Machine Company, South Walpole, Mass., a corporation of Massachusetts
Continuation-in-part of application Ser. No. 546,020, Apr. 28, 1966. This application Jan. 23, 1967, Ser. No. 610,871
9 Claims. (Cl. 210—328)



A horizontal tilting pan filter having a trap in the drain region which is constructed and arranged to retain residual filtrate and prevent the backflow and rewetting of the filter medium and solids when the pan is tilted for discharge of the solids.

3,389,801
FILTER AND MANUAL FUEL PUMP FOR CARBURETOR

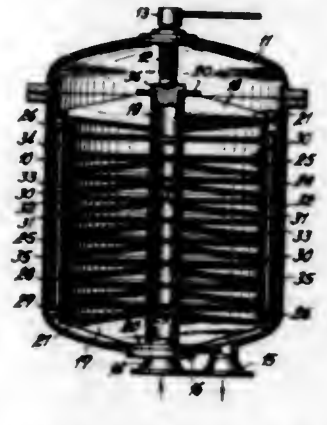
Albert Sleger, 4180 SW. 9th St., Miami, Fla. 33134
Filed May 19, 1966, Ser. No. 551,455
4 Claims. (Cl. 210—135)



A combined fuel filter-and-manual pump unit comprising a single housing having adjacent elongated filter and pump chambers connected by a passage extending through a common wall and communicating with a lower portion of said pump chamber and a lower intermediate portion of said filter chamber, a removable filter cartridge in said filter chamber including inlet and outlet portions whereby fuel must flow therethrough, said filter chamber including a floor portion below said passage, forming a sludge collection portion serving both said filter and pump chambers, said pump chamber including valve means opening toward said passage and an inlet directing fuel into said pump chamber above said valve means, a second valve means in said inlet opening toward said pump chamber permitting fuel to flow therein, and a manually operated piston in said pump chamber above said first mentioned valve means and subject to fuel pressure in said pump chamber under normal operating conditions whereby the piston is normally urged to the upper portion of said pump chamber and the pump chamber is filled with a substantial primer charge of fuel to be expressed manually toward the filter chamber by said manually operated piston.

3,389,802
TANK FILTER WITH INTERCHANGEABLE CLAMPING PLATES

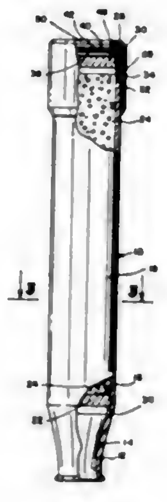
Lothar Stöbe, Bad Kreuznach, Germany, assignor to Seitz-Werke G.m.b.H., Bad Kreuznach, Germany
Filed Mar. 27, 1967, Ser. No. 626,217
4 Claims. (Cl. 210—232)



A tank filter with a central inlet for the liquid to be filtered and with a filter packet composed of a plurality of filter plates with filter layers therebetween, in which said filter packet is adapted to be clamped together by two clamping plates which are identical as to height, diameter, and outer shape and are each provided with a central bore for alignment with the inlet passage for the fluid to be filtered, that surface of each of said clamping plates which faces the filter packet being provided with elevations for resting a filter thereon and also adapted to form a filter chamber therewith.

3,389,803
ORALLY OPERABLE WATER FILTER

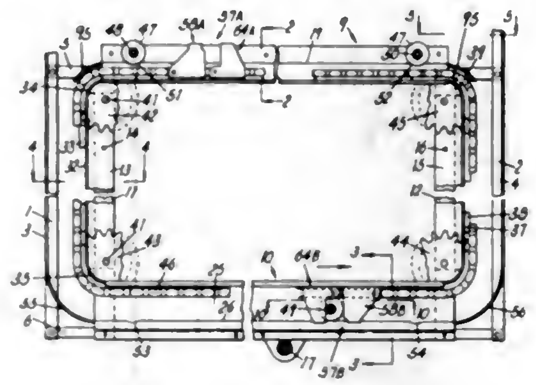
Edward S. Barley, 3014 N. 15th Ave., Phoenix, Ariz. 85014
Filed Oct. 9, 1967, Ser. No. 673,760
5 Claims. (Cl. 210—266)



An orally operable water filter comprising a housing having a mouthpiece on one end and a retaining cap on the other end all enclosing a pair of filter plates spaced from each other between which activated carbon is disposed, and also comprising a bacteria filter in an end opposite the mouthpiece end; said bacteria filter being protected by a pair of screens disposed on opposite sides thereof.

3,389,804
SUPPORTING TRACK AND ADVANCING PAWLS FOR ARTICLE DISPLAY AND STORAGE APPARATUS

William Bronson Lyon, 6204 Charlotte Pike, Nashville, Tenn. 37209
Filed Oct. 28, 1966, Ser. No. 590,381
7 Claims. (Cl. 211—1.5)



1. In an article storage and display device having conveyor chains arranged in spaced, upright, generally rectangular loops, with pairs of leading and trailing pawls connected to the chains in two equally spaced positions around said loops, sprockets located in the corners of said loops, and three article support rods extending between said loops to be advanced by said pawls between four positions located adjacent the corners of the loops, chain and rod guiding and pawl supporting mechanism comprising:

top and bottom chain and pawl supporting rails extending laterally inwardly across the plane of said loops with the top rail below the top reach of the associated loop and the bottom rail above the bottom reach of the associated loop, with the chains engaged with laterally inwardly spaced central portions of the rails,

top and bottom bar support tracks positioned in laterally overlapping relation to the outer portions of said chain and pawl supporting rails with the top bar support track located above the top support rail and the bottom bar support track located below the bottom pawl supporting rail,

bar restraining detents on said bar supporting tracks adjacent the ends thereof,

front and rear upright bar retaining tracks extending between the ends of said top and bottom bar supporting tracks with curved means connecting the upright tracks to the ends of the bottom bar,

upright front and rear chain and pawl guiding rails disposed in spaced relation to the inner sides of said front and rear tracks and having their ends spaced from the ends of said top and bottom rails,

sprockets engaging said chain loop and positioned in chain transferring relation between the ends of the rails,

said pawls having U-shaped cross sections with side flanges projecting inwardly of said chain loop to engage said rails,

first pivot pins connecting the leading ends of said leading pawls to said chain in laterally opposite off-center but straddling relation to the outside of said chain loop,

second pivot pins connecting the leading of said trailing pawls in spaced relation behind said leading pawls and in laterally opposite off-center but straddling relation to the outside of said chain loop with each trailing pawl off-set oppositely to its associated leading pawl,

means on the insides of the side flanges of said pawls forming stops displaced in trailing relation to pivot pins connected thereto,

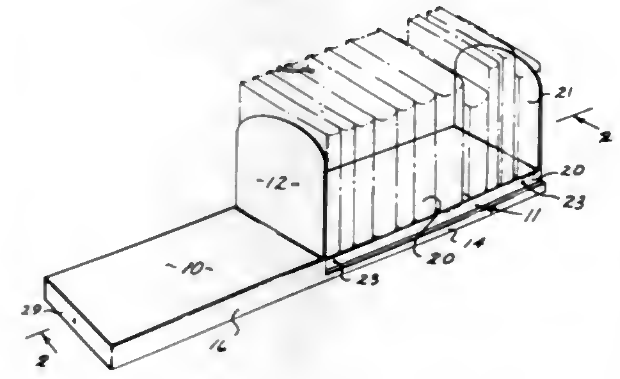
stop pins projecting from said chain in overlying relation to said stops outwardly of said chain loop,

first pairs of longitudinal recesses formed in said top and bottom support and guide rails and located near the front ends thereof to receive the trailing edges of the side flanges on the leading pawl of one of said pairs and the side flanges of the trailing pawl of the other of said pairs of pawls to permit inward tilting of the pawls to pass support bars engaged with the detents in said front ends, and

other pairs of longitudinal recesses formed in the rear ends of said top and bottom rails in laterally oppositely off-set relation to said first pairs of recesses to receive the trailing edges of the side flanges of the leading pawl of said other of said pairs of pawls and the side flanges of the trailing pawl of said one of said pairs of pawls.

3,389,805
SELF-ADJUSTING TELESCOPING BOOKENDS

Ralph Dick Yeomans, 1501 Belmont Ave., West Covina, Calif. 91790
Filed Oct. 24, 1965, Ser. No. 504,419
4 Claims. (Cl. 211—43)



An adjustable telescoping bookend apparatus having a stationary section and a movable book supporting section, both sections having upright bookends, the stationary section having an upright bookend and a longitudinally extending hollow receiving portion with a transverse opening and a lower platform extending from the opening, the movable section being telescopically receivable in the hollow portion of the stationary section and being supported on rollers for movement on the platform, the movable and stationary sections being connected by spring means whereby the movable section is resiliently urged telescopically into the hollow section.

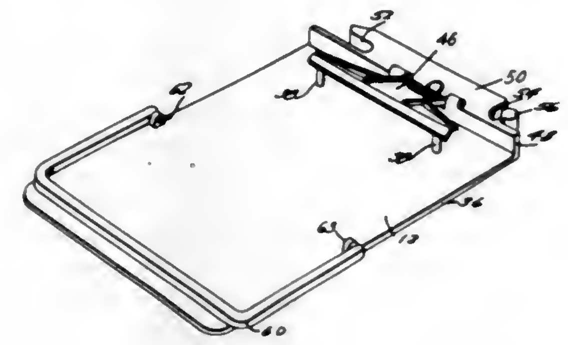
3,389,806
SNAP-IN CLIPBOARD

Mike W. Grey, Box 217, Hooker, Okla. 73945
Filed Oct. 13, 1966, Ser. No. 586,434
5 Claims. (Cl. 211—50)

1. A clipboard comprising a board member for stacking sheets of paper, said sheets having filing apertures at the edges, a flange upwardly extending from top edge of said board,

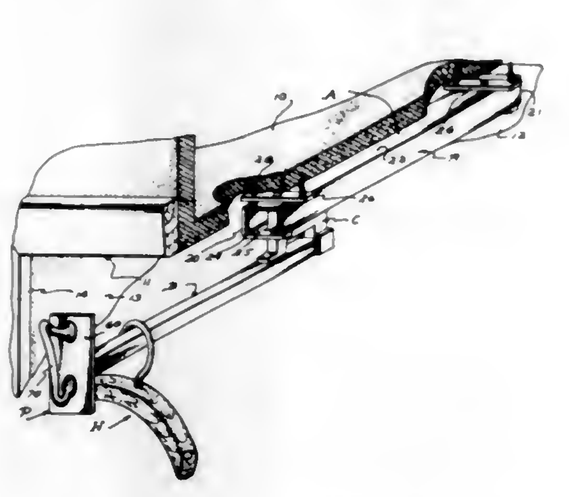
a pair of pin members mounted on the board for receiving apertures of said sheets in filing said sheets thereon,

a spring-biased clip means mounted on said flange for closing and securing the filed sheets on said pair of pin members,



said flange having an extension body including rod receiving recess extending parallel to said flange disposed on one side of said clip means and a rod receiving recess extending generally perpendicularly of said flange disposed on the other side of said clip means, and a resilient knob for retention of a rod in said perpendicular recess.

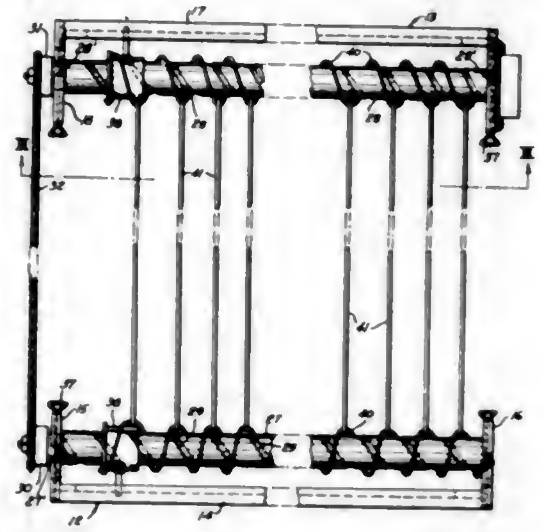
3,389,807
GARMENT SUPPORT
Evan N. Manning and R. Sewall Henderson, both of 13736 Mulberry Drive, Whittier, Calif. 90605
Filed May 31, 1966, Ser. No. 553,761
10 Claims. (Cl. 211—94)



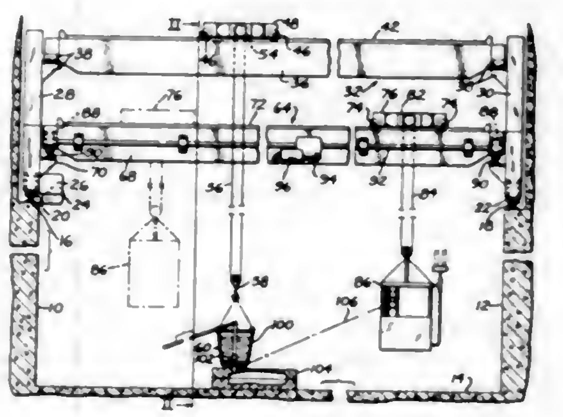
An axially extensible clothing support structure including, an elongate horizontal rail member with front and rear ends, mounting means to secure said member to an overhead structure, a carriage with front and rear rollers normally arranged adjacent the rear end of the rail member with said rollers engaging the said member and shiftable forwardly relative thereto, an elongate load supporting beam fixed to and projecting forwardly from the carriage to normally occur in spaced parallel relationship below the rail member and adapted to project freely forwardly beyond the front end of said rail member when said carriage is shifted forward, and combined stop and support means at the front end of the rail and beam to limit forward shifting of the carriage relative to the rail member and to normally releasably engage and support the front end of the beam.

3,389,808
CLOTHESLINE
Frank Louis Cavalleri, 760 67th St., Brooklyn, N.Y. 11220
Filed Apr. 20, 1966, Ser. No. 543,888
7 Claims. (Cl. 211—119.16)

A clothesline intended for use in a bathroom or similar inner space has two aligned brackets fixed to opposite walls. Each bracket carries a rotary shaft provided with helical grooves and carrying helically wound wires, the lines being attached to the wires so that they extend in parallel relationship between the two shafts. The two shafts are interconnected by a gear drive which may be operated manually by a downwardly hanging chain so that the shafts will rotate jointly in the same direction. A sleeve is mounted on each shaft. Each sleeve carries a pin, one end of which extends into the helical groove of the shaft while the other end is located in an elongated slit extending the entire length of the bracket. One end of each helically wound wire is connected to its sleeve while the other end is connected to an end of its bracket. The user by pulling the chain will be able to move the sleeves jointly upon the shafts, thereby contracting or expanding the helically wound wires and thus moving the parallel lines closer to each other or away from each other.



3,389,809
OVERHEAD CRANE WITH MAIN BEAM
Ray Wilson, R.R. 1, Box 102, West Alexandria, Ohio 45381
Filed June 20, 1967, Ser. No. 647,539
11 Claims. (Cl. 212—10)



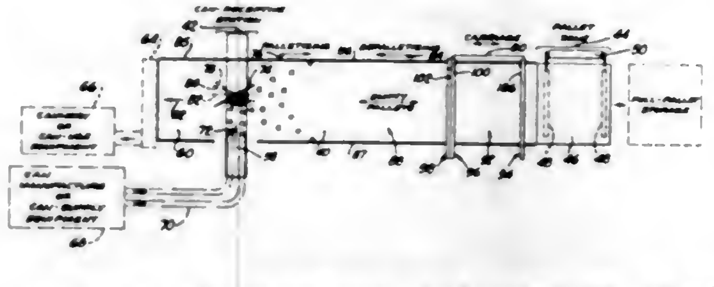
Overhead crane with main beam with a main load carriage thereon and an auxiliary beam on the crane structure parallel to but at different height than main beam and movable at right angles to the main beam and supporting an auxiliary carriage movable along the length of the auxiliary beam with an operator's cab vertically movably suspended from the auxiliary carriage.

3,389,810
PALLETIZING AND DEPALLETIZING EQUIPMENT
Wayne F. Wolfe, Orange, Alwin M. Miller, Fremont, and Roland Miller, Orange, Calif., assignors to Hunt Foods and Industries, Inc., Fullerton, Calif., a corporation of Delaware
Filed Oct. 23, 1964, Ser. No. 406,095
10 Claims. (Cl. 214—6)

1. Can-palletizing equipment for palletizing uniform-size cans carried forwardly in a random pattern by a conveyor in a laterally-confined way above the upper run thereof toward a pallet in a pallet zone at the forward end of said conveyor, said can-palletizing equipment including:

a carriage having a can-complement space axially aligned with the forward end of said conveyor, said can-complement space being open rearwardly at its rear end toward the cans advancing along said way and closed laterally by side members and forwardly at its front end by a stop member disposed in the path of said advancing cans, said carriage providing means including said stop member for forming the cans advancing in random pattern by said conveyor into a nested pattern of cans filling said can-complement space and extending upstream thereof rearwardly beyond said rear end of said carriage;

means for mounting said carriage to move forwardly and rearwardly in the direction of movement of said conveyor between a first pattern-forming position in which said can-complement space overlies



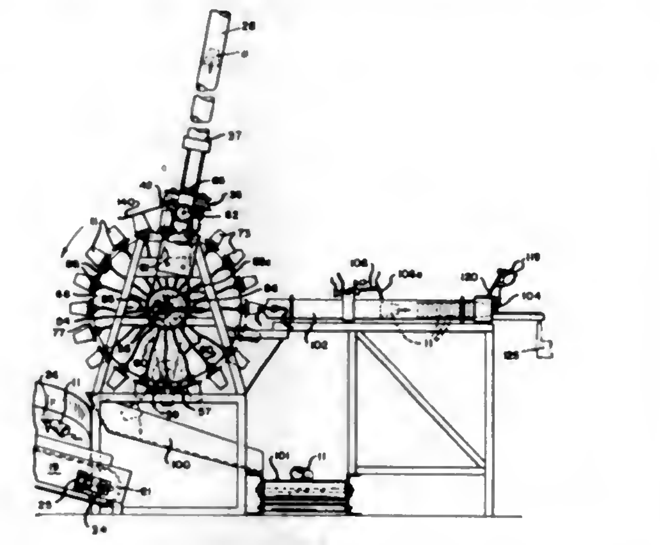
and opens downwardly on said upper run of said conveyor with said stop member thereabove near the end thereof and a second position in which said can-complement space overlies said pallet with said stop member adjacent the forward boundary of said pallet zone;

means for delivering cans in such random pattern to said conveyor while said carriage is in said first position, said stop member stopping the advance of said cans and forming the front row of said nested pattern; and

a can-holding means adjacent the rear end of said carriage when in said first position holding against advancement by said conveyor those cans of said nested pattern upstream of said filled can-complement space, movement of said carriage to said second position in conjunction with forward movement of said conveyor effecting displacement of said nested pattern of cans in said can-complement space onto said pallet during the time said can-holding means holds such upstream nested-pattern cans.

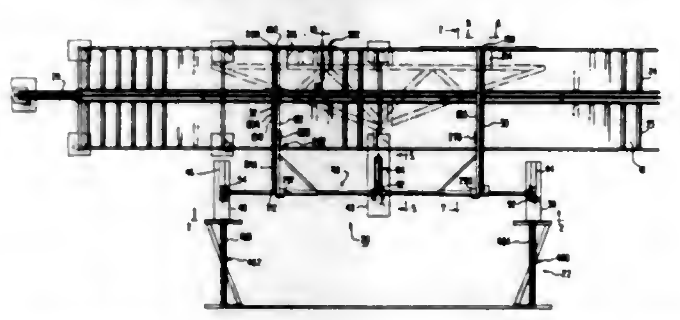
3,389,811
MECHANISM FOR HANDLING AND TESTING CONTAINERS
Alan I. W. Frank, Pittsburgh, Pa., assignor to The Alan I. W. Frank Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Original application June 29, 1965, Ser. No. 468,005, now Patent No. 3,351,388, dated Nov. 7, 1967. Divided and this application Apr. 15, 1966, Ser. No. 558,526
1 Claim. (Cl. 214—6.5)

Mechanism for handling and testing containers comprising testing means for separating containers free from leaks from those having leaks and delivering the containers free from leaks to a discharge station, fluid pressure means at the discharge station for discharging such containers one by one from the testing means and means



receiving the discharged containers in relative arrangement for packaging in groups, including means for dividing the discharged containers into groups each including a predetermined number of the discharged containers.

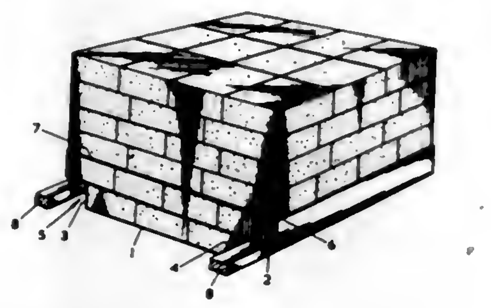
3,389,812
APPARATUS FOR UNLOADING AND STORING WOODEN STRUCTURAL ELEMENTS
John C. Jureit, Coral Gables, and Berny L. Smith, Miami, Fla., assignors to Automated Building Components, Inc., Miami, Fla., a corporation of Florida
Filed Sept. 9, 1966, Ser. No. 578,365
28 Claims. (Cl. 214—7)



1. Apparatus for unloading and storing press manufactured jig mounted wooden framing elements, comprising storage means for said wooden elements, means for moving a jig carrying a wooden element along a predetermined path of travel, a pair of rollers spacially positioned along, transverse to and above the path of travel of the jig, said rollers being in a first generally horizontal position, means for moving said wooden element from said jig to a position upon said generally horizontal rollers, and means for moving said pair of rollers from their first generally horizontal position to a second upright position to transfer the wooden element to said storage means.

3,389,813
PALLETS
Henderikus Jakob Kat, Bloemendaal, and Johan Christiaan Meuwissen, Vogelenzang, Netherlands, assignors to Meuwissen Industrie N.V., Haarlem, Netherlands, a corporation of Dutch law
Filed May 5, 1966, Ser. No. 547,816
Claims priority, application Netherlands, Aug. 6, 1965, 6510304
7 Claims. (Cl. 214—10.5)

A lift truck pallet for use in handling and transporting material having a plurality of parallel wires sandwiched between and secured to thin flexible sheet material, the wires serving to reinforce the thin flexible sheet material and to substantially support the loaded material without



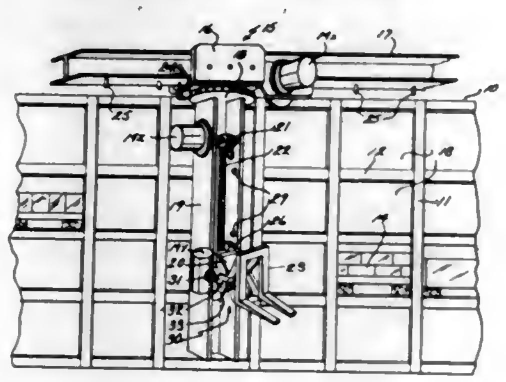
permitting the unsupported middle portion of said pallet from bulging out and also serving to maintain the folded end portions of said pallet.

3,389,814
LOAD RESPONSIVE CONTROL MEANS FOR A MATERIAL HANDLING APPARATUS

Jerome H. Lemelson, Metuchen, N.J., assignor to The Triax Company, Cleveland, Ohio, a corporation of Ohio

Continuation of application Ser. No. 430,075, Feb. 3, 1965, which is a continuation-in-part of application Ser. No. 152,702, Oct. 17, 1961, which is a division of applications Ser. No. 449,874, July 28, 1954, and Ser. No. 219,357, Aug. 13, 1962. This application June 7, 1966, Ser. No. 561,307

14 Claims. (Cl. 214—16.4)



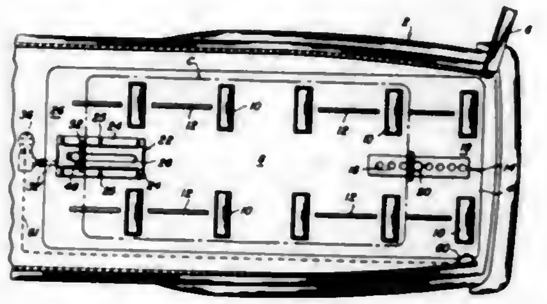
1. Material handling apparatus for transporting loads to and from selected storage locations, said apparatus comprising a storage frame defining a multiplicity of vertically and horizontally arranged bins having open, load receiving ends, a load carrier including a carriage movable past said open ends of said bins; said load carrier including generally vertically extending horizontally movable mast structure supported by said carriage and a veritcally movable elevator guided by said mast structure; a laterally movable load support means carried by said elevator and movable generally horizontally into said bins; power means for actuating said carriage, elevator and load support means; automatic control means for effecting a series of movements whereby said carriage is moved to the horizontal position of a selected bin and said elevator is moved to the level of said selected bin, and said load support means is reciprocated laterally in a transfer movement to transfer a load between said load support means and said selected bin, said control means including a first sequence control effecting an unloading movement whereby said load support means enters said selected bin in a high position and is lowered to deposit a load; said control means including a second sequence control effecting a loading movement whereby said load support means enters said selected bin in a low position and is raised to pick up a load; said load support means being so mounted with respect to said elevator that said load support means is disposed in spaced relationship to the defining storage frame elements of the selected bin during movement of said load support means into and out of said selected bin for respectively depositing a load into or removing a load from the selected bin; said control means including load sensing means on said load carrier selecting either said first sequence control or said second sequence control for activation during said sequence of movements, said load suport means including a generally horizontal upwardly facing surface adapted for supporting a load thereon, and said sensing means being operatively connected to said load support means and responsive to a load positioned on said surface for activating said first sequence control and responsive to no load positioned on said surface for activating said second sequence control, and other sensing means on said load carier for determining whether or not a load is already positioned in said selected bin, said control means being responsive to actuation of said other sensing means and preventing said load support means from moving into said selected bin.

3,389,815
COMBINATION CASKET STAY AND MOVER

Elwood W. Houser, Mount Lebanon, Pa., assignor to Houser and Carafas Engineering Company, a corporation of Pennsylvania

Filed Dec. 21, 1966, Ser. No. 603,621

6 Claims. (Cl. 214—82)



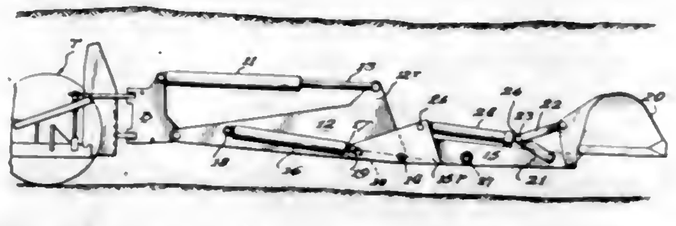
A power driven abutment is provided on the head end of a hearse casket-table which, together with a detachable bier pin at the opposite end of the table, restrains a casket on the table from axial movement. Abutment also serves to overcome the inertia and initiate movement of the casket after the bier pin has been removed preparatory to removing the casket from the hearse.

3,389,816
OVERCENTER BACKHOE

Elton B. Long, Burlington, Iowa, assignor to J. I. Case Company, a corporation of Wisconsin

Filed Oct. 28, 1966, Ser. No. 590,367

5 Claims. (Cl. 214—138)



A backhoe arrangement is disclosed to accommodate overcenter movement of the dipper so that the dipper may swing either upwardly or downwardly of an extended central or neutral position relative to the boom, such position being defined when a straight-line relationship exists between the line of action of the dipper cylinder and the pivot point between the boom and dipper. The dipper cylinder is positioned upwardly of neutral position for conventional ditch or trench digging and is positioned downwardly of center for undercut digging operations. When the dipper cylinder is downwardly of center, the backhoe mechanism can be swung to a transport position wherein the dipper overlies the tractor so that the center of gravity of the backhoe mechanism is more forwardly located and establishes a better weight ratio on the tractor wheels.

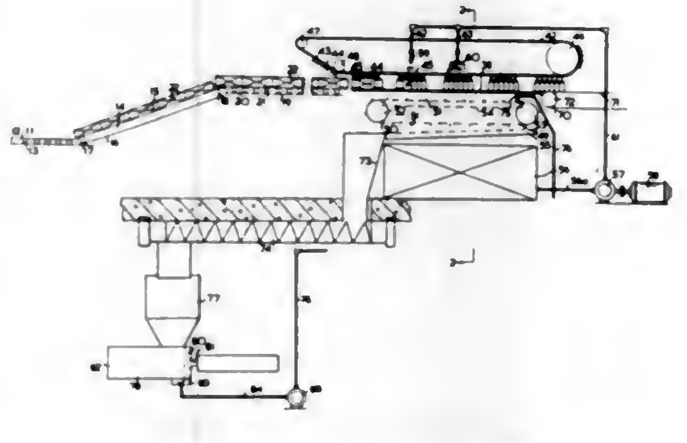
3,389,817
HYDRAULIC BOTTLE UNCASER

Arthur G. Pugh, Calgary, Alberta, Canada, assignor to Molson Breweries Limited, Montreal, Quebec, Canada

Filed Mar. 21, 1966, Ser. No. 536,134

Claims priority, application Canada, Nov. 22, 1965, 945,894

13 Claims. (Cl. 214—300)



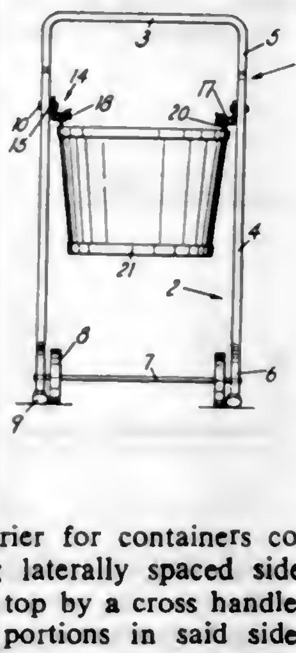
Method and apparatus for hydraulically uncasing bottles from disintegratable paperboard cartons by subjecting the cartons first to the action of fixed jets of high velocity, high pressure liquid, and then subjecting the cartons to the action of moving jets of high velocity, high pressure liquid.

3,389,818
UTILITY CART OR BASKET CARRIER

John R. Rinehart, 426 Bellevue Place, Kalamazoo, Mich. 49007

Filed Apr. 13, 1966, Ser. No. 542,288

5 Claims. (Cl. 214—372)



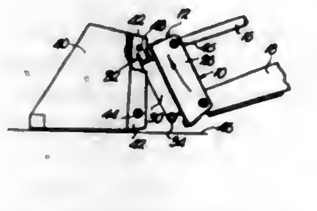
1. A utility carrier for containers comprising,
a frame having laterally spaced side members connected at the top by a cross handle,
straight center portions in said side members with rearwardly angled top extensions extending to said handle and forwardly angled foot portions at their lower ends,
an axle connecting said foot portions toward the rear ends thereof,
a pair of wheels on said axle having radii terminating short of said center portions,
U-shaped hanger members pivotally connected to said center portions adjacent to the tops thereof,
and manually releasable retaining screws engaged through said hanger members below the pivot supports thereof and adapted to releasably retain looped handles of containers within said hanger members.

3,389,819
ATTACHING BRACKET FOR FRONT END LOADERS

George D. Schumacher, Great Bend, Kans., assignor to Great Bend Manufacturing Company, Great Bend, Kans., a corporation of Kansas

Filed July 15, 1966, Ser. No. 565,593

1 Claim. (Cl. 214—780)



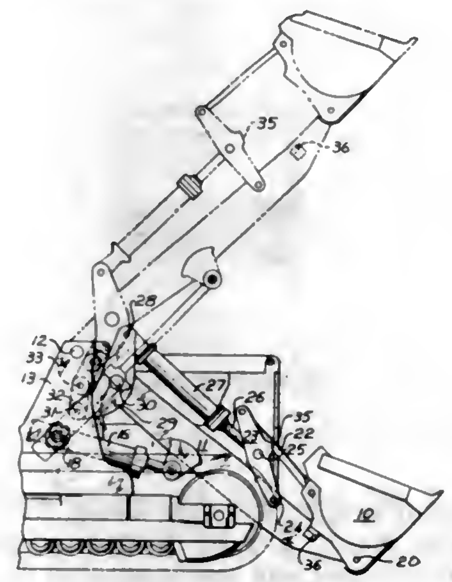
A bracket for releasable attachment to the control and lift arms of a front end loader, the bracket having hook and latch means thereon for engaging and carrying an implement, such as a bucket, to be operated by the arms of the loader. A bracket unit is provided for each pair of arms and each unit includes a first section provided with pin receiving means for releasably attaching the bracket to the arms, and a second section which extends forwardly from the first section and includes the hook and latch means for engaging and carrying the implement.

3,389,820
BUCKET ACTUATING LINKAGE FOR TRACTOR MOUNTED LOADER

Herbert W. Borer and Roy R. Buck, Naperville, Ill., assignors to Caterpillar Tractor Co., Peoria, Ill., a corporation of California

Filed June 6, 1966, Ser. No. 555,525

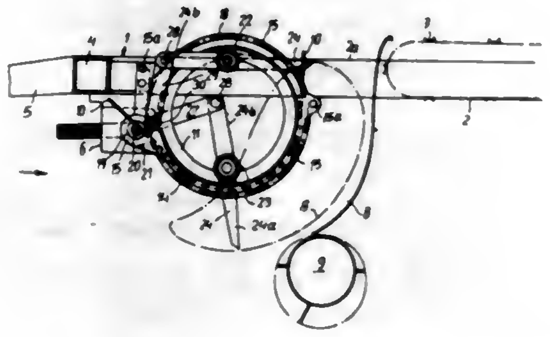
1 Claim. (Cl. 214—776)



Loader bucket linkage wherein lift and tilt linkage members are disposed between closely spaced brackets and a special design of tilt linkage prevents interference with a lift jack which acts between the brackets.

3,389,821
FEEDING DEVICE FOR LOADING MACHINES

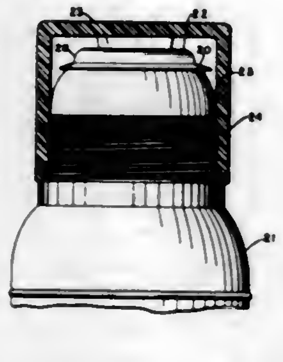
Ernst Weichel, Heiningen, Kreis Goppingen, Germany
Filed Dec. 3, 1965, Ser. No. 511,419
Claims priority, application Germany, Dec. 8, 1964, W 38,101
9 Claims. (Cl. 214—83.3)



1. A feeding device for loading machines and the like comprising a frame, a feed guide channel on said frame, first and second tine supporting elements each carrying a plurality of laterally spaced tines thereon, each of said tines including an inner end and an outwardly projecting portion, means on said frame for supporting said tine supporting elements adjacent said inner end thereof for revolving movement of said outwardly projecting portion adjacent said guide channel and for individual pivotal movement about their inner ends on respective axis at substantially diametrically opposite locations of the path of revolution, a first link having a first end connected to said supporting means and a second end extending outwardly from said supporting means and a second link having one end pivotally connected to said frame and an opposite end connected to said second end of said first link to pivot said supporting means and said tine supporting elements to confine the movement of the outwardly projecting portions of the tines to a path corresponding to the feed channel during an upward feeding movement of said tine supporting elements with said tines.

3,389,822
ANTI-DRIP DEVICE

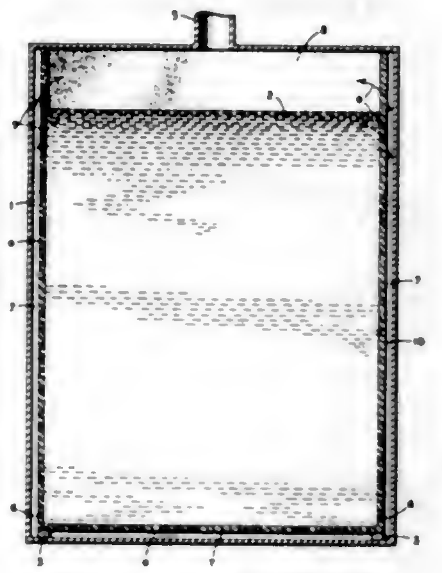
Raveran R. Hoffman, Portland, N. Dak. 58274
Filed June 22, 1966, Ser. No. 559,552
1 Claim. (Cl. 215—13)



The invention is an anti-drip device comprising a narrow annular plastic ring for a vacuum bottle having a rounded mouth, said ring having an inner diameter slightly smaller than the outer diameter of the mouth, said ring's inner diameter being greater than half of the outer diameter of the rings, said annular plastic ring being flexed downward into an annular frustoconical flange, with the inner edges of the ring acting to engage the mouth of the bottle and prevent it from slipping off while in its frustoconical shape, said annular ring projecting downward from the mouth and acting to prevent any drops of fluid from running down the sides of the bottle past the mouth of the bottle.

3,389,823
CONTAINER FOR THE STORAGE AND/OR TRANSPORTATION OF LIQUEFIED GASES

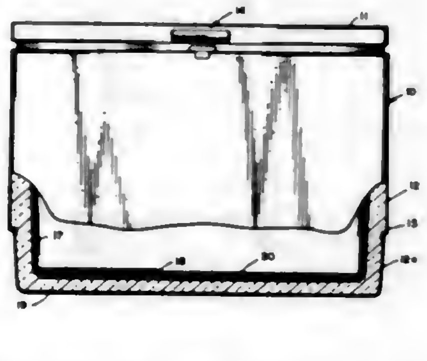
Sergio Finzi, Masnago, and Jacques F. Faure and Jean P. Lebrun, Cocquio, Italy, assignors to European Atomic Energy Community (Euratom), Brussels, Belgium
Filed June 3, 1966, Ser. No. 555,194
Claims priority, application Belgium, June 16, 1965, 14,212, Patent 665,554
4 Claims. (Cl. 220—9)



A container for storage and/or transportation of liquefied gases including, outer impervious walls, thermally insulating walls formed of a porous casing disposed between the main body of the liquefied gas and the outer walls and spaced a few millimeters from said outer walls so as to bound a layer of the liquid therebetween.

3,389,824
PICNIC CHEST CONSTRUCTION

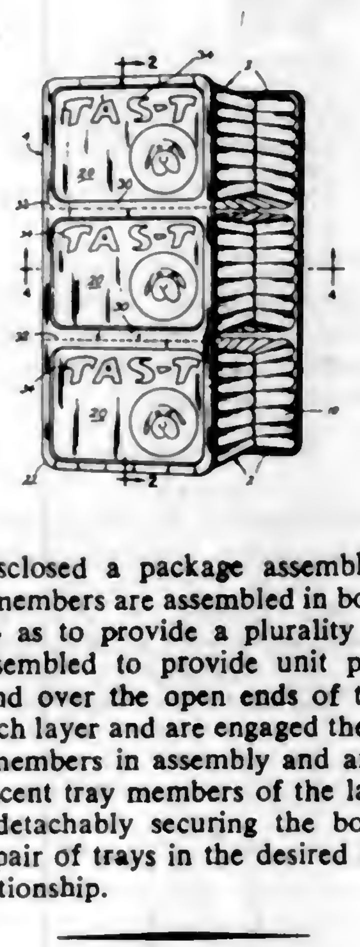
Donald V. Berchtold, Wichita, Kans., assignor to The Coleman Company, Inc., Wichita, Kans., a corporation of Kansas
Filed Dec. 7, 1966, Ser. No. 599,766
7 Claims. (Cl. 220—9)



In accordance with the present invention, the construction of picnic coolers having styrene liners surrounded by polyurethane foam insulation is improved by interposing a sheet of flexible fiberboard between the bottom of the liner and the polyurethane foam. The fiberboard sheet has its upper surface in contact with the underside of the liner bottom and its lower surface in contact with the polyurethane foam. Preferably, the fiberboard sheet is corrugated fiberboard. The plastic liner is preferably formed from a polymer of styrene butadiene, and acrylonitrile, and the invention is particularly useful where the polyurethane foam was prepared in place using a chlorofluoroalkane foaming agent.

3,389,825
CONTAINER ASSEMBLY

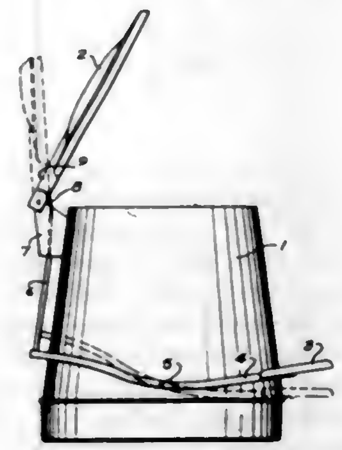
Carlton L. Whiteford, New Canaan, Conn., assignor to Poly-Pak Corporation of America, Springdale, Conn., a corporation of Delaware
Filed Oct. 20, 1965, Ser. No. 498,703
17 Claims. (Cl. 220—23.4)



There is disclosed a package assembly wherein two layers of tray members are assembled in bottom-to-bottom relationship so as to provide a plurality of pairs which may be disassembled to provide unit packages. Cover members extend over the open ends of the aligned tray members of each layer and are engaged therewith to maintain the tray members in assembly and are severable between the adjacent tray members of the layer. Means are provided for detachably securing the bottom wall portions of each pair of trays in the desired aligned bottom-to-bottom relationship.

3,389,826
SELF-CLOSING RECEPTACLE COVER

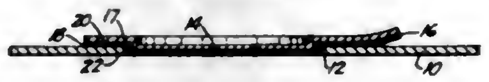
Wilhelm A. Wall, 6810 Chestnut, Kansas City, Mo. 64132
Filed Aug. 11, 1967, Ser. No. 660,568
4 Claims. (Cl. 220—35)



This invention relates to receptacles with self-closing covers. The cover is operated by a treadle mechanism incorporating a spring forming the connection between the cover and a treadle bar.

3,389,827
EASY-OPEN CONTAINER AND SEALING TAPE

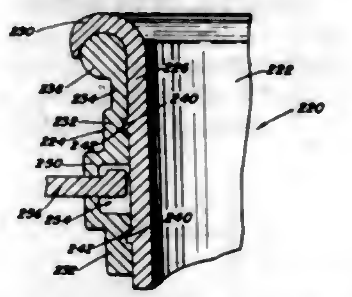
Joseph F. Abere, White Bear Lake, and Wilfred R. Brochman, Oakdale Township, Washington County, Minn., assignors to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
Filed Apr. 10, 1967, Ser. No. 629,515
11 Claims. (Cl. 220—53)



Easy-open containers having a dispensing opening sealed with pressure-sensitive tape or tape having short term characteristics of pressure-sensitive tape, and tapes therefore having adhesive coatings including cross-linked neoprenes, acrylates, and tackified block copolymers.

3,389,828
PLASTIC CONTAINERS

Alva J. Godshalk, Ozona, Fla., assignor to Bennett Industries, Inc., Peotone, Ill., a corporation of Illinois
Original application Aug. 4, 1965, Ser. No. 479,687. Divided and this application Apr. 24, 1967, Ser. No. 632,992
5 Claims. (Cl. 220—73)

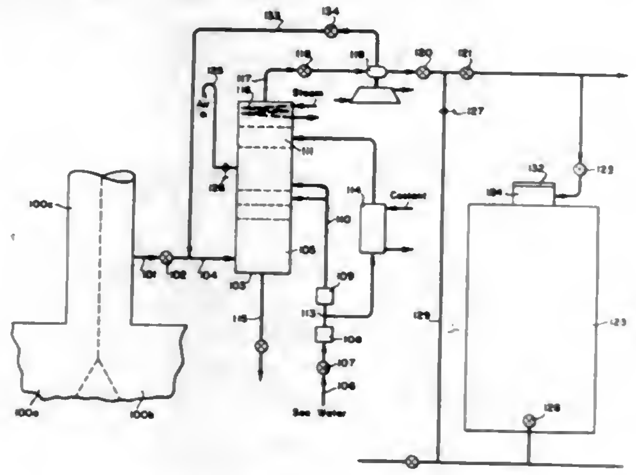


A plastic pail provided with a reinforcing supporting collar adjacent its open end can be made sufficiently strong and distortion-free to withstand the abuses of freight handling and shipping where the collar is formed of a material (such as steel, fiber impregnated plastic, and the like) that is substantially more rigid than the plastic material of the pail. In addition, such a pail is capable of accepting conventional closure members, such as lug, band, or lever interlocking type closures. The supporting collar of metal or fiber impregnated plastic is attached to the plastic pail adjacent the open end thereof. The collar may either be press-fitted to the pail, or, alternatively, interlocking means may be provided in order to positively attach the supporting collar to the plastic pail. For example, a plurality of openings may be provided in the metal supporting collar, and protuberances on the pail may extend through the openings. A locking key may be inserted in each protuberance, or, alternatively, plastic attaching members may be fused to the protuberances by means of spin or ultrasonic welding techniques.

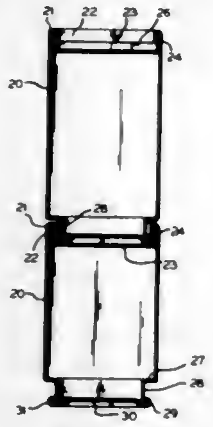
3,389,829
METHOD OF PROVIDING AN INERT ATMOSPHERE

Alfred E. Stanford, Oakland, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware
Original application Apr. 24, 1963, Ser. No. 275,249, now Patent No. 3,285,711, dated Nov. 15, 1966. Divided and this application Mar. 7, 1966, Ser. No. 532,295
4 Claims. (Cl. 220—88)

A method of cooling and treating hot flue gases to remove oxides of sulfur therefrom and lower the relative humidity of the gases. The gases are first scrubbed by contact with an alkaline solution of sea water and subsequently cooled by contact with additional refrigerated sea water. Subsequently the flue gases thus dehumidified are raised in temperature by a heater prior to passage into the hold of a cargo tanker to introduce therein an inert non-combustible gas as combustible liquid is withdrawn from the hold. Provision is made for recirculating a portion of the scrubbed dehumidified gases through the scrubber unit during low demand periods for inert gases in the cargo hold.

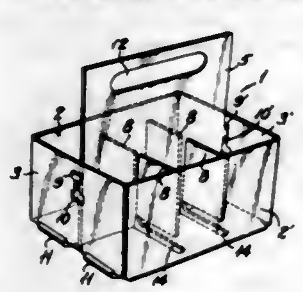


3,389,830
CAN CONSTRUCTION
Gordon Smith, 2804 N. 44th St.,
Milwaukee, Wis. 53210
Filed June 29, 1966, Ser. No. 561,473
9 Claims. (Cl. 220—97)



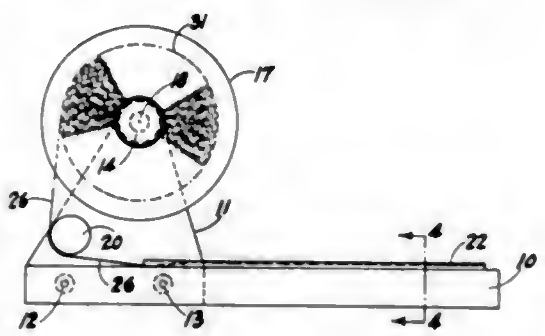
Parallelepipedon containers having non-flaring sides. The containers are integrally provided with complementary tops and bottoms that lock together to facilitate stacking. A clip is provided to laterally interlock the containers for storage or transportation purposes.

3,389,831
COLLAPSIBLE BOX FOR CARRYING BOTTLES
Kashichi Hirota, 691 Sanda-Higashi-cho,
Hachiaji-shi, Tokyo, Japan
Filed Mar. 2, 1966, Ser. No. 531,206
Claims priority, application Japan, Aug. 17, 1965,
40/67,548
4 Claims. (Cl. 220—111)



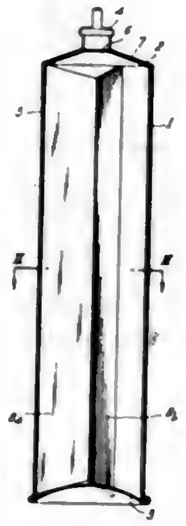
A folding carrier for bottles or the like having a central partition connected to a folding center line of a bottom wall and folding end panels separate from the central partition but adapted for engagement therewith when the box is erected.

3,389,832
TAIL-TAB DISPENSERS
Reynold B. Smith and John W. Gingerich, York, Pa., assignors to York Tape & Label Corporation, York, Pa., a corporation of Pennsylvania
Filed July 10, 1967, Ser. No. 652,130
4 Claims. (Cl. 221—70)



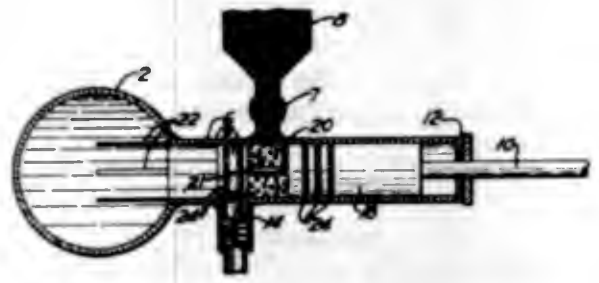
A dispenser in which labels, partially affixed to a tape, are fed from a roll along a track, the track being formed so that the unaffixed part of the label is cammed upwardly into position to be grasped.

3,389,833
DISPENSING CONTAINER
Jean Ramis, Marly-le-Roi, Yvelines, France, assignor to Idees, Paris, France
Filed Oct. 21, 1966, Ser. No. 588,393
Claims priority, application France, Oct. 30, 1965,
36,843
9 Claims. (Cl. 222—95)



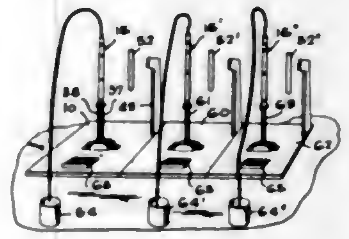
A dispensing container which comprises the combination of an outer enclosure formed of a fluid and vapor impervious material having a dispensing valve at one end and an internal enclosure dimensioned to correspond with the outer enclosure in expanded position and formed of a foldable material, the inner enclosure being disposed within the outer enclosure to define an outer space between the outer enclosure and the inner enclosure and a separate inner space within the inner enclosure, a guiding means within the inner enclosure for guiding the folding action of the inner enclosure between unfolded and folded positions in which the guiding means comprises a rigid member disposed axially within the inner enclosure and formed of a body portion having a plurality of fins extending outwardly therefrom, and a propellant fluid in one of said spaces and the material to be dispensed in the other to achieve dispensing of the material responsive to the unfolding or folding action of the inner enclosure.

3,389,834
CHAMBERED PUMP PISTON WITH VENT PASSAGE
Kenneth L. Collins, Odessa, Tex., assignor to Gulf Oil Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Jan. 5, 1967, Ser. No. 607,474
1 Claim. (Cl. 222—133)



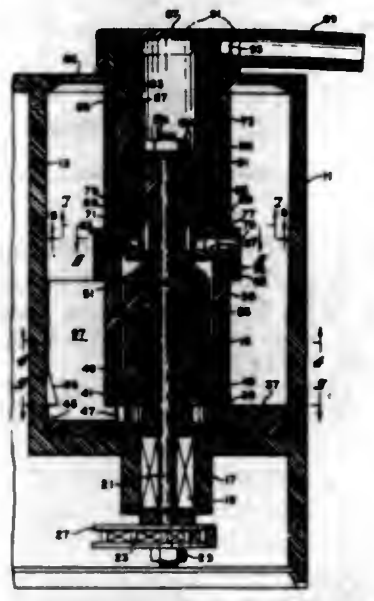
Apparatus for injecting solid particles into a conduit containing fluids at high pressure. A piston housing extends from below a hopper for the solid particles into the conduit. A chambered piston having a central portion of reduced diameter between end portions sealingly engaging the walls of the piston housing is adapted to move from a position below the hopper into the conduit. Guide rails extend into the conduit to support the piston as it moves into the conduit.

3,389,835
STATIONARY ANALYTICAL SAMPLING DEVICE
Jacob P. Marbach, 17736 Kinzie St., Northridge, Calif. 91324, and Edward P. Marbach, 4607 Marwood Drive, Los Angeles, Calif. 90065
Filed Sept. 19, 1967, Ser. No. 668,909
10 Claims. (Cl. 222—135)



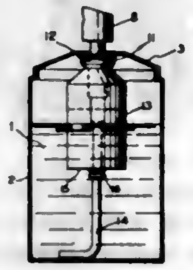
The invention has reference to an analytical sampling device making use of one or more syringes, of the customary glass laboratory character, for withdrawing carefully measured samples of one or more fluids from a source of supply for subsequent analysis. The sampling device is stationarily mounted upon an appropriate base in such fashion that only the sampling needle needs to be held in the hands of the operator, stationarily mounting the movable plunger of the syringe in an inverted position and applying the barrel of the syringe over the plunger in telescoping relationship. A gauge member is also stationarily mounted adjacent the plunger so the flange of the barrel, when raised from a bottomed position and placed upon the top of the gauge member, will positively fix the relationship of the barrel to the plunger and thereby precisely determine the volume of the barrel which is to be filled with the fluid to be sampled. A flexible tube interconnects the upper end of the barrel with the sampling needle, so that the sampling needle can be readily inserted into a beaker or other appropriate vessel initially holding the fluid to be sampled. In the alternative, the sampling needle may be stationarily mounted in its support and the vessel brought up to it for the operation.

3,389,836
FOAM PRODUCING AND DISPENSING DEVICE
Alfred W. Wakeman, Durham, Conn., assignor to Dynamics Corporation of America, New York, N.Y., a corporation of New York
Original application Mar. 16, 1965, Ser. No. 440,152, now Patent No. 3,368,719, dated Feb. 13, 1968. Divided and this application Jan. 6, 1967, Ser. No. 623,155
8 Claims. (Cl. 222—189)



Generally, the present device consists of a liquid reservoir having a pump housing therein which surrounds a rotatable pump means for pumping the liquid from the reservoir upwardly within the pump housing. The amount of fluid delivered from this lower pump housing is metered and mixed with air from an entrance port, thus generating a foam mixture. The foam is then forced upwardly into a passageway containing a body having a cellular structure with intercommunicating cells. This body is rotated together with the pump means and bears against an upper pump housing which is internally threaded. As a result, further air is drawn into the entrance port thus providing a continuous supply of foam and at the same time the friction of the cellular structure bearing against the upper housing elevates the temperature of the foam which may then be dispensed out of a spout or the like.

3,389,837
PLUG VALVE ASSEMBLY FOR AEROSOL TYPE DISPENSERS OF FLUID PRODUCTS
Jean Marand, Poitiers, Vienne, France, assignor to Geigy Chemical Corporation, Ardsley, N.Y.
Filed June 28, 1967, Ser. No. 649,717
Claims priority, application France, June 30, 1966,
67,608
11 Claims. (Cl. 222—193)

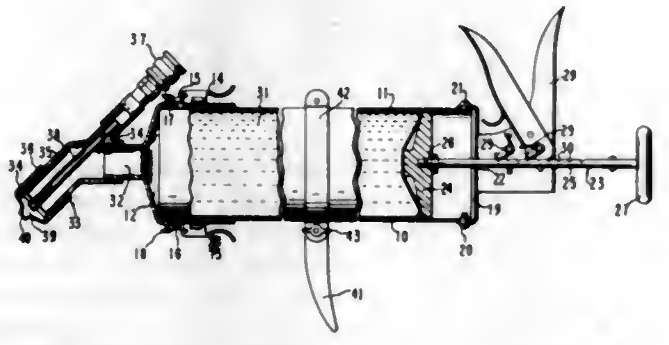


A plug valve assembly for dispensers of fluid products and having a product container for containing the fluid product to be dispensed and adapted to accommodate a propellant cartridge within the product container, said plug valve assembly comprising a hollow rod, a valve actuator on the upper end of said rod and having a nozzle therein, a cap member having an aperture therein through which the hollow rod is movable, a valve body on the lower side of said cap member and into which said valve rod is slidable through said aperture, the assembly having three flow paths therethrough, one for the propellant, one for the fluid product, and one for atmospheric air to flow into the space within the product container above the fluid product, two flexible gaskets in said assembly through which said hollow rod passes, one of said gaskets obturating two of said flow paths, a propellant cartridge secured to said valve body, and a dip tube extending through said propellant cartridge to the bottom of said valve body and opening into said one flow path, said dip tube being in fluid tight engagement with said propellant cartridge where it passes therethrough.

3,389,838

PORTABLE APPARATUS FOR APPLYING ACOUSTIC MATERIALS

Peter J. Morra, 3393 Wheeling Drive, Santa Clara, Calif. 95051, and Le Roy D. West, 945 Cottonwood Drive, San Jose, Calif. 95129
Filed July 20, 1967, Ser. No. 654,769
5 Claims. (Cl. 222—193)

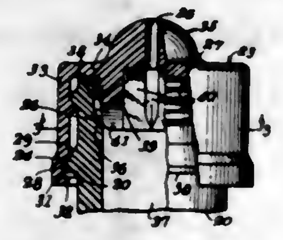


Portable gun for applying acoustic materials to ceilings, textured walls, and other surfaces. Uses a cylindrical container with disposal bag and ratchet-operated piston for pushing the contents to be sprayed through a nozzle. The effluent material is mixed in the nozzle with the gas and converted therein to a viscosity and consistency primarily adapted to be applied to a surface to increase its sound-absorbing properties.

3,389,839

NON-REMOVABLE BOTTLE CLOSURE

Henry T. Williams, Hacienda Heights, Calif., assignor of one-half to Neil G. Kane, Hacienda Heights, Calif.
Filed Oct. 31, 1966, Ser. No. 590,877
8 Claims. (Cl. 222—502)



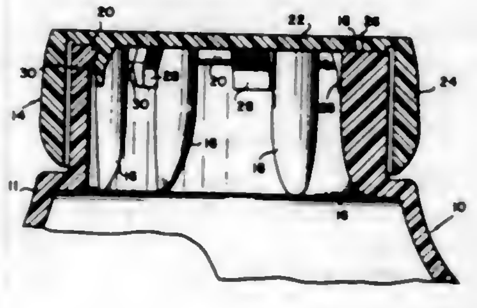
The primary characteristic of this invention is that the closure is non-removable and has two operative positions, one closing the bottle against dispensing flow therefrom of its contents, and the other opening the bottle to such flow. Another characteristic is that the two operative positions of the closure are simply effected by turning the same from one position to another through a predetermined arc, preferably 90°. Yet another characteristic is that only a flow passage is controlled by such turning of the closure from one position to the other, the same being otherwise sealed, in both positions, to obviate linkage and/or evaporation of the contents of the bottle.

Whether the bottle or other container is formed of metal, glass or plastic material, the same is substantially rigid and non-deformable. The same is provided with portions that cooperate with a rotative cap that is formed of resilient material and formed to have a normally-open dispensing passage. Said cap is provided with snap-retention engaging portions that cooperate with the mentioned container portions to hold the cap captive and yet permit of rotative movement thereof, said cap being provided with an inner extension in which said passage is provided and which is operatively related to the mentioned portions of the container to release the passage so it may open or to close said passage, depending on the position to which the cap is moved.

3,389,840

COMBINED DISPENSING CONTAINER AND CLOSURE

Robert J. Musel, 106 E. Iona Ave., Linwood, N.J. 08221, and Elmer G. Thomas, 400 W. 7th St., Mays Landing, N.J. 08330
Filed Apr. 27, 1966, Ser. No. 545,733
4 Claims. (Cl. 222—548)

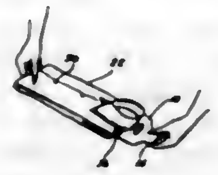


The present invention relates to a closure assembly for a container provided with spaced lug means formed on an assembly which serve the dual purpose of limiting the rotation of the closure member on the upper end of the neck of the container and which further serve to secure the closure member to the neck by means of a locking bead means formed along the outer circumferential surface of the lug means.

3,389,841

REUSABLE FORM FOR FOLDING SHIRTS

Frederick A. Schwartz, 86 Judson Ave., Dobbs Ferry, N.Y. 10522
Filed Mar. 3, 1967, Ser. No. 620,412
3 Claims. (Cl. 223—71)

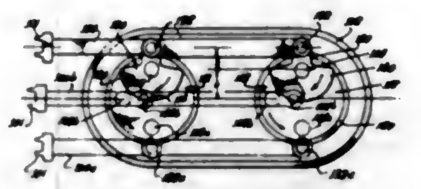


A form which can be used repeatedly for holding shirts and like garments, preferably permanently pressed shirts that are stored away after the form has been removed from the folded shirt. The form consists of a single piece made of a flat uncreased and uncreasable semistiff sheet material such as a high impact butadiene-polystyrene. The form is of oblong planar shape with straight parallel side edges, a centered head lip projecting from the top edge and downwardly sloped portions extending from the head lip to the side edges. The bottom edge is centrally notched. Handling apertures are provided within the periphery of the form. The form is dimensioned to have a shirt folded about it with the shirt bosom flat and facing forwardly.

3,389,842

KINETOGRAPH MOVEMENT MECHANISM

Rouel R. Campbell, Los Angeles, Calif., assignor to Mitchell Camera Corporation, Glendale, Calif., a corporation of Delaware
Continuation of application Ser. No. 381,295, July 9, 1964. This application Mar. 1, 1967, Ser. No. 619,872
22 Claims. (Cl. 226—69)

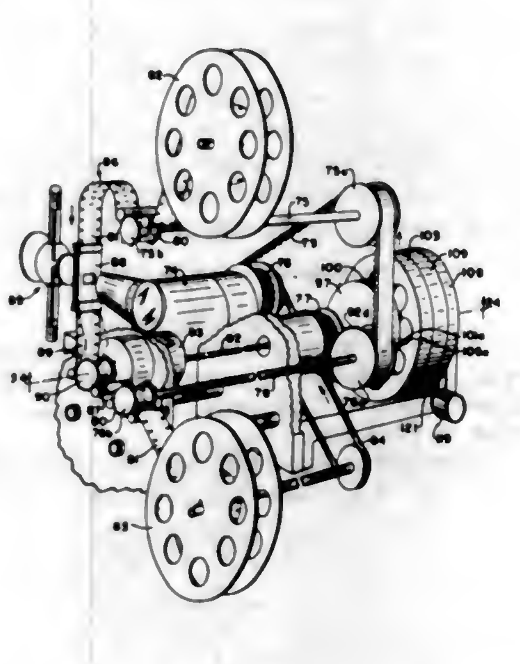


A film engaging claw is carried by a member mounted on a pair of crank members rotating in a given direction, the crank members being mounted on means rotating in the opposite direction, the resulting motion of the claw carrying member being the sum of the two motions.

3,389,843

INTERMITTENT MOTION APPARATUS

William S. Touchman, Dayton, Ohio, assignor to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland
Original application Aug. 3, 1964, Ser. No. 387,085, now Patent No. 3,309,988. Divided and this application Jan. 16, 1967, Ser. No. 609,378
6 Claims. (Cl. 226—134)

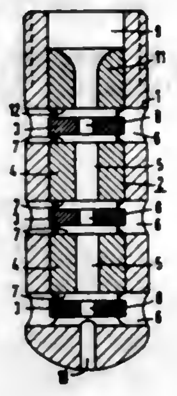


An intermittent motion device comprising a rotatable system having a certain resonant frequency. The rotatable system includes an output member capable of oscillation about the axis of rotation of the rotatable system. A uniform rotation of a portion of the rotatable system is effected. Oscillator means causes the rotatable system to oscillate substantially at its resonant frequency, whereby the oscillations and uniform rotation of the rotatable system are superposed, so that the output member undergoes alternate advances and effective dwells.

3,389,844

DEVICE FOR DIRECTED FEEDING OF WIRES

Wolfgang Rossner, Nuremberg, Germany, assignor to Siemens Aktiengesellschaft, a corporation of Germany
Filed Apr. 29, 1966, Ser. No. 546,412
19 Claims. (Cl. 226—196)

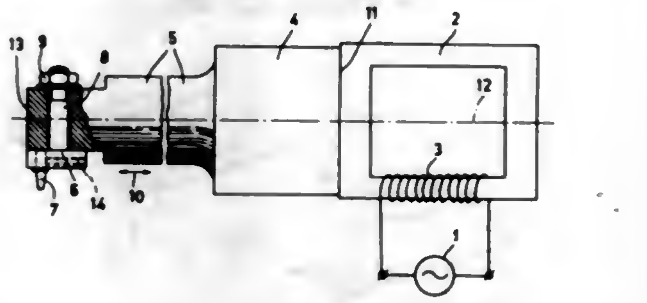


Device for directed feeding of rods or wires such as weld wires includes a nozzle-shaped base member formed with a longitudinal bore having at least one step-like offset, a plurality of abrasion-resistant guide elements located in the longitudinal bore, one of the guide elements being supported on the offset in spaced relationship to the other guide elements, the base member being formed with at least one substantially radial bore extending to the guide elements respectively in the longitudinal bore, the guide elements having a pair of opposite end faces located transversely to the longitudinal bore and adapted to guide a wire of abradable material through the base member, whereby material abraded from the wire at one or both end faces of the guide elements is dischargeable from the base member through the radial bores.

3,389,845

DEVICE FOR ULTRASONIC WELDING OF THE KIND COMPRISING A CONVERTOR AND AN AMPLITUDE TRANSFORMER

Henricus Petrus Cornelis Daniels, Emmasingel, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed June 9, 1966, Ser. No. 556,366
Claims priority, application Netherlands, June 25, 1965, 6508149
4 Claims. (Cl. 228—1)

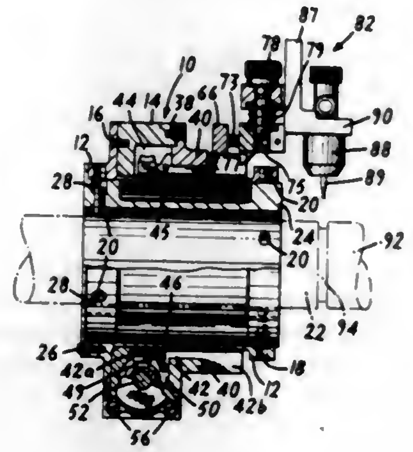


1. A device for ultrasonic welding comprising a convertor which converts the electrical energy of an alternating-voltage source into mechanical energy, an amplitude transformer which raises the amplitude of the mechanical vibrations produced by the convertor and a welding tip which is disposed at the end of the transformer remote from the convertor and which transfers the mechanical energy to the welding area, characterized in that the welding tip is inserted into a plate which is mechanically connected with the transformer, while the in-

terface between the plate and the transformer, which are made of different materials, extends parallel to the direction of the mechanical vibrations of the transformer.

3,389,846
AUTOMATIC PIPE WELDER

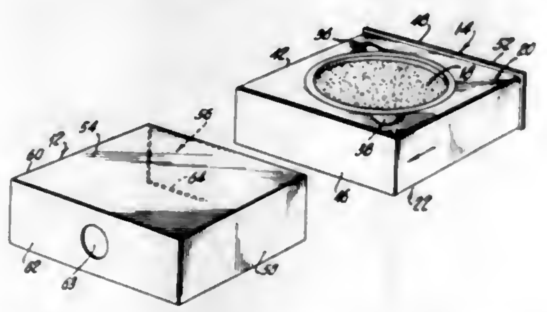
Thomas R. Claffey, Groton, Conn., assignor to General Dynamics Corporation, New York, N.Y., a corporation of Delaware
Filed Nov. 3, 1966, Ser. No. 591,818
10 Claims. (Cl. 228—29)



1. Automatic pipe welding apparatus, comprising a split gear housing having an opening formed therein and a bottom wall extending beyond the side walls of the housing and adapted to secure the housing to a first pipe, a split gear assembly having a tooth portion located within the opening of the housing and a flange portion extending beyond one of the side walls of the housing and in superposed relation with the bottom wall of the housing, a welding torch mounting clamp mounted on the flange portion of the split gear assembly for clamping both halves of the split gear assembly together, a welding torch assembly attached to the mounting clamp and having a welding torch for welding the first pipe to a second pipe and means for driving the tooth portion of the split gear assembly to thereby rotate the welding torch around a junction between the first and second pipes.

3,389,847
POWDER CONTAINER

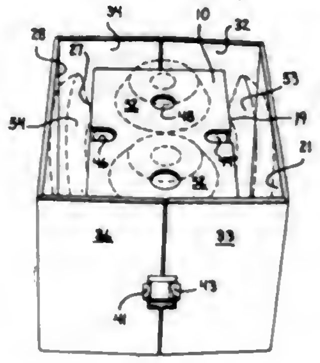
Alice Darot, Paris, France, assignor to Produits de Beaute—Parfums Jean d'Aveze
Filed July 22, 1966, Ser. No. 567,143
6 Claims. (Cl. 229—9)



A powder container having a drawer portion having a bowl shaped powder receptacle, an insert portion adapted to receive said bowl shaped receptacle and a box portion adapted to receive said insert portion. A cover portion adaptable to slidably receive and frictionally surround said drawer portion, permits said drawer to be withdrawn horizontally to provide access to said bowl shaped powder receptacle.

3,389,848
PACKING MEMBER

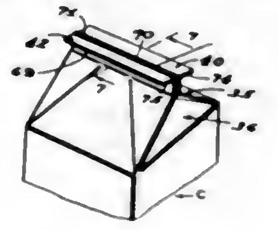
Thomas M. McKee, Indianapolis, Ind., assignor to Inland Container Corporation, Indianapolis, Ind., a corporation of Indiana
Filed Sept. 16, 1966, Ser. No. 579,882
3 Claims. (Cl. 229—14)



A packing member erected from a unitary blank and having multiple side and end walls and a central article supporting panel, the multiple side wall panels on opposite sides of the supporting panel being spaced from each other to provide either additional article-accommodating pockets or protective air cells.

3,389,849
PLASTIC GABLE TOP CONTAINER

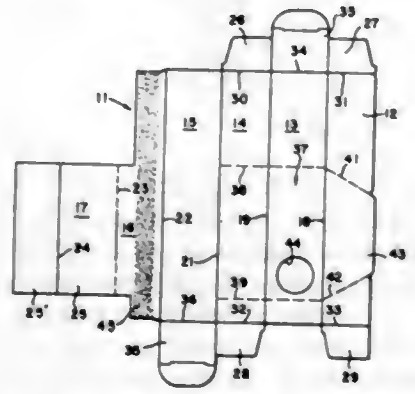
Harry B. Egleston, Livonia, Mich., assignor to Ex-Cell-O Corporation
Filed Jan. 6, 1966, Ser. No. 534,257
13 Claims. (Cl. 229—17)



An extensible pouring spout closure for a container formed of thermoplastic resinous sheet material wherein the pouring lip area is sanitarily housed by means of a double tear edge seal which may be opened by the initial tearing of a single, easily accessible fused edge seal that in turn initiates, as part of the same operation, the sequential breaking of a pair of independent spout release edge seals.

3,389,850
CARTON WITH UNITARY COUPON

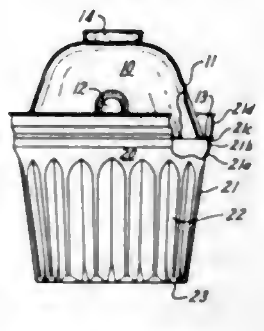
Winston G. Rockefeller, Woodcliff Lake, N.J., assignor to Colgate-Palmolive Company, New York, N.Y., a corporation of Delaware
Filed Mar. 14, 1966, Ser. No. 534,008
5 Claims. (Cl. 229—16)



1. A unitary carton and coupon assembly comprising a preformed blank of sheet material having a series of parallel longitudinally extending fold lines whereby the blank may be folded to form a tube, an integral coupon tab detachably connected along one edge to a side edge of said blank, said coupon tab freely underlying at least one side of said tube so as to be completely protectively enclosed within said tube, and means in the blank defining a tear portion in the tube side which when opened fully exposes said coupon tab for detachment from the assembly.

3,389,851
SUNDAE CONTAINER CONSTRUCTION

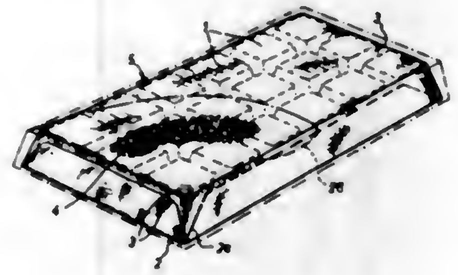
William C. Clark, 599 Audubon Ave., Pittsburgh, Pa. 15228
Filed Mar. 31, 1967, Ser. No. 627,495
15 Claims. (Cl. 229—43)



A dome-shaped translucent closure lid is constructed to removably snap-fit and latch-engage within an open end of and to rest upon an inside seat of a bottom container for a food product, such as ice cream, to provide an upwardly-offset container compartment and viewing enclosure for topping of a food product that is carried in the bottom container. The closure lid is provided with a rounded, dome or conically-shaped body surmounted at its apex by a reinforcing and stabilizing top button-like portion, with an annular radially-outwardly projecting bottom mounting flange, and with offset or recessed finger grip portions in a spaced quadrant relation about its rounded body.

3,389,852
TEAR-UP PACKAGE

Emil Egli, Windisch, Aargau, Switzerland, assignor to Chocoladefabriken Lindt & Sprungli Aktiengesellschaft, Zurich, Switzerland
Filed June 13, 1967, Ser. No. 645,797
Claims priority, application Switzerland, June 15, 1966, 8,611/66
6 Claims. (Cl. 229—51)



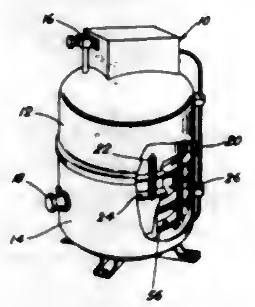
A tear-up package, especially for food products, such as chocolate, candy and like small articles consists of an inner envelope in which the products are wrapped and an outer envelope surrounding the inner envelope. The outer envelope has formed thereon a tear-up portion which adheres to a portion of the inner envelope, so that when the tear-up portion is torn open, the adhering portion of the inner envelope is also torn open and the products wrapped by the inner envelope become exposed.

ERRATUM

For Class 230—117 see:
Patent No. 3,390,401

3,389,853
REFRIGERANT COMPRESSOR WITH OIL TRAP IN DISCHARGE GAS CAVITY

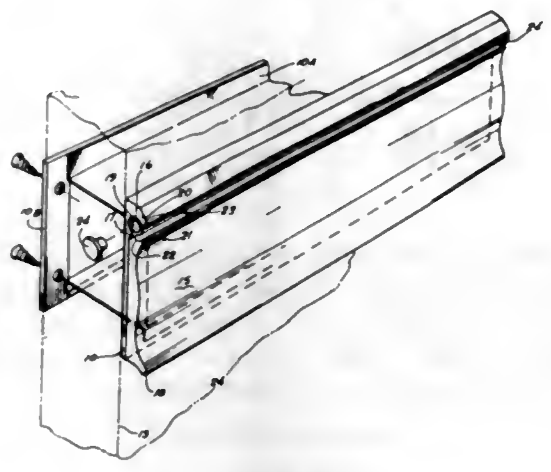
William R. Dirk, Marshalltown, Iowa, assignor to Lennox Industries Inc., a corporation of Iowa
Filed Feb. 14, 1967, Ser. No. 616,024
9 Claims. (Cl. 230—206)



A refrigerant compressor having an annular discharge gas manifold provided in the lower portion of the compression mechanism, with means for trapping oil carried with the refrigerant in the lower portion of the discharge gas manifold, and with conduit means for effecting return of the trapped oil from the discharge manifold to the sump defined in the compressor between the compression mechanism and the outer housing during operation of the compressor.

3,389,854
LETTERBOX PLATE

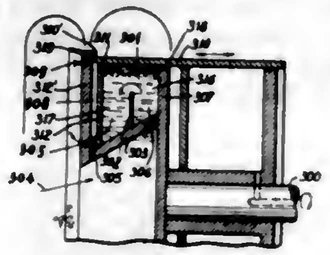
Leo Coopersmith, Ivoryton, Conn., assignor to The H. B. Ives Company, New Haven, Conn., a corporation of Connecticut
Filed Dec. 22, 1966, Ser. No. 603,872
4 Claims. (Cl. 232—46)



There is provided a letterbox plate for receipt therethrough of mail delivered by a postman, of the type having a hinged flap to cover a letter opening in a front plate of the assembly in such a way that when the flap is manipulated it uncovers the aforementioned opening in the plate. The flap has as an integral part thereof a hinge pin received in a complementally formed flange in the front plate to form a hinge connection between the two elements and the flange and flap are provided with coacting means to resist mutilation of the assembly when the flap is forceably opened.

3,389,855
FILTER

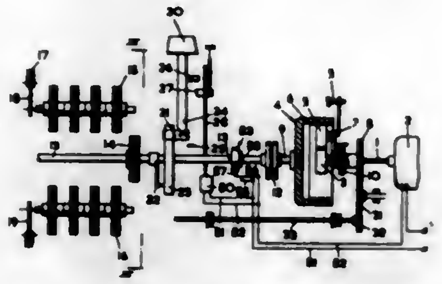
Hans Müller, Erlenbach, Zurich, Switzerland
Continuation of application Ser. No. 278,216, May 6, 1963. This application May 23, 1966, Ser. No. 552,340
Claims priority, application Switzerland, May 19, 1962, 6,198/62; Jan. 31, 1963, 1,176/63
8 Claims. (Cl. 233—2)



A centrifuge for separating solid particles suspended in a liquid from the latter, wherein a centrifuging chamber is provided between two plates fixed to the driven shaft of the centrifuge and extending axially spaced from each other transverse to the shaft, and an axially movable tubular member surrounding the shaft and forming with the periphery of one of the plates filter means in form of a narrow annular gap through which the liquid may pass while the solid material will be retained by the gap and will accumulate on the inner surface of the tubular member to be discharged therefrom by moving the tubular member in axial direction so as to open the centrifugal chamber in radial direction.

3,389,856
APPARATUS FOR ACTUATING A RESULT UNIT OF A CALCULATING MACHINE, AND THE LIKE, EACH TIME WHEN THE APPARATUS IS OPERATED

Frans Willem Ruys, Utrechtsweg 19,
De Bilt, Netherlands
Filed Feb. 13, 1967, Ser. No. 615,826
Claims priority, application Netherlands, Feb. 17, 1966, 6602050; May 18, 1966, 6606837
14 Claims. (Cl. 235—62)



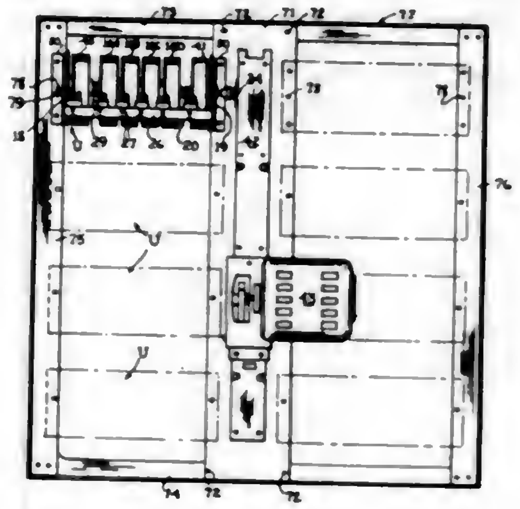
Key-operated calculating or adding machine in which the successive depressions of the digital value keys each are operable to adjust a stop to co-operate with a differential gear which thereby enters a value corresponding with the depressed key into a storage device.

3,389,857
MOTOR-DRIVEN SCORE DRUMS

Henry S. Ross and Marcine P. Wolverton, both of
10136 Pacific, Franklin Park, Ill. 60131
Filed July 5, 1966, Ser. No. 562,689
10 Claims. (Cl. 235—144)

1. A number-display rotatable drum having a center hub portion and a peripheral indicia-bearing flange and including

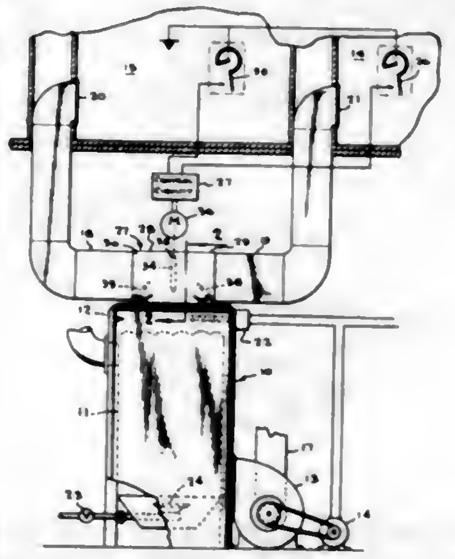
(a) a rotatable shaft journalled through said hub for supporting and rotating said drum in either direction,
(b) means carried by said shaft and engageable with said hub for frictionally rotatably connecting said drum to said shaft,
(c) said peripheral indicia-bearing flange of said drum having formed on one edge thereof stop shoulders cooperating with a latch means for preventing rotational movement of the drum with said shaft in one direction,
(d) latch means engaging said stop shoulders and having a first position holding said drum against rotation with said shaft in one direction while permitting rotational movement of said drum in an opposite direction, and a second position permitting rotation of said drum with said shaft in either direction,



(e) means for moving said latch means between its first and second positions,
(f) means connected to said shaft for continuously rotating said shaft in either direction,
(g) and a second means on said one edge of said peripheral indicia-bearing flange of said drum co-operating with said latch means when in its first position for preventing rotation of the drum with said shaft in either direction.

3,389,858
DISTRIBUTING DAMPER ASSEMBLY FOR PLURAL ZONE HEATING

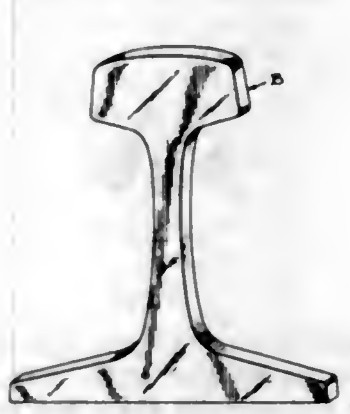
Randolph P. Capps, Lynchburg, Va., assignor to Multi-Zoner, Inc., Lynchburg, Va., a corporation of Virginia
Filed Oct. 14, 1966, Ser. No. 586,816
12 Claims. (Cl. 237—2)



1. In a temperature control system for a building having first and second zones, temperature changing means for supplying a temperature conditioned medium to said zones, a duct system including first and second branch duct means associated with the first and second zones respectively, for conveying said medium to said zones, a thermostat in each of said zones for producing demand signals when the air temperature in its associated zone is in selected temperature ranges, blower means for circulating said medium through said duct means to said zones, and zone distributing means in said duct system controlled responsive to said signals to assume first and second zone positions directing said medium predominantly to the first and second branch duct means respectively when their associated theremostats separately produce demand signals and to assume a distributing position supplying both branch duct means when both zone thermostats are concurrently producing demand signals; the improvement wherein said zone distributing means comprises a damper chamber communicating with said temperature changing means to receive said medium therefrom and communicating at opposite end portions of said chamber with the respective branch duct means to deliver said medium to each of said zones, a main distributing damper having a free edge movable in a selected arcuate path pivoted for angular movement from said distributing position to said first and second zone positions, and at least one angularly adjustable supplemental damper pivotally supported in said chamber radially outwardly of said arcuate path and disposed adjacent said first zone position of said distributing damper for modifying the distribution of the medium when said distributing damper assumes said first zone position, said supplemental damper being movable between a first position coacting with said main damper at said first zone position to substantially prevent passage of said medium through said chamber to said second branch duct means and a second position spacing said supplemental damper relative to the distributing damper for admitting selected proportions of said medium to said second branch duct means when the distributing damper occupies the first zone position.

3,389,859
INSULATING END POST

Emory L. Groff, Pompano Beach, Fla., assignor to Poor & Company, Chicago, Ill., a corporation of Delaware
Filed July 17, 1967, Ser. No. 653,770
1 Claim. (Cl. 238—152)

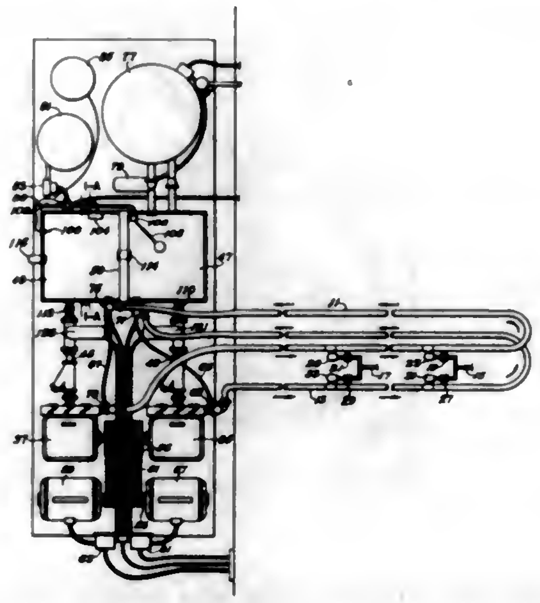


An insulating end post for railway rails wherein, the end post is made of filaments coated with thermo-responsive composition and made available in sheet form from which the profile of the end post is die cut.

3,389,860
AUTOMOTIVE VEHICLE WASH SYSTEMS

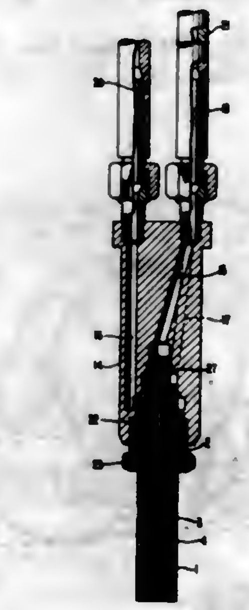
H. L. Null, 4004 Golden Oaks Drive,
Haltom City, Tex. 76531
Filed May 27, 1966, Ser. No. 553,392
3 Claims. (Cl. 239—124)

Following is disclosed an automotive vehicle wash system having separate rinse and wash water circulation loops. Control valves disposed in lines connected with the rinse and wash water circulation loops provide essential instantaneous change from rinse to wash water at each car wash location. Parallel electrical controls enable each car wash stall or location to energize common wash or rinse water primary motors, while preventing interference between the wash and rinse water solenoid control valves used at each location. A conductivity sensing element in a wash water storage tank controls a solenoid valve to intermittently add water to control cleaning compound concentration.



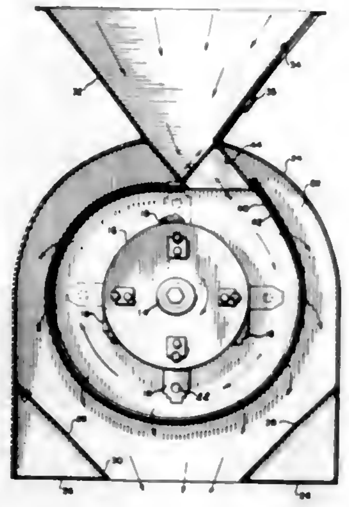
3,389,861
DEVICE FOR GAS CUTTING UTILIZING A SHIELD GAS

Minoru Nakanishi and Hidehiko Hayasaki, Tokyo, Japan, assignors to Kabushiki Kaisha Tanaka Seisakusho
Filed Mar. 21, 1966, Ser. No. 535,885
Claims priority, application Japan, Oct. 26, 1965, 40/65,303
1 Claim. (Cl. 239—422)



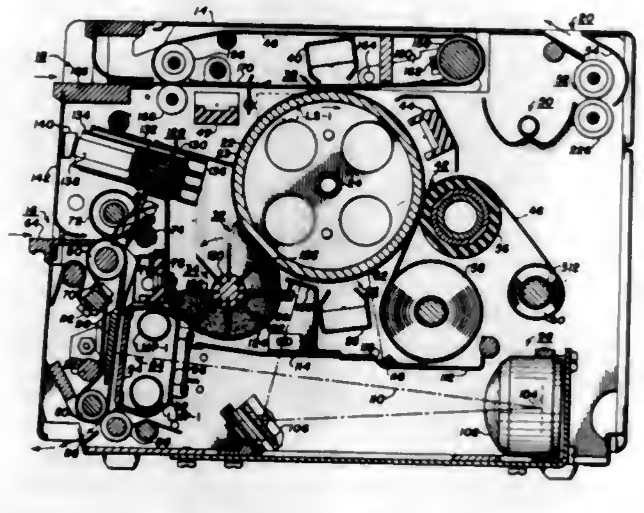
A device for gas cutting, utilizing a nozzle having a central cutting gas conduit, an intermediate concentric shield gas conduit and an outer concentric heating gas conduit. The incoming supply of shield gas to the nozzle is divided between the intermediate and outer conduit by means of a suitable porting arrangement within the nozzle structure.

3,389,862
SCREEN MILL
Herman D. Schutte, 51 Woodbury Drive,
Snyder, N.Y. 14226
Filed May 17, 1965, Ser. No. 456,294
3 Claims. (Cl. 241—86)



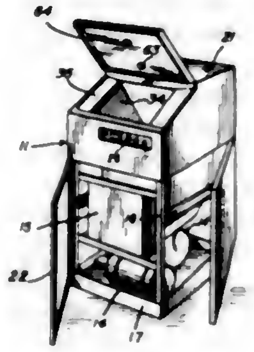
A screening mill consisting of a housing into which a rotor shaft extends having a plurality of hammers pivotally carried thereon describing a cylindrically shaped hammer tip path plane concentric to said rotor shaft within said housing, a material sizing screen of spiral-shaped profile mounted interiorly of said housing in substantially concentric relation to said tip plane path and comprising a perforated plate bent into a spiraloid form with its opposite ends disposed in spaced-apart relation and thereby defining a material inlet opening through a top portion of said screen into the interior thereof, and a material feed chute leading through an apertured top portion of said housing and delivering mill feed through said inlet opening into the interior of said screen and on top of said hammers.

3,389,863
XEROGRAPHIC TONER DISPENSER
Roger H. Eichorn, Webster, N.Y., assignor to Xerox Corporation, Rochester, N.Y., a corporation of New York
Filed Oct. 22, 1965, Ser. No. 500,826
3 Claims. (Cl. 241—94)



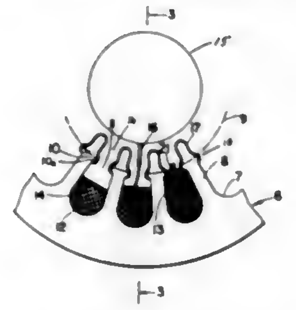
A device for dispensing toner from solid blocks having a container to hold the block and bias the same against a series of blades which are reciprocated to separate toner particles from the blades.

3,389,864
WASTE DISPOSAL UNIT
George F. Topinka, Riverside, Ill., assignor to FMC Corporation, a corporation of Delaware
Filed Dec. 10, 1965, Ser. No. 513,043
8 Claims. (Cl. 241—141)



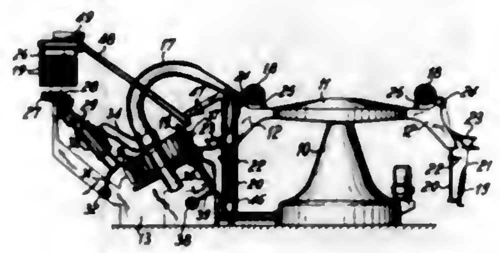
The waste disposal unit comprises a hopper for receiving waste and a pair of comminuting units blocking the open bottom of the unit so that all of the waste material deposited in the hopper must pass through one of the comminuting units before it can pass through the open bottom of the unit. One of the comminuting units is slightly lower than the other, and the direction of rotation of the cutting cylinders causes the waste material to move toward the combs of both cylinders. Water jets are mounted at opposite ends of the comb of the lower unit. The units comminute waste only when the cylinders are rotating in one direction, and when the direction of rotation is reversed the water jets wash the residual waste from the lower cylinder.

3,389,865
DYNAMOELECTRIC MACHINE CORE MEMBER TOOTH EXTENDER
Buddy S. Stuckey, Fort Wayne, Ind., assignor to Fort Wayne Tool & Die, Inc., Fort Wayne, Ind., a corporation of Indiana
Filed Sept. 3, 1965, Ser. No. 484,887
5 Claims. (Cl. 242—1.1)



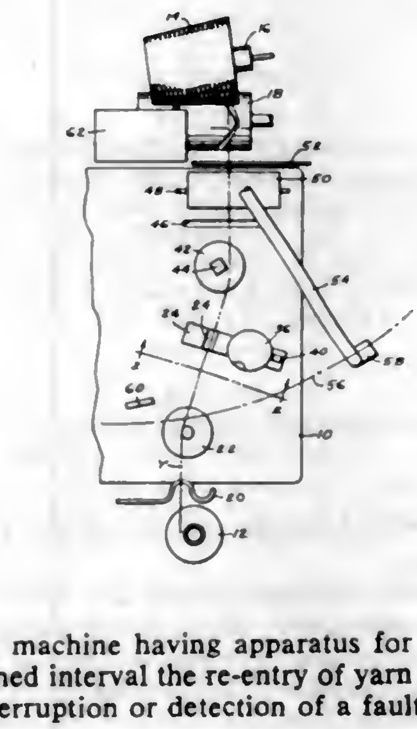
An apparatus for use with gun type winding machines and dynamoelectric machine stator core members having a central bore and radially extending teeth and winding slots to extend the teeth radially into the bore during the winding operation. The tooth extending member has a generally U-shaped tooth extending portion having two generally flat surfaces joined at one end by a smoothly rounded bight portion which forms one end of the member. The tooth extending member has a clip portion extending from the flat surfaces away from the bight portion to form the other end of the member. The clip portion, in a specific embodiment, comprises strip material bent, adjacent to the flat surfaces, outwardly and away therefrom, and bent, remote from the flat surfaces, back toward each other. The clip portion functions to removably secure the member to a respective tooth and to prevent the unintentional removal of the member from the tooth during the winding operation and the insertion of slot wedges, and to allow their subsequent removal.

3,389,866
METHOD OF OPERATION OF AN AUTOMATIC SPOOL MACHINE, IN PARTICULAR A CROSS-SPOOL AUTOMATIC WINDING MACHINE
Karl August Müllers, Grassheide 55, Monchen-Gladbach, Germany
Filed Dec. 8, 1965, Ser. No. 512,333
Claims priority, application Germany, Dec. 9, 1964, M 63,415
4 Claims. (Cl. 242—35.5)



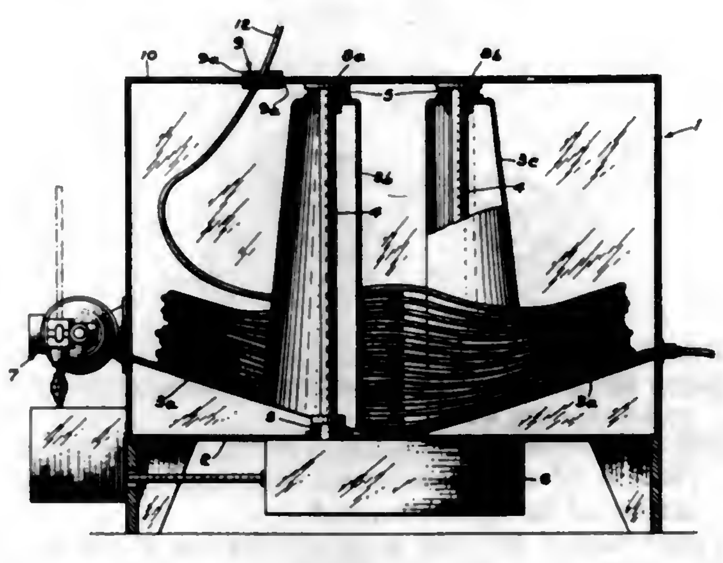
A method of operation of an automatic spool machine, in particular a cross spool automatic winding machine including a stand, a rotor rotatably mounted on the stand and including a plurality of spooling stations having a creel, a knotting device immovably disposed adjacent the spooling stations and passed by the latter during rotation of the rotor and an intermediate storage means having cop receivers, comprising the steps of separating empty cops from partly unwound cops, raising the partly unwound cops to a plane disposed above the intermediate storage means, feeding further the partly unwound cops to common mixed storage device containing new cops and crippled cops, feeding the partly unwound cops, new cops and crippled cops from the common mixed storage device in a falling movement to the cop receivers of the intermediate storage means and to the creel at the corresponding spooling station, sensing each of the cops upon release from the mixed storage device as to its peripheral configuration, and controlling the inclination of falling of the cop in response to the sensing step.

3,389,867
TEXTILE APPARATUS
Thomas E. Pitts, Cranston, R.I., assignor to Leesona Corporation, Warwick, R.I., a corporation of Massachusetts
Filed Sept. 8, 1966, Ser. No. 578,080
12 Claims. (Cl. 242—35.6)



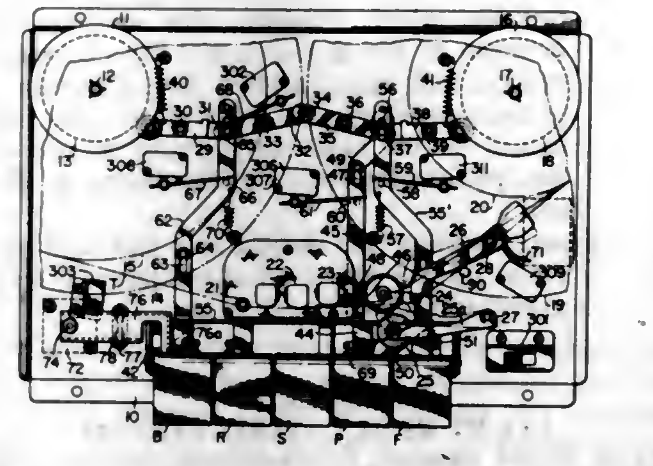
A winding machine having apparatus for delaying for a predetermined interval the re-entry of yarn into a sensor following interruption or detection of a fault in the yarn.

3,389,868
DEVICE FOR COILED STOWAGE OF CABLES
Charles P. Majkrzak, Nutley, N.J., assignor to International Telephone and Telegraph Corporation, a corporation of Delaware
Filed Sept. 8, 1966, Ser. No. 578,077
11 Claims. (Cl. 242—54)



Wire or cable is wound in a figure eight pattern for stowage in a housing by two rotatable disks which alternately carry a guide within channels around the disks in the desired pattern. Deflectors coupled to the disk driving mechanism control the alternating movement of the guide.

3,389,869
TAPE DRIVE MOTOR CONTROL ARRANGEMENT
Katsuya Atsumi, Tokyo, Japan, assignor to Akai Electric Company Limited, Tokyo, Japan
Filed Feb. 24, 1966, Ser. No. 529,709
Claims priority, application Japan, Mar. 3, 1965, 40/12,057
4 Claims. (Cl. 242—55.12)



A tape drive control for a magnetic tape recorder includes push buttons for controlling tape drive motors for feeding tape between a take up reel and wind up reel with capstan feed mechanism. A manual switch controls a circuit to the motors and a tension arm pivotally mounted on the recorder bears on the tape between the take up reel and drive reel for sensing termination of the tape or an extremely slackened condition of the tape. The tension arm operates a switch which controls a relay having its contacts in parallel with the manual switch so that the motors continue to run even when the manual switch is open until the tape has been completely wound onto one of the reels. This arrangement also keeps the motors de-energized when one of the push buttons is activated in the absence of tape contacting the tension arm.

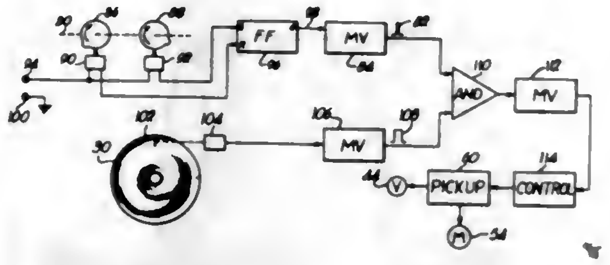
3,389,870

COINCIDENCE SPLICER

Minford E. Betts, Odessa, Mo., Richard L. Hatton, Fairway, Kans., and Richard L. Asper, Kansas City, Mo., assignors to The Kansas City Star Company, Kansas City, Mo., a corporation of Missouri

Filed Sept. 26, 1966, Ser. No. 582,048

13 Claims. (Cl. 242—58.2)



1. In a web-fed machine:

means for performing a repetitive secondary operation on an expiring web;

paster apparatus for effecting a flying splice upon expiration of a predetermined time interval after actuation of the apparatus; and

a start control for said apparatus for use in the splicing of the expiring web with a new, rotating roll having regularly spaced register marks thereon to assure substantial registration of the new web of the roll and the secondary operation after splicing is effected, said control comprising:

  means coupled with said operation-performing means and responsive thereto for producing a reference signal during each repetition of said operation;

  a sensor operably associated with said roll for producing a pulse that indicates the rotative position of the roll during each revolution thereof;

  a comparator coupled with said signal-producing means and said sensor and responsive to said signals and said pulses for delivering a splice command when one of said signals and one of and pulses have a predetermined time interrelationship which indicates that substantial registration of the new web and the secondary operation will occur after a time duration equal to said predetermined interval plus the time required for the new web to travel to said operation-performing means after splicing is effected; and

  means coupling said comparator with said apparatus to initiate operation of the latter in response to said splice command.

3,389,871

FLUID REGULATING SYSTEM

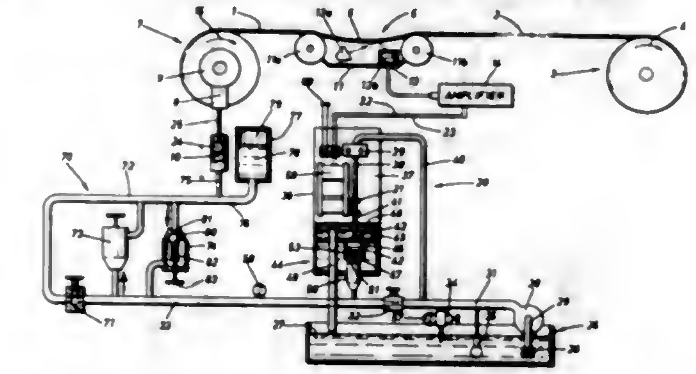
Peter de Hertel Eastcott, Peterborough, Ontario, Canada, assignor to Canadian General Electric Company Limited, Toronto, Ontario, Canada, a corporation of Canada

Filed Nov. 16, 1966, Ser. No. 594,804

Claims priority, application Canada, Dec. 11, 1965, 947,556

6 Claims. (Cl. 242—75.44)

1. A fluid regulating system adapted to be used in a controlled system comprising a fluid actuator; a fluid regulator for controlling the working fluid supplied to said actuator according to the requirements of the system controlled; a fluid flow circuit connecting said regulator to said actuator; a bi-directional flow valve in said circuit for restricting the flow of the fluid between the regulator and the actuator; a relief valve connected in said circuit across said flow restricting valve, said relief valve being normally closed and set to open at a predetermined pressure differential of one sense and when open providing an unrestricted fluid flow path around said flow restricting valve; and another relief valve connected in said circuit across said flow restricting valve, said other relief valve being normally closed and set to open at a predetermined pressure differential of the opposite sense and when open providing an unrestricted fluid flow path around said flow restricting valve.



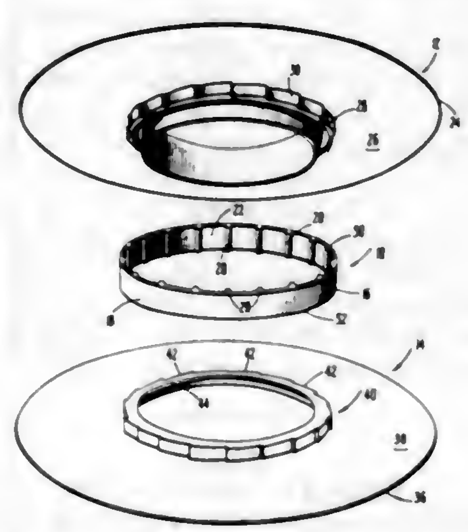
3,389,872

REEL

George F. Lyman, 307 North Ave., Weston, Mass. 02193

Filed Jan. 25, 1967, Ser. No. 611,672

14 Claims. (Cl. 242—71.8)



A reel having a hub and a separately formed flange with the hub carrying ribs that serve as cam followers and the flange having cam faces that cooperate with the ribs so as to enable the hub and flange to be releasably secured together by relative rotation of the hub and flange.

3,389,873

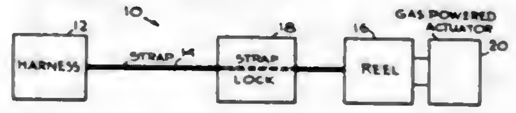
HARNESS REEL ARRANGEMENT

Ernest A. Filippi, Northridge, and Donald H. Herbert, Rolling Hills Estates, Calif.; said Filippi assignor to Special Devices, Inc., a corporation of California

Filed Mar. 28, 1966, Ser. No. 549,738

(Filed under Rule 47(a) and 35 U.S.C. 116)

9 Claims. (Cl. 242—107.2)



1. A gas powered harness reel arrangement comprising, in combination:

a substantially constant velocity gas powered actuator having a preselected linear stroke for providing an average, substantially constant velocity during predetermined portions of said stroke;

an output shaft;

means engaging said actuator and said output shaft for converting said linear stroke movement of said actuator to rotary motion of said output shaft;

a strap shaft adapted to have a strap wound thereupon;

means for yieldingly resisting rotation in a first direction of said strap shaft;

rotary motion transfer means for rotating said strap shaft in a second direction opposite said first direction in response to rotation of said output shaft; and

means for providing a gas under pressure to said actuator to provide said preselected linear stroke, whereby said strap shaft is rotated in said second direction at a substantially constant angular velocity.

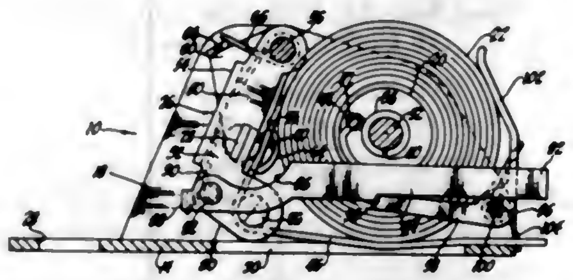
3,389,874

SEAT BELT RETRACTOR

Andrew J. Van Noord, Grand Rapids, Mich., assignor to Kent Engineering, Grand Rapids, Mich., a partnership

Filed May 16, 1966, Ser. No. 550,517

9 Claims. (Cl. 242—107.2)



1. A seat belt retractor comprising,

a mounting bracket having spaced side walls and including a reel mounted between said side walls, having a seat belt engaged thereto and biased for winding said seat belt thereon,

an operative mechanism mounted between said side walls and receiving said seat belt in threaded engagement therethrough in the course of being wound on and unwound from said reel,

said operative mechanism including means of locking engagement with said seat belt as received in threaded engagement therethrough,

means connected to said operative mechanism, for holding said locking means inactivated, and disposed in strain responsive engagement with said seat belt for activation of said locking means upon strain relieving release of said seat belt in the course of being withdrawn from said reel,

said operative mechanism being pivotally mounted between said side walls and including two parts pivotal relative to each other and biased for separation and to receive said seat belt therebetween,

and means provided on one of said two parts for receiving said seat belt in threaded engagement thereover, and under the retracting bias of said reel, for drawing said parts together against said reel and closing the separation therebetween for latching engagement with said seat belt thereby.

3,389,875

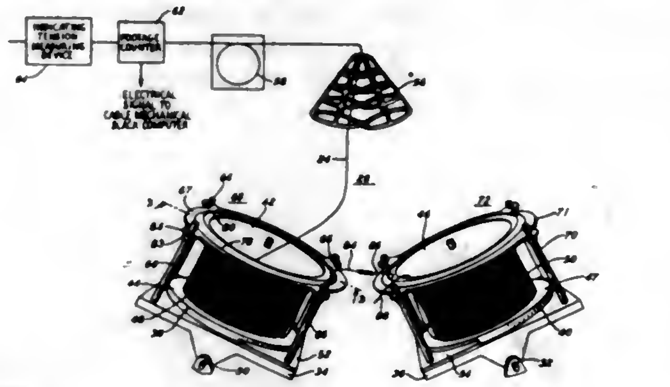
WIRE PAYOUT SYSTEM FOR MEASURING A SHIP'S GROUND SPEED

Neil M. Brown, Belford, N.J., assignor to Bell Telephone Laboratories, Incorporated, Murray Hill and Berkeley Heights, N.J., a corporation of New York

Filed June 17, 1966, Ser. No. 558,513

7 Claims. (Cl. 242—128)

On a ship, taut wire is passed over a sheave and overboard by drawing it axially over the flange of a spool about which the wire is wound. To prevent the springy wire from uncoiling too fast and kinking as it is drawn over the flange, the wire passes between the spool's end flange and an elastic ring embracing the flange. As it is drawn the wire moves peripherally around the flange. The bitter end of the wire on the spool also passes between the flange and ring. It is joined to the wire of a successive waiting spool. The leading end and bitter end of the second spool also pass through an elastic ring embracing its end flange. This prevents kinking and breaking of the wire.



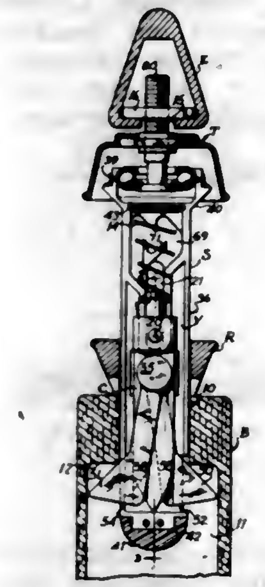
3,389,876

BOBBIN HOLDER WITH WEDGE MEMBER

Richard K. Whitehead, Sr., Richard K. Whitehead, Jr., Alvin C. Whitehead, and Harry C. Whitehead, Atlanta, Ga., assignors to Southern Research & Engineering Company, Atlanta, Ga., a corporation of Georgia

Filed July 30, 1965, Ser. No. 476,132

7 Claims. (Cl. 242—130.2)



Suspension type bobbin holder by which a bobbin for thread, sliver or roving is releasably suspended for free rotation from the creel board or creel rail of a spinning machine or the like, and comprising an elongate shell for insertion into the opening in a bobbin, pawls extendable outwardly from the shell to engage the interior portion of the bobbin, and a sleeve slidable along the shell to actuate the pawls.

3,389,877

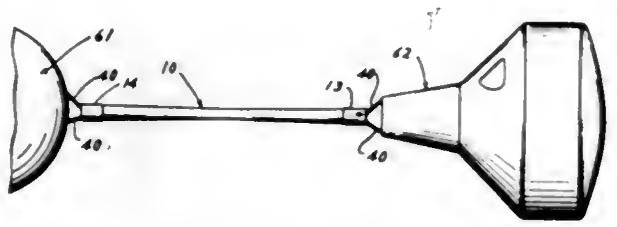
INFLATABLE TETHER

William C. Huber and Edwin Samfield, Harris County, Tex., assignors to the United States of America as represented by the Administrator of the National Aeronautics and Space Administration

Filed Aug. 11, 1967, Ser. No. 660,573

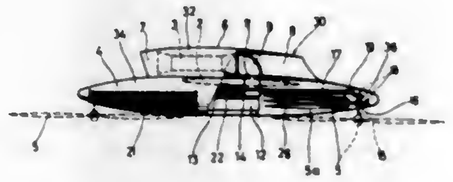
9 Claims. (Cl. 244—1)

An inflatable tether device particularly adapted for tethering objects in zero gravity environment. The device includes an inflatable structure comprising a pair of cup-like rigid housing sections and a tubular casing of flexible fabric bonded at its respective ends to the housing sections to provide a closed inflatable structure. For stowage, the housing sections are connectable in a lip-to-lip configuration by a releasable clamp with the fabric casing folded therein in a readily expandable condition. The structure is inflatable into a semi-rigid column by a compressed gas supply and together with shock absorber struts, which are provided at each end of the inflatable structure, dampens disturbing forces and relative oscillations between the tethered objects. The struts are pivotally moveable into external recesses in the housing sections for stowage and are also moveable to extend radially outward of the inflatable structure in operative condition in which they are attachable to the objects to be tethered. A modified form includes internal hatches and inflatable sealing means which adapt the tether for use as a passageway between space vehicles.



3,389,878
VTOL AIRCRAFT

Manfred Westrup, Ottobrunn, Germany, assignor to Bolkow Gesellschaft mit beschranker Haftung, Ottobrunn, near Munich, Germany
Filed Jan. 19, 1966, Ser. No. 521,629
Claims priority, application Germany, Feb. 2, 1965, B 80,350
13 Claims. (Cl. 244—12)

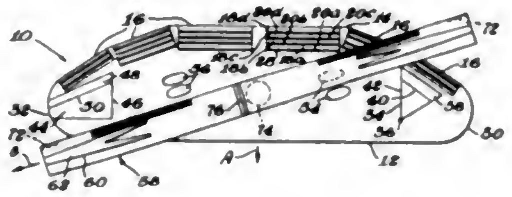


An aircraft includes a fuselage having a wing having a thrust engine mounted adjacent the top of the wing and a gondola which projects downwardly from the wing and which houses at least one rotor with foldable blades which may be folded to retract the rotor within the housing. The gondola may be opened to permit pivoting of the rotor so that its shaft extends downwardly and supports a hub and a plurality of blades around the hub for rotation around a substantially vertical axis to provide a lift rotor. In the preferred arrangement, the foldable and retractable rotor is carried at each end of the gondola and a gondola is carried on each wing on each side of the fuselage.

3,389,879
AIRCRAFT

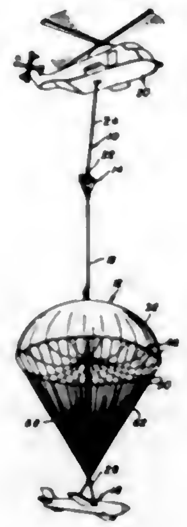
John J. Grebe, Midland, Mich.
(12430 W. St. Andrews Drive, Sun City, Ariz. 85351)
Filed Oct. 22, 1965, Ser. No. 501,716
5 Claims. (Cl. 244—17.11)

The present invention comprises an aircraft in the shape of a fuselage-wing airfoil fitted with at least one movable pressure equalizing assembly. The pressure equalizing assembly comprises a multiplicity of spaced apart components separated by through passages extending from the bottom surface to the top surface of the airfoil. The aircraft, by its unique design and construction, provides unexpected smoothness of flight at both low and high speeds as well as excellent flight control.



3,389,880
PARACHUTE SYSTEM FOR MID-AIR LOAD RECOVERY

Otis B. Ferguson, Alamogordo, N. Mex., assignor to Recovery Research Systems, Inc., a corporation of New Mexico
Filed June 21, 1966, Ser. No. 559,197
10 Claims. (Cl. 244—137)

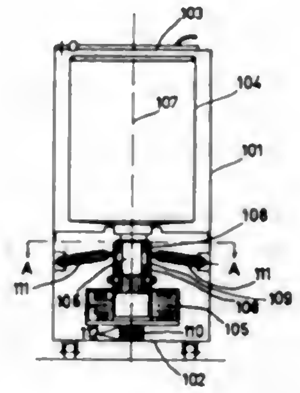


A parachute re-reefing and dis-reefing apparatus including a main parachute, a drogue parachute located centrally above the main parachute and connected to a common load supported by the shroud lines of the main parachute by means of an elongated load line extending from the drogue chute freely through a vent in the apex of the main parachute to attached engagement with the load. A plurality of reefing lines are secured peripherally about the outer edge of the main parachute canopy and extend radially inward therefrom for engagement with the load line in a manner whereby an upward pull on the load line will produce an inward and upward folding of the peripheral edge of the main parachute so as to effect a predefined collapsing of the main parachute whereby, upon a release of the pull on the load line, the main parachute can reopen.

3,389,881
RESILIENT SUPPORTS FOR ROTATING MACHINE PARTS

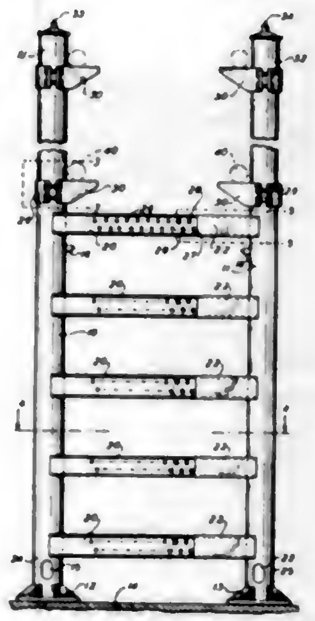
Jan Stelwagen, Emmasingel, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed July 12, 1966, Ser. No. 564,616
Claims priority, application Netherlands, July 17, 1965, 6509288
1 Claim. (Cl. 248—18)

A suspension system for rotatable drums of the type utilized in domestic washing/drying apparatus. A rotatable drum is suspended in a rigid framework by a plurality of spring and damping elements which co-act to define an elastic system having an elastic center positioned along the central axis of the drum and particularly at the center of mass of the total rotating system. The tension of springs which support the drum can be regulated thus permitting adjustment of the position of the elastic center of the elastic system.



3,389,882
ADJUSTABLE SIGN SPAN SUPPORT

Francis G. Schlosser, Ridgefield Park, N.J., assignor to Pfaff and Kendall, Newark, N.J., a corporation of New Jersey
Filed Aug. 8, 1966, Ser. No. 571,071
3 Claims. (Cl. 248—125)

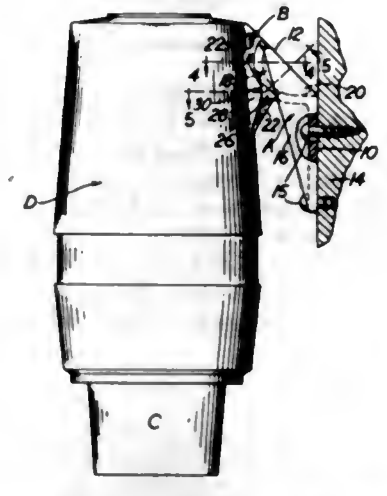


Sign span supports comprising a pair of posts adapted to be secured adjacent the shoulders or margins of roadways, formed with adjustable interconnecting plate members to hold the posts at the desired spaced relation and with vertically adjustable clamp support members for adjustment to support the sign span.

3,389,883
DISPENSER MOUNTING MEANS

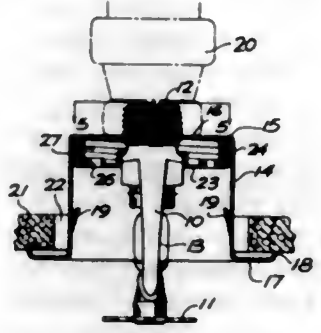
Howard W. Johnson, Park Forest, Ill., assignor to Solo Cup Company, Chicago, Ill., a corporation of Delaware
Filed Mar. 4, 1966, Ser. No. 531,843
4 Claims. (Cl. 248—224)

A two-piece mounting means for dispensers and the like is disclosed. One piece of the mounting means is a wall bracket having a sloped upper surface in which there is formed a semispherical seat or pocket and a slot. The other piece of the mounting means presents a matching semispherical head for reception in the seat and a centering web extending downwardly from the head for coaction with the slot in the first piece.



3,389,884
ADJUSTABLE FITTING FOR CEILING MOUNTED SPRINKLER HEADS

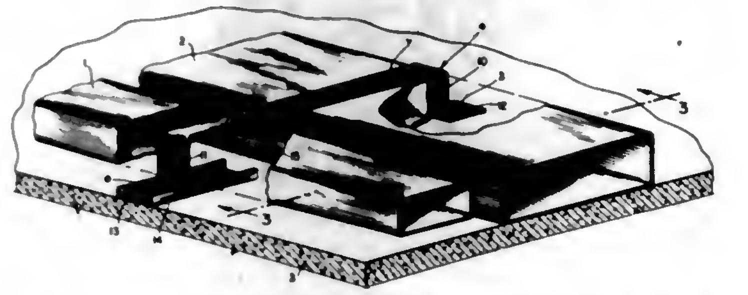
Wayne E. Ault, Youngstown, Ohio, assignor to "Automatic" Sprinkler Corporation of America, Youngstown, Ohio
Filed July 15, 1966, Ser. No. 565,541
4 Claims. (Cl. 248—345)



An adjustable cup-like fitting for a ceiling mounted sprinkler head consists of a cylindrical body member having an inturned flange on its upper end and an outturned flange on its lower end and an apertured disc axially movable therewithin to receive the sprinkler head through the aperture. Between the inturned flange and the disc is a compression spring which in operative position urges the disc against the sprinkler head and the outturned flange against the ceiling.

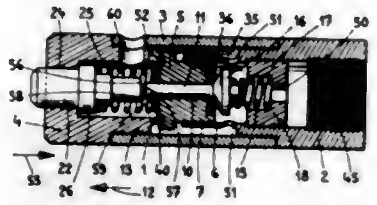
3,389,885
HOLDING MEANS FOR UNDERFLOOR DUCTS

Ronald S. Friedman, Parkersburg, W. Va., and Robert Hadfield, Belpre, Ohio, assignors to Textron, Inc., Providence, R.I., a corporation of Rhode Island
Filed June 6, 1966, Ser. No. 555,584
2 Claims. (Cl. 248—361)



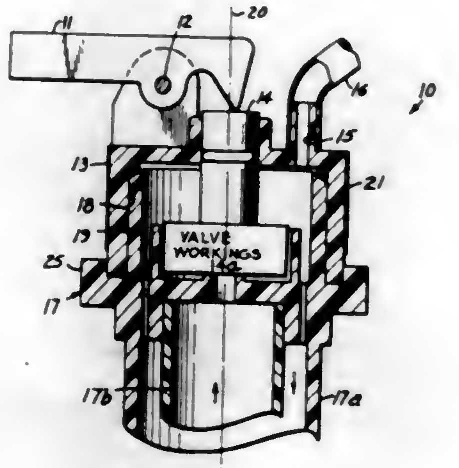
A U-shaped strap to envelop several underfloor ducts of the same or different sizes and having a pair of feet to mount the strap on a deck together with an upright channel supporting one of the feet and holding smaller size duct up against the strap.

3,389,886
PNEUMATIC PILOT VALVE WITH SNAP ACTION
Michel Louis Andre Tissot-Dupont, Annecy, Haute-Savoie, France, assignor to Société à R.L. named S. T. Dupont, Paris, France
Filed May 11, 1964, Ser. No. 366,415
Claims priority, application France May 13, 1963
2 Claims. (Cl. 251—75)



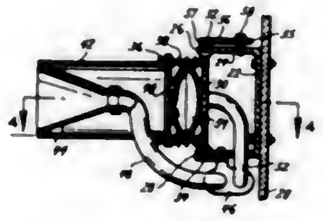
1. A pneumatic valve comprising a cylindrical valve body having an open threaded end and a closed end, a cylindrical bearing mounted axially of said valve body and having an outer diameter smaller than the inner diameter of said body and forming a chamber therebetween, a piston valve slidable in said bearing and having an axial bore, an intermediate pusher slidable in said piston valve and having a head portion and a bearing portion, an abutment provided with an axial bore, secured in said open end of the valve body, a first helical spring mounted between said abutment and said pusher head portion for biasing said cylindrical valve against said valve body closed end, a control button for displacing said pusher against the bias of said first spring, extending through said closed end, a second helical spring interposed between said piston valve and said control button, said second spring being stronger than said first spring, said bearing having a passage communicating with said valve body open end, said valve body having a bore in its wall adjacent its closed end, for equalizing the pressure exerted upon said valve.

3,389,887
FLOAT VALVE
Armand E. Antunez, Jr., Glendora, Calif. (% Coast Foundry & Mfg. Co., 2700 E. 1st St., La Verne, Calif. 91750)
Filed Nov. 25, 1964, Ser. No. 413,936
4 Claims. (Cl. 251—367)



1. In combination: a base member and a cap member; said base member having a valve seat formed thereon, said base member and said cap member enclosing a valve head member therein, said cap member further including a pivotal support for a float arm for operating said valve head member, and means for joining the members comprising: a centering surface on the base member and a centering surface on the cap member, said centering surfaces being substantially equidistant from a central axis around which the members are relatively rotatable, and which centering surfaces are circularly cylindrical and make a close-fitting, telescopic engagement for a significant axial extent, thereby to restrain the members against relative lateral movement including canting; an engagement surface on the cap member and an engagement surface on the base member, each of said engagement surfaces occupying less than one-half of the periphery around the axis, and both of them including portions which are equidistantly spaced from the said axis, whereby the members may be relatively moved axially to engage the centering surfaces while the engagement surfaces are rotationally displaced from each other, thereby moving the engagement surfaces to a mutually axially overlapping position, and thereafter relatively rotating the members while in this axial position so that the engagement surfaces overlap each other radially and thereby prevent separation of the members; and key means engageable to one of said members to prevent reverse relative rotation of the members.

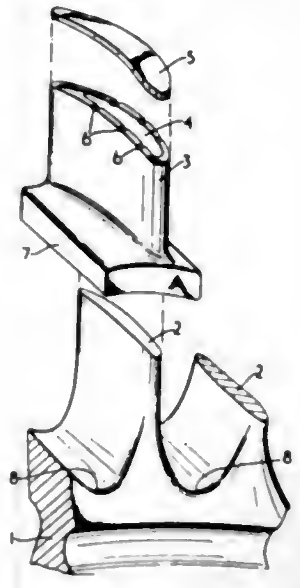
3,389,888
WAVE-POWERED EQUIPMENT
Morgan L. Edwards, 1127 Grand Ave., Dayton, Ohio 45407
Filed Jan. 6, 1966, Ser. No. 519,144
17 Claims. (Cl. 253—4)



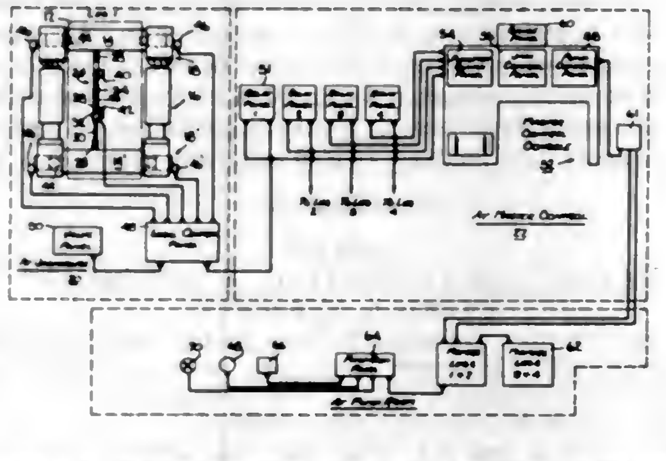
A container with flexible walls is mounted adjacent the surface of a body of water so it is at the approximate level of the troughs of waves on that body of water, a conduit extends into that body of water and is connected to the interior of that container by a valve, a second conduit is connected to the interior of that container by a second valve, that container will respond to the forces applied to it by waves to become compressed and thereby force water out through the second valve and the second conduit, and a spring will restore that container to its extended position to permit further water to enter that container through the first conduit and the first valve.

3,389,889
AXIAL FLOW ROTOR
Robert Noel Penny, Solihull, England, assignor to The Rover Company Limited, Solihull, England
Filed June 5, 1967, Ser. No. 643,451
Claims priority, application Great Britain, June 3, 1966, 24,822/66
6 Claims. (Cl. 253—39.15)

An axial flow rotor in which each blade is an open-ended tubular sleeve carried on a stub extending radially from the rotor body, each stub protruding radially beyond the radially-outer end of the sleeve carried thereby and having a retaining cap secured to its radially-outer end, the retaining cap extending outwardly from the peripheral surface of the stub to form a stop to restrain the sleeve from centrifugal movement on its stub, and in which a blade platform extends circumferentially outwardly from the radially-inner end of each sleeve, the platforms of adjacent sleeves co-operating to shroud the periphery of the body portion between each stub from the working fluid.



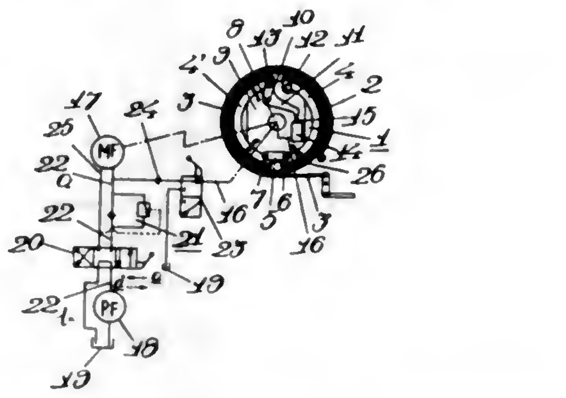
3,389,890
JACKING APPARATUS AND CONTROLS
Robert E. Bradbury, Jr., Houston, Tex., assignor to The Offshore Company, Houston, Tex., a corporation of Delaware
Filed July 1, 1966, Ser. No. 562,401
28 Claims. (Cl. 254—106)



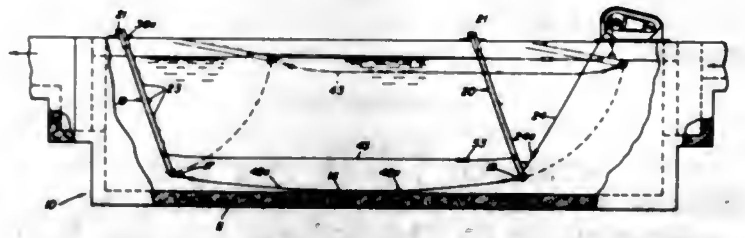
Jacking apparatus and controls for platforms which are movable with respect to support legs, characterized by expandable and retractable upper and lower jack means adjacent each leg; stroking jack means secured between each pair of upper and lower jack means; and hydraulic and electrical means for controlling the operation of the jack means both at a central location and also adjacent each support leg.

3,389,891
WINCH
Sinitsu Sinohara, Takesi Yokoyama, Hironori Kimura, Seiji Kurauchi, and Hiromi Miyaucti, Takamatsu, Japan, assignors to Kabushiki Kaisha Tadano Tekkosho, Takamatsu, Japan
Filed May 5, 1967, Ser. No. 636,487
Claims priority, application Japan, May 9, 1966, 41/43,038; May 28, 1966, 41/50,098; Sept. 21, 1966, 41/88,964
5 Claims. (Cl. 254—187)

A winch having a rotary axis and a winch drum rotated by said rotary axis through the intermediary of a clutch, a hydraulic cylinder for operating said clutch device, first and second hydraulic systems for operating the hoist motor and the hydraulic cylinder respectively, characterized in that the oil pressure set in the second hydraulic system including said hydraulic cylinder is raised in synchronism with the rotation of the hydraulic motor, and the clutch device is engaged automatically when the hydraulic motor is rotated by a change-over valve installed in said first hydraulic system.

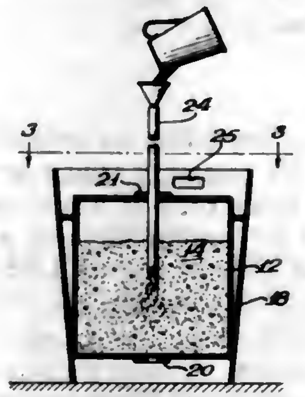


3,389,892
APPARATUS FOR FLOCCULATING TREATMENT OF LIQUIDS IN HORIZONTAL THROUGH-FLOW TANKS
David E. Williamson, Norwalk, Conn., and Joseph A. Rinato, Bronx, N.Y., assignors to Dorr-Oliver Incorporated, Stamford, Conn., a corporation of Delaware
Filed Feb. 13, 1967, Ser. No. 615,727
16 Claims. (Cl. 259—100)



This invention relates to apparatus for the flocculating treatment of suspensions of solids or of turbidity in liquids in a horizontal through-flow tank by way of gentle mechanical agitation, whereby the suspended solids are rendered as settleable floc structures to be removed from the carrier liquid by subsequent sedimentation-clarification and/or by filtration.

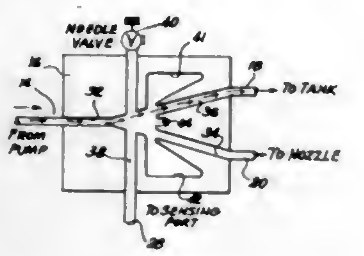
3,389,893
PORTABLE, DISPOSABLE MIXING CONTAINER SYSTEM
Thomas J. Arcuri, 2646 S. Oak Park Ave., Berwyn, Ill. 60402
Filed Mar. 31, 1967, Ser. No. 628,238
10 Claims. (Cl. 259—146)



A method and apparatus for mixing liquid and a dry particulate material, such as concrete mix, especially adapted for smaller projects of the type often performed by a homeowner. A hollow pipe is partially inserted into a box containing a measured amount of the dry material. Water is then added to the dry material in a measured amount through the hollow pipe. The pipe is then pushed through the opposite side of the material container, and the contents are mixed by rotating the container about the hollow pipe axle. Alternatively, the mix container with the inserted pipe may be placed into a frustoconical container and the frustoconical container may be rolled on its side to mix the ingredients. Finally, the hollow pipe is removed and the mixed ingredients allowed to flow through the opening left by the withdrawn pipe.

3,389,894
FUEL INDUCTION DEVICE

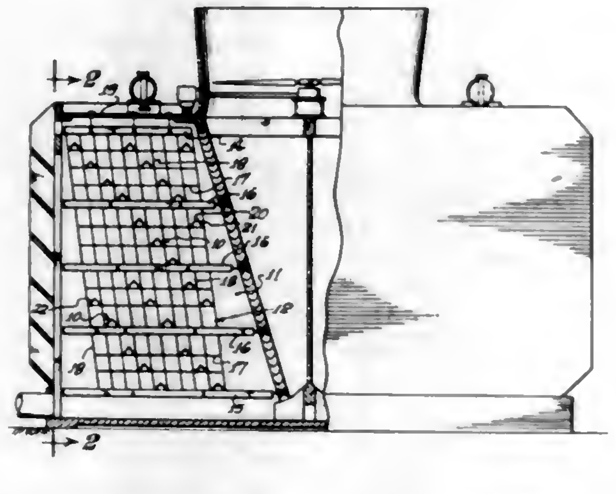
Alan M. Binder, 1706 Eastern Parkway,
Schenectady, N.Y. 12309
Filed Oct. 11, 1965, Ser. No. 494,726
19 Claims. (Cl. 261—36)



An induction device including a fluid amplifier adapted to proportion liquid flow between separate outlet passages in response to the flow of a controlling fluid through said amplifier.

3,389,895
COOLING TOWER FILL BAR

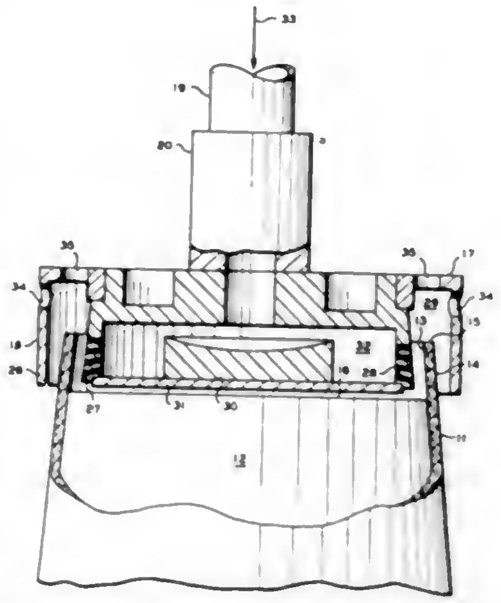
James G. De Flon, Whittier, Calif., assignor, by mesne assignments, to De Flon-Anderson Co., Inc., Kansas City, Mo., a corporation of Delaware
Filed Jan. 24, 1967, Ser. No. 611,397
9 Claims. (Cl. 261—111)



A cooling tower including an improved splash fill bar and splash type fill assembly which are utilized to cool fluids of various kinds such as water, and by the reverse operation thereof for cooling air with water. A splash fill bar in accordance with the present invention is formed of plastic or metal of a comparatively thin wall having a geometric structural shape and of such size that it will span between supports without sagging or requiring tension to prevent sagging and being perforated with a multitude of holes being round, square, rectangular, oblong, or polygonal, these holes being of such size that both air and water will freely pass through.

3,389,896
METHOD AND APPARATUS FOR HEATING THERMOPLASTIC CONTAINERS FOR SEALING

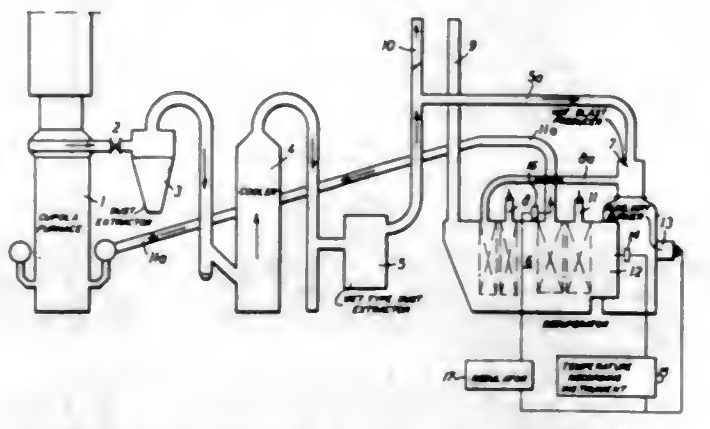
Isaac L. Wilcox and Vincent W. Jezerski, Fulton, N.Y., assignors to Phillips Petroleum Company, a corporation of Delaware
Filed Oct. 10, 1966, Ser. No. 585,376
9 Claims. (Cl. 263—5)



4. An apparatus for heating thermoplastic-coated containers to soften the plastic for hot-melt sealing comprising, in combination, means for supporting a container, a movable heater head containing a heat source means and a thermal energy radiating means, and means to position said heater over end of said container so that a portion of one surface of the container is heated directly from said heat source means and a portion of the other surface of said container is heated from the radiation of thermal energy from said thermal energy radiating means.

3,389,897
METHOD OF OPERATING A HOT BLAST CUPOLA FURNACE

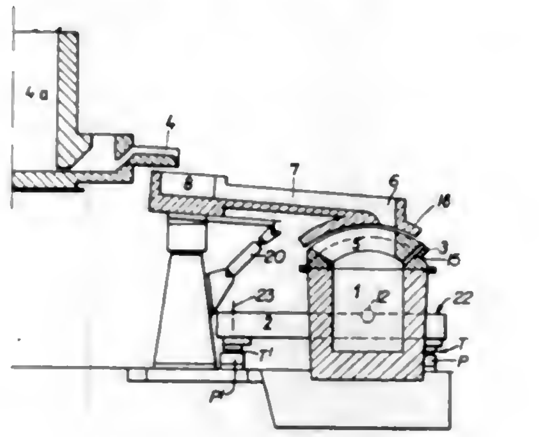
Siegfried Tunder, Dusseldorf-Nord, and Gerhard Schefels, Dusseldorf, Germany, assignors to Gesellschaft für Huttenwerksanlagen m.b.H., and Rekuperator K.G. Dr.-Ing. Schack & Co., Dusseldorf, Germany
Filed Oct. 12, 1965, Ser. No. 495,218
Claims priority, application Germany, June 28, 1965, G 44,003
1 Claim. (Cl. 263—52)



A method of operating a hot blast cupola furnace involves the steps of burning the dust free waste gases of the furnace in a hot blast producer together with combustion air that has been preheated by passage through the producer, supplying additional heat to the producer from an auxiliary burner when the temperature of the hot blast air falls below a certain minimum, and recording the operating temperature of the hot blast producer, or measuring it, so that when the operating temperature is normal, the auxiliary burner will automatically be deactivated.

3,389,898
CUPOLA FURNACE PLANT HAVING A SHAKER LADLE

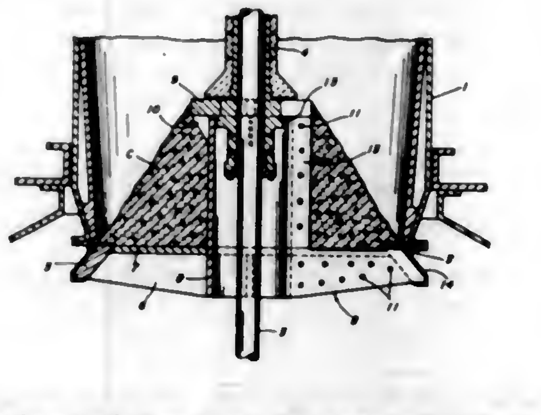
Busso Schimmel, Kitzingen (Main), and Siegfried Tunder, Dusseldorf-Nord, Germany, assignors to Gesellschaft für Huttenwerksanlagen m.b.H., Dusseldorf, Germany
Filed Dec. 14, 1965, Ser. No. 513,745
Claims priority, application Germany, July 8, 1965, G 44,099
5 Claims. (Cl. 266—13)



Combination in a cupola furnace apparatus includes a furnace having a tapping outlet through which molten metal from the furnace is continuously discharged; a ladle; a shaking ladle-means mounting the ladle so as to be capable of displacement from a normal to a tipping position, the ladle having a cover plate in which there is a supply opening for admission of molten metal and an outlet opening for pouring molten metal therefrom; a tapping spout, one end of which is located to receive metal from the tapping outlet of the furnace and in the other end of which is a discharge orifice for feeding metal into the ladle, the supply opening in the ladle extending over an arc whose length is proportional to the angular displacement of the ladle in moving to and from its tipped position whereby metal can be charged into the ladle in all angular positions of the ladle, even when the ladle is in a tipping position in which molten metal is being poured from said outlet opening thereof.

3,389,899
BLAST FURNACE BELL

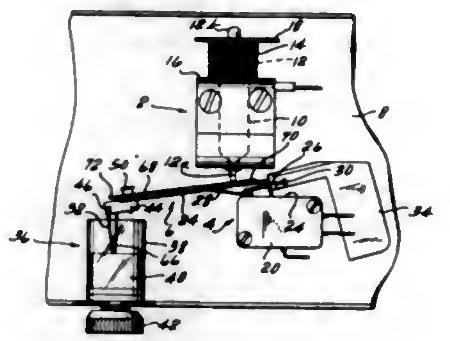
Lowery J. McFarland, Crown Point, Ind., assignor to United States Steel Corporation, a corporation of Delaware
Filed Oct. 5, 1965, Ser. No. 493,176
1 Claim. (Cl. 266—27)



An abrasion resisting blast furnace bell. The bell includes a central cylindrical member, a horizontal platform extending outwardly therefrom, and a frustum shaped ring on the outer periphery of the platform. Charge material is accumulated on the platform adjacent the central cylindrical member.

3,389,900
TIMING SYSTEM

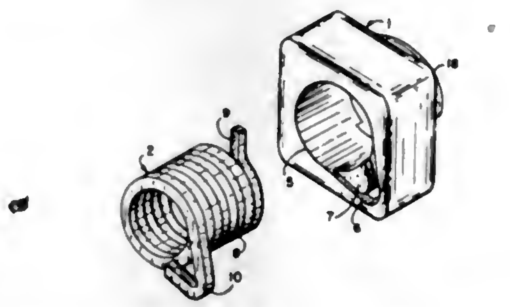
Lance C. Wilcox, Wilton, Conn., assignor to Electric Regulator Corporation, Norwalk, Conn., a corporation of New York
Filed Oct. 28, 1965, Ser. No. 505,551
14 Claims. (Cl. 267—1)



A dashpot-controlled timing system in which the dashpot parts have slow relative movement in one direction and rapid relative movement in the other direction, the speed of movement being controlled by a speed-control element which is moved from one operative position to the other after the parts reach one of their operative positions and before they are caused to move substantially toward the other of their operative positions.

3,389,901
SPRING CLUTCH ANCHOR

Ian Wilson, Pinole, and Erwin K. Munzinger, Oakland, Calif., assignors, by mesne assignments, to Control Data Corporation, a corporation of Minnesota
Filed Sept. 15, 1966, Ser. No. 579,552
9 Claims. (Cl. 267—1)

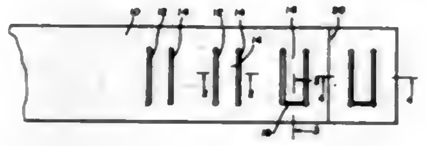


1. An anchoring device comprising the combination of, a helical spring having a coil portion and an anchoring end, and spring support means operatively associated with said spring end including a cavity portion substantially complementary to said anchoring end with said anchoring end fitted therein for anchoring said spring to said spring support wherein said anchoring end is substantially V-shaped with one leg of the V coming off said coil portion.

3,389,902
SNAP-OVER CENTER SPRING AND METHOD OF MAKING

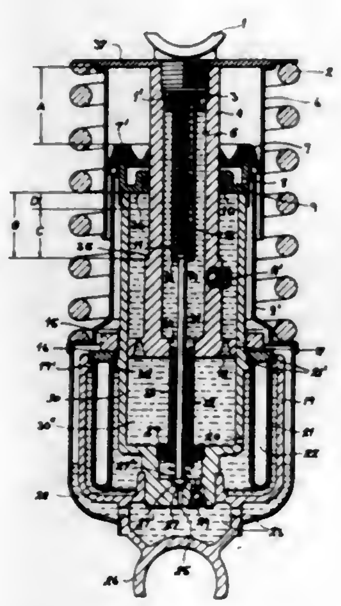
William E. Young, 52 Sea Beach Drive, Stamford, Conn. 06902
Filed Dec. 12, 1966, Ser. No. 605,123
10 Claims. (Cl. 267—1)

A snap-over center spring made of sheet plastic and the like with blanks stamped from the sheet having at least one connected leaf portion of the spring extending between ends of a beam. The leaf at its connection to one of the beam ends through deformation is reduced in thickness to form a thinner hinge portion with the deformation



causing a material flow and the leaf to be lengthened and bowed in relationship to the beam portion of the snap-over center spring.

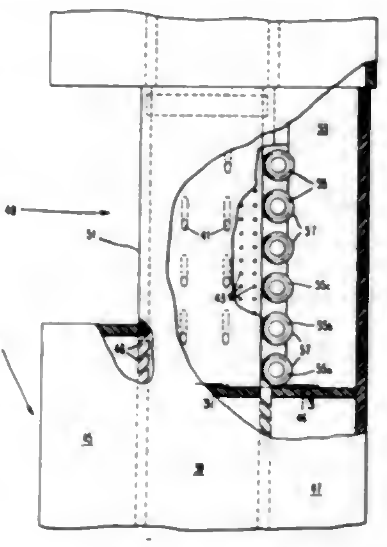
3,389,903
HYDRAULIC SHOCK ABSORBER FOR AUTOMOTIVE-VEHICLE SUSPENSIONS AND THE LIKE
Leopold F. Schmid, Pischekstrasse 49,
Stuttgart, Germany
Filed Dec. 2, 1965, Ser. No. 511,039
Claims priority, application Germany, Dec. 2, 1964,
Sch 36,200
6 Claims. (Cl. 267—64)



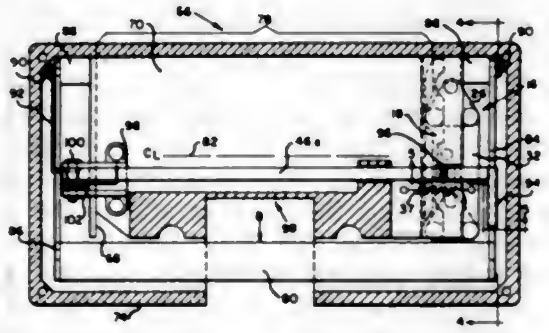
Hydraulic shock absorber with a dashpot assembly whose cylinder, under conditions of reduced load, drains into a reservoir by way of a valve held closed by a first spring under normal or excess load; a second spring acting upon the valve yields to pressure of the hydraulic fluid at reduced loads but recloses the valve under very light loads as the liquid pressure in the dashpot cylinder, supplemented by the resiliency of a gas cushion, falls to a minimum.

3,389,904
SHEET ITEM ALIGNMENT DEVICE FOR SHEET HANDLING SYSTEM
Charles Barton Albright, Norristown, Pa., assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Filed Aug. 4, 1966, Ser. No. 570,303
6 Claims. (Cl. 271—52)

The present device provides a plurality of rotatable wheels fitted along one side of a fluid transport passageway. Elements upon which data are recorded are transported along this passageway and into the area, or station, wherein the rotatable elements are located. The data bearing elements are shifted to come in tangential contact with the rotatable elements. Accordingly, the data bearing elements are aligned so that they can be transported under a read head.

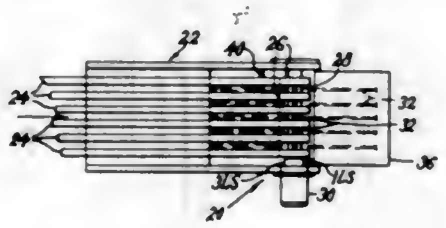


3,389,905
MEANS FOR ADJUSTABLY CONTROLLING THE WIDTH OF A GUIDEWAY
James L. Boggs, Covington, Ohio, assignor to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland
Filed Oct. 14, 1966, Ser. No. 586,766
3 Claims. (Cl. 271—59)



A guideway having a fixed wall and a movable wall. The width of the guideway is established in accordance with the width of an object passing therethrough. Once the width of the guideway is so established, the movable wall is fixed by a locking member having adjustable stops thereon. The movable wall is actually one link of a four-link parallel motion mechanism.

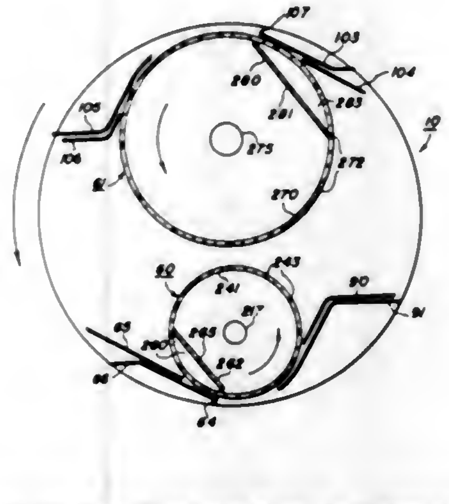
3,389,906
MACHINES FOR STACKING FLEXIBLE SHEETS
Richard R. Walton, Boston, Mass., assignor to United Shoe Machinery Corporation, Flemington, N.J., and Boston, Mass., a corporation of New Jersey
Filed Aug. 1, 1966, Ser. No. 569,297
9 Claims. (Cl. 271—70)



A machine for handling sheets of material having automatic means for transferring individual workpieces from a conveyor or other work support to a uniform stack,

or into a predetermined marginal relation with a preceding piece. Oscillatory stacking members are cooperative with the conveyor and responsive to arrival of a workpiece on the conveyor for removing the workpiece therefrom and transferring it to the uniform stack or into predetermined relation with a preceding piece.

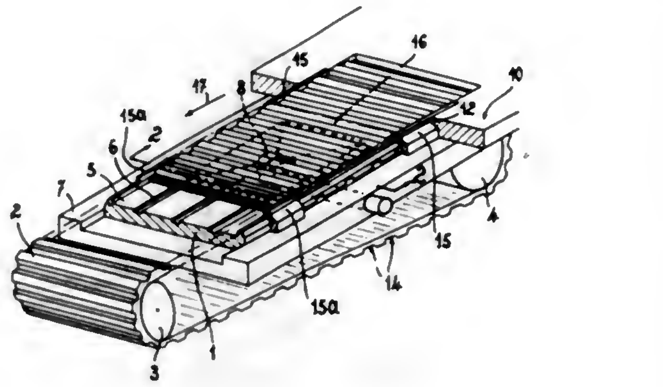
3,389,907
DOCUMENT-HANDLING APPARATUS
Lyman H. Turner, Pittsford, N.Y., assignor to Xerox Corporation, Rochester, N.Y., a corporation of New York
Filed Oct. 17, 1966, Ser. No. 587,109
5 Claims. (Cl. 271—74)



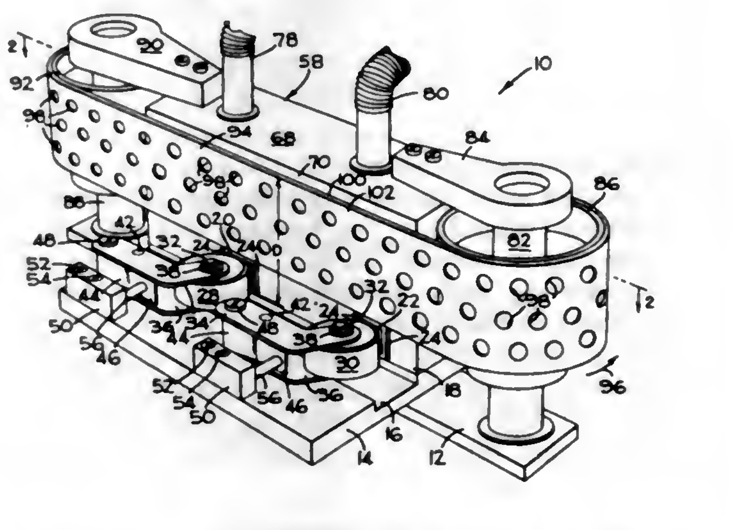
1. Document handling apparatus comprising
a cylinder supported for rotation having tiny apertures formed over substantially the entire surface thereof,
drive means for supplying continuous rotary motion to said cylinder,
a plate member extending parallel to the longitudinal axis of said cylinder and affixed thereto and subtending an arc thereof to define a chordal chamber, said plate member having a plurality of spaced apart orifices formed therein,
stop means located on said arc to position a document with its leading edge in overlying relation with said chordal chamber,
a source of vacuum,
first condit means communicating with said source of vacuum and the interior of said cylinder to exert a vacuum pull along the periphery thereof for wrapping a document therearound,
air supply means for supplying a short duration puff of compressed air in response to a discrete electrical signal,
second conduit means in communication with said air supply means and the interior of said chordal chamber, and
circuit means for emitting a discrete electrical signal to said air supply means to momentarily break the vacuum pull exerted in the vicinity of said arc after a predetermined time interval.

3,389,908
DEVICE FOR TRANSFERRING FLAT OR SHEET PRODUCTS
Louis Martin, 10 Quai Victor Augagneur,
Lyon, France
Filed Sept. 22, 1966, Ser. No. 581,305
Claims priority, application France, Nov. 17, 1965,
46,592, Patent 1,454,859
6 Claims. (Cl. 271—74)

A device for transferring flat or sheet products, composed of an endless belt having an outer surface with transverse flutes which passes through an enclosure in which the spaces between the flutes are subjected to suction pressure at the lateral edge of the belt, whereby a product on the belt is held thereagainst due to the difference between atmospheric pressure acting on the outer surface of the product and the suction pressure acting on its under surface.



3,389,909
LETTER-CODING CONVEYOR
Richard Heaney, Campbell, and Derek Hall, Los Gatos, Calif., assignors to FMC Corporation, San Jose, Calif., a corporation of Delaware
Filed Oct. 17, 1966, Ser. No. 587,301
9 Claims. (Cl. 271—74)

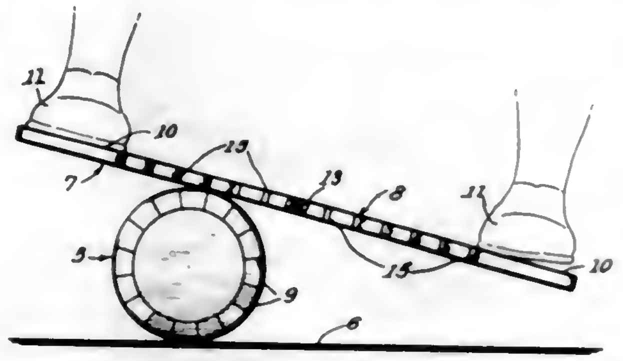


A stationary magnetic head is mounted on the apertured face of a vacuum box adjacent the reach of a perforate belt in sliding contact with said face. Vacuum slots at each side of the magnetic head are evacuated with a higher negative pressure than the vacuum pressure applied to the belt reach. A letter conveyed by the belt reach thus has a relatively large area subjected to one vacuum pressure, and a relatively small area that overlies the magnetic head and is subjected to a high vacuum pressure. The vacuum box is compartmented to prevent excessive loss of vacuum pressure when the document is not in complete masking relation with the vacuum box apertures.

3,389,910
BALANCE GAME APPARATUS
Ernest C. Kanzler, Jr., 1014 Moraga Drive,
Los Angeles, Calif. 90047
Filed Nov. 8, 1965, Ser. No. 506,782
5 Claims. (Cl. 273—1)

1. Game apparatus comprising:
(a) a round-sectioned base member adapted to roll on a support surface,

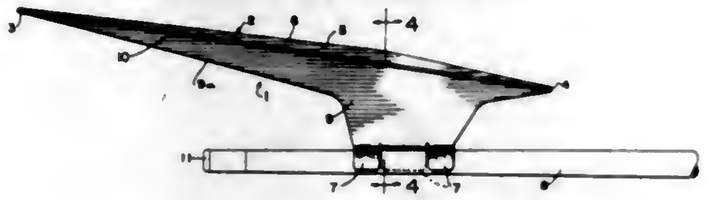
(b) an elongated board adapted to be disposed transversely on said base member with its ends on opposite sides thereof and maintained at various positions of balance by a person having his feet resting on the board ends and shifting his balance, accordingly, and



(c) a scale along the intermediate portion of the board and comprising tally values that increase from the middle of the scale toward the opposite ends thereof.

3,389,911
POCKET BILLIARD CUE STICK AND SIGHT THEREFOR

Eugene Castiglione, Jr., 4241 SW. 112th Ave.
Miami, Fla. 33156
Filed Oct. 22, 1965, Ser. No. 502,082
5 Claims. (Cl. 273—68)



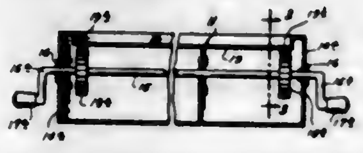
3. A cue stick including:

a cue stick sight having a sighting means, a main body portion supporting the forward end of said sighting means beyond the tip end of said cue stick, a supporting body portion between said main body portion and said cue stick,

said supporting body portion holding said main body portion at an acute angle in relation to the center line of said cue stick with the angle being open in a forward direction to provide an interference-free cue stick sight.

3,389,912
VIBRATORY GAMES

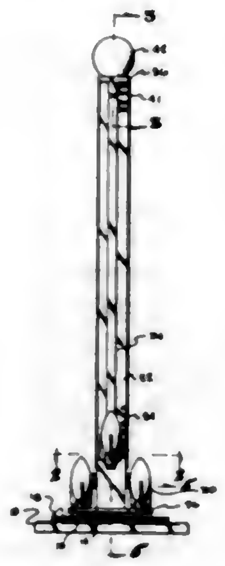
Sol Friedman, Munsey, N.Y., assignor to Miner Industries, Inc., New York, N.Y., a corporation of Delaware
Filed Mar. 23, 1966, Ser. No. 536,696
2 Claims. (Cl. 273—94)



A game having a playing surface defined by a rectangular, stiffly resilient sheet member supported at its perimeter and over which game pieces move in response to vibration of the sheet member, is provided with a rotatable shaft extending below the sheet member at right angles to the long sides of its rectangular perimeter at a location approximately midway between the perimeter's short sides and which is manually rotatable by handles on end portions of the shaft projecting beyond such long sides, and wheels secured on the shaft to underlie the sheet member adjacent the opposite long sides and having toothed peripheries contacted by projections, for example, formed by pressed dimples, directed downwardly from the sheet member, whereby to introduce vibrations into the sheet member adjacent the mid-points of its long sides upon rotation of the shaft.

3,389,913
SIMULATED SPACE TRAVEL GAME APPARATUS WITH VERTICALLY EXTENDING BOARD

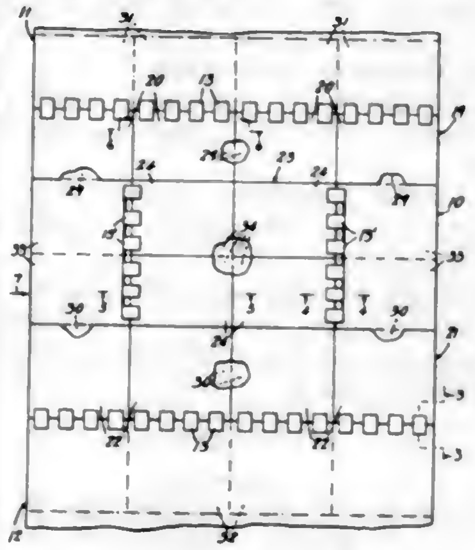
Wilfred Tunstall, 12874 2nd St.,
Yucaipa, Calif. 92399
Filed Aug. 2, 1965, Ser. No. 476,465
2 Claims. (Cl. 273—134)



An apparatus in which players advance magnetic game pieces upwardly on a metallic stripped post, by chance, to a spaced metallic lighting area that is activated when the first magnetic game piece bridges the gap.

3,389,914
MULTIPLE PICTURE PUZZLE BOOK

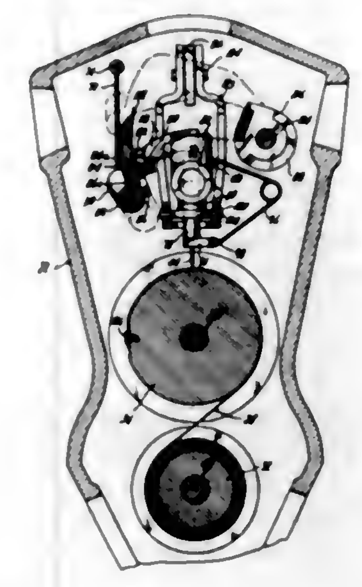
Evelyn Solomita and Robert L. B. Gumaelius, Bayside, N.Y.; said Solomita assignor to Steve G. Weil, New York, N.Y.
Filed Oct. 2, 1964, Ser. No. 401,077
6 Claims. (Cl. 273—155)



A puzzle book employing a back and one or more covers wherein a multiplicity of picture elements have hinge mountings between the back and at least one cover and with other parallel hinge mountings within peripheral boundaries of the back and at right angles to the hinge cover mounting, so that all of the picture elements are maintained on the back, with part of these picture elements extendable onto part of the cover and in producing solutions to a plurality of complete puzzle pictures.

3,389,915
AUDIO DEVICE

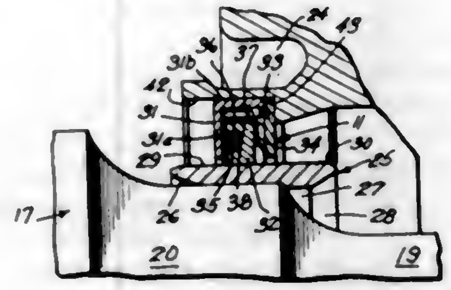
Charles L. Owen, Skokie, Frank J. Silhavy, Park Forest, and Henryk W. Merecz, Chicago, Ill., assignors, by mesne assignments, to Ideal Toy Corporation, Hollis, N.Y., a corporation of New York
Filed Oct. 18, 1965, Ser. No. 497,279
3 Claims. (Cl. 274—1)



An audio device intended primarily for installation in a doll and having a tape with recording grooves thereon, a helical spring which is arranged to actually carry the tape through recording movement past a stylus, and a positioning lever which moves against the stylus to actuate it into a clearance position during intervals between recording operation of the device, the surfaces on the positioning lever and stylus which make surface contact with each other having cooperating serrations thereon which mate with each other to hold the stylus against movement while it is in its clearance position so it can be accurately positioned thereafter in a recording groove.

3,389,916
FLOATING RING SHAFT SEAL

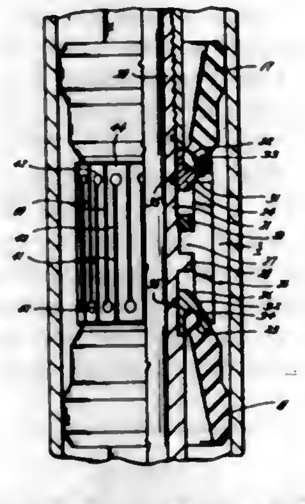
Edward C. Wahl, Arlington Heights, Ill., assignor to Gits Bros. Mfg. Co., Chicago, Ill., a corporation of Delaware
Filed July 8, 1965, Ser. No. 470,461
4 Claims. (Cl. 277—41)



A mechanical seal having particular adaptability to railroad journal boxes which consists of a casing press fitted into the inboard end of the journal box, a sleeve press fitted around an axle received in the journal box and through the casing, a rigid seal ring in the casing and around the sleeve, an O-ring seal between the casing and the seal ring, a spring loading the seal ring into sealing engagement with the O-ring and the O-ring with the casing, key and key slots to prevent rotation of the seal relative to the casing, and the dimensions of the seal ring and casing such as to allow the seal ring to move radially and axially within the casing and the dimensions of the seal ring and sleeve such as to provide close running clearance relationship therebetween having a minimal gap between the sleeve and the ring to prevent friction therebetween.

3,389,917
EFFECTIVE SEAL FORMING DEVICE

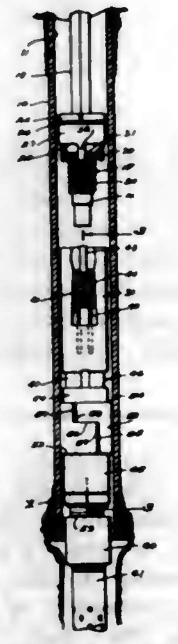
Howard L. McGill and Homer G. Smith, Jr., Houston, Tex., assignors to Schlumberger Technology Corporation, Houston, Tex., a corporation of Texas
Filed June 22, 1966, Ser. No. 559,465
5 Claims. (Cl. 277—63)



An anti-extrusion system for a well tool packing element comprising an annular member having slots extending from alternate end surfaces of said member to points adjacent alternate opposite end surfaces to divide said member into a plurality of segments having interconnected end portions, the interconnected end portions adjacent said packing element engaging said packing element to prevent extrusion of said packing element past said segments under pressure.

3,389,918
OIL WELL PACKER CONSTRUCTION

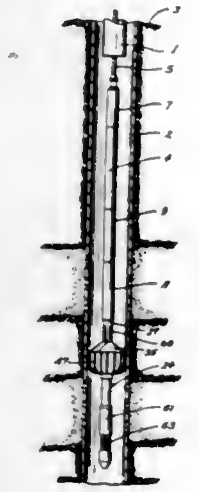
Erwin Burns, Los Angeles, Calif.
(8346 Salt Lake Ave., Bell, Calif. 90201)
Filed Feb. 1, 1966, Ser. No. 536,202
11 Claims. (Cl. 277—116.4)



1. A packer construction to seal the annulus between a pair of axially aligned inter-engaged tubular members including a tubular body engaged with one of the mem-

bers and having an annular axially disposed first stop shoulder, an elongate, annular packer sleeve of malleable and ductile metal adjacent the body and having one end stopped against the stop shoulder, said sleeve having a straight, cylindrical sealing surface opposing the other member and normally spaced radially therefrom, and having an elongate tapered surface on its side adjacent the body and extending longitudinally from the other end of the sleeve, an annular actuating ring having a second stop shoulder opposing and engageable with said other end of the sleeve and having an axially extending expander portion with a conical surface projecting axially between the body and the sleeve, said sleeve having a circumferentially extending slit of limited circumferential extent positioned in the sleeve between the opposite ends of the tapered surface thereof and defining axially disposed, opposing sealing surfaces and having circumferentially spaced, axially extending slits communicating with the opposite ends of the circumferential slit, one axial slit extending to one end and the other axially extending slit extending to the other end of the sleeve, and actuating means related to the actuating ring to urge said ring axially towards the sleeve and the first stop shoulder whereby said expander portion of the ring urges the sleeve radially into sealing engagement with the expander portion of the actuating ring and said other member and compacts the sleeve axially between the stop shoulders and the sealing faces into tight sealing engagement with each other.

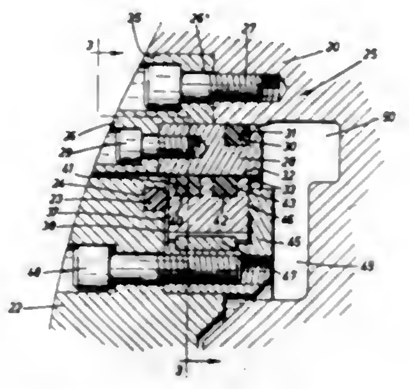
3,389,919
FLOW DIRECTOR MEANS
Orwin E. Petty, Houston, Tex., assignor to Flow Surveys, Inc., Houston, Tex., a corporation of Texas
Filed Feb. 3, 1965, Ser. No. 430,151
9 Claims. (Cl. 277—126)



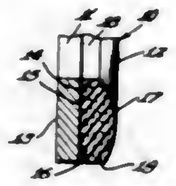
A fluid flow director apparatus for insertion in a fluid conduit or well bore for directing the flow of fluid, as through a flowmeter. It includes a resilient member which is adapted for radially outward and inward expansion and contraction to and from engagement with the wall of the conduit. The resilient member is spiraled upon itself, and in expanding, it is partially unspiraled and on contraction is respiraled.

3,389,920
FLOATING SEAL FOR ADJUSTABLE BLADE
Michael B. Allan, Westmount, Quebec, and Feodor Kanger, Montreal, Quebec, Canada, assignors to Dominion Engineering Works, Limited, Lachine, Quebec, Canada, a company of Canada
Filed July 25, 1966, Ser. No. 567,634
12 Claims. (Cl. 277—174)

1. In a seal assembly for a machine having a first major component rotatably secured to a second major component about a pivot axis, including an annular seal recess between the major components in a substantially coaxial relation with the pivot axis, having a first continuous annular surface forming part of the recess in fixed sealed relation with one of said components and a second continuous annular surface forming part of the recess, spaced from said first annular surface and in fixed sealed relation with the other of said components, the improvement comprising; an annular seal ring located within said recess and positioned to seal the space between said annular surfaces, having a first surface thereof in facing, generally parallel spaced relation with said first recess surface, a second seal ring surface in facing generally parallel spaced relation with said second recess surface, first annular seal resilient ring means interposed between said first surfaces, second annular seal resilient ring means interposed between said second surfaces, and seal ring mounting means locating said seal ring concentrically within said recess substantially independently of deviations of a said major component from concentricity with the pivot axis.

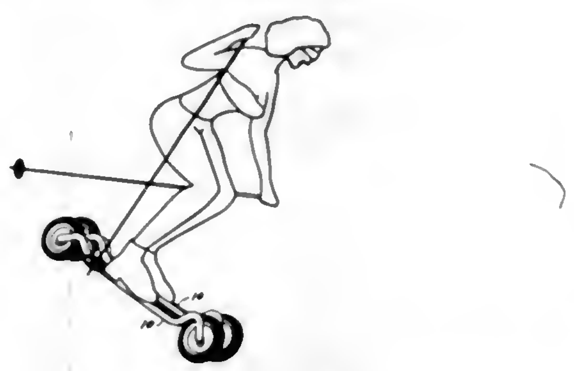


3,389,921
SEAL ADAPTED FOR A LINK BELT ASSEMBLY
Bruno V. Lojkutz, Chicago, Ill., assignor to Gits Bros. Mfg. Co., Chicago, Ill., a corporation of Delaware
Filed June 8, 1964, Ser. No. 373,305
4 Claims. (Cl. 277—235)



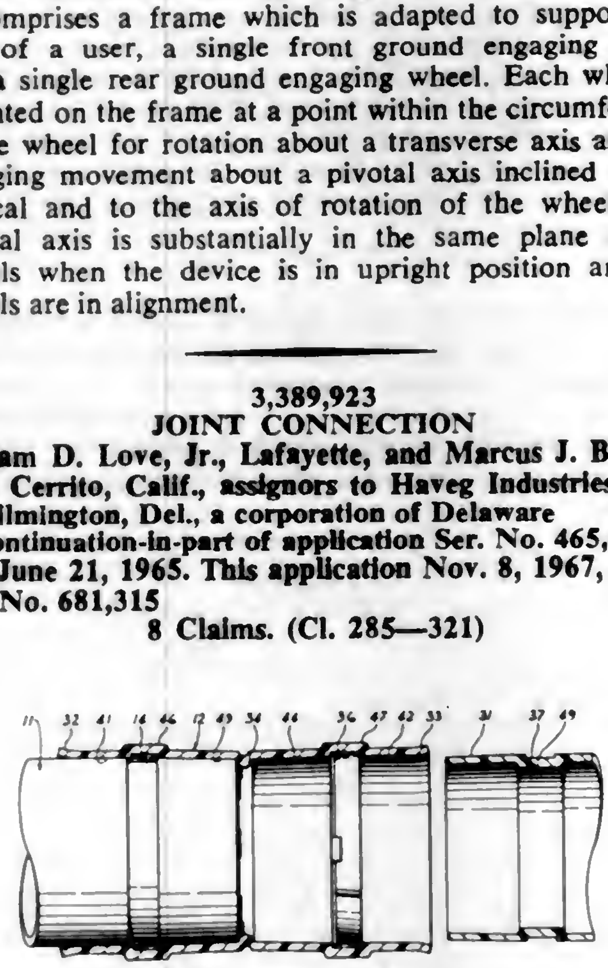
1. A seal ring which comprises, a flat metal washer ring having a smooth sealing face adapted to ride on a part to be sealed, an elastomeric ring bonded to the opposite face of said washer ring, said elastomeric ring in its free state having inner and outer peripheries substantially flush with the inner and outer peripheries of said washer ring, said elastomeric ring having a crowned exposed face contoured to slope more acutely from its apex to one of said peripheries than to the other of said peripheries, said one of said peripheries being axially thinner than the other of said peripheries, and said elastomeric ring when flattened under axial load having the periphery at the terminal end of the acute sloping crowned face portion extended beyond the metal washer ring, said extended periphery being adapted to seat on an adjacent member to carry the metal washer ring while the flattened elastomeric ring urges the metal washer ring against a part to be sealed.

3,389,922
AMUSEMENT AND SPORTING DEVICE
Edward H. Eastin, 635 Canyon, Rochester, Mich. 48063
Filed Oct. 22, 1965, Ser. No. 500,780
36 Claims. (Cl. 280—11.23)



The amusement and sporting device disclosed herein comprises a frame which is adapted to support the foot of a user, a single front ground engaging wheel and a single rear ground engaging wheel. Each wheel is mounted on the frame at a point within the circumference of the wheel for rotation about a transverse axis and for swinging movement about a pivotal axis inclined to the vertical and to the axis of rotation of the wheel. The pivotal axis is substantially in the same plane of the wheels when the device is in upright position and the wheels are in alignment.

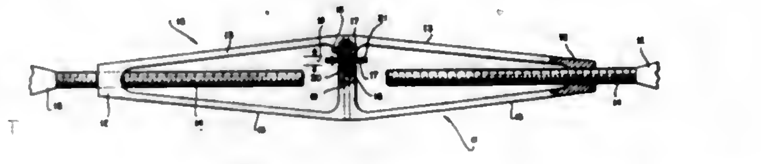
3,389,923
JOINT CONNECTION
William D. Love, Jr., Lafayette, and Marcus J. Billings, El Cerrito, Calif., assignors to Haveg Industries, Inc., Wilmington, Del., a corporation of Delaware
Continuation-in-part of application Ser. No. 465,607, June 21, 1965. This application Nov. 8, 1967, Ser. No. 681,315
8 Claims. (Cl. 285—321)



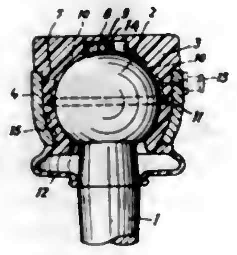
A connection between two telescoping pipes wherein a resilient split ring has portions engaging opposing shoulders of a recess on one pipe for retaining the ring on the one pipe while the inner pipe is being inserted within the outer pipe; the split ring has additional portions engaging a shoulder of a recess on the other pipe after the insertion of the inner pipe for preventing the inner pipe from being withdrawn from the outer pipe.

3,389,924
TURNBUCKLE
Charles R. Bush, Smyrna, and William C. Cook, Marietta, Ga., assignors to Lockheed Aircraft Corporation, Los Angeles, Calif.
Filed Nov. 10, 1965, Ser. No. 507,175
3 Claims. (Cl. 287—60)

A turnbuckle incorporating a sensing wheel between axially aligned posts at the midpoint of interconnected straps senses precisely a predetermined tension. Tension is adjusted by rotating the turnbuckle until a slight wheel drag is felt. Since visual reference is not required, an over and under tension condition can be detected and corrected with the turnbuckle located anywhere it can be reached with one hand.

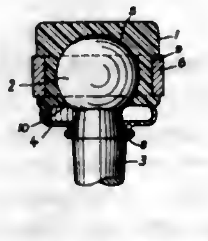


3,389,925
BALL JOINTS, ESPECIALLY FOR STEERING GEARS
Rudolf Gottschald, Osterath, am Meerbusch, Germany, assignor to A. Ehrenreich & Cie.
Filed Oct. 21, 1965, Ser. No. 500,407
Claims priority, application Germany, Aug. 6, 1965, E 29,857
4 Claims. (Cl. 287—87)



The invention relates to a ball and socket joint. Basically, the joint casing of the joint assembly is formed with a spherical cavity to accommodate the ball head of a typical joint pin. In addition, the joint case has a grease chamber located at the uppermost point of the casing extending from and in communication with the ball head cavity. Also included in the design are a plurality of recesses extending from the grease chamber along the cavity surface to the plane of the horizontal center line of the cavity and a nipple mounted on the joint case support ring through which lubricant can be inserted into the grease chamber by way of one of the recesses on the cavity surface. The design also includes provisions for annular inserts of material harder than the joint case material to act as the bearing surfaces for the ball. Rib means extending from the joint ring mounting can also be employed to maintain the joint case in the mounting.

3,389,926
BALL JOINTS, ESPECIALLY IN THE FORM OF ANGULAR JOINTS
Rudolf Gottschald, Osterath, Germany, assignor to Messrs. A. Ehrenreich & Cie.
Filed Nov. 16, 1965, Ser. No. 508,082
Claims priority, application Germany, Sept. 23, 1965, E 22,252
2 Claims. (Cl. 287—87)



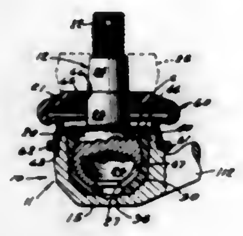
The invention relates to a ball and socket joint comprised of a resilient bushing and a hinge pin terminating in

1

a ball head. The resilient bushing has a bellows seal integrally formed therewith which is designed to engage the shaft of the hinge pin in sealing relationship. The resilient bushing member has formed therein, an outer annular peripheral recess and a spherical cavity adapted to accommodate the ball head of the pin member. The vertical dimension of the outer annular recess is smaller than the diameter of the ball and is located in the plane through which the horizontal center line of the ball head passes. The joint is assembled by first inserting the external bushing member in an annular cooperating socket that fits within the outer annular recess and subsequently inserting the ball head of the pin through the seal and into the spherical cavity.

3,389,927
JOINT ASSEMBLY

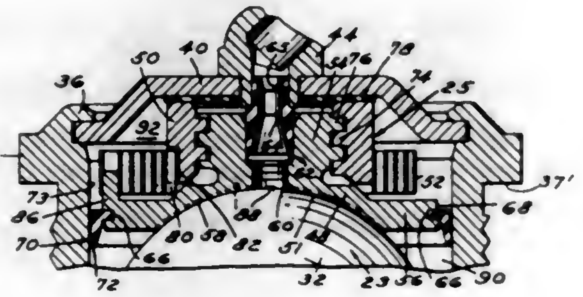
Edward J. Herbenar, Detroit, Mich., assignor to TRW Inc., Cleveland, Ohio, a corporation of Ohio
Filed Sept. 21, 1965, Ser. No. 488,968
2 Claims. (Cl. 287—87)



A pivotal joint assembly including a socket having a closed end and an open end and having a pair of frustoconical surfaces of different taper toward the closed end, a stud having its ball end within said socket and its shank end extending through an open end of such socket, the ball end preferably being hollow and open toward the closed end of the socket, and a bearing member of antifrictional deformable material between said ball end and said socket so arranged and constructed as to be in press-fit relationship with both when the assembly is completed and the bearing member is placed under axial load.

3,389,928
BALL JOINT

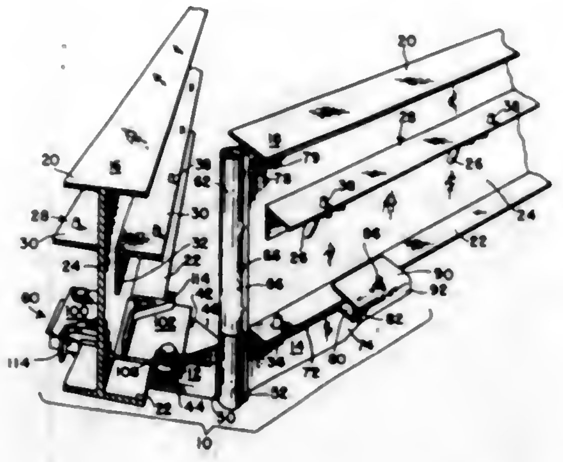
William C. Wehner, 14891 Grandville, Detroit, Mich. 48223
Filed Mar. 3, 1964, Ser. No. 349,114
19 Claims. (Cl. 287—90)



This disclosure relates to a self-adjusting ball joint having a self-energizing jackscrew unit continuously urging the stud head of the ball joint into the primary bearing. The jackscrew unit includes a pair of threadedly connected members, which are urged to threadably expand by a resilient biasing means. The jackscrew unit may laterally float and thereby avoids jamming between the stud head and the opposed wall of the housing socket. A seal may be carried by one of the jackscrew members, which engeges the inner wall of the housing, to provide a sealed chamber including the jackscrew unit.

3,389,929
ADJUSTABLE TWO-PART SEPARABLE I-BEAM CONNECTOR

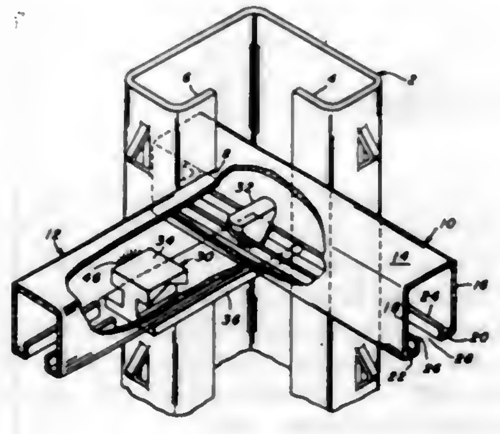
Walter D. Williams, River Forest, Ill., assignor to Symons Mfg. Company, Des Plaines, Ill., a corporation of Delaware
Filed Mar. 31, 1966, Ser. No. 539,102
7 Claims. (Cl. 287—189.36)



An adjustable two-part separable I-beam connector by means of which a first and fixed horizontally disposed I-beam may be caused to support a second horizontally disposed I-beam in side-to-end relationship and in such a manner that the second I-beam is capable of swinging movement in a horizontal plane with respect to the first I-beam.

3,389,930
RAIL CORNER MOUNTING

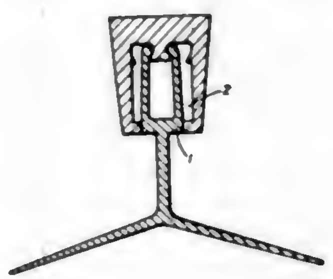
James E. Ashworth, Moraga, and August L. Bartz, Alamo, Calif., assignors to United States Steel Corporation, a corporation of Delaware
Filed July 29, 1966, Ser. No. 568,955
3 Claims. (Cl. 287—189.36)



A rail corner mounting including a pair of open rails arranged at an angle to one another, each rail having a longitudinal slot and an inwardly extending flange on each side of the slot, and a one piece connector extending between the rails. The connector has a wedge shaped head at one end which is inserted into the slot of one rail and rotated 90° to deform the flanges. The other end of the connector has a T-shaped head which is received in the slot of the second rail, the T-shaped head having a cavity in one side for receiving a section of the wall of the second rail.

3,389,931
CONNECTOR MEANS FOR ATTACHING COMPONENTS INTO AN INTEGRAL STRUCTURE

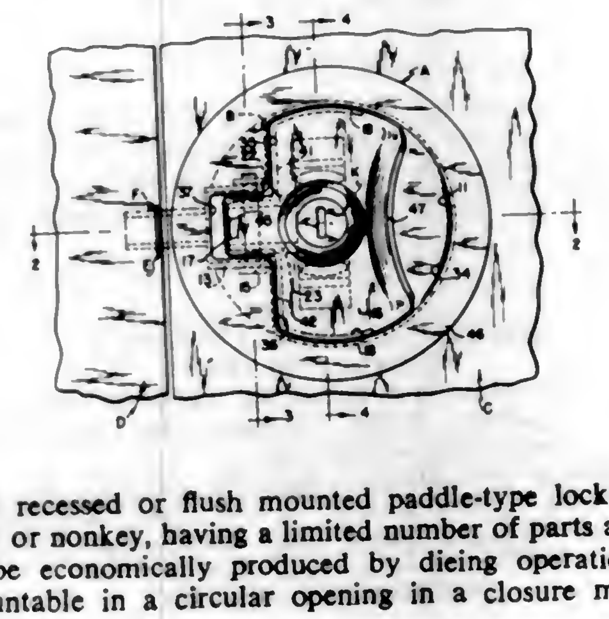
Raymond H. St. John, 5103 E. 9th St., Tulsa, Okla. 74112
Filed Apr. 24, 1967, Ser. No. 632,976
2 Claims. (Cl. 287—189.36)



A connector means suitable for use in inter-connecting structural members in an assembly of ornamental railing, the connector means each being a part of the body of the structural members being joined and each connector means being essentially U-shaped in configuration. One of the U-shaped means having flexible arms and the other having an central projection in the base thereof to cooperate with the free ends of the flexible arms, and requiring no additional connecting components to hold the structure together as a unit.

3,389,932
DOOR LOCK

John V. Pastva, Jr., Parma Heights, Ohio, assignor to The Eastern Company, Cleveland, Ohio, a corporation of Connecticut
Filed Sept. 2, 1966, Ser. No. 576,931
4 Claims. (Cl. 292—173)

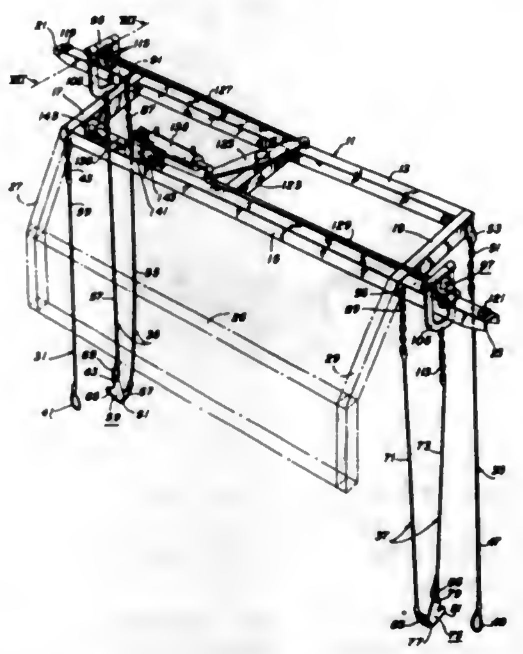


A recessed or flush mounted paddle-type lock, either key or nonkey, having a limited number of parts adapted to be economically produced by dieing operation and mountable in a circular opening in a closure member.

3,389,933
TRIPPING SLING APPARATUS

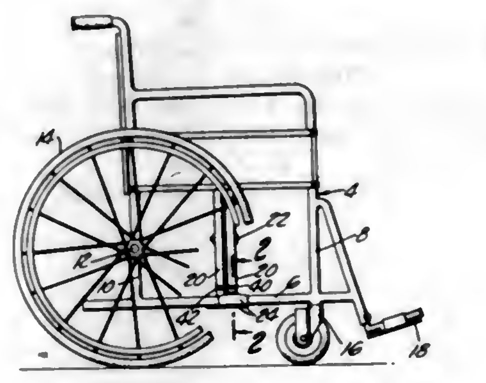
Clancy E. Estes, Louisville, Miss., assignor to Taylor Machine Works, Louisville, Miss.
Filed Apr. 21, 1967, Ser. No. 632,756
6 Claims. (Cl. 294—76)

Tripping sling apparatus for handling pulpwood logs or the like and for use with vehicular lifting means having an elevatable carriage or for use with tension line, crane or trolley overhead lifting means. The apparatus includes four sling halves connectable in pairs to make two full slings parallel spaced apart. A sling half is adapted to be disconnectably connected with one of two other sling halves thereby optionally forming a parallel spaced pair of full slings extending in one direction or for forming a pair of slings extending in a direction perpendicularly thereto. The sling halves are optionally adapted to be connected together to form a short-spaced parallel pair of full slings or to form a long-spaced parallel pair of full slings; the parallel pair of full slings are adapted to be arranged a short distance apart for handling short loads or adapted to be arranged a relative long distance apart for handling long loads.



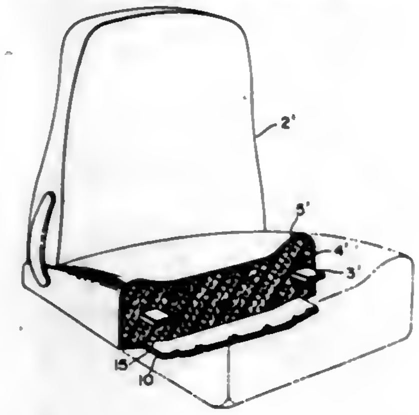
3,389,934
ADJUSTABLE CONNECTOR FOR COLLAPSIBLE CROSS-BRACES FOR WHEELCHAIRS

Fenton F. Sully, Reseda, Calif., assignor to Everest & Jennings, Inc., Los Angeles, Calif., a corporation of California
Filed Jan. 9, 1967, Ser. No. 608,142
5 Claims. (Cl. 297—42)



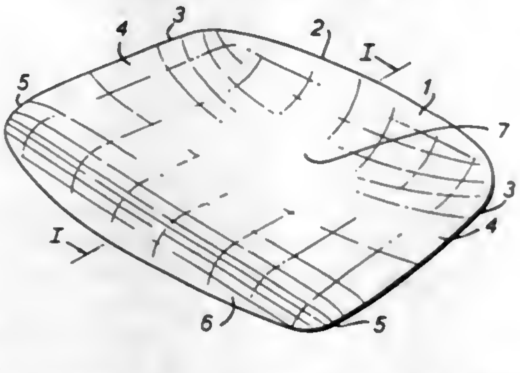
1. A wheelchair comprising side frames, each of which has a lower longitudinal tubular member with uprights extending upwardly from front and rear portions thereof, a pair of crossed and pivotally connected cross-brace elements having their upper ends connected respectively to an upper portion of one of said side frames, a cross-brace connector comprising a pair of complementary internally rounded connector saddles having means connecting them to the lower end of a cross-brace element and to each other with the saddles embracing said lower longitudinal frame member between said uprights, one each of said lower longitudinal tubular frame member and cross-brace connector having, respectively, a slot and a detent movable therein, the slot being elongated on an arc partially about the circumference of said lower longitudinal tubular frame member.

3,389,935
COMPOSITE LOAD SUPPORTING STRUCTURE
Edward T. Getz, Cleveland Heights, and Matthew Pacak, Solon, Ohio, assignors to Eaton Yale & Towne Inc., Cleveland, Ohio, a corporation of Ohio
Filed May 11, 1966, Ser. No. 549,233
16 Claims. (Cl. 297—452)



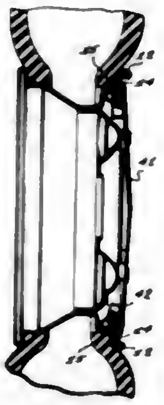
1. A composite load supporting structure comprising:
frame means adjacent the sides of said structure and outwardly of the central load supporting surface of the structure,
foamed elastomeric material surrounding and bonded to said frame means and forming the desired shape of said load supporting structure,
a preformed layer of porous material bonded to said foamed elastomeric material, said preformed layer being impregnated with said elastomeric material to form an interface therebetween of denser, tougher consistency than either said preformed layer or said elastomeric material to provide a reinforced load supporting structure with surfaces free of voids or pockets,
a wire molded in place within said elastomeric material adjacent a surface thereof, and
upholstery material covering said foamed elastomeric material and said preformed layer and means securing said upholstery material directly to said wire.

3,389,936
SEATS
Fritz Drabert, 37 Marienstrasse, Minden, Westphalia, Germany
Filed Nov. 18, 1966, Ser. No. 595,508
Claims priority, application Germany, Apr. 30, 1966, D 33,365
5 Claims. (Cl. 297—459)



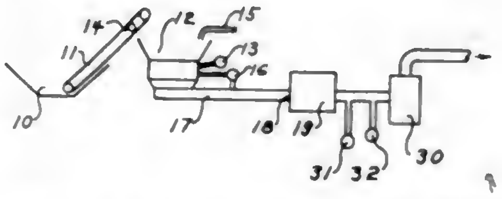
A seat comprising a rear portion with a depression and having a rearmost portion adjacent to the rear of the depression which rises in a smooth curve to the rear edge of the seat. Side portions of the seat are disposed adjacent to and laterally of the depression and each side portion rises in a smooth curve to the respective lateral edge of the seat. The seat further has a flat portion at the front and the side portions each slope upwards towards the front portion, the slope decreasing gradually to nil where the side portions meet the front flat portion.

3,389,937
WHEEL COVER AND RETAINING MEANS THEREFOR
John Henry Brumfield, 3900 N. Weber, Colorado Springs, Colo. 80907
Filed Aug. 8, 1966, Ser. No. 570,982
6 Claims. (Cl. 301—37)



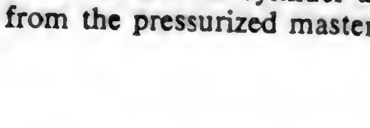
A clip for detachably fastening a wheel cover to a wheel, having a V-shaped body with a partial cover thereover and in which is disposed a portion of a pivotal latch adapted to secure a flange of the wheel cover between the latch and one side of the V-shaped body.

3,389,938
CLOSED CIRCUIT SLURRIFIER
David M. Frazier, 208 Shore Crest Drive, Tampa, Fla. 33609
Filed Aug. 15, 1966, Ser. No. 572,397
2 Claims. (Cl. 302—14)



A combination for mixing solids with liquids wherein the density of the mixture is controlled by separately regulating the introduction of solids and liquids in accordance with the density and velocity of discharge of the mixture.

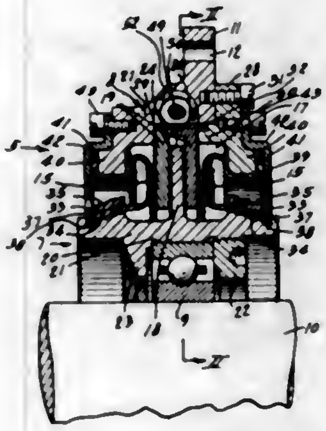
3,389,939
ANTI-LOCK APPARATUS FOR VEHICLE BRAKES
Derek R. Skoyles, East Grinstead, England, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Continuation of application Ser. No. 449,216, Apr. 19, 1965. This application Aug. 30, 1967, Ser. No. 667,041
Claims priority, application Great Britain, Apr. 21, 1964, 16,474/64; July 30, 1964, 30,214/64
22 Claims. (Cl. 303—21)



An anti-lock apparatus for a vehicle brake system having a control piston interposed in an open fluid passage between a master cylinder and a brake cylinder. When brake-lock is sensed, the control piston is actuated thereby terminating fluid communication between the master cylinder and the brake cylinder. A force balancing mechanism is connected to the master cylinder and the control piston. Energy from the pressurized master cylinder fluid is transmitted to the control piston via the force balancing mechanism to balance the pressure from the master cylinder acting directly on the control piston. Fluid pressure is reduced in the brake cylinder by the action of the control piston thereby causing the brakes to be released.

3,389,940
VISCOUS SHEAR CRITICAL SHAFT DAMPERS

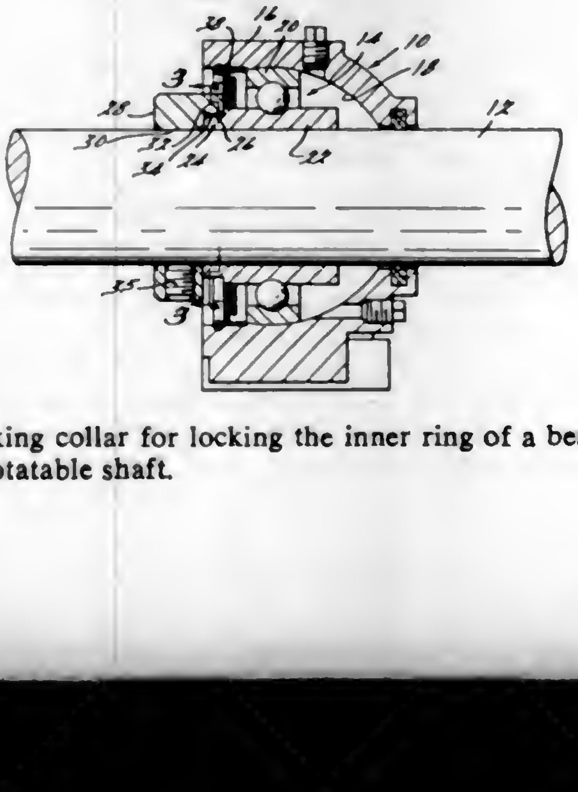
Rollin Douglas Rumsey, Buffalo, N.Y., assignor to Houdaille Industries, Inc., Buffalo, N.Y., a corporation of Michigan
Filed Aug. 8, 1966, Ser. No. 576,490
12 Claims. (Cl. 308—26)



1. A viscous shear critical shaft damper comprising:
complementary radially inner and radially outer annular concentric housing structures, one of which has annular bearing means and the other of which has means for securing it fixedly;
respective resiliently yieldable annular end wall connectors secured to and connecting the respective opposite ends of said structures, enabling relative movement of said structures and defining therewith a sealed annular chamber;
viscous damping fluid substantially filling said chamber; and
respective radially extending annular damping plates on and forming part of each of said structures within said chamber and having opposed working surfaces in shear film spaced relation whereby the shear film damping fluid coupling between said plates will damp relative vibrations imparted to either of said structures in the plane of said coupling.

3,389,941
BEARING LOCKING COLLAR

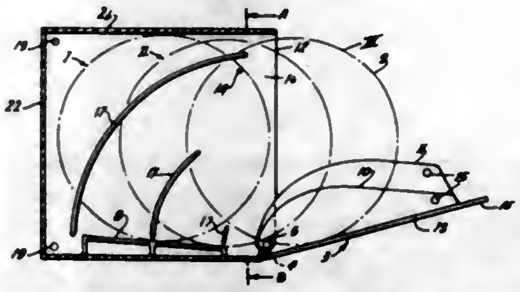
James R. Haefner, Lancaster, Pa., assignor to Federal-Mogul Corporation, Detroit, Mich., a corporation of Michigan
Filed Oct. 23, 1965, Ser. No. 503,824
8 Claims. (Cl. 308—236)



A locking collar for locking the inner ring of a bearing onto a rotatable shaft.

3,389,942
STORING DEVICE FOR CONVOLUTED TAPE AND THE LIKE

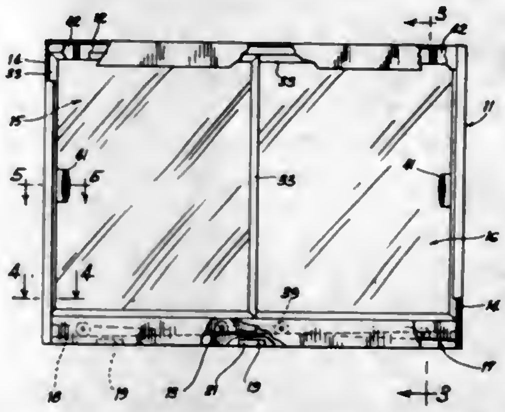
Karlheinz Jacob, Nuremberg, Germany, assignor to Grundig Electro-Mechanische Versuchsanstalt, Furth, Bavaria, Germany
Filed Mar. 23, 1966, Ser. No. 536,683
Claims priority, application Germany, Apr. 17, 1965, G 43,379
6 Claims. (Cl. 312—20)



A device for storing reels of convoluted tape comprising a flat box-shaped plastic receptacle having a compartment bounded by two side walls and provided with a narrow upwardly extending inlet which can be closed by a cover pivoted to the receptacle at the lower end of the inlet. The reel which is inserted into the compartment rests on a ramp slanting downwardly toward the inlet so that the reel rolls along the ramp and against a bottom portion of the cover when the latter is moved to open position. The bottom portion is inclined downwardly toward the inlet and the pivot for the cover is located at a level above the lowermost point of the ramp to reduce the speed of a reel during travel against the bottom portion and to thereupon act as a stop which cooperates with the bottom portion to support the reel and to prevent rolling movement of the reel back onto the ramp.

3,389,943
SELF-CLOSING CABINET DOORS

Harold B. Jones, Lombard, and Theodore E. Zmuda, Chicago, Ill., assignors to Leitner Equipment Company, a corporation of Illinois
Filed Oct. 28, 1966, Ser. No. 590,238
1 Claim. (Cl. 312—138)

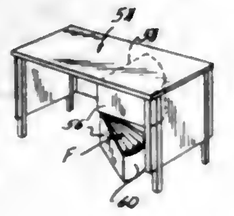


This specification discloses a pair of doors slidably mounted on longitudinally inclined tracks removably secured to the bottom of a cabinet adjacent the door opening, whereby gravity causes each door to slide downwardly to provide a positive closing action. The removability of the bottom tracks facilitates cleaning of the cabinet.

3,389,944
FILING MECHANISM

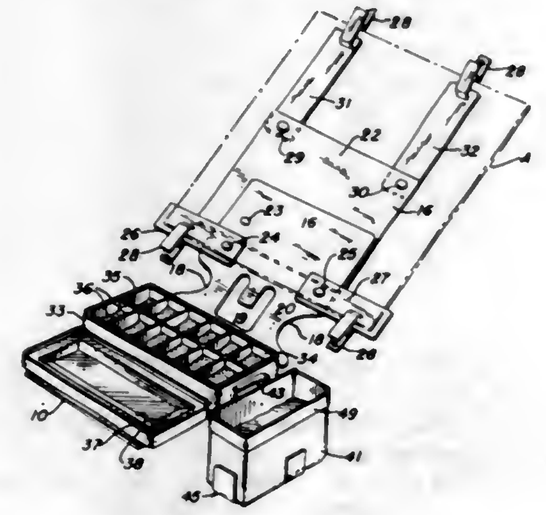
David H. Humphrey, F. D. Roosevelt Ave., Hato Rey, Puerto Rico 00918
Filed Sept. 26, 1966, Ser. No. 582,023
9 Claims. (Cl. 312—193)

Filing mechanism including cantilever arms and continuous accordion folded panel type filing folders. The cantilever arms are single rods each having a horizontal arm, a hook-like bend at one end thereof, an angular arm extending downwardly beneath the horizontal arm and pivot portions at the terminal ends of the horizontal and angular arms pivoted in matching holes of a pair of supporting brackets. The cantilever arms can swing for opening the filing folder between any pair of arms to gain access to the material filed therein.



3,389,945
ARTIST'S WATER COLOR KIT

Carroll E. Thomas, 157 Marina Blvd., San Rafael, Calif. 94901
Filed Aug. 24, 1966, Ser. No. 574,830
2 Claims. (Cl. 312—231)

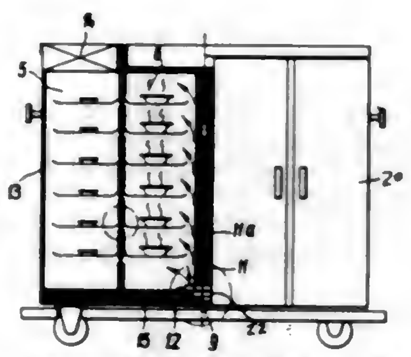


The invention comprises the combination of a flat base of ferrous metal, a flat foldable easel pivotally connected at one end thereof to an end of the base; said easel being adapted to overlie said base when folded and being adapted to be unfolded and set up in an inclined position, together with a paint box for a variety of colored paints seated on said base, a magnet secured to the bottom of said paint box to hold the same against displacement, a removable lid on said paint box for conversion to a palette when supported on the base in a reverse position, a magnet on the upper side of said lid for contacting said base to hold the lid normally against displacement, adjustable spring clips on said paint box to engage with said clips being adapted to be released from said lid and swinging to downwardly extending positions to support brackets at either or both ends of said box, and water containers supported by the brackets.

3,389,946
CART FOR CARRYING TRAYS

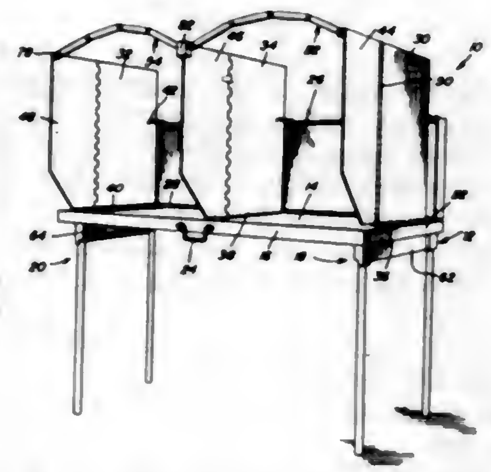
Norbert Nicolaus, Elze, Hannover, and Heinz Krügener, Sarstedt, Germany, assignors to Firma Homann-Maytag G.m.b.H., Wuppertal-Vohwinkel, Germany, a corporation of Germany
Filed Feb. 16, 1966, Ser. No. 527,812
4 Claims. (Cl. 312—236)

Food service cart having a hot and a cold section, which hot section is heated by means within the cart, wherein means are provided for trays carrying both hot and cold food thereon with a flexible barrier wall so disposed within the cart as to separate the portions of the trays carrying hot and cold food thereon.



3,389,947
FLIP-TOP FOLDING VOTING BOOTH

Thomas M. Kelley, 1875 Hames Road, Aptos, Calif. 95003, and Glenn C. Underwood, 740 30th Ave., Sp. 97, Santa Cruz, Calif. 95060
Filed Jan. 4, 1967, Ser. No. 607,288
7 Claims. (Cl. 312—258)

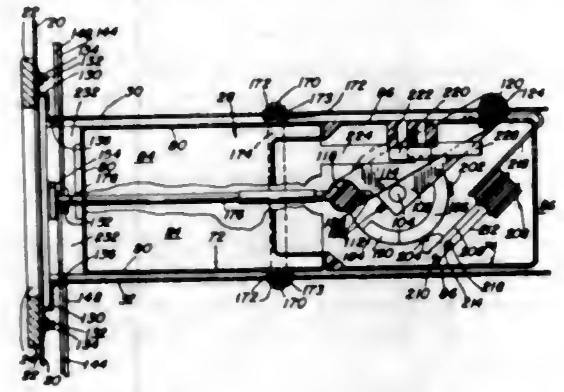


A foldable structure that collapses into a relatively thin rectangular assembly made mostly of sheet metal parts. The assembly is basically a table having supporting legs that fold under the table top. Flat panels are hinged to the table top to form compartments when extended upwardly. A backing member is also hinged along one longitudinal edge of the table top and folds down to enclose the panels when they are folded onto the table top. When erected, the panels are locked to the backing member in vertically upright positions on top of the table. Each erected panel also has an extension unfolded to extend the compartments forwardly of the table top. Curtain bars hold the extensions unfolded.

3,389,948
AUTOMATIC DELIVERY MECHANISM

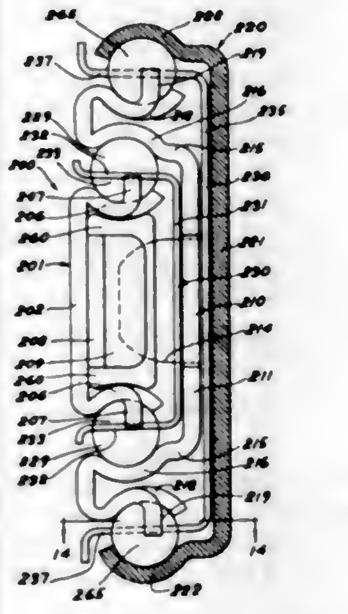
Mahlon W. Kenney, Oak Park, Menger Weathersby, Chicago, and Arthur J. Danko, Oak Lawn, Ill., assignors to The Seeburg Corporation, Chicago, Ill., a corporation of Delaware
Filed Sept. 27, 1965, Ser. No. 490,475
14 Claims. (Cl. 312—310)

This application describes an automatic delivery mechanism for use in a vending machine including a transport slide which moves a merchandise article through an aperture from a position inside the machine to a position accessible to a purchaser. A cover normally extends across the aperture which is raised in front of and lowered behind the merchandise article as it is moved through the aperture by the transport slide. The cover is moved by a plurality of pivotally connected links, and the transport slide is moved by another plurality of links. The sequence of operation of the transport slide and cover is controlled by a cam and switch arrangement and an energy source which is adapted to move the cam.



3,389,949
FILING CABINET AND SUSPENSION SYSTEM THEREFOR

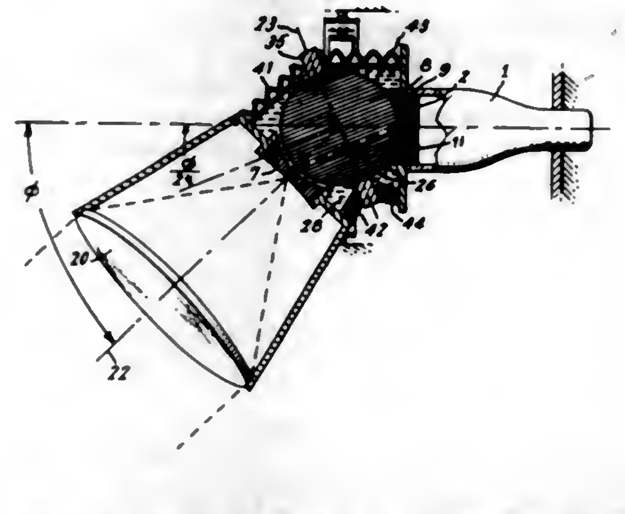
Robert A. Studinski and Edward C. Stewart, Aurora, Ill., assignors to Lyon Metal Products, Incorporated, Aurora, Ill., a corporation of Illinois
Filed June 14, 1966, Ser. No. 557,571
20 Claims. (Cl. 312—339)



There is disclosed a drawer suspension system for mounting a drawer in a cabinet case for movement inwardly and outwardly. The drawer suspension system comprises a case rail, a drawer rail and an intermediate rail or neutral member. The case rail is secured to the cabinet case. The drawer is provided with drawer clips on each side of the drawer and adjacent the front and rear ends of the drawer for detachably mounting the drawer on the drawer rail. Anti-friction members, such as ball bearings, are disposed between the case rail and an intermediate rail or neutral member and between the neutral member and the drawer rail. A lock bracket is mounted on the rear end of each case rail and includes a flange which overlies the adjacent one of the drawer clips at the rear of the drawer when the drawer is in the fully closed position. Stop arms and brackets limit the inward and outward movement of the several rails relative to each other. The drawer clips are fashioned to permit ready detachment of the drawer from the suspension system when the system is in its extended position and to permit ready reattachment of the drawer to the suspension system when the system is in extended position.

3,389,950
FIBER OPTICS SCAN SYSTEM

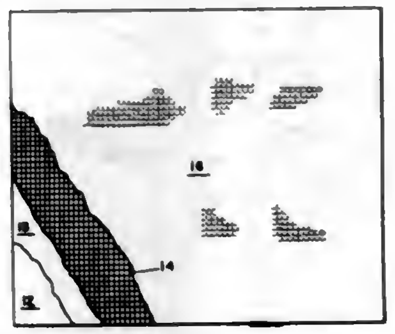
Kennard W. Harper, Ithaca, N.Y., assignor to General Electric Company, a corporation of New York
Continuation of application Ser. No. 354,638, Mar. 25, 1964. This application Oct. 18, 1967, Ser. No. 677,001
6 Claims. (Cl. 350—96)



The subject invention relates to an improved optical scanning system, and more particularly, to a scanning system utilizing fiber optical elements. In a preferred form, the system comprises three fiber optics components: a central spherical element, a second element having a concave surface mating with the spherical element for focusing an image thereon, and the third fiber optic element also having a concave surface mating with said spherical element for deriving an image therefrom. A liquid may be provided between the mating surfaces which has a refractive index similar to that of the fiber optics. Additional means are provided for supporting the three fiber optic elements in position and for maintaining the central spherical member at half the angular displacement of the first optics element during scanning. Using a spherical central element, it is possible to conveniently provide for scanning about two orthogonal axes.

3,389,951
DIFFUSE REFLECTOR INCORPORATING WIRE MESH STRUCTURE

Allen E. Eagles, Latham, N.Y., and Bernd Linder, Broomall, Pa., assignors to General Electric Company, a corporation of New York
Filed July 1, 1963, Ser. No. 291,872
3 Claims. (Cl. 350—292)

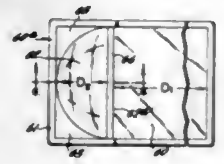


1. A diffusing reflector comprising:
a flexible base having a surface of large radius of curvature;

a woven mesh structure of metal wires of equal circular cross section, each said wire being spaced from the next adjacent wire parallel thereto by not less than one nor more than two diameters of the said wire, in contact with the said surface of the said base; and

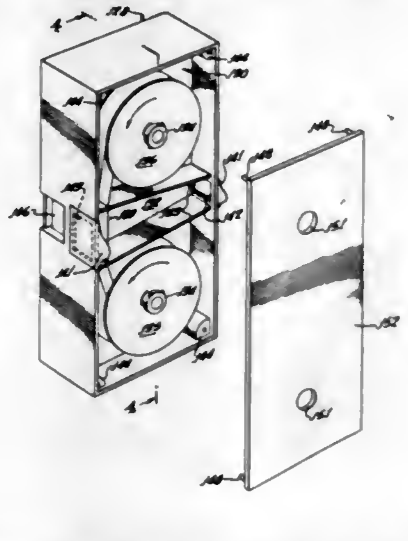
a reflective surface upon the said mesh structure and the said surface of the said base sufficiently thin to have an exposed surface substantially as defined by the said mesh structure and the side of the said base with which the said mesh structure is in contact.

3,389,952
EXTERIOR MIRROR ASSEMBLY FOR VEHICLES
John J. Tobin, Jr., 113 Ardmore Ave., Ardmore, Pa. 19003
Filed Dec. 2, 1964, Ser. No. 415,438
4 Claims. (Cl. 350—303)



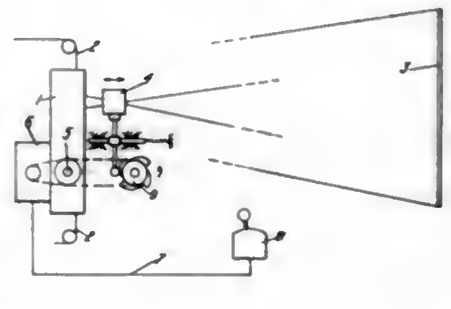
A rearview mirror assembly adapted to be mounted exteriorly of a vehicle relative to the driver so that he can observe trailing vehicles therein comprising a frame for supporting at least two mirror sections in a fixed position relative to one another, a first section having a planar reflecting surface and a second section having a convex reflecting surface not greater than one-half of a spherical segment disposed laterally adjacent the planar reflecting surface being arranged so that the straight side thereof is disposed adjacent one end of the first planar section outboard of the first section relative to the vehicle and indicia means at the juncture of the first and second sections. By this arrangement the image of trailing vehicles transfers from the planar surface of the first section to the convex surface of the second section when the trailing vehicles are disposed laterally and rearwardly adjacent the vehicle.

3,389,953
SOUND SYNCHRONIZED CARTRIDGE
Martin E. Gerry, Santa Ana, Calif., assignor of one-half to Aaron L. Sandberg, La Mirada, Calif.
Original application June 28, 1965, Ser. No. 467,223, now Patent No. 3,332,319, dated July 25, 1967. Divided and this application June 26, 1967, Ser. No. 662,227
2 Claims. (Cl. 352—78)



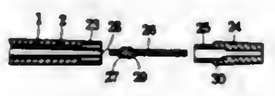
A rectangularly shaped film cartridge having two lengthwise extending compartments separated by a common wall. A visual film take-up spool and a sound tape take-up spool are mounted coaxially on a shaft extending through the common wall, one spool in each compartment. The visual film supply spool and the sound tape supply spool are similarly mounted on a second shaft such that the sound tape and the film move in synchronism. A tapered light channel is provided in the visual film compartment and an aperture for the admission of a sound head is provided in the tape compartment.

3,389,954
VISUAL SIMULATION DEVICES ESPECIALLY FOR VEHICLE DRIVING TRAINERS
Stuart Henry Rutherford, Aylesbury, England, assignor to Redifon Air Trainers Limited, a British company
Filed Apr. 30, 1965, Ser. No. 452,293
Claims priority, application Great Britain, May 6, 1964, 18,860/64
7 Claims. (Cl. 352—85)



Use of a zoom lens in an intermittent film feed optical system with the zoom power cyclically controlled in synchronism with the intermittent film feed to progressively increase the system magnification between first and second values during the dwell time of each frame and then to reset the magnification to the first value as a successive frame is viewed, thereby interpolating between successive frames and allowing the use of very low frame rates without incurring disconcerting jerkiness, and disabling the zoom power adjustment at high frame rates. The system finds particular use in visual displays for locomotive, automobile, aircraft and similar visual displays for training purposes.

3,389,955
PUSH-OUT TYPE MECHANICAL PENCIL
Hiroyuki Matsumoto, Tokyo, Japan, assignor to Dainihon Bungu, Kabu Shikigaisha, also known as The Japan Stationery Co., Ltd., Tokyo, Japan, a corporation of Japan
Filed Mar. 9, 1966, Ser. No. 532,972
Claims priority, application Japan, May 12, 1965, 40/36,766
4 Claims. (Cl. 401—94)

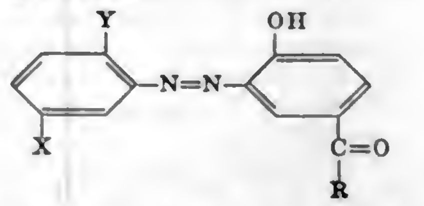


This invention relates to a push-out type mechanical pencil having a cylindrical main body open at both ends with a lead carrying cylinder having a lead-gripping chuck affixed to one end thereof slidably positioned in the main body. Chuck closing means are provided on the main body adjacent one end contiguous to the chuck whereby relative movement therebetween causes the chuck to grip the lead. An operating member is carried in the other end of the main body and engages the lead-carrying cylinder to move it longitudinally through the main body to feed the lead.

CHEMICAL

3,389,956
DYEING NICKEL-MODIFIED POLYPROPYLENE TEXTILES WITH AN ACYL DIHYDROXYBENZENE AZO DYE
Reinhard Mohr, Offenbach (Main), and Fritz Osterloh, Bad Soden, Taunus, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning, Frankfurt am Main, Germany, a corporation of Germany
No Drawing. Filed July 19, 1965, Ser. No. 473,226
Claims priority, application Germany, July 25, 1964, F 43,562
5 Claims. (Cl. 8—42)

Nickel modified polypropylene textiles are dyed with an acyl-, O,O′-dihydroxy or O-hydroxy, O′-carboxy azo dye of the following formula:



where X is a nitro or chloro group, R is a lower alkyl, phenyl, chlorophenyl, lower alkoxyphenyl lower alkyl phenyl or benzyl group and Y is an OH group or a COOH group when an acetyl group is the RC=O- group. Specifically enumerated in the specification are 5-propionyl-, 5-butyryl-, 5-benzoyl-, 5-phenacetyl-, 5-methylbenzoyl-, 5-methoxybenzoyl- and 5-hexahydrobenzoyl-, 2,4-dihydroxy-, 5-chloro-2′-hydroxyazobenzene, and 5-acetyl-, 2,4-dihydroxy-, 2′-carboxy-, and 2′-hydroxy-, 5′-nitroazobenzene analogues. Carriers can be used to assist the dyeing.

3,389,957
PROCESS FOR SELECTIVELY CARBIDING TITANIUM, IRON, AND VANADIUM VALUES
Leonard E. Olds, Grand Island, Murray C. Udy, Niagara Falls, and John R. Wesel, Lewiston, N.Y., assignors to Strategic Materials Corp., Niagara Falls, N.Y.
Filed Jan. 19, 1965, Ser. No. 426,590
8 Claims. (Cl. 23—16)

Titanium and vanadium values in complex materials such as slags are recovered as pure chlorides by selective carbiding of these values in preference to the gangue constituents. Carbiding is done in the solid state while in a nitrogenous atmosphere and at controlled times and temperatures. The reaction mass is then selectively chlorinated at low temperatures to give a vapor mixture of $TiCl_4$-$VOCl_3$ which is capable of high levels of purification by distillation.

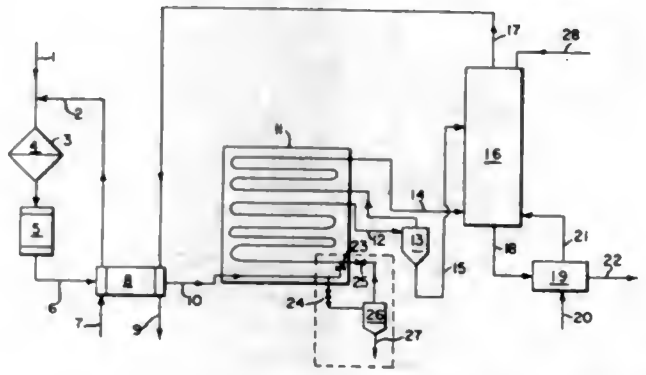
3,389,958
PROCESS FOR THE MANUFACTURE OF ALKALI METAL TRIMETAPHOSPHATES
Gero Heymer, Knapsack, near Cologne, Joseph Cremer, Hermulheim, near Cologne, and Heinz Harnisch, Lovenich, near Cologne, Germany, assignors to Knapsack Aktiengesellschaft, Knapsack, near Cologne, Germany, a corporation of Germany
Filed July 2, 1965, Ser. No. 469,195
Claims priority, application Germany, July 17, 1964, K 53,496
9 Claims. (Cl. 23—106)

Alkali metal trimetaphosphates are made by introducing an alkali metal compound having a volatile anion into a flame fed with phosphorus and an oxygen-containing gas with the resultant formation of a phosphate melt. The alkali metal compound and phosphorus are used in a quantitative ratio sufficient to produce a phosphate melt containing alkali metal oxide and P_2O_5 in a ratio of 1:1. The phosphate melt is immediately solidified, and then maintained for a period from 1 to 30 minutes at temperatures between 300 degrees C. and below the melting point of the trimetaphosphate produced and ultimately cooled down to ambient temperature. The solidified phosphate melt may preferably be maintained for a period of 5 to 10 minutes at a temperature between 350 degrees C. and below the melting point of the trimetaphosphate produced. It may be advantageously solidified on an endless belt resistant to the attack of the melt, which is conveyed through a heat-insulated tunnel as soon as the solidified melt has reached the temperature between 300 degrees C. and the melting point of the trimetaphosphate produced. The length of the tunnel and the belt velocity may advantageously be adapted to one another to ensure a sojourn time of the solidified melt in the tunnel of 1 to 30 minutes. The phosphate melt may be efficiently collected in containers having a capacity of more than about 100 liters and cooled down therein to ambient temperature.

3,389,959
MANUFACTURE OF TRIPLE SUPERPHOSPHATE
Donald E. Lee, Atlanta, Ga., assignor, by mesne assignments, to Armour Agricultural Chemical Company, a corporation of Delaware
No Drawing. Filed Apr. 30, 1965, Ser. No. 452,347
3 Claims. (Cl. 23—109)

Triple superphosphate is prepared by acidulating low-grade phosphate ore having less than 62 BPL with wet process superphosphoric acid having at least 65 weight percent P_2O_5 equivalent and at a P_2O_5/CaO ratio of about 1.0 to 1.1, and heating the mixture to a temperature in the range of about 250–450° F., and storing the heated mass for reaction to form triple superphosphate. While the superphosphoric acid may be mixed with the phosphate rock at room temperatures, the superphosphoric acid is preferably heated to about 250–450° F. and then mixed with the rock and the mixture then heated to 250–450° F. before being stored in a den for reaction to form triple superphosphate.

3,389,960
PROCESS FOR PRODUCING STRONG NITRIC ACID
Donald N. Miller, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Aug. 31, 1964, Ser. No. 393,065
6 Claims. (Cl. 23—160)

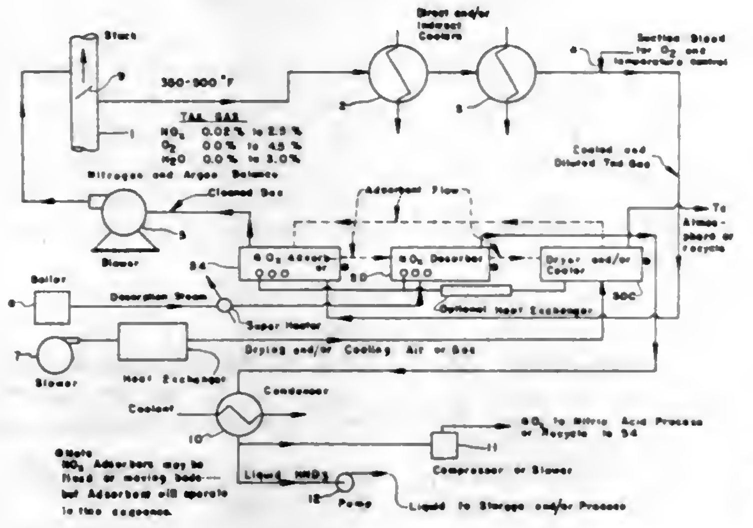


Nitric acid containing at least 63% HNO_3 by weight is produced in a modified pressure process wherein water in the form of weak acid condensate is withdrawn from the cooler-condenser in two stages. First stage withdrawal is of aqueous nitric acid having a concentration of about from 1 to 45%, by weight, and the second stage comprises removal of stronger weak acid than is removed in the first stage.

3,389,961
METHODS OF RECOVERING GASES AND VAPORS

Bommaya B. Sundaresan and Charles I. Harding, Gainesville, Fla., assignors to Nitram Chemicals, Inc., a corporation of Florida; Wilson-Toomer Division of the Embhart Corporation, a corporation of Connecticut; and the University of Florida

Filed Jan. 14, 1966, Ser. No. 520,570
8 Claims. (Cl. 23—162)

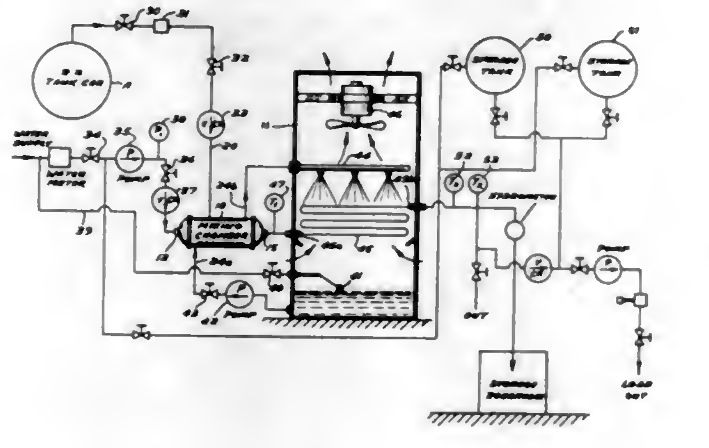


A method of recovering oxides of nitrogen by adsorbing on a bed of synthetic zeolite and thereafter desorbing by passing a gas at elevated temperature through said bed.

3,389,962
METHOD FOR CONVERSION OF ANHYDROUS AMMONIA TO AQUEOUS AMMONIA AND APPARATUS THEREFOR

Donald M. Moorhead, Minneapolis, and Bruce Hayhoe, Wayzata, Minn., assignors to Moorhead Machinery & Boiler Company, Minneapolis, Minn., a corporation of Minnesota

Filed Oct. 24, 1965, Ser. No. 504,509
7 Claims. (Cl. 23—193)



This invention relates to a method and apparatus for converting anhydrous ammonia to aqueous ammonia and includes the proper supplies of water and anhydrous ammonia fed into a mixing chamber with further cooling of the aqueous ammonia after it leaves the chamber. The mixing chamber basically includes a venturi tube section through which water is pumped to lower the pressure of the water as it passes through the venturi which lowering of pressure will draw anhydrous ammonia into a mixing chamber which mixing chamber actually occupies a portion of the venturi and a continuing tubular section extending from the venturi all contained in a jacketed container. Surrounding the anhydrous ammonia inlet is a second water jacket which is provided with recycled spray water to flow therethrough thereby removing the normally accompanying ice forming around the anhydrous ammonia chamber such that the final effect will be to cool the mixing chamber interiorly of the anhydrous ammonia chamber and inlet and lower the temperature of the spray water, thereby minimizing make-up water requirements.

3,389,963
CATALYTIC DECOMPOSITION OF HYDROGEN PEROXIDE

Herman J. Baumgartner, Danville, and George C. Hood, Orinda, Calif., and Donald D. Weaver, Houston, Tex., assignors to Shell Oil Company, New York, N.Y., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 312,355, Sept. 30, 1963. This application Dec. 3, 1963, Ser. No. 327,817

The portion of the term of the patent subsequent to Aug. 1, 1984, has been disclaimed
13 Claims. (Cl. 23—204)

The loss of a silver-containing catalyst in a process of hydrogen peroxide decomposition is reduced by employing hydrogen peroxide having dissolved therein zinc or cadmium salts of certain organic acids.

3,389,964
PROCESS FOR PREPARING LOW DENSITY GRAPHITE STRUCTURES

Franciszek Olstowski, Freeport, Tex., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Apr. 4, 1966, Ser. No. 539,635
8 Claims. (Cl. 23—209.1)

1. A process for preparing relatively low density graphite structures having low thermal conductivities which comprises compressing vermicular graphite to form a graphite compact having a density of at least 40 lbs./ft.^{3}, treating said compact with an intercalating agent, and heating said treated compact to a temperature of between about 100° C. and about 500° C. to cause expansion thereof along the axis of compression to produce a graphite structure having a density of between about 5 and 25 lbs./ft.^{3}.

3,389,965
PROCESS FOR PRODUCING HYDROGEN BY REACTION OF A HYDROCARBON AND STEAM EMPLOYING A RHENIUM-CONTAINING CATALYST

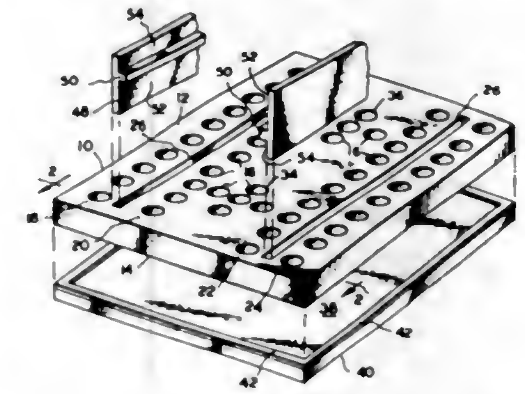
Hendrikus de Ruiter, Pieter A. van Weeren, and Willem C. J. Quik, Amsterdam, Netherlands, assignors to Shell Oil Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed May 25, 1964, Ser. No. 370,063
Claims priority, application Netherlands, May 30, 1963, 293,400; Apr. 19, 1964, 6,404,815
9 Claims. (Cl. 23—212)

Rhenium-containing catalysts for the production of hydrogen by the reaction of hydrocarbon and steam are highly active, very resistant to sulfur poisoning and promote the reaction with substantially no formation of soot. Activity and catalyst life is increased by the use of promoters such as the metals and metal compounds of Group I–B and Group V–III of the Periodic Table.

3,389,966
APPARATUS AND PROCESS FOR SEMIQUALITATIVE, SEMIQUANTITATIVE IMMUNODIFFUSION REACTIONS

Calvin A. Saravis, Waban, Mass.
(281 South St., Jamaica Plain, Mass. 02130)
Filed Apr. 30, 1964, Ser. No. 363,960
7 Claims. (Cl. 23—230)

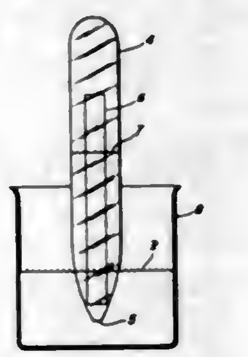


An immunodiffusion test plate and method are shown, wherein a template and a slide plate sandwich an agar film therebetween. The template has an ordered series of apertures therethrough for adding an antigen solution and an antibody solution to the underlying agar film. For serial dilution tests a column of cup-like circular depressions sized for a Takatsy loop parallels a slot aperture. Other cup-like depressions are disposed in an Ouchterlony pattern. A cylindrical bore of restricted diameter passes from the base of each cup-like depression to the opposing surface of the template whereby the cup-like depression and cylindrical bore form an aperture through the template.

3,389,967
DETECTION OF TRACE AMOUNTS OF WATER

Joseph R. Hrabinski, 1040 Woodbridge Ave., Fords, N.J. 08863

Continuation-in-part of application Ser. No. 274,812, Apr. 22, 1963. This application Aug. 17, 1965, Ser. No. 480,436
11 Claims. (Cl. 23—230)



1. The process for detecting minute amounts of water in a liquid which comprises contacting the said liquid with a test paper comprising methyl orange indicator paper coated with a thin layer of finely divided particles of phosphorus pentoxide for a sufficient period to obtain a color change when said liquid contains trace amounts of water.

3,389,968
METHOD OF DETERMINING THYROXIN IODINE IN BLOOD SERUM

John M. Masen, Crofton, Md., assignor to La Huis Clinical Laboratories, Inc., Miami, Fla., a corporation of Florida

No Drawing. Filed July 7, 1966, Ser. No. 563,365
6 Claims. (Cl. 23—230)

Method of determining the amount of thyroxin iodine in blood serum by first extracting thyroxin in an alcohol-liquid hydrocarbon solvent mixture and an aqueous buffer of citric acid-disodium phosphate. The thyroxin remains in the solvent mixture and after centrifuging, a portion of the supernatant liquid is treated with an aqueous alkaline organic reagent having bromate and bromide ions. With the addition of a mineral acid, bromine then liberates the iodine from its organic combination. After centrifuging again, the amount of iodine liberated is measured colorimetrically from a portion of the supernatant liquid. A sequestrant can be included with the buffer solution.

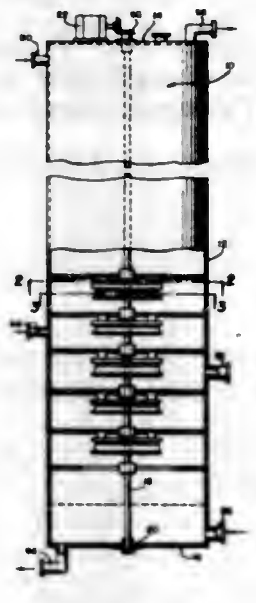
ERRATUM

For Class 23—270 see:
Patent No. 3,390,402

3,389,969
COUNTERCURRENT LIQUID-LIQUID EXTRACTION APPARATUS

Willi Wirz, Reinach, Basel-Land, Switzerland, assignor to Hoffmann-La Roche Inc., Nutley, N.J., a corporation of New Jersey

Filed Feb. 10, 1965, Ser. No. 431,581
Claims priority, application Switzerland, Feb. 18, 1964, 1,937/64
3 Claims. (Cl. 23—270.5)

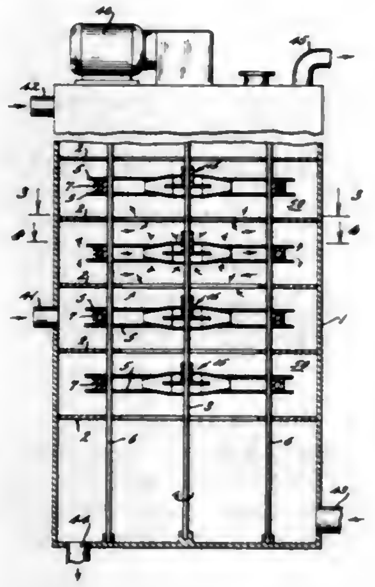


An extraction column for countercurrent contacting of immiscible liquids comprising mixing chambers containing stirring blades mounted upon a rotable shaft and interfitting concentric annular baffles in planar relationship with the blades. In operation, the immiscible liquids to be separated are forced by the stirring blades through the interfitting concentric baffles.

3,389,970
LIQUID-LIQUID EXTRACTION COLUMN HAVING ROTATABLE PUMPING IMPELLER ASSEMBLIES

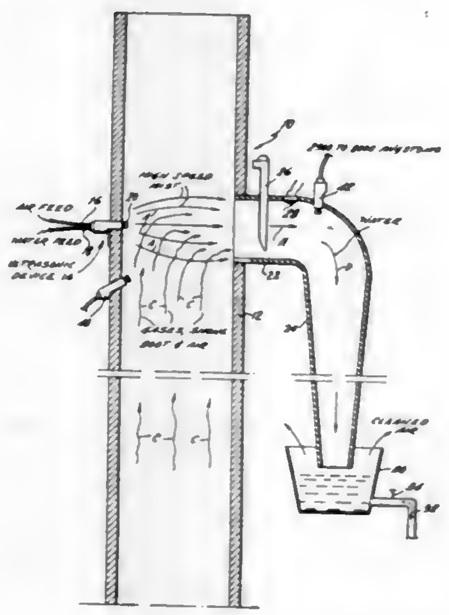
Edward G. Scheibel, 75 Harrison Ave., Montclair, N.J. 07042
Filed Feb. 15, 1967, Ser. No. 616,332
8 Claims. (Cl. 23—270.5)

The agitated liquid-liquid extraction column disclosed herein comprises a vertically elongated column divided into a plurality of mixing stages by fixed horizontal baffles, each mixing stage containing a pumping impeller fixed flow control plates and wire mesh deflectors arranged to mix the two liquid phases near the center of the column and to direct the mixed liquid radially to near the column wall where phase separation occurs. The impellers are mounted on an axial rotatable shaft and the shaft-impeller assembly may be removed from the column as a unit through an appropriate opening at the top of the column.



3,389,971
SPRAY-TYPE SOOT ELIMINATOR

Howard Alliger, 10 Ponderosa Drive,
Melville, N.Y. 11746
Continuation-in-part of application Ser. No. 594,844, Nov. 16, 1966. This application June 14, 1967, Ser. No. 645,948
6 Claims. (Cl. 23—277)

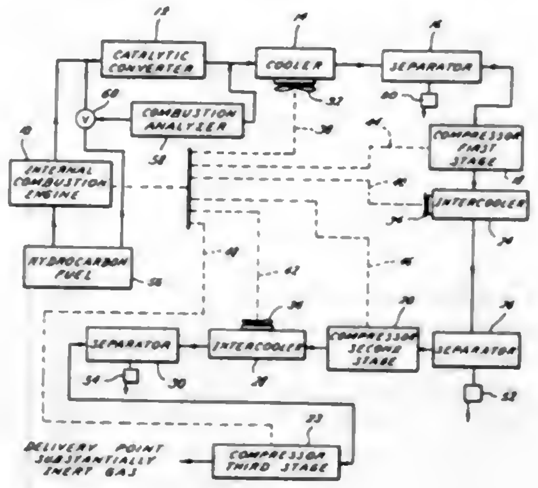


A soot eliminator for removing soot and noxious materials from combustion gases comprising means for delivering ultrasonic vibrations, a gas, a liquid, steam, ultraviolet light and other radiations into a chimney and into a disposal tube for absorbing and rendering more soluble in the liquid various noxious materials.

3,389,972
INERT GAS GENERATOR

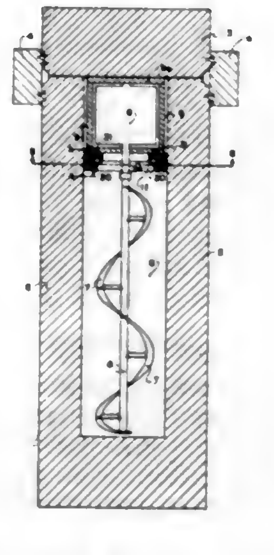
John E. Pottharst, Jr., 861 Carondelet St.,
New Orleans, La. 70130
Filed Apr. 8, 1964, Ser. No. 358,354
6 Claims. (Cl. 23—281)

1. An apparatus for manufacturing substantially inert gas, under superatmospheric pressure and at a desired predetermined rate, said apparatus comprising a hydrocarbon-fueled internal combustion engine wherein exhaust gas is formed; a catalytic converter communicating with said engine for accepting said exhaust gas and converting corrosive components thereof to form a substantially inert gas; cooling means communicating with said converter for cooling said substantially inert gas, said cooling means including a fan driven by said engine, means for varying the pitch of the blades of said fan to thereby control the power consumed by the fan and hence the power output of said engine and accordingly the rate of exhaust gas produced by said engine whereby the rate of exhaust gas produced by said engine approximates the desired predetermined rate; and a compressor driven by said engine and communicating with said cooling means for accepting said substantially inert gas therefrom, said apparatus from said engine to the compressor creating a positive back pressure at the engine of approximately 12 to 20 inches of water whereby the inert gas at the compressor will be slightly above atmospheric pressure, said compressor compressing it to a superatmospheric pressure.



3,389,973
INTERNAL SEALING MEANS FOR AUTOCLAVE MOTOR HOUSING

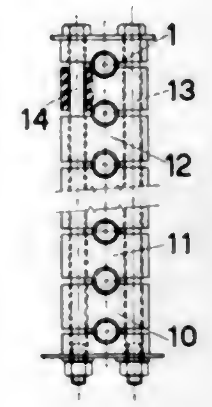
Kerien Fitzpatrick, Odessa, Tex., assignor to Rexall Drug and Chemical Company, Los Angeles, Calif., a corporation of Delaware
Filed June 23, 1967, Ser. No. 648,290
4 Claims. (Cl. 23—290)



Sealing means between reaction and agitator motor sections comprises disc having peripheral grooves containing resilient and expander rings with clearance provided for fluid passage to spaces between grooves and expander rings whereby fluid pressure from reaction section urges resilient rings against autoclave's wall preventing passage of fluid to motor section.

3,389,974
PROCESS AND APPARATUS FOR HARVESTING CRYSTALS

Cesare Barattini, Siracusa, Paolo Bortolini, Milan, and Alberto Scarfi, Siracusa, Italy, assignors to Montecatini Edison S.p.A., Milan, Italy
Filed June 10, 1965, Ser. No. 462,914
Claims priority, application Italy, June 10, 1964, 12,698/64
4 Claims. (Cl. 23—295)



System for recovering inorganic salt crystals from a hot mother liquor containing the salt wherein the mother liquor is passed rapidly into heat-exchange contact with a multiplicity of tubes of undulating configuration and closely spaced U-shaped turns with relatively long vertical passes and relatively short spacing between the passes, a coolant passing through these tubes, the tubes being vibrated relatively to the vessel upon which they are suspended and independently of the stirring of the solution to prevent adhesion of crystal growth to the tubes.

3,389,975
PROCESS FOR THE RECOVERY OF ALUMINUM VALUES FROM RETORTED SHALE AND CONVERSION OF SODIUM ALUMINATE TO SODIUM ALUMINUM CARBONATE HYDROXIDE

Robert A. Van Nordstrand, Tulsa, Okla., assignor to Sinclair Research, Inc., New York, N.Y., a corporation of Delaware
No Drawing. Filed Mar. 10, 1967, Ser. No. 622,056
19 Claims. (Cl. 23—315)

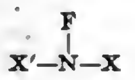
A process for the recovery of aluminum values, e.g., dawsonite, from oil shales comprising leaching a retorted oil shale with a solution of sodium carbonate and sodium hydroxide to provide a sodium to aluminum atomic ratio of at least about 5:1, most preferably at least about 20:1, to dissolve the aluminum component therein and subsequently precipitating the aluminum component by treating the solution with carbon dioxide. The resulting solution can be recycled to the leaching operation after adjustment of the sodium carbonate and sodium hydroxide contents.

Sodium aluminum carbonate hydroxide can be made from a solution of sodium aluminate and sodium carbonate having a high atomic ratio of sodium to aluminum of at least about 5:1, preferably at least about 20:1, by contacting the solution with carbon dioxide.

3,389,976
PROCESS FOR PREPARING MIXED NITROGEN TRIHALIDES SUCH AS DICHLOROFLUOROAMINE

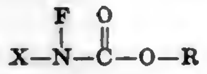
Vytautas Grakauskas, Arcadia, Calif., assignor to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio
No Drawing. Filed Oct. 14, 1964, Ser. No. 404,208
8 Claims. (Cl. 23—356)

1. The method of preparing mixed nitrogen trihalides of the formula:



$$X'{-}\overset{\overset{\Large F}{|}}{N}{-}X$$

which comprises reacting an N-halo-N-fluorocarbamate of the formula:

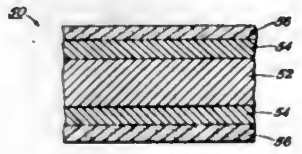


$$X{-}\overset{\overset{\Large F}{|}}{N}{-}\overset{\overset{\Large O}{\|}}{C}{-}O{-}R$$

with an alkali metal hypohalite, wherein in the above formulae, X and X′ may be the same or different, and are selected from the group consisting of chlorine and bromine, and R is a monovalent organic radical selected from the group consisting of alkyl, cycloalkyl, haloalkyl and nitroalkyl.

3,389,977
TUNGSTEN CARBIDE COATED ARTICLE OF MANUFACTURE

Donald A. Tarver, Richardson, Tex., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware
Filed Aug. 5, 1964, Ser. No. 387,613
1 Claim. (Cl. 29—195)



Disclosed is a method for depositing substantially pure tungsten carbide in the form W_2C by the reaction of tungsten hexafluoride with carbon monoxide or with tungsten hexacarbonyl. The tungsten carbide may be more adherently bonded to a steel substrate by first depositing a very thin film of tungsten metal on the surface of the substrate and then depositing the coat of tungsten carbide.

3,389,978
DIESEL FUEL COMPOSITION CONTAINING DIMETHYL FORMAMIDE AND A METAL NAPHTHENATE

John S. Mann, Medina, and William F. Reinhart, Shaker Heights, Ohio, assignors to The Standard Oil Company, Cleveland, Ohio, a corporation of Ohio
No Drawing. Filed Mar. 25, 1966, Ser. No. 537,281
5 Claims. (Cl. 44—57)

A diesel fuel additive containing 25–250 p.p.m. of dimethyl formamide and up to 500 p.p.m. on the basis of the metal portion of a material selected from the group of barium, calcium, strontium, zinc and magnesium naphthenates. The additive package improves nozzle cleanliness, increases the cetane number of the fuel and provides other benefits.

3,389,979
MIDDLE DISTILLATE FLOW IMPROVER

Darrell W. Brownawell, Scotch Plains, and Vincent P. Catto, Elizabeth, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Filed June 3, 1964, Ser. No. 372,377
3 Claims. (Cl. 44—62)

Hydrocarbon distillate fuel improved in its low temperature flow properties by a mixture of one part by weight of copolymer comprising 60–99 weight percent ethylene and 1–40 weight percent vinyl acetate having molecular weights of 1000–3000 and about ½ to 2 parts by weight of a petroleum resin.

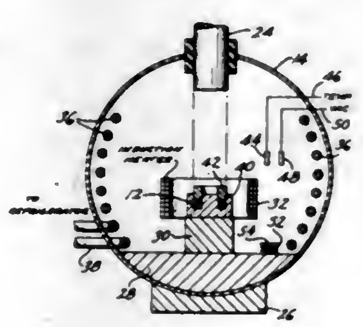
3,389,980
GASOLINE FUEL CONTAINING ALKYL ORTHOPHOSPHATES OF N-AMINOALKYL-SUBSTITUTED 2-AMINO-ALKANE DETERGENTS

George J. Kautsky, El Cerrito, Calif., assignor to Chevron Research Company, a corporation of Delaware
No Drawing. Filed June 8, 1964, Ser. No. 373,515
5 Claims. (Cl. 44—69)

Leaded gasoline composition containing alkyl orthophosphates of N-aminoalkyl-substituted 2-aminoalkanes in which the alkane is a straight chain containing from about 9 to 24 carbon atoms and each alkyl group of the orthophosphate contains from 8 to 18 carbon atoms.

3,389,981
METHOD OF BONDING DIAMOND AND METAL

Harry L. Strauss, Jr., 183 Sterling Road,
Harrison, N.Y. 10528
Filed Oct. 8, 1963, Ser. No. 314,720
10 Claims. (Cl. 51—293)



1. The method of bonding diamond pieces and metal which includes embedding the diamond pieces in a metal powder selected from the group consisting of iron, copper, tin, nickel, cobalt, chromium boride, and tungsten carbide and compressing the same to form an embryo abrasive product having some "green strength," subjecting the product to direct mechanical pressure and to heat and to environmental vacuum in the presence of a titanium getter until the temperature has risen to a range of 1800° to 2400° F. and the treatment has continued for about six to ten minutes, and thereupon terminating the heating and abruptly cooling by refrigeration while maintaining the direct mechanical pressure and the environmental vacuum until the product is cooled to approximately room temperature.

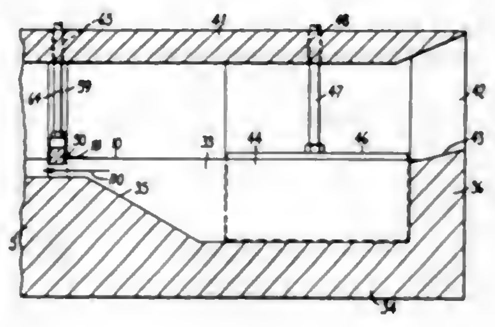
3,389,982
METHOD FOR MAKING HIGH STRENGTH SPHERICAL GLASS BODIES

Charles W. Schott, Pittsburgh, Pa., assignor to Union Carbide Corporation, a corporation of New York
No Drawing. Continuation-in-part of application Ser. No. 154,881, Nov. 24, 1961. This application Jan. 28, 1964, Ser. No. 340,808
9 Claims. (Cl. 65—21)

A spherical glass body having compressive strength in excess of 50,000 p.s.i. when notched to a depth of up to 30% of diameter, resistance to chemical attack and density less than 2.65 g./cc. and made by blending particulate glass with 0.25% to 0.75% acetylene black, mixing the blend with 1% to 5% graphite, adding 0.2% to 0.4% water, heating to a temperature such that the particulate glass spheroidizes, quenching from a temperature between softening and working and recovering the treated glass bodies.

3,389,983
METHOD AND APPARATUS FOR REMOVING DROSS FROM THE SURFACE OF A MOLTEN METAL GLASS SHEET FLOAT BATH

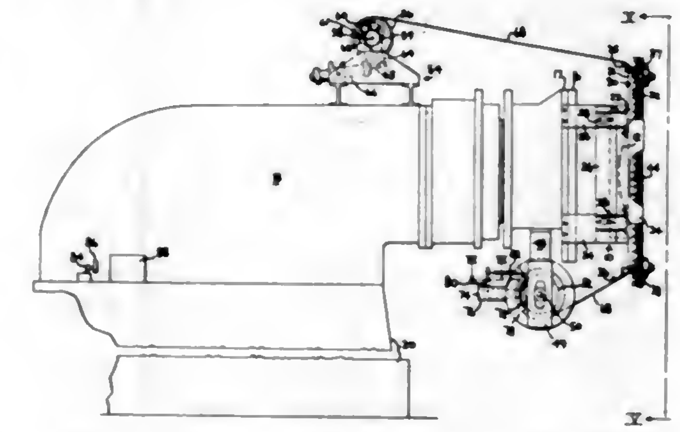
Albert Sidney Robinson, Birkdale, Southport, and Frederick William Silverwood, Appley Bridge, England, assignors to Pilkington Brothers Limited, Liverpool, England, a corporation of Great Britain
Filed July 21, 1964, Ser. No. 384,096
Claims priority, application Great Britain, July 23, 1963, 29,166/63
9 Claims. (Cl. 65—27)



A method and apparatus for removing dross from the surface of molten metal along which a ribbon of glass is being advanced in which surface flow of molten metal is engendered into a defined zone of the molten metal, and dross is trapped in that zone during cyclic flow of molten metal into and out of the zone.

3,389,984
GLASS SHEET PRESS BENDING APPARATUS WITH INDEXED COVER OVER THE SHAPING SURFACE

Oscar D. Englehart, Brackenridge, and James S. Shuster, Leechburg, Pa., assignors to Pittsburgh Plate Glass Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Feb. 11, 1965, Ser. No. 431,840
8 Claims. (Cl. 65—287)



Method and apparatus for periodically moving a refractory fabric cover for a glass sheet pressing mold, and particularly, a cover disposed over a pressing mold having a concave shaping surface. The cover is a continuous ribbon attached between a supply roll and a receiving roll disposed on opposite sides of the shaping surface to support the cover over the shaping surface. The receiving roll is periodically indexed to displace said cover a short distance over said shaping surface before the fabric cover frays to present overlapping areas of the fabric cover over the shaping surface. Means are provided to prevent the cover portion covering the shaping surface from wrinkling.

3,389,985
HERBICIDAL METHOD EMPLOYING TRIHALOTHIONOACETAMIDES

Lowell R. Smith, St. Louis, and Angelo John Speziale, Creve Coeur, Mo., assignors to Monsanto Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Original application July 22, 1963, Ser. No. 296,427. Divided and this application Apr. 18, 1967, Ser. No. 631,616
10 Claims. (Cl. 71—88)

The usage of trihalothionoacetamides for the inhibition of the germination and preemergent growth of grasses.

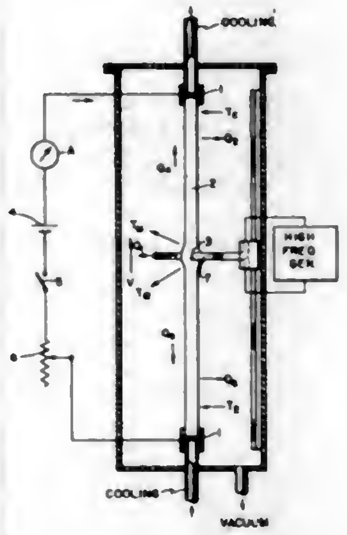
3,389,986
2,6-SUBSTITUTED CYCLOHEXANONES AS INSECTICIDES, MITICIDES, FUNGICIDES, NEMATOCIDES AND HERBICIDES

Eugene P. Di Bella, Rochelle Park, N.J., assignor to Tenneco Chemicals, Inc., a corporation of Delaware
No Drawing. Filed July 2, 1964, Ser. No. 380,049
12 Claims. (Cl. 71—123)

The growth of undesirable insects, mites, fungi, nematodes, and plants is controlled by applying to the pests or to the locus in which control is to be effected a pesticidal amount of a 2,6-substituted cyclohexanone.

3,389,987
PROCESS FOR THE PURIFICATION OF MATERIALS IN SINGLE CRYSTAL PRODUCTION

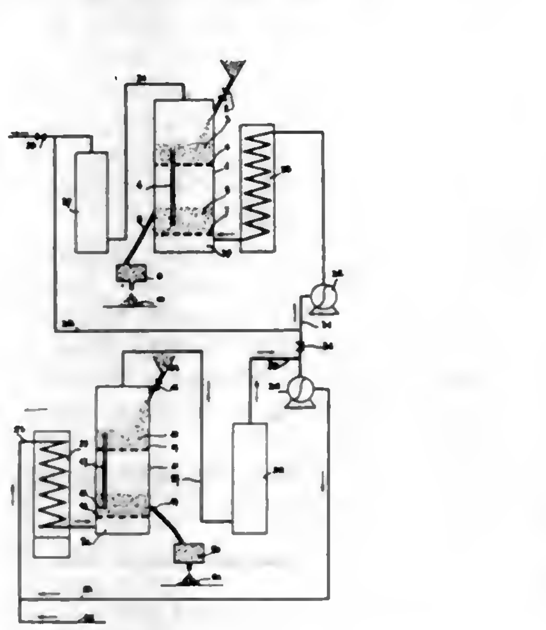
Alexander Lebek, Berlin-Weissensee, and Siegfried Raab, Berlin-Johannisthal, Germany, assignors to Deutsche Akademie der Wissenschaften zu Berlin, Berlin-Adlershof, Germany
Filed June 14, 1965, Ser. No. 463,723
2 Claims. (Cl. 75—10)



A method of zone melting an elongated body of semiconductor material is disclosed, especially for purifying the material and/or for producing a single crystal, in which a direct current is passed through the body, which has a magnitude corresponding to the Peltier or the Peltier and Thomson coefficient of the semiconductor material and to the speed of movement of the molten zone through the body, in which an external heating zone is maintained around the molten zone, and in which the heating zone is moved along the length of the body with a speed corresponding to the speed of movement of the molten zone through the body, while the end portions of the body are variably cooled for purposes of influencing the Thomson effect.

3,389,988
PROCESS OF DIRECT REDUCTION OF IRON OXIDES IN FLUIDIZED BEDS

Theophile F. L. Cambon and Georges A. M. Igounenc, Toulouse, France, assignors to Office National Industriel de l'Azote, Toulouse, France, a corporation of France
Filed Apr. 1, 1965, Ser. No. 444,607
Claims priority, application France, May 27, 1964, 4,978
12 Claims. (Cl. 75—26)



The present disclosure relates to the industrial reduction of iron oxide utilizing hydrogen and without causing pyrophorism or sintering. The process involves partially reducing the iron oxide to about 60–75% of total reduction during a primary reduction stage followed by cooling down to at least 250° C. and as low as room temperature followed by reheating the partially reduced mixture of iron and iron oxide and completing reduction to iron at an elevated temperature lower than the temperature of the first stage reduction.

3,389,989
TREATMENT OF MOLTEN METAL

Charles W. Finkl, Chicago, Ill., assignor to A. Finkl & Sons Co., Chicago, Ill., a corporation of Illinois
Continuation-in-part of application Ser. No. 777,664, Dec. 2, 1958. This application June 3, 1965, Ser. No. 461,034
9 Claims. (Cl. 75—49)

1. Apparatus for reducing the oxygen content of molten steel containing an undesirably high quantity of oxygen in an initial molten condition, said apparatus including

a molten metal receptacle,
said receptacle having an internal configuration proportioned to provide a low surface to volume ratio of a melt of steel contained therein,
the upwardly extending metal contacting surfaces of said receptacle being composed of a refractory material which includes a major proportion of alumina, zirconia, or magnesia, and a maximum of 35% silica,
a cover member adapted to be carried by the receptacle,
said cover having means forming a passage for the admission of materials to the metal in the receptacle when the cover is in place, and
a filler plate having a contour complementary to the passage formed in the cover whereby said plate, when in position blocking the admission passage, forms a substantially continuous heat reflecting surface above the metal.

3. In a production method of lowering the oxygen and inclusion content of commercial steel by vacuum treatment to produce quality steel, the steps of

forming, as a starting material, molten metal by exposing charge material to a source of arc heat under substantially atmospheric pressure conditions to thereby provide molten metal containing an undesirably high deleterious gas content in the as melted condition,

said molten metal containing an alloying quantity of carbon, no active deoxidizer in an amount sufficient to preclude the carbon monoxide boil during the later subjection of the molten metal to vacuum, and alloying material in addition to carbon which will not materially inhibit a subsequent carbon monoxide boil, subjecting the molten metal to a vacuum which will effectively degas it,

maintaining the steel, while subjected to the vacuum, in contact with a refractory surface composed of a refractory which is more stable than silica under vacuum conditions selected from the group consisting essentially of magnesia, zirconia, and an alumina type brick having an alumina content of from about 65%–90%, and

adding active deoxidizers after the oxygen content has been lowered to a desired level.

3,389,990

MANGANESE NITRIDE

William W. Gullett, College Park, Md., assignor to Pickands Mather & Co., Cleveland, Ohio, a corporation of Delaware

No Drawing. Filed May 17, 1965, Ser. No. 456,553

6 Claims. (Cl. 75—122)

1. Process of producing a nitrided sinter of a manganese-containing starting material selected from the group consisting of manganese and manganese alloys, which comprises coarsely crushing and then comminuting in an impact-type mill said starting material to the production of a comminuted material consisting of particles of non-slivery shape varying in size between 6 mesh and 325 mesh and having substantially the following size distribution:

	Percent
—6+14 mesh	16–20
—14+20 mesh	16–20
—20+40 mesh	18–22
—40+80 mesh	16–22
—80+100 mesh	3–5
—100+200 mesh	10–15
—200+	8–12

and a bulk density of from about 3.4 to about 6.0 grams per cubic centimeter, filling a mold with the dry comminuted material, heating the material, in the mold, in an atmosphere rich in nitrogen at a temperature of from about 650 to about 1120° C. for at least one hour and until the material contains at least 1% by weight of nitrogen as manganese nitride, and until the material in the mold has become sintered, and cooling the resulting sintered body in an inert atmosphere.

3,389,991

STAINLESS STEEL AND METHOD

Harry Tanczyn, Baltimore, Md., assignor to Armco Steel Corporation, Middletown, Ohio, a corporation of Ohio

No Drawing. Filed Dec. 23, 1964, Ser. No. 420,765

9 Claims. (Cl. 75—126)

Heat-hardenable stainless steel which, in addition to chromium and carbon, essentially contains nitrogen and columbium-tantalum in particular amount, and in which any molybdenum and/or tungsten is maintained in critically low amount. More particularly, the steel essentially consists of about .01% to about .25% carbon, about .01% to 3% manganese, about .01% to about 2% silicon, about 10% to about 16% chromium, any molybdenum not exceeding .3% and any tungsten not exceeding .5% and with molybdenum and tungsten together not exceeding about .5% in total, about .04% to about .2% nitrogen, about .03% to about .75% columbium-tantalum, up to about .75% vanadium, and remainder substantially all iron. The steel is particularly produced in the form of bar stock from which various products are fashioned, especially turbine blading and the like.

3,389,992

NICKEL-BASE ALLOY FOR USE AT ELEVATED TEMPERATURE

Stuart Walter Ker Shaw, Coldfield, and Reginald Massey Cook, King's Heath, Birmingham, England, assignors to The International Nickel Company, Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Oct. 14, 1965, Ser. No. 496,145

Claims priority, application Great Britain, Oct. 20, 1964, 42,767/64

13 Claims. (Cl. 75—171)

1. A nickel-base alloy characterized by good stress-rupture characteristics at elevated temperatures of the order of about 1100° C. while under relatively high stress, said alloy consisting essentially of about 1% to 3.5% chromium, about 7% to 19.5% tungsten, up to 4% molybdenum, about 0.2% to 2% columbium, the sum of the tungsten plus 1.2 times the molybdenum plus the columbium plus two-thirds the chromium being from 16.5% to 22%, about 4.7% to 6.8% aluminum, up to 16% cobalt, up to 0.3% carbon, about 0.1% to 1% zirconium, up to 0.05% boron, the sum of the zirconium plus ten times the boron being from 0.1% to 1.2%, and the balance essentially nickel.

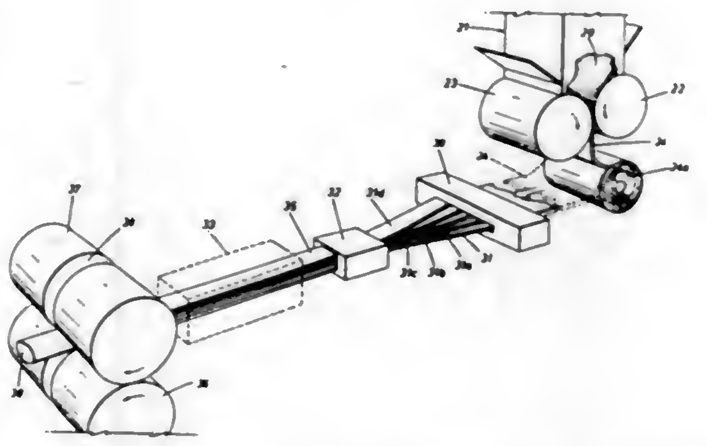
3,389,993

PROCESS FOR PRODUCING ELONGATED CONTINUOUS BARS AND RODS FROM METAL POWDERS

John A. H. Lund, Vancouver, British Columbia, and Vilnis Silins, Fort Saskatchewan, Alberta, Canada, assignors to Sherritt Gordon Mines Limited, Toronto, Ontario, Canada, a corporation of Canada

Continuation-in-part of application Ser. No. 84,726, Jan. 24, 1961. This application Mar. 5, 1965, Ser. No. 437,412

4 Claims. (Cl. 75—208)



1. A process of forming finely divided compactible metallic powders into continuous bars and rods and the like elongated products which comprises the following steps in sequence: feeding a finely divided, compactible metallic powder to a roll compacting unit to produce a continuous self-supporting green strip having a thickness

in the range of $\frac{1}{50}$ to $\frac{1}{100}$ of the diameter of the rolls of said compacting unit and a density equivalent to about 45% to 95% of the theoretical density of the material of which said compactible metallic powder is formed; slitting said green strip along its length into a plurality of strips of predetermined width; forming a vertical stack of predetermined thickness of said plurality of strips; passing said stack to a sintering operation at a temperature below the melting point of said metallic powder; and thereafter mechanically working the sintered stack to form a continuous unitary bar, rod or the like elongated wrought product having a density substantially equivalent to 100% of the theoretical density of the material from which said product is formed.

3,389,994

PHOTOGRAPHIC LIGHT-SENSITIVE MATERIAL

Bernhard Piller, Basel, Switzerland, assignor to CIBA Limited, Basel, Switzerland, a Swiss company

No Drawing. Filed Dec. 15, 1964, Ser. No. 418,555

Claims priority, application Switzerland, Dec. 20, 1963, 15,703/63

8 Claims. (Cl. 96—84)

Photographic silver halide light-sensitive material containing a styryl dyestuff having at least one sulfonic acid group and that corresponds to the formula

$$A—R_1—CH{=}Py \qquad (1)$$

in which A represents an acylamino group bound to R_1 through its nitrogen atom, R_1 represents a benzene radical, and Py represents a radical of a 5-pyrazolone bound to the —CH= group in 4-position and to an aromatic ring in 1-position.

3,389,995

TWO-COMPONENT HEAT DEVELOPABLE DIAZOTYPES CONTAINING AMIDINE COMPOUNDS

Bert E. Tripp, Binghamton, Walter J. Welch, Port Dickinson, and Theodore Panasik, Vestal, N.Y., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Sept. 15, 1964, Ser. No. 396,715

15 Claims. (Cl. 96—91)

Two-component diazotype photoprinting material, and a sensitizing composition for its preparation, comprising a surface having thereon a light-sensitive layer containing an azo coupling component, a light-sensitive diazonium compound, an acid stabilizer and at least one amidine compound selected from the group consisting of acetamidine, propionamidine, butyramidine, dicyandiamidine, guanyl thiourea and salts thereof.

3,389,996

TWO-COMPONENT HEAT DEVELOPABLE DIAZOTYPES

Walter J. Welch, Port Dickinson, N.Y., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Oct. 15, 1964, Ser. No. 404,181

8 Claims. (Cl. 96—91)

Two-component diazotype photoprinting material susceptible to development on heating and a sensitizing composition for preparing same, which material comprises a support having thereon a light-sensitive layer comprising an azo coupling component, a light-sensitive diazonium compound, a neutral to acid salt of trichloroacetic acid and at least one polybasic acid alkali metal or ammonium salt stabilizer having at least one hydrogen atom bonded through oxygen to the polybasic carboxylic acid, the sensitizing composition comprising the components of the light-sensitive layer in an aqueous medium.

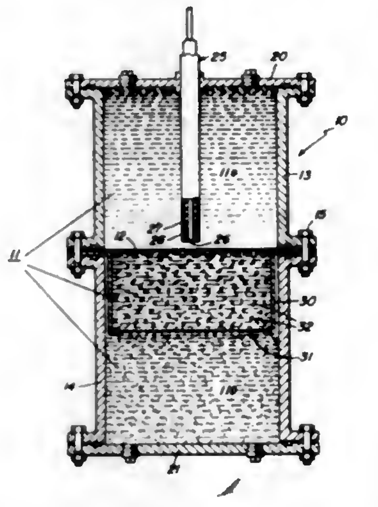
3,389,997

PROCESS FOR RECOVERING INTRA-CELLULAR PROTEINS

Merton Allen, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York

Filed Aug. 3, 1966, Ser. No. 569,945

3 Claims. (Cl. 99—14)



Intra-cellular proteins locked within plant and animal cells are recovered for nutritional use by a process which includes as a key step subjecting the source material to electrohydraulic shock waves which break the material open and release the intra-cellular proteins into the surrounding liquid medium.

3,389,998

FERMENTATION PROCESS FOR PRODUCING ALCOHOLIC BEVERAGES FROM MICROALGAE

Jorgen Jorgensen, % Laboratorio de Investigacion, Leprocomio de Cabo Blanco, Maiquetia, Venezuela

No Drawing. Filed Jan. 17, 1967, Ser. No. 609,739

10 Claims. (Cl. 99—35)

A fermentation process utilizing mass-cultured microalge of the family Chlorophyceae to produce a wine-like alcoholic beverage. The process includes (1) the preparation of a slurry from concentrates of mass-cultured live microalgae, (2) the addition of sucrose to the slurry to constitute 8 to 12% by weight of the medium, (3) leaving the sweetened slurry in repose for a convenient period to allow the microalgae enzymes to produce a complex of organic acid flavoring factors from the sucrose (4) killing the live microalgae, diluting with water and clarifying the slurry, (5) adding additional sucrose to the culture medium to constitute a total of about 25 to 30 percent by weight of the liquid, (6) mixing the culture medium with a suitable strain of Saccharomyces yeast proliferating in a previously prepared identical culture medium, and (7) allowing the alcoholic fermentation to proceed in its natural course until terminated.

3,389,999

METHODS FOR ACHIEVING THE CHEMICAL PRESERVATION OF BEER AND RESULTANT BEER COMPOSITIONS

Frede B. Strandskov, North Caldwell, and John B. Bockelmann, Tenafly, N.J., assignors to The F. & M. Schaefer Brewing Co., Brooklyn, N.Y.

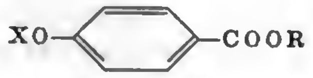
No Drawing. Filed Oct. 6, 1964, Ser. No. 401,997

16 Claims. (Cl. 99—48)

Beer is chemically preserved by intimately mixing therewith:

(A) a mixture of:

(1) a compound of the formula



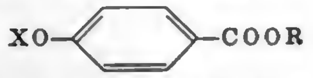
wherein X is a member selected from the group consisting of H, alkali metal, and alkaline earth metal, and

R is a member selected from the group consisting of octyl and heptyl, and

(2) benzylbromoacetate, or

(B) a mixture of:

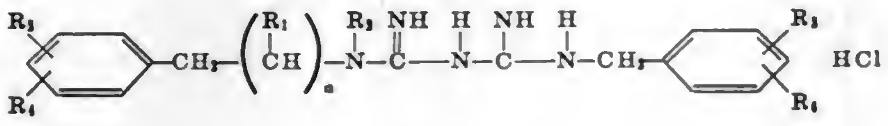
(1) a compound of the formula



wherein X is a member selected from the group consisting of H, alkali metal, and alkaline earth metal, and

R is a member selected from the group consisting of octyl and heptyl, and

(2) a compound of the formula



wherein R_1 is a member selected from the group consisting of H and phenyl, and R_2 represents a member selected from the group consisting of H, and lower alkyl, and

R_3, R_4, R_5, and R_6 represent the same or different members selected from the group consisting of H, halogen and lower alkyl, and n is a member selected from the group consisting of 0 and 1.

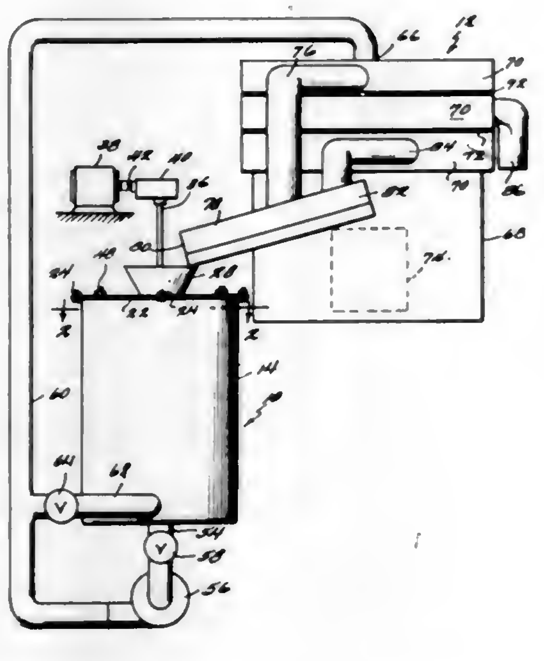
The invention also provides the resultant chemically preserved beer compositions.

3,390,000
SEPARATION OF LUPULIN FROM HOPS

Robert J. Brison and John H. Litchfield, Columbus, Ohio, assignors to John I. Haas Inc., Washington, D.C., a corporation of Delaware

Filed Dec. 2, 1965, Ser. No. 511,110

15 Claims. (Cl. 99—50)



1. A method of obtaining lupulin particles from hops comprising mixing said hops with water to form a slurry, agitating said slurry to a degree sufficient to free substantially unruptured lupulin particles from the residual hops and separating by screening lupulin particles from the remainder of the slurry.

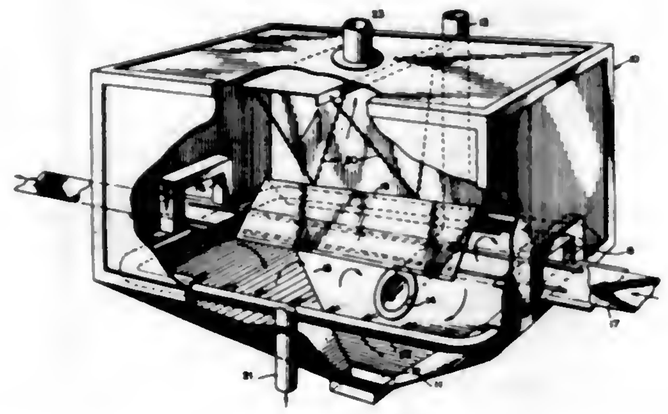
3,390,001
APPARATUS AND METHODS FOR TREATING CHEESE WITH ANTI-SPOILAGE AGENTS

Herbert H. Beck, Portage, Wis., assignor to Armour and Company, Chicago, Ill., a corporation of Delaware

Filed Apr. 28, 1964, Ser. No. 363,160

6 Claims. (Cl. 99—162)

In the application of anti-microbial food spoilage powder, such as crystalline sorbic acid, etc., the food material, such as cheese, is passed on an open mesh conveyor through a chamber which is maintained under slight negative pressure. Within the chamber, a suspended baffle divides the chamber into a lower turbulent zone in which the powder is suspended by air jets and into a relatively quiescent zone above the baffle. Air and powder are withdrawn from the quiescent zone to produce the negative pressure and to permit powder within the quiescent zone to settle downwardly into the chamber.



3,390,002
MAGNESITE REFRACTORIES

Ben Davies and George F. Carini, Pittsburgh, Pa., assignors to Dresser Industries, Inc., a corporation of Delaware

Filed June 7, 1966, Ser. No. 555,734

15 Claims. (Cl. 106—58)

Burned magnesite shapes consisting essentially of 85% MgO and including at least some each of the materials lime, silica, and phosphorous combined as calcium silicophosphates.

3,390,003
PAPER BASED MOLDING COMPOSITION AND PROCESS FOR MAKING SAME

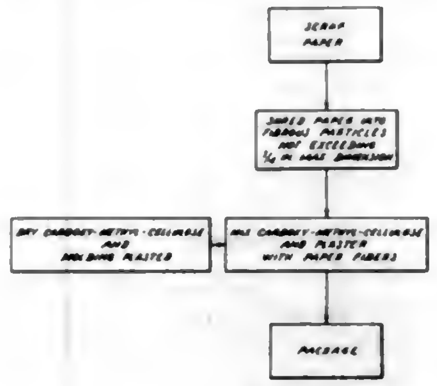
Wanda C. Cooper, Midland, Tex.

(3032 Wroxton, Houston, Tex. 77005)

Continuation of application Ser. No. 460,207, June 1, 1967. This application Oct. 2, 1967, Ser. No. 672,395

4 Claims. (Cl. 106—193)

This invention is directed to a dry paper-based molding composition having paper fibers of a size up to ¼ inch in maximum dimension as the major constituent thereof, and the sodium salt of carboxy-methyl-cellulose as the binding agent. Such composition may be extended with an inert material such as molding plaster for economy in applications where the accompanying loss of strength is acceptable. The material offers advantageous molding characteristics, strength, economy and durability.

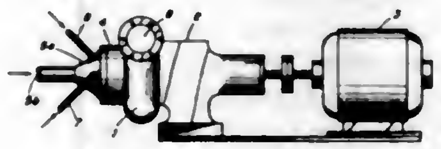

SCRAP PAPER
SHRED PAPER INTO FIBROUS PARTICLES NOT EXCEEDING ¼ IN. MAX DIMENSION
DRY CARBOXY-METHYL-CELLULOSE AND MOLDING PLASTER
MIX CARBOXY-METHYL-CELLULOSE AND PLASTER WITH PAPER FIBERS
PACKAGE

3,390,004
MANUFACTURE OF PASTE ROSIN SIZE IN CLOSED CIRCUIT REACTOR

John Carl Di Placido, Mobile, Ala., assignor to American Cyanamid Company, Stamford, Conn., a corporation of Maine

Filed Sept. 1, 1965, Ser. No. 484,263

2 Claims. (Cl. 106—238)



Paste rosin size is manufactured by introducing hot paste rosin size, hot aqueous alkali metal alkali solution, and molten rosin in appropriate proportions into the vortex of a centrifugal pump rotating sufficiently rapidly to emulsify the rosin.

3,390,005
PHOSPHATE GEL COMPOSITIONS

James P. Hamilton, Pasadena, Md., assignor to FMC Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed June 6, 1966, Ser. No. 555,286

3 Claims. (Cl. 106—287)

A thixotropic phosphate gel composition suitable for coating dust filter media in air filters, said composition comprises tris(tetrahydrofurfuryl) phosphate, a siliceous bodying agent and a cationic surfactant.

3,390,006
METHOD OF MAKING CARBON BLACK/SILICA PIGMENT

Robert B. Takewell and Theodore Kohn, Borger, Tex., assignors to J. M. Huber Corporation, Locust, N.J., a corporation of New Jersey

No Drawing. Filed Aug. 30, 1965, Ser. No. 483,844

8 Claims. (Cl. 106—288)

5. A method of producing a combination carbon black/silica pigment which includes the steps of producing a carbon black in a carbon black furnace by the incomplete combustion of a hydrocarbon oil, quenching the products of combustion including the carbon black with a silica pigment water slurry in an amount and of a silica concentration sufficient to provide a carbon black/silica pigment having increased modulus and improved abrasion and tear resistance and collecting the combined carbon black silica pigment.

3,390,007
PROCESS FOR TREATING COLD WET SURFACES AND RESULTING PRODUCTS

Richard B. Bonner and Robert M. Jorda, Houston, Tex., assignors to Shell Oil Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Aug. 21, 1964, Ser. No. 391,296

8 Claims. (Cl. 117—132)

A process for treating cold and wet surfaces is disclosed. This process comprises applying a corrosion-resistant coating to a cold and wet surface on which dew is forming, by spraying onto the surface a mixture of a polyepoxide, an excess of a material possessing more than one amino hydrogen atom, an accelerator for the amine-epoxy reaction, and a solvent.

3,390,008
METHOD FOR IMPARTING ANTIMICROBIC PROPERTIES TO POLYVINYL ALCOHOL ARTICLES

Solomon Aronovich Giller, Pernavas 10, Apt. 76, Riga, U.S.S.R., and Leonard Abramovich Wolf, Nevsky Prospect 16, Apt. 11, and Alexander Ivanovich Meos, Chaikovsky Str. 43, Apt. 2, both of Leningrad, U.S.S.R.

No Drawing. Filed Nov. 7, 1963, Ser. No. 322,042

12 Claims. (Cl. 117—138.5)

The modification of fibers or films of polyvinyl alcohol by treatment with a 5-nitrofuran compound to impart antimicrobic and antimycotic properties to the polyvinyl alcohol fibers or films.

3,390,009
PROCESS FOR RENDERING HYDROPHOBIC FIBERS CONTAINING TEXTILE ANTISTATIC AND THE TREATING COMPOSITION

Emery I. Valko, Belmont, Mass., assignor to Standard Chemical Products, Inc., Hoboken, N.J., a corporation of New Jersey

No Drawing. Filed Aug. 21, 1964, Ser. No. 391,283

2 Claims. (Cl. 117—139.5)

This invention relates to a process for rendering synthetic fibers antistatic, which comprises impregnating textile materials containing a substantial portion of hydrophobic fibers, to give a total dry weight add-on of between 0.4% and 8% by weight, based on the weight of said textile material, with an aqueous acidic solution of a mixture of 2-carbamoylethyl derivatives of polyoxyethylene amines and their N-methylol derivatives, with a polyethylene glycol and an acidic catalyst, removing the water from said impregnated textile material and heating said dried impregnated textile material to cure the impregnating mixture. The invention also relates to the impregnating compositions.

3,390,010
PROCESS FOR DYEING A FIBROUS MATERIAL WITH AN AQUEOUS PIGMENT DYE LIQUOR AND DYE LIQUOR

Gert Frerker, Frankenthal, Pfalz, and Peter Kutschera, Matthias Marx, and Wolfgang Schwindt, Ludwigshafen (Rhine), Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

No Drawing. Filed Dec. 7, 1964, Ser. No. 416,646

Claims priority, application Germany, Dec. 11, 1963, B 74,617; Mar. 10, 1964, B 75,833

4 Claims. (Cl. 117—161)

1. A process for dyeing fibrous material which comprises contacting said material with an aqueous dye liquor containing:
- (a) a pigment,
- (b) a cross-linkable resin binder and
- (c) from 0.05 to 5.0% by weight based on the weight of said liquor of a polymer selected from the group consisting of polyvinylcaprolactam and copolymers

of vinylcaprolactam which are soluble in said dye liquor,

and drying said material by heating the treated material to a temperature of from 50° to 200° C.

3. An aqueous dye liquor for dyeing fibrous material which comprises:

(a) pigment,
(b) a cross-linkable resin binder and
(c) 0.05 to 5.0% by weight based on the weight of said liquor of a polymer selected from the group consisting of (1) polyvinylcaprolactam and (2) copolymers of vinylcaprolactam and another monomer selected from the group consisting of vinylimidazole, vinylpyrrolidone, methacrylamide, acrylic acid, ethyl acrylate and vinyl acetate, the polymer and copolymer being soluble in the dye liquor.

3,390,011
METHOD OF TREATING PLANAR JUNCTIONS

George Axel Brown, Richardson, Clyde Rhea Fuller, Plano, and Harold Gary Carlson, Richardson, Tex., assignors to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware

Filed Mar. 23, 1965, Ser. No. 442,038
5 Claims. (Cl. 117—201)

Disclosed is a method for treating semiconductor devices to increase the breakdown voltage of the P—N junctions contained therein by treating said devices in a flowing atmosphere of nitric acid vapor.

3,390,012
METHOD OF MAKING DIELECTRIC BODIES HAVING CONDUCTING PORTIONS

Rolf R. Haberecht, Richardson, Tex., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware

Continuation-in-part of application Ser. No. 367,462, May 14, 1964. This application Sept. 18, 1964, Ser. No. 398,480
21 Claims. (Cl. 117—212)

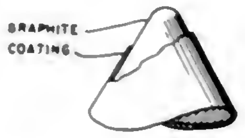
Disclosed are dielectric bodies with selectively formed conductive or metallic portions, and methods of making such bodies. These selectively formed conductive portions may be made by reducing a zone of a unitary dielectric body so that the zone is made comparatively conductive. The reduction of the zone of the dielectric body may be accomplished by the use of many suitable heat sources including, for example, an electron beam which concentrates localized energy in predetermined regions of the dielectric body. The portions of the bodies so reduced have changed electrical and/or magnetic properties. The disclosure further relates to composite bodies, including dielectric bodies, with semiconductor material and to the method of making such composites. Such composites include solid state integrated composite circuits or networks provided by circuitry in the body of dielectric material and in the semiconductor material. Other applications and variations are too numerous to specifically list and they are presented on a variety of scales, from miniaturized circuits and components on up to large size applications.

3,390,013
HIGH-TEMPERATURE RESISTANT STRUCTURAL BODY

Ottmar Rubisch, Meitingen, near Augsburg, Germany, assignor to Siemens-Planiawerke Aktiengesellschaft für Kohlefabrikate, Meitingen, near Augsburg, Germany, a corporation of Germany

Filed Mar. 4, 1965, Ser. No. 437,051
Claims priority, application Germany, Mar. 6, 1964, S 89,888
13 Claims. (Cl. 117—219)

Refractory structures are protected from oxidation by a coating comprising an intimate mixture of an aluminum silicate based glass and an oxygen getter comprising a silicide of a metal from Groups IV*b* to VI*b* of the Periodic Table.



3,390,014
SECONDARY ELECTRIC BATTERIES HAVING PLURALITY OF THIN FLEXIBLE INTERMEDIATE BIPOLAR PLATES

Paul Eisler, 57 Exeter Road, London NW. 2, England

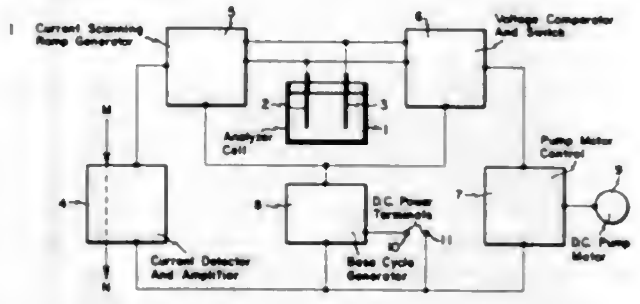
Continuation-in-part of application Ser. No. 28,414, May 11, 1960. This application May 19, 1964, Ser. No. 368,544
The portion of the term of the patent subsequent to July 21, 1981, has been disclaimed
21 Claims. (Cl. 136—6)

1. A secondary electric battery having a plurality of individual cells to be activated by an electrolyte and connected electrically in series, including a plurality of closely spaced generally parallel aligned thin flexible intermediate bipolar plates, each intermediate bipolar plate comprising a barrier layer and two outer layers, the barrier layer being as a whole electrically conductive through its thickness over substantially all of its area and impervious to the electrolyte and the two outer layers being of active material on opposite sides of the barrier layer and in good contact therewith over substantially its whole area, the plates being arranged so that active layers of opposite polarity alternate throughout the series, a barrier layer with a single layer of active material of appropriate polarity closing each of the two end cells of the series, flexible electrolyte resistant electrical insulating material completing electrolyte chambers between the active layers of successive bipolar plates and of the end cells, pervious electrically insulating means located between the active layers in every cell, pervious supporting means disposed over substantially the whole area of each active layer, and means exerting endwise pressure on the battery thereby causing said supporting means to hold the active layers each in pressure contact with its respective barrier layer over substantially the whole area of the barrier layer.

3,390,015
METHOD AND APPARATUS FOR AUTOMATICALLY CONTROLLING FUEL CELL

James A. Wilson, Stanhope, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware

Filed May 26, 1964, Ser. No. 370,292
4 Claims. (Cl. 136—86)

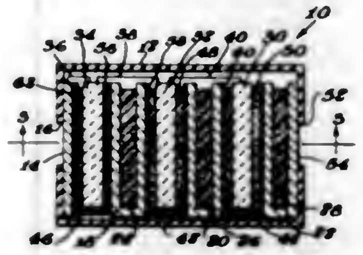


The fuel feed to a fuel cell utilizing a liquid fuel may be controlled by a system which measures the current in the fuel cell, such current being a variable of the amount of liquid feed, and increasing or decreasing this feed such that the cell operates at its optimum efficiency. Specifically, the current in the fuel cell is flowed through a second driven cell and measured. The fuel cell current oscillations are evaluated by the driven cell and fuel is admitted to the fuel cell in an inverse proportion to the current across the driven cell, thus keep the fuel cell operating within optimum limits.

3,390,016
PRIMARY CELL WITH PLURAL U-SHAPED MAGNESIUM ANODE ASSEMBLIES

Charles E. Nelson, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Filed July 30, 1965, Ser. No. 476,020
7 Claims. (Cl. 136—100)

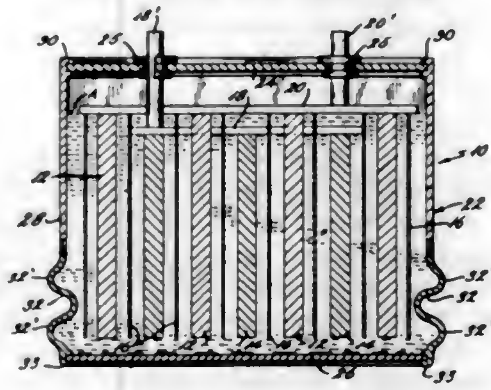


This invention relates to a flat pack primary cell comprising, within a suitable generally enclosed casing having opposed ends, a plurality of anode assemblies of magnesium alloy, each of said anode assemblies being sheetlike in form and folded to form a two faced structure having a generally U-shaped transverse cross-sectional configuration, said anode assemblies being spaced apart in side-by-side relationship with a sheet of compressible material disposed between the inner faces thereof. An electrically insulating ionically conductive element is disposed between and covering adjacent outer faces of adjacent anode assemblies. At least one cathode electrode is disposed between and spaced from the adjacent outer faces of adjacent anode assemblies with cathode mix, being disposed between said adjacent outer faces of adjacent anode assemblies, the mix surrounding said cathode electrodes and separated from said outer faces by said ionically conductive elements.

3,390,017
SEALED ELECTROCHEMICAL CELL PROVIDED WITH A FLEXIBLE CASING

Thomas J. Hennigan, West Hyattsville, Md., assignor to the United States of America as represented by the Administrator of the National Aeronautics and Space Administration

Filed Oct. 22, 1965, Ser. No. 502,756
3 Claims. (Cl. 136—166)

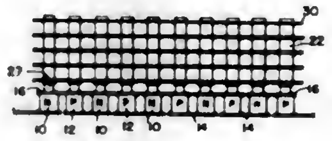


An improved casing structure for an electrochemical cell for enabling the lowering of the electrolyte level in the cell during the recharging cycle to better insure the proper recombination of gases at the electrodes. Essentially, the casing has as an integral part thereof a bellows section capable of expanding during the recharging cycle as the pressure increases due to a release of gases from the electrodes, and contracting upon a subsequent decrease of pressure due to the recombination of the gases, thereby effecting a lowering and a raising of the electrolyte level within the cell.

3,390,018
THERMOELECTRIC HEAT PUMP AND HEAT FLOW PEGS

Edward P. Habdas, Dearborn, Mich., assignor to Calumet & Hecla, Inc., Allen Park, Mich., a corporation of Michigan

Filed Apr. 15, 1963, Ser. No. 272,888
22 Claims. (Cl. 136—204)



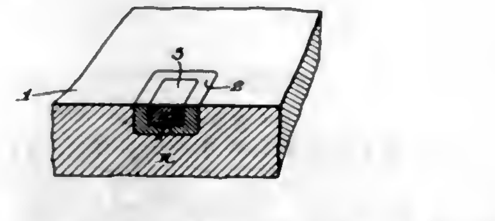
5. A thermoelectric heat pump unit comprising a flat module having a multiplicity of semi-conductor pellets, means electrically connecting said pellets in series, said pellets being arranged with thermally similar ends at the same side of said module, heat flow pegs comprising metal rods and metal sheaths laterally surrounding said rods and electrically insulated from said rods, thin electrically insulating, heat conducting films in full area contact with and intermediate said rods and sheaths, said rods being bonded in both electrical and heat conducting relation to the semi-conductor pellets, and heat transfer fins connected to said metal sheaths.

13. A pair of heat flow pegs for use with a thermoelectric heat pump comprising a plurality of pellets of semi-conducting material, each of said pegs comprising an elongated metal element, a metal sheath laterally surrounding said element and electrically insulated therefrom, the insulation being provided by a continuous layer of an electrically insulating, heat conducting material in good heat conducting relation to both of said element and said sheath, one end of each of said elements being exposed by the sheath associated therewith to provide for bonding each of said elements to at least one of the pellets without contact between said sheath and the pellet, and metallic heat exchange means connecting said pegs.

3,390,019
METHOD OF MAKING A SEMICONDUCTOR BY IONIC BOMBARDMENT

Kenneth E. Manchester, Williamstown, Mass., assignor to Sprague Electric Company, North Adams, Mass., a corporation of Massachusetts

Filed Dec. 24, 1964, Ser. No. 421,061
4 Claims. (Cl. 148—1.5)



A planar semiconductive structure is produced by ion beam implantation of impurities in such a manner that no implantation extends to an edge of the body and each subsequent implantation is within the volume defined by a previous implantation.

3,390,020
SEMICONDUCTOR MATERIAL AND METHOD OF MAKING SAME

Joseph Mandelkorn, 3654 Grosvenor, Cleveland Heights, Ohio 44118

No Drawing. Continuation of application Ser. No. 352,692, Mar. 17, 1964. This application Aug. 11, 1967, Ser. No. 660,571

2 Claims. (Cl. 148—1.5)

Improving the properties and increasing the resistance to radiation damage of silicon semiconductor material by the selective addition of certain elements or compounds of the elements of Group III of the Periodic Table. The presence of aluminum atoms results in the formation of less recombination centers while the presence of indium atoms results in the formation of less trapping centers than the presence of atoms of other electrically active impurity elements in equal concentration.

3,390,021
METAL TREATMENT

Harold J. Michael, Columbus, Ohio, assignor to North American Rockwell Corporation, a corporation of Delaware

No Drawing. Filed Oct. 15, 1965, Ser. No. 496,632

8 Claims. (Cl. 148—20)

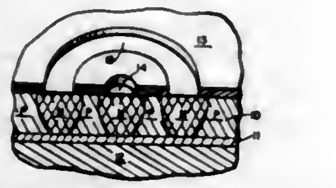
A method of heat treating metal workpieces in a molten bath of borate glass consisting on a 100 parts weight basis of from 71.8 to 85.5 parts by weight of boric oxide, from 5.5 to 10.7 parts by weight of alkali metal oxide from the group consisting of the oxides of sodium, potassium and lithium, and from 9.0 to 17.5 parts by weight of viscosity and surface tension control oxide from the group consisting of the oxides of aluminum, titanium and zirconium.

3,390,022
SEMICONDUCTOR DEVICE AND PROCESS FOR PRODUCING SAME

Charles H. Fa, Costa Mesa, Calif., assignor to North American Rockwell Corporation, a corporation of Delaware

Filed June 30, 1965, Ser. No. 468,202

2 Claims. (Cl. 148—33)



1. The composite comprising
a crystalline body of a given conductivity type having two major sides,
a layer of dielectric material on a first major side,
a crystalline substrate on the dielectric material, and
selected zones diffused from the second major side of said crystalline body down to said layer of dielectric material with impurities selected to produce in said crystalline body zones of a conductivity type opposite said given conductivity type, thereby providing p-n junctions extending from the surface of said dielectric material to the surface of said crystalline body.

3,390,023
METHOD OF HEAT TREATING AGE-HARDENABLE ALLOYS

Chester S. Shira, Canoga Park, Calif., assignor to North American Rockwell Corporation, a corporation of Delaware

No Drawing. Filed Feb. 4, 1965, Ser. No. 430,496

6 Claims. (Cl. 148—127)

A method of heat treating age-hardenable nickel-chromium base alloys which comprises controlling the temperature and rate of cooling of the alloys after being solution heated to produce annealed alloy bodies having a yield strength of at least 90,000 p.s.i.

3,390,024
FLUX FOR FUSING TIN TO GALLIUM ARSENIDE AND METHOD OF MAKING AND USING SAME

Alfred J. Stein, Jr., Dallas, Tex., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware

No Drawing. Filed Mar. 11, 1965, Ser. No. 439,103

3 Claims. (Cl, 148—182)

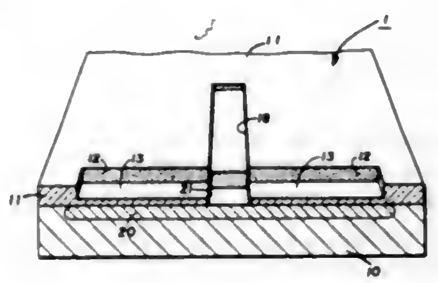
Disclosed is a flux of stannous chloride for use when fusing tin with gallium arsenide which causes the tin to uniformly wet the gallium arsenide surface. The stannous chloride flux may be applied to tin spheres for forming alloy functions by immersing the spheres in a solution of hydrochloric acid. Anhydrous stannous chloride may also be evaporated onto the exposed gallium arsenide surface prior to the deposition of tin thereon.

3,390,025
METHOD OF FORMING SMALL GEOMETRY DIFFUSED JUNCTION SEMICONDUCTOR DEVICES BY DIFFUSION

Frederick J. Strieter, Richardson, Tex., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware

Continuation of application Ser. No. 422,695, Dec. 31, 1964. This application Aug. 14, 1967, Ser. No. 660,528

7 Claims. (Cl. 148—187)



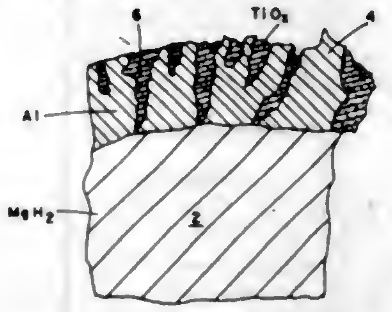
1. A method of making a semiconductor device comprising the steps of:
(a) forming an insulating layer adjacent one surface of a body of semiconducting material,
(b) forming a first narrow elongated slot in said insulating layer,
(c) forming a first diffused region of semiconducting material beneath said first elongated slot and within said body of semiconducting material having conduction carriers of one type predominating,
(d) forming another insulating layer upon the upper surface of said first diffused region and within said first elongated slot,
(e) forming a second narrow elongated slot in said first and said second mentioned insulating layers, the length of said second elongated slot transversely intersecting the length of said first elongated slot thereby defining a hole in said second-mentioned insulating layer at the intersection of said first elongated slot and said second elongated slot,
(f) forming another diffused region of semiconducting material beneath said hole having conduction carriers of opposite type predominating thereby forming a junction within said first diffused region,
(g) forming individual ohmic contacts connected to each of said diffused regions.

3,390,026
PROCESS OF FORMING A PROTECTIVE COATING ON PARTICULATE MATERIAL, AND COATED ARTICLE OBTAINED THEREBY

John Z. Cerych, Methuen, and Allen L. Klibanoff, Boston, Mass., assignors, by mesne assignments, to National Research Corporation, Cambridge, Mass., a corporation of Massachusetts

Filed Nov. 25, 1960, Ser. No. 71,579

10 Claims. (Cl. 149—5)



1. The process of forming a protective coating on a particular material comprising introducing said material into a vacuum chamber, vaporizing a metal and condensing the metal vapors to form a coating on said material, and treating said vacuum-deposited metal coating with a reactive organic metal compound of a sealing agent in liquid form, said treating comprising impregnating the pores of said metal coating with the liquid reactive organic metal compound, and reacting the compound to form a solid within the ports of the coating thereby plugging said pores.

7. An encapsulated article comprising a reactive substrate having a protective coating thereon said protective coating comprising a film having a thickness of a few microns and selected from the group consisting of metals and metalloids which can be vaporized and condensed to form a film and a sealing agent impregnated in the pores of said metal film, said sealing agent being a metal oxide, and being a reaction product of a metal organic compound and water vapor.

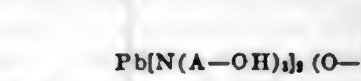
3,390,027
POLYURETHANE PROPELLANT COMPOSITION PREPARED WITH ORGANIC LEAD COMPOUND

Ralph C. Olberg, Sacramento, and Manfred Stammler, Carmichael, Calif., assignors to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio

No Drawing. Original application Aug. 13, 1963, Ser. No. 303,718. Divided and this application June 9, 1965, Ser. No. 482,645

8 Claims. (Cl. 149—19)

A method of preparing a polyurethane polymer utilizing as the catalyst a lead compound having the general formula:



$$Pb[N(A-OH)_2]_2\,(O-\overset{\overset{\displaystyle O}{\|}}{C}-R)_2$$

wherein R is selected from the group consisting of hydrogen and alkyl; and A is an alkylene radical.

3,390,028
AQUEOUS SLURRY BLASTING EXPLOSIVE CONTAINING SILICON AND AN AERATION AGENT

Harry R. Fee, Hopatcong, N.J., and Robert W. Lawrence and Orin W. Marks, Wilmington, Del., assignors to Hercules Incorporated, Wilmington, Del., a corporation of Delaware

Filed Jan. 4, 1967, Ser. No. 607,260

10 Claims. (Cl. 149—39)

An aqueous slurry blasting composition having an explosive sensitizer and containing silicon and an aeration agent. The aeration agent lowers the maximum specific gravity of the composition at the time of blasting.

3,390,029
INORGANIC OXIDIZER SALT EXPLOSIVE COMPOSITION CONTAINING ORGANIC FUEL SOLVENT FOR SAID SALT

Ralph F. Preckel, La Vale, Md., assignor to Hercules Incorporated, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Dec. 13, 1966, Ser. No. 601,825

10 Claims. (Cl. 149—41)

An explosive composition in which inorganic oxidizer salt is suspended in fuel-solvent liquid solution of the salt. The composition may be fluent or semi-fluent containing thickening agent or non-fluent containing crosslinking agent.

3,390,030
AQUEOUS SLURRY BLASTING COMPOSITION OF NON-EXPLOSIVE INGREDIENTS CONTAINING SILICON AND AN AERATION AGENT

Harry R. Fee, Hopatcong, N.J., and Robert W. Lawrence and Orin W. Marks, Wilmington, Del., assignors to Hercules Incorporated, Wilmington, Del., a corporation of Delaware

Filed Jan. 4, 1967, Ser. No. 607,176

14 Claims. (Cl. 149—41)

An aqueous slurry blasting composition of ingredients which per se are non-explosive containing silicon and an aeration agent. The aeration agent lowers the maximum specific gravity of the composition at the time of blasting.

3,390,031
GELLED AQUEOUS SLURRY EXPLOSIVE COMPOSITION CONTAINING AN INORGANIC NITRITE

Alfred A. Albert, Wilmington, Del., assignor to Hercules Incorporated, Wilmington, Del., a corporation of Delaware

Filed Jan. 4, 1967, Ser. No. 607,259

6 Claims. (Cl. 149—45)

An aeration agent having an in situ gas generating material for adjusting and improving the control of the specific gravity of a gelled aqueous slurry explosive composition at the time of blasting. Sodium, potassium, calcium and barium nitrites are such gas generating materials.

3,390,032
GELLED AQUEOUS SLURRY EXPLOSIVE COMPOSITION CONTAINING AS A GAS GENERATING AGENT A CARBONATE OR BICARBONATE WITH A NITRITE

Alfred A. Albert and Robert W. Lawrence, Wilmington, Del., assignors to Hercules Incorporated, Wilmington, Del., a corporation of Delaware

Filed Jan. 4, 1967, Ser. No. 607,261

5 Claims. (Cl. 149—45)

An explosive composition containing in combination fast and slow in situ gas generating materials for adjusting and improving the control of the specific gravity of a gelled aqueous slurry explosive composition. Sodium bicarbonate and sodium nitrite respectively, are such gas generating materials.

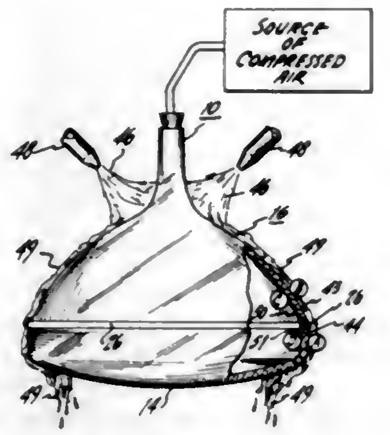
3,390,033
METHOD OF SEPARATING FRIT SEALED PARTS OF AN ELECTRON TUBE

Martin K. Brown, Lancaster, Pa., assignor to Radio Corporation of America, a corporation of Delaware

Filed Aug. 13, 1964, Ser. No. 389,365

7 Claims. (Cl. 156—24)

The frit-sealed panel and funnel parts of a cathode ray tube are thermally processed to produce a bending stress in the frit seal which causes the seal to fracture. The thermal processing is performed cyclically by alternate heating and then cooling both parts (e.g. by alternate applications of hot and then cold water to the exterior surfaces only of both parts) to produce successive temperature differentials of opposite sense between the exterior and interior surfaces.

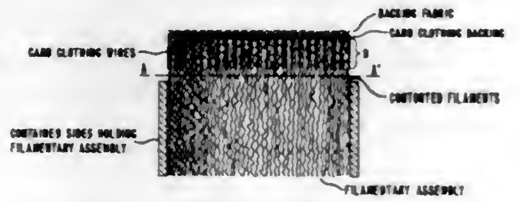


3,390,034
METHOD FOR ATTACHING SLICED ALIGNED FILAMENTS TO A BACKING

Donald Robert Hull, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Continuation-in-part of abandoned application Ser. No. 239,675, Nov. 23, 1962. This application Apr. 30, 1965, Ser. No. 453,564

5 Claims. (Cl. 156—72)



3. Method for attaching aligned filaments to a backing comprising the steps of:

(a) providing a filamentary body in the form of a porous material having a plurality of contorted synthetic organic polymeric filamentary structures, said structures overlapping and being aligned generally in the same direction, said filamentary structures being interconnected by a small amount of an organic binder composition at a plurality of contact points uniformly throughout the three dimensions of said material and said material having a fiber density up to about 2.95 lbs./ft.^{3}, said body having at least one substantially planar surface defined by filament ends,

(b) placing card wire clothing in contact with said planar surface of said body and causing penetration of the card wires throughout a predetermined depth in said body in generally parallel relationship with said filaments to reinforce the alignment of said filaments,

(c) slicing said body in a plane substantially parallel to said planar surface and beyond said predetermined depth, and

(d) adhering the free cut ends of the severed, reinforced portion of said body to a backing and removing said card wire clothing therefrom.

3,390,035
METHOD FOR MANUFACTURING TUFTED CARPETS

Seymour Sands, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 241,548, Dec. 3, 1962. This application May 12, 1966, Ser. No. 549,461

3 Claims. (Cl. 156—72)

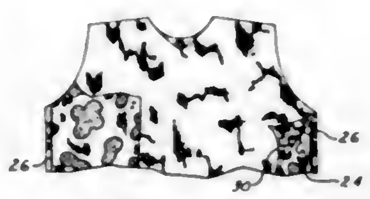
Tufted carpets are backsized with a non-aqueous, solvent free polymeric material containing a copolymer of ethylene and vinyl acetate by applying the polymeric material to the back side of the carpet as a hot melt.

3,390,036
METHOD OF SEWING USING A SELF-BASTING THREAD

John T. Wright, Longmeadow, William R. Wright, Warren, and Peter P. Du Biel, Springfield, Mass., assignors to Wm. E. Wright & Sons Co., West Warren, Mass., a corporation of Delaware

Filed June 4, 1964, Ser. No. 372,584

4 Claims. (Cl. 156—93)



A method for making textile articles by releasably adhering two fabrics together with a pressure sensitive adhesive filament disposed between the fabrics and generally parallel with the edges thereof to be sewed together and thereafter permanently sewing said fabrics together.

3,390,037
PROCESS FOR PREPARING PREIMPREGNATED STRANDS OF FIBERS AND USE OF RESULTING PRODUCTS IN MAKING REINFORCED COMPOSITES

Samuel H. Christie, Warren Township, N.J., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Dec. 3, 1963, Ser. No. 327,813

11 Claims. (Cl. 156—148)

1. A process for preparing reinforced composites which comprises applying to one set of strands of fibers a coating which contains a thermosetting resin and then applying to another set of strands of fibers a coating which contains a curing agent for the thermosetting resin, drying the strands and then simultaneously winding the separately treated strands onto a mandrel to form a reinforced composite product, and heating the composite product to cure the thermosetting resin.

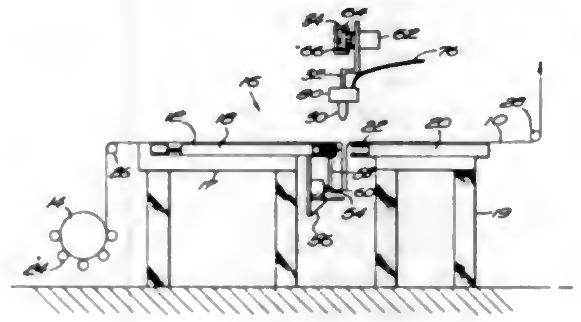
3,390,038
METHOD AND APPARATUS FOR TRIMMING AND JOINING THE ENDS OF TWO WEB LENGTHS

Wilfred N. Hadley, Springfield, Vt., assignor to Hadley Company, Inc., Springfield, Vt., a corporation of Vermont

Filed May 12, 1964, Ser. No. 366,828

6 Claims. (Cl. 156—159)

Lengths of flexible webs, such as produced by the textile industry, are joined in end-to-end relation to provide a continuous web permitting processing of one web length after another without interruption. The method includes trimming and butting in end-to-end co-planar relation the opposing ends of two webs and then spraying a band of quick-setting liquid adhesive material containing a quantity of fiber glass strands randomly dispersed throughout. The band of tow and binder forms a thin, flexible stratum along the opposing marginal edges, firmly and flexibly joining the webs. The apparatus for carrying out the process involves a nipping mechanism which holds and trims web ends and a carriage adapted to transport a spray unit transversely across the web for spraying the tow and binder along the web edges.

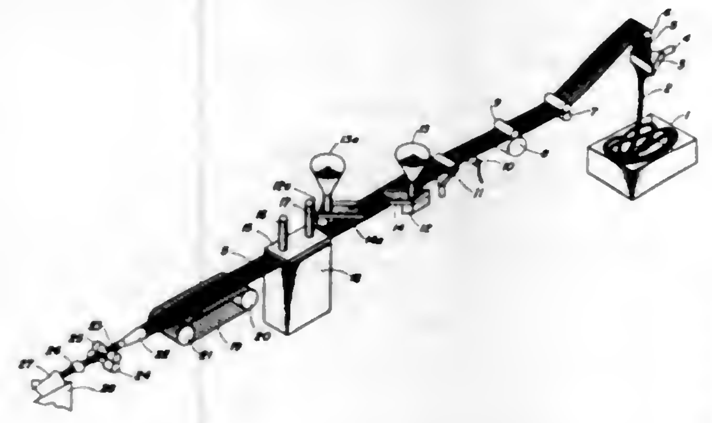


3,390,039
METHOD AND APPARATUS FOR MAKING ADDITIVE FILTERS

Roscoe S. Caughman and Theodore C. Fritz, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

Continuation-in-part of application Ser. No. 402,772, Oct. 9, 1964. This application Sept. 22, 1965, Ser. No. 489,328

14 Claims. (Cl. 156—166)



A process and apparatus for forming an additive containing tobacco smoke filter element by depositing predetermined amounts of a particulate additive and bonding agent onto a filter tow after which the bonding agent is softened by heating to secure the particulate additive to the tow.

ERRATUM

For Class 156—245 see:
Patent No. 3,389,749

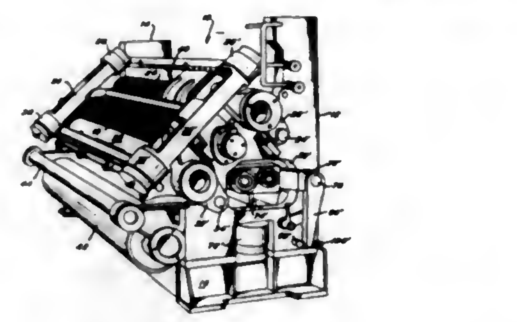
3,390,040
SINGLE FACER MACHINE

Henry W. Moser, Haddonfield, and Hans Meister, Cherry Hill, N.J., assignors, by mesne assignments, to The Langston Company, Camden, N.J., a corporation of New Jersey

Filed Aug. 17, 1965, Ser. No. 480,415

12 Claims. (Cl. 156—473)

A single facer machine having a pivotally supported glue mechanism and having easily accessible limit stops for limiting pivoting of the glue mechanism. The glue mechanism has free floating self-adjusting clean-out fingers which are partially received within grooves in the glue applicator roll.

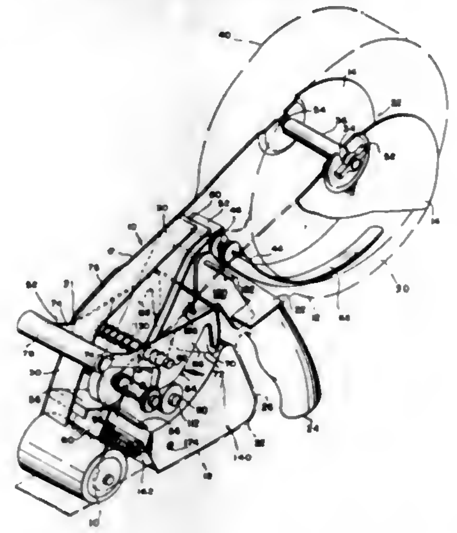


3,390,041
TAPE APPLYING DEVICE

James T. Auld, 10360 125A St., North Surrey, Vancouver, British Columbia, Canada, and Richard H. Sawin, Rte. 3, Box 571-B, Poulsbo, Wash. 98370

Filed Apr. 27, 1964, Ser. No. 362,841

4 Claims. (Cl. 156—526)



A manual tape applying mechanism for gummed paper tape. The device has means for supporting a roll of tape from which the tape passes to a guide channel in the body of the machine. At the lower end of the channel are feed rollers which when rotated advance the end of the tape past cutting means and thence past wetting means and then under a pressure applicator roller. A caulking and clutch arrangement actuates the feed rollers and removes the cutting means from the path of the tape as it passes from the feed rollers to the wetter. The cutting means is released from a spring biased position by a finger trigger and passes through the tape to sever the moistened tape from the dry tape above.

3,390,042
DEVICE FOR THE CONTINUOUS MANUFACTURE OF BAGS FROM A SYNTHETIC MATERIAL

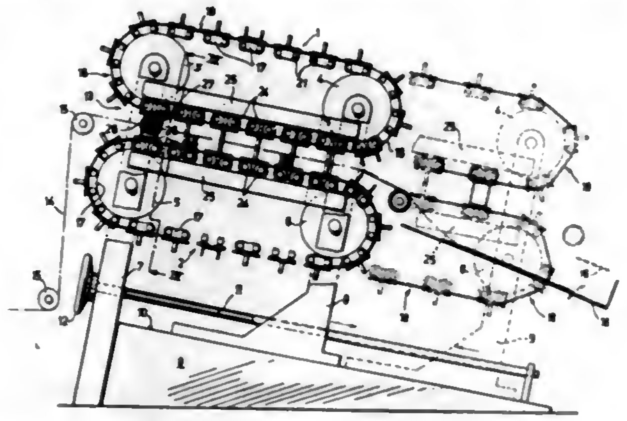
Leonard van der Meulen, Oranje Nassaulaan 30, Amsterdam, Netherlands

Filed Mar. 17, 1965, Ser. No. 440,379

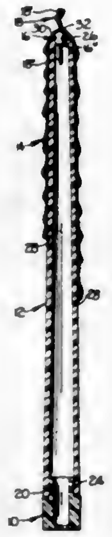
Claims priority, application Netherlands, Mar. 20, 1964, 6403047

6 Claims. (Cl. 156—583)

Apparatus for continuously manufacturing heat sealed bags in which the conveyor chains carrying the heat sealing bars may be lengthened to move the bars further apart and thereby increase the size of the bags which are manufactured. The chains comprise nonextensible links and extensible links of crossed members pivoted at their centers and at one side to sleeves slidably mounted on the nonextensible links so that when the chain is lengthened the distance between the nonextensible links will be uniform to assure that the bags produced will be of the same size.



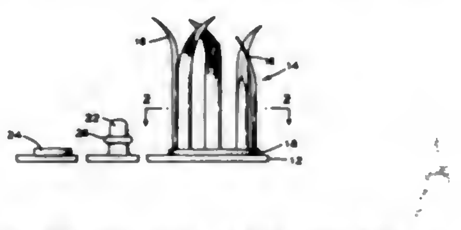
3,390,043
DECORATIVE NON-BURNING CANDLE DEVICE
Daniel B. Humes, 3236 Paddington Lane,
Winston-Salem, N.C. 27106
Filed Nov. 19, 1964, Ser. No. 412,446
2 Claims. (Cl. 161—19)



A decorative non-burning candle device characterized by being convertible from a simulated unburned, new candle form to a simulated partially burned candle, as desired. The candle comprises an elongate body adapted to be mounted in a generally upright position and having an exterior appearance closely simulating an authentic unburned candle, an elongate cap having the external appearance closely simulating an authentic partially burned candle and adapted to be removably mounted on the upper end of the elongate body for simulating an authentic partially burned candle and adapted to be removed from the body when a simulated unburned candle is desired, and a convertible wick member in which one end thereof simulates a burned wick and the other end thereof simulates an unburned wick and adapted to be removably mounted in the upper end portion of the elongate body for providing the desired simulated burned or unburned candle appearance.

3,390,044
ARTIFICIAL GRASS MAT
Irving Malakoff, Cliffside Park, N.J., assignor to
Obi Inc., Ridgefield, N.J.
Filed June 2, 1967, Ser. No. 643,152
7 Claims. (Cl. 161—19)

An artficial grass mat that includes a plastic sheet having a plurality of blade units molded integrally thereto. Each unit has a plurality of blade elements upstanding from the plastic sheet, with the base portion of the blade elements in each unit being adjacent each other and in circular arrangement. A plurality of collar members are molded integrally with the plastic sheet, with each collar member encircling an associated blade unit and in contact with the base portion of the blade elements thereof. There is also provided co-acting means on adjacent mats for connecting said mats together.



ERRATUM

For Class 161—67 see:
Patent No. 3,390,403

3,390,045
METHOD OF MAKING PAPER FROM MICA FLAKES WHICH HAVE BEEN SUBJECTED TO HOT AQUA REGIA
John L. Miller, Jr., and Kenneth H. Ivey, Norris, Tenn., assignors to the United States of America as represented by the Secretary of the Interior
No Drawing. Filed May 27, 1965, Ser. No. 459,477
13 Claims. (Cl. 162—3)

1. A process for preparing mica paper comprising forming mica flakes having a thickness to area ratio of less than 1 to 1000, subjecting said flakes to hot concentrated aqua regia in amount from about 10 ml. to 20 ml. per gram of the mica, removing the aqua regia from the flakes, forming a water suspension of the flakes, screening the suspension and drying to form mica paper.

3,390,046
MODIFIED ROSIN OILS AND THEIR USE IN PAPER
William D. McDavid, Pensacola, Fla., assignor to Tenneco Chemicals, Inc., a corporation of Delaware
No Drawing. Filed Apr. 29, 1965, Ser. No. 451,965
8 Claims. (Cl. 162—180)

Rosin oil having an acid value of 70 to 130 is reacted with an aliphatic α,β-unsaturated acid having 1 to 3 carboxylic groups, such as maleic anhydride or fumaric acid, to form a modified rosin oil that has an acid value of 150 to 290. Alkali metal soaps of the modified rosin oils can be used alone or in combination with rosin soaps in the sizing of paper.

3,390,047
COMPOSITION AND METHODS FOR CONTROLLING INSECT, MITE AND NEMATODE PESTS WITH O-ETHYL-S-[N'-METHOXY-N'-METHYL-ACETAMIDE]-N-ISOPROPYLTHIOPHOSPHORAMIDE
Sidney B. Richter, Chicago, Ill., assignor to Velsicol Chemical Corporation, Chicago, Ill., a corporation of Delaware
No Drawing. Original application Aug. 4, 1964, Ser. No. 387,492, now Patent No. 3,342,906, dated Sept. 19, 1967. Divided and this application July 21, 1967, Ser. No. 654,984
4 Claims. (Cl. 167—22)

An insecticidal, miticidal and nematocidal composition comprising an inert carrier and a toxic amount of the compound O-ethyl-S-(N'-methoxy-N'-methlacetamido)-N-isopropylthiophosphoramide. A method for controlling insects, mites and nematodes by applying to said pests, the foregoing composition.

3,390,048
STABILIZED INSECTICIDAL PHOSPHORODITHIOATES IN POWDERS OF SUBSTANTIALLY IRON-FREE KIESELGUHR WITH LOW VOLATILE SOLVENT OILS
Neville G. Cutler, Glamorgan, Wales, assignor to Mechema Limited, Glamorgan, Wales
No Drawing. Filed Oct. 11, 1965, Ser. No. 494,896
Claims priority, application Great Britain, Oct. 12, 1964, 41,619/64; Apr. 6, 1965, 14,629/65
11 Claims. (Cl. 167—42)

Insecticidal powders of the wettable or dispersible type containing a phosphorodithioate as the active biocide having critically improved stability on storage are formed by combining the active biocide with a solvent oil of low volatility and substantially iron-free kieselguhr.

3,390,049
PHARMACEUTICAL TABLETS COATED WITH WAX-FREE AMMONIA SOLUBILIZED WATER SOLUBLE SHELLAC
Alvin B. Rednick, Cherry Hill, N.J., and Michael Secora, Philadelphia, Pa., assignors to Smith Kline & French Laboratories, Philadelphia, Pa., a corporation of Pennsylvania
No Drawing. Filed Dec. 23, 1964, Ser. No. 420,771
3 Claims. (Cl. 167—82)

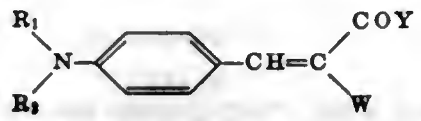
Thin film coated pharmaceutical forms which employ a water soluble shellac as the coating material. Wax-free shellac is rendered water soluble by dissolving it in ammonia and water resulting in a water permeable coating.

3,390,050
STABLE PHARMACEUTICAL BEADS CONTAINING MEDICAMENT INCORPORATED IN SYNTHETIC COPOLYMER BY BEAD POLYMERIZATION
Peter Speiser, Forch, Switzerland, assignor to Ciba Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed June 8, 1965, Ser. No. 462,450
Claims priority, application Switzerland, June 19, 1964, 8,062/64
8 Claims. (Cl. 167—83)

1. Pharmaceutical oral, controlled-size, bead dosage-form preparations, 0.1 to 3.0 mm. in diameter, which contain a predetermined dosage of active medicament, stabilized by being incorporated by bead polymerization in physiologically acceptable synthetic copolymers which are alkali-soluble or at least swollen by the gastro-intestinal juices, said copoymers being selected from the group consisting of copolymers of methacrylic acid and methylmethacrylate, acrylic acid and acrylic acid methyl ester, vinyl acetate and crotonic acid, styrene and acrylic acid, and/or maleic anhydride, vinyl methyl ether and maleic acid anhydride and/or fumaric acid and/or itaconic acid, wherein control of the size of the beads controls the release of the active medicament in respect of both amount and time and wherein the ratio of active medicament to synthetic copolymer is correlated to the dosage of active medicament, the desired rate of release and regulation of the swelling capacity and alkali solubility of the synthetic copolymer by changing the proportion of free acid present in the copolymer.

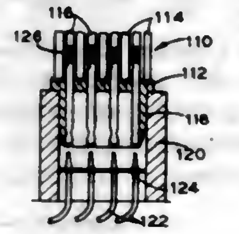
3,390,051
DIALKYLAMINOCINNAMATES AND DIALKYLBENZALMALONATES IN ULTRAVIOLET ABSORBING COMPOSITIONS AND METHODS
James Albert Baker, Farnham Royal, John William James, Langley, and Harry Polkinhorne, Wokingham, England, assignors to Aspro-Nicholas Limited, a British company
Filed Mar. 31, 1964, Ser. No. 356,159
Claims priority, application Great Britain, Apr. 3, 1963, 13,124/63
14 Claims. (Cl. 167—90)

4. Method of protecting the skin against erythema-producing or other undesired ultraviolet radiation, which comprises applying to the skin a film or coating of a composition comprising a cosmetic carrier having disseminated therethrough an effective proportion of at least one dermatologically acceptable ultraviolet absorbing compound of the formula:



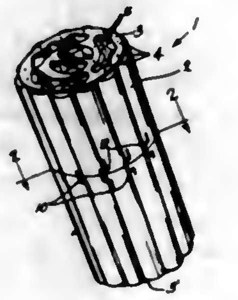
wherein W represents hydrogen or COZ; Y and Z, which may be the same or different, each represent OR_3 where R_3 is hydrogen, alkyl of from 1 to 4 carbons or represent OB where B is a dermatologically acceptable group selected from alkali metal, ammonium and substituted ammonium; and R_1 and R_2, which may be the same or different, each represent alkyl of from 1 to 4 carbons.

3,390,052
CONTROL ARRANGEMENT FOR A NUCLEAR REACTOR
John D. McDaniels, Jr., Lynchburg, Va., assignor to The Babcock & Wilcox Company, New York, N.Y., a corporation of New Jersey
Continuation-in-part of application Ser. No. 439,227, Mar. 12, 1965. This application Feb. 16, 1967, Ser. No. 616,699
7 Claims. (Cl. 176—35)



A control member actuating arrangement for a nuclear reactor having a core and having control members movably captured in tubes, including nozzles spaced apart from the lower end openings of the tubes for ejecting control fluid into the tubes against the control members to drive the members substantially axially of the tubes and out of the reactor core.

3,390,053
FLEXIBLE SPACER FOR A NUCLEAR REACTOR FUEL ASSEMBLY
Walter R. Tarasuk, Pleman E. Bessey, and Paul D. Scholfield, Peterborough, Ontario, Canada, assignors to Atomic Energy of Canada Limited, Ottawa, Ontario, Canada., a corporation of Canada
Filed Nov. 2, 1966, Ser. No. 591,569
Claims priority, application Canada, Dec. 31, 1965, 948,999
9 Claims. (Cl. 176—78)



A fuel rod assembly for a nuclear reactor is described in which the elements have thin metal sheaths and a flexible spacer separates the elements. The spacer consists of a wire bent to form a pair of attachment portions to the sheaths of adjacent elements with a transverse portion joining the two attachment portions. The attachment portions are secured to the sheaths of adjacent elements such as by welding with the point of attachment offset from the line of action of force acting through the transverse portion.

3,390,054

PROCESS FOR PREPARING PROTEINASES

Kazuyuki Morihara, Osaka Prefecture, Japan, assignor to Shionogi & Co., Ltd., Osaka, Japan
Filed Dec. 6, 1965, Ser. No. 511,803
Claims priority, application Japan, Dec. 16, 1964, 39/71,200; Mar. 20, 1965, 40/16,391
7 Claims. (Cl. 195—66)

Proteinase is prepared by inoculating a nutrient medium which contains, as sole carbon source, a non-carbohydrate (e.g. heavy mineral oil or aliphatic polyhydric alcohol), with a strain of *Pseudomonas aeruginosa*, culturing and recovering accumulated proteinase from the culture broth.

3,390,055

FERMENTATIVE PRODUCTION OF N-ETHYLOXYTETRACYCLINE

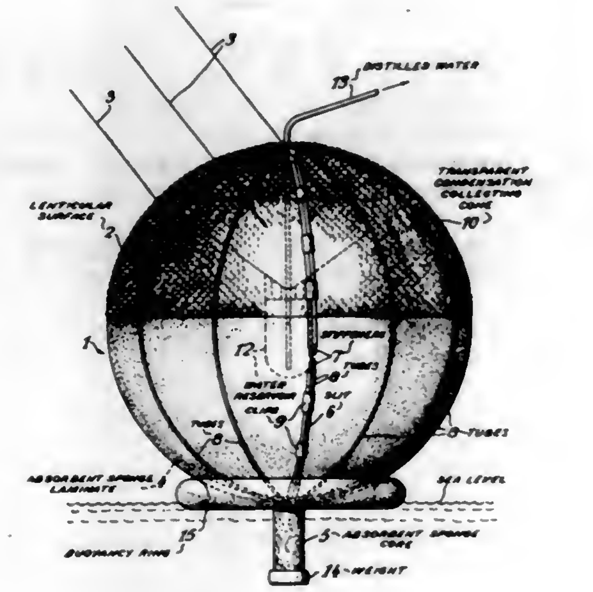
Eugene L. Dulaney, Metuchen, and Irving Putter, Martinsville, N.J., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey
No Drawing. Original application Apr. 5, 1962, Ser. No. 185,233. Divided and this application Jan. 21, 1965, Ser. No. 442,223
6 Claims. (Cl. 195—80)

1. A process for preparing N-ethyloxytetracycline which comprises growing an oxytetracycline producing strain of *Streptomyces rimosus* in an aqueous nutrient medium in the presence of ethionine.

3,390,056

PORTABLE WATER DISTILLATION APPARATUS

George Ingram, 902 Hawkins House, Dolphin Square, London, England
Filed Mar. 25, 1966, Ser. No. 537,378
Claims priority, application Great Britain, Mar. 26, 1965, 12,852/65
7 Claims. (Cl. 202—83)

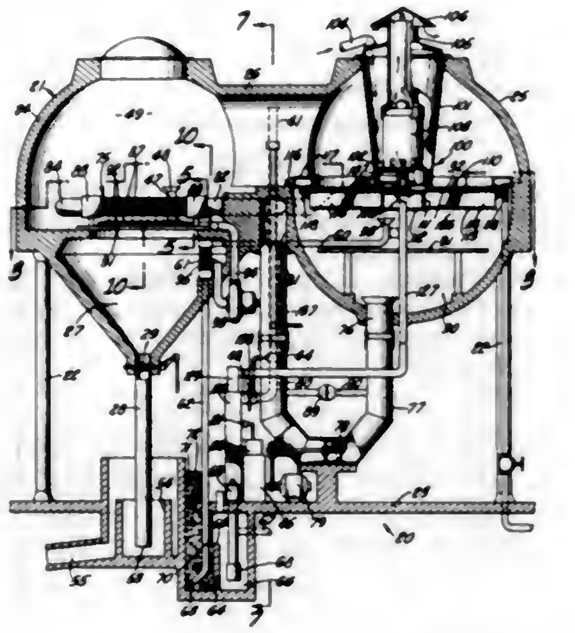


The still comprises a collapsible sphere whose upper hemisphere is transparent and lenticulated. The lower hemisphere is lined with water absorbent material with an absorbent projection dipping into the sea on which it floats supported by a buoyancy ring. A condenser and water reservoir are supported within the sphere.

3,390,057

APPARATUS FOR VAPOR COMPRESSION DISTILLATION OF WATER

Phillip E. Day, Los Angeles, Calif., assignor to Waterdome Corporation, Los Angeles, Calif., a corporation of California
Filed Dec. 14, 1964, Ser. No. 418,149
29 Claims. (Cl. 202—172)



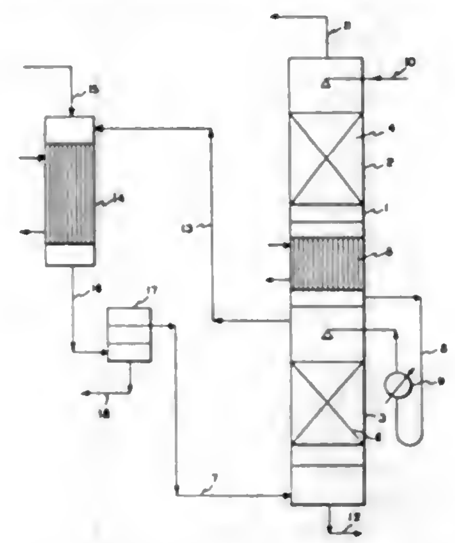
A vacumm vessel is provided with separate supply water and distilled water reservoirs and a passageway above and between the reservoirs. The supply water is vaporized by circulating distilled water from the distilled water reservoir through a heat exchanger in the supply water reservoir. A centrifugal compressor, having an impervious bottom, positioned above the water level in the distilled water reservoir so as to form an air space, draws vapor from the passageway, reducing the pressure therein to the saturated vapor pressure of the supply water, and discharges the vapor at an increased pressure into a condensing chamber at its periphery. The circulating distilled water is sprayed into the condensing chamber to condense the compressed vapor. The air pressure in the air space is controlled to be slightly in excess of the saturated vapor pressure of the distilled water in the distilled water reservoir. The speed of the centrifugal compressor may also be controlled.

3,390,058

PLURAL STAGE PRESSURE DISTILLATION OF UREA SYNTHESIS EFFLUENT WITH LIQUIFIED GAS ADDITION

Eiji Otsuka and Kazumichi Kanai, Fujisawa, and Sadashi Chikaoka, Yokohama, Japan, assignors to Toyo Koatsu Industries, Incorporated, Tokyo, Japan, a corporation of Japan
Filed June 1, 1965, Ser. No. 460,386
Claims priority, application Japan, June 8, 1964, 39/32,219
8 Claims. (Cl. 203—49)

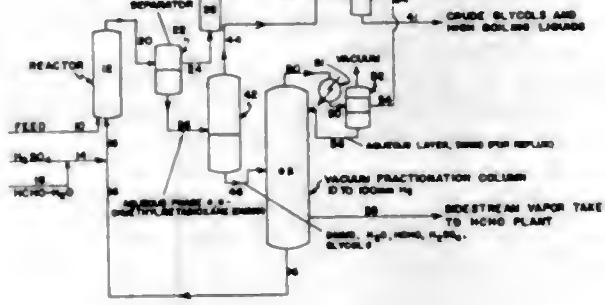
A method for separating unreacted carbon dioxide and ammonia from a urea synthesis effluent wherein the urea synthesis effluent is subjected to a first distillation at 10 to 30 kg./cm.^{2} to remove major parts of the unreacted carbon dioxide and ammonia, and the resulting depleted solution is subjected to a second distillation at 10 to 30 kg./cm.^{2} to remove the remaining parts of the unreacted carbon dioxide and ammonia, said second distillation being conducted by introducing into said depleted solution a liquefied gas such as propane.



3,390,059

VACUUM DISTILLATION OF DIMETHYLMETADIOXANE FROM AN ACIDIC AQUEOUS PHASE

Clarence R. Murphy, Allison Park, Pa., assignor to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware
Filed May 12, 1964, Ser. No. 366,717
8 Claims. (Cl. 203—94)


GASES
DIMD STREAM TO ISOPRENE PLANT
NEUTRALIZATION CHAMBER
SEPARATOR
CRUDE GLYCOLS AND HIGH BOILING LIQUIDS
VACUUM
REACTOR
FEED
AQUEOUS LAYER, USED FOR REFLUX
VACUUM FRACTIONATION COLUMN 10 TO 100mm Hg
SIDESTREAM VAPOR TAKE-OFF TO HCHO PLANT

A process for the separation of 4,4-dimethylmetadioxane from admixture with water and a strong mineral acid, such as sulfuric acid, which comprises fractionally distilling said admixture at an absolute pressure of between 10 and 100 mm. of Hg.

3,390,060

WAX STOPOFF COMPOSITION AND PROCESS

Ram Dev Bedi, Cleveland, Ohio, assignor to M & T Chemicals Inc., New York, N.Y., a corporation of Delaware
No Drawing. Filed Mar. 11, 1964, Ser. No. 351,240
10 Claims. (Cl. 204—15)

A cathode having a selected area of high current density whereon plating is desired and pre-determined areas of low current density is protected against undesirable reactions during electroplating by applying to the areas of low current density a solution containing an inert organic solvent, chlorinated naphthalene wax having a melting point of at least 100° C., and microcrystalline wax having a melting point of at least 75° C.; and evaporating said solvent to form a wax film having a thickness of about 2.5–50 microns on said areas of low current density.

3,390,061

PROTECTIVE LOCALIZED AREA RESIN COATINGS FOR ELECTROPLATING

Steven Levinos, Vestal, N.Y., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed Apr. 18, 1966, Ser. No. 543,070
4 Claims. (Cl. 204—15)

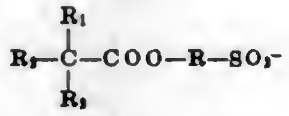
1. The process of electroplating an aluminum sheet with a metal selected from the group consisting of copper and chromium, said electroplating being carried out at an acid pH, the improvement which comprises employing as the cathode an oxide-free aluminum sheet having coated thereon a localized area protective resin layer selected from the group consisting of thermoplastic, film-forming acrylic resins soluble in alkaline media, said resin being capable of forming a strong, adhesive bond with the aluminum surface and wherein said resin is capable of being completely removed from the aluminum surface subsequent to the electroplating operation by subjecting same to an alkaline medium maintained at a pH of at least 7.5.

3,390,062

ELECTROPLATING NICKEL AND ELECTROLYTE THEREFOR

Frank Passal, Detroit, Mich., assignor to M & T Chemicals Inc., New York, N.Y., a corporation of Delaware
No Drawing. Filed June 29, 1965, Ser. No. 468,149
10 Claims. (Cl. 204—49)

An electrolyte and process for the electrodeposition of nickel. The electrolyte contains a compound providing sulfohydrocarbon-di-yl neocarboxylate anion



$$R_2-\overset{\displaystyle R_1}{\underset{\displaystyle R_3}{\overset{|}{\underset{|}{C}}}}-COO-R-SO_3^-$$

wherein R_1, R_2, and R_3 are alkyl groups and R is a hydrocarbon-di-yl group containing at least 2 carbon atoms. The compound acts to reduce surface tension of the electrolyte, thereby reducing the tendency toward production of pitted deposits.

3,390,063

ELECTROLYTES AND METHOD FOR ANODIZING ALUMINUM

Kenneth C. Working, 3409 E. Ocean Ave., Long Beach, Calif. 90807
No Drawing. Filed Dec. 28, 1964, Ser. No. 421,722
7 Claims. (Cl. 204—58)

Aluminum is anodized in an aqueous electrolyte containing an anodizing acid and an additive made by steeping redwood in water until a solution having a pH of about 2 to 5 is formed.

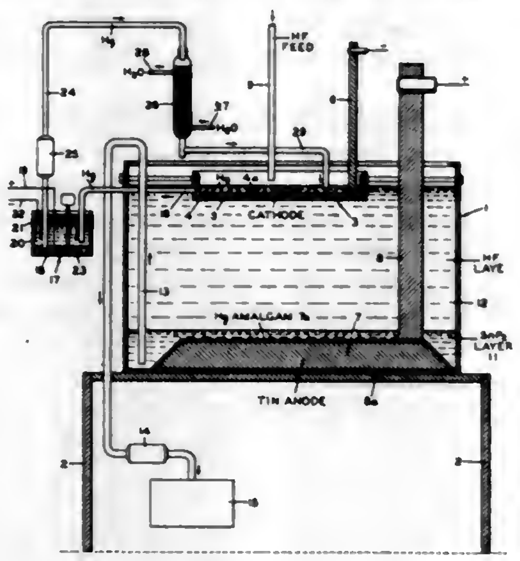
3,390,064

ELECTROLYTIC PROCESS FOR PREPARING STANNOUS FLUORIDE

Gotlibs Baltakmens, Wilmington, Del., and John P. Tourish, Swarthmore, Pa., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York
Filed Oct. 6, 1964, Ser. No. 401,926
3 Claims. (Cl. 204—94)

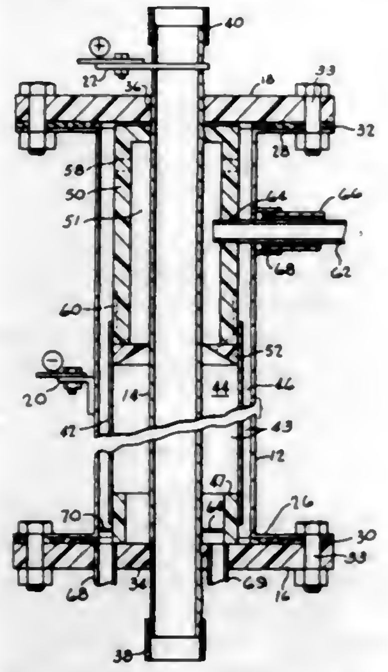
1. A method for producing stannous fluoride free from substantial contamination with stannic fluoride, which comprises passing an electric current between a mercury

cathode and an anode of metallic tin having superimposed thereon a thin layer of mercury-tin amalgam, said cathode and anode being immersed in an aqueous hydrofluoric acid solution.



3,390,065
PROCESS AND CELL FOR THE MANUFACTURE OF EITHER SODIUM HYPOCHLORITE OR CHLORINE

Hal B. H. Cooper, 4234 Chevy Chase Drive,
Pasadena, Calif. 91103
Filed Apr. 3, 1964, Ser. No. 357,109
17 Claims. (Cl. 204—95)



A sodium hypochlorite or caustic chlorine generator having concentric tubular electrodes and a tubular diaphragm therebetween with the inner electrode serving as cooling duct for the electrolytic zone and, in the instance, of the hypochlorite application, also as cooling duct for an adjoining reaction zone, where chlorine and caustic from the electrolytic zone react to form sodium hypochlorite.

3,390,066
ELECTROLYTIC HYDRODIMERIZATION OF CERTAIN ALLYL COMPOUNDS

Manuel M. Baizer, St. Louis, Mo., assignor to Monsanto Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed Sept. 15, 1964, Ser. No. 396,728
13 Claims. (Cl. 204—72)

1. A method of electrolysis which comprises subjecting a solution in aqueous salt electrolyte of olefinic compounds selected from the group consisting of β,γ-olefinic carboxylates, carboxamides, nitriles, phosphonates, phosphinates, phosphine oxides, sulfones, 2-pyridines, 4-pyridines and mixtures thereof in which the olefinic group has at least one hydrogen atom attached to the α-carbon atom to electrolysis by passing an electric current through said solution in actual physical contact with a cathode, causing development of the cathode potential required to effect reductive coupling, and recovering product consistent with that resulting from coupling of two molecules of starting reactant at the β-position with saturation of the olefinic groups.

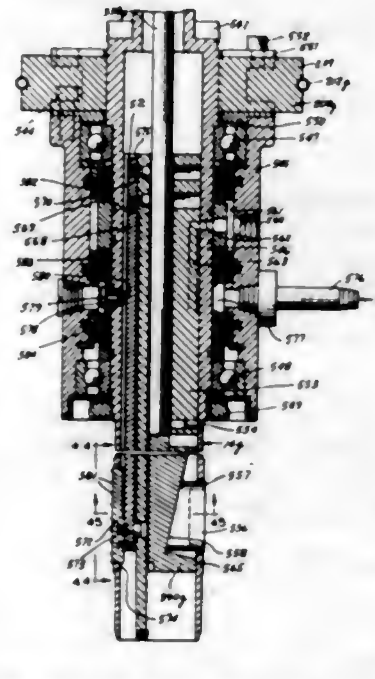
3,390,067
ALKALI-ETCHED, ACRYLATE IRRADIATION-GRAFTED POROUS POLYTETRAFLUOROETHYLENE FELT AND METHOD FOR PREPARING SAME

Mary Lucy Miller, New York, and Henry Joseph Fornasar, Brooklyn, N.Y., assignors to American Cyanamid Company, Stamford, Conn., a corporation of Maine
No Drawing. Filed Apr. 21, 1965, Ser. No. 449,873
10 Claims. (Cl. 204—159.17)

5. A process for surface modifying polytetrafluoroethylene felt which comprises: contacting polytetrafluoroethylene felt with a solution of an alkali selected from the group consisting of sodium and potassium; subjecting the latter alkali-etched felt to ionizing radiation in the presence of methyl acrylate monomer to a total radiation dose between about 1.0 megrad to 2.5 megrads and hydrolyzing the so-alkali etched and grafted felt to recover a wettable and porous polytetrafluoroethylene felting material.

3,390,068
ELECTROCHEMICAL HONING APPARATUS INCLUDING BORE GAUGING MEANS

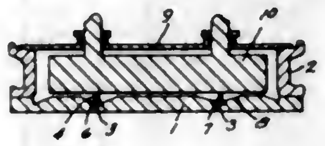
Myron P. Ellis, Royal Oak, Robert C. Engle, Livonia, Albin S. Czubak, Detroit, and Everett A. Randlett, Jr., Southfield, Mich., assignors to Micromatic Hone Corporation, Detroit, Mich.
Continuation of application Ser. No. 498,335, Oct. 20, 1965. This application Apr. 7, 1967, Ser. No. 629,330
28 Claims. (Cl. 204—212)



Electrochemical honing apparatus for removing metal from a workpiece bore surface by combined electrochemical machining and mechanical honing processes, including a pressure sensing gauge arm means connected to the rotatable and reciprocable cathode tool, and adapted to be moved radially outwardly to engage the bore wall surface of a workpiece and sense the change in the size of the bore during the metal removing operation.

3,390,069
HORIZONTAL MERCURY CATHODE CELL WITH BOTTOM MOUNTED ANODE SUPPORT MEMBERS

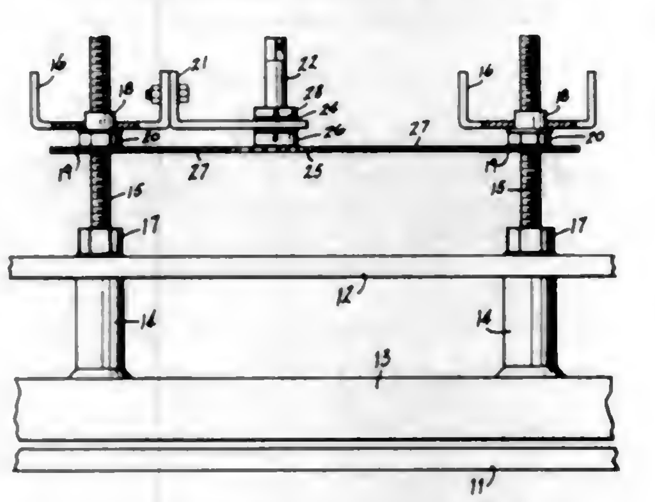
Yoshio Utsugi, Shigeru Katsumata, and Katumi Onozaki, Tokyo, Japan, assignors to Asahidenka Kogyo Kabushiki Kaisha, Tokyo, Japan, a corporation of Japan
Filed May 22, 1964, Ser. No. 369,455
Claims priority, application Japan, May 24, 1963, 38/37,775; May 2, 1964, 39/34,142; May 9, 1964, 39/25,980
7 Claims. (Cl. 204—219)



A bottom member for an amalgamating chamber of a horizontal mercury cathode cell in which the bottom plate is made of electrically conductive material and has at least two elongated parallel grooves in the upper side thereof. Elongated anode supporter supporting bodies are mounted in the grooves so that clearance spaces are formed between said bodies and the sidewalls of said grooves. Anode supporters made of insulating material are mounted on said bodies at spaced positions therealong.

3,390,070
ELECTRODE ADJUSTMENTS MEANS FOR MERCURY CATHODE ELECTROLYTIC CELLS

Roy M. Cooper, Hamden, William C. Gardiner, Orange, and James R. Newberry, Cheshire, Conn., assignors to Olin Mathieson Chemical Corporation, a corporation of Virginia
Filed Feb. 19, 1965, Ser. No. 434,017
5 Claims. (Cl. 204—219)

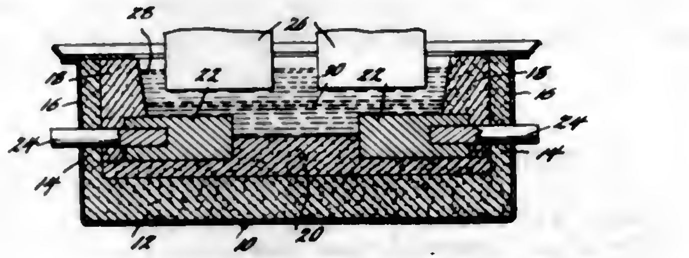


1. In a mercury cathode electrolytic cell having:
(a) a bottom and two sides forming a trough;
(b) a perforated, self-supporting cover resting on the sides of said trough;
(c) threaded upright members located at spaced intervals on said cover above the sides of said trough;
(d) substantially horizontal anode-supporting members having said upright members passing through said horizontal members;
(e) threaded support means on said upright members to provide adjustable support for said horizontal members;
(f) anodes adjustably suspended from said horizontal members through the perforations in said cover; a mercury cathode flowing over the bottom of said trough and means for imposing an electric current on said anodes and cathode;

the combination therewith of:
(a) a horizontally rotatable wheel on each of said upright members;
(b) endless, flexible drive means engaging a plurality of said wheels; and
(c) means for rotating said wheels.

3,390,071
CATHODE CONSTRUCTION FOR ALUMINUM REDUCTION CELL

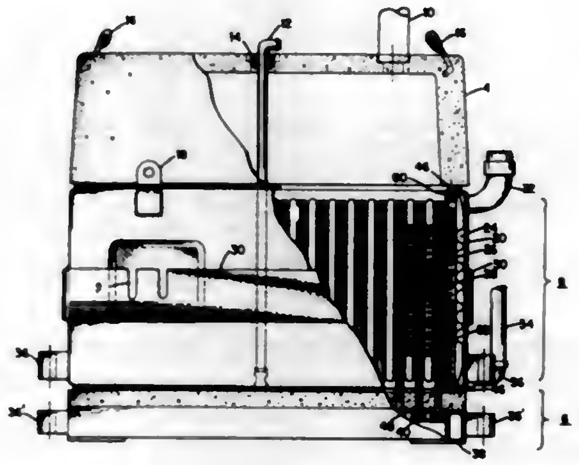
Curtis J. McMinn, Florence, and Samuel A. Bruce, Sheffield, Ala., assignors to Reynolds Metals Company, Richmond, Va., a corporation of Delaware
Filed Oct. 26, 1964, Ser. No. 406,488
4 Claims. (Cl. 204—243)



An electrolytic cell for the production of aluminum comprising a pot shell lined with insulating material supporting a graphite cathode block, and an improved oxygen-free copper current collector pin being electrically connected to the block.

3,390,072
DIAPHRAGM ELECTROLYTIC ALKALI HALOGEN CELL

Russell M. Wiseman, Mentor, Ohio, assignor to Diamond Shamrock Corporation, a corporation of Delaware
Filed May 6, 1965, Ser. No. 453,616
5 Claims. (Cl. 204—266)



1. In an electrolytic cell the improvements comprising:
(A) a base member having associated therewith an electrically conductive one piece grid support member which comprises alternately facing corrugation adapted to support said plurality of anodes in good positional proximity between alternately associated cathode members anodes;
(B) a plurality of hollow, tubular, foraminous electrically conductive metal cathodes interposed between said anodes in an alternating array and which comprise;

(C) a flat, separately mounted electrically conductive member adapted to be fitted between two corresponding cathode members constituting part of said array.

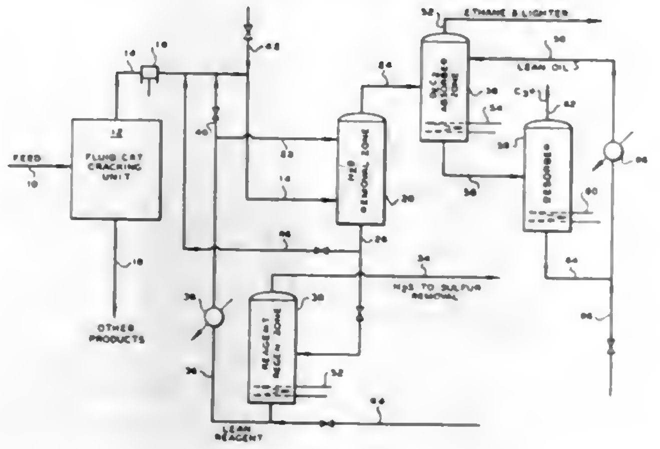
3,390,073
HYDROCARBON ADDITIVE FOR HEAT-EXCHANGER ANTI-FOULING
Richard L. Godar, Glendale, Mo., and James L. Richardson, Havertown, Pa., assignors to Petrolite Corporation, a corporation of Delaware
Continuation-in-part of application Ser. No. 380,241, July 6, 1964. This application Sept. 5, 1967, Ser. No. 665,480
4 Claims. (Cl. 208—48)

Adhesion of deposits on heat-exchange metal surfaces is inhibited by dosing the hydrocarbon liquid with an antifouling amount of a composition comprising: (1) a secondary amine, (2) a vinylpyrrolidone-acrylic ester copolymer, and (3) optionally, a metal deactivator such as a Schiff base of salicylaldehyde and alkylene diamine.

3,390,074
HYDROCRACKING PROCESS EMPLOYING A PROMOTED CATALYST
Bernard F. Mulaskey, Pinole, Calif., assignor to Chevron Research Company, San Francisco, Calif., a corporation of Delaware
No Drawing. Filed Dec. 9, 1966, Ser. No. 600,390
10 Claims. (Cl. 208—111)

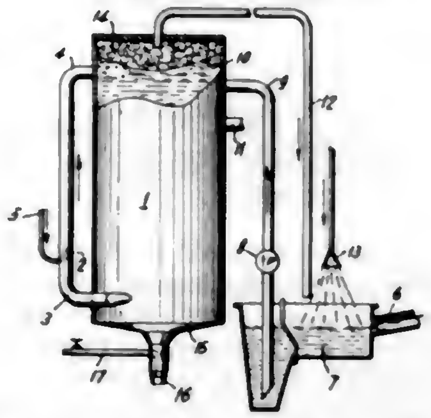
Hydrocracking a hydrocarbon feed in the presence of hydrogen at hydrocracking conditions with a catalyst containing an iron transitional group metal component associated with a coprecipitated composite of a porous inorganic oxide and antimony or compounds thereof.

3,390,075
PROCESS FOR RECOVERING HYDROCARBON GASES FROM STREAMS THEREOF CONTAINING H_2S
Kenneth A. Harper, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed May 2, 1966, Ser. No. 546,922
9 Claims. (Cl. 208—341)



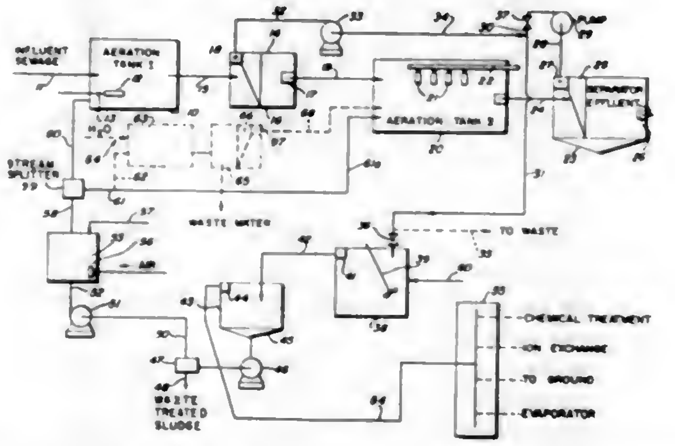
In separating a low pressure and low temperature mixed stream of light hydrocarbons containing H_2S into separate streams of hydrocarbons and H_2S, using a cool liquid absorbent for removing H_2S, the mixed stream is compressed for more effective absorption of H_2S and cooled by mixing cool absorbent from the H_2S absorption zone therewith before passing the mixed stream to the absorption zone. In one embodiment of the invention, the liquid absorbent mixed with the compressed gas to cool it is cooled lean absorbent from an H_2S desorption zone downstream of the H_2S absorption zone. In another embodiment, H_2S-rich liquid absorbent from the H_2S absorption zone is used as the coolant.

3,390,076
METHOD AND APPARATUS FOR SEWAGE DISPOSAL ACCORDING TO THE ACTIVATED SLUDGE PROCESS
Max Dubach, Riedholz, Soleure, Switzerland, assignor to Cellulosefabrik Attisholz A.-G. vorm. Dr. B. Sieber, Attisholz, Switzerland
Filed Aug. 26, 1964, Ser. No. 392,117
Claims priority, application Switzerland, Sept. 2, 1963, 10,840/63; Mar. 10, 1964, 3,072/64
12 Claims. (Cl. 210—3)



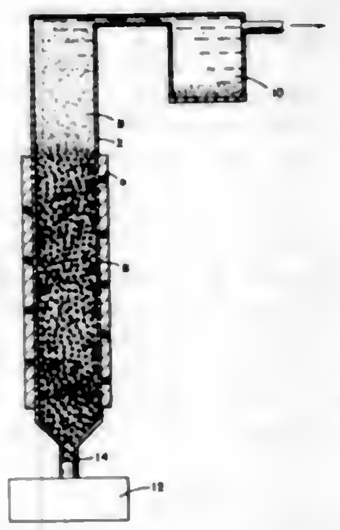
1. A method of treating sewage according to the activated sludge process in which sewage is placed in a vertically oriented volume having a liquid level therein dividing the volume into a liquid space and a gas collection space and comprising the steps of tangentially removing sewage from the lower end of the liquid space in the volume, mixing air with the removed sewage, tangentially feeding the mixture of air and sewage into the liquid space of the volume at the liquid level whereby the volume of sewage is given a strong whirling motion about the vertical axis of the volume, collecting foam and undissolved gases in the gas collection space in the volume above the liquid level, removing the foam and undissolved gases from the collection space and delivering the foam and undissolved gas to a separate volume, liquefying the foam in the separate volume and recirculating the liquefied foam to the liquid space in the vertically oriented volume.

3,390,077
SEWAGE TREATMENT PROCESS
Tom H. Forrest, Evanston, Ill., assignor to FMC Corporation, a corporation of Delaware
Filed May 4, 1966, Ser. No. 547,495
8 Claims. (Cl. 210—6)



The process of this invention deals with the treatment of sewage to produce an effluent having a low biochemical oxygen demand and a markedly reduced content of nutrients such as phosphorus compounds. In the illustrative embodiment, sewage is subjected to two stages of aeration and settling. In the aeration stages, a minimum of 60 pounds of suspended solids in the mixed liquor per pound of phosphate-containing material introduced into the mixed liquor by the influent medium. Sludge recovered by settling the mixed liquors from both the first and aeration stages are washed with acidulated water to removed phosphates. The washed sludge is aerated before return to the sewage treatment system to insure that it is not degraded in activity due to being held under anaerobic conditions for too long a period in the course of washing to free the sludge of nutrients.

3,390,078
SEPARATING SALTS HAVING INVERTED SOLUBILITY CURVES
Loranus P. Hatch, Brookhaven, N.Y., assignor to the United States of America as represented by the United States Atomic Energy Commission
Filed Dec. 29, 1964, Ser. No. 425,664
3 Claims. (Cl. 210—56)



This invention discloses a process for heating saline solutions containing salts having inverted solubility curves to temperatures above 260° F. comprising upwardly flowing the saline solution through a walled heat exchanger having heating means contained in the walls while maintaining a bed of particles in a fluidized state with the upward flow of the water, said fluidized particles being in contact with walls of the exchanger.

3,390,079
METHOD OF HOT EXTRUSION OF METALLIC ARTICLES
Masaru Utakoji, 15 1-chome, Urakaze-cho, Imazu, Nishinomiya, Japan, and Minoru Imaoka, 518 Kita-1-chome, Kaijin-cho, Funabashi, Japan
Filed July 8, 1965, Ser. No. 470,355
Claims priority, application Japan, July 20, 1964, 39/41,450
5 Claims. (Cl. 252—12)

A method of extrusion of metallic articles by using a solid lubricant of disk-shape comprising at least first and second solid lubricant layers having different viscosities, the first solid lubricant layer consisting of a glass composition containing more than 80 mol percent B_2O_3 and SiO_2, less than 20 mol percent of Na_2O and CaO, and 2.5 to 10 mol percent of Al_2O_3, while the second solid lubricant layer is a conventional glass lubricant having a higher viscosity and a slower rate of softening as compared with said first solid lubricant layer.

3,390,080
MOLYBDENUM DISULPHIDE
Aleksander Jerzy Groszek, Ealing, London, England, assignor to The British Petroleum Company Limited, London, England, a corporation of Great Britain
No Drawing. Filed Sept. 21, 1966, Ser. No. 586,346
Claims priority, application Great Britain, Sept. 24, 1965, 40,700/65
6 Claims. (Cl. 252—25)

1. An oleophilic molybdenum disulphide with a surface area of from 10 to 400 square metres per gram, prepared by grinding natural or synthetic molybdenum disulphide in organic liquid distilling below 500° C., having a viscosity below 600 centistokes at 38° C. and a surface tension less than 72 degrees/cm. at 25° C.

3,390,081
RUST INHIBITED EXTREME PRESSURE GREASE
Peter E. Floeck, Anaheim, Calif., assignor to Atlantic Richfield Company, Philadelphia, Pa., a corporation of Pennsylvania
No Drawing. Continuation-in-part of application Ser. No. 330,608, Dec. 16, 1963. This application Mar. 10, 1967, Ser. No. 622,063
7 Claims. (Cl. 252—32.7)

This application is directed to a grease showing improved physical properties, particularly dropping point, effected by the synergistic combination of a zinc alkyl dithiophosphate with an imidazoline salt of a fatty acid, such as caprylic acid.

3,390,082
LUBRICANTS CONTAINING METAL-FREE DISPERSANTS AND INHIBITORS
William M. Le Suer, Cleveland, and George R. Norman, Lyndhurst, Ohio, assignors to The Lubrizol Corporation, Wickliffe, Ohio, a corporation of Ohio
No Drawing. Continuation-in-part of application Ser. No. 102,638, Apr. 13, 1961. This application Sept. 19, 1967, Ser. No. 668,921
12 Claims. (Cl. 252—32.7)

The invention relates to a lubricant, such as is prepared from a petroleum lubricating oil or synthetically prepared lubricating oil, which contains at least one metal-free dispersant and at least one corrosion- and/or oxidation inhibitor. The metal-free dispersant is an oil-soluble acylated amine wherein the acyl group is illustrated by a relatively high molecular weight substituted succinic group having at least about 50 aliphatic carbon atoms in the substituent. The inhibitor is illustrated by a phosphorus-containing substance such as a metal phosphorodithioate or an adduct of such phosphorodithioate with an epoxide.

3,390,083
POLYESTER ADDITIVES FOR HYDROCARBON OIL COMPOSITIONS AND PROCESS OF PREPARING THE SAME
Charlotte Lion, Rouen, France, assignor to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Continuation-in-part of application Ser. No. 445,725, Apr. 5, 1965. This application May 6, 1966, Ser. No. 548,065
Claims priority, application France, May 11, 1965, 16,663
2 Claims. (Cl. 252—33.4)

Mineral lubricating oil containing as an antiwear agent a blocked polyester of ethylene glycol, a C_{36} dicarboxylic acid and alcohol, together with an alkaline earth metal sulfonate forms a lubricant suitable for lubricating upper cylinders of marine diesel engines.

3,390,084
COLD ROLLING LUBRICATION
Alan Wainwright Lake, Banstead, Surrey, England, assignor to Henry W. Peabody (Industrial) Limited
No Drawing. Filed July 1, 1966, Ser. No. 562,121
19 Claims. (Cl. 252—34.7)

1. In a method of cold rolling metals, in which the roll-metal interface is lubricated with a circulating lubricating composition, the improvement comprising using as said circulating lubricating composition a dilute aqueous solution of a blend of

(a) from 40 to 95% by weight of a salt formed between
  (i) at least one amine which is non-volatile at ambient temperatures and
  (ii) an acid selected from the group consisting of fatty acids containing at least 12 carbon atoms, fatty acid distillation residues, and synthetic polymerised fatty acids;
(b) 0.1 to 20% by weight of a surfactant selected from the group consisting of
  (i) polyoxyalkylene oxide condensates of an acid selected from the group consisting of fatty acids and rosin acids,
  (ii) sorbitan esters of an acid selected from the group consisting of fatty acids containing at least 12 carbon atoms, fatty acid distillation residues, and synthetic polymerised fatty acids, and
  (iii) polyoxyalkylene condensates of said sorbitan esters (ii);
(c) 5 to 50% by weight of a synthetic fatty acid alkyl ester, the fatty acid containing at least 12 carbon atoms and the alkyl group containing up to 4 carbon atoms; and
(d) 0 to 5% by weight of a water-soluble bactericide; none of the constituents of the blend being emulsified in said solution and none of them separating from the solution at any of the temperatures encountered in the cold rolling and in the circulation of the solution during the cold rolling.

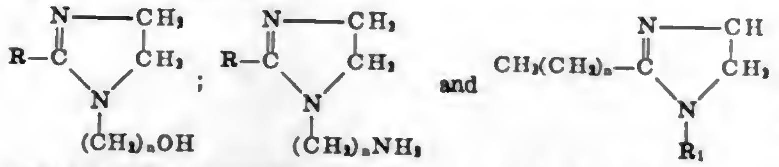
3,390,085
GREASE COMPOSITION

Peter E. Floeck, Anaheim, Calif., assignor to Atlantic Richfield Company, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Continuation-in-part of application Ser. No. 147,486, Oct. 25, 1961. This application Oct. 24, 1966, Ser. No. 588,727

13 Claims. (Cl. 252—34.7)

This application discloses a grease containing an imidazoline salt made by reacting a fatty acid having from 6 to 18 carbon atoms with an imidazoline selected from the group consisting of



where *n* is an integer of from 1 to 4, R and R_1 are selected from the group consisting of hydrogen and an aliphatic hydrocarbon having from 5 to 17 carbon atoms, at a reaction temperature of between about 160° and 220° F., which additive serves as a rust inhibitor which does not impair the mechanical stability, dropping point, water tolerance or thixotropic hardening resistance of the base grease.

3,390,086
SULFUR CONTAINING ASHLESS DISPERSANT

Rosemary O'Halloran, Union, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Dec. 29, 1964, Ser. No. 422,036

8 Claims. (Cl. 252—47.5)

1. An ashless dispersant comprising a polyalkyleneamine having one of its terminal primary amine groups condensed with a first acid selected from the group consisting of alkenylsuccinic anhydride, alkenylsuccinic acid, and alkenyl monocarboxylic acid, wherein said alkenyl groups contain about 40 to 250 carbon atoms; said polyalkyleneamine having its second terminal primary amine group condensed with a material selected from the group consisting of said first acid, C_1 to C_{30} fatty acid, C_1 to C_{10} aldehydes and ketones consisting only of carbon, hydrogen and oxygen; said polyalkyleneamine containing a total of 3 to 12 amine groups and said alkylene groups thereof each containing 2 to 3 carbon atoms; said ashless dispersant being sulfurized with elemental sulfur to a sulfur content of 0.1 to 5.0 wt. percent based on the weight of sulfurized dispersant.

5. A fluid petroleum hydrocarbon composition comprising a major amount of fluid petroleum hydrocarbon and .001 to 10.0 wt. percent of the sulfurized dispersant of claim 1.

3,390,087
SYNTHETIC LUBRICANT STABILIZED WITH TRIORGANOTIN AND LEAD DERIVATIVES OF FERROCENE

John P. Pellegrini, Jr., O'Hara Township, Allegheny County, and Ilgvars J. Spilners, Monroeville, Pa., assignors to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware

No Drawing. Original application Dec. 28, 1964, Ser. No. 421,648, now Patent No. 3,350,434, dated Oct. 31, 1967. Divided and this application Sept. 29, 1967, Ser. No. 671,554

8 Claims. (Cl. 252—49.7)

Organometallic derivatives of ferrocene are added to liquid polyorgano siloxane lubricating oils to decrease their normal tendency to volatilize and solidify when heated at 600° F. Specific examples of the organometallic derivatives include tributylstannylferrocene, triphenylstannylferrocene, triphenylplumbylferrocene, tributylplumbylferrocene, and 1,1' - bis(tributylstannyl)ferrocene.

3,390,088
GASOLINE LUBRICATING OILS OR ORGANOMETALLIC ANTIKNOCK FLUIDS CONTAINING A MIXTURE OF MONO-ALKYLPHENOL CONDENSATION PRODUCTS

Margaret E. Griffing, Southfield, Mich., assignor to Ethyl Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed Feb. 18, 1965, Ser. No. 433,810

4 Claims. (Cl. 252—52)

1. A composition selected from the group consisting of engine lubricating oil, gasoline and organometallic antiknock fluid, said composition containing an exhaust emission reducing amount of a resinous product obtained by reacting 2-tert-butylphenol with formaldehyde wherein the mole ratio of formaldehyde to 2-tert-butylphenol is from about 7:1 to about 9:1.

3,390,089
LUBRICATING OIL CONTAINING POLYMERIC ADDITIVE

Robert Tirtiaux, Rouen, and Roger Tourret, Mont-Saint-Aignan, France, assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Application Nov. 13, 1963, Ser. No. 323,270, which is a continuation-in-part of application Ser. No. 240,424, Nov. 27, 1962. Divided and this application Oct. 21, 1966, Ser. No. 588,629

Claims priority, application France, Nov. 30, 1961, 880,559

10 Claims. (Cl. 252—56)

A lubricating oil of enhanced viscosity index is obtained by blending into a major proportion of a lubricating oil a minor, viscosity index improving amount, generally about 0.001 to 20 wt. percent based on the compounded lubricant, of an oil-soluble polymeric additive comprising a copolymer of at least one polymerizable ester of a saturated aliphatic monohydric alcohol of from 3 to 18 carbon atoms and an ethylenically unsaturated carboxylic acid having 1 to 2 carboxy groups and 3 to 4 carbon atoms, together with from 0.01 to 5.0 wt. percent based on the total weight of unsaturated esters, of a compound that is copolymerizable with said ester and that is characterized

by having at least two vinylidene groups and that is selected from the class consisting of unsubstituted hydrocarbons and substituted hydrocarbons containing only carbon, hydrogen and oxygen. Representative unsaturated esters include esters of fumaric acid and of methacrylic acid, e.g. mixed fumarate esters of coconut oil alcohols or lauryl methacrylate. Representative compounds containing at least two vinylidene groups include divinyl benzene and divinyl succinate. A particularly effective copolymer is prepared from mixed C_8–C_{18} alcohol fumarate, monobutyl acid maleate, dibutyl fumarate, vinyl acetate and divinyl benzene.

3,390,090
METALLIC SELENIDES AND TELLURIDES AND PROCESS FOR MAKING SAME

Robert C. Taylor, Metuchen, and John B. Conn, Westfield, N.J., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Continuation of application Ser. No. 76,139, Dec. 16, 1960. This application Sept. 12, 1966, Ser. No. 578,887

15 Claims. (Cl. 252—62.3)

This invention relates to the production of metallic selenides and tellurides by first reducing elemental selenium or tellurium by the use of hypophosphite ions, and subsequently reacting the selenium or tellurium anions thus formed with cadmium, zinc, antimony or arsenic cations to form the selenides or telluride of cadmium, zinc, antimony or arsenic.

3,390,091
DIELECTRIC GASEOUS MIXTURE OF THIAZYLTRIFLUORIDE AND SF_6

Richard E. Eibeck, Convent Station, N.J., assignor to Allied Chemical Corporation, New York, N.Y., a corporation of New York

Filed Dec. 27, 1965, Ser. No. 516,449

3 Claims. (Cl. 252—63.5)

Mixtures of thiazyltrifluoride and sulfur hexafluoride have been found to possess dielectric properties which render them useful as gaseous electrical insulating media, such mixtures being superior to pure sulfur hexafluoride. These mixtures preferably contain from about 10 to about 80% by volume of thiazyltrifluoride and correspondingly 20–90% by volume sulfur hexafluoride.

3,390,092
DISHWASHING DETERGENT PREPARATIONS CONTAINING SODIUM OR POTASSIUM DICHLOROISOCYANURATE

Russell R. Keast, Yardley, Pa., and Duncan S. Corliss, Roselle, N.J., assignors to FMC Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Mar. 30, 1965, Ser. No. 444,063

9 Claims. (Cl. 252—99)

Dishwashing tablets and granular preparations are formulated to contain a dichloroisocyanurate, white paraffin oil, a low-foaming nonionic surfactant, sodium silicate, a polyphosphate and a filler.

3,390,093
DETERGENT COMPOSITIONS CONTAINING HYDRATED ALKALI METAL TRIPOLYPHOSPHATES

Harold E. Feierstein and Chung Yu Shen, St. Louis, Mo., and Robert R. Versen, Belleville, Ill., assignors to Monsanto Company, St. Louis, Mo., a corporation of Delaware

Continuation-in-part of application Ser. No. 200,325, June 6, 1962. This application June 1, 1965, Ser. No. 460,205

39 Claims. (Cl. 252—138)

1. A process which comprises forming an aqueous slurry containing (a) at least about 8% by weight of a water-soluble alkali metal trimetaphosphate salt, (b) an amount sufficient to convert a major proportion of said trimetaphosphate salt to a tripolyphosphate, of a base of a strength such that a 1% by weight solution of the base in distilled water provides a pH of at least about 10.2 at 25° C., (c) an amount of water at least 5% in excess of that required to hydrate said tripolyphosphate and equal to at least about 10% by weight but not more than 50% by weight of said slurry; interspersing a gas in said slurry to form a foam; said gas being selected from the group consisting of water vapor and gases which are non-reactive with the other materials in said slurry at temperatures of from about 50° C. to 135° C.; and maintaining the temperature of said foam within the range of from about 50° C. to about 135° C. while removing sufficient free water from said foam to form a porous solid product containing a substantial proportion of hydrated tripolyphosphate.

10. A process which comprises the steps of (a) rapidly mixing into a stream of a precursor slurry a metered quantity of an aqueous basic solution said precursor slurry being at a temperature of from 50° C. to 135° C. and containing at least about 8% by weight of a water-soluble alkali metal trimetaphosphate salt, an amount of water such that subsequent to the addition of said basic solution the slurry contains from about 10% by weight to about 50% by weight of water, and at least about 0.1% by weight of a foaming agent selected from the group consisting of water-soluble organic detergent active materials and water-soluble organic polymer materials and said basic solution being of a concentration such that said metered quantity thereof contains an amount of base sufficient to convert a major portion of said trimetaphosphate salt to a tripolyphosphate and such that said slurry subsequent to the addition of said basic solution contains an amount of water at least 5% in excess of that required to hydrate said tripolyphosphate, said base being of such strength that a 1% by weight solution thereof in distilled water provides a pH of at least about 10.2 at 25° C.; (b) transferring said stream containing said basic solution onto a moving surface such that it is in a substantially unconfined state free to expand in volume due to the formation of foam and such that it loses moisture by evaporation; and (c) maintaining said foam at a temperature above about 80° C. but below about 135° C. on said moving surface until it has lost sufficient free water to form a porous solid product.

3,390,094
DETERGENT COMPOSITIONS CONTAINING SULFONIO SULFONATES

Francis L. Diehl and Howard F. Drew, Wyoming, and Arnon O. Snoddy, Cincinnati, Ohio, assignors to The Procter & Gamble Company, Cincinnati, Ohio, a corporation of Ohio

No Drawing. Filed Mar. 14, 1966, Ser. No. 533,848

10 Claims. (Cl. 252—138)

Detergent compositions with superior cool water laundering effectiveness comprising sulfonio sulfonates having a long chain alkyl and an alkaline builder salt.

3,390,095
DETERGENT COMPOSITION CONTAINING PHOSPHONIO SULFONATES

Francis L. Diehl, Wyoming, Ohio, assignor to The Procter & Gamble Company, Cincinnati, Ohio, a corporation of Ohio

No Drawing. Filed Mar. 14, 1966, Ser. No. 533,858

10 Claims. (Cl. 252—138)

Detergent compositions with superior cool water laundering effectiveness comprising a phosphonio sulfonate having a long chain alkyl and an alkaline builder salt.

3,390,096

COMBINATIONS OF WASH-ACTIVE SUBSTANCES IN LIQUID OR PASTE FORM

Werner Stein, Erkrath-Unterbach, Otto Koch, Hilden, Rhineland, and Herbert Weiss, Cologne-Deutz, Germany, assignors to Henkel & Cie. G.m.b.H., Dusseldorf, Germany, a corporation of Germany

No Drawing. Filed Jan. 4, 1965, Ser. No. 423,390

Claims priority, application Germany, June 27, 1964, H 53,115

The portion of the term of the patent subsequent to Apr. 9, 1985, has been disclaimed

10 Claims. (Cl. 252—161)

1. Wash-active aqueous concentrate having a liquid to pasty consistency which consists essentially of

(a) 5–45% of wash-active substances constituting a mixture of surface-active alkylbenzenesulfonates having 8–18 carbon atoms in the alkyl moiety and α-sulfofatty acid salt having 10–14 carbon atoms in the fatty acid radical, in which said α-sulfofatty acid salt is present in an amount of about 2.5–50% of said mixture; and

(b) 95–55% of water.

8. Method of improving the viscosity of a wash-active aqueous concentrate having a liquid to pasty consistency and consisting essentially of surface-active alkylbenzenesulfonates having 8–18 carbon atoms in the alkyl moiety, which comprises admixing such concentrate with α-sulfofatty acid salt having 10–14 carbon atoms in the fatty acid radical, in a quantity sufficient to provide a resulting wash-active mixture in which the α-sulfofatty acid salt is present in an amount of about 2.5–50% of said mixture, and in which the improved viscosity concentrate consists essentially of 5–45% of such wash-active mixture and 95–55% of water, with heating of at least one of the mixture components to dissolve at least some of the resulting mass in the water present.

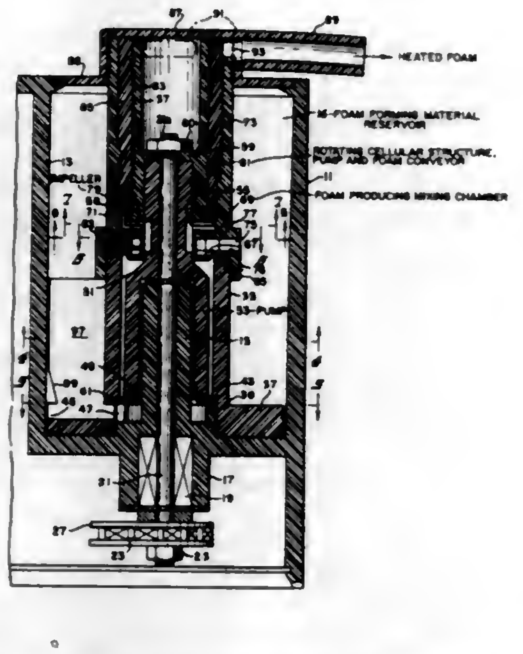
3,390,097

FOAM PRODUCING AND DISPENSING DEVICE

Alfred W. Wakeman, Durham, Conn., assignor to Dynamics Corporation of America, New York, N.Y., a corporation of New York

Original application Mar. 16, 1965, Ser. No. 440,152, now Patent No. 3,368,719, dated Feb. 13, 1968. Divided and this application Jan. 6, 1967, Ser. No. 623,156

3 Claims. (Cl. 252—359)


HEATED FOAM
FOAM FORMING MATERIAL RESERVOIR
ROTATING CELLULAR STRUCTURE, PUMP AND FOAM CONVEYOR
FOAM PRODUCING MIXING CHAMBER
IMPELLER
PUMP

A foam producing and dispensing device wherein foam is created in a chamber and drawn upwardly through a rotatable body member having a cellular structure with interconnecting cells. The body member is in frictional contact with an internally threaded housing so that rotation of the body causes a pumping action and also produces sufficient friction to substantially raise the temperature of the foam.

3,390,098

ANTIOXIDANT COMPOSITION

La Verne Willard Van Ness, Bradley, Ill., assignor to Armour Pharmaceutical Company, Chicago, Ill., a corporation of Delaware

No Drawing. Filed June 8, 1964, Ser. No. 373,571

15 Claims. (Cl. 252—404)

An antioxidant composition containing two or more antioxidant solutes and a solvent containing a polyoxyalkylene ether, and methods of using the composition to protect food products from oxidation.

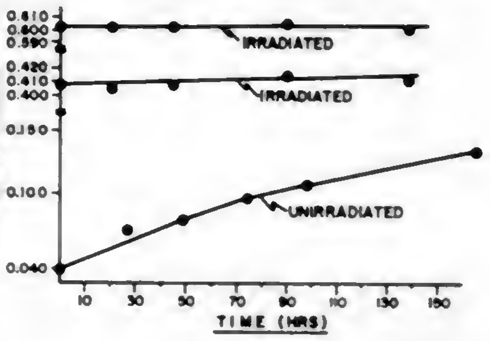
3,390,099

STABILIZED RADIATION DOSIMETERS

Niels W. Holm, Roskilde, Denmark, and Robert D. Jarrett, Framingham, Mass., assignors, by direct and mesne assignments, to the United States of America as represented by the Secretary of the Army

Filed Sept. 15, 1965, Ser. No. 487,641

4 Claims. (Cl. 252—408)



A radiation dosimeter useful in the range of from 50,000 to 1,000,000 rads consisting of an air saturated solution of ferrous sulfate, cupric sulfate and sulfuric acid, which is stabilized against oxidation-reduction reactions which alter the optical density of the solution by irradiation of the freshly prepared solution by high energy ionizing radiation in the range of 200,000 to 400,000 rads.

3,390,100

PROCESS FOR THE PREPARATION OF EXTRUDATES FROM HYDROGELS

Nicholas Chomitz, Yonkers, N.Y., and William Eugene Sanborn, Wilton, Conn., assignors to American Cyanamid Company, Stamford, Conn., a corporation of Maine

No Drawing. Filed Feb. 14, 1964, Ser. No. 344,842

7 Claims. (Cl. 252—455)

This invention relates to the preparation of extrudates from inorganic hydrogels, which extrudates find use as catalysts and catalyst supports. More particularly, it relates to a method which comprises homogenizing an aqueous slurry of an inorganic hydrogen having a solids content of 4 to 25% to produce an homogenizate of substantially the same liquids to solids ratio as the slurry and thereafter extruding the homogenizate to produce an extrudate which can be worked up by conventional techniques to give a material which is suitable for use in the field of catalysis.

3,390,101

CATALYST ACTIVATION PROCESS

Sigmund M. Csicsery, Greenbrae, Calif., assignor to Chevron Research Company, San Francisco, Calif., a corporation of Delaware

No Drawing. Filed Mar. 23, 1966, Ser. No. 536,625

4 Claims. (Cl. 252—455)

1. A method of activating a crystalline zeolitic aluminosilicate having hydrogen as a substantial portion of its

cations and being substantially free of hydrogenating metal components, said aluminosilicate having a pore size of at least 6 Angstroms, which activation method comprises the sequence of steps of:

(1) subjecting said aluminosilicate to a reducing atmosphere for a period of time equivalent to at least one hour when dry hydrogen is used,

(2) subjecting said aluminosilicate to an oxidizing atmosphere for a period of time equivalent to at least 0.25 hour when dry air is used, and

(3) subjecting said aluminosilicate to a reducing atmosphere for a period of time equivalent to at least 0.25 hour when dry hydrogen is used, each of said steps being carried out above 600° F. but below the temperature at which a substantial portion of the crystallinity of said aluminosilicate is destroyed.

3,390,102

REDUCTION-ACTIVATION OF COPPER OXIDE-ZINC OXIDE LOW TEMPERATURE SHIFT CATALYSTS

Ronald E. Reitmeier, Middletown, Ky., assignor to Catalysts & Chemicals, Inc., Louisville, Ky., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 422,452, Dec. 30, 1964. This application Dec. 1, 1966, Ser. No. 598,168

8 Claims. (Cl. 252—475)

Copper oxide-zinc oxide catalyst precursors made for use in low temperature shift reactions wherein carbon monoxide and steam are reacted are very difficult to reduce in large scale commercial operations. Maximum activity catalysts can be made by reduction under controlled conditions using a low concentration hydrogen or carbon monoxide reducing gas in a diluent gas, and incrementally increasing the concentration of hydrogen or carbon monoxide in the diluent gas to control the temperature which increases proportionally to the hydrogen or carbon monoxide concentration.

3,390,103

CATALYST AND PROCESS FOR PREPARATION THEREOF

Otto Roelen, Oberhausen-Holten, and Walter Rottig, Oberhausen-Sterkrade-Nord, Germany, assignors to Ruhrchemie Aktiengesellschaft, Oberhausen-Holten, Germany, a corporation of Germany

No Drawing. Original application Aug. 3, 1962, Ser. No. 214,521, now Patent No. 3,255,238, dated June 7, 1966. Divided and this application Oct. 5, 1965, Ser. No. 493,228

Claims priority, application Germany, Aug. 5, 1961, R 30,885

7 Claims. (Cl. 252—432)

Catalyst for oxidation of lower aliphatic olefins to produce saturated aliphatic products. The catalyst comprises calcined molybdenum oxide, bismuth oxide, phosphoric acid, and boric acid on a support such as silica or alumina. The phosphoric acid and boric acid, figured as P_2O_5 and B_2O_3, amount to about 1–25% of the total catalyst.

3,390,104

ELECTRICAL RESISTOR COMPOSITIONS, ELEMENTS AND METHOD OF MAKING SAME

Lewis F. Miller, Wappingers Falls, and Kenneth E. Neisser, Jr., Poughkeepsie, N.Y., assignors to International Business Machines Corporation, Armonk, N.Y., a corporation of New York

No Drawing. Filed July 16, 1965, Ser. No. 472,690

11 Claims. (Cl. 252—512)

A resistor composition which is applied to a ceramic substrate by silk screening and subsequently fired. The composition comprises a non-polar linear resin from the group of polystyrene, polyalphamethylstyrene and polyterpene, the resin having an average molecular weight in the range of 500 to 7000. The resin is dissolved in a non-polar hydrocarbon solvent having a boiling range of from 450° F. to 588° F. The solvent has a vapor pressure of less than 0.01 mm. of mercury at room temperature and a vapor pressure of from 10 to 20 mm. of mercury at 212° F.

3,390,105

METHOD OF MAKING A CROSSLINKED POLYMER FOAM AND PRODUCT OBTAINED THEREFROM

Joseph A. Verdol, Dolton, Ill., assignor to Sinclair Research, Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Sept. 20, 1963, Ser. No. 310,492

23 Claims. (Cl. 260—2.5)

This invention is a method for production of foamed solid synthetic resin compositions and the foam of improved dimensional stability produced thereby. In the process a tertiary alkoxyalkyl component of the feedstock is decomposed. The decomposition produces tertiary olefin gas which serves as a blowing agent and also free hydroxyl groups suitable for cross-linking. The resulting polymer foams are of improved solvent resistance and thermal stability, derived, to some extent at least, from being cross-linked during or subsequent to the foaming process.

3,390,106

CELLULAR PRODUCTS

Henry C. Geen, Ann Arbor, and Warren A. Rice, Dexter, Mich., assignors to Chemotronics, Incorporated, Ann Arbor, Mich., a corporation of Michigan

Original application Apr. 5, 1963, Ser. No. 271,031, now Patent No. 3,175,025, dated Mar. 23, 1965. Divided and this application Jan. 18, 1965, Ser. No. 426,287

The portion of the term of the patent subsequent to Mar. 23, 1982, has been disclaimed

4 Claims. (Cl. 260—2.5)

1. The article of manufacture, derived from an interconnected cell organic thermoplastic cellular material with a three dimensional skeletal structure of interconnected strands and with membranes joined to the strands which divide contiguous cells, which comprises: a reticulated material wherein the cell membranes of the cellular material are destroyed by raising the temperature of the membranes to the destruction point without destroying the strands of the skeletal structure and wherein the skeletal structure remaining after destruction of the cell membranes is fire-polished.

3,390,107

PROCESS FOR PREPARING A CELLULAR FURAN RESIN AND PRODUCT OBTAINED THEREFROM

Irving Tashlick, Rockaway Township, Morris County, and Gabriel M. Grudus, Rockaway, N.J., assignors to International Pipe & Ceramics Corporation, East Orange, N.J., a corporation of Delaware

No Drawing. Filed June 24, 1965, Ser. No. 466,820

6 Claims. (Cl. 260—2.5)

The disclosure concerns a rigid, cellular, expanded furan resin. It is prepared by polymerizing a reaction mixture consisting essentially of a liquid furan resin, an acid catalyst and a blowing agent.

3,390,108
ETHYLENE GLYCOL-TEREPHTHALIC ACID-DIMER ACID COPOLYESTER RESIN

Max H. Keck, Cuyahoga Falls, and John R. Wilson, Akron, Ohio, assignors to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
No Drawing. Filed July 13, 1966, Ser. No. 564,741
13 Claims. (Cl. 260—7.5)

The invention relates to new copolyester resins which are copolyesters of ethylene glycol, terephthalic acid and dimer acid and to products of these copolyesters. The copolyesters contain from 99.5 to 95.0 percent of ethylene terephthalate and from 0.5 to 5 percent of ethylene dimerate. The new copolyester resins have an intrinsic viscosity of at least .3 and a reduce melt viscosity and improved affinity for dyes (fibers) compared to the conventional high molecular weight polyethylene terephthalate polyester resins. The new copolyester resins have utility as films, fibers and textile staple fiber blends.

3,390,109
ALKALI STABLE TERPOLYMER COMPOSITIONS AND PROCESS FOR THEIR MANUFACTURE

André P. Reverdin, Basel, Paul Wicht, Freiburg, and Kurt Volken, Basel, Switzerland, assignors to Lonza Ltd., Gampel, Valais, Switzerland
Filed June 1, 1965, Ser. No. 460,082
Claims priority, application Switzerland, June 2, 1964, 7,186/64
16 Claims. (Cl. 260—17)

Aqueous resin dispersion, of pH between 3 and 5, which is resistant to saponification. The resin dispersion comprises a terpolymer from a component A, which is vinyl chloride, in the proportion between 20 and 40%, a component B, which is a vinyl ester with 1 to 3 carbon atoms in the acid radical, in the proportion between 20 and 50%, and a component C, which has the general structure

$$R_1CH{=}CR_2COOR_3$$

in which R_1=H or $COOR_3$, R_2=H or CH_3, R_3=alkyl group with 4 to 8 carbon atoms in the proportion between 25 and 50%, a nonionic protective colloid, in the proportion between 2 and 6%, a nonionic surface-active agent in the proportion between 0.1 and 3%, the combined amount of said colloid and said surface-active agent being between 2.5 and 8% of the combined weight of the polymers, and a buffering agent, in the amount of 0.3 to 0.5%, the weight percent of said colloid, said surface-active agent and said buffering agent being based on the weight of the terpolymer. The aqueous resin dispersions are suitable for use in hydraulic binders and binding agents for pigments, dyes and fillers.

3,390,110
PROCESS FOR THE PREPARATION OF MODIFIED ALKYD RESINS AND RESULTING PRODUCT

Horst Dallbor, Harksheide, near Hamburg, Germany, assignor to Reichhold Chemicals, Inc., White Plains, N.Y.
No Drawing. Filed June 23, 1964, Ser. No. 377,403
Claims priority, application Germany, Sept. 12, 1963, R 36,103
6 Claims. (Cl. 260—20)

The patent disclosed the following procedures for the preparation of modified alkyd resins:

(a) Carboxylic acids are esterified with polyhydric alcohols in such a manner as to form esters, bearing free hydroxyl groups,

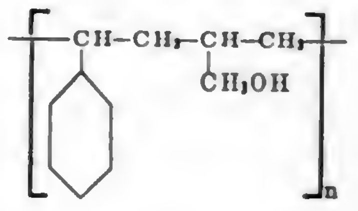
(b) Reaction products of (a) are esterified with carboxylic acids in such a manner as to form esters, bearing free carboxylic groups,

(c) Reaction products of (b) are esterified with phenol-formaldehyde condensation products, which are reacted with a 1, 2 mono-epoxide prior to step c.

3,390,111
VINYL HALIDE RESINS STABILIZED WITH MIXTURES COMPRISING POLYOLS, PHENOLS AND BARIUM, CADMIUM AND ZINC SALTS

James P. Scullin, Pompton Lakes, and Arthur F. Fletcher, Elizabeth, N.J., assignors, by mesne assignments, to Tenneco Chemicals, Inc., a corporation of Delaware
No Drawing. Filed July 3, 1963, Ser. No. 292,711
20 Claims. (Cl. 260—23)

13. A heat and light stable resinous composition comprising a vinyl halide resin and a heat stabilizing amount of a stabilizer comprising (a) a mixture of barium, cadmium, and zinc salts that contains at least one salt having an aromatic anion and at least one salt having an aliphatic anion; (b) a phenolic compound; and (c) a polyhydric alcohol selected from the group consisting of pentaerythritol, sorbitol, mannitol, methyl glucoside, and compounds having the formula

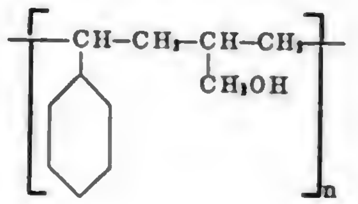


wherein *n* represents a number in the range of 5 to 10, and mixtures thereof in the amounts of approximately 10 parts to 30 parts by weight of said cadmium salt, 25 parts to 45 parts by weight of said barium salt, 5 parts to 30 parts by weight of said zinc salt, 5 parts to 20 parts by weight of said phenolic compound, and 5 parts to 20 parts by weight of said polyhydric alcohol.

3,390,112
VINYL HALIDE RESINS STABILIZED WITH MIXTURES COMPRISING POLYOLS, PHENOLS AND BARIUM AND CADMIUM SALTS

James P. Scullin, Pompton Lakes, and Arthur F. Fletcher, Elizabeth, N.J., assignors, by mesne assignments, to Tenneco Chemicals, Inc., a corporation of Delaware
No Drawing. Filed July 3, 1963, Ser. No. 292,722
20 Claims. (Cl. 260—23)

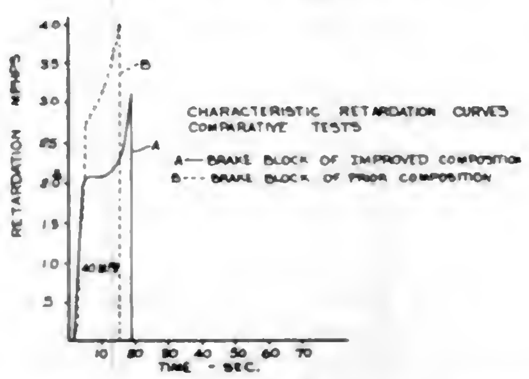
11. A heat and light stable resinous composition comprising a vinyl halide resin and a heat stabilizing amount of a stabilizer comprising (a) a mixture of barium and cadmium salts that contains at least one salt having an aromatic anion and at least one salt having an aliphatic anion; (b) a phenolic compound; and (c) a polyhydric alcohol selected from the group consisting of pentaerythritol, sorbitol, mannitol, methyl glucoside, the compound having the formula



wherein *n* represents a number in the range of 5 to 10, and mixtures thereof in the amounts of approximately 45 parts to 65 parts by weight of said cadmium salt, 20 parts to 40 parts by weight of said barium salt, 5 parts to 15 parts by weight of said phenolic compound, and 5 parts to 15 parts by weight of said polyhydric alcohol.

3,390,113
BRAKE BLOCK COMPOSITIONS COMPRISING VULCANIZED HALOGENATED BUTYL RUBBER

Charles Louis Ernest de Gaugue, Califon, N.J., assignor to Johns-Manville Corporation, New York, N.Y., a corporation of New York
Continuation-in-part of application Ser. No. 198,156, May 28, 1962. This application Jan. 27, 1967, Ser. No. 632,120
12 Claims. (Cl. 260—23.7)



A heavy duty brake block composition containing hard ferrous metal particles, non-ferrous inorganic and organic fillers, and an organic binder matrix comprising a heat resistant, vulcanized in situ halogenated butyl rubber.

3,390,114
BINDERS FOR PIGMENT DYEINGS AND PRINTS ON FIBROUS MATERIAL COMPRISING ADDITION POLYMERS CONTAINING HALOHYDRIN GROUPS AND AN EPOXY COMPOUND

Guenter Uhl, Worms (Rhine), Wolfgang Schwindt and Hans Wilhelm, Ludwigshafen (Rhine), and Gerhard Faulhaber, Mannheim, Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany
No Drawing. Filed Oct. 4, 1965, Ser. No. 492,890
Claims priority, application Germany, Oct. 23, 1964, B 79,025
10 Claims. (Cl. 260—29.6)

A pigment and binder composition in which the binder contains (a) an addition polymer characterized by its essential monomeric unit of an ester of an α,β-unsaturated organic acid with a polyhydric alcohol bearing halogen in vicinal position to a free hydroxyl group, and (b) a compound bearing at least two epoxy groups in the molecule. This composition can be applied to fibrous material, e.g. cellulosic textiles, in a conventional manner and then cured to provide useful pigment dyeings or prints. As one example, the binder may include (a) a copolymer of the acrylic type containing as the essential monomeric unit 10% by weight of 2-hydroxy-3-chloropropyl acrylate, and (b) butanediol diglycidyl ether.

3,390,115
POLYVINYL CHLORIDE ADHESIVE COMPOSITIONS

Hugh J. Hagemeyer, Jr., William J. Gammans, and Alfred G. Robinson III, Longview, Tex., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
No Drawing. Filed Dec. 29, 1964, Ser. No. 422,003
2 Claims. (Cl. 260—31.6)

1. The process for obtaining an exceptionally strong bond comprising contacting the surfaces to be bonded with a composition of matter comprising a mixture of polyvinyl chloride, a plasticizer therefor, and at least one ester selected from the group consisting of the mono- and di-methacrylate esters of 2,2,4-trimethyl-1,3-pentanediol and 2,2-dimethyl-1,3-propanediol, the total amount of said ester and plasticizer comprising from about 40 to about 80 parts/100 parts of said polyvinyl chloride, and thereafter heating the mixture until a cure is obtained.

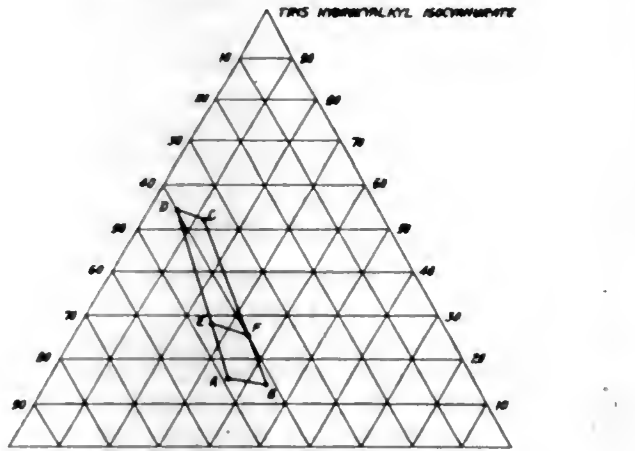
3,390,116
PROCESS FOR THE MANUFACTURE OF SOLUTIONS OF PREPOLYMERS OF A DIALLYLPHTHALATE

Daniel Porret, Basel, Switzerland, assignor to Ciba Limited, Basel, Switzerland, a Swiss company
No Drawing. Filed Oct. 15, 1964, Ser. No. 404,175
Claims priority, application Switzerland, Oct. 25, 1963, 13,136/63
8 Claims. (Cl. 260—32.8)

Solutions of prepolymers of a diallylphthalate can be obtained directly by an inexpensive route by performing the polymerisation in the presence of a liquid ketone, such as acetone or methylethyl ketone, as solvent and of a catalyst capable of forming free radicals, such as hydrogen peroxide, ensuring by the addition of a small amount of a strong acid that the polymerisation solution is always of a weakly acid reaction, i.e. that its pH value remains at 2 to 5.

3,390,117
USE OF ALKYL PHENOL-MODIFIED AMINOPLAST RESINS TOGETHER WITH TITANIUM ION IN COATING SOLUTIONS CONTAINING COPOLYESTERS BASED ON TRIS-HYDROXYALKYL ISOCYANURATES AND DICARBOXYLIC ACIDS

Naaman F. Barr, Pine Township, Allegheny County, Milan J. Getting, Ben Avon, and Jack S. Skinner, Pittsburgh, Pa., assignors, by mesne assignments, to Mobil Oil Corporation, a corporation of New York
Filed Dec. 11, 1964, Ser. No. 417,744
14 Claims. (Cl. 260—33.4)



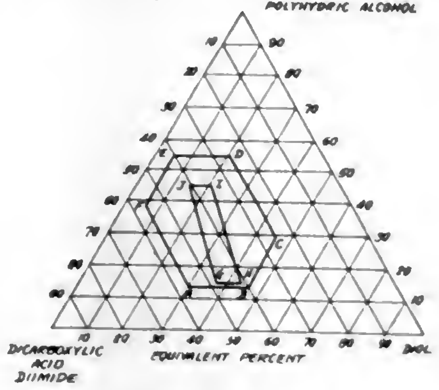
Wire coating solutions yielding improved Emerson scrape resistance are provided by dissolving in an organic solvent including an alkyl phenol component:

(1) certain specific copolyesters formed by the copolyesterification reaction of:
  (A) aromatic dicarboxylic acid;
  (B) aliphatic diol containing from 2–10 carbon atoms; and
  (C) tris-hydroxyalkyl isocyanurate,
(2) an alkyl phenol-modified aminoplast resin; and
(3) titanium ion as catalyst.

3,390,118
RESINOUS COPOLYESTERS COMPRISING ALIPHATIC DIOL, POLYHYDRIC ALCOHOL AND DICARBOXYLIC ACID DIIMIDE AND COATING SOLUTIONS CONTAINING THE SAME

Henry J. Bach, Mount Lebanon, Naaman F. Barr, Pine Township, Allegheny County, Milan J. Getting, Ben Avon, and Jack S. Skinner, Pittsburgh, Pa., assignors, by mesne assignments, to Mobil Oil Corporation, a corporation of New York
Filed July 14, 1965, Ser. No. 471,802
7 Claims. (Cl. 260—33.4)

Organic solvent-soluble non-linear thermosetting copolyesters useful for the provision of high temperature resistant wire enamels are provided based on dicarboxylic acid diimides in place of the conventionally used terephthalic acid. The copolyester includes the dicarboxylic acid diimide as well as aliphatic diol and polyhydric alcohol. The preferred polyhydric alcohol is tris hydroxyalkyl isocyanurate. The copolyester is formulated into wire enamels in which the copolyester is desirably cured with alkyl phenol-modified aminoplast resin and titanium catalyst. These enamels can be used as basecoats or topcoats.



3,390,119

HYDROCARBON OIL-URETHANE COMPOSITIONS

Stephen H. Alexander, St. Louis, Mo., Stewart R. Montgomery, Silver Spring, Md., and Leo J. Spillane, Chesterfield, Mo., assignors to Monsanto Company, a corporation of Delaware
No Drawing. Filed Dec. 4, 1963, Ser. No. 328,115
5 Claims. (Cl. 260—33.6)

The present invention relates to a new and novel composition having particular utility as a coating or molding compound. More particularly, the present invention relates to a composition having particular utility as a coating or molding compound comprised of a particular petroleum derived oil and urethane polymers.

3,390,120

POLYURETHANES CONTAINING AMINO ORGANOSILANE MODIFIED CLAY

Joseph Iannicelli, Macon, Ga., assignor to J. M. Huber Corporation, Locust, N.J., a corporation of New Jersey
No Drawing. Continuation-in-part of application Ser. No. 269,695, Apr. 1, 1963. This application Aug. 16, 1965, Ser. No. 480,090
3 Claims. (Cl. 260—37)

The instant disclosure is directed to the polyurethane polymer compositions which are filled with a kaolin clay which has been modified with from 1% to 3% of an amino organosilane. The modulus and tear resistance of the polymers is improved without degradation of the remaining properties.

3,390,121

COLOR INDICATION IN POLYESTER RESIN CURING

Bruce Lee Burford, Brooklyn, and Otto S. Kauder, Jamaica, N.Y., assignors to Argus Chemical Corporation, Brooklyn, N.Y., a corporation of New York
No Drawing. Filed June 16, 1964, Ser. No. 375,634
17 Claims. (Cl. 260—40)

Uniform blending of a curing catalyst in the curing of polyester resins is achieved by including a color indicating compound in the polyester resin curing composition. The compositions of the invention include as the indicator a diphenylamine compound having at least one additional resonating group, i.e. a bivalent sulfur, a bivalent imino or a monovalent amino group, which in the presence of a peroxide curing catalyst gives a fugitive color which disappears during the curing.

3,390,122

HYDROCARBON-SULFONIC ACID LATENT CATALYSTS FOR THERMOSETTING COMPOSITIONS

Robert Louis Heppolette, Toronto, Ontario, James David Murdock, St. Hilaire, Quebec, and Mirko Ternbah, McMasterville, Quebec, Canada, assignors to Canadian Industries Limited, Montreal, Quebec, Canada, a corporation of Canada
No Drawing. Filed Apr. 12, 1965, Ser. No. 447,537
Claims priority, application Canada, Apr. 25, 1964, 901,300
13 Claims. (Cl. 260—40)

Hydrocarbon-sulphonic esters of primary alcohols and alkali metal salts of alkyl sulphuric and hydrocarbonsulphonic acids are used as latent catalysts in thermosetting compositions comprising compounds containing at least two dihydropyranyl groups per molecule and compatible polyhydroxyl compounds reactive therewith.

3,390,123

MOLDING COMPOSITIONS

James D. Frichette, Seattle, Wash., assignor, by mesne assignments, to Weyerhaeuser Company, Tacoma, Wash., a corporation of Washington
No Drawing. Filed Mar. 9, 1962, Ser. No. 178,571
3 Claims. (Cl. 260—47)

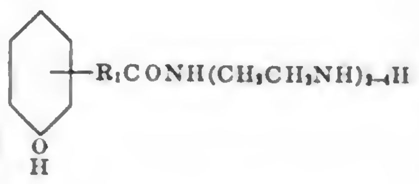
1. A method of producing a stable and non-segregating epoxy resin molding composition convertible under application of heat and pressure to a thermoset condition and containing an epoxy resin having an epoxy equivalency of at least 3 and a curing agent coreactive with said resin in intimate association with and substantially unreacted with one another comprising, mixing in the absence of liquid carriers finely divided normally solid epoxy resin and finely divided normally solid curing agent coreactive with said resin in the substantial absence of kneading forces and subjecting said mixture to momentary pressure to densely compact said mixture.

3,390,124

EPOXY RESINS CURED BY NOVEL POLYAMINES

John B. Kittridge, White Bear Lake, Minn., and Albert L. Micchelli, Newark, N.J., assignors to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
No Drawing. Original application Feb. 28, 1962, Ser. No. 176,428. Divided and this application Aug. 19, 1965, Ser. No. 493,296
1 Claim. (Cl. 260—47)

1. A composition comprising a polyamine terminated phenol having the structural formula



where R_1 is a hydrocarbon radical and an epoxy resin having a plurality of vicinal epoxide groups.

3,390,125

PROCESS FOR PREPARING A POLYPHENYLENE ETHER BY OXIDATION OF PHENOLS WITH NICKEL PEROXIDE

Hans-Dieter Becker, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
No Drawing. Filed Sept. 13, 1966, Ser. No. 579,001
4 Claims. (Cl. 260—47)

High molecular weight poly(2,6 - disubstituted - 1,4-phenylene)ethers are prepared from 2,6-dimethylphenol, 2-phenyl-6-methylphenol or 2,6-diphenylphenol by oxidation with nickel peroxide.

3,390,126

BLOOM CONTROL FOR SULFUR CURABLE SYNTHETIC ELASTOMERS

Bernard J. Davis, Houston, Tex., assignor to Reichhold Chemicals, Inc., White Plains, N.Y.
No Drawing. Filed Apr. 26, 1965, Ser. No. 451,044
12 Claims. (Cl. 260—79.5)

A process for controlling bloom in sulfur curable synthetic elastomers which comprises sulfur curing such elastomers in the presence of a small quantity of a bloom reducing agent comprising a hydroxy alkyl ether of a dihydric phenol.

3,390,127

WATER-SOLUBLE KETONE-ALDEHYDE-PHENOL RESINS AND PROCESS OF MAKING SAME

John W. Schick and John H. Stockinger, Cherry Hill, and Robert M. Gemmill, Jr., Woodbury, N.J., assignors to Mobil Oil Corporation, a corporation of New York
No Drawing. Continuation of application Ser. No. 354,435, Mar. 24, 1964. This application Sept. 28, 1967, Ser. No. 671,488
8 Claims. (Cl. 260—50)

A water-soluble, thermosettable resin is produced by reacting an aldehyde, a ketone, and a phenol in a one-step polycondensation reaction that is catalyzed with a base. In the final resin product the molar proportions of aldehyde, ketone, and phenol present are between about 3 and about 6 moles of the aldehyde, between about 1 and about 1.5 moles of the ketone per mole of the phenol. These resins are useful as binders for bonded products made from fibers, particles, or sheets, which bonded products possess properties of high bond strength and are resistant against weakening of the bond from exposure to water.

3,390,128

RESIN COMPOSITION AND METHOD OF PREPARING SAME, SAID RESIN RESULTING FROM THE REACTION OF BISPHENOL, FORMALDEHYDE AND A SPACED POLYPHENOL

George K. Hughes, Waukegan, William D. Coder, Jr., Barrington, and Milton A. Glaser, Glencoe, Ill., assignors, by mesne assignments, to The Dexter Corporation, a corporation of Connecticut
No Drawing. Filed Nov. 19, 1965, Ser. No. 508,848
13 Claims. (Cl. 260—51)

The disclosure relates to synthetic resins, and a method of making such resins by reacting formaldehyde with a bisphenol and a spaced polyphenol containing at least two phenolic groups per molecule, said phenolic groups being joined by aliphatic hydrocarbons of from about 12 to 30 carbon atoms. These resins are suitable for coating and impregnating purposes, and can be used as adhesives or binders, or in molding and laminating materials such as paper or wood or other cellulosic materials or asbestos or the like.

3,390,129

POLYMERIZATION OF CYCLIC ETHERS USING A CATALYST SYSTEM COMPRISING ALUMINUM HALIDE ETHERATE

Junji Furukawa and Takeo Saegusa, Kyoto, and Hirosuke Imai, Takatsuki, Japan, assignors to Nippon Oil Company, Limited, Tokyo, Japan, a corporation of Japan
No Drawing. Filed Aug. 14, 1964, Ser. No. 389,786
Claims priority, application Japan, Aug. 19, 1963, 38/44,252
12 Claims. (Cl. 260—67)

1. A method of polymerizing cyclic ethers which comprises polymerizing at a temperature of from about —100° to about 250° C. an ether selected from the group consisting of a cyclic ether and a mixture of cyclic ethers in the presence of a cataylst system comprising from about 1×10^{-5} to about 1 gram atom calculated as aluminum per mole of ether of the non-volatile residue produced by the thermal decomposition of an aluminum halide etherate.

2. A method according to claim 1 wherein said catalyst system additionally contains from about 1×10^{-4} to about 1 mole per mole of monomer of a co-catalyst capable of liberating an ion selected from the group consisting of carbonium and oxonium ions on reaction with a Lewis acid.

3,390,130

PROCESS FOR THE PRODUCTION OF CYCLIC SULPHONYL NITROGENOUS CO-POLYMERS OF FORMALDEHYDE

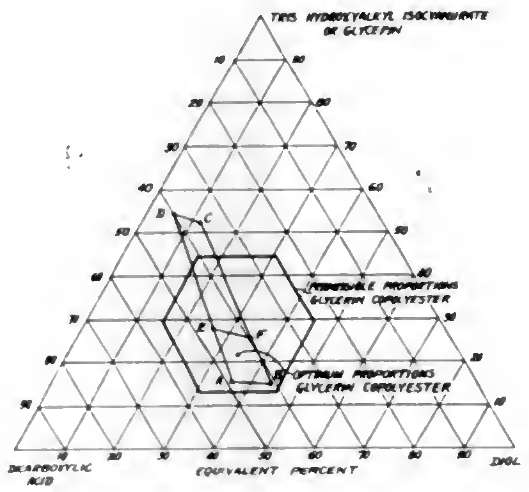
Ernst-Ulrich Kocher, Leverkusen, Otto Bayer, Burscheid, and Kuno Wagner and Wolfgang von der Emden, Leverkusen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a German corporation
No Drawing. Filed May 3, 1965, Ser. No. 452,860
Claims priority, application Germany, July 2, 1964, F 43,327
14 Claims. (Cl. 260—67.5)

Copolymers based on trioxane and N-sulphonyl aziridines having improved thermostability.

3,390,131

COPOLYESTER OF TRIS-HYDROXYALKYL ISOCYANURATE

Gerald P. Roeser, Lahaska, Pa., assignor, by mesne assignments, to Mobil Oil Corporation, a corporation of New York
Filed Oct. 4, 1963, Ser. No. 313,934
4 Claims. (Cl. 260—75)



1. An organic solvent soluble thermally convertible copolyester possessing improved elevated temperature exposure resistance and consisting essentially of the copolyesterification reaction product of:

(A) aromatic dicarboxylic acid consisting essentially of terephthalic acid;

(B) aliphatic diol containing from 2–10 carbon atoms; and

(C) tris-hydroxyalkyl isocyanurate;

the equivalent proportions of said components (A), (B) and (C) being defined by the closed area E–F–C–D–E in the accompanying triangulation, said copolyester having a specific viscosity in the range of from 0.15 to 0.30, viscosity being measured at 77° F. in a 1 gram per deciliter solution in a solvent mixture of 60 parts of phenol to 40 parts of tetrachlorethane.

3,390,132
POLYESTER RESINS

John F. Walker, Wilmington, Del., assignor to Hercules, Incorporated, a corporation of Delaware
No Drawing. Filed May 27, 1964, Ser. No. 370,698
2 Claims. (Cl. 260—75)

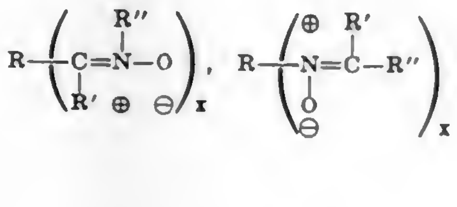
1. A linear thermoplastic polyester resin having a specific viscosity of at least about 0.4 as measured at 25° C. on a 1% solution of said resin in a 60:40 by weight mixture of phenol and tetrachloroethane, and made by the melt polymerization of reactants consisting essentially of

(1) acid material of which
  (a) about 25–40 mole percent thereof is selected from the group consisting of hexahydroterephthalic acid and lower dialkyl esters thereof, and
  (b) about 75–60 mole percent of which is selected from the group consisting of terephthalic acid and lower dialkyl esters thereof, and
(2) a glycol having the formula $HO(CH_2)_nOH$, wherein n is a whole number of 2–10, said glycol being in excess of one mole per mole of said acid material.

3,390,133
CROSS-LINKED POLYMERS AND THE PROCESS FOR THEIR PREPARATION

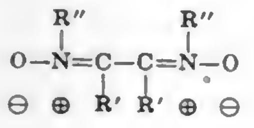
David S. Breslow, Munich, Germany, assignor to Hercules Incorporated, a corporation of Delaware
No Drawing. Filed Apr. 13, 1965, Ser. No. 447,905
16 Claims. (Cl. 260—75)

Unsaturated polymers can be cross-linked with polyfunctional nitrones having the general formulae



$$R\left(\underset{R'}{C}=\underset{\oplus}{\overset{R''}{N}}-\underset{\ominus}{O}\right)_x,\quad R\left(\underset{\underset{\ominus}{O}}{\overset{\oplus}{N}}=\overset{R'}{C}-R''\right)_x$$

and



$$\underset{\ominus}{O}-\underset{\oplus}{\overset{R''}{N}}=\underset{R'}{C}-\underset{R'}{C}=\underset{\oplus}{\overset{R''}{N}}-\underset{\ominus}{O}$$

where R is a radical selected from the group consisting of alkylene, cycloalkylene, arylene, arylene-dialkylene, alkylene-diarylene, cycloalkylene-dialkylene and arylene-dicarbonyl; R′ is a radical selected from the group consisting of hydrogen, alkyl, aryl, alkaryl and aralkyl; R″ is a radical selected from the group consisting of alkyl, aryl, alkaryl and aralkyl; and x is an integer greater than 1.

3,390,134
PREPOLYMER CRYSTALLIZATION AND SOLID PHASE POLYMERIZATION

Charles Jacob Kibler, Kingsport, Tenn., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
No Drawing. Continuation-in-part of application Ser. No. 259,370, Feb. 18, 1963. This application Jan. 16, 1967, Ser. No. 609,322
10 Claims. (Cl. 260—75)

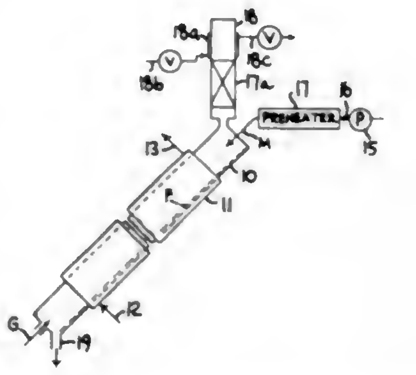
An improved solid phase polymerization process for building up the molecular weight of a linear polyester containing branched chain alkylene radicals, said improvement comprising, prior to build up, the preliminary crystallization in a volatile liquid (e.g., acetone, aqueous acetone, tetrachloroethane, methanol, ethyl acetate, etc.) of a prepolymer of said linear polyester containing branched chain alkylene radicals.

3,390,135
CONTINUOUS POLYESTER PROCESS

Jerome A. Seiner, Pittsburgh, Pa., assignor to Pittsburgh Plate Glass Company, Pittsburgh, Pa., a corporation of Pennsylvania

Continuation-in-part of application Ser. No. 221,105, Sept. 4, 1962. This application Apr. 25, 1967, Ser. No. 633,590

17 Claims. (Cl. 260—75)



This application relates to a method of, and apparatus for, forming polymeric polyesters by the direct esterification of dicarboxylic acids and polyhydric alcohols wherein the polyester product is formed in a continuous operation, the reactants being mixed and heated in a closed preheating zone to a temperature above about 400° F., whereupon the reaction mixture is discharged from the preheating zone and attenuated, exposing a large surface area to a continuous gas or vapor phase, thereby liberating and removing water of esterification to complete the polyesterification reaction.

3,390,136
2,3 - BIS - (DIFLUORAMINO) - BUTANE - 1,4-DIISOCYANATE AND POLYURETHANES PREPARED THEREFROM

Ralph J. Leary, Cranford, Eugene L. Stogryn, Fords, and Perry A. Argabright, Cranford, N.J., assignors to Esso Research and Engineering Company a corporation of Delaware

No Drawing. Filed Nov. 20, 1961, Ser. No. 154,391

3 Claims. (Cl. 260—77.5)

The compound 2,3-bis-(difluoramino)-butane-1,4-diisocyanate is prepared by addition reaction of 2-butene-1,4-diisocyanate with N_2F_4 and is useful for producing high-energy polyurethanes.

3,390,137
FLEXIBLE POLYUREAS

Isidor Kirshenbaum, Westfield, and Constantine J. Bouboulis, Union, N.J., and Charles M. White, Miami, Fla., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Oct. 18, 1965, Ser. No. 497,560

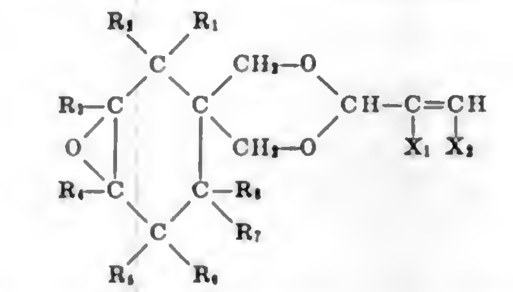
9 Claims. (Cl. 260—77.5)

A process for preparing high molecular weight, clear, hard, flexible polyurea wherein diamines are reacted with urea in the presence of excess diamine, the diamine to urea ratio being 1.6:1 to 3:1. This process makes possible the preparation of uniform noncrosslinked, high molecular weight linear alkyl diamine-urea condensates without the use of conventional solvents.

3,390,138
EPOXIDES

Hans Batzer, Arlesheim, Otto Ernst, Pfeffingen, and Daniel Porret, Basel, Switzerland, assignors to Ciba Limited, Basel, Switzerland, a Swiss company
No Drawing. Continuation-in-part of application Ser. No. 63,956, Oct. 21, 1960. This application Mar. 11, 1964, Ser. No. 351,235
Claims priority, application Switzerland, Oct. 23, 1959, 79,779/59
6 Claims. (Cl. 260—78.4)

1. A hardenable composition of matter which comprises (1) a 1,2-epoxide compound having a 1,2-epoxy equivalency greater than 1, (2) a monoepoxide of the formula



in which R_1 and R_5 taken together form a member selected from the group consisting of two hydrogen atoms, two lower alkyl radicals of 1 to 4 carbon atoms and the methylene group, R_2, R_3, R_4, R_6, R_7, R_8 and R_9, each represent a member selected from the group consisting of hydrogen and lower alkyl of 1 to 4 carbon atoms, and X_1 and X_2 each are members selected from the group consisting of hydrogen and methyl, and (3) a member selected from the group consisting of dicarboxylic and polycarboxylic acid anhydrides.

3,390,139
N-VINYL-2-PIPERAZINONES

Peter L. de Benneville, Philadelphia, Pa., assignor to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware
No Drawing. Filed Mar. 4, 1964, Ser. No. 349,485
19 Claims. (Cl. 260—78.5)

This invention is directed to certain N-vinyl-2-piperazinones and to a method for preparing these novel compounds. The invention further relates to homopolymers of the N-vinyl-2-piperazinones and to copolymers of the novel piperazinones with other ethylenically unsaturated monomers. The copolymers of this invention are useful as thickening agents for starch-water mixtures, and are valuable as additives to lubricating oil and gasoline compositions. Furthermore the copolymers may be used in coating formulations and are also effective as aggregants for soils.

3,390,140
PROCESS FOR THE COPOLYMERIZATION OF CARBON BISULFIDE WITH AN OLEFINIC ORGANIC COMPOUND

Harold M. Pitt, Lafayette, and Ferenc M. Pallos, Concord, Calif., assignors to Stauffer Chemical Company, New York, N.Y., a corporation of Delaware
No Drawing. Filed Mar. 16, 1966, Ser. No. 534,657
19 Claims. (Cl. 260—79)

Process for preparing copolymers and terpolymers by contacting carbon bisulfide with an α-olefin or a conjugated diene in an inert atmosphere using a Ziegler-type catalyst of (A) alkyl aluminum dihalide, alkyl aluminum sesquihalide, dialkyl aluminum bromide, dialkyl aluminum chloride·solvent-complex, or trialkyl aluminum·solvent-complex and a compound of a transition metal of Group IV–VIII; (B) dialkyl aluminum chloride stoichiometric complexes with a compound of a transition metal of Group IV–VIII, or (C) trialkyl aluminum stoichiometric-complexes with a compound of a transition metal of Group IV–VIII, at pressures between atmospheric and superatmospheric up to about 100 atmospheres and at temperatures ranging from about −20° C. to about 100° C.

3,390,141
COPOLYMERIZATION PROCESS

Harry F. Richards, Walnut Creek, Calif., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware
No Drawing. Filed Oct. 9, 1964, Ser. No. 402,945
4 Claims. (Cl. 260—88.2)

1. In a process for the production of a modified crystallizable polyalkene of the group consisting of polyethylene and random copolymers of ethylene with from 5 to 60 mol percent of an alpha-monoolefin of from 3 to 18 carbon atoms per molecule by contact of the polymerization feed components in liquid phase with a catalyst from the group consisting of halides of titanium and vanadium, and hydrocarbon-soluble compounds of vanadium, and, as cocatalyst, an organoaluminum compound, the improvement which comprises continually adding said feed components to a liquid reaction mixture containing said catalyst while simultaneously continually adding to said reaction mixture an amount of styrene sufficient to result in a polymerization product containing from 0.01 to 7 weight percent styrene characterized by a lower molecular weight than polyalkene produced under identical conditions except for omission of styrene from the polymerization mixture.

3,390,142
PROCESS OF SUSPENSION POLYMERIZATION OF VINYL MONOMERS

Gianni Benetta and Gennaro Cinque, Milan, Italy, assignors, by mesne assignments, to Montecatini Edison S.p.A., Milan, Italy
No Drawing. Filed Sept. 17, 1963, Ser. No. 309,395
Claims priority, application, Italy, Sept. 20, 1962, Patent 674,764
9 Claims. (Cl. 260—92.8)

In a process for the suspension polymerization of a monomeric component consisting essentially of homopolymerizable or copolymerizable vinylic monomers wherein the polymerization is carried out in an aqueous vehicle in the presence of a water-soluble suspending agent and a monomer-soluble suspending agent to form particles of the polymer, and wherein the spreading coefficient S of the monomer on the water can be represented as $S=\gamma_s-\gamma_l-\gamma_0$, the improvement wherein a water-surface-tension modifier, from the group of aliphatic alcohols having 2 to 15 carbon atoms, aliphatic acids having 2 to 10 carbon atoms, and organosiloxanes, is added to the system in an amount between 0.001 and 10% by weight of the monomer component to adjust the spreading coefficient S to approximately zero.

3,390,143
PROCESS FOR THE PRODUCTION OF VINYLCHLORIDE POLYMERS BY LOW-TEMPERATURE POLYMERIZATION IN THE PRESENCE OF A CERIC SALT CATALYST AND AN ORGANOMETALLIC REDUCING AGENT

Carlo Nicora, Varese, and Giancarlo Borsini, Milan, Italy, assignors to Montecatini Edison S.p.A., Milan, Italy,
No Drawing. Continuation-in-part of application Ser. No. 444,811, Apr. 1, 1965. This application Feb. 16, 1966, Ser. No. 527,745
Claims priority, application Italy, Feb. 22, 1965, 3,608/65
8 Claims. (Cl. 260—92.8)

A process for the production of vinylchloride polymers and copolymers by the polymerization at a temperature between substantially −60° C. and 0° C. of a monomeric component containing at least 75% vinylchloride in the presence of a redox-catalyst system consisting essentially of a tetraalkyl lead, a tetravalent-cerium salt and a solvent for said salt, in which the polymerization reaction is terminated at a predetermined degree of conversion of said monomeric component to polymer by introducing into the reaction mass between 0.001 and 5 parts by weight per 100 parts by weight of said monomeric component of at least one peroxydic polymerization-stopping agent having the general formula

$$R—O—O—H$$

where R is selected from the group consisting of hydrogen, alkyl, aralkyl, cycloalkyl and alkyl derivatives of cycloalkyl radicals and their α-hydroxy, α-hydroperoxy, α-alkylperoxy and halide derivatives; aryl-halide, acyl and aroyl radicals and their halide derivatives; and alkyloxycarbonyl, aryloxycarbonyl, alkylidene, heterocyclic and alkenylic radicals.

3,390,144

PROCESS FOR THE SELECTIVE REMOVAL OF SUBSTITUTED PHENYLSULFENYL PROTECTIVE GROUPS IN THE SYNTHESIS OF PEPTIDES

Werner Kessler, Loerrach, Baden, Germany, and Beat Iselin, Riehen, Switzerland, assignors to Ciba Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Aug. 24, 1965, Ser. No. 482,281

Claims priority, application Switzerland, Sept. 10, 1964, 11,803/64; Jan. 26, 1965, 1,067/65; Aug. 6, 1965, 11,108/65

20 Claims. (Cl. 260—112.5)

A process for the synthesis of peptides, in which the α-amino protecting group or groups is a sulfenyl group (e.g. o-nitrophenylsulfenyl) which is selectively eliminated by treatment in a weakly acid medium with a compound containing di- or tetra-valent nucleophilic sulfur or with hydrazoic or hydrocyanic acid or a salt thereof or with a salt of hydriodic acid, especially an alkali metal salt. The process may be carried out, if desired, by solid phase synthesis.

3,390,145

WATER-INSOLUBLE MONOAZO DYES

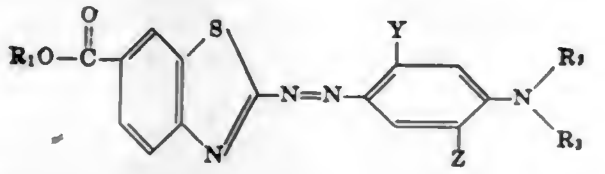
Hans Guenter Wippel, Ludwigshafen (Rhine), Germany, assignor to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

No Drawing. Filed Jan. 17, 1966, Ser. No. 520,867

Claims priority, application Germany, Jan. 20, 1965, B 80,179

7 Claims. (Cl. 260—158)

1. A dye of the formula:



wherein:

R_1 represents an alkyl radical having 1 to 4 carbon atoms,

R_2 represents an alkyl radical having 1 to 4 carbon atoms or an alkyl radical having 1 to 4 carbon atoms and being substituted by a hydroxy, methoxy or acetyloxy group,

R_3 represents an alkyl radical having 1 to 4 carbon atoms and being substituted by a hydroxy, cyano, acetyloxy, carbomethoxyacetyl, acetylamino or chloro group,

Y represents hydrogen, chloro, methyl or acetylamino, and

Z represents hydrogen or methoxy.

3,390,146

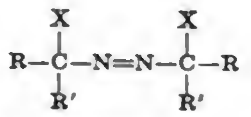
PREPARATION OF AZO COMPOUNDS

Cyril H. Nield and James Clarke, Morristown, and Constantinos G. Screttas, Knoxville, Tenn., assignors to Chemetron Corporation, Chicago, Ill., a corporation of Delaware

No Drawing. Filed Apr. 7, 1964, Ser. No. 358,063

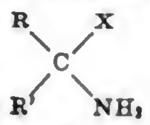
5 Claims. (Cl. 260—192)

1. In a process for preparing compounds of the formula



$$R-\overset{\overset{\displaystyle X}{|}}{\underset{\underset{\displaystyle R'}{|}}{C}}-N=N-\overset{\overset{\displaystyle X}{|}}{\underset{\underset{\displaystyle R'}{|}}{C}}-R$$

from a compound of the formula



wherein R in the above formulae is selected from the group consisting of lower alkyl, cycloalkyl, phenyl and lower alkoxyalkyl, R' is lower alkyl or R and R' together forming cycloalkyl or phenyl and X is selected from the group consisting of nitrile, alkali and alkaline earth lower alkyl carboxylate and a lower alkyl carboxylic ester group, by oxidation of said compound with an aqueous alkali metal or alkaline earth metal hypohalite solution to form the desired end azo product, the improvement comprising conducting said oxidation at a temperature of at least about 20° C. while maintaining the pH of the reaction mixture between about 10–13.

3,390,147

α-(THIENYL-2)-4-STILBENOL

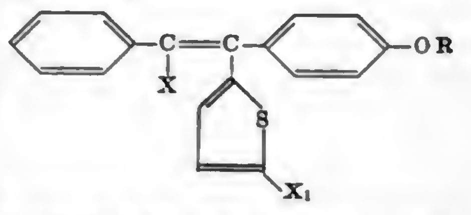
Roland Charles Jaeger, Mulhouse, Haut-Rhin, France, assignor to Societe Anonyme pour l'Industrie Chimique, Mulhouse-Dornach, Haut-Rhin, France

Filed Mar. 27, 1964, Ser. No. 355,304

Claims priority, application France, Nov. 20, 1963, 954,404

13 Claims. (Cl. 260—240)

New α-(thienyl-2)-4-stilbenols are provided which have the following formula



wherein X is selected from the group consisting of H and Br, X_1 is selected from the group consisting of H and Br, and R is selected from the group consisting of benzyl, acetyl, α-carboxylic aliphatic group of the formula

$$CR_1R_2—CO_2H$$

and corresponding Zn salts thereof, and phosphorated group of the formula $PO(OR_3)(OR_4)$, R_1 and R_2 being selected from the group consisting of H and lower alkyl and R_{13} and R_4 being selected from the group consisting of H, lower alkyl, phenyl and sodium.

3,390,148

NOVEL THIAZINE AND THIAZOLINE ANTHELMINTIC AGENTS

William C. Austin, Bishops Stortfield, England, Lloyd H. Conover, Quaker Hill, and James W. McFarland, Lyme, Conn., and Derek H. Morgan, Littlebourne, near Canterbury, England, assignors to Chas. Pfizer & Co., Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed July 28, 1965, Ser. No. 475,555

13 Claims. (Cl. 260—240)

A series of 2-[W-(2-thienyl)alkyl]-, 2-[2-(2-thienyl) vinyl]-, and the corresponding isomeric 3-thienyl derivatives of thiazoline and 5,6-dihydro-4H-1,3-thiazine and the non-toxic acid addition salts thereof as agents for the control of helminthiasis, and methods for their preparation.

3,390,149

PROCESS FOR THE PRODUCTION OF β-QUINOPHTHALINES

Joachim Kranz, Ludwigshafen (Rhine), and Wolfgang Gerstner, Heidelberg, Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

No Drawing. Filed Sept. 22, 1965, Ser. No. 489,399

Claims priority, application Germany, Sept. 25, 1964, B 78,669; Apr. 3, 1965, B 81,294; July 22, 1965, B 82,950

8 Claims. (Cl. 260—240.7)

Process for the production of β-quinophthalines by reacting a phthalodinitrile with aqueous alcoholic hydrochloric acid to form a 3-iminophthalimidine which after isolation is in turn reacted with α-picoline, a quinaldine or a benzoquinaldine.

3,390,150

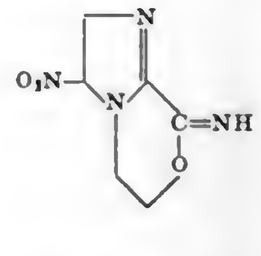
PROCESS FOR THE PREPARATION OF 1-(β-HYDROXYETHYL) - 5 - NITROIMIDAZOLE - 2 - CARBOXYLIC ACID γ-LACTONE

David W. Henry, Menlo Park, Calif., assignor to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Application July 22, 1966, Ser. No. 567,060, now Patent No. 3,341,549, dated Sept. 12, 1967, which is a continuation-in-part of application Ser. No. 300,675, Aug. 7, 1963. Divided and this application May 22, 1967, Ser. No. 654,291

1 Claim. (Cl. 260—244)

The process of this invention concerns the preparation of 1-(β-hydroxyethyl-5-nitroimidazole-2-carboxylic acid γ-lactone by reacting 1-(β-hydroxyethyl)-2-cyano-5-nitroimidazole with an alkali metal alkoxide to produce the iminoether,



and contacting this compound with a mineral acid. The lactone is an intermediate for the preparation of 1-(β-hydroxyethyl)-5-nitroimidazole-2-carboxamide which possesses antihistomonal and antitrichomonal activity. Other related nitroimidazoles are disclosed.

3,390,151

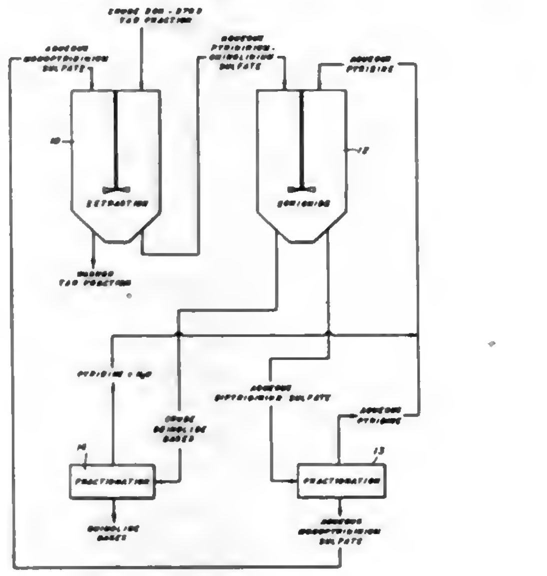
METHOD OF RECOVERING QUINOLINE BASES

Philip X. Masciantonio, Penn Township, Westmoreland County, and William E. Peoples, North Huntingdon Township, Westmoreland County, Pa., assignors to United States Steel Corporation, a corporation of Delaware

Filed Sept. 16, 1965, Ser. No. 487,793

1 Claim. (Cl. 260—283)

A cyclic method of recovering quinoline bases from a crude coal tar fraction. The tar is treated with monopyridinium sulfate to obtain an extract of quinoline bases. The extract is treated with pyridine to spring the quinoline bases and produce dipyridinium sulfate. The latter is fractionated to recover pyridine and monopyridinium sulfate for re-use in the process.



3,390,152

9,10-ALKOXY-3-ALKYL-2,2-(DITHIOSUBSTITUTED)-BENZOQUINOLIZINES

Michael Raymond Harnden, Waukegan, Ill., assignor to Abbott Laboratories, North Chicago, Ill., a corporation of Illinois

No Drawing. Filed Oct. 21, 1965, Ser. No. 500,228

5 Claims. (Cl. 260—286)

3,9,10-trisubstituted 1,2,3,4,6,7-hexahydro-11b-H-benzo [a]quinolizines carrying sulfur containing functions in the 2-position are described. These compounds and their nontoxic salts are active tranquilizers and useful in the treatment of anxiety.

3,390,153

PROCESS FOR PREPARING 4-METHYL-5-ALKOXY OXAZOLES

John M. Chemerda, Watchung, and Elbert E. Harris, Westfield, N.J., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Filed Nov. 5, 1965, Ser. No. 506,576

4 Claims. (Cl. 260—307)

1. A process for preparing 4-methyl-5-lower-alkoxy oxazoles which comprises reacting a lower alkyl ester of α-diazopropionic acid with hydrogen cyanide.

3,390,154

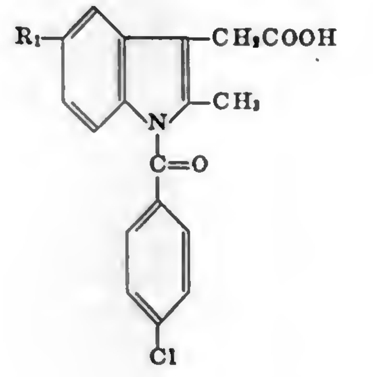
PROCESS FOR PREPARING 3-INDOLYL ACETIC ACIDS

George Gal, Summit, N.J., assignor to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Filed Sept. 9, 1966, Ser. No. 578,150

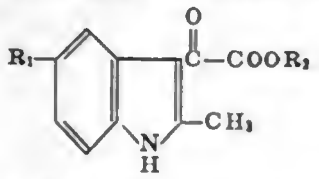
5 Claims. (Cl. 260—326.13)

1. A process for preparing a 3-indolyl acetic acid compound of the formula

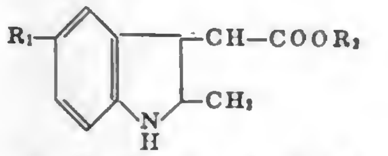


wherein R_1 may be methoxy or dimethylamino; which comprises in combination the steps of:

(a) reducing with Raney nickel or with palladium/carbon or aluminum amalgam followed by Raney nickel a glyoxalic acid compound of the formula



wherein R_2 is hydrogen, lower alkyl or tetrahydropyranyl; to form a glycollic acid compound of the formula



(b) if desired, esterifying with an R_2 alcohol said glycollic acid compound to form the corresponding glycollate ester;

(c) admixing said glycollic acid or ester with a p-chlorobenzoyl halide or anhydride under basic conditions to form the corresponding N–1 acyl glycollic acid or ester compound; and

(d) heating said N–1 acyl glycolic acid or ester compound in the presence of at least a catalytic amount of a strong acid to form the desired 3-indolyl acetic acid compound.

3,390,155
NOVEL 9,10-DIHYDRO-9,10-DIOXOANTHRACENE-DIYL-BIS-(4'-CARBAMOYLPHTHALIC ANHYDRIDES)

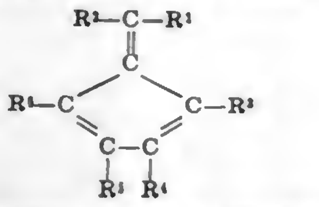
John F. Santimauro, Wyckoff, N.J., and Herman Gerson, New York, N.Y., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York
No Drawing. Filed Dec. 2, 1966, Ser. No. 598,592
3 Claims. (Cl. 260—346.3)

Dianhydrides derived from trimellitic acid and diaminoanthraquinones which are useful as intermediates for the preparation of pigments and polyesters, and as curing agents for epoxy resins.

3,390,156
FULVENE COMPOSITIONS AND POLYMERS

Marvin J. Hurwitz, Elkins Park, Pa., and Donald M. Fenton, Anaheim, Calif., assignors to Rohm and Haas Company, Philadelphia, Pa., a corporation of Delaware
No Drawing. Filed Oct. 11, 1963, Ser. No. 315,663
5 Claims. (Cl. 260—346.8)

1. A Diels-Alder adduct comprising the reaction product of one mole of a fulvene of the formula



in which the substituents R^1 and R^2 are selected from the group consisting of

(1) an alkyl group substituted on its α-carbon by an alkyl group having no more than 4 carbon atoms;

(2) a cycloalkylene group having 5 to 7 carbon atoms in the ring while the other substituent of R^1 and R^2 is a hydrogen atom;

while under both classes (1) and (2) above, R^3 to R^6 is selected from the group consisting of a hydrogen atom, an alkylene group and an alkylene group substituted on its α-carbon atom by an alkyl group having no more than 4 carbon atoms;

(3) an aryl group of 6 to 14 carbon a toms while one of R^3 to R^5 is a branched alkylene group;

(4) an alkylene group having a maximum of 18 carbon atoms and having a terminal ethylenic unsaturation and R^3 to R^5 is a hydrogen atom and

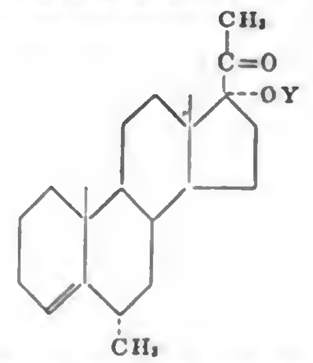
(5) a hydrogen atom while one of the other substituents of R^1 and R^2 is linked with one of R^3 to R^6 to form a cycloalkylene carbocycle having 2 to 6 carbon atoms while the other substituent of R^3 to R^6 that is not linked to one of R^1 to R^2 is a hydrogen atom, with at least one mole of a dienophile selected from the group consisting of methyl acrylate, ethyl acrylate, butyl acrylate, methyl methacrylate, dimethyl acetylene, dicarboxylate, maleic anhydride, itaconic anhydride, methacrylic acid, acrylic acid, dimethyl fumarate, dioctyl fumarate, fumaric acid, dimethyl maleate, diisobutyl maleate, fumaryl chloride, methylfumaric acid, and azo-bis-isobutyronitrile.

3. The Diels-Alder adduct of claim 2 and maleic anhydride.

3,390,157
3-DESOXY-6α-METHYL-17α-OXYGENATED-Δ⁴-PREGNENES

Irving Scheer, Somerville, N.J., assignor to Ortho Pharmaceutical Corporation, a corporation of New Jersey
No Drawing. Filed July 24, 1961, Ser. No. 125,995
7 Claims. (Cl. 260—397.4)

1. A compound having the structure

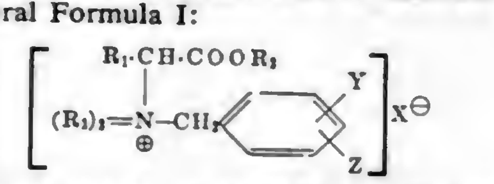


in which Y is a radical selected from the group consisting of hydrogen and alkanoyl radicals.

3,390,158
AROMATIC QUATERNARY AMMONIUM SALTS WITH DISINFECTANT ACTIVITY

Vladimír Janata and Viktor Bydzovsky, Prague, Czechoslovakia, assignors to Spofa, Sdruzeni Podniku pro Zdrovotnickou Vyrobu, Prague, Czechoslovakia
No Drawing. Filed Nov. 30, 1964, Ser. No. 414,833
Claims priority, application Czechoslovakia, Dec. 5, 1963, 6,731
11 Claims. (Cl. 260—404)

Quaternary ammonium salts with disinfectant activity, of the general Formula I:



I

wherein R_1 is a straight or branched aliphatic chain with 10–16 carbon atoms, R_2 is a straight or branched alkyl with 1–8 carbon atoms, cycloalkyl or aralkyl, R_3 is alkyl with 1–4 carbon atoms, and the substituents Y and Z, identical or different, stand for hydrogen, halogen, or methoxy, and X is halogen.

The compounds of the invention are useful as disinfectants and can be made in solid crystalline form.

An example of the compounds of the invention is α-carbethoxypentadecyl-benzyldimethylammonium chloride.

3,390,159
PROCESS FOR PREPARING DIOCTYLTIN OXIDE

Tatsuo Katsumura and Hirohisa Kataoka, Suita-shi, and Yutaka Mizuno, Osaka-shi, Japan, assignors to Nitto Chemical Industrial Co., Ltd., Osaka, Japan, a corporation of Japan
No Drawing. Filed Sept. 16, 1964, Ser. No. 397,013
Claims priority, application Japan, Sept. 19, 1963, 38/49,422
12 Claims. (Cl. 260—429.7)

In accordance with certain of its aspects, the novel process of this invention for producing di-n-octyltin oxide may comprise hydrolyzing di-n-octyltin dihalide with aqueous alkali in the presence of a hydrocarbon solvent thereby forming di-n-octyltin oxide in a reaction mixture; maintaining the temperature of said reaction mixture at 60° C.–100° C. during said hydrolysis; and recovering said di-n-octyltin oxide from said reaction mixture.

3,390,160
PROCESS FOR THE PRODUCTION OF COMPLEX SALTS OF BIS-(O-HYDROXY-ARYL) SULPHIDES AND DIVALENT METALS

Karl-Heinz Heller, Moers, Joachim Nentwig, Krefeld-Bockum, and Hermann Schnell, Krefeld-Urdingen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany
No Drawing. Filed May 4, 1964, Ser. No. 364,812
Claims priority, application Germany, May 17, 1963, F 39,767
5 Claims. (Cl. 260—433)

Free bis-(o-hydroxyaryl)sulphide in specified molar solutions in a water-miscible inert organic solvent is mixed with salts of nickel, copper, cobalt or mercury in a water-miscible inert organic solvent or water of specified mols/liter with resultant direct precipitation of complex salts containing the metal and sulphide in a molecular ratio of 1:2.

3,390,161
PROCESS FOR SEPARATING TRACE QUANTITIES OF AN IMPURITY ISOTOPE FROM A MIXTURE OF ELEMENTS

Anthony V. Fraioli, Essex Fells, N.J., assignor to The Bendix Corporation, Teterboro, N.J., a corporation of Delaware
No Drawing. Filed Sept. 30, 1963, Ser. No. 312,341
8 Claims. (Cl. 260—439)

1. A process for separating trace quantities of gamma emitting isotope of a metal selected from the group consisting of cobalt and mixtures of cobalt and iron from acid solutions having a pH value below 4 containing nickel and a metal selected from the group consisting of cobalt and mixtures of cobalt and iron, comprising adding an inactive isotope of the metal to said solution so that the ratio of inactive isotope to gamma emitting isotope is at least 10^4 parts to 1 part, adding to said solution a precipitating reagent selected from the group consisting of alpha-nitroso beta-naphthol and alpha-nitro beta-naphthol to precipitate in said solution said gamma emitting isotope and said added inactive isotope, and separating the precipitate from the supernatant solution.

3,390,162
ORGANOSILICON COMPOUNDS AND METHOD OF MANUFACTURE

Abe Berger, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
No Drawing. Filed Nov. 13, 1964, Ser. No. 411,084
5 Claims. (Cl. 260—448)

Ketosilanes, such as ethoxydimethylsilylpropylmethyl ketone and dichloromethylsilylpropylmethyl ketone complexes of aluminum chloride, are prepared by reacting alkyl aluminum halides, such as methyl aluminum chloride, with corresponding silylpropionyl chlorides. The complexes are decomposed by reaction with water and the hydrolysis and condensation products of the silanes are useful in the formation of silicone fluids.

3,390,163
OCTAPHENYLTETRACYCLOOCTASILOXANEDIOLS AND METHODS FOR PREPARING THE SAME

John F. Brown, Jr., Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
No Drawing. Filed Apr. 5, 1965, Ser. No. 445,772
6 Claims. (Cl. 260—448.2)

Octaphenyltetracyclooctasiloxanediols are obtained by hydrolysis of a phenylsilane containing three hydrolyzable groups. The compositions have utility as coating and insulating materials and can be condensed with other hydrolyzable silanes to make copolymeric compositions.

3,390,164
CHLORINATED POLYISOCYANATE COMPOSITIONS AND PREPARATION THEREOF

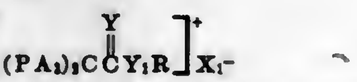
Melvin Kaplan, Tonawanda, N.Y., and Joseph A. Arcesi, Dover, N.J., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York
No Drawing. Filed Oct. 11, 1965, Ser. No. 494,913
6 Claims. (Cl. 260—453)

1. Chlorinated aromatic polyisocyanates containing about 10 to about 30 weight percent chlorine, at least 60 percent of said chlorine being substituted on carbons of an aromatic nucleus, having a viscosity at about 25° C. of 50 to about 5000 cps. and a corrected amine equivalent of about 110 to 150, prepared by chlorinating, at temperatures of from about 70° to 170° C. a toluenediamine phosgenation product having an amine equivalent between about 90 and about 135 and a viscosity between about 20 and about 2000 cps. at about 25° C. said phosgenation product having been prepared by phosgenating a solution of a mixture of about 80% 2,4-toluenediamine and about 20% 2,6-toluenediamine, in an inert solvent, and then distilling said solvent and tolylene diisocyanates from the phosgenation mixture until a toluenediamine phosgenation product is obtained, comprising a tolylene diisocyanate solution of non-volatile solutes, said solution having an amine equivalent and a viscosity in said amine equivalents and viscosity ranges, until a chlorination level of about 10 to about 30 weight percent is attained.

3,390,165
PROCESS FOR THE PREPARATION OF MESOMERIC PHOSPHONIUM ESTER SALTS

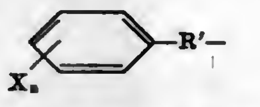
Gail H. Birum, Kirkwood, and Clifford N. Matthews, St. Louis, Mo., assignors to Monsanto Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed Mar. 30, 1966, Ser. No. 538,573
8 Claims. (Cl. 260—455)

1. Process for the preparation of compounds as represented by the formula

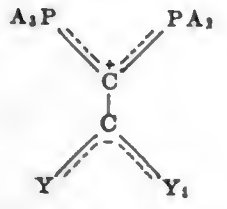


$$\left[(PA_3)_3C\overset{Y}{\overset{\|}{C}}Y_1R\right]^{+}X_1^{-}$$

wherein A is phenyl, X_1 is selected from the group consisting of C1, Br and I, R is an organic radical of not more than 20 carbon atoms selected from the group consisting of alkyl, alkenyl and



wherein R' is alkylene, X halogen, and n is an integer from 0 to 5, and Y and Y_1 are selected from the group consisting of oxygen and sulfur, provided that Y is oxygen when Y_1 is oxygen, which comprises reacting an adduct of hexaphenylcarbodiphosphorane selected from the group consisting of adducts of the formula



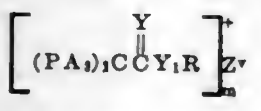
with an organic halide of the formula RX_1 wherein A, R, Y, X_1 and Y_1 are as defined above and when Y_1 is oxygen, Y is oxygen.

3,390,166

MESOMERIC PHOSPHONIUM ESTER SALTS AND PROCESS OF PREPARATION

Gail H. Birum, Kirkwood, and Clifford N. Matthews, St. Louis, Mo., assignors to Monsanto Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed Mar. 30, 1966, Ser. No. 543,765
19 Claims. (Cl. 260—455)

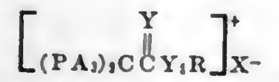
1. Compounds as represented by the formula



$$\left[(PA_3)_2C\overset{Y}{\overset{\|}{C}}Y_1R\right]^{+}_{m}Z^{v}$$

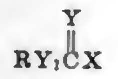
wherein A is phenyl, R is an organic radical of not more than 20 carbon atoms selected from the group consisting of alkyl, aralkyl, haloaralkyl, alkenyl, aryl, alkaryl and haloaryl wherein halo is chloro, bromo or iodo, Y and Y_1 selected from the group consisting of oxygen and sulfur, Z is an anion, *v* is the actual valence of the anion Z and is an integer from 1 to 2, and *m* is an integer equal to *v*.

14. Process of preparing compounds as represented by the formula



$$\left[(PA_3)_2C\overset{Y}{\overset{\|}{C}}Y_1R\right]^{+}X^{-}$$

wherein each A is phenyl, X is Cl, Br or I, R is an organic radical of not more than 20 carbon atoms selected from the group consisting of alkyl, aralkyl, haloaralkyl, alkenyl, aryl, alkaryl and haloaryl wherein halo is chloro, bromo or iodo, Y and Y_1 are selected from the group consisting of oxygen and sulfur, which comprises reacting hexaphenylcarbodiphosphorane with a compound of the formula



$$RY_1\overset{Y}{\overset{\|}{C}}X$$

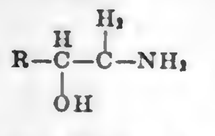
wherein Y, Y_1 R and X are as defined above.

3,390,167

PROCESS FOR THE PREPARATION OF 1-AMINO-2-ALKYLSULFURIC ACIDS

Howard S. Bender, Ridgefield, and Frederic C. Loew, Ridgewood, N.J., and Paul Resnick, Brooklyn, N.Y., assignors to Interchemical Corporation, Clifton, N.J.
No Drawing. Filed Mar. 30, 1965, Ser. No. 444,056
9 Claims. (Cl. 260—458)

A process for preparing 1-amino-2-alkylsulfuric acids by reacting a compound having the formula



$$R-\overset{H}{\underset{OH}{C}}-\overset{H_2}{C}-NH_2$$

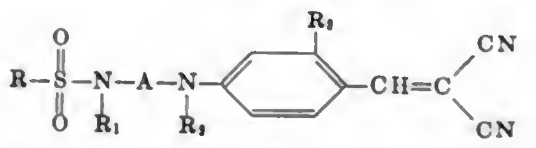
(R being an alkyl group having 1–6 carbon atoms) with liquid sulfur trioxide at a temperature between 0° and 15° C., in a liquid solvent.

3,390,168

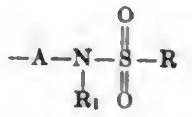
DISPERSE DYESTUFFS

Alfred Brack, Leverkusen, Germany, assignor to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany
No Drawing. Filed Dec. 4, 1964, Ser. No. 416,161
Claims priority, application Germany, Dec. 18, 1963, F 41,573
18 Claims. (Cl. 260—465)

Disperse dyestuffs of the formula:



wherein R means an alkyl, cycloalkyl, aralkyl or aryl radical or a dialkylamino or N-alkyl-N-arylamino group, R_1 means hydrogen, an alkyl, cycloalkyl, aralkyl, aryl, alkylsulphonyl or amidosulphonyl group, R_2 denotes an alkyl, cycloalkyl or aralkyl radical, R_3 means hydrogen, an alkyl or alkoxy radical or a halogen atom, and A denotes an aliphatic chain which can also contain oxygen or sulphur atoms in ether- or thioether linkage; R_1 can also be linked to R or R_3, possibly with the inclusion of further hetero atoms; the radical R_2 can also be the radical



$$-A-\underset{R_1}{N}-\overset{O}{\underset{O}{S}}-R$$

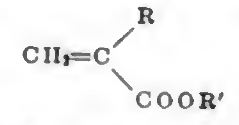
The radicals R, R_1, R_2, A and the benzene ring can contain non-ionic substituents.

3,390,169

FORMATION OF DIELS-ALDER ADDUCTS BY CONTACTING A 1,3-DIENE WITH A MIXTURE OF $AlCl_3$, A HYDROCARBON SOLVENT, AND AN ACRYLIC ACID ESTER DIENOPHILE

Takashi Inukai, 577 Morimachi Isoku-ku, Kanagawa-ken, Japan, and Michio Kasai, 44 Otsutomocho, Kanagawa-ku, Yokohama-shi, Japan
No Drawing. Filed Mar. 22, 1966, Ser. No. 536,284
Claims priority, application Japan, Mar. 29, 1965, 40/18,185
6 Claims. (Cl. 260—468)

A method for producing a Diels-Alder adduct which comprises mixing from 0.01 to 1 mole of anhydrous aluminum chloride with one mole of a dienophile represented by a formula:



wherein R is H or CH_3 and R′ is an alkyl radical having 1 to 20 carbon atoms, in a hydrocarbon solvent to form a complex dissolved in said solvent and then contacting an aliphatic or alicyclic 1,3-diene with the resulting preformed-complex-containing solution at a temperature of from room temperature to about 70° C. The above order of mixing of the reagents is essential for the complete avoidance of side reactions.

3,390,170

TREATMENT OF ESTERS WITH POLYCARBONATES OF DI(MONOHYDROXYARYL)ALKANES

James K. Sears, Webster Groves, Mo., assignor to Monsanto Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed Jan. 21, 1965, Ser. No. 427,111
17 Claims. (Cl. 260—475)

This invention relates to the use of polycarbonate resins to reduce the odor of carboxylic acid esters.

3,390,171

METHOD OF REMOVING POTASSIUM IONS FROM HYDROXYALKYL ALKYL MALEATES

George L. Brownell, Mount Lebanon Township, Allegheny County, Pa., assignor to United States Steel Corporation, a corporation of Delaware
No Drawing. Filed May 6, 1966, Ser. No. 548,074
4 Claims. (Cl. 260—485)

1. A method of removing potassium ions from hydroxyalkyl alkyl maleates prepared by adding an alkylene oxide to a monoalkyl maleate in the presence of potassium hydroxide as a catalyst, said method comprising treating the hydroxyalkyl alkyl maleate with otrhophosphoric acid in an amount to furnish a mole ratio of acid to potassium ions of at least 1 to 1 up to a maximum of 2 to 1, heating the maleate and acid mixture to a temperature of 50 to 80° C. for a period of at least about 30 minutes to about 1 hour, and cooling and filtering the mixture.

3,390,172

N-(3-TRIFLUOROMETHYLPHENYL)-ANTHRANILIC ACIDS

Robert A. Scherrer, Ann Arbor, Mich., assignor to Parke, Davis & Company, Detroit, Mich., a corporation of Michigan
No Drawing. Filed Mar. 27, 1964, Ser. No. 355,488
5 Claims. (Cl. 260—518)

N-(3-trifluoromethylphenyl)anthranilic acid compounds, substituted in the N-aryl ring at position 2 by methyl or halogen and optionally substituted at position 6 by methyl or chlorine, and salts thereof, useful as anti-inflammatory agents, and their production by (a) condensing either an o-halobenzoic acid, or salt thereof, with a 3-amino-2-(methyl or halo)-4-(hydrogen, methyl, or chloro)benzotrifluoride or an o-aminobenzoic acid, or salt thereof, with a 3-halo-2-methyl-4-(hydrogen or methyl)benzotrifluoride, preferably in the presence of a copper-containing catalyst and a proton acceptor, and (b) hydrolyzing an appropriately substituted N-acylated diphenylamine compound, substituted at the position ortho to the N-acyl group by a carboxy group or a group hydrolyzable to a carboxy group.

3,390,173

SOLVENT-BASE SYSTEM AND ITS USE IN ORGANIC REACTIONS

Thomas J. Wallace, Elizabeth, and Alan Schriesheim, Berkeley Heights, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Filed June 10, 1963, Ser. No. 286,501
5 Claims. (Cl. 260—524)

1. An improved solvent-base system for the conversion of organic compounds containing a weakly ionizable carbon to hydrogen bond which consists of a base catalyst capable of extracting a proton from the organic reactant compound and diphenylsulfoxide as the solvent.

2. A process for the oxidation of an organic compound containing a weakly ionization carbon to hydrogen bond which comprises reacting the same with oxygen in contact with a base-solvent system as defined in claim **1** at temperatures of about 20–150° C.

3,390,174

PROCESS FOR THE PREPARATION OF ADIPIC ACID

Johann G. D. Schulz and Arthur C. Whitaker, Pittsburgh, Pa., assignors to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware
No Drawing. Filed June 17, 1964, Ser. No. 375,951
14 Claims. (Cl. 260—533)

1. A process for the selective preparation of an aliphatic dibasic acid which comprises oxidizing a liquid reaction mixture comprising at least one saturated cyclic hydrocarbon having between 5 and 8 cyclic carbon atoms per molecule in the presence of at least an equilibrium concentration of a cyclic alcohol corresponding to said saturated cyclic hydrocarbon and at least an equilibrium concentration of a cyclic ketone corresponding to said saturated cyclic hydrocarbon under oxidation conditions including a temperature between 130° and 160° C. with a gas containing at least 50 percent molecular oxygen while removing the water of reaction substantially as quickly as it is formed, and where in said reaction mixture the sum of the concentrations of said cyclic alcohol and said cyclic ketone are less than 50 weight percent of said reaction mixture.

3,390,175

PROCESS FOR PURIFYING GLUTAMIC ACID

Miyoji Dazai, Yokohama-shi, Kanagawa-ken, and Masahiko Konishi, Kawasaki-shi, Kanagawa-ken, Japan, assignors to Ajinomoto Co., Inc., Tokyo, Japan

No Drawing. Filed Apr. 8, 1964, Ser. No. 358,367

Claims priority, application Japan, Apr. 16, 1963, 38/19,574

3 Claims. (Cl. 260—534)

1. A method of purifying crude glutamic acid which comprises
   (a) preparing an aqueous solution supersaturated with said glutamic acid and containing 0.01 to 5 percent of an anionic or a non-ionic surface active agent selected from the group consisting of alkali metal salts of sulfates of higher alcohols, alkali metal salts of dialkyl esters of sulfosuccinic acid, polyoxyalkylene alkyl aryl ethers, and alkyl aryl polyether alcohols;
   (b) permitting said glutamic acid to crystallize from said solution; and
   (c) separating the crystals of glutamic acid from the remaining solution.

3,390,176

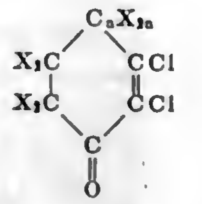
HIGHLY FLUORINATED SURFACE ACTIVE COMPOSITIONS AND PREPARATION THEREOF

Richard F. Sweeney and Henry R. Nychka, Randolph Township, Morris County, N.J., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York

No Drawing. Continuation-in-part of application Ser. No. 373,035, June 4, 1964. This application Oct. 6, 1967, Ser. No. 673,265

10 Claims. (Cl. 260—539)

Highly fluorinated surface active compositions are prepared by reacting fluorine with a compound of the formula:



wherein X is independently selected from the group consisting of Cl and F and *n* is 0 or 1, with the proviso that at least two of the X atoms are F, to form fluorinated intermediates followed by admixing the fluorinated intermediates with an aqueous alkaline solution to produce the highly fluorinated surface active compositions.

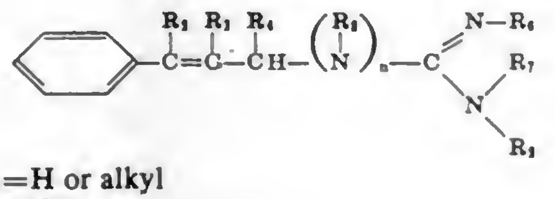
3,390,177
ARALKENYL-AMINOGUANIDINES AND THE SALTS THEREOF

Robert Paul Mull, Florham Park, N.J., assignor to Ciba Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Sept. 27, 1965, Ser. No. 490,656

6 Claims. (Cl. 260—564)

Aralkenyl-aminoguanidines, e.g. those of the formula



R_2 to R_7=H or alkyl
R_8=H or NH_2
n=1 (or 2 if R_8=H)

and acid addition salts thereof exhibit hypotensive effects.

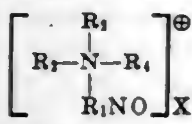
3,390,178
TRIALKYL NITROSO-SUBSTITUTED AROMATIC QUATERNARY AMMONIUM HALIDES

Asher A. Hyatt, Lexington, Mass., assignor to Monsanto Research Corporation, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Dec. 3, 1965, Ser. No. 531,320

2 Claims. (Cl. 260—567.6)

1. Compounds of the formula:



$$\left[\begin{matrix} & R_3 & \\ R_2- & N & -R_4 \\ & R_1NO & \end{matrix}\right]^{\oplus} X^{\ominus}$$

wherein R_1 represents bivalent aromatic hydrocarbon radicals of from 6 to 12 carbon atoms, each of R_2, R_3, and R_4 represents alkyl radicals of from 1 to 6 carbon atoms and X represents a halogen element of atomic weight below 130.

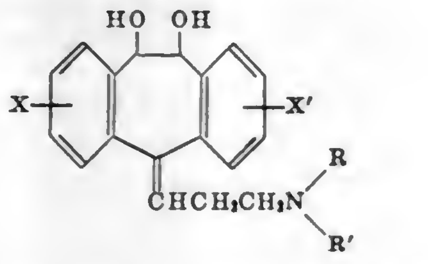
3,390,179
NOVEL 10,11 - DIHYDRO - 10,11 - DIHYDROXY - (3-SUBSTITUTED AMINOPROPYLIDENE) - 5H - DIBENZO[a,d]CYCLOHEPTENES

Howard B. Hucker, Horsham, and Marcia E. Christy, Colemar, Pa., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Filed July 22, 1963, Ser. No. 296,463

4 Claims. (Cl. 260—570.8)

1. A compound selected from the group consisting of compounds having the structural formula



and the non-toxic salts thereof; wherein R and R′ are selected from the group consisting of lower alkyl radicals and lower alkyl radicals linked together through an atom selected from the group consisting of carbon, nitrogen and oxygen to form a heterocyclic ring selected from the group consisting of 1-piperidyl, 1-pyrrolidyl, 4-morpholinyl and 1-loweralkyl-4-piperazinyl; and X and X′ are selected from the group consisting of hydrogen, lower alkyl, lower alkenyl, halogen, trifluoromethyl, hydroxyl, lower alkoxy, mercapto, loweralkyl mercapto, loweralkyl sulfonyl, sulfamoyl, loweralkyl sulfamoyl and diloweralkyl sulfamoyl.

3. 10,11-dihydro-10,11-dihydroxy - 5 - (3 - dimethylaminopropylidene)-5H-dibenzo[a,d]cycloheptene.

3,390,180
PURIFICATION OF BIS(ORTHO-DIAMINO-PHENYL) COMPOUNDS

Celeste Michael Fontana, Gainesville, Fla., and Anthony B. Conciatori, Chatham, N.J., assignors to Celanese Corporation, a corporation of Delaware

No Drawing. Filed Apr. 5, 1965, Ser. No. 445,782

9 Claims. (Cl. 260—582)

The purification of crude bis(ortho-diamino-phenyl) compounds by means of adding a soluble flocculating agent to an aqueous solution of the crude compound, separating the flocculated impurities, and recovering the purified compound from the solution.

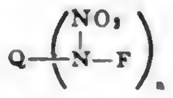
3,390,181
PROCESS FOR PREPARING N-NITRO-N-FLUORO-AMINES

Vytautas Grakauskas, Arcadia, Calif., assignor to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio

No Drawing. Filed Oct. 14, 1964, Ser. No. 404,205

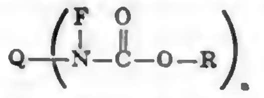
15 Claims. (Cl. 260—583)

1. The method of preparing organic compounds of the formula:



$$Q-\left(\overset{NO_2}{\overset{|}{N}}-F\right)_n$$

which comprises reacting a nitrating agent selected from the group consisting of 100% nitric acid, nitric acid-acetic anhydride mixtures, lower alkyl nitrates, and inorganic nitronium salts; with a compound of the formula:



$$Q-\left(\overset{F}{\overset{|}{N}}-\overset{O}{\overset{\|}{C}}-O-R\right)_n$$

wherein in the above formulae, Q is selected from the group consisting of hydrocarbyl, nitro-substituted hydrocarbyl, halo-substituted hydrocarbyl, hydroxy-substituted hydrocarbyl, sulfo-substituted hydrocarbyl, and carboxyl-substituted hydrocarbyl, R is a hydrocarbyl radical, and n is a small whole number of from 1 to about 5.

3,390,182
METHOD FOR PREPARING AMINE N OXIDES

John Kollar, Wallington, N.J., and Robert S. Barker, Port Washington, N.Y., assignors to Halcon International, Inc., a corporation of Delaware

No Drawing. Filed Dec. 16, 1964, Ser. No. 418,874

5 Claims. (Cl. 260—583)

A method for preparing amine N oxides by the reaction of tertiary amines with organic hydroperoxides in the liquid phase and in the presence of a catalyst.

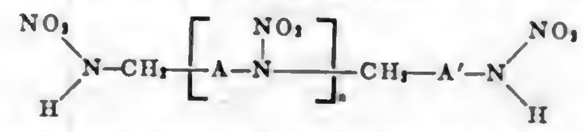
3,390,183
PREPARATION OF NITRAMINES

Milton B. Frankel, Menlo Park, and Karl Klager, Sacramento, Calif., assignors to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio

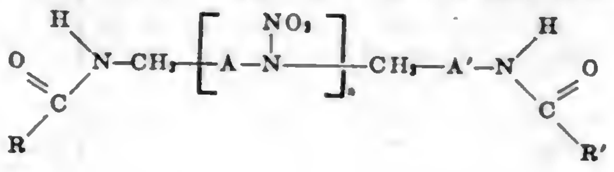
No Drawing. Original application June 8, 1964, Ser. No. 374,235. Divided and this application Dec. 27, 1966, Ser. No. 620,200

6 Claims. (Cl. 260—583)

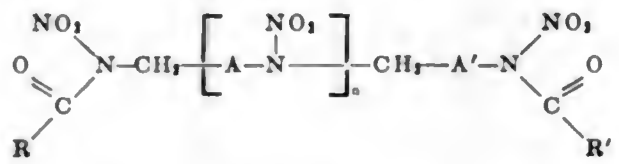
1. The method of preparing nitramines of the formula:



which comprises reacting a compound of the formula:



with an ionic nitrating agent to form the nitramide of the formula:



wherein in each of the above formulae, R and R′ are lower alkyl radicals, A and A′ are lower alkylene radicals, and n is a small whole number of from 1 to about 4; hydrolyzing the thus formed nitramide to the nitramine salt by the addition of a base, and neutralizing said salt to the nitramine by the addition of a mineral acid.

3,390,184
PRODUCTION OF PRIMARY AMINES BY AMMONOLYSIS

Philip H. Moss, Ernest L. Yeakey, and George P. Speranza, Austin, Tex., assignors to Jefferson Chemical Company, Inc., Houston, Tex., a corporation of Delaware

No Drawing. Filed June 1, 1965, Ser. No. 460,492

9 Claims. (Cl. 260—585)

High molecular weight secondary alcohols are converted with good yield and selectivity to the corresponding primary amines by reaction with ammonia in liquid phase in the presence of a hydrogenation-dehydrogenation catalyst.

3,390,185
ALKOXYVINYLCYCLOBUTANONE COMPOUNDS AND PROCESS FOR THEIR PREPARATION

James C. Martin, Kingsport, Tenn., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Dec. 23, 1964, Ser. No. 420,790

8 Claims. (Cl. 260—586)

Ketenes are reacted with 1,3-butadiene compounds to form 3-alkoxyvinylcyclobutanone and 3-aryloxyvinylcyclobutanone compounds having utility, for example as plasticizers for cellulose acetate butyrate.

3,390,186
PREPARATION OF ALDEHYDES AND KETONES

Henri Normant, Paris, France, assignor to Rhone-Poulenc S.A., Paris, France

No Drawing. Filed July 14, 1965, Ser. No. 472,029

Claims priority, application France, July 17, 1964, 982,102

5 Claims. (Cl. 260—590)

α-Ethylenic aldehydes and ketones of the formula:

$$R—CH=CH—CO—R_1$$

where R is alkyl or phenyl and R_1 is hydrogen, alkyl or phenyl are made by contacting a compound of formula:

$$R—C\equiv C—CH(A)—R_1$$

where A is alkoxy, phenoxy, alkylthio, phenylthio, dialkylamino, diphenylamino, or N-alkyl-N-phenylamino, with potassium t-butoxide in dimethylsulphoxide, and hydrolysing the allene produced with a strong aqueous non-oxidizing mineral acid.

3,390,187
SIDE CHAIN CHLORINATION OF 2,4,5-TRICHLOROACETOPHENONES

Jürgen F. Falbe, Bonn, and Hans Tetteroo, Hoholz, Germany, assignors to Shell Oil Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Apr. 7, 1967, Ser. No. 629,118

Claims priority, application Germany, Oct. 21, 1966, S 106,643

4 Claims. (Cl. 260—592)

Preparation of dichloroacetyl-2,4,5-trichlorobenzene by controlled chlorination of a mixture of 2,4,5- and 2,3,6-trichloroacetophenone.

3,390,188
PROCESSES FOR THE PRODUCTION OF γ-CHLORO-γ-ACETYLPROPANOL

Earl M. Chamberlin, Westfield, Harry L. Slates, Florham Park, and Leonard M. Weinstock, Rocky Hill, N.J., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Filed Oct. 24, 1965, Ser. No. 505,028

3 Claims. (Cl. 260—594)

Novel method for preparing γ-chloro-γ-acetylpropanol from monochloracetone and ethylene oxide. γ-Chloro-γ-acetylpropanol is a chemical intermediate useful in the synthesis of vitamin B_1.

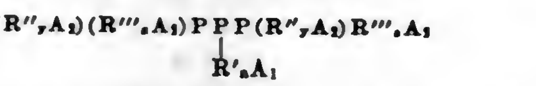
3,390,189
PROCESS FOR PREPARING PENTAORGANO-TRIPHOSPHINES

Max van Ghemen and Egon Wiberg, Munich, Germany, assignors to Hooker Chemical Corporation, Niagara Falls, N.Y., a corporation of New York

No Drawing. Filed May 22, 1963, Ser. No. 282,220

8 Claims. (Cl. 260—606.5)

1. A process for the preparation of the compounds of the formula



$$(R''_yA_2)(R'''_zA_3)P\underset{R'_nA_1}{\underset{|}{P}}P(R''_yA_2)R'''_zA_3$$

comprising contacting a compound of the formula:

$$R'_nA_1PX_2$$

with a compound of the formula:

$$(R''_yA_2)R'''_zA_3PM$$

in about a one to two molar ratio, at a temperature from 0° C. to −190° C., wherein the substituents:

(a) R′, R″ and R‴ are each selected from the group consisting of alkyl and alkoxy;
(b) n, y and z are zero to one and represent the number of R′, R″ and R‴ substituents attached to the core structures A_1, A_2 and A_3, said n, y and z being zero when A_1, A_2 and A_3 are alkyl;
(c) A_1, A_2 and A_3 are radicals selected from the group consisting of alkyl and aryl;
(d) X is a halogen atom selected from the group consisting of chlorine, bromine and iodine; and
(e) M is an alkali metal.

3,390,190
PROCESS FOR PURIFICATION OF 4,4′-DIHYDROXYDIPHENYL SULFIDE

Gerard Warren Curtis, Fairlawn, and Edmund Paul Wozniak, Lawrenceville, N.J., assignors to American Cyanamid Company, Stamford, Conn., a corporation of Maine

No Drawing. Filed Mar. 11, 1966, Ser. No. 533,446

5 Claims. (Cl. 260—609)

1. Process for preparing high purity 4,4′-dihydroxydiphenyl sulfide which comprises refluxing said sulfide in toluene, cooling said solution to crystallize said sulfide,

and separating said purified sulfide crystals from said solution.

3,390,191
HYDROGENATION OF METHYL TRIFLUOROACETATE TO TRIFLUOROETHANOL

Louis G. Anello, Basking Ridge, and William J. Cunningham, Rockaway, N.J., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York

No Drawing. Filed Mar. 24, 1964, Ser. No. 354,446
9 Claims. (Cl. 260—633)

1. A method for the preparation of 2,2,2-trifluoroethanol which comprises passing a vaporous mixture of hydrogen and methyl trifluoroacetate, wherein the hydrogen to methyl trifluoroacetate mole ratio is about 0.25 to 50:1, at a temperature within the range of about 200° to 400° C., at a pressure of one to five atmospheres and at a volume hourly space velocity within the range of 100 to 1000 through a reactor containing a catalyst consisting essentially of chromium oxide, copper oxide and a stabilizing metal oxide selected from the class consisting of barium oxide, calcium oxide, cadmium oxide, magnesium oxide, lead oxide and silver oxide, and separating 2,2,2-trifluoroethanol from the resultant reaction mixture.

3,390,192
DIHYDROPYRENES AND PHOTOCHROMIC COMPOSITIONS BASED THEREON

Luther A. R. Hall, Woodcliff Lake, N.J., and John A. Gurney, Tarrytown, N.Y., assignors to Geigy Chemical Corporation, Greenburgh, N.Y., a corporation of Delaware

No Drawing. Filed Oct. 20, 1965, Ser. No. 499,037
5 Claims. (Cl. 260—666)

15,16-methylene-15,16-dihydropyrenes and polyalkyl-15,16-dimethyl-15,16-dihydropyrenes having photochromic properties are prepared via multistep ring closure of bisphenolic compounds to yield metacyclophanes which are then subjected to several steps of oxidation, reduction and dehydrogenation. Typical embodiments are 15,16 - methylene - 1,3,6,8 - tetramethyl - 15,16 - dihydropyrene and 1,3,6,8,15,16 - hexamethyl - 15,16 - dihydropyrene.

3,390,193
METHOD OF MAKING ETHYLIDENE-1-CYCLOHEXENES

Leonard C. Kreider, Wadsworth, Ohio, assignor to Goodrich-Gulf Chemicals, Inc., Cleveland, Ohio, a corporation of Delaware

No Drawing. Filed Dec. 27, 1965, Ser. No. 516,668
24 Claims. (Cl. 260—666)

This invention relates to the manufacture of ethylidene-1-cyclohexenes and more particularly to a new and improved process for making 3-ethylidene-1-cyclohexene and/or 4-ethylidene-1-cyclohexene by the isomerization of 4-vinyl-1-cyclohexene in the presence of a reactant which is either tri-4-ethyl-1-cyclohexene aluminum or tri-alkyl-aluminum and a colloidal nickel catalyst at a temperature of from 75° to 150° C.

3,390,194
PHENOL RECOVERY

Charles M. Selwitz, Monroeville, Pa., assignor to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware

Continuation-in-part of application Ser. No. 420,436, Dec. 22, 1964. This application May 24, 1965, Ser. No. 458,070
1 Claim. (Cl. 260—621)

A process for recovering phenol from admixture with a benzene compound, water and HBr. The process involves first separating from the admixture an organic phase containing the benzene compound and a portion of the phenol and an aqueous phase containing water, the remainder of the phenol and HBr. The aqueous phase is then extracted with a benzene compound to remove the phenol from the water. The extract is combined with the organic phase above and the combined product is water washed to remove residual amounts of HBr. The water-washed product is then distilled to recover the phenol.

3,390,195
OLIGOMERIZATION PROCESS

Sterling F. Chappell III, and Jerome R. Olechowski, Lake Charles, and Arthur A. Arseneaux, New Orleans, La., assignors to Columbian Carbon Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Oct. 5, 1966, Ser. No. 584,379
25 Claims. (Cl. 260—666)

1. An oligomerization process which comprises contacting under substantially anhydrous conditions a monomeric feed comprising the aliphatic conjugated diolefin, butadiene, with a catalyst composition produced by admixing under substantially anhydrous conditions a nickel compound selected from the group consisting of nickel (II) and nickel (III) compounds; a reducing agent capable of reducing the valence of nickel to below 2, carbon monoxide and a molecular organic Lewis base.

3,390,196
POLYMERIZATION PROCESS EMPLOYING A CHROMIUM COORDINATION CATALYST

Sterling Frank Chappell III, and Jerome Robert Olechowski, Lake Charles, La., assignors to Columbian Carbon Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Feb. 7, 1966, Ser. No. 525,318
16 Claims. (Cl. 260—666)

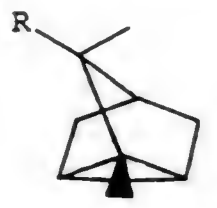
Processes are described for the polymerization or oligomerization of ethylenically unsaturated monomers at moderate temperatures and pressures in the presence of a coordination catalyst derived from a Ziegler type reducing agent and the hydrocarbon insoluble portion of the interaction product of a positive valence chromium compound with a hydrocarbyl or hydroaluminum halide. The use of such catalysts to convert alpha-monoolefins to high molecular weight solid polymers and to convert open chain conjugated diolefins to large ring cyclic trimers is illustrated.

3,390,197
NOVEL TRICYCLIC COMPOUNDS AND NOVEL PROCESSES FOR PRODUCING TRICYCLIC COMPOUNDS

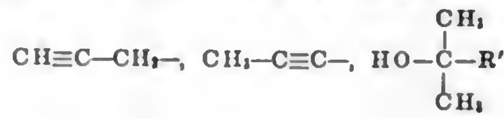
William F. Erman, Ronald G. Lewis, and David H. Gustafson, Cincinnati, Ohio, assignors to The Procter & Gamble Company, Cincinnati, Ohio, a corporation of Ohio

No Drawing. Filed May 13, 1966, Ser. No. 549,812
8 Claims. (Cl. 260—666)

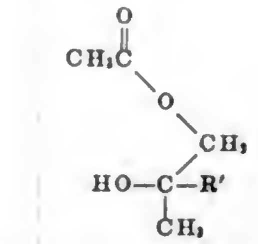
1. As a novel composition of matter, a tricyclene compound of the general formula



wherein R is selected from the group consisting of


$$CH\equiv C-CH_2-,\quad CH_3-C\equiv C-,\quad HO-\overset{\displaystyle CH_3}{\underset{\displaystyle CH_3}{\overset{|}{\underset{|}{C}}}}-R'$$

and



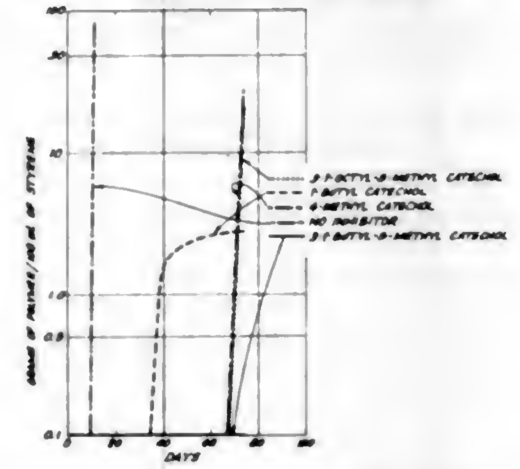
and R′ is a radical selected from the group consisting of

$$-C\equiv C-CH_2-,\quad -CH=CH-CH_2-,\ \text{and}$$
$$-CH_2-CH_2CH_2-$$

3,390,198
TERTIARY-BUTYL-5-METHYL CATECHOL AS POLYMERIZATION INHIBITOR FOR HOT STYRENE

Gerd Leston, Pittsburgh, Pa., assignor to Koppers Company, Inc., a corporation of Delaware

Filed Dec. 16, 1965, Ser. No. 514,269
8 Claims. (Cl. 260—666.5)



Of several mono- and di-alkyl catechols tested (at 0.1%) as inhibitor for hot (63° C.) styrene, the best was 3-t- butyl -5- methyl catechol, showing negligible polymer through 74 days.

3,390,199
XYLENE ISOMERIZATION PROCESS

Robert L. Burnett, Pinole, Calif., assignor to Chevron Research Company, San Francisco, Calif., a corporation of Delaware

No Drawing. Filed Feb. 1, 1966, Ser. No. 523,854
5 Claims. (Cl. 260—668)

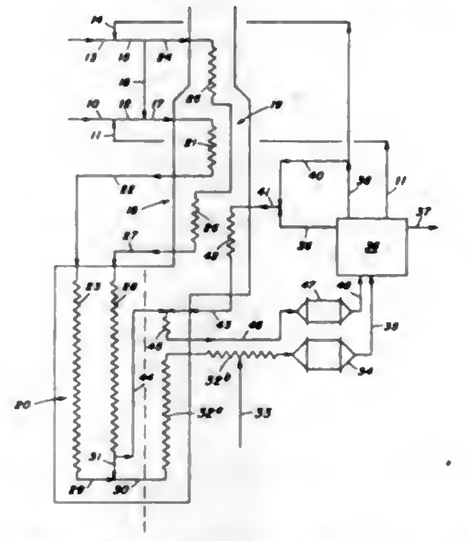
Xylene is isomerized to near o-m-p equilibrium at high space velocity in presence of H_2 over Ni on type Y sieve. Compared to other catalyst with feed 20% meta-xylene in 80% heptane, there was little isomerization of heptane nor substantial hydrocarbon cracking.

3,390,200
PRODUCTION OF AROMATIC HYDROCARBONS BY HYDRODEALKYLATION AND HYDROGENOLYSIS

Morgan C. Sze, Garden City, N.Y., assignor to The Lummus Company, New York, N.Y., a corporation of Delaware

Filed Sept. 24, 1965, Ser. No. 489,829
21 Claims. (Cl. 260—672)

A process for effecting the hydrogenolysis of a stream primarily comprised of C_{12}–C_{14} diphenyl hydrocarbons wherein the stream is mixed with a hydrogen-containing gaseous stream, the streams being mixed in a quantity and at a temperature and rate such that the combined stream is substantially instantaneously brought to a temperature of not less than 1000° F. The mixture is heated to a final reaction temperature of between 1300° and 1700° F. to effect hydrogenolysis in a residence time of 1–10 seconds. The hydrogenolysis is preferably effected in a fired coil reactor and the diphenyl feed stream is preferably obtained as a byproduct from an alkyl aromatic hydrocarbon dealkylation process.



3,390,201
PROCESS FOR THE PRODUCTION OF DIMETHYLBUTENES

Ernest H. Drew, Baton Rouge, La., assignor to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Aug. 1, 1966, Ser. No. 571,658
8 Claims. (Cl. 260—676)

This specification discloses a process for the preparation of dimethylbutenes and dimethylbutanes. A propylene containing gas is dimerized in the presence of a catalyst comprising a metal acetylacetonate, an alkyl aluminum halide and a phosphine. The butene dimers can be hydrogenated to obtain the corresponding butanes.

3,390,202
PROMOTED CATALYSTS FOR THE OXIDATION OF OLEFINS

James L. Callahan, Bedford Heights, Robert K. Grasselli, Garfield Heights, and Warren R. Knipple, Bedford, Ohio, assignors to The Standard Oil Company, Cleveland, Ohio, a corporation of Ohio

No Drawing. Continuation-in-part of applications Ser. No. 311,657, Sept. 26, 1963, and Ser. No. 604,118, Dec. 23, 1966. This application May 15, 1967, Ser. No. 638,577
10 Claims. (Cl. 260—680)

Diolefins such as butadiene are produced by the oxidative dehydrogenation of monoolefins such as butene-2 in the presence of an antimony oxide-uranium oxide catalyst containing at least one of a number of specified promoter elements.

3,390,203
POLYSILICIC ACID/HYDROXYALKYL VINYL ETHER-TETRAFLUOROETHYLENE OF CHLOROTRIFLUOROETHYLENE COPOLYMERS CONTAINING SELECTED SODIUM AND POTASSIUM SALTS

Eugene Herman Engelhardt, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Sept. 29, 1966, Ser. No. 583,002
7 Claims. (Cl. 260—827)

Coating compositions formed from polysilicic acid and a copolymer of chlorotrifluoroethylene or tetrafluoroethylene and an omega-hydroxyalkyl vinyl ether having improved resistance to aqueous alkali due to incorporation of at least one member of the group consisting of sodium thiocyanate, potassium thiocyanate, and sodium or potassium salts of carboxylic acids.

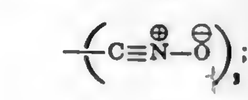
3,390,204
CROSS-LINKING AGENTS AND THEIR USE IN CROSS-LINKING UNSATURATED POLYMERS

David S. Breslow, Madelyn Gardens, Del., assignor to Hercules Incorporated, Wilmington, Del., a corporation of Delaware

No Drawing. Continuation-in-part of application Ser. No. 447,864, Apr. 13, 1965. This application Oct. 4, 1966, Ser. No. 584,116

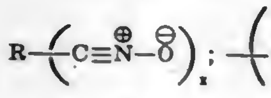
12 Claims. (Cl. 260—837)

Unsaturated polymers can be cross-linked with polyfunctional nitrile N-oxides having the general formulae



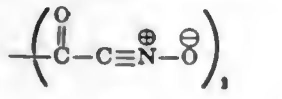
$-\left(C\equiv\overset{\oplus}{N}-\overset{\ominus}{O}\right)_x$;

I



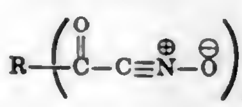
$R-\left(C\equiv\overset{\oplus}{N}-\overset{\ominus}{O}\right)_x$;

II



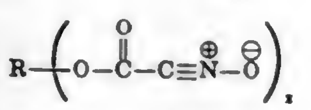
$-\left(\overset{O}{\overset{\|}{C}}-C\equiv\overset{\oplus}{N}-\overset{\ominus}{O}\right)_x$

III



$R-\left(\overset{O}{\overset{\|}{C}}-C\equiv\overset{\oplus}{N}-\overset{\ominus}{O}\right)_x$;

IV



$R-\left(O-\overset{O}{\overset{\|}{C}}-C\equiv\overset{\oplus}{N}-\overset{\ominus}{O}\right)_x$

V

where R is an organic radical inert to the cross-linking reaction and *x* is an integer from 2 to 10.

3,390,205
MONO CARBOXYLIC ACIDS AS THICKENING AIDS FOR MAGNESIUM OXIDE CONTAINING UNSATURATED POLYESTERS

Hermann Schnell, Krefeld-Urdingen, Karl Raichle and Klaus Prater, Krefeld-Bockum, and Friedrich Brühne, Krefeld, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Nov. 19, 1965, Ser. No. 508,838
Claims priority, application Germany, Dec. 24, 1964, F 44,809

6 Claims. (Cl. 260—865)

The thickening of unsaturated polyesters by magnesium oxide can be enhanced by adding active amounts of a component selected from the group consisting of an aliphatic monocarboxylic acid having a carbon chain of 2–5 carbon atoms, the corresponding anhydrides thereof, a semi-ester of a cyclic anhydride forming linear aliphatic dicarboxylic acid and an acid ester of phosphoric acid.

3,390,206
PROCESS FOR PREPARING POLYMERS HAVING ONE TERMINAL FUNCTIONAL GROUP CAPABLE OF CONDENSATION REACTION

Morice William Thompson and Frederick Andrew Waite, Maidenhead, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Filed May 15, 1964, Ser. No. 367,883
Claims priority, application Great Britain, Aug. 6, 1963, 30,978/63

2 Claims. (Cl. 260—875)

This invention concerns a process for preparing addition polymers having essentially no unsaturated groups in the chain which are terminated by only one terminal functional group selected from the group consisting of carboxyl, hydroxyl, amine and substituted amine. The polymer having said terminal functional group is capable of undergoing condensation reaction with monomers and other polymers having functional groups capable of condensation reaction with that of the polymer. The polymers having one terminal functional group are prepared by polymerizing an ethylenically unsaturated monomer in the presence of an initiator and a chain transfer agent both of which contain the functional group e.g. γ,γ'-azobis-(γ-cyanovaleric acid) as the initiator and thioglycollic acid as the chain transfer agent for terminal carboxyl groups.

3,390,207
METHOD OF MAKING BLOCK COPOLYMERS OF DIENES AND VINYL ARYL COMPOUNDS

Fred Dudley Moss, Long Beach, and Joseph F. Mathews, Hawthorne, Calif., assignors to Shell Oil Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Oct. 28, 1964, Ser. No. 407,241

4 Claims. (Cl. 260—879)

A process for making block polymers of the configuration A—B—A wherein each A is a polymer block of a monovinyl substituted aromatic compound and B is a polymer block of a conjugated diene wherein the first block A is formed with a lithium alkyl catalyst in the presence of a C_{6-7} cyclic hydrocarbon solvent under adiabatic conditions and there is then added a conjugated diene and a C_{4-5} open chain hydrocarbon solvent and polymerization is continued under reflux.

3,390,208
POLYMER BLENDS

Charles W. Montgomery, Baton Rouge, La., assignor to Ethyl Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed Aug. 28, 1964, Ser. No. 392,912

4 Claims. (Cl. 260—897)

The invention comprises novel blends of (1) from about 5 to 200 parts of a copolymer of ethylenevinyl chloride and (2) about 100 parts of a polymer selected from polyethylene, polypropylene, polystyrene, and rubbery polymers. The vinyl chloride-ethylene copolymers most suited for the invention contain about 10 to about 80 percent weight ethylene. Preferably, the copolymer should contain no less than about 5 percent weight ethylene. The rubbery polymers are exemplified by SBR, Butyl rubber and EPR. All of the polymers are improved in their impact strength, flame resistance, oxygen-permeation resistance, stress-cracking, and the like, by the blending of vinyl chloride-ethylene copolymer therewith.

3,390,209
SULFUR CONTAINING DIPHENYLENE DIPHOSPHATES

James Byron Lovell, Pennington, N.J., and Ronald William Baer, Flushing, N.Y., assignors to American Cyanamid Company, Stamford, Conn., a corporation of Maine

No Drawing. Continuation-in-part of application Ser. No. 287,190, June 12, 1963. This application Jan. 10, 1964, Ser. No. 336,878

4 Claims. (Cl. 260—929)

This invention relates to a new class of sulfur containing diphenylene organophosphates, their method of preparation, and insecticidal compositions containing said organophosphates.

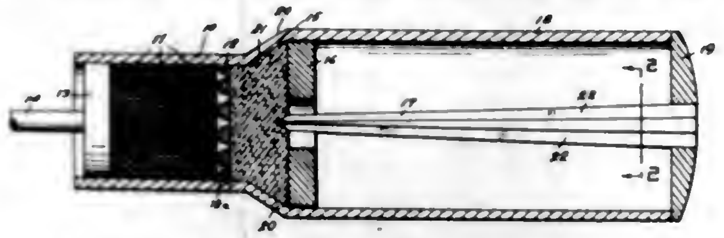
3,390,210
SOLVENTLESS EXTRUSION PROCESS FOR FORMING ROCKET PROPELLANT GRAINS

Richard G. Guenter, Wilmington, Del., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Army

Filed July 16, 1965, Ser. No. 472,742

5 Claims. (Cl. 264—3)

A process for producing a propellant of substantially larger cross-section than that of the propellant material before extrusion, by employing an expansion chamber in which the material is consolidated into a larger grain by the retarding force created by the friction of the moving extruded material against the outwardly tapering metal walls of the guide chamber.

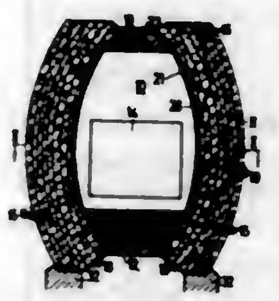


3,390,211
METHOD FOR MANUFACTURING CONCRETE PRESSURE VESSELS

Albert Ziegler, Erlangen, Germany, assignor to Siemens Aktiengesellschaft, Munich, Germany, a corporation of Germany

Filed June 26, 1963, Ser. No. 290,733
Claims priority, application Germany, Mar. 2, 1963, S 83,973

4 Claims. (Cl. 264—32)



1. A method of manufacturing a prestressed concrete pressure vessel for nuclear reactors, which comprises assembling the pressure vessel in situ from prefabricated components including prestressing elements and concrete wall segments having adjacent edge portions the prefabricated components being so formed as to provide an opening at respective upper and lower ends of said vessel, introducing an elastic inflatable container into the interior of said pressure vessel; covering the adjacent edge portions of said wall segments with strips of pressure-resistant material; inflating said container by pumping fluid therein so as to expand said vessel and form gaps between the edge portions of said wall segments, and filling said gaps with a pressure-resistant material, the method also comprising the steps of lining the interior surface of said vessel with a layer of steel plates having adjacent edges and, after prestressing the vessel, lining said layer of steel plates with a layer of austenitic steel projecting out of said upper opening, and sealingly connecting said layer of steel plates and said layer of austenitic steel outside of said upper opening.

3,390,212
PROCESS FOR MAKING LIGHTWEIGHT FIRED CERAMIC BODIES

Russell T. Stelle, 6 N. Walnut St., Brazil, Ind. 47834

No Drawing. Continuation-in-part of application Ser. No. 372,108, June 2, 1964. This application Nov. 14, 1966, Ser. No. 593,754

2 Claims. (Cl. 264—44)

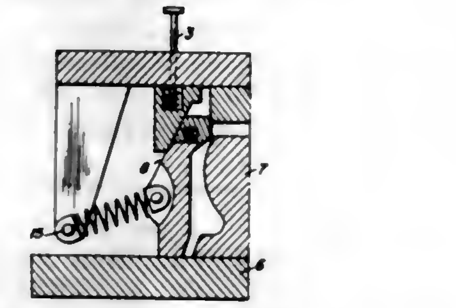
A process for making lightweight ceramic bodies having superior physical properties consisting of grinding and mixing sandy and plastic clay, adding an oil-water emulsion in the amount of from 5 to 30% of the weight of the clay, thoroughly mixing the clay-water-oil emulsion mix, shaping the ceramic mix containing the oil-water emulsion by extrusion, by pressing, by hand, or by any other convenient process and firing the resultant tile shapes.

3,390,213
METHOD OF MANUFACTURE OF FOOTWEAR

Ernest E. Rollman, Anton Liebacher, and Andrew Szerenyi, Waynesville, N.C., assignors to Ro-Search, Inc., Waynesville, N.C.

Original application Aug. 15, 1957, Ser. No. 678,412, now Patent No. 3,098,308, dated July 23, 1963. Divided and this application Sept. 17, 1962, Ser. No. 224,607

5 Claims. (Cl. 264—45)



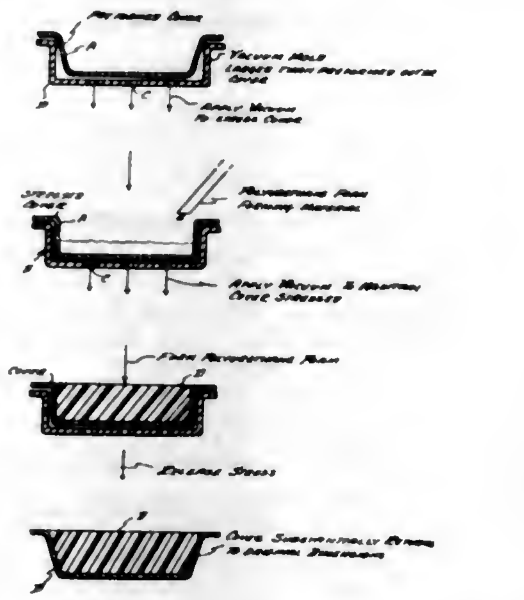
1. The method of manufacturing footwear which includes the steps of placing a shoe upper and a pressure moldable elastomeric material including a blowing agent in a mold, closing the mold, applying pressure to the elastomeric material in the mold to mold the same to the shoe upper, thereafter enlarging the mold and thereby reducing the pressure on the elastomeric material to permit the remaining portion of the material to expand in the mold to form an inner porous mass, maintaining the enlargement of the mold until the material is cured, and thereafter removing the footwear from the mold.

3,390,214
PROCESS FOR THE MANUFACTURE OF COMPOSITE FOAMED PLASTIC ARTICLES

George Woods, Manchester, England, assignor to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

Filed June 17, 1964, Ser. No. 375,710
Claims priority, application Great Britain, June 17, 1963, 24,014/63

4 Claims. (Cl. 264—45)



A process for manufacturing of composite articles having an outer cover and filled with polyurethane foam. In the process a pre-formed cavity in a covering material is filled with polyurethane foam-forming mixture and the mixture is allowed to foam and set to an elastic condition within the cavity. The filling, foaming and setting are carried out after the pre-formed cavity has been enlarged by applying stressing forces to the covering material. These forces are released after the foam has set.

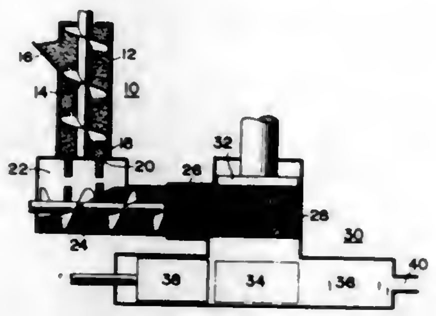
3,390,215
FOAM-FILLED NYLON ARTICLE AND METHOD OF MAKING THE SAME

Herbert J. Pike, Basking Ridge, N.J., assignor to Allied Chemical Corporation, New York, N.Y., a corporation of New York
No Drawing. Filed Feb. 6, 1964, Ser. No. 343,127
1 Claim. (Cl. 264—45)

A method for reinforcing the walls of a hollow nylon object comprising injecting foamable urethane into said hollow object. The foamable urethane is at its incipient foam point and maintained between 60° C. and 90° C. The preferred urethane is a polyether having an hydroxyl number between 350 and 450, dibutyl tin dilaurate, a blowing agent and an isocyanate having a density of 2.0 lb./ft.^{3}.

3,390,216
VACUUM EXTRUSION SHAPING OF CERAMIC MATERIALS

Kaoru Umeya, Sendai, and Takaaki Watanabe and Yoshiaki Kondo, Urawa, Japan, assignors to Mitsubishi Genshiryoku Kogyo Kabushiki Kaisha, Tokyo, Japan
Filed July 5, 1963, Ser. No. 293,077
6 Claims. (Cl. 264—102)

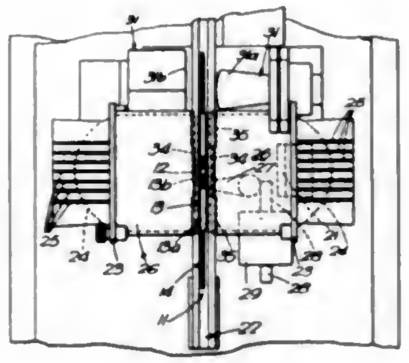


1. A method of extrusion shaping a ceramic material, comprising the steps of pre-shaping a mass of a ceramic material by passing it through at least one auger extrusion machine, immediately vacuum degassing it and before it has time to set due to work hardening, directly passing it through a piston-type extrusion press for shaping it while maintaining the material in the degassed state.

3,390,217
METHOD TO PREVENT WARPING OF HOT EMBOSSED DISK RECORDS BY PREHEATING THE CENTRAL ANNULUS

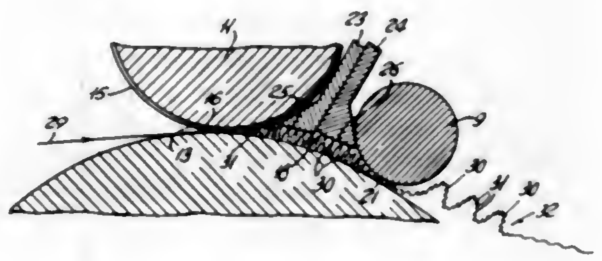
Alan Phillipson, Basil Harry Royston Spiller, Robin Smith, and Harry Cheesman, London, England, assignors to Decca Limited, London, England, a British company
Filed Sept. 11, 1964, Ser. No. 395,872
Claims priority, application Great Britain, Sept. 16, 1963, 36,305/63
8 Claims. (Cl. 264—107)

A gramophone record making process in which blank preformed discs made by injection moulding are embossed with required sound tracks by heated dies. To combat the effects of warping due to differential heating of a disc by the dies only the central region of a disc is preheated before embossing. The region immediately round the central hole in the disc as well as the outer annulus thereof can be shielded from the preheating.



3,390,218
METHOD OF PLEATING SHEET MATERIALS

Erle V. Painter, La Grange, Frederick K. Mesek, Downers Grove, and Robert C. Shepherd, Oak Lawn, Ill., assignors to Johnson & Johnson, a corporation of New Jersey
Continuation-in-part of application Ser. No. 375,142, June 15, 1964. This application Oct. 6, 1964, Ser. No. 401,838
3 Claims. (Cl. 264—282)



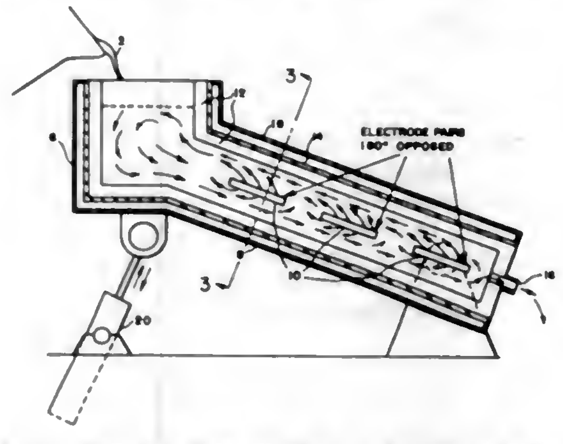
A method of mechanically compressing a fibrous sheet to form large and small pleats in a pattern by retarding movement of the fabric. The sheet is passed into the nip of a pair of feed rolls at least one containing an indented pattern. Downstream of the nip the movement of the sheet is retarded thereby forcing a portion of the sheet into the indentation in the feed rolls whereby pleats are formed on the exit side of the nip in a pattern of rows of smaller and larger pleats.

ELECTRICAL

3,390,219
ELECTRODE FURNACE

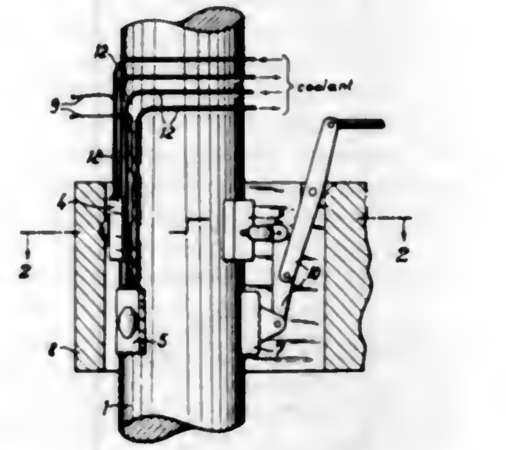
Arthur J. Henriksen, Pocatello, Idaho, and Dean F. Thorpe, Westport, Conn., assignors to FMC Corporation, New York, N.Y., a corporation of Delaware
Filed Apr. 26, 1966, Ser. No. 545,427
6 Claims. (Cl. 13—6)

1. A furnace comprising an elongated tubular heating section having a feed section connected to one end and a discharge orifice connected to the opposite end thereof, said sections containing an inner layer of refractory composition supported by outer supporting means and a jacket containing a cooling medium surrounding said supporting means, said elongated heating section containing electrodes internally placed for heating, said elongated tubular heating section being inclined downwardly from said feed section whereby two thermal layers of a molten product are formed in said elongated tubular heating section in which an upper, hotter thermal layer flows upwardly toward the feed section and a lower, cooler thermal layer flows downwardly toward said discharge orifice, and means for altering the angle of inclination of said elongated tubular heating section whereby the rate at which molten product is discharged from said discharge orifice can be controlled.



3,390,220
ELECTRODE HOLDER FOR ARC FURNACES

Alfred Wagner, Essen-Dellwig, Germany, assignor to Beteiligungs- und Patentverwaltungsgesellschaft mit beschrankter Haftung, Essen, Germany
Filed July 10, 1967, Ser. No. 652,156
Claims priority, application Germany, July 26, 1966, B 88,179
8 Claims. (Cl. 13—15)

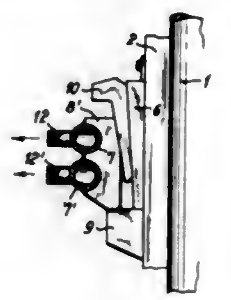


An electrode holder and contact member for holding a generally cylindrical electrode and for applying current to the electrode, including a plurality of jaw members arranged in at least two groups with three jaw members in each group, the jaw members of each group being positioned to receive a generally cylindrical electrode, the plane defined by the three jaw members of each group being substantially perpendicular to the axis of the electrode, the groups of jaw members being spaced from each other along the axis of the electrode, and the individual jaw members of each group being circumferentially spaced with respect to each other and circumferentially staggered with respect to the jaw members of the adjacent groups.

3,390,221
MEANS FOR TIGHTENING CURRENT SUPPLY PLATES ON ELECTRODES IN OPEN OR CLOSED TYPE ELECTRIC FURNACES

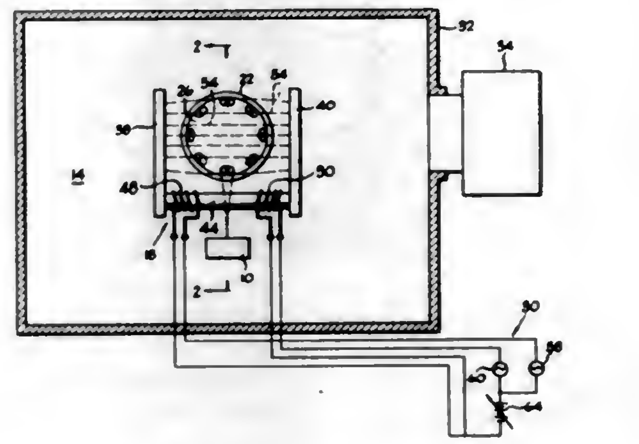
Friedrich Wilhelm Kampmann, Knapsack, near Cologne, and Heinrich Thome, Turnich, Germany, assignors to Knapsack Aktiengesellschaft, a corporation of Germany
Filed June 29, 1964, Ser. No. 378,534
Claims priority, application Germany, June 29, 1963, K 50,098
6 Claims. (Cl. 13—16)

Current supply plates for the electrode for an electric furnace are clamped to the outer surface of the electrode by a circular thrust collar. The electrodes are elongated with the upper ends movably supported from a stationary support structure in a circumferential array about the electrode. Cotter keys inserted between each of the current supply plates and the thrust collar urge the sides of the current supply plates into firm contact with the electrode without imposing any longitudinal loads upon the clamping structure. The thrust collar may be advantageously provided by a circular pipe circulating a cooling fluid. Saddle-shaped sections within the thrust collar are aligned with tapered links upon the supply plates to facilitate engagement of the cotter keys.



3,390,222
ELECTRON BEAM APPARATUS WITH VARIABLE ORIENTATION OF TRANSVERSE DEFLECTING FIELD

Emmett R. Anderson, Berkeley, Calif., assignor, by mesne assignments, to Air Reduction Company, Incorporated, a corporation of New York
Filed Aug. 17, 1965, Ser. No. 480,287
6 Claims. (Cl. 13—31)



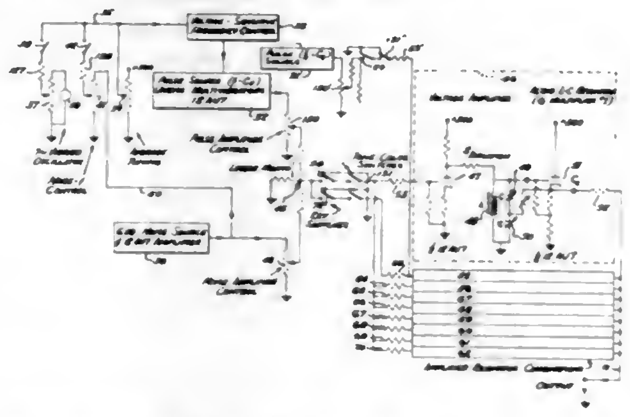
Apparatus is described for heating a target material in a high vacuum electron beam furnace. A beam of electrons is deflected by a transverse magnetic field, the orientation of which is varied to provide a predetermined impact pattern on the surface of the target material.

3,390,223
ELECTRICAL ORGAN

William C. Wayne, Jr., South Fort Mitchell, Ky., assignor to D. H. Baldwin Company, a corporation of Ohio
Filed Aug. 1, 1960, Ser. No. 46,704
25 Claims. (Cl. 84—1.24)

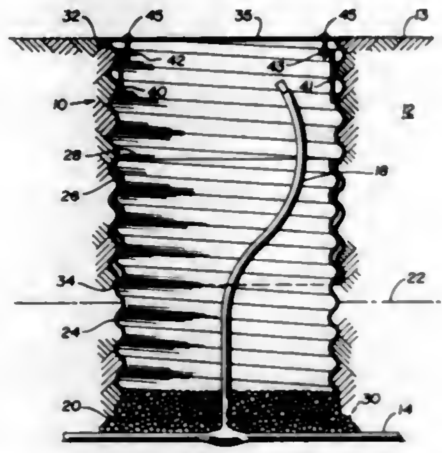
1. In an electrical musical instrument system, a source of continuous electrical oscillations corresponding in fundamental frequency to a note of the musical scale and having a substantial partial content, a plurality of electrical resonators of sufficiently high Q to have build-up and decay times comparable to those of partials in an organ pipe of comparble fundamental frequency, said resonators having resonant frequencies respectively corresponding approximately to the partials of said oscillations, switching means operatively associating said source with at least certain of said resonators whereby to excite each at a frequency related to its resonant frequency, and a plurality of means

operatively associated with said resonators respectively for controlling the amplitudes of the outputs thereof whereby



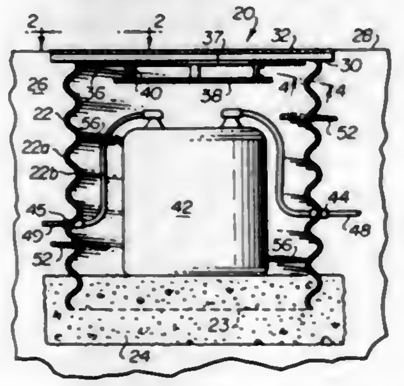
to derive from said source via said resonators, electrical oscillations of a desired partial content and a tone envelope characterized by finite build-up and decay times.

3,390,224
ADJUSTABLE UNDERGROUND SHELL
David L. Wyatt, Akron, Ohio, assignor, by mesne assignments, to New England Realty Co., Barberton, Ohio, a corporation of Ohio
Filed Sept. 28, 1966, Ser. No. 582,612
2 Claims. (Cl. 174—37)



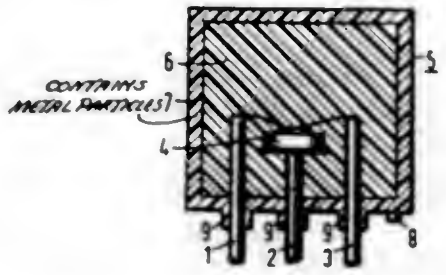
An underground shell or container of two parts formed of helically corrugated tubular walls that interengage in threaded fashion for vertical adjustment through relative rotation to change the height of the shell.

3,390,225
UNDERGROUND ELECTRICAL VAULT
Robert O. Couch, Wadsworth, and David L. Wyatt, Akron, Ohio, assignors, by mesne assignments, to New England Realty Co., Barberton, Ohio, a corporation of Ohio
Filed Mar. 28, 1966, Ser. No. 537,886
7 Claims. (Cl. 174—37)



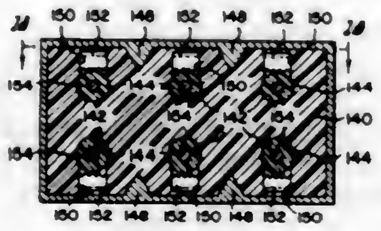
Underground containers or vaults of helically corrugated metal. Also, vaults formed of two telescoped tubes concentrically arranged and spaced from each other with a foam filler. Openings are provided in side walls for conduits and the like. Covers, including grates with spaced baffle members, are provided and a grate can extend across the container to provide upper and lower zones.

3,390,226
ENCAPSULATED SEMICONDUCTOR ELEMENT
Fritz-Werner Beyerlein, Munich, Germany, assignor to Siemens Aktiengesellschaft, a corporation of Germany
Filed Oct. 18, 1965, Ser. No. 497,088
Claims priority, application Germany, Oct. 19, 1964, S 93,786
6 Claims. (Cl. 174—52)



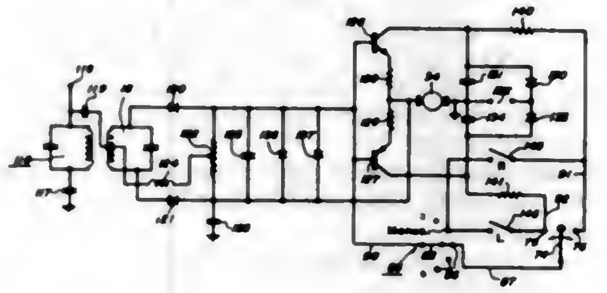
Semiconductor circuit element includes a semiconductor body, a plurality of conductive leads connected to the body, and a housing surrounding the body, the housing comprising an inner portion of insulating material wherein the body is embedded, and an outer layer of insulating material wherein metallic particles are incorporated, the outer layer being relatively thin compared to the thickness of the inner portion and being formed with a plurality of openings, the inner portion of insulating material having a plurality of sleevelike projections respectively extending through the openings, and the conductive leads extending through the respective sleevelike projections to the exterior of the housing, whereby the leads are insulated from the outer layer.

3,390,227
COMPRESSION RING CRIMP CONNECTORS
Bernard Edward Shlesinger, Jr., Annandale, Va., assignor to AMP Incorporated, Harrisburg, Pa.
Filed Sept. 16, 1965, Ser. No. 487,673
12 Claims. (Cl. 174—84)



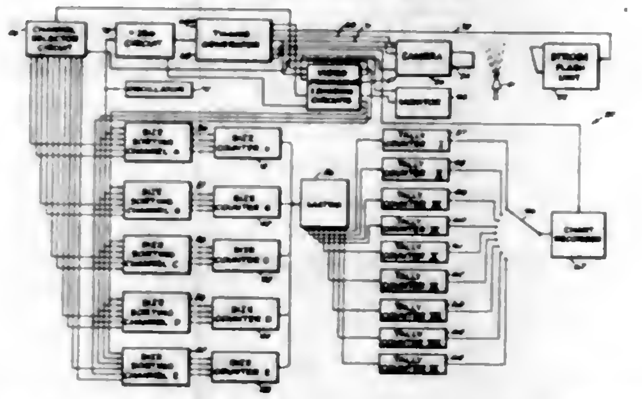
4. A connector for electrically connecting the ends of two wires comprising a non-conductive deformable casing having a central portion and having a passageway for receiving at each end thereof one of said wires, a pair of individual non-connected spaced radially reducible and compressible rings of a harder material than said casing encircling the ends only of said casing so as to leave said central portion of said casing non-encircled, a connector means positioned lengthwise in said casing and having its overall length shorter than said casing and having end portions extending towards said wire for piercing said wire to make electrical connection therebetween, said connector means end portions positioned within the confines of their respective rings whereby when said rings are compressibly reduced radially in size, said casing in the area of said rings is reduced in size thereby driving said connector means end portions into engagement with said wires to electrically connect them.

3,390,228
TELEVISION RECEIVER WITH AUTOMATIC TUNING RESPONSIVE TO DETECTED SOUND CARRIER
John F. Bell, Wilmette, Ill., assignor to Zenith Radio Corporation, Chicago, Ill., a corporation of Delaware
Original application Aug. 22, 1963, Ser. No. 303,822. Divided and this application Nov. 21, 1966, Ser. No. 595,715
6 Claims. (Cl. 178—5.8)



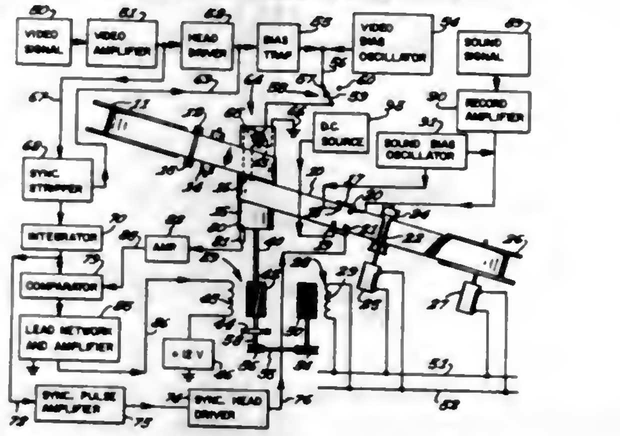
A tunable television receiver that utilizes a program signal having a picture carrier and a sound carrier has signal translating means that includes a tuner for selecting a desired channel. At least one adjustable tuning element is included in the tuner. A frequency modulation detector is coupled to the signal translating means for demodulating the sound carrier. An audio system is coupled to this detector for utilizing the demodulation components of the sound carrier to reproduce the audio information of the program signal. Finally, there are additional means also coupled to the detector which respond to the low frequency components of the detected signal to adjust the tuning element to maintain the receiver tuned to the selected signal channel.

3,390,229
PARTICLE MEASURING AND COUNTING SYSTEM
David A. Williams, Michigan City, Ind., assignor, by mesne assignments, to Raytheon Education Company, a corporation of Delaware
Filed Nov. 1, 1962, Ser. No. 234,723
13 Claims. (Cl. 178—6)



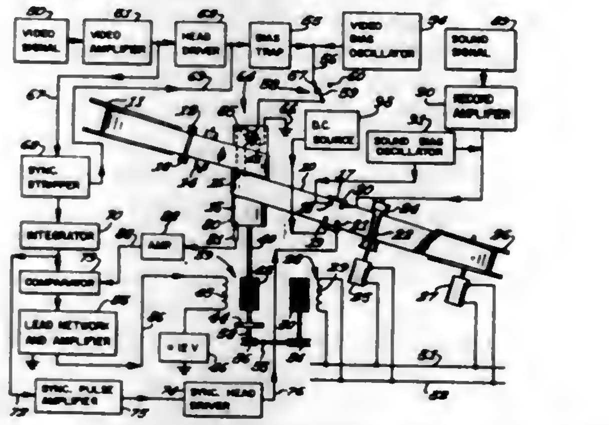
1. In a television system for measuring dimensions of a plurality of objects including a television camera having a screen and deflection means for causing a cathode ray beam spot to traverse said screen in a line pattern,
  means for producing images of said plurality of objects on said screen to be traversed by said spot,
  a plurality of pulse counters,
  means for applying pulses to each pulse counter in response to each traverse of one image by said spot,
  a plurality of tally counters,
  a gating matrix between said pulse counters and said tally counters,
  and means for applying a readout signal to each pulse counter following the last traverse of an image by said spot to apply a signal to one of said tally counters through said gating matrix in accordance with the count registered in said pulse counter.

3,390,230
VIDEO RECORDING AND REPRODUCING WITH VERTICAL SYNC PULSE GENERATION
Robert J. Youngquist, Arden Hills, Minn., assignor to Minnesota, Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
Filed June 8, 1964, Ser. No. 373,365
11 Claims. (Cl. 178—6.6)



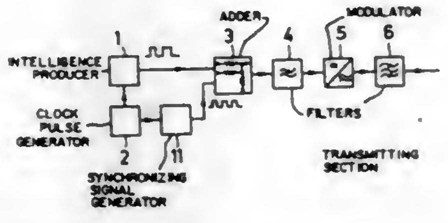
A video tape transducing apparatus of the type in which a tape has a video signal recorded in a series of oblique tracks and a control signal recorded along one longitudinal edge of the tape is shown wherein the tape is driven longitudinally at a constant speed adjacent a transducing head which is rotated obliquely to the longitudinal direction of the tape and at a relatively high speed and during playback a pulse signal generated by each revolution of the head is used for synchronizing head position with the track position in a servo system and for supplying a vertical synchronizing signal to the video signal reproduced from the tape by the head.

3,390,231
VIDEO RECORDING CONTROL AND SYNCHRONIZING SYSTEM
Robert J. Youngquist, Village of Arden Hills, Minn., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
Continuation-in-part of application Ser. No. 373,365, June 8, 1964. This application Apr. 21, 1966, Ser. No. 544,167
10 Claims. (Cl. 178—6.6)



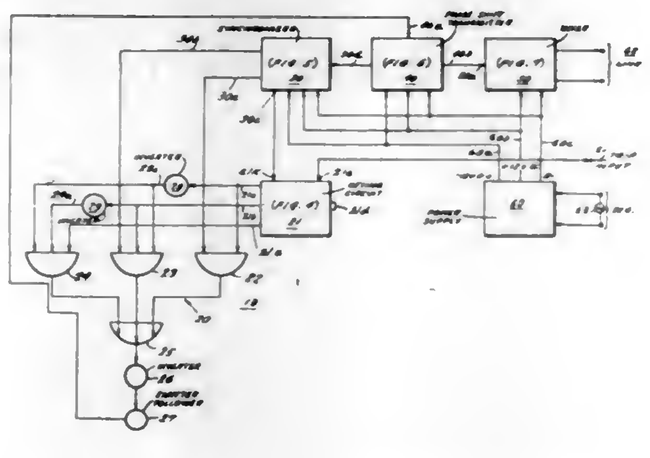
A video tape transducing apparatus of the type in which a tape has a video signal recorded in a series of oblique tracks and a control signal recorded along one longitudinal edge of the tape is shown wherein the tape is driven longitudinally at a constant speed adjacent a transducing head which is rotated obliquely to the longitudinal direction of the tape and at a relatively high speed and during playback a first pulse signal generated by each revolution of the head is used for synchronizing track position and head position in a servo system which controls a braking member and a second pulse signal generated by each revolution of the head is used for supplying a vertical synchronizing signal to the video signal reproduced from the tape by the head.

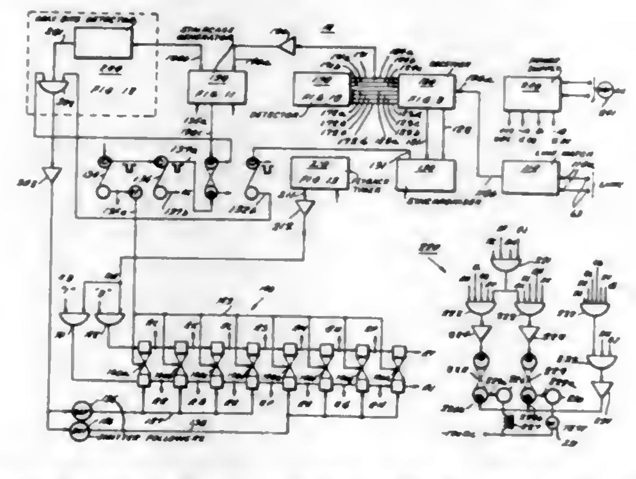
3,390,232
INFORMATION PULSE TRANSMISSION SYSTEM
Frank de Jager and Leo Eduard Zegers, Emmasingel, Eindhoven, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed May 12, 1964, Ser. No. 366,728
Claims priority, application Netherlands, May 15, 1963, 292,831
10 Claims. (Cl. 178—69.5)



A pulse transmission in which the transmitter adds synchronizing pulses to the output signal. The synchronizing pulses have successive zero passages that coincide with the zero passages of the fundamental frequency of the information pulses, and the repetition rate of the synchronizing pulses is half the repetition rate of the clock pulses. The receiver applies the sum signal input to a network having a quadratic transmission characteristic for deriving synchronized clock pulses.

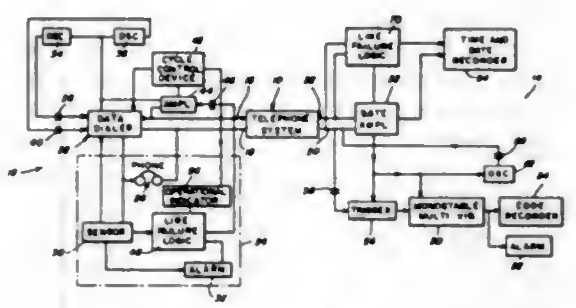
3,390,233
DIGITAL UNAMBIGUOUS CONTROL OF CIRCUIT INTERRUPTER MEANS
Abraham Brothman, Dumont, Michael Gomery, Saddle River, Conrad Yanis, Glen Rock, N.J., and Allen H. Miller, Laurelton, N.Y., assignors, by mesne assignments, to Sangamo Electric Company, Springfield, Ill., a corporation of Delaware
Filed Jan. 8, 1965, Ser. No. 424,347
22 Claims. (Cl. 179—2)





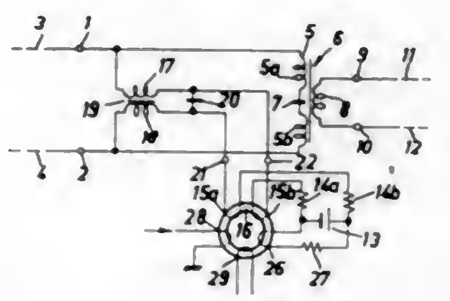
A digital transfer trip system which eliminates pilot wire by modulating a phase shift transmitter to provide different code formats, each of which is comprised of data bits, each data bit being comprised of a predetermined number of Nyquist intervals. Receiver means examine the number of Nyquist intervals in each bit to determine ambiguity. Nonambiguous bits are fed to a shift register and logical gate means provide alarms indicated by the code of the bits properly received. If one bit is ambiguous the shift register is reset, and no alarm is generated.

3,390,234
COMBINATION TELEPHONE FIRE ALARM AND METER READING SYSTEM
Roger C. Glidden, Wenham, Mass., assignor to The Glidden Electric Corporation, a corporation of Massachusetts
Continuation-in-part of application Ser. No. 430,431, Feb. 4, 1965. This application Feb. 27, 1967, Ser. No. 618,602
20 Claims. (Cl. 179—5)



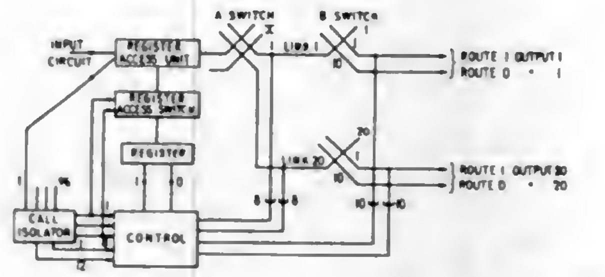
A data reporting and recording system utilizing commercial telephone lines to detect fire and read meters at reporting stations and transmit the information to fire stations and data collecting centers by automatic dialing and information transmitting equipment powered by the telephone system itself.

3,390,235
SUBSCRIBER CIRCUITS FOR TELECOMMUNICATION SYSTEMS
Hans Diggelmann, Muri, Bern, and Karl Sluda, Bern, Switzerland, assignors to Hasler, A.G., Bern, Switzerland, a Swiss company
Filed Jan. 21, 1965, Ser. No. 426,906
Claims priority, application Switzerland, Jan. 20, 1964, 562/64
2 Claims. (Cl. 179—18)



1. A subscriber circuit for telecommunications systems utilising to the full the loop current flowing in a closed loop, with two branches connected parallel to one another between the two conductors of the subscriber loop, the first branch including the primary winding of the line transformer in series with a capacitor and the second branch whereof contains the central battery in series with a resistance and an input winding of a ring core which is magnetically saturated by the effect of the loop current and carries further windings which serve to ascertain the magnetic saturation of the ring core for the purpose of utilising to the full the current flowing in the closed loop and the second branch including two self-induction coils each connected to a conductor of the subscriber line, the ends of the coils remote from the conductors being connected by a second capacitor, the so-formed frequency sensitive circuit having a high-pass filter formed by the primary inductance of the line transformer and the first-mentioned capacitor and a low-pass filter formed by the self-induction coils and the second capacitor and being completed by a resistance, the element of said circuit being so dimensioned that the attenuation between the subscriber line and the line transformer is constant in the frequency band of the information to be transmitted from subscriber to subscriber and increases with decreasing frequency at lower frequencies, the attenuation between the subscriber line and the input winding is constant from zero frequency to a frequency lying below the said frequency band and increases above this frequency with increasing frequency, and the input impedance of the frequency-sensitive circuit measured between the conductors remains constant from zero frequency to the upper limit of the aforesaid frequency band.

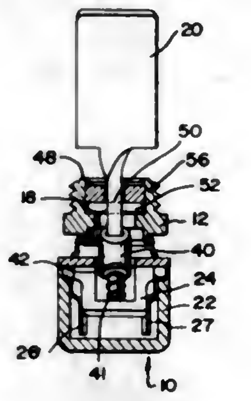
3,390,236
TELECOMMUNICATION SYSTEMS HAVING PRIMARY AND SECONDARY RANKS OF MATRICES
John Albert Lawrence, Beckenham, Kent, England, assignor to Her Majesty's Postmaster General, London, England
Filed July 26, 1965, Ser. No. 474,725
Claims priority, application Great Britain, July 31, 1964, 30,349/64
15 Claims. (Cl. 179—18)



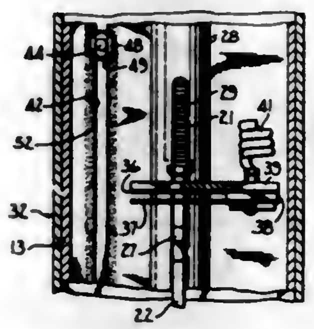
1. A switching stage for a step-by-step communication system comprising a plurality of first rank switches each having a number of inputs, a greater number of outputs and connection means for connecting inputs and outputs, a plurality of second rank switches each having a number of inputs, a number of outputs and connection means for connecting inputs and outputs, the outputs of the first rank switches being distributed amongst and linked to the inputs of the second rank switches, and, associated with the stage a register which is unique to the stage for receiving information relating to a desired connection to be set up from an input of a first rank switch of the stage to an output of a second rank switch of the stage, and, a switching stage control circuit connected to the register for operating the connection means of the switches of the stage to set up the desired connection.

3,390,237
TOGGLE SWITCH ASSEMBLY
John E. Maas, Valparaiso, and Thomas F. Osika, Gary, Ind., assignors to McGill Manufacturing Company, Inc., Valparaiso, Ind., a corporation of Indiana
Filed Oct. 26, 1966, Ser. No. 589,754
3 Claims. (Cl. 200—67)

A bushing on the housing of a toggle-type switch has a bore and a counterbore which form a shoulder portion. A plastic insert is inserted into the counterbore and ears integral with the switch bat are positioned within arc-like portions of the insert and are captured in the space between the top of the arc portions of the insert and the shoulder portion of the bushing. A spring couples the bat to the switch contact and biases the ears into the arc-like portions of the insert to pivotally mount the bat within the bushing. A crimped edge on the top of the bushing stakes the insert against longitudinal movement therewithin.



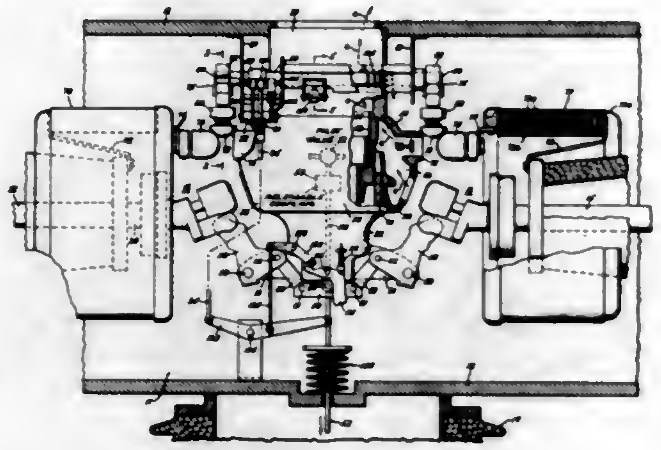
3,390,238
INTRAVENOUS FLUID LEVEL SIGNALLING APPARATUS
Clyde W. O'Neill, 35 Excelsior Court, Oakland, Calif. 94610
Filed May 13, 1966, Ser. No. 549,988
8 Claims. (Cl. 200—85)



1. Intravenous fluid level signalling apparatus comprising support means adapted for securance to an elevated support, a spring depending from said support means, a suspension member secured to the lower end of said spring and adapted for securance of a container of intravenous fluid thereto, a casing encompassing said support means and being vertically slidable relative thereto, one of said casing and suspension member carrying a switch actuating means at a predetermined fixed point thereof, said suspension member moving vertically upward as said fluid is dispensed from said container with the relative vertical position between said casing and suspension member of said fixed point being representative of the quantity of fluid remaining in said container, a switch mounted on the other of said casing and suspension member acutatable by said actuating means when the former and latter are at the same vertical position, said casing having a plurality of apertures therethrough respectively corresponding to different sizes and types of containers of different intravenous fluids, said support means having a face subjacent said apertures with columns of quantity calibrations selectively visible through said apertures upon relative vertical movement between said casing and support means, said calibrations corresponding to quantities of fluid represented by vertical relative positions between said casing and suspension member of said switch actuating means for the different sizes and types of containers of different fluids represented by the corresponding apertures, and latch means for selectively locking said casing and support means in different relative vertical positions.

3,390,239
ELECTRIC CIRCUIT BREAKER WITH VOLTAGE-CONTROLLING RESISTANCES AND MEANS FOR SWITCHING THE RESISTANCES IN SYNCHRONISM

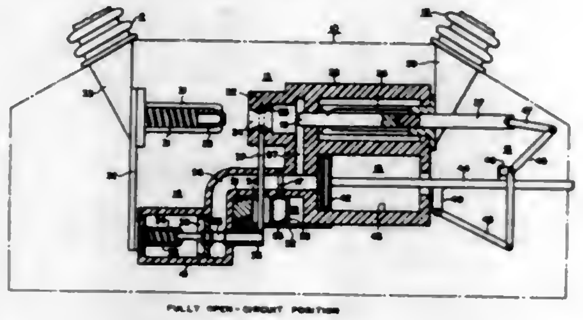
Richard H. Miller, Berwyn, Pa., assignor to General Electric Company, a corporation of New York
Filed Feb. 23, 1965, Ser. No. 434,270
21 Claims. (Cl. 200—146)



Discloses a circuit breaker comprising spaced-apart high voltage tanks, main breaks within the tanks, resistors respectively shunting the main breaks, and resistor switches within the tanks respectively connected in series with the resistors. Also within the tanks are controls for the respective resistor switches which are mechanically tied together through a linkage system both during circuit-breaker-opening and circuit-breaker-closing. Operation of this linkage system is controlled from a controlling point at ground potential; and at an intermediate point during an operating stroke of the linkage system, operation of the main breaks is initiated by the linkage system.

3,390,240
CIRCUIT BREAKER WITH PISTON GAS FLOW AND SELECTIVE SYNCHRONOUS OPERATION

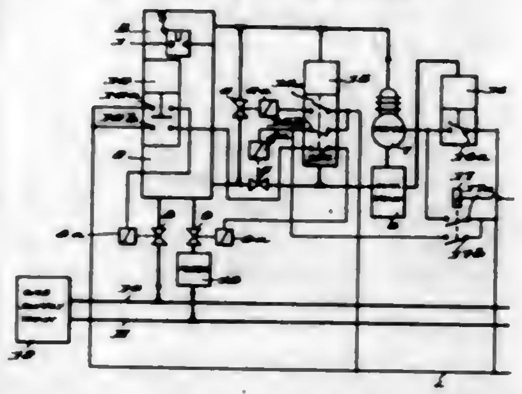
Robert R. Circle, Woodbridge, Va., and Thomas O. Prunty, New Orleans, La., assignors to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Feb. 26, 1965, Ser. No. 435,557
10 Claims. (Cl. 200—148)



A puffer-type gas-flow circuit interrupter has main contacts in electrical parallel with light synchronously-operated contacts, and a single piston device to supply gas flow to either set of contacts dependent upon the current magnitude being interrupted. The synchronously-operated contacts have a first chance at interruption, while the main orifice is blocked by the moving main contact. If synchronous interruption does not occur because of light overload currents, then the main orifice is unplugged by continued opening movement of the main movable contact, and conventional puffer flow by the piston device effects interruption of such light overload currents within the main orifice in the usual manner.

3,390,241
GAS CIRCULATING SYSTEM FOR COMPRESSED GAS OPERATED CIRCUIT BREAKERS

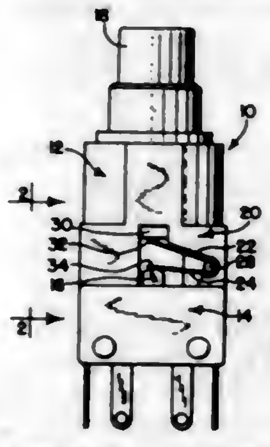
Egbertus Adrianus Frowein, Nussbaumen, Aargau, Switzerland, assignor to Aktiengesellschaft Brown, Boveri & Cie., Baden, Switzerland, a joint-stock company
Filed Oct. 20, 1965, Ser. No. 498,466
Claims priority, application Switzerland, Oct. 23, 1964, 13,779/64
5 Claims. (Cl. 200—148)



1. In a pressure gas operated electrical power switch having a closed gas circulating system, the combination comprising a low-pressure tank, a high-pressure accumulator, said tank and accumulator being internally communicable with each other through the quenching chamber of the load breaking switch contacts only upon disconnection of said contacts, thereby to establish a flow of gas from said accumulator to said low-pressure tank, a gas line extending between said low-pressure tank and high-pressure accumulator, said gas line including a control valve, and a compressor for returning gas from said low-pressure tank into said high-pressure accumulator and raising the pressure thereof, a pressure difference controller responsive to the difference in pressures of the gas in said low-pressure tank and said high-pressure accumulator for controlling the operation of said control valve and said compressor, a second controller responsive to the pressure in said low-pressure tank, a gas supply tank, a gas supply line from said gas supply tank into said low-pressure tank and which includes a feed-in valve, a gas discharge line to said gas supply tank from said low-pressure tank and which includes a discharge valve, and means controlled by said second controller for operating said feed-in and discharge valves in accordance with the change in gas pressure in said low-pressure tank, thereby to maintain a constant gas volume in said closed gas circulating system.

3,390,242
SWITCH MECHANISM UTILIZING A SINGLE SPRING ELEMENT TO PROVIDE LOST MOTION

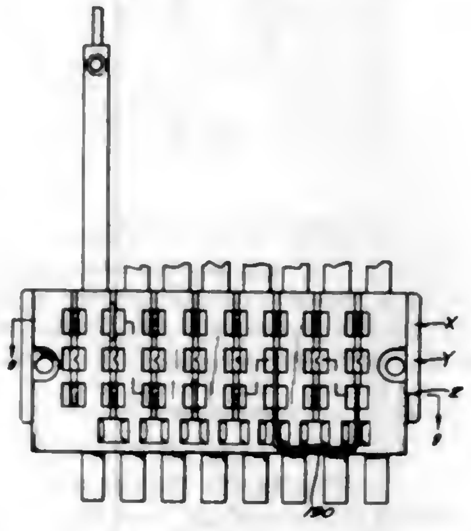
John A. Koepke, Mount Prospect, Ill., assignor to Illinois Tool Works Inc., Chicago, Ill., a corporation of Delaware
Filed Mar. 10, 1967, Ser. No. 622,166
6 Claims. (Cl. 200—153)



A lost motion mechanism or device capable of being employed between spaced reciprocating switch components to increase pre-travel and over-travel beyond the limits normally enjoyed by the switch device.

3,390,243
MULTIPLE SWITCH ASSEMBLY

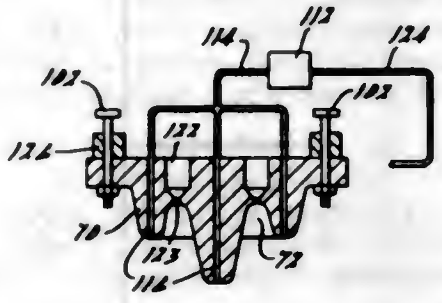
George Obermann, Niles, Ill., assignor to Controls Company of America, Melrose Park, Ill., a corporation of Delaware
Original application Apr. 17, 1967, Ser. No. 631,371. Divided and this application Aug. 29, 1967, Ser. No. 664,080
5 Claims. (Cl. 200—166)



The switch blades are molded into wafers which can be stacked to provide an assembly having grouped terminals for a suitable connector cable. Selected blades can be interconnected by a variety of bussing methods. The active blade end engages a guided follower which rides on the cam and is not sensitive to direction of rotation of the cam. The passive blades abut stops in the follower guide to eliminate need for adjustment. Axial movement of the cam arbor actuates a line switch in one of the switch assemblies. A drive cam can actuate another switch which can also be actuated by the main cam. The cam arbor is mounted between end plates spaced by the motor mounting plate and the motor bearing is free of radial loading.

3,390,244
MACHINING APPARATUS OF THE ELECTROEROSIVE TYPE

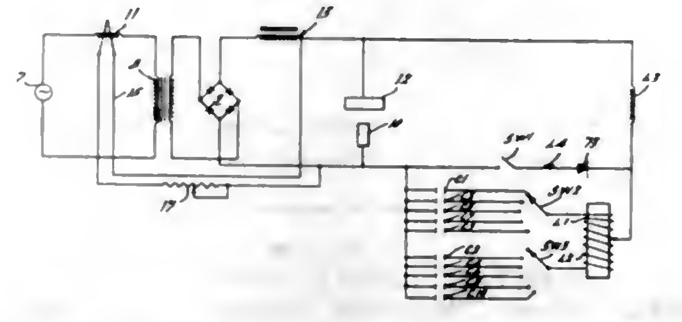
Robert S. Webb, Bloomfield Hills, Mich., assignor, by mesne assignments, to Elox Inc., Troy, Mich., a corporation of Delaware
Continuation of application Ser. No. 91,457, Feb. 24, 1961. This application July 6, 1965, Ser. No. 469,578
11 Claims. (Cl. 219—69)



A coolant circulating and electrode system for electrical machining in which a fluid coolant is continuously circulated through a machining spark gap. The electrode has protuberant portions and adjacent reentrant portions, which portions have fluid passages opening through their machining faces. Gap-cooling and flushing fluid may selectively be forced or sucked through either the protuberant or the reentrant passages.

3,390,245
ELECTRICAL DISCHARGE MACHINING POWER SUPPLY APPARATUS

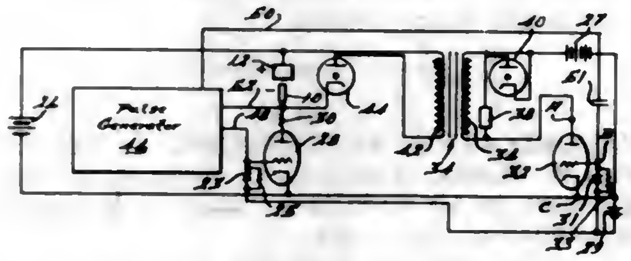
Robert S. Webb, Bloomfield Hills, Mich., assignor, by mesne assignments, to Elox Inc., Troy, Mich., a corporation of Delaware
Filed Sept. 16, 1965, Ser. No. 487,784
8 Claims. (Cl. 219—69)



1. In an electrical discharge machining apparatus for machining a conductive workpiece by a tool electrode across a dielectric filled gap, a source of machining pulses operatively connected to said gap, a first inductance and a unidirectional current conducting device connected in a series combination, at least one resonant network connected across said combination, said combination connected in series with a second inductance of greater magnitude than said first inductance across said gap to provide unidirectional followup pulses after each of said machining pulses.

3,390,246
ELECTRICAL DISCHARGE MACHINING POWER SUPPLY CIRCUIT

Robert S. Webb, Bloomfield Hills, Mich., assignor, by mesne assignments, to Elox Inc., Troy, Mich., a corporation of Delaware
Continuation-in-part of application Ser. No. 29,363 May 16, 1960, now Patent No. 3,229,159, Jan. 11, 1966. This application Dec. 13, 1965, Ser. No. 513,275
4 Claims. (Cl. 219—69)

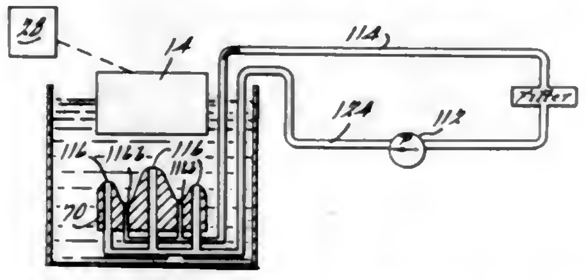


Method and apparatus for electrical discharge machining wherein a high voltage, high current pulse of relatively short duration is superimposed on the leading edge of a low voltage machining pulse of equal or less current.

3,390,247
COOLANT CIRCULATION SYSTEM FOR ELECTRICAL DISCHARGE MACHINING APPARATUS

Robert S. Webb, Bloomfield Hills, Mich., assignor, by mesne assignments, to Elox Inc., Troy, Mich., a corporation of Delaware
Continuation-in-part of application Ser. No. 469,578, July 6, 1965, which is a continuation of abandoned application Ser. No. 91,457, Feb. 24, 1961. This application June 27, 1966, Ser. No. 560,670
4 Claims. (Cl. 219—69)

An EDM dielectric-liquid circulation system including an electrode having protuberant and reentrant face areas and circulation passages extending through the electrode and opening medially of said face areas. Positive or negative pressure may be applied to the liquid to cause



it to flow out of or into either passage at the EDM gap, to cool, deionize and flush the gap.

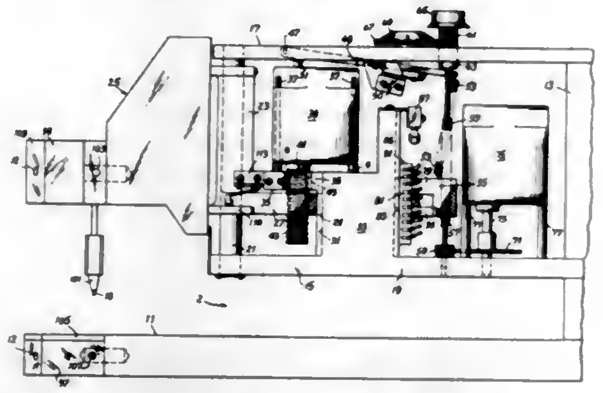
3,390,248

ELECTRIC RESISTANCE WELDER

William Thomas Illingworth, Houston, Tex., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware

Filed July 10, 1964, Ser. No. 381,778

16 Claims. (Cl. 219—86)



A resistance welding machine with an electric motor driven mechanism for driving the electrodes into engagement with the workpiece. Upon the attainment of a preselected electrode pressure, a switch is activated to stop the drive motor and initiate the welding cycle. Two opposing moments, one caused by adjustable spring biasing means and the other the resultant of the reaction force caused by the drive motor driving the electrodes into engagement, cause a control lever to pivot and thereby activate the control switch.

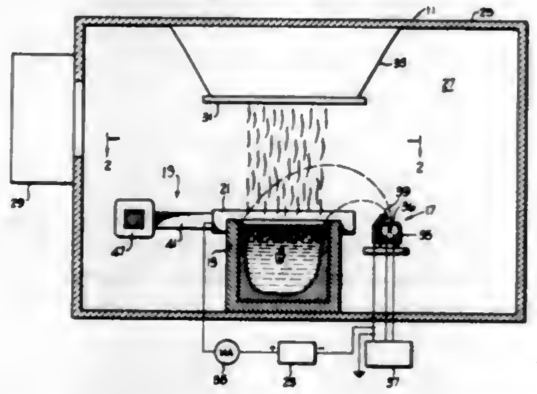
3,390,249

VAPORIZATION MONITORING APPARATUS

Charles W. Hanks, Orinda, Calif., assignor, by mesne assignments, to Air Reduction Company, Incorporated, a corporation of New York

Filed Sept. 20, 1965, Ser. No. 488,671

10 Claims. (Cl. 219—121)



A vaporization monitor provides an indication of the density of the vapor cloud above the evaporant in an electron beam furnace by collecting the low velocity ionization electrons which are constrained from passing to the evaporant by the magnetic focusing field.

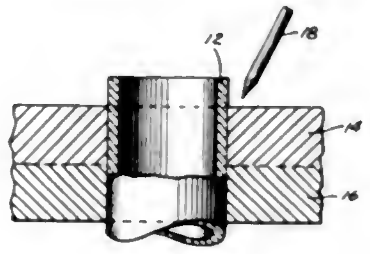
3,390,250

APPLICATION OF A PULSATING CURRENT TO TUBE-TO-TUBE SHEET WELDING

William R. Apblett, Metuchen, Joseph Martin, Menlo Park, and Edward J. Philipps, Scotch Plains, N.J., assignors to Foster Wheeler Corporation, New York, N.Y., a corporation of New York

Filed Nov. 16, 1964, Ser. No. 411,409

5 Claims. (Cl. 219—125)



A method of welding in which a pulsating direct current having a frequency of ten to one-half cycles per second is supplied to a nonconsumable electrode, and the electrode is moved along the weld area with a travel rate of 0.020 inch to 0.093 inch per pulse.

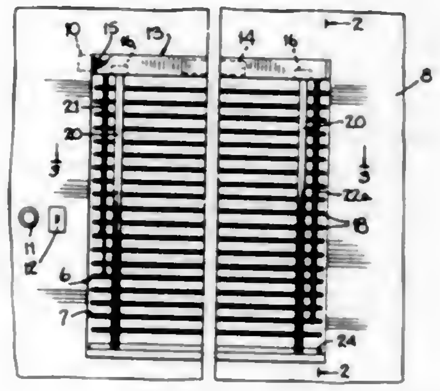
3,390,251

HEATING DEVICE

Joshua D. Lowenfish, New York, N.Y. (23 Lawrence Park Crescent, Bronxville, N.Y. 10708)

Filed Oct. 22, 1965, Ser. No. 501,172

8 Claims. (Cl. 219—213)



A heating and ventilating device of collapsible screen construction for mounting in an exterior window or glazed door frame including hollow, collapsible, tiltable slats to form an adjustable screen construction with electrical heating means and heat and electrical insulation in the individual slats, adjusting means for moving and tilting the slats to provide controlled thermal insulation at the exterior window or door opening for the room as well as a convection heating source when the electrical heating means in selected slats is energized by a low current potential from a high potential source.

3,390,252

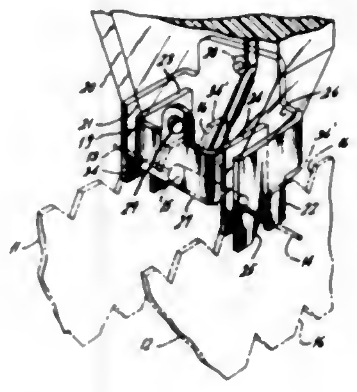
ELECTRIC HEATING TOOL

Robert C. Storck, Warminster, Pa., assignor to Philco-Ford Corporation, Philadelphia, Pa., a corporation of Delaware

Filed Oct. 22, 1965, Ser. No. 501,086

4 Claims. (Cl. 219—234)

Tool for "welding" wire structures to edges of thermoplastic boards, particularly in the building of "cordwood" modules. The tool uses a pair of U-shaped clips one facing the other and with partly overlapping arms, parallel edges of which rest on spaced portions of the wire structure. Electric current is passed through the two clips and thereby through a pair of wire segments, the arrangement being such that these segments rest on edges of the thermoplastic boards. The current passing through the wire segments then heats the underlying parts of the edges of the boards, thereby "welding" the wires to the thermoplastic boards.



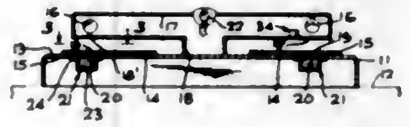
3,390,253

LIGHT RESPONSIVE APPARATUS FOR COMPARING CARDS OR THE LIKE

Wendell S. Miller, 1341 Comstock Ave., Los Angeles, Calif. 90024

Filed June 25, 1962, Ser. No. 205,009

11 Claims. (Cl. 235—61.7)



1. Apparatus including a first photovoltaic cell, a second photovoltaic cell, electrical circuitry responsive to both of said cells and actuable to a first condition when neither of said cells is illuminated or when both are illuminated, and to a second and different condition when only one of said cells is illuminated, said circuitry including a closed loop circuit having said two photovoltaic cells connected in series with one another in additive relation so that both cells tend when illuminated to generate currents flowing in the same direction about said loop, said series connected cells being adapted to produce a closed circulation of current within said loop when both cells are illuminated, but to produce a circulation of current externally of said loop when only one cell is illuminated, means responsive to said external circulation of current, and rectifier means for preventing said external circulation of current from flowing through said last mentioned means except in a predetermined single direction.

3,390,254

INCOMPATIBLE MODULUS COUNTING DEVICE

Robert S. Lundin, Thomaston, Conn., assignor to General Time Corporation, New York, N.Y., a corporation of Delaware

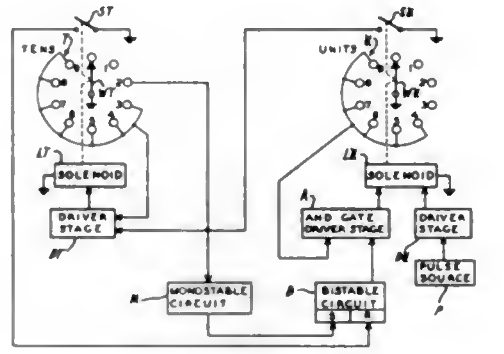
Filed Feb. 3, 1964, Ser. No. 342,171

26 Claims. (Cl. 235—92)

An incompatible modulus counting device comprising an electrically actuated and electrically indicating counting module adapted to count to a fixed modulus. In order to count to a total count less than said fixed modulus, the electrical indications provided by all counts higher than the desired total count are connected in a feedback circuit to the electrical module drive. Thus, upon attaining a count higher than the desired count, the module is advanced a unit count at a time to zero.

The feedback loop may include an AND gate such that the module may selectively count to its fixed modulus or to the desired lower unit count. In a 24 hour clock the unit hours module counts first to 9 to indicate 19 hours, then to 3 to indicate 23 hours; the AND gate being enabled by the attainment of a count of 2 in the tens hours module or by a separate counter activated each time the unit hours module attains its full modulus ten.

An electronic clock utilizing such modules comprises a unique monostable circuit for setting a bistable circuit controlling the AND gate. The bistable circuit is reset each time the tens hours module attains its full modulus often.



A unique inhibiting circuit for inhibiting electrical readout of a counting module during a change in the count is also disclosed.

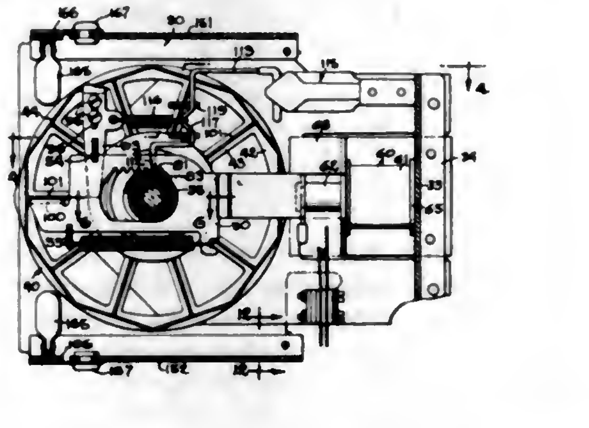
3,390,255

STEPPING MECHANISM FOR USE IN A PINBALL MACHINE OR THE LIKE

Roman F. Garbark, Westchester, Ill., assignor to D. Gottlieb & Co., Chicago, Ill., a corporation of Illinois

Filed Aug. 9, 1965, Ser. No. 478,256

14 Claims. (Cl. 235—92)



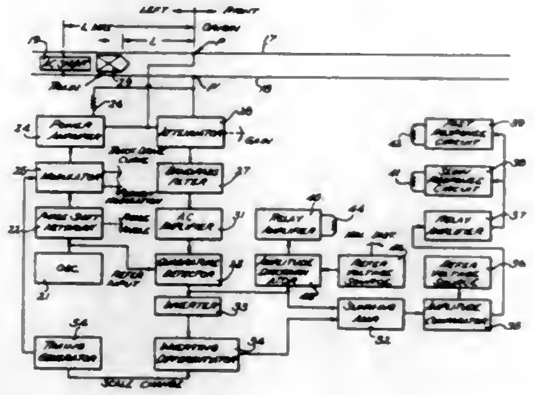
1. In a stepping mechanism for use in a pinball machine or the like, the combination comprising a frame plate mounting a shaft, an indicator drum having a hub journaled on the shaft and having a central web recessed to define a drum hollow, a flat rack member arranged adjacent the drum hollow, means including a solenoid and return spring for reciprocating the rack member, a rotary pawl member extending axially into the drum hollow, a first set of axially facing ratchet teeth on the web adjacent the hub, a set of pawl teeth on the pawl member for cooperating with the first set of ratchet teeth, means for biasing the pawl member endwise, a second set of axially facing ratchet teeth surrounding said first set, a keeper pawl secured with respect to the frame plate for cooperating with the teeth of the second set, and a rack and pinion connection between the rack member and the pawl member so that when the rack member is reciprocated by the solenoid the rotary pawl member oscillates for indexing of the drum through one step of movement.

3,390,256
PREDICTOR SELF-CHECK SYSTEM FOR ANALOG COMPUTER

Henry M. Clanton and George B. Crofts, Claremont, Calif., assignors to The Marquardt Corporation, Van Nuys, Calif., a corporation of California

Filed Sept. 18, 1963, Ser. No. 309,731

7 Claims. (Cl. 235—153)



The apparatus simulates, at periodic intervals, a train approaching a grade crossing at a very high rate of speed, higher than any speed attainable by an actual train. This signal actuates the entire crossing predictor system and, if it is not operating properly, a stand-by system is switched into operation.

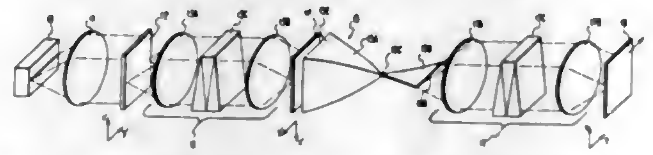
A timing generator causes a modulated test signal of approximately one second duration to be applied to the system every five seconds. A circuit having one response time responds to the approach of a train, whereas a circuit having another response time responds to the test signal.

3,390,257
OPTICAL COMPUTER FOR CORRELATION AND CONVOLUTION

Adolf W. Lohmann, San Jose, Calif., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Apr. 13, 1964, Ser. No. 359,325

11 Claims. (Cl. 235—181)



An apparatus for generating the correlation or convolution of two transparencies: a first spectroscope is used to produce a continuum of images of a first transparency on the face of a second transparency. All of the light passing through the second transparency is collected into one point. The collected light represents the convolution or correlation of the images on the first and second transparencies. The information bearing variable is the wavelength of the light. A second spectroscope is used to transform the wavelength variable to a space variable.

3,390,258
SIMPLIFIED ANALOG COMPUTER AND SIMULATOR HAVING SYNCHRONOUSLY SWITCHED INPUT AND OUTPUT TO EFFECT TIME-SHARING

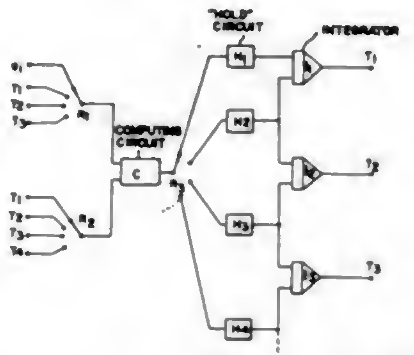
Takeo Miura, Tokyo-to, and Junzo Iwata, Kodaira-shi, Japan, assignors to Kabushiki Kaisha Hitachi Seisakusho, Tokyo-to, Japan, and Hitachi Denshi Kabushiki Kaisha, Kodaire-shi, Japan, both joint-stock companies of Japan

Filed May 12, 1964, Ser. No. 366,746

Claims priority, application Japan, May 15, 1963, 38/24,164

3 Claims. (Cl. 235—184)

A time-shared analog computer and simulator for compensation of errors due to dead time arising from time-sharing, which utilizes a computing element commonly used for a plurality of channels, change-over switches for scanning the input and output of the computing element, a plurality of holding circuits to hold the respective channel outputs of the computing element, and a plurality of compensating circuits to compensate dead time subsantially corresponding to the quantity represented by



$$\left\{\tau+\frac{T}{2}\left(1-\frac{1}{n}\right)^2\right\}$$

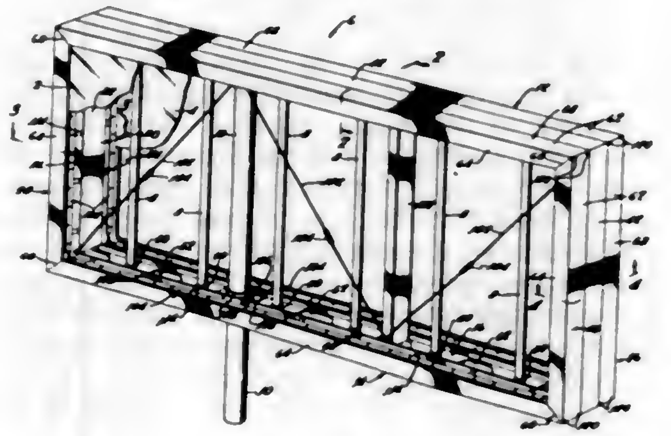
wherein τ denotes the dead time required for computation, T denotes the scanning period, and T/n represents the time interval during which each of said holding circuits is connected to the output of said computing element and correctly follows up variations in the output of said computing element as well as variations in the output of said computing element within one cyclic period.

3,390,259
ILLUMINATED SIGN

Angier R. Angier, Santa Ana, Calif., assignor to S. Marshall Youngman

Filed Feb. 7, 1966, Ser. No. 525,472

16 Claims. (Cl. 240—11.2)



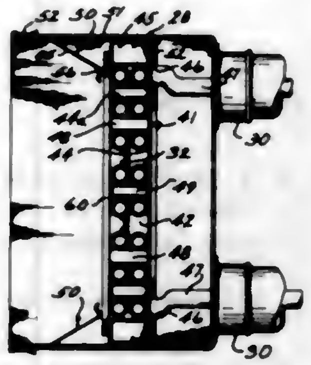
An illuminated outdoor sign consisting of a cabinet having a plurality of sides connected together to frame at least one display panel and enclosure electrical means for supplying power and illuminating the panel. The cabinet includes a central frame member with an outwardly opening raceway extending along its length. An elongated skirt having a face flange framing an edge of the panel and a side flange extending across the panel edge is supported from the central member. The side flange terminates adjacent the central member to leave the raceway exposed so that the conductors of the electrical means which are housed in the raceway are readily accessible. A removable plate covers the raceway to protect the lamps and conductor from the weather. The skirt also has an elongated outwardly opening trench formed at its central edge interior of one longitudinal edge of the cover plate. Moisture which enters between the cover plate and the skirts is channelled to the bottom side of the cabinet where it escapes from the trench exterior of the cabinet.

3,390,260
SUPPORT DEVICE FOR TUBULAR LIGHT GRID ASSEMBLY

Ray W. Cabe, Manhattan Beach, Calif., assignor to Tamar Electronics Industries, Inc., Los Angeles, Calif., a corporation of Delaware

Filed Feb. 18, 1966, Ser. No. 528,627

9 Claims. (Cl. 240—11.4)



A shock resistant support for tubular lights takes the form of a generally rectangular shallow shell of resilient dielectric material in which the edge or marginal material is formed into a double wall surrounding a nest-like cavity contoured around the tubular lights supported therein. Fastening clips are provided to securely retain the lights within the support and to fasten the support to a housing within which it is contained.

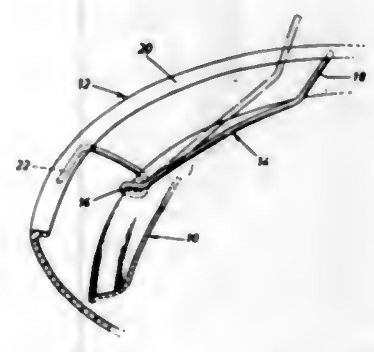
3,390,261
TRIM RING FOR AUTOMOBILE HEADLIGHTS AND DEVICE FOR THE RETENTION THEREOF

Klaus Frederick Nowak, 442 Manor Road E., Toronto, Ontario, Canada

Filed Nov. 8, 1965, Ser. No. 506,722

Claims priority, application Germany, Oct. 9, 1965, N 27,462

2 Claims. (Cl. 240—41.5)



A retaining spring adapted for use in automobile headlights for the purpose of retaining a trim ring to the reflector. The retaining spring having an intermediate portion with a bend which embraces the reflector edge on both sides with the ends of the spring bearing against the trim ring under spring tension.

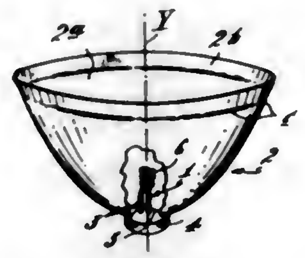
3,390,262
MULTIZONE HIGH POWER LIGHT REFLECTOR

William B. Elmer, Boston, Mass., assignor to Sylvania Electric Products Inc., a corporation of Delaware

Filed May 24, 1965, Ser. No. 457,925

9 Claims. (Cl. 240—41.37)

An airport beacon for projecting a narrow (10°) vertical beam portion of high intensity (10,000 c.p.) and a concentric wider (30°) beam portion of lower intensity (5,000 c.p.) unitary with the first. The beacon comprises a compound reflector of light from a source with volume, rather than a point source. The reflector is a surface of revolution with two concentric portions generated from two coaxial curves. The curve further from the light source is a parabola with its focus at the light source and reflects the narrow, high intensity beam portion. The curve nearer the light source is the locus of increments reflecting light in the wider beam but within a definite angle.

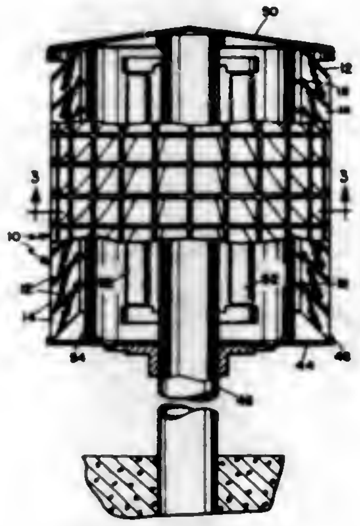


3,390,263
COLUMNAR CELLULAR LOUVER LIGHT CONTROL UNIT

Willis L. Lipscomb, 2208 Willow St., San Diego, Calif. 92106

Filed Aug. 22, 1966, Ser. No. 574,009

9 Claims. (Cl. 240—108)



A columnar light control unit formed from stacked louver elements each of which is a dished plate ring with vertical unitary vanes extending radially on one side of the plate. There are registering means on the plates for direct interengagement with doubly dished plates enabling assembly with a number of the louver elements inverted. A shield is also arranged between the central source of light and the louver elements which has portions thereof reflective and other portions translucent for directional control of emitted light.

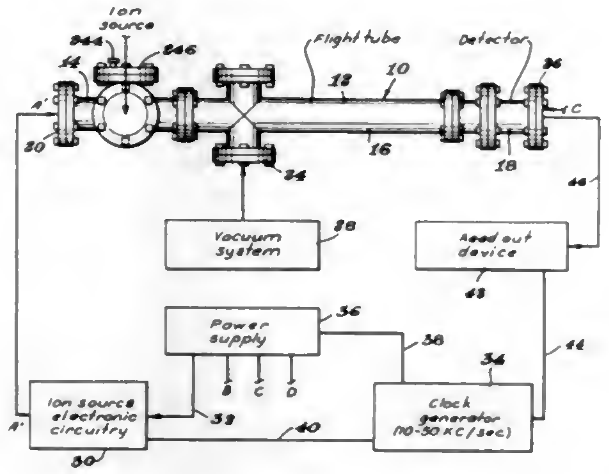
3,390,264
ION SOURCE AND ACCELERATOR ASSEMBLY FOR A TIME-OF-FLIGHT MASS SPECTROMETER

Roland S. Gohlke, Ashland, and Franklin J. Karle, Natick, Mass., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Filed Dec. 4, 1964, Ser. No. 415,897

9 Claims. (Cl. 250—41.9)

This invention relates to electrostatic time-of-flight mass spectrometer apparatus in which a ribbon of electrons is brought to sharp focus along the longitudinal axis of the ion source, ion acceleration and flight tube assembly. The ions produced by the collision of the electron beam with the sample in the ion source are accelerated by means of substantially uniform accelerating fields through collimating slits in the ion source, ion accelerator, and flight tube and impinge on a detector which usually is an electron multiplier device.

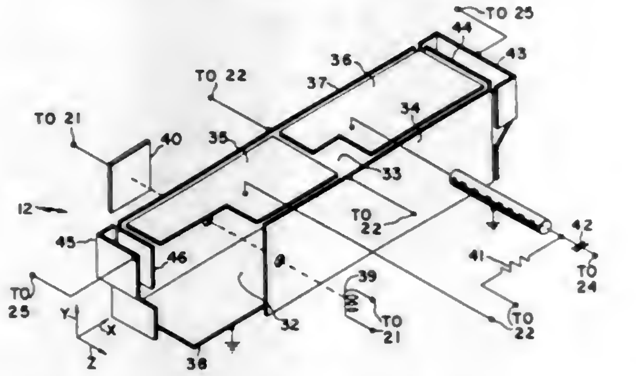


3,390,265
ION CYCLOTRON RESONANCE MASS SPECTROMETER HAVING MEANS FOR DETECTING THE ENERGY ABSORBED BY RESONANT IONS

Peter M. Llewellyn, Menlo Park, Calif., assignor to Varian Associates, Palo Alto, Calif., a corporation of California

Filed May 17, 1965, Ser. No. 456,173

20 Claims. (Cl. 250—41.9)



A spectrometer is described which employs ion cyclotron resonance and energy absorption in mass analysis. In an evacuated envelope ions are formed in the first of two regions which are subjected to static magnetic and electric fields disposed at right angles to each other and to the common axis of the two regions. The ions are caused by the interaction of the fields to move with cycloidal motion into the second region which is additionally subjected to an oscillating electric field in the same direction as the static field. The ions in resonance with the oscillating field absorb energy therefrom and separate from the non-resonant ions. The energy absorbed by the resonant ions is then detected as a measure of the resonant ions.

3,390,266
APPARATUS FOR CHARGING THE SURFACE OF PHOTOELECTRIC LAYERS USING CORONA DISCHARGE

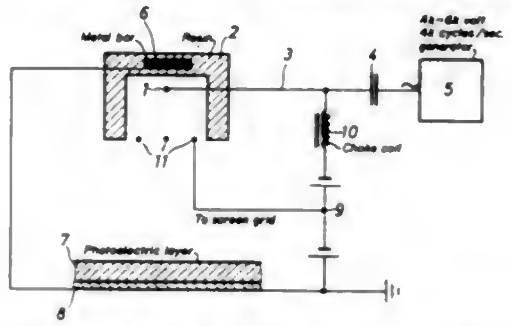
Reinhold Hermann Epping, 10 Konigsteinstrasse, 8 Munich 13, Germany

Filed Oct. 19, 1965, Ser. No. 497,720

Claims priority, application Germany, Nov. 5, 1964, E 28,077

3 Claims. (Cl. 250—49.5)

An apparatus for charging xerographic sheets electrostatically with either positive or negative ions from the corona around a wire that is connected to a high voltage high frequency A.C. generator and also to a positive or negative D.C. potential whose voltage is not itself sufficient to produce a corona discharge, the wire being in close proximity to a parallel grounded conductor with a layer of resinous insulation between the two, and with a screen grid between the wire and the xerographic sheet.

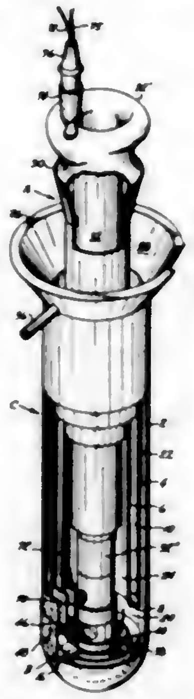


3,390,267
X-RAY CRYOSTAT

Czeslaw Deminet, Seattle, Wash., assignor to The Boeing Company, Seattle, Wash., a corporation of Delaware

Continuation of application Ser. No. 304,480, Aug. 26, 1963. This application May 5, 1965, Ser. No. 456,036

12 Claims. (Cl. 250—51.5)



A method and apparatus are disclosed by which glass can be used to fashion a Dewar that is suitable for X-ray diffractions. The Dewar is commonly assembled with a narrow circumferential slot about one side thereof which has a continuously open angular extent of at least 180°. The vertical extent of the slot may be as little as ⅛ inch, that is, sufficient to pass an X-ray beam but no more. The Dewar is also structured so that stresses created in use at liquid nitrogen temperatures are balanced at all points on and around the Dewar.

3,390,268
ELECTRICAL APPARATUS FOR SIMULATING THE OPTICAL STIMULATION OF A MEDIUM AND COMPUTING CHARACTERISTIC LIFE-TIMES OF SAID MEDIUM

Robert S. Witte, Redondo Beach, and Richard C. Mackey, Reseda, Calif., assignors to TRW Inc., Redondo Beach, Calif., a corporation of Ohio

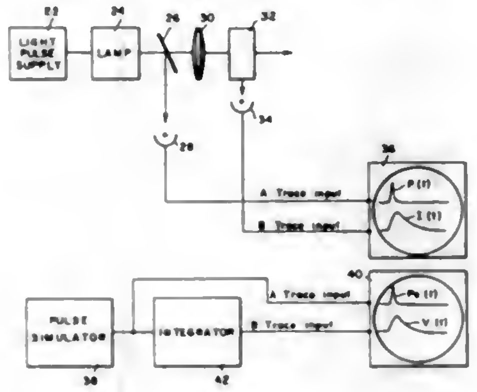
Filed Sept. 30, 1965, Ser. No. 491,607

7 Claims. (Cl. 250—71)

1. In apparatus for analyzing the time dependent physical characteristics of a medium, the combination of:

means for supplying time varying excitation energy to a medium to effect a change in atomic states of the medium which causes the medium to exhibit a physical response having a time dependent characteristic that is a function of said excitation energy;

means for converting the physical response of said medium to a first electrical signal having a waveform corresponding to the physical response;



means for generating a second electrical signal having a waveform simulating that of said time varying excitation energy; and

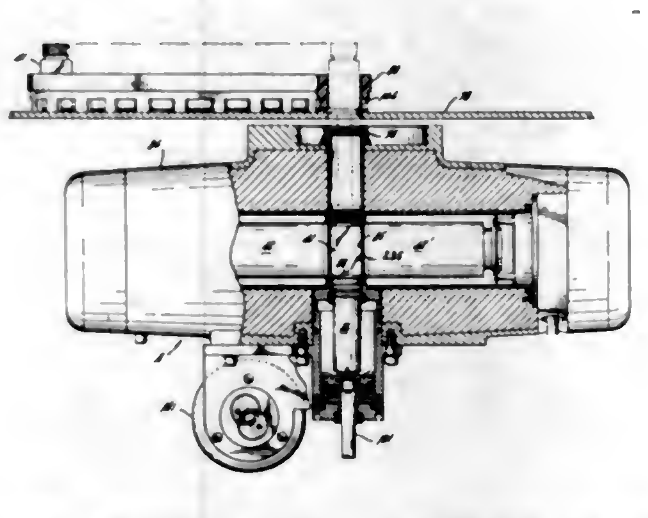
means for integrating said second electrical signal to develop a simulated waveform matching the waveform of said first electrical signal.

3,390,269
APPARATUS FOR AUTOMATIC STANDARDIZATION WITH EXTERNAL STANDARDS IN LIQUID SCINTILLATION SPECTROMETRY

Lyle E. Packard, Hinsdale, Ill., assignor to Packard Instrument Company, Inc., Downers Grove, Ill., a corporation of Illinois

Filed June 18, 1964, Ser. No. 376,064

12 Claims. (Cl. 250—71.5)



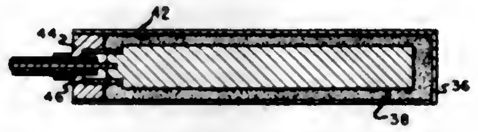
1. Radioactivity spectrometry apparatus for use in analyzing test samples of the type including a light transmissive sample vial having a liquid scintillator and a radioactive isotope therein, said apparatus comprising, in combination, a housing defining a shielded detection chamber, means for introducing said test samples into said chamber one at a time in seriatim order, means supported in said housing and positioned adjacent said chamber for producing output signals proportional to the energy of light scintillations occurring within said chamber, means for counting at least certain of the output signals produced, means for ejecting said test samples from said chamber after said counting means has counted at least certain of the output signals produced during two successive count cycles, a normally inactive emitter of penetrating radiation positioned adjacent said chamber, said normally inactive emitter being characterized in that penetrating radiation is emitted therefrom only while said emitter is activated so as to insure that said chamber and any sample therein are isolated from radiations emanating externally of the sample during periods of inactivation of said emitter, and means for activating said emitter upon completion of one of said two count cycles and for inactivating said emitter upon completion of the other of said two count cycles so that during one of said count cycles light scintillations are created in said liquid scintillator by the composite effect of decay events occurring in said isotope and interactions between said penetrating radiation and said liquid scintillator.

3,390,270
DEVICE FOR SENSING THERMAL NEUTRONS AND UTILIZING SUCH NEUTRONS FOR PRODUCING AN ELECTRICAL SIGNAL

Robert L. Treinen, Forest Park, and Raymond H. Stentz, Mount Healthy, Ohio, assignors to the United States of America as represented by the United States Atomic Energy Commission

Filed Oct. 22, 1965, Ser. No. 502,698

6 Claims. (Cl. 250—83.1)



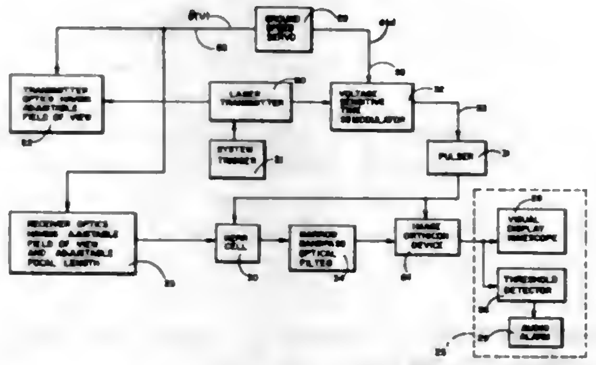
This invention relates to a thermal-neutron sensor which has the capability of providing a dynamic linear response to changes in thermal-neutron-flux conditions while providing an electrical output indicative of the density of the thermal-neutron flux at the sensor. The senor is formed of an emitter electrode possessing a high thermal-neutron absorption across section for radiative capture of thermal neutrons and a collector electrode separated from the emitter electrode by a dielectric material. An (n,γ) reaction occurs in the emitter electrode upon sensing thermal neutrons for the generation of gamma photons which are absorbed to generate Compton electrons for collection by the collector electrode.

3,390,271
OBSTACLE WARNING DEVICE

Arthur A. Lavine, 5322 Waupaca Road, Palos Verdes Estates, Calif. 90274

Filed May 25, 1964, Ser. No. 382,426

12 Claims. (Cl. 250—199)



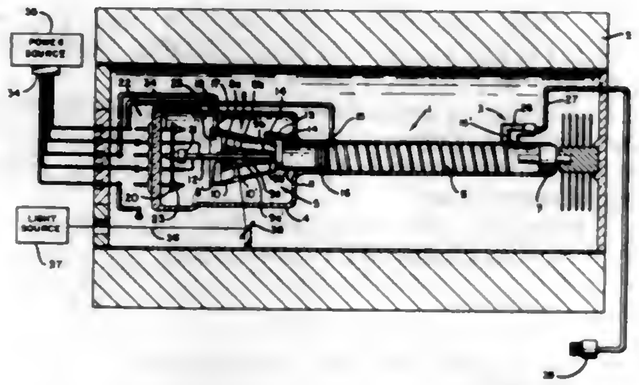
1. In a vehicle having a speed sensor, a pulsed-light energy system for detecting the presence of obstacles within a selected view angle and at a selected range comprising:

optical receiving means for detecting reflections of said light energy from said obstacles to-be-detected; and

means adapted to be responsive to said speed sensor for selectively limiting both the view angle and range within which said optical receiving means is responsive to said received energy, whereby said vehicle may be enabled to be evasively maneuvered so as to avoid such obstacle.

3,390,272
PHOTOMULTIPLIER

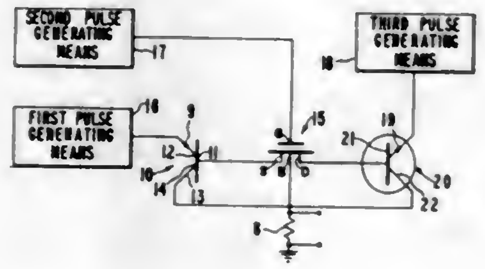
Mahlon B. Fisher, Monte Sereno, Calif., assignor to Sylvania Electric Products Inc., a corporation of Delaware
Filed Mar. 31, 1965, Ser. No. 444,241
17 Claims. (Cl. 250—199)



This photomultiplier comprises an electron gun and helical slow wave structure supported in axial alignment and located in an axial magnetic field. The cathode and dynode electrodes of the electron gun comprise axially spaced truncated cones having external electron emissive surfaces. A hollow focus-accelerating electrode is radially spaced from and is supported coaxially around and substantially coextensive with the cathode and dynodes. The focus-accelerating electrode also has a truncated conical shape and has an opening therein through which light is passed to the photosensitive surface of the cathode.

3,390,273
ELECTRONIC SHUTTER WITH GATING AND STORAGE FEATURES

Gene P. Weckler, Campbell, Calif., assignor to Fairchild Camera and Instrument Corporation, Syosset, N.Y., a corporation of Delaware
Filed Aug. 8, 1966, Ser. No. 571,091
18 Claims. (Cl. 250—214)


SECOND PULSE GENERATING MEANS
17
THIRD PULSE GENERATING MEANS
18
FIRST PULSE GENERATING MEANS
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9
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8

1. A storage-mode photodetector device with electronic shutter action comprising:

a photosensor means having at least one P-N junction therein for producing an electronic signal representing impinging radiant energy thereupon;

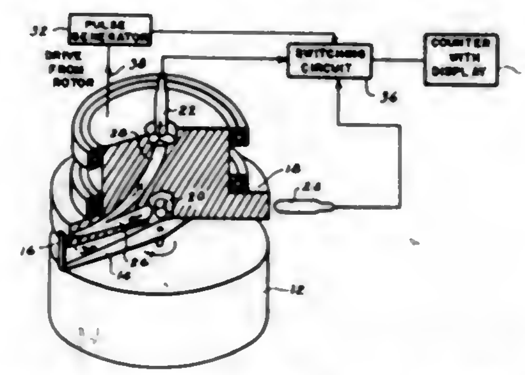
a storage means having at least one P-N junction therein for storing said electronic signal;

a coupling means between said photosensor means and said storage means for transferring said electronic signal from said photosensor means to said storage means at selected intervals; and

a means for reading said electronic signal in said storage means at selected intervals.

3,390,274
ROTATING LIGHT CONDUCTOR FOR INSTRUMENT READING

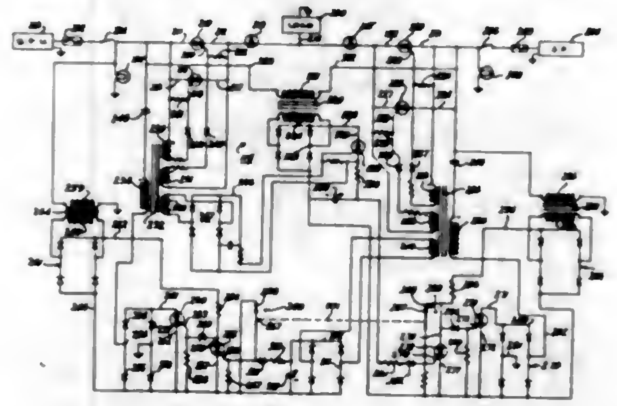
James P. Hunt, Maspeth, N.Y., assignor to White Avionics Corporation, New York, N.Y., a corporation of Delaware
Filed Dec. 7, 1964, Ser. No. 416,399
22 Claims. (Cl. 250—231)



19. An optical scanning transducer for use with an instrument having a rotatable pointer carrying a mirror, said transducer comprising a rotor coaxial with the pointer, a lamp, a light sensor acting as a position sensor, a light sensor acting as a reference sensor, said rotor having means to direct light from the lamp to the mirror and means to guide reflected light back from the mirror to the position sensor, motive means to revolve the rotor, said reference sensor being positioned adjacent the path of revolution of said light-directing means whereby the angle of rotation between illumination of the reference sensor and illumination of the position sensor corresponds to the reading of the instrument.

3,390,275
ZERO POWER DETECTOR SWITCH AND POWER TRANSFER SYSTEM

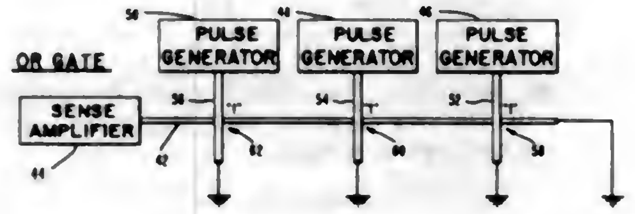
Edward S. Baker, Seattle, Wash., assignor to The Boeing Company, Seattle, Wash., a corporation of Delaware
Continuation-in-part of application Ser. No. 378,377, June 26, 1964. This application Sept. 14, 1964, Ser. No. 398,829
29 Claims. (Cl. 307—64)



The present invention relates to zero power detector switches and power transfer systems adapted to switch power on and off in an A.C. system and to transfer power for a load from one power supply to another power supply. Circuits are disclosed for sensing when an alternating power supply voltage is crossing a zero reference axis with the circuit then operating to apply the power supply voltage to a load in a noise free manner. Details of circuits are provided for pre-gating silicon controlled rectifiers in the zero power turn-on circuits for further reducing sources of noise signals associated with turn-on of such devices. A power transfer system for transferring the load on one power to a different power supply without the generation of electrical disturbance to the load is also disclosed in detail.

3,390,276
ONE-WAY TRANSMISSION LOGIC CIRCUIT

Lester M. Spandorfer, Cheltenham, Pa., assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Filed Nov. 26, 1963, Ser. No. 326,068
12 Claims. (Cl. 307—88)

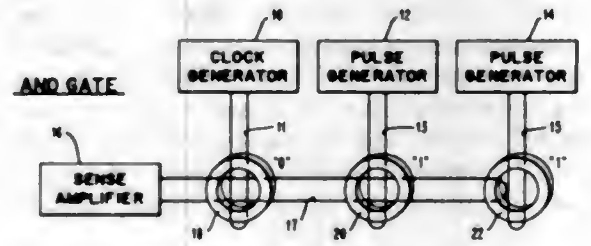


A logical OR-NOR device has been devised in accordance with this invention which use thin film or ferrite core one-way transmission devices having a strong nonreciprocal relationship. In the OR arrangement, a plurality of memeory elements which are all magnetized in the same direction are interrogated either singly or simultaneously in combination. All of the memory elements are linked by a common sense line which in turn is connected to a specialized sense amplifier. Accordingly, when anyone or several of the memory elements are interrogated, the signal or signals, as the case may be, are induced in the sense line and are detected by the specialized sense amplifier. Since all of the memory elements are magnetized in the same direction the signal or signals which are cumulative detected by the sense amplifier indicate the logical OR function.

The logical NOR function is obtained by magnetizing all of the memory elements oppositely from that of the OR function memory elements.

3,390,277
LOGICAL DEVICES

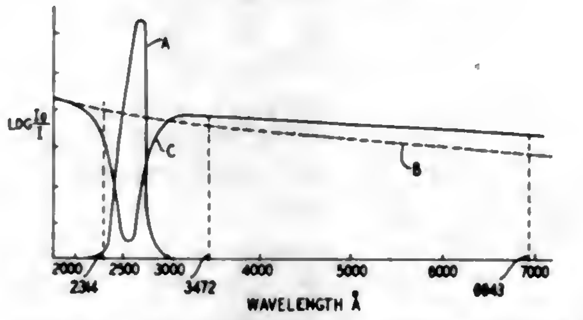
Lester M. Spandorfer, Cheltenham, Pa., assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Filed Jan. 3, 1964, Ser. No. 335,591
10 Claims. (Cl. 307—88)



This invention relates to a logical AND gate utilizing one-way transmission devices, which comprise drive lines juxtaposed either to thin film or ferrite core memory elements. The AND gate of this invention may comprise, for example, two binary bits which are permanently magnetized as binary ones with the third bit being magnetized as a binary zero. The energizing means connected to the drive line contiguous to the binary zero bit is connected to a clock generator which is in continuous operation. The remaining two drive lines are connected to conventional pulse generators. When all three drive lines are energized during the same time period, a resultant signal is produced which is detected by a sense amplifier. The resultant signal indicates that the logical AND function has been accomplished. If only one drive line is energized in addition to the line connected to the clock generator no signal is detected by the sense amplifier thereby indicating that the logical AND function is not accomplished.

3,390,278
OPTICAL LIQUID PARAMETRIC DEVICES WITH INCREASED COHERENCE LENGTH USING DYE

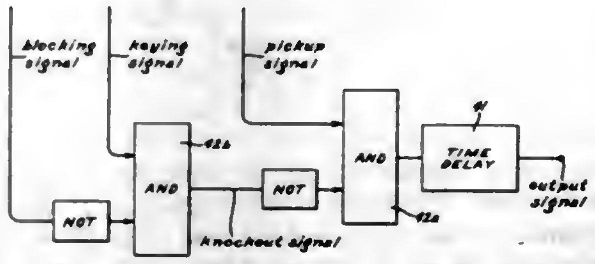
Joseph A. Giordmaine, Summit, and Peter M. Rentzepis, Bernardsville, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Apr. 12, 1966, Ser. No. 542,074
8 Claims. (Cl. 307—88.3)



1. A high frequency mixing arrangement comprising a liquid solution having a chemically stable constituent characterized by an asymmetric carbon atom, means for directing first and second light beams into said solution at an angle to each other such that said beams intersect within the solution and mix to produce a polarization wave and a free wave within the solution, and means within the solution for increasing the coherence length of the produced waves comprising a substance having an absorption peak which occurs at a wavelength lying between the wavelengths of the generated waves and the higher frequency wave of said first and second light beams.

3,390,279
LOGICAL CONTROL MEANS UTILIZING TIME DELAY AND KNOCKOUT "AND" CIRCUITS

Merwyn E. Hodges, Broomall, Pa., assignor to General Electric Company, a corporation of New York
Original application Dec. 16, 1960, Ser. No. 76,209, now Patent No. 3,176,190, dated Mar. 30, 1965. Divided and this application Nov. 24, 1964, Ser. No. 413,579
3 Claims. (Cl. 307—208)



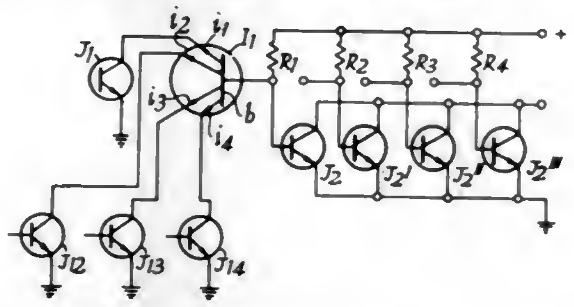
1. Electric control means for producing an output signal in delayed response to the application of a continuous pickup signal under conditions of predetermined phase relationships between periodic blocking and keying signals, comprising: time delay means for producing the output signal after a predetermined time delay upon continuous energization thereof; circuit means connected to the time delay means and controlled by the pickup signal for energizing the time delay means in response to application of the pickup signal, knockout means connected to the circuit means and controlled by the keying signal for preventing energization of the time delay means during the keying signal periods, said time delay means being incapable of producing said output signal when energized only during the intervals between successive periods of the keying signal; and blocking means connected to the knockout means for controlled by the blocking signal for disabling the knockout means, thereby blocking its energization-preventing function, during the blocking signal periods.

3,390,280
SEMICONDUCTOR COUPLING MEANS FOR TWO TRANSISTORS OR GROUPS OF TRANSISTORS

Philip M. Thompson, Stittsville, Ontario, Canada, assignor to The Plessey Company Limited, Ilford, England, a British company

Continuation of application Ser. No. 238,070, Oct. 1, 1962. This application May 24, 1966, Ser. No. 552,617

8 Claims. (Cl. 307—215)



In transistor logic, the transistor of successive stages are coupled by direct connection between the collector of one stage and the base of the next-following stage through a semi-conductor element having when conducting a voltage drop considerably lower than the base-to-emitter drop of the controlled transistor. Thus silicon transistors may be coupled by germanium diodes or by silicon backward diodes.

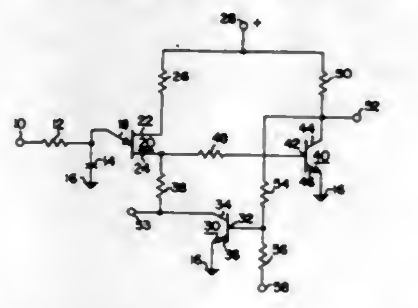
Parallel-connected diodes in this system are preferably constructed as solid circuits which may, by suitable arrangement of terminals, incorporate a series resistance to the voltage source.

3,390,281
CONTROL APPARATUS

Adrian J. Moses, Rush City, Minn., assignor to Honeywell Inc., Minneapolis, Minn., a corporation of Delaware

Filed Apr. 22, 1965, Ser. No. 450,049

2 Claims. (Cl. 307—232)



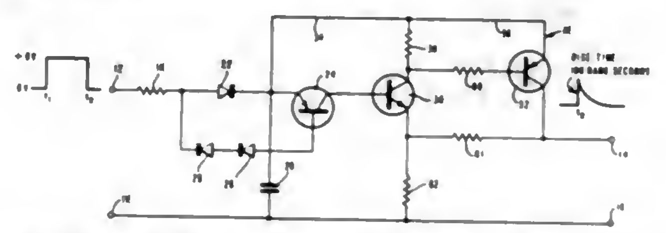
An error sensor is shown wherein amplifier output signals 180° out-of-phase are summed. If the phase or amplitude of one signal varies, the sum differs from zero to provide an error signal. The error signal triggers a unijunction transistor and a bistable circuit to give an output error indication.

3,390,282
PASSIVE SYNCHRONIZED SPIKE GENERATOR WITH HIGH INPUT IMPEDANCE AND LOW OUTPUT IMPEDANCE AND CAPACITOR POWER SUPPLY

Ciro A. Cancro, Silver Spring, and Paul J. Janniche, Jr., Lanham, Md., assignors to the United States of America as represented by the Administrator of the National Aeronautics and Space Administration

Filed Oct. 22, 1965, Ser. No. 502,739

10 Claims. (Cl. 307—260)



A pulse generator for synchronizing or resetting electranic signals without requiring a separate external power source. A storage capacitor stores energy from incoming signals, such energy being utilized to power the pulse generator circuitry. By charging the storage capacitor, triggering a discharge circuit when the input pulse drops to a predetermined level, and developing the output pulse through an amplifier stage which is connected directly to said storage capacitor, the output pulse is rendered independent of the input pulse and the pulse generator needs no external power source.

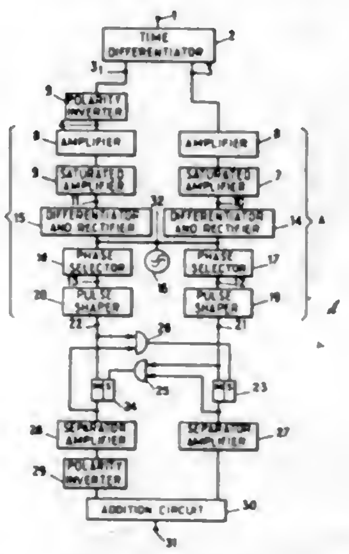
3,390,283
REGENERATIVE REPEATER FOR BITERNARY CODED ELECTRIC PULSES

Claude Hannigsberg, Vernouillet, France, assignor to Lignes Telegraphiques & Telephoniques, Paris, France

Filed May 26, 1965, Ser. No. 458,975

Claims priority, application France, June 26, 1964, 979,760

12 Claims. (Cl. 307—268)



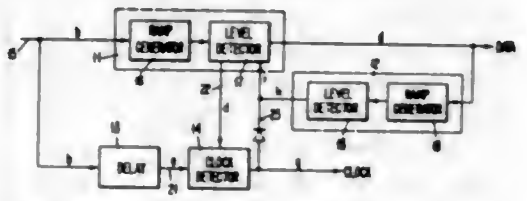
A regenerative repeater for biternary coded electric pulses, comprising a time differentiator circuit delivering differentiated signals of opposite phases to a first and a second channel, respectively, in each of which the latter signals are regenerated with the aid of oscillations delivered by a local oscillator. A bistable circuit provided in each channel is operated by the regenerated signals from both of said channels, and the outputs of both bistable circuits are combined to form the output signals of the repeater.

3,390,284
DOUBLE FREQUENCY DETECTION SYSTEM

James D. Carothers, Saratoga, and Martin O. Halfhill, San Jose, Calif., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Jan. 22, 1965, Ser. No. 427,348

12 Claims. (Cl. 307—269)



A self synchronizing clock and data detector which accommodates maximum bit shift in binary signals magnetically recorded with double frequency techniques. A data detector circuit with a variable time constant is connected to a data read line and the time constant thereof adjusted in a predetermined manner under control of the data output signal to accurately differentiate between data signals and clock signals.

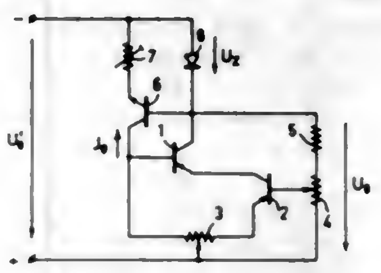
3,390,285
CIRCUIT ARRANGEMENT FOR VARYING THE OPERATING POINT OF A TRANSISTOR WITH CONSTANT DISSIPATION

Hermann Schoen, Hamburg-Lokstedt, Germany, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed Feb. 12, 1965, Ser. No. 432,141

Claims priority, application Germany, Mar. 3, 1964, P 33,735

8 Claims. (Cl. 307—296)



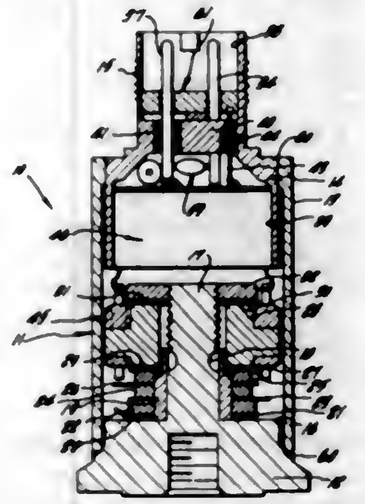
A circuit for holding the collector dissipation of a transistor constant while its collector current is varied includes a second transistor connected with its emitter-collector path in series with the emitter-collector path of the first transistor. A potentiometer is connected between the emitter of the second transistor and the base of the first transistor. The variable tap of the potentiometer is connected to a point of reference potential. A constant current is applied to the end of the potentiometer connected to the base of the first transistors.

3,390,286
HERMETICALLY SEALED INSTRUMENT TRANSDUCER WITH EXTERNAL SENSITIVITY SELECTION

James H. Gradin, Whittier, Billy R. Tolliver, Glendora, John T. Blessum, Arcadia, and Neil R. Richardson, Temple City, Calif., assignors to Consolidated Electrodynamics Corporation, Pasadena, Calif., a corporation of California

Filed Mar. 29, 1966, Ser. No. 538,331

11 Claims. (Cl. 310—8.4)



1. An instrument transducer including a housing, signal generating means in the housing for generating a signal in respose to variations in a selected physical phenomenon presented to the transducer and to which the transducer is sensitive, terminal means including a pair of terminal members carried by the housing accessible to the exterior thereof and extending into the interior thereof, circuit means in the housing coupled between the signal generating means and the terminal means for operating upon the generated signal in a selected manner determined by the circuit means and for presenting the signal as operated upon to the terminal means other than the terminal members as a transducer output signal, means conductively connecting each terminal member to a separate location in the circuit means, and means hermetically sealing and closing the housing including around the terminal means.

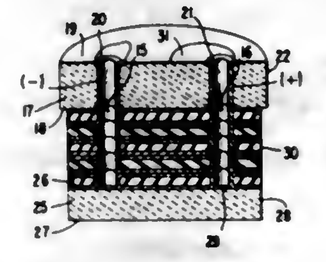
3,390,287
PIEZO-ELECTRIC BUILDING UNITS

Hans Conrad Sonderegger, Sulz-Rickenbach, Switzerland, assignor to Kistler Instrumente AG., Winterthur, Switzerland

Filed Dec. 8, 1965, Ser. No. 512,450

Claims priority, application Switzerland, Dec. 10, 1964, 15,994/64

15 Claims. (Cl. 310—9.6)



1. A piezo-electric building unit for use in a transducer, such as a measuring value converter, for pressure force and acceleration comprising
- a plurality of piezo-electric discs having first and second metallized surfaces and at least one aperture therethrough, said first metallized surface extending through said aperture and being separated from second metallized surface by a first annular gap, said discs being stacked with first metallized surfaces contacting only first metallized surfaces and second metallized surfaces contacting only second metallized surfaces,
- a base plate disposed at one end of said stack of discs and having at least one aperture in alignment with said aperture in said discs and
- a cover plate disposed at the other end of said stack of discs and having at least one aperture in alignment with said aperture in said discs,
- said second metallized surface extending through said aperture on each disc contacting corresponding surfaces on adjacent discs of said stack so as to form a conductive tube extending through said stack.

3,390,288
DEVICE FOR DRIVING OUT THE COMBUSTION GASES OF A SUBATMOSPHERIC MAGNETOHYDRODYNAMIC GENERATOR

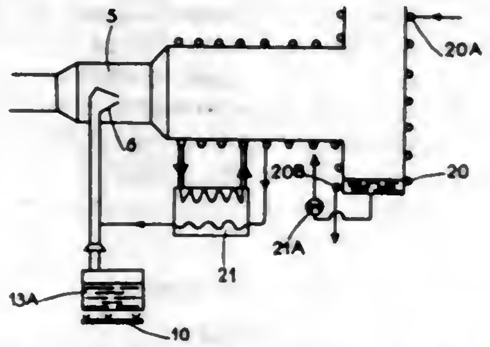
André Dubois, Orsay, and Georges Klein, Paris, France, assignors to Compagnie Generale d'Electricite, Paris, France, a corporation of France

Filed Sept. 8, 1964, Ser. No. 394,809

Claims priority, application France, Sept. 6, 1963, 946,830; July 29, 1964, 983,457

5 Claims. (Cl. 310—11)

A magnetohydrodynamic generator of the subatmospheric type for educting hot gases including a combustion chamber in which combustible fluids with appropriate seed particles are introduced, a duct in which the gases acquire a suitable speed, a conversion chamber connected to a slackening chamber, and at least one eduction stage which is at the same time a purifier for extracting the seed particles of the gases, and an ejector operating by means of fluids such as gases, vapors, steam, water, organic salts and the like. The ejector is connected to the slackening chamber whereby the seed particles are washed away by the condensed ejecting fluid.



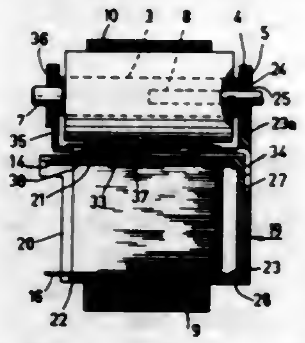
3,390,289
MINIATURE ELECTRIC MOTOR ASSEMBLY

Reinder Hendrik Dijken, Jolle Jager, and Minne Krikke, Drachten, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed Nov. 19, 1965, Ser. No. 508,813

Claims priority, application Netherlands, Dec. 16, 1964, 6414624

5 Claims. (Cl. 310—42)



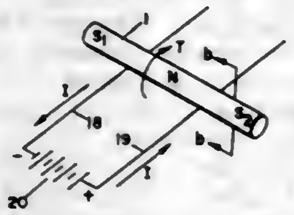
1. A motor assembly comprising a U-shaped stator having a connecting piece and a pair of limb pieces, stator coil means surrounding the lower portion of the limbs of said stator, rotor means, a first and a second member each having an arm for rotatably receiving said rotor means, said first and second members being adapted for slidably entering between the limbs of said stator adjacent said stator coils from opposite sides of said stator, and means for locking said members together for assembling said rotor and stator in operative relation.

3,390,290
STATORLESS HOMOPOLAR MOTOR OR REACTION TORQUE GENERATOR

Martin Nathan Kaplan, San Diego, Calif.
(11610 Cantlay St., North Hollywood, Calif. 91605)

Filed Aug. 28, 1963, Ser. No. 305,122

6 Claims. (Cl. 310—156)



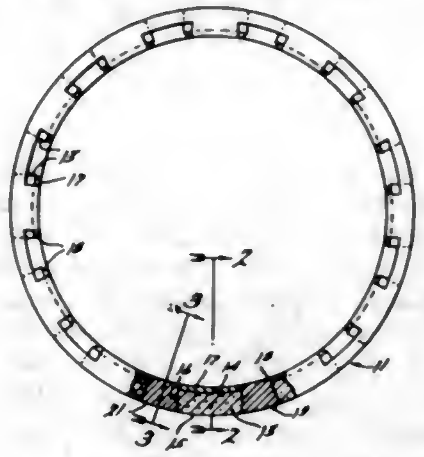
1. A statorless homopolar motor comprising a rotatably mounted single member of circular cross section having symmetrically dispersed magnetic field components therein and thereabout; current supply means adjacent said rotatable member for supplying current thereto, said current supply means having a pair of parallel, electrically isolated and conductive tracks spaced apart so as to support said single member between its opposing poles; a source of electrical current connected to said tracks; and, a current conducting path forming a portion of said single member to conduct current from said current supply means which current traverses and interacts with said magnetic field components to impose torque on said rotatable single member, thus urging it to accelerate in rotation.

3,390,291
PERMANENT MAGNET ROTOR STRUCTURE FOR A DYNAMOELECTRIC MACHINE

Richard F. Eberline, Rochester, and Thomas F. Carmichael and Edward A. Schilling, Drayton Plains, Mich., assignors, by mesne assignments, to Michigan Bank, National Association, a national banking association

Original application July 3, 1962, Ser. No. 207,264, now Patent No. 3,368,275, dated Feb. 13, 1968. Divided and this application Sept. 28, 1967, Ser. No. 671,252

10 Claims. (Cl. 310—156)



A permanent magnet rotor structure for a dynamo electric machine utilizing a separate unit holding a cluster of permanent magnets and a supporting ring for supporting the separate unit with the supporting ring being a preexisting component serving a function in a machine assembly, other than as a part of a generator, in which it is adapted to be rotated.

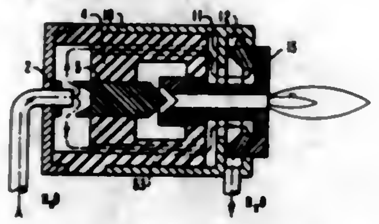
3,390,292
FLUID COOLANT SYSTEM FOR A PLASMA-JET GENERATOR

Giancarlo Perugini, Merano, Bolzano, Italy, assignor to Montecatini Edison S.p.A., Milan, Italy, a corporation of Italy

Filed May 24, 1966, Ser. No. 552,490

Claims priority, application Italy, May 25, 1965, 11,645

6 Claims. (Cl. 313—23)



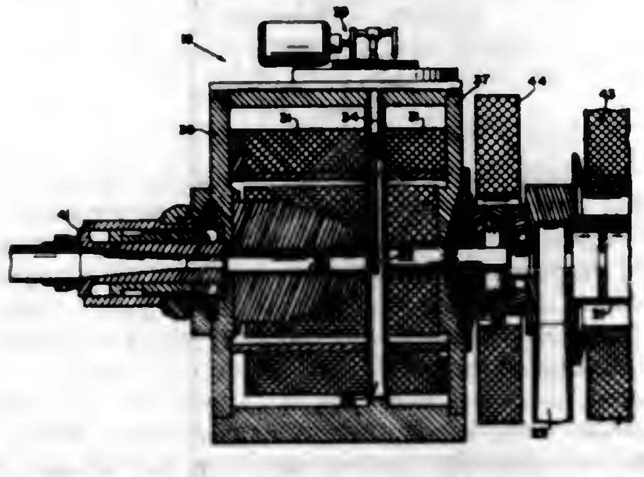
1. In a plasma-jet generator comprising a cathode, an interelectrode electro-insulating element and an anode, said cathode and anode being coaxial electrodes, a cooling system which comprises means for injecting a stream of water against the rear of the cathode, multiradial directrixes determined by the rear configuration of the cathode for passage of water to circumferential water passages in the electro-insulating element for conveying the cooling water through said element to the anode, said passage being coaxial to the electrodes and equidirectional to the plasma jet, and means for passing cooling water around the anode to cool the same, said anode has an axial nozzle which presents a series of parallel, cylindrical and truncated-conical shapes obtained on an integral copper body, multiradial directrixes in a first portion of said anode through which the cooling water flows with a centripetal movement and then along a main portion, with a water passage which is circumferential coaxially, and equidirectional with the plasma jet, and finally a ring of holes arranged radially and obliquely on the external annular wall of the anode, an annular diaphragm supporting the anode and a circular discharge collecting zone so that the water entering the anode and the discharge collecting zone are adjacent each other though separated from each other by said annular diaphragm.

3,390,293
HIGH ENERGY PARTICLE GENERATOR

Craig S. Nunan, Los Altos Hills, Calif., assignor to Varian Associates, Palo Alto, Calif., a corporation of California

Filed June 30, 1964, Ser. No. 379,300

4 Claims. (Cl. 313—63)



1. A positron generating and confining apparatus including means for generating a beam of electrons; means for accelerating said beam of electrons to substantially relativistic velocity; a target electrode of a material having a high atomic number; means for directing said accelerated beam of electrons onto said target for generating positrons; means defining a high intensitivity short longitudinally magnetic field extending through said target and substantially aligned with the direction of incidence of said beam of electrons for confining the positrons generated in said target and imparting a rotational momentum to said positrons, said magnetic field of said field defining means of a length such that positrons in a desired band of energies rotate through a mean angle of substantially 1810°; and means for accelerating the positrons after leaving said magnetic field defining means.

3,390,294
TARGET VIBRATION ISOLATION MOUNT

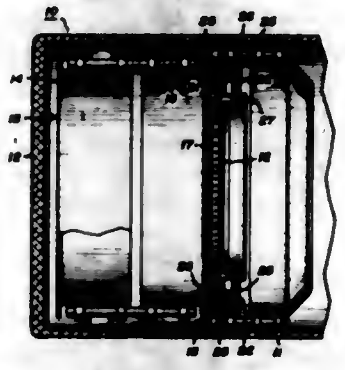
Bernard E. Day and Wilbur M. Clark, Liverpool, N.Y., assignors to General Electric Company, a corporation of New York

Filed Mar. 16, 1966, Ser. No. 534,748

9 Claims. (Cl. 313—67)

1. A television camera tube electrode supporting means comprising in combination

(a) an annular support member,
(b) an annular frame assembly within said support member,
(c) flange surfaces on said frame assembly and said support member interleaving with each other,
(d) a plurality of coplanar flexible tension strips about the periphery of said support member on one side of one of said flanges surfaces and attached to said frame assembly for support thereof,
(e) a plurality of coplanar flexible tension strips about the periphery of said support member on the other side of said one flange surface,
(f) a plurality of coplanar vibration damping masses on one side of and engaging said one of said flange surfaces and an opposed flange surface,



(g) a plurality of coplanar vibration damping masses on the other side of and engaging said one flange surface and an opposing flange surface,
(h) said frame supported axially and peripherally within said support member transversely in pendulum-like coplanar relationship,
(i) so that relative motion between said frame and said support is transmitted through said vibration damping means and said tension members for damping of said motion.

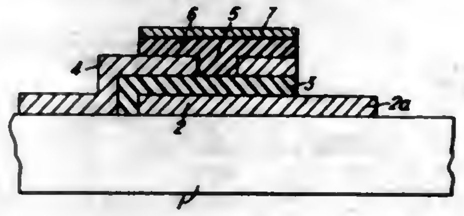
3,390,295
DISPLAY ELEMENT COMPRISING PHOSPHOR AND METAL-INSULATOR-METAL BISTABLE DEVICE

John George Bernard Simmons and Rudolph Richard Verderber, Harlow, England, assignors to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware

Filed Apr. 13, 1967, Ser. No. 630,697

Claims priority, application Great Britain, May 4, 1966, 19,712/66

7 Claims. (Cl. 313—108)



A solid state display element including a metal-insulator-metal non-volatile bistable device having a phosphor layer on one of the exposed metal surfaces. A transparent electrode overlies the exposed surface of the phosphor layer. Potentials may be applied between the metal layers to place the bistable "diode" in a selected one of two memory states. A potential subsequently applied between the outer metal layer and the transparent electrode causes electron emission from the "diode" element to excite the phosphor material, which radiates light observable through the transparent electrode when the diode is in a particular one of its two memory states.

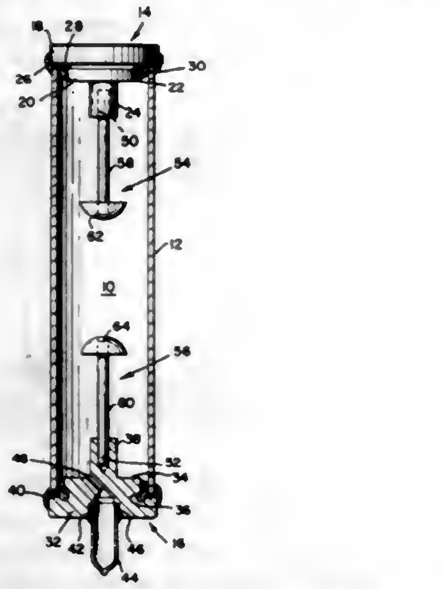
3,390,296
ELECTRIC DISCHARGE DEVICE HAVING SPACED ELECTRODES SEALED TO OPPOSITE END OF ENVELOPE

J Perry Smith, Hawthorne, Calif., assignor to TRW Inc., Redondo Beach, Calif., a corporation of Ohio

Filed Mar. 14, 1966, Ser. No. 534,071

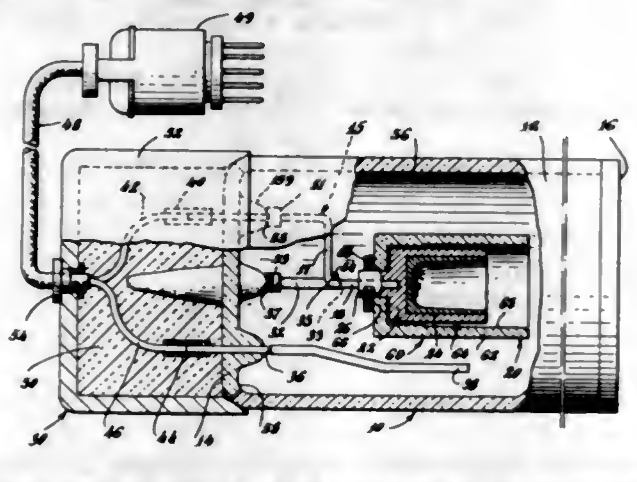
11 Claims. (Cl. 313—182)

A lead-in structure for an electric discharge device includes a hollow, cylindrical envelope portion and an electrically conductive header sealed to the end of the envelope portion by an epoxy resin. The header includes a stepped cylinder having a sealing flange abutting the end of the envelope portion and a recessed surface contiguous with the sealing flange. The epoxy resin is bonded hermetically to the end of the envelope portion, to the sealing flange, and to the recessed surface. An electrode joined to the header extends within the envelope portion.



3,390,297
SHIELD FOR HOLLOW CATHODE LAMPS

John W. Vollmer, Norwalk, Conn., assignor to The Perkin-Elmer Corporation, Norwalk, Conn., a corporation of New York
Filed July 1, 1966, Ser. No. 562,145
10 Claims. (Cl. 313—209)

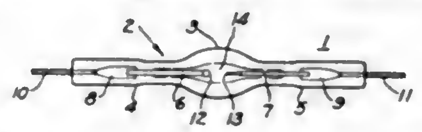


Hollow cathode lamps of the type used for example as spectral sources in atomic absorption spectroscopy have generally cup-shaped cathodes, including the glowing or sputtering desired material at least on their interior surfaces. The invention utilizes a generally cylindrical shell of insulating material partly surrounding the cathode so as to both restrict the volume of glowing vapor (thereby increasing its brightness) and blocking the sputtered material from coating other parts of the lamp (which coating tends to cause short circuits within the lamp). In an alternative form the shell partially restricts the open end of the cathode so as to form an effective aperture smaller than the interior of the cathode.

3,390,298
ELECTRIC DISCHARGE LAMP ENVELOPE HAVING MOLTEN INNER SURFACE AT OPERATING TEMPERATURE

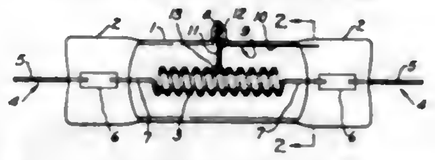
Horst R. Werner, South Euclid, Ohio, assignor to General Electric Company, a corporation of New York
Filed Mar. 31, 1965, Ser. No. 444,217
7 Claims. (Cl. 313—220)

The air-cooled, thick walled, sealed vitreous silica envelope of a compact high brightness electric lamp has an inner surface consisting of boric oxide-silica glass which is molten at temperatures at which rapid devitrification of vitreous silica occurs to minimize devitrification of the envelope and retain the brightness of the lamp during operation with the inner surface of the envelope at such temperatures.



3,390,299
FILAMENT SUPPORTS FOR TUBULAR INCANDESCENT LAMPS

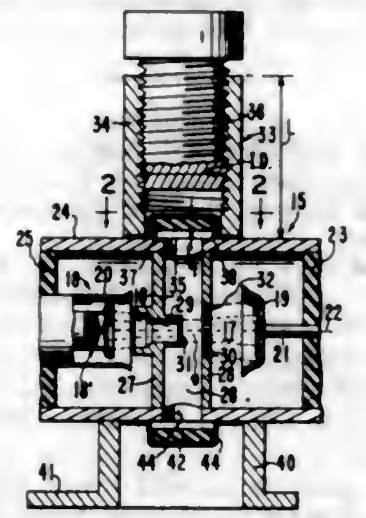
Robert H. Van Sickler, Lyndhurst, and James F. Dagley, Mayfield Heights, Ohio, assignors to General Electric Company, a corporation of New York
Filed Nov. 8, 1965, Ser. No. 506,644
9 Claims. (Cl. 313—274)



In a tubular lamp having an axially extending coiled filament having its ends connected to and supported by leads in pinch seals at the ends of the envelope, a supplemental support comprises a wire member having one short leg looped about the filament at its midpoint and one long main leg extending longitudinally along the envelope wall into one of the pinch seals where it is embedded and anchored, a second short leg is caught in a depression, conveniently the residue of an exhaust tube, in the envelope wall whereby, during assembly, the second short leg serves to cause the supplemental support to be pivoted during the usual stretching of the filament to effectively insure that the main long leg will lie flat against the envelope wall before its end is embedded in the pinch seal.

3,390,300
HIGH FREQUENCY ELECTRON DISCHARGE DEVICES OF THE KLYSTRON TYPE INCORPORATING BELOW CUT-OFF WAVEGUIDE LEAKY WALL H-FIELD TUNERS

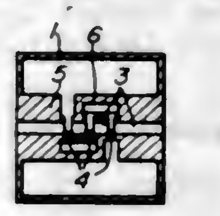
Charles D. Mack, San Jose, Calif., assignor to Varian Associates, Palo Alto, Calif., a corporation of California
Filed Oct. 22, 1965, Ser. No. 500,970
14 Claims. (Cl. 315—5.21)



1. A high frequency electron discharge device of the klystron type having a main body portion defining an evacuated envelope including an electron gun means having a cathode for generating an electron beam disposed at the upstream end portion and internally of the vacuum envelope of said device, a resonant cavity disposed downstream from said cathode means and provided with a pair of axially spaced beam coupling apertures through which said electron beam travels in operation, said resonant cavity being provided with an aperture in a side wall therein, said aperture having an electromagnetic wave permeable dielectric window vacuum sealed thereacross, a waveguide having a dominant mode cut-off frequency which is above the operating frequency of the klystron over the tunable band of the fundamental mode of the resonant cavity disposed about said dielectric window externally of said evacuated resonant cavity, said below cut-off waveguide having a tuning member disposed therein which functions to control the resonant frequency of cavity as a function of tuning member position within said waveguide.

3,390,301
CAVITY RESONATOR HAVING ALTERNATE APERTURED DRIFT TUBES CONNECTED TO OPPOSITE END WALLS

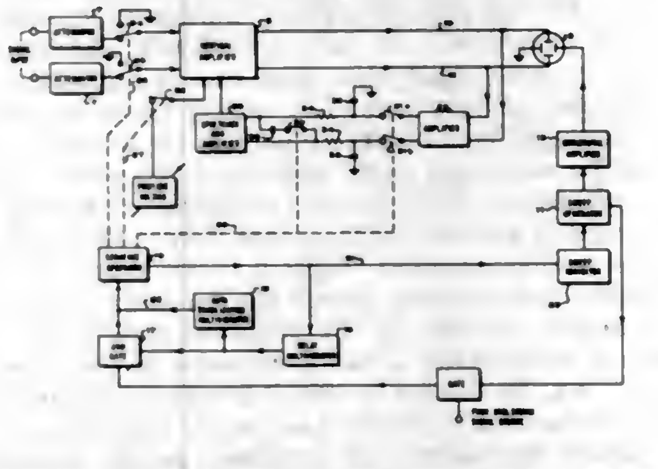
Ryoka Sawada, Kokubunji-shi, and Yoichi Kaneko, Hachioji-shi, Japan, assignors to Hitachi, Ltd., Tokyo, Japan, a corporation of Japan
Filed Dec. 9, 1965, Ser. No. 512,678
Claims priority, application Japan, Dec. 18, 1964, 39/71,061
2 Claims. (Cl. 315—5.39)



A cavity resonator in the form of a hollow conductor casing having end walls including aligned apertures positioned on the axis of the casing and along which a beam of charged particles is propagated, a plurality of aligned apertured members arranged along the path of the particles within the casing defining a plurality of gaps therebetween, and supporting conductors interconnecting alternate ones of said apertured members and connected to respective opposite end walls of the casing.

3,390,302
DISPLAY STABILIZER

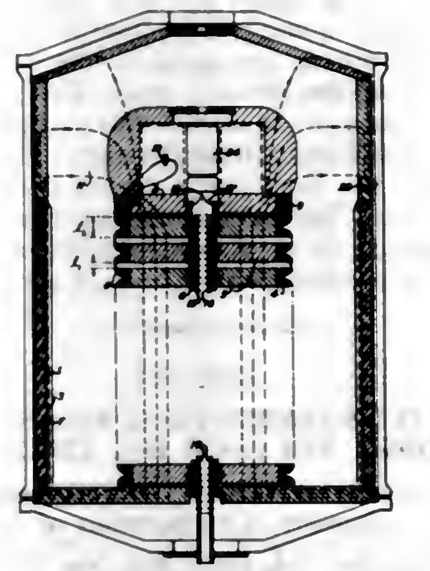
John H. Strathman and James R. Pettit, Colorado Springs, Colo., assignors to Hewlett-Packard Company, Palo Alto, Calif., a corporation of California
Filed Oct. 23, 1965, Ser. No. 503,305
3 Claims. (Cl. 315—25)



A sequence generator is used in an oscilloscope to establish stabilization periods during retrace. A reference signal is applied during these periods to the input of the vertical deflection amplifier and the output of the amplifier is simultaneously sampled for any error. The error signals is then stored and applied as a correction signal to the amplifier input during the successive sweep periods, thus stabilizing the base level of the oscilloscope.

3,390,303
TRANSFORMER CONTROLLED CHARGED-PARTICLE ACCELERATOR

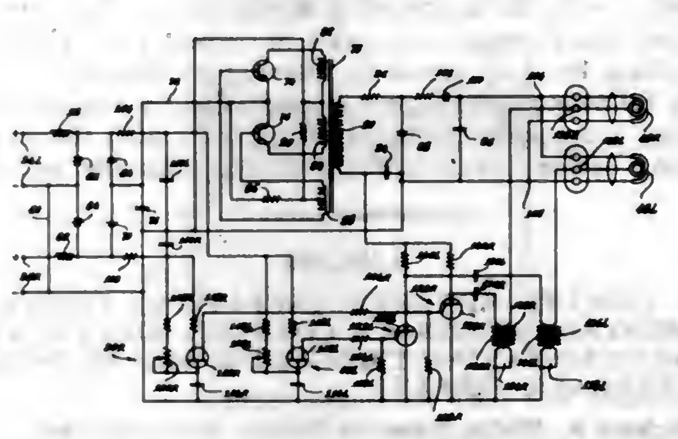
Evgeny Aramovich Abramyan, ul. Tereshkovoi 15, kv. 1, and Vasily Alexandrovich Gaponov, Zolotodolinskaya ul., 9 kv. 27, both of Novosibirsk, U.S.S.R.
Filed Aug. 6, 1965, Ser. No. 477,841
4 Claims. (Cl. 315—57)



A charged-particle accelerator in which there is an accelerating tube with an injector and control grid, there being a transformer with primary and secondary windings, the latter providing an acceleration voltage in the tube, the transformer having a core divided into insulated sections, an oscillating circuit being used to insure a constant gradient of voltage along said tube.

3,390,304
HIGH INTENSITY RAILROAD CROSSING SIGNALS WITH SEPARATE FREQUENCIES OF REPETITION FOR LAMPS AND RELAY FLASHER

Harrison A. Scott, Minneapolis, Minn., and James E. Moe, Ridgewood, N.J., assignors to Railroad Accessories Corporation, Cresskill, N.J.
Filed Sept. 12, 1966, Ser. No. 578,591
9 Claims. (Cl. 315—217)



A high intensity railroad crossing signal comprising a pair of gas discharge lamps mounted within the existing lamp housings of such a signal and power supply therefor connected to the existing flasher relay of the installation. The high voltage power supply is of the type commonly used in automobiles to replace older multivibrator types and it is connected to the flasher relay terminals such as to be continuously energized by the direct current supplied thereto.

Rather than merely alternately energizing the high intensity flash lamps at the usual 30 to 48 cycles per minute rate of existing railroad crossing signals, during each of its energization intervals a lamp is multiply-energized approximately five times at a rate of approximately ten cycles per second. The flash lamps are thus repeatedly energized for a period of 10 to 15 milliseconds each time, this being the average integration time of the human eye. The ten cycles per second flash rate produces the psychological impression that the lamps are each on half of the time.

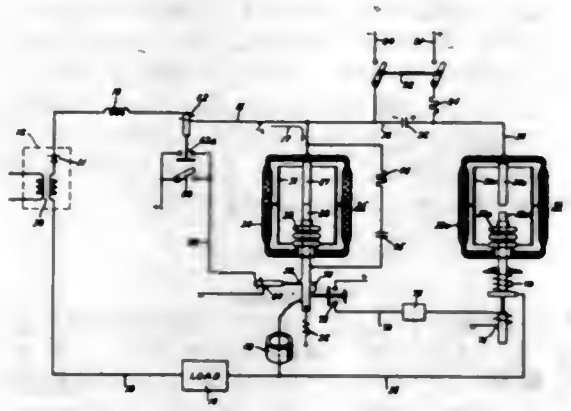
Each of a pair of unijunction transistor, resistor-capacitor, pulser circuits is connected to the flasher relay terminals corresponding to each lamp. This controls a solid state switch connected in circuit with a trigger transformer and a capacitor charged from the high voltage power supply to trigger the flash lamps at the desired ten cycles per second rate. The existing flasher relay provides the alternate periods of multiple energization of each lamp at the rate of approximately 30 to 48 cycles per minute.

3,390,305
CIRCUIT INTERRUPTING MEANS FOR A HIGH VOLTAGE D-C CIRCUIT

Allan N. Greenwood, Media, Pa., assignor to General Electric Company, a corporation of New York

Filed Dec. 14, 1965, Ser. No. 513,756

3 Claims. (Cl. 317—11)



A high voltage D-C circuit breaker in which a current zero is created by discharging a commutating capacitor through a circuit interrupting device. A saturable reactor in series with the interrupting device reduces the rate of current decay immediately prior to current zero. The rate of voltage build-up across the interrupting device immediately following current zero is controlled by means comprising a capacitor connected in parallel with the interrupting device but in series with the saturable recator.

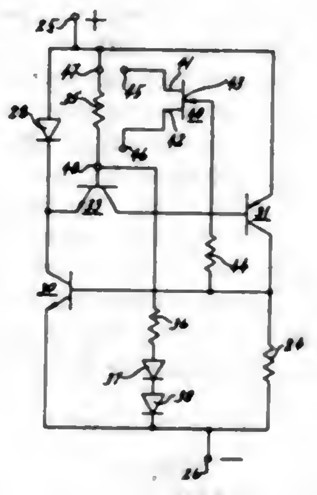
3,390,306
DC CIRCUIT BREAKER INCLUDING COMPLEMENTARY FEEDBACK COUPLED SOLID STATE DEVICES HAVING TRIGGERING MEANS IN THE FEEDBACK CIRCUIT

Richard L. White, Paradise Valley, Ariz., assignor to Dickson Electronics Corporation

Filed July 30, 1965, Ser. No. 476,111

14 Claims. (Cl. 317—22)

A DC circuit breaker is provided having complementary transistors with base-to-collector connections to provide a feedback path. Gating means is inserted in the feedback path and may take the form of a third transistor for cutting off the first two transistors.



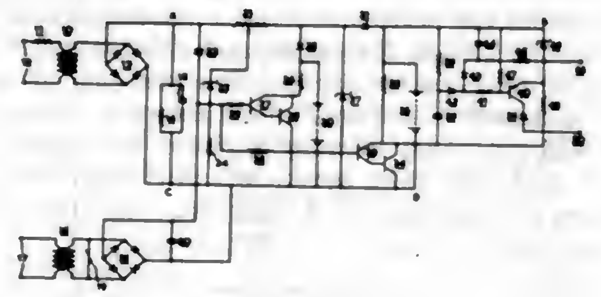
3,390,307
ELECTRICAL RELAYS

Eric Paddison, David Clegg, and Robin Howard John Warren, Safford, England, assignors to The English Electric Company Limited, London, England, a British company

Filed Aug. 30, 1965, Ser. No. 483,524

Claims priority, application Great Britain, Sept. 16, 1964, 37,916/64

6 Claims. (Cl. 317—33)



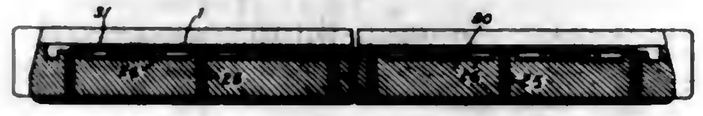
This invention relates to an electrical power supply circuit for energising in a protective relay monitoring means which are operative to monitor electrical conditions, e.g. voltage and current, existing in an electrical system and to evaluate from these quantities control signals for effecting protective action. The monitoring means, which may conveniently be distance-to-fault measuring circuits, are supplied with power for their operation by the input signals to the relay itself when these exceed a predetermined magnitude and from a stand-by battery (normally charged by these input signals) during periods for which the input signals lie below this magnitude. Thus, two power supplies are provided in effect, and the advantage of having these two supplies available at the same time is that each may have a smaller electrical "capacity" than if only one were available. For example, power for the measuring circuits is normally provided by the protected system but in the event of there being a sudden increase in the power required, e.g. to initiate a circuit-breaker tripping signal, then this increase is provided in part by the battery whereas without the battery the additional power requirement would result in a sudden drop in the supply voltage which would consequently disturb the measuring function. The battery is always in its "standby" condition and is yet not permitted to discharge during its out-of-service periods.

3,390,308
MULTIPLE CHIP INTEGRATED CIRCUIT ASSEMBLY

John Marley, Wayne, N.J., assignor to International Telephone and Telegraph Corporation, a corporation of Delaware

Filed Mar. 31, 1966, Ser. No. 539,003

2 Claims. (Cl. 317—100)



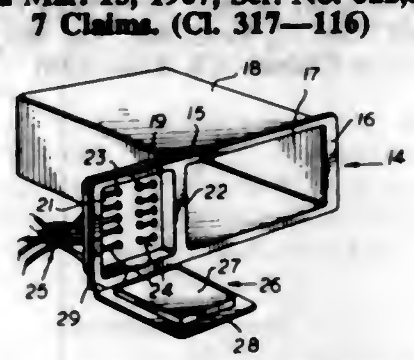
This is an invention of a multiple chip integrated assembly comprising a film substrate with integrated circuit chips assembled in openings in said substrate. A heat sink film of conductive material is disposed in juxtaposed heat conductive relation to the underside of the chips. Electrical connections are made to said chips by cantilever leads which are integrally connected to circuit connection leads on the film substrate, with certain of said connection leads coupled to said heat sink film.

3,390,309
MOLDED COMBINATION AUTOMOTIVE GLOVE COMPARTMENT AND ELECTRICAL FUSE PANEL

Charles B. McGrew, Jr., Fort Wayne, Ind., assignor to International Harvester Company, Chicago, Ill., a corporation of Delaware

Filed Mar. 13, 1967, Ser. No. 622,542

7 Claims. (Cl. 317—116)



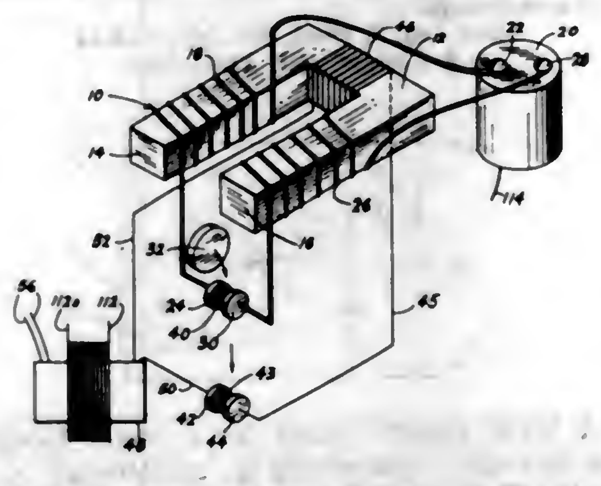
A combination glove compartment and electrical fuse panel integrally molded and including a door or closure for the fuse panel of an automobile or truck dashboard panel and having the fuse clips and terminals embedded in the molded fuse panel. The fuse panel closure is formed with a flexible hinge of the same material as the glove compartment and fuse panel.

3,390,310
MAGNET CHARGER

Glen Peterson, 540 S. 83rd East Ave., Tulsa, Okla. 74112

Filed Mar. 24, 1965, Ser. No. 442,324

9 Claims. (Cl. 317—157.5)



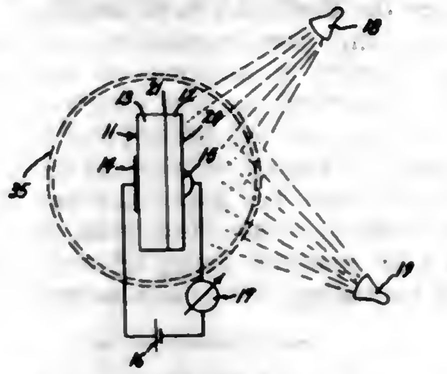
A magnet charger operated by a coin-like member or control slug in a manner similar to the operation of a vending machine. The magnet charger is particularly designed for precluding the use of a counterfeit control slug for operation thereof, and if any attempt is made to operate the magnet charger with any operating member other than the regularly provided coin-like slug, the charger will function to demagnetize a magnet rather than magnetize the magnet.

3,390,311
SELENO-TELLURIDE P-N JUNCTION DEVICE UTILIZING DEEP TRAPPING STATES

Manuel Aven, Burnt Hills, and Walter Garwacki, Schenectady, N.Y., assignors to General Electric Company, a corporation of New York

Continuation-in-part of applications Ser. No. 537,514 and Ser. No. 537,519, Mar. 25, 1966, which is a continuation-in-part of application Ser. No. 396,323, Sept. 14, 1964. This application Mar. 20, 1967, Ser. No. 624,384

6 Claims. (Cl. 317—237)



A bistable light emitting diode having high and low resistivity states is formed from a body of zinc seleno-telluride having a first region including deep hole traps and exhibiting N-type conductivity and a second region including deep electron traps and exhibiting P-type conductivity. When irradiated with short wavelength radiation, the traps are filled and the device exhibits a low resistivity and emits light. When irradiated with long wavelength radiation, the device exhibits high resistivity and does not emit light.

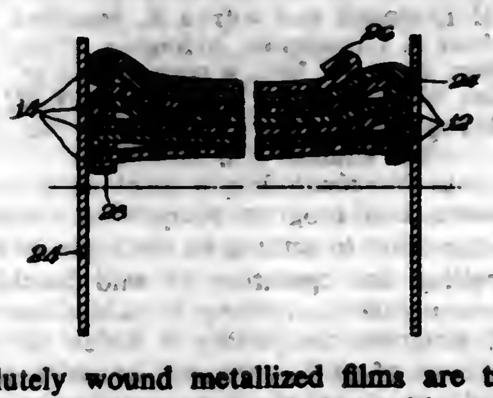
A wide band gap junction device comprising a semiconductive body of zinc seleno-telluride having P- and N-type regions. In a particular embodiment, the device is bistable and may be switched by the application of pulses of radiation.

3,390,312
METALLIZED FILM CAPACITOR

Walter F. England, Williamstown, Mass., assignor to Sprague Electric Company, a corporation of Massachusetts

Filed Mar. 3, 1967, Ser. No. 620,338

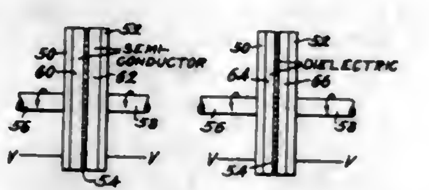
2 Claims. (Cl. 317—260)



Convolutely wound metallized films are transversely disposed within a convolute winding with extended portions of each film folded back into alternate ends of the winding so as to encompass and insulate the edge portion of an adjoining turn of opposite polarity and to provide contact of the metallizing on the outside of the fold to that of the next adjacent turn of the same polarity.

3,390,313
ELECTROMECHANICAL DEVICES USING IONIC SEMICONDUCTORS

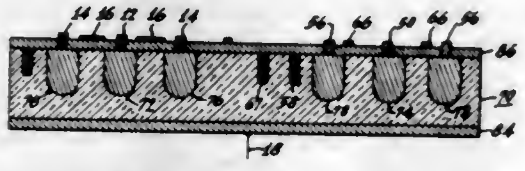
Robert L. Peck, Woodbridge, Conn., assignor, by mesne assignments, to Textron Electronics, Inc., Providence, R.I., a corporation of Delaware
Original application Aug. 25, 1961, Ser. No. 133,874. Divided and this application Aug. 2, 1965, Ser. No. 479,038
9 Claims. (Cl. 317—262)



4. An electrical device comprising a pair of electrodes mounted in spaced apart relation, means for enabling the space between the electrodes to be occupied by a quantity of a viscous ionic semi-conductor composition which changes its viscosity in response to an applied electric field, means connected to said electrodes for coupling them to a source of electric energy, and at least one layer of solid material arranged within said space such that all of the electric current that passes between said electrodes through said viscous composition must pass through said layer, said solid material being selected from the class of materials consisting of semiconductors and dielectrics.

3,390,314
SEMICONDUCTOR TRANSLATING CIRCUIT

Albert H. Medwin, Whippany, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Oct. 30, 1964, Ser. No. 407,636
8 Claims. (Cl. 317—235)

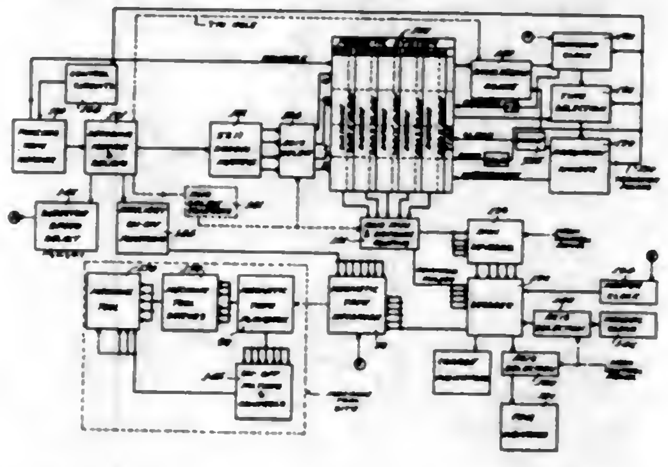


A notch filter is provided by an insulated-gate field-effect transistor connected between an input circuit and an output circuit. Biasing voltages are applied to the gate electrode and to the substrate to vary the resistances and capacitances of the device to tune the frequency of the notch.

3,390,315
APPARATUS FOR NUMERICAL CONTROL OF A MULTIAXES MACHINE TOOL INCLUDING INTERPOLATION AND FEEDRATE CONTROL

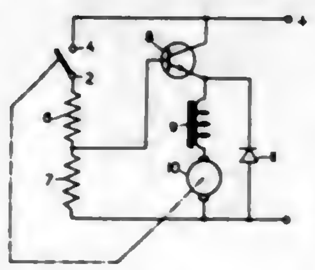
James O. McDonough and Alfred K. Susskind, Concord, and Herbert P. Grossimon, Arlington, Mass., assignors to Giddings & Lewis Inc., a corporation of Wisconsin
Continuation of application Ser. No. 589,491, June 5, 1956. This application Apr. 5, 1963, Ser. No. 271,558
146 Claims. (Cl. 318—162)

1. Apparatus for controlling a machine in accordance with a predetermined program comprising, a director connected for operation to actuate an analogue servo-mechanism controlling the operation of said machine, input means for sequentially applying to said director a predetermined program comprising a series of individual commands, each of said commands containing information encoded in a 1–1–2–5 binary-decimal code, register means to store the information contained in one of said commands, means to produce in a predetermined time interval a train of pulses consisting of a decimal number of pulses determined by the information in said stored command, means to produce first and second output signals of the same frequency, means to apply said train of pulses to phase modulate one of said output signals to a degree proportional to the number of pulses in said train, means to apply said first and second output signals to said servo-mechanism, said analogue servo-mechanism being responsive to the phase difference between said first and second output signals to actuate said machine to an extent determined by the information in said input program.



3,390,316
PULSE SPEED REGULATOR FOR AN ELECTRIC MOTOR

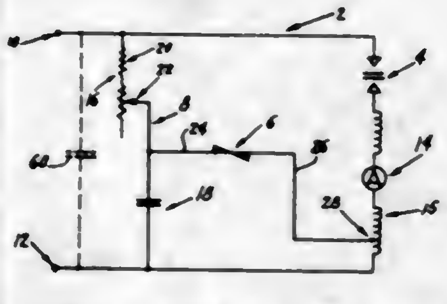
Radek Vlchr, Brno, Czechoslovakia, assignor to Presna Mechanika, narodny podnik, Stara Tura, Czechoslovakia
Filed Nov. 22, 1965, Ser. No. 509,046
4 Claims. (Cl. 318—325)



A centrifugal regulator is mounted to rotate with a motor. A class D regenerative amplifier has an output comprising a choke coil connected in series with the motor and a diode connected in parallel with the series connection of the choke coil and the motor with reverse polarity. A variable voltage divider is connected to the movable contact of the centrifugal regulator and in the input of the amplifier.

3,390,317
MOTOR CONTROL

Richard E. De Sisto, Salem, Mass., assignor to Signal Manufacturing Company, Salem, Mass., a corporation of Massachusetts
Filed Jan. 3, 1966, Ser. No. 518,227
8 Claims. (Cl. 318—345)

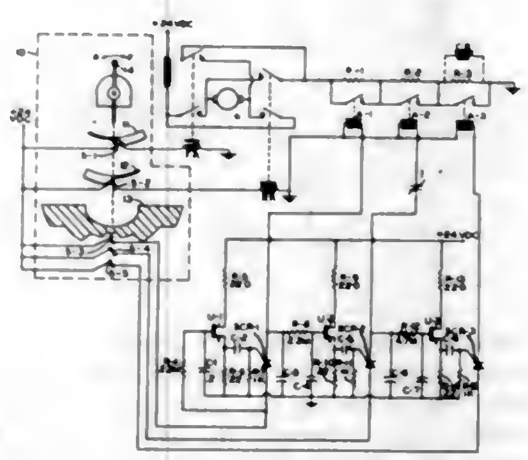


1. A speed control circuit for a motor having coil means, said circuit comprising the combination of:

(a) bilateral switching means having two terminals, and
  (1) operable when a potential of one polarity existent between said terminals exceeds a given value to conduct in one direction,
  (2) operable when a potential of opposite polarity existent between said terminals exceeds a given value to conduct in the opposite direction, and
  (3) operable once conduction has started therethrough in either direction to maintain the same until the potential thereacross decreases to a value closer to zero;
(b) means for connecting said bilateral switching means in series with said coil means of said motor and across a power supply;
(c) trigger switching means having first and second terminals and operable to conduct in response to positive potential across the terminals thereof exceeding a given value and in response to negative potential across the terminals thereof exceeding a given value;
(d) a control network coupled in parallel across said motor and bilateral switching means, said control network including resistor means and capacitor means connected in series and means connecting said second terminal of said trigger switching means with said network;
(e) means coupling said first terminal of said trigger switching means with said control network and said second terminal of said trigger switching means with said coil means of said motor for producing in said coil means of said motor in response to said conduction of said trigger switching means amplified pulses of sufficient magnitude to render said bilateral switching means conductive in respective opposite directions; and
(f) said positive and negative potentials to which said trigger switching means is responsive to conduct being of less magnitude than the potentials between the terminals of said bilateral switching means necessary to initially render said bilateral switching means conductive.

3,390,318
ACCELERATION CONTROL DEVICE FOR AN ELECTRIC MOTOR INCLUDING A UNIJUNCTION TRANSISTOR AND A CONTROLLED RECTIFIER

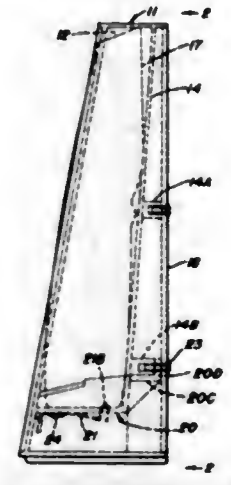
Hiram G. Gilbert, Binghamton, N.Y., assignor to The Raymond Corporation, Greene, N.Y., a corporation of New York
Filed July 6, 1965, Ser. No. 469,657
7 Claims. (Cl. 318—422)



An electric motor acceleration contactor timing system in which the coils of a series of successive electromagnet acceleration contactors are conditioned to be energized by advancement of a manual switch and then energized by firing of a controlled rectifier associated with each contactor coil, each controlled rectifier being fired by a pulse from a respective unijunction transistor, and each unijunction transistor being arranged to fire when the output of an associated RC integrating network exceeds a selected level. Operation of the manual switch applies an input signal to a first of the integrating networks, and the firing of each controlled rectifier (other than the last one) connects an input signal to the integrating circuit associated with the next controlled rectifier.

3,390,319
CHARGING UNIT FOR A BATTERY-CONTAINING HANDLE FOR AN ELECTRIC KNIFE OR THE LIKE

Russell O. Robison, Plymouth, Ohio, assignor to Dominion Electric Corporation, a corporation of Ohio
Filed Oct. 21, 1965, Ser. No. 499,313
9 Claims. (Cl. 320—2)



1. In a charging unit for a battery-containing handle of an electric knife or the like, the handle having a pair of battery-connected spaced electrical contacts exposed adjacent the bottom thereof, comprising the combination of a casing of molded plastic material, said casing having a well formed in the forward face thereof having upright side walls and rear wall and against which a said handle may be leaned for maintaining the handle in a substantially upright position, the said well having an open forward side through which the handle may be moved in inserting it and removing it from the well, a bottom member carried by the casing and disposed at the bottom of said well for supporting a said handle therein, said bottom member having a bottom wall, said bottom wall having a pair of laterally opened slots extending therethrough, a pair of resilient electrical contact members positioned below said bottom member, each of said contact members having an anchored end portion and a free end portion resiliently movable relative to the plane of said bottom wall upon flexing of the contact members, said free end portions each being bent to protrude upwardly through the respective said slots under the resilient bias of the contact members for electrical engagement with the exposed electrical contacts, respectively, of a handle disposed in said well, each of said free end portions being bifurcated to provide independently resilient parallel portions engageable with said electrical contact of said handle, said bottom member having a pair of spaced downwardly directed saddle portions adjacent said anchored end portions of the contact members and defining apertures between the saddle portions and said bottom wall, said anchored end portions being extended through the respective apertures and held by said saddle portions, each anchored end portion at opposite sides of the saddle portion being slit and bent downwardly at an acute angle to the plane of the contact

member to engage the sides of the saddle portions and to resist removal of the anchored end portions from the apertures and thereby retain the contact member to the bottom member.

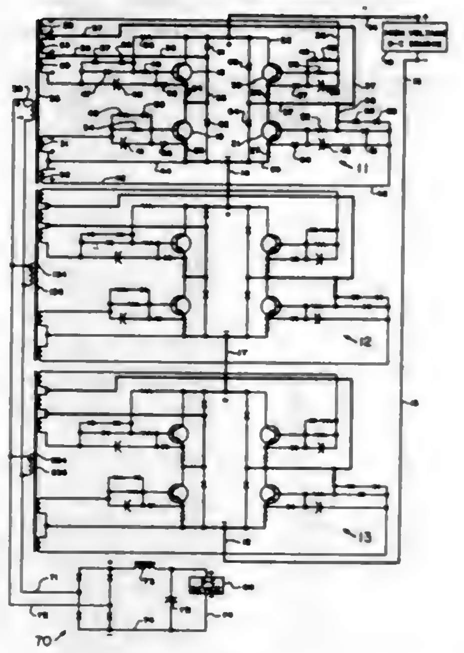
3,390,320

TRANSISTOR INVERTER FOR SYNCHRONIZED OPERATION WITH A LIKE PARALLELED INVERTER

Neil A. Kammiller, North Olmsted, and Brian W. Howald, Amherst, Ohio, assignors to Lorain Products Corporation, a corporation of Ohio

Filed June 13, 1966, Ser. No. 558,199

11 Claims. (Cl. 321—2)



6. In a saturable transformer type inverter adapted to be energized from a D-C source and to have the output voltage thereof applied to a load in parallel relationship to the output voltage of at least one other like inverter also applying voltage to the load, in combination, a transistor bridge, each arm of which includes the collector-emitter circuit of a transistor having emitter, collector and base electrodes, said bridge having D-C input means for connection to the D-C source and A-C output means, a transformer having a saturable core provided with a primary and an output winding, and with a feedback winding for each transistor in said bridge, the leakage reactance of said core being less between said output winding and said feedback windings than between said output winding and said primary winding, means for connecting said primary winding to said A-C output means of said transistor bridge, means for connecting said output winding to a load, means for connecting said respective feedback windings between the base and emitter electrodes of respective ones of said transistors of said bridge to control the conduction thereof, the differential of leakage reactance between said primary, output and feedback windings causing said transistors to switch when the impedance of the output winding of a paralleled inverter decreases before said core of said transformer saturates.

3,390,321

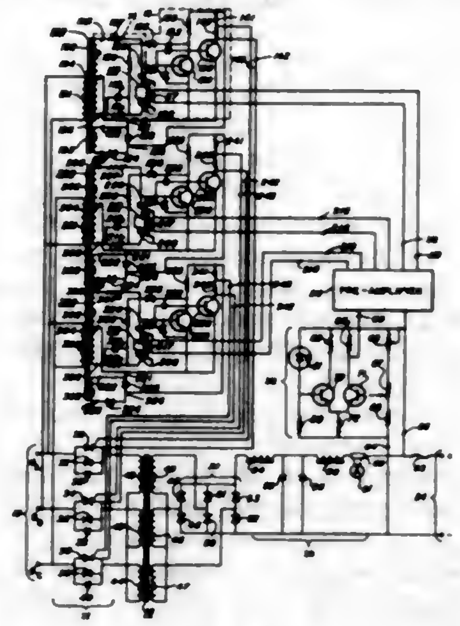
POLY-PHASE REGULATED RECTIFIER

Robert John Plow, Avon Lake, Ohio, assignor to Lorain Products Corporation, Avon Lake, Ohio, a corporation of Ohio

Continuation-in-part of application Ser. No. 351,505, Mar. 12, 1964. This application May 14, 1964, Ser. No. 367,507

18 Claims. (Cl. 321—5)

This invention is an improved poly-phase rectifier system provided with a group of input controlled rectifiers, output rectifiers, transformer means between the controlled and output rectifiers, and a regulating system for controlling the controlled rectifiers to compensate for variations in the load connected to the output rectifiers. The regulating portion of the system includes a reference amplifier coupled to the output, or the power rectifiers to compare a signal derived from the power rectifiers with a predetermined, fixed potential and to deliver an output signal indicative of the difference of this comparison. The difference signal is employed to control a variable phase-shift network which receives alternating current from the power input terminals and shifts the phase of this input power signal in accordance with the difference signal derived from the reference amplifier. The output of the variable phase-shift network is employed to gate or trigger a group of squarewave pulse generators which in turn deliver gating signals to the controlled rectifiers to thereby selectively control the input power delivered through the controlled rectifiers to the load.



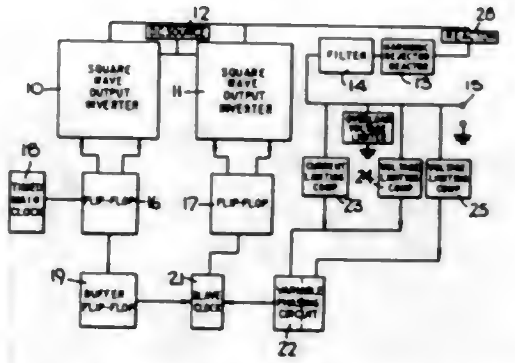
3,390,322

PHASE CONTROLLED INVERTER

David W. Rogers, Teaneck, N.J., assignor to Regulators Inc., Wyckoff, N.J., a corporation of New Jersey

Filed Aug. 20, 1965, Ser. No. 481,301

6 Claims. (Cl. 321—18)



An inverter for changing direct current to alternating current has two square wave output inverters connected to output transformers having the secondary windings connected in parallel. The inverters are switched by separate flip-flop circuits with one flip-flop timed by a main clock circuit and the other inverter timed by a slave clock circuit. The phasing of the slave clock circuit is varied in relation to the main clock circuit by a variable phasing circuit. The variable phasing circuit is connected to current and voltage limiting and control circuits to control the output of the inverter.

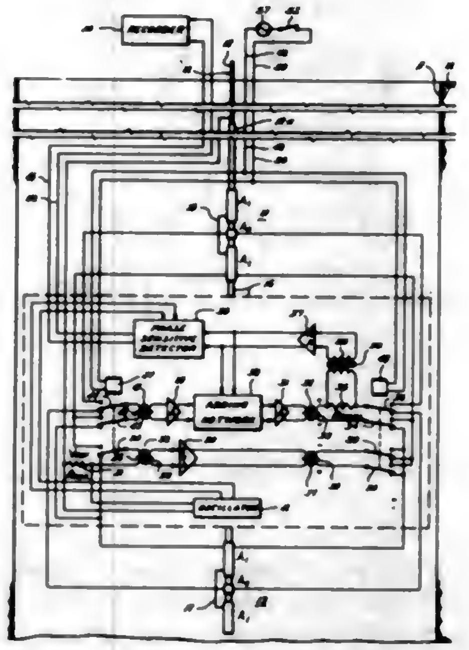
3,390,323

WELL LOGGING METHODS AND APPARATUS HAVING REVERSIBLE FUNCTION ELECTRODE ARRAYS

James W. Kisling, Houston, Tex., assignor, by mesne assignments, to Schlumberger Technology Corporation, Houston, Tex., a corporation of Texas

Filed July 14, 1965, Ser. No. 471,807

10 Claims. (Cl. 324—10)



The particular embodiments described herein as illustrative of the invention describes methods and apparatus for investigating earth formations with two separate electrode arrays of the "focused" type. A remote potential reference electrode located above both electrode arrays supplies constant voltage approximating zero volts to the downhole investigating apparatus. For logging the principal portion of the borehole, the upper electrode array is utilized as the investigating array and is maintained at a constant potential to shield the remote potential reference electrode from the lower electrode array to which the emitted current is returned. To facilitate logging the bottom of the borehole, switching means are provided for reversing the functions of the two electrode arrays.

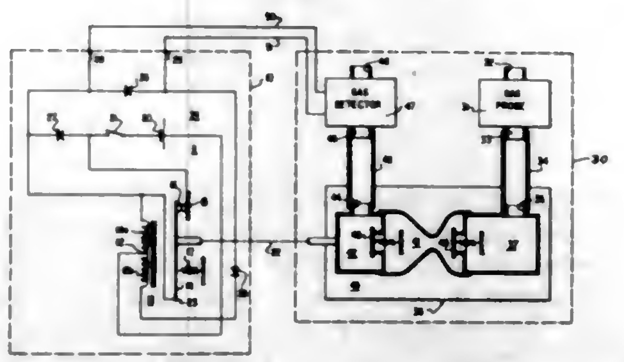
3,390,324

LEAK DETECTING SYSTEM WITH ENERGY CONVERSION MEANS

John A. Roberts, Lynnfield Center, Mass., assignor to General Electric Company, a corporation of New York

Filed Apr. 11, 1966, Ser. No. 541,586

13 Claims. (Cl. 324—33)



Means connected to a direct current source for energizing electronic circuitry and driving a pump in a leak detector system. Normally closed relay contacts on an armature in series with the relay winding permit energization thereof to open the relay contacts, deenergize the winding and close the contacts. The oscillating armature drives the pump. Opening the contacts discharges the relay winding energy through another winding in series into a capacitor to energize the circuitry.

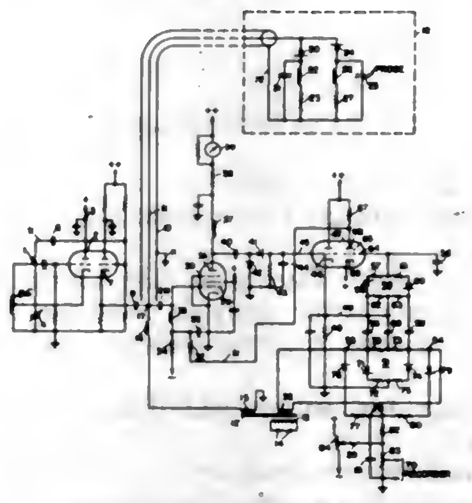
3,390,325

APPARATUS FOR IMPEDANCE MEASUREMENT WITH COMPENSATION FOR CABLE LENGTH, TUBE AGING, AND THE LIKE

Elbert N. Shawhan, Newtown Square, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

Filed Jan. 12, 1965, Ser. No. 424,905

4 Claims. (Cl. 324—60)



Circuitry for the measurement of impedance (capacitance) using high frequencies, in the megacycle range. Means is provided which compensates for the necessary physical length of the cable interconnecting the measuring point and the recording point. Other means is provided which compensates for changes such as those due to aging of tubes.

3,390,326

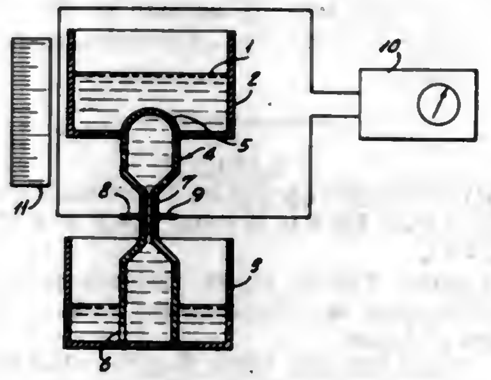
PARTICLE COUNTING DEVICE INCLUDING FLUID CONDUCTING MEANS BREAKING UP PARTICLE CLUSTERS

Hiroshi Imadate, Hyogo-ku, Kobe, Japan, assignor to Toa Electric Co., Ltd., Kobe, Japan, a company of Japan

Continuation of application Ser. No. 237,463, Nov. 14, 1962. This application Apr. 11, 1967, Ser. No. 630,485

Claims priority, application Japan, Nov. 20, 1961, 36/42,477

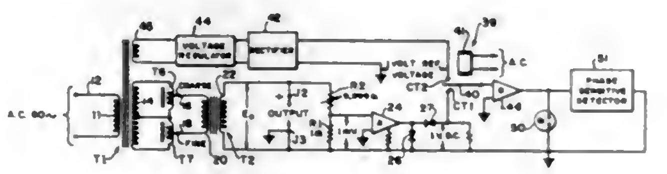
4 Claims. (Cl. 324—61)



Apparatus for counting particles in a flowing medium by breaking up clusters of particles in the solution, agitating the solution to produce a uniform dispersion of particles and then conducting the fluid with the dispersed particles through a narrow tubular member and counting the particles flowing through said tubular member.

3,390,327
CALIBRATION DEVICE FOR ELECTRICAL INSTRUMENTS HAVING AN ERROR PERCENTAGE INDICATOR

Seymour Bosworth, Plainview, Jerome Zauderer, Brooklyn, and William S. Douglas, Centerport, N.Y., assignors to Abbey Electronics Corp., Carle Place, N.Y., a corporation of New York
Filed Nov. 5, 1964, Ser. No. 409,256
18 Claims. (Cl. 324—74)

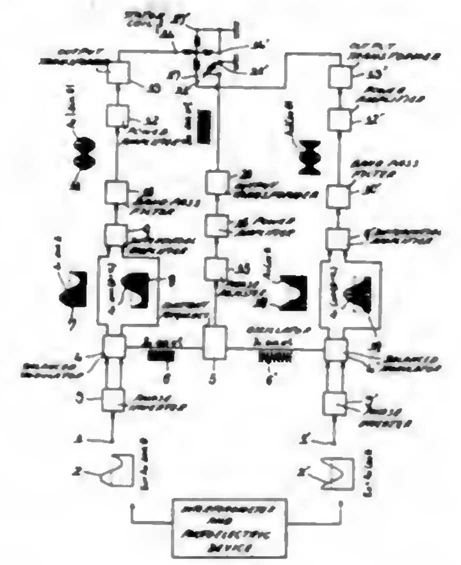


1. A test circuit for calibrating an electric instrument, comprising:
- a variable source of voltage;
- circuit output terminals for connecting said instrument thereto;
- first circuit means connecting said source of voltage to said terminals for applying a voltage thereto;
- a resistance decade in circuit with said variable voltage source;
- switch means for setting said decade to various resistances;
- second circuit means connected to said resistance decade to take off a standard voltage related in magnitude to the resistance setting of said resistance decade;
- a decade scale on said resistance decade calibrated to indicate nominal circuit output;
- a source of fixed reference voltage;
- a calibration meter having a meter scale calibrated to read percentage differences proportional to voltages applied thereto; and
- voltage comparison means capable of producing a voltage output depending on the difference in magnitude of two voltages applied to its input,
  - said source of reference voltage and said second circuit means being connected to the input of the voltage comparison means, said calibration meter being connected to the output of the voltage comparision means,
  - whereby the calibration meter scale indicates the percentage difference between the nominal output indicated by the decade scale and the actual output applied to the circuit output terminals, and
  - whereby the decade scale indicates the magnitude of output actually applied to the circuit output terminals when the calibration meter has a zero reading.

3,390,328
INTERFEROMETER FRACTIONAL FRINGE INDICATING DEVICE FOR SINE WAVE INPUT SIGNAL

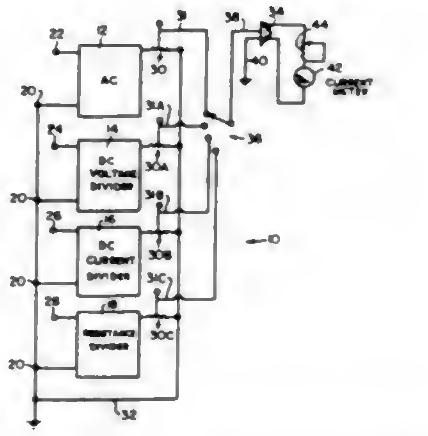
Keiichi Tanaka, Tokyo, Japan, assignor to Agency of Industrial Science and Technology, Tokyo, Japan, a corporation of Japan
Filed July 24, 1964, Ser. No. 384,889
Claims priority, application Japan, Mar. 27, 1964, 39/16,734
5 Claims. (Cl. 324—83)

An interference fringe measuring electric device comprising two identical circuits, each including a phase inverter and an amplitude modulator, a differential amplifying circuit, filters and power amplifiers and output transformers and stator coils, each circuit, respectively, producing modulated carrier signals with amplitudes proportional to the absolute value of the amplitude of an input sinusoidal signal and the phase of the carrier wave signals being changed by 180° when the input sinusoidal signals pass through a reference point for every phase change to create a rotatable alternating magnetic field by combining the modulated signals, the phases of which are different from each other, and a circuit including a constant frequency oscillator and phase adjuster and rotor coils disposed in the magnetic field above-mentioned for indicating the measured fraction of an interference fringe with a resultant rotatable vector produced by the rotatable alternating magnetic field.



3,390,329
SIMPLIFIED APPARATUS FOR MEASURING PRIMARY ELECTRICAL QUANTITIES

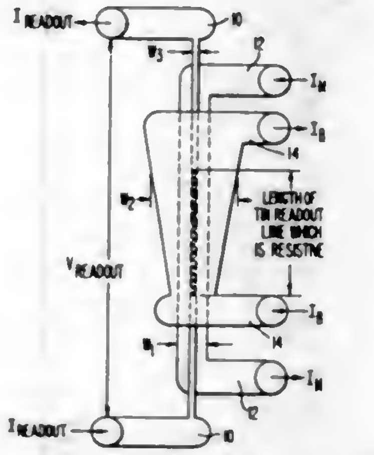
Stanley Gewirtz, New York, N.Y., assignor to Solid State Systems, Inc., New York, N.Y.
Continuation-in-part of application Ser. No. 182,456, Mar. 26, 1962. This application Apr. 30, 1964, Ser. No. 363,883
6 Claims. (Cl. 324—115)



1. A circuit for measuring selectively a variety of primary electrical quantities, comprising a plurality of divider networks, a DC amplifier, a current measuring meter and means in series circuit with said meter and said amplifier for neutralizing drift in the sensitivity of said amplifier, terminal means for applying different electrical quantities to said divider networks, a plurality of ratio voltage dividers respectively connected to the outputs of said divider networks, and switch means between the respective ratio voltage dividers and said DC amplifier for selectively connecting each of said divider networks to said amplifier, so that the meter measures an electrical quantity applied to a selected network.

3,390,330
THIN FILM CRYOGENIC SUPERCURRENT MEASURING DEVICE

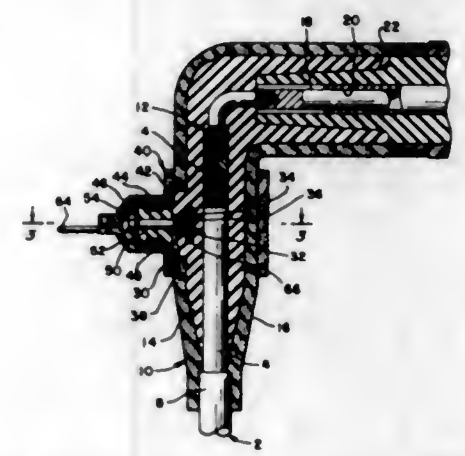
Albert J. Meyerhoff, Wynnewood, Pa., Chien Chanz Huang, Stamford, Conn., and Charles B. Hebeler, Farmington, Mich., assignors to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed Sept. 18, 1964, Ser. No. 397,453
4 Claims. (Cl. 324—117)



The present application discloses a thin film device for indicating the presence, the magnitude and the direction of a supercurrent flowing in a cryogenic circuit. Basically it is a three element thin film in-line cryotron whereon one element carries the supercurrent to be measured, another element carries a reference current and a third element, having a non-uniform or wedge-like shape, carries a bias current to control the resistive length of the element carrying the reference current. Also disclosed is a circuit utilizing the novel three-element cryotron in an operative configuration which uses the wedge-like member to provide a feedback bias which improves stabilization.

3,390,331
DEVICE FOR DETECTING THE PRESENCE OF VOLTAGE IN CONNECTORS OF HIGH VOLTAGE SYSTEMS

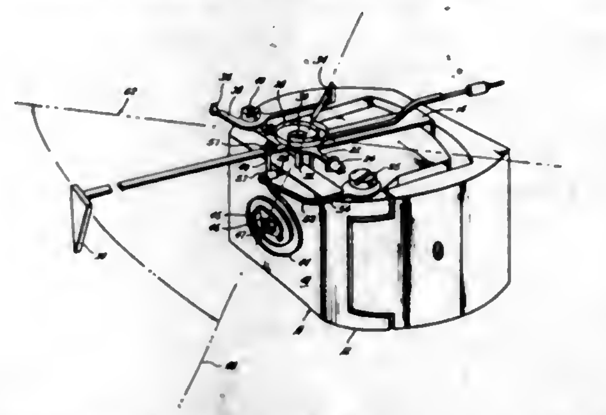
Robert R. Brown, Bernardsville, Michael W. Malia, Washington, Robert C. Ruete, Long Valley, and Frank A. Silva, Basking Ridge, N.J., assignors to Elastic Stop Nut Corporation of America, Union, N.J., a corporation of New Jersey
Filed Mar. 21, 1966, Ser. No. 535,881
7 Claims. (Cl. 324—122)



A device for detecting the presence of voltage in connectors of high voltage systems includes a conductor, an insulator surrounding the conductor, a conductive shield surrounding the insulator, a conductive cap normally covering a break in the shield, and removable to expose the break and the insulator to the outside, an electrode assembly located in the insulator in such proximity to the conductor as to enable the voltage which is to be detected to place an electric charge upon the electrode assembly, and conductive means providing an electrical path between the electrode assembly and the cap when the cap is in position covering the break and providing an electrical path between the electrode assembly and the outside when the cap is removed.

3,390,332
SUPPRESSED SCALE ELECTRICAL INSTRUMENT WITH ADJUSTABLE AUXILIARY SPRING MEANS

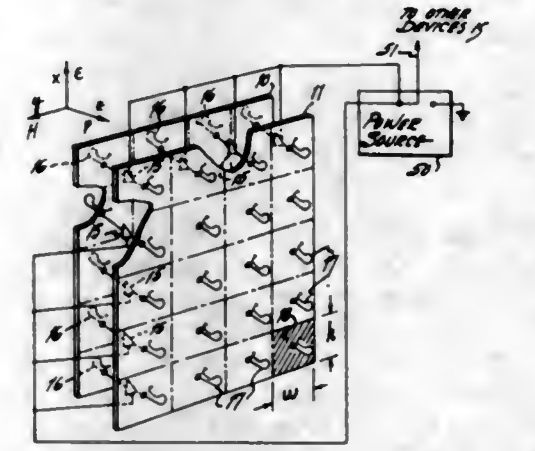
Dominick J. Rappoccio, Roselle Park, N.J., assignor to Weston Instruments, Inc., a corporation of Texas
Filed Feb. 17, 1964, Ser. No. 345,195
3 Claims. (Cl. 324—132)



A suppressed or depressed scale meter including a mechanical scale suppression or depression control. The control includes an auxiliary spring with an end that engages a stop on the meter frame positioned to suppress scale deflection of the pointer after a predetermined initial deflection of the pointer. The stop is adjustable to enable precise setting of the point at which suppression begins. In a first embodiment the auxiliary spring has one end adjustably secured to the pointer pivot for movement with the pointer and its other or free end engages a tab fixed to the pointer that prevents the spring from unwinding. The free end engages the stop after a predetermined pointer deflection. In the second embodiment the one end of the spring is adjustably secured to the frame and the pointer engages the free end at the start of the suppressed scale.

3,390,333
PARALLEL AMPLIFIERS WITH INPUT AND OUTPUT COUPLING BY MEANS OF CLOSELY-PACKED, ELECTRICALLY SMALL INPUT AND OUTPUT RADIATORS

Frank Klawsnik, Haddonfield, and Willard Thomas Patton, Moorestown, N.J., assignors to Radio Corporation of America, a corporation of Delaware
Filed Oct. 29, 1965, Ser. No. 505,676
8 Claims. (Cl. 325—14)

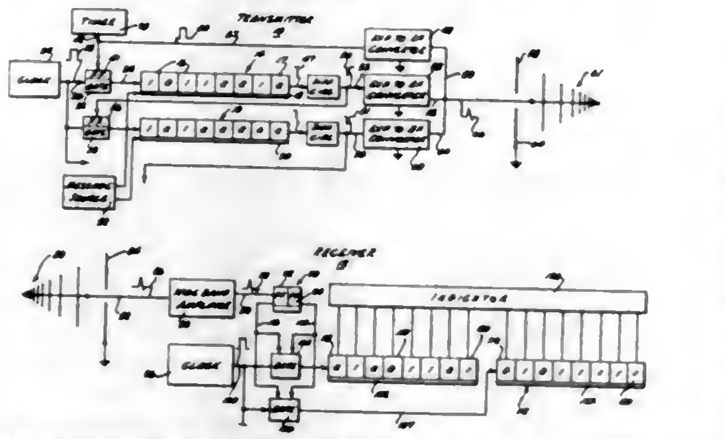


A plurality of active devices are individually positioned between an input and output metallic plate. Each of these active devices has an individual input and output radiator. The radiators are surrounded by an area of a given height and width of the respective metallic plates. An electromagnetic wave is launched with its Poynting vector in the direction of the input radiators. The ratio of the height and width of the areas of the plates surrounding each radiator is made so that both the input impedance and the output impedance of the active devices are matched by the effective input and output impedance provided by the metallic plates. The complete area behaves substantially resistive even though each individual area has a height and width substantially less than one-half a wave length at the operating frequency and would by itself be highly reactive.

3,390,334
HIGH POWER PULSE TIME MODULATION COMMUNICATION SYSTEM WITH EXPLOSIVE POWER AMPLIFICATION MEANS

Robert L. Forward, Oxnard, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware

Filed Mar. 2, 1964, Ser. No. 348,631
9 Claims. (Cl. 325—43)



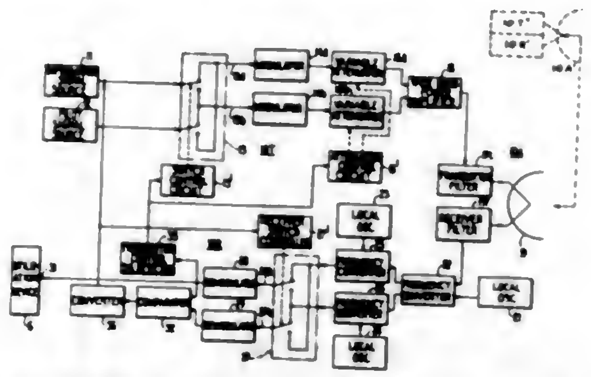
A transmitter is shown, including a binary counter and a first and second pulse forming device, each pulse forming device including an explosive element and a compressible piezoelectric crystal for developing a high power and relatively narrow pulse. At the start of a message, a first pulse is transmitted from the first pulse forming device and clock pulses are gated to the counter. When the counter changes to a count representative of a coded message, a second pulse is transmitted from the second pulse forming device. A binary counter is provided at the receiver responsive to a clock source similar to that at the transmitter to count between the first and second intercepted pulses to develop a binary number representative of the coded message.

3,390,335
FREQUENCY-DIVERSITY TRANSMITTER-RECEIVER

Masahisa Miyagi, Tokyo, Japan, assignor to Nippon Electric Company, Limited, Tokyo, Japan, a corporation of Japan

Filed Dec. 16, 1964, Ser. No. 418,672
Claims priority, application Japan, Dec. 31, 1963, 38/68,867
1 Claim. (Cl. 325—56)

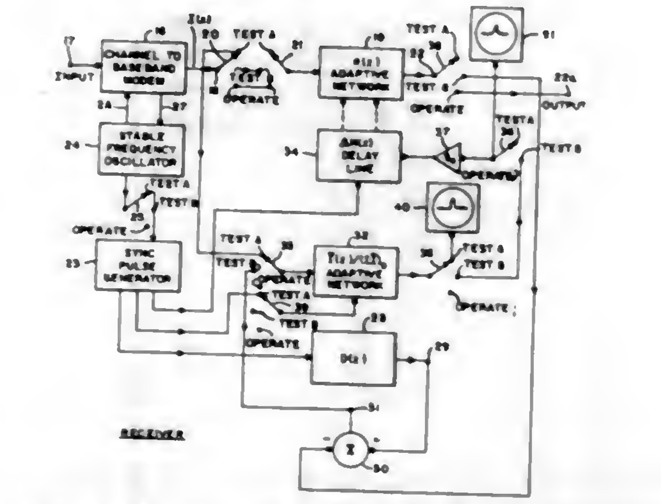
This application teaches a frequency-diversity communication system wherein remote locations may reliably transmit to one another by means at each location comprised of a transmitter facility for transmitting an information signal train and a pilot signal train having a much reduced bandwidth relative to the information signal train. The two signal trains are each employed to modulate two carriers of different carrier frequencies. The modulated carriers are then combined in an amplifying and transmitting means for transmission to a remote location. Switching means are coupled between the information signals and the pilot signals for selectively reversing the connections between the modulating circuits and the two signal sources. Each receiver facility at each location is provided with means for receiving and frequency converting the pair of incoming modulated signals. After frequency conversion the signals are then demodulated and compared to determine which of the two has a lower noise level. As a result of this comparison the signal is generated to be applied together with the information signal source train and a second signal to be applied to a switch control circuit for switching the connection between the two signal trains in the transmitter portion and the two modulators so as to insure the fact that the information signal source is being transmitted by the modulator having the lower of the two noise levels. The pilot signal source being of much reduced bandwidth causes the overall bandwidth of the transmitted combined signals to be substantially reduced. Also, since the carrier frequency introducing the least amount of noise is employed to be modulated by the information signal pulses this same carrier is likewise modulated by the control signal to cause the remote location to receive the control signal in the modulated signal having the lowest noise level in order to make the appropriate switching as between its information and pilot signal sources and its pair of modulators.



3,390,336
APPARATUS AND METHOD FOR CONVERTING AN INPUT WAVE SIGNAL USING ADAPTIVE NETWORK ADJUSTED TO TIME INVERSE OF TRANSLATING CHANNEL

Michael J. Di Toro, Massepequa, N.Y., assignor to Cardion Electronics, Inc., a corporation of Delaware

Filed Jan. 24, 1966, Ser. No. 522,519
11 Claims. (Cl. 325—65)

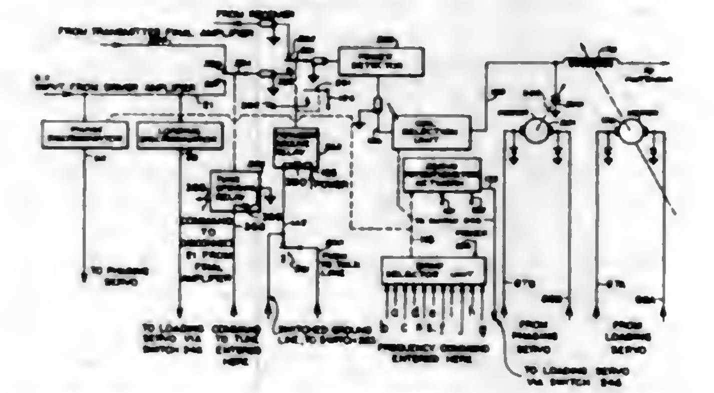


A system for correcting for dispersion and distortion of a signal translated through a medium having nonlinear amplitude and frequency response characteristics which includes certain adaptive correction networks which are readjusted or reset in a number of sequential steps and in a converging manner to obtain optimum correction. A distorted and dispersed receive pulse signal is first passed through a signal storage adaptive network the response of which is to be adjusted. The received pulse signal is also passed through a second signal storage adaptive network which is automatically adjusted to have a response which is the time-reverse of the wave form of the received distorted pulse signal. The output of the latter network is compared with a signal of desired wave form and the difference or error signal is utilized to adjust the response characteristic of the first adaptive network. The adjustments of the latter network are made in sequence in response to the transmission of a series of test pulses through the distorting medium, the arrangement being such that the error signal progressively diminishes. After the adaptive networks have been adjusted as described, the system is capable of receiving signals of any type and wave form and correcting them for the distortion and dispersion by the transmitting medium.

3,390,337
BAND CHANGING AND AUTOMATIC TUNING APPARATUS FOR TRANSMITTER T-PAD OUTPUT FILTER

Bernard J. Beitman, Jr., Cincinnati, Ohio, assignor to Avco Corporation, Cincinnati, Ohio, a corporation of Delaware

Filed Mar. 15, 1966, Ser. No. 534,457
29 Claims. (Cl. 325—174)

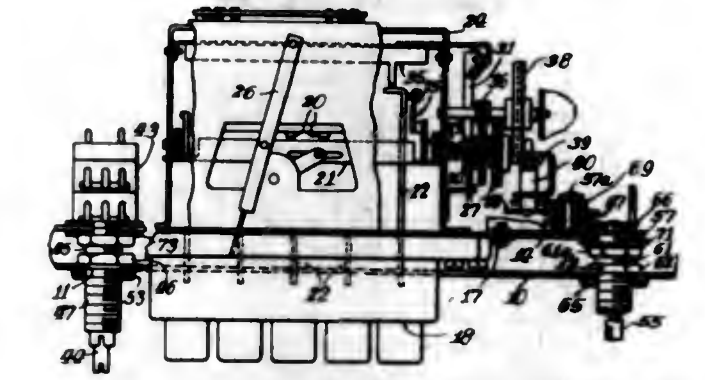


This invention is a system for matching the source impedance at the driver stage of a transmitter to the load impedance of an antenna in any band within a spectrum of frequencies. Basically it comprises a T-pad filter having a selectable series input inductance parameter, a shunt capacitor and a series output inductor. Tuning, speaking broadly, is by first selecting the inductance parameter as a permutation from a plurality of lumped coils, second, adjusting the inductor approximately to the lower end of the desired band, then forcing the capacitor away from minimum value and finally adjusting the capacitor to the desired value. A first or phase sensor then detects phase error at the source output and controls a first electromechanical drive for the variable capacitor in such a way as to eliminate phase error. A second or loading sensor senses deviation away from a desired impedance ratio at the output of the source and controls a second electromechanical drive to adjust the variable inductor in such a way as to eliminate the deviation. The system is cycled in such a way that as the inductance parameter is selected in response to a first command a register stores an electrical order indicative of the desired band. Routing means responds to a second command to couple the register to the inductor drive and the routing means responds to a third command to couple the loading sensor to the inductor drive, so that the inductor drive is first driven toward a magnitude of inductance appropriate to the desired band and then maintained thereat by the loading sensor. Override means responds to the second command to cause the variable capacitor to be adjusted to minimum capacity. Another override means responsive to a command intermediate between the second and the third commands gives the capacitor an initial "shove" away from minimum capacitance. As the third command is given the phase sensor, coupled to the capacitor drive, brings the capacitor to the value of capacitance appropriate for the desired band and maintains it at such value.

3,390,338
RECEIVER MOUNTING APPARATUS PERMITTING ADJUSTMENT OF CONTROL SHAFT POSITION

William J. Race, Franklin Park, Ill., assignor to Motorola, Inc., Franklin Park, Ill., a corporation of Illinois

Filed Aug. 16, 1965, Ser. No. 480,066
6 Claims. (Cl. 325—352)

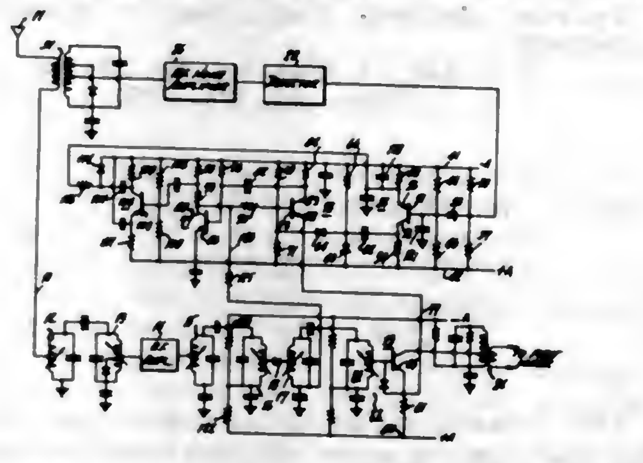


1. Control apparatus for a universal mount radio receiver, including in combination, a pair of control shafts having substantially parallel axes, a front panel having a dial fixed thereon and further having a pair of apertures therein, said apertures being on opposite sides of said dial, said apertures being shaped to accommodate displacement of respective ones of said control shafts relative to said dial and having portions permitting vertical displacement of said control shafts with respect to said dial while maintaining a given horizontal spacing of said control shafts with respect to each other and said dial, and means connected to said front panel for supporting each of said control shafts in a respective one of said apertures at a given position with respect to the other and said dial.

3,390,339
PULSE RATE LIMITING CIRCUIT

George R. Kamerer, McMurray, and Lee F. Crowley, Pittsburgh, Pa., assignors to Radio Corporation of America, a corporation of Delaware

Filed June 1, 1964, Ser. No. 371,526
2 Claims. (Cl. 325—478)



This invention provides a rate limiting circuit for use in noise suppression circuits of radio receivers that is immune to overriding high amplitude noise pulses. The circuit is responsive only to a control signal proportional to the received noise pulse repetition rate to prevent receiver disabling when the rate increases. The received noise pulses are detected, limited and amplified to control a receiver switching pulse multivibrator. The multivibrator develops noise blanking signals to disable a receiver periodically at a relatively slow rate.

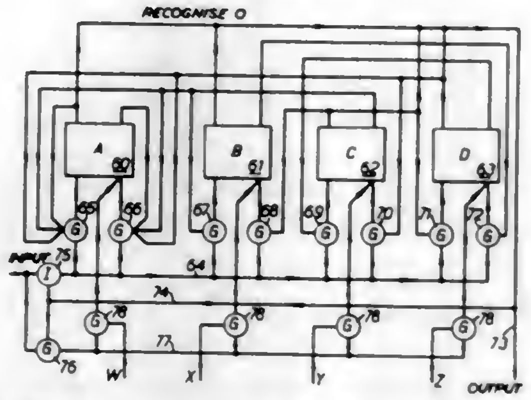
3,390,340
DIGITAL COUNTER EMPLOYING LOGIC GATING NETWORK INDEPENDENT OF COUNTER STAGE(S) CONTROL TO EFFECT RESET OPERATION

John D. Newman, Hayling Island, and Robert A. Elliot, Petersfield, England, assignors to Plessey-U.K. Limited, a British company

Filed Aug. 28, 1963, Ser. No. 305,232

Claims priority, application Great Britain, Aug. 31, 1962, 33,600/62

7 Claims. (Cl. 328—48)



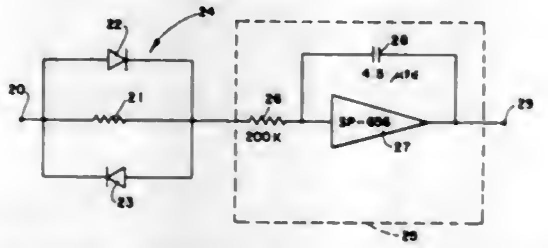
1. A digital counter stage including at least two switching devices having at least two stable positions and having inputs arranged to receive input pulses from a common input line through gating means which determine the effect of an input pulse on the respective switching devices and which are arranged to be set each in correspondence with the state of at least one of the switching devices in such a way that a succession of input pulses causes the counter to progress through a repeated series of counting states, the counter including also recognition means for recognising when the counter has arrived at a selected one of its possible states and further gating means for responding to this recognition and to variable signals applied to said gating means in dependence upon any selected counting state to which the counter is to be reset in such a way that the next consecutive input pulse is employed as a resetting pulse for resetting the counter to recommence counting from said selected reset state.

3,390,341
VOLTAGE SENSITIVE INTEGRATION CIRCUIT

Kenneth H. Kline, Canoga Park, Calif., assignor to North American Rockwell Corporation, a corporation of Delaware

Filed July 24, 1964, Ser. No. 384,978

3 Claims. (Cl. 328—127)



This disclosure relates to an integration circuit which is voltage sensitive so that the time constant is varied as a function of the magnitude of the applied voltage. The circuit includes a variable time impedance connected in series with a resistor of comparatively small magnitude which in turn is connected to the input of an operational amplifier. A feedback capacitor is connected between the input and output of the amplifier in a conventional manner.

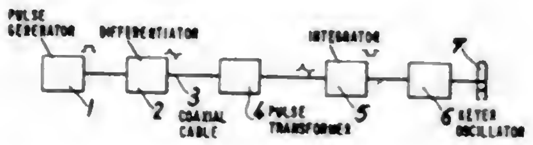
3,390,342
ION BEAM REMOTE CONTROL DEVICE HAVING PULSE SHAPING AND RESTORING MEANS

Genevieve Breynat, Bernin par Crolles, Isere, and Alexandre Pierson, Saint-Egreve, Isere, France, assignors to Commissariat à l'Energie Atomique, Paris, France

Filed July 20, 1965, Ser. No. 473,445

Claims priority, application France, July 22, 1964, 982,695

4 Claims. (Cl. 328—227)



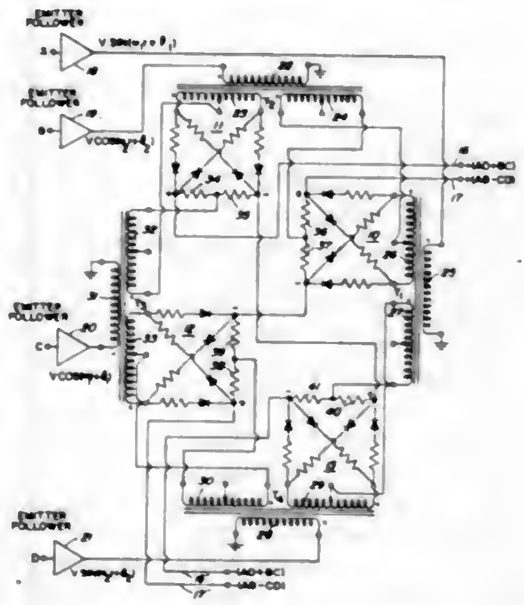
1. A device for remote control of an ion beam from an ion source subjected to a high frequency electric field comprising, connected in series, a pulse generator emitting rectangular signals, a differentiating and impedance reducing unit connected to said generator and actuated by said generator and altering the signals emitted by said generator, said generator and said unit being located adjacent a control desk, a long coaxial cable, one end of said cable being connected to said unit, a step-down pulse transformer having primary and secondary windings connected to the other end of said cable, said primary windings of said transformer receiving the differentiated signals emitted by said unit, an integrator connected to said secondary windings and actuated by the signals emitted by said secondary windings, said integrator emitting reconstituted, rectangular, phase-inverted signals, a keyer connected to said integrator and actuated by the reconstituted signals, a high frequency oscillator connected to said keyer and alternately blocked and unblocked by said keyer, and two rings mounted on said ion source and connected to said oscillator generating a high frequency electric field in said ion source whereby when said oscillator is blocked the ionic flow is substantially zero and when said oscillator is unblocked the ionic flow is maximum.

3,390,343
SINGLE SIDE-BAND PULSE PRODUCT DETECTOR

Robert C. Carter, Richardson, Tex., assignor to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa

Filed May 24, 1965, Ser. No. 458,159

2 Claims. (Cl. 329—146)



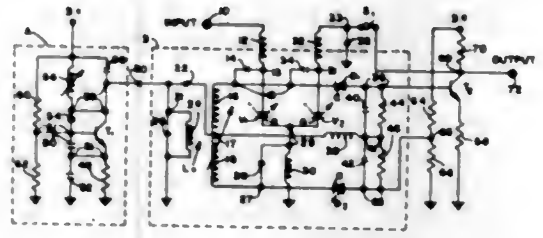
A combination of product detectors together with sum and difference circuitries which may be used to add or subtract two frequencies, to single sideband modulate, or to determine the phase angle between sinusoidal input waveforms. The input signal may be of different frequencies or of the same frequency or may be in the form of D.C. levels. The latter inputs are gated into the circuitry as repetitive samples of the level of the input. First and second output signals are obtained, the amplitudes of which are respectively proportional to the sine and cosine functions of the phase difference angle.

3,390,344
OPERATIONAL AMPLIFIER

Thurston W. Squires, Orange County, Fla., assignor to Martin Marietta Corporation, Middle River, Md., a corporation of Maryland

Filed Oct. 1, 1964, Ser. No. 400,811

12 Claims. (Cl. 330—9)



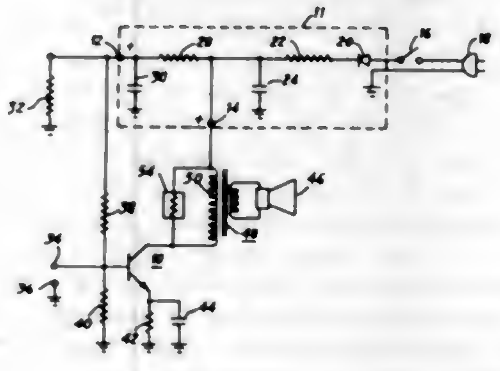
An operational amplifier apparatus for performing amplifying, integrating, and differentiating functions, and having a crystal controlled oscillator which supplies a preselected RF frequency to a modified Foster-Seeley type discriminator circuit. The discriminator circuit is tuned to the fixed RF signal by means of a voltage variable capacitance which is in parallel with the discriminator tank circuit. An analog signal is series fed to the voltage variable capacitance and differentially detunes the tank circuit which tank circuit is connected to a rectifying circuit for developing an output signal proportional to the input signal on an output buffer amplifier. When the amplifier is not being used to perform the desired amplifying, integrating, or differentiating functions, a reset switch connects a degenerative feedback circuit between the buffer amplifier and the voltage variable capacitance to compensate for component variations in the operational amplifier.

3,390,345
TRANSISTOR PROTECTION CIRCUIT

Henry M. Kleinman, Somerville, N.J., assignor to Radio Corporation of America, a corporation of Delaware

Filed Aug. 31, 1964, Ser. No. 393,038

6 Claims. (Cl. 330—11)



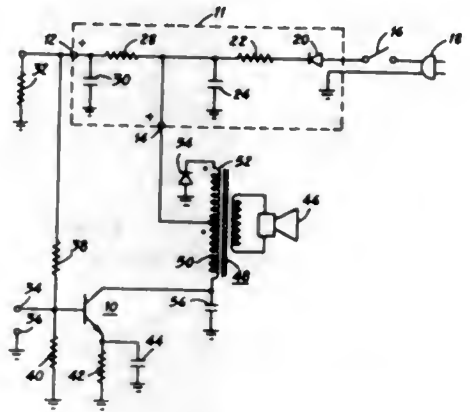
A Class A transistor amplifier including a voltage dependent resistor bypass circuit providing transistor protection against voltage breakdown caused by the large reaction voltage generated in a transformer load when an applied input signal suddenly cuts the transistor off.

3,390,346
TRANSISTOR PROTECTION CIRCUIT

Carl F. Wheatley, Jr., Somerset, N.J., assignor to Radio Corporation of America, a corporation of Delaware

Filed Aug. 31, 1964, Ser. No. 393,039

10 Claims. (Cl. 330—11)



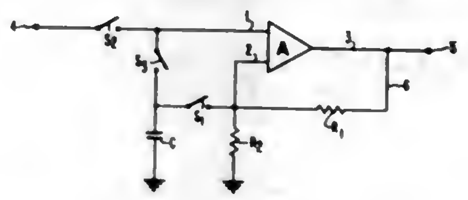
A Class A transistor amplifier including a diode bypass circuit providing transistor protection against voltage breakdown caused by the large reaction voltage generated in a transformer load when an applied input signal suddenly cuts the transistor off.

3,390,347
SAMPLE AND HOLD CIRCUIT

Jackie R. Jones, Campbell, Calif., and Hjalmar Ottesen, Boulder, Colo., assignors to International Business Machines Corporation, Armonk, N.Y., a corporation of New York

Filed Jan. 10, 1966, Ser. No. 519,577

2 Claims. (Cl. 330—51)

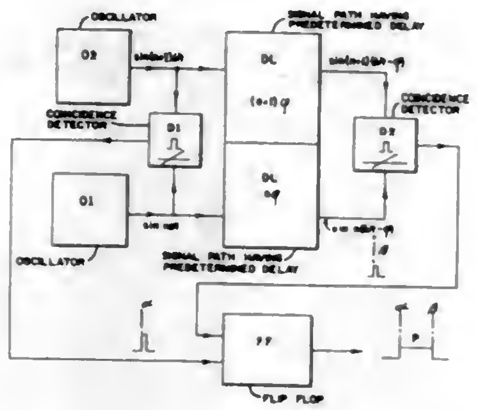


1. A sample and hold circuit comprising:
a potentiometric amplifier having first and second inputs and an output, said output being connected through a feedback loop to said second input;
a storage capacitor;
first switch means connecting said storage capacitor to the second input of said potentiometric amplifier when said circuit is in its sample mode;
second switch means connecting an input signal to the first input of said potentiometric amplifier when said circuit is in its sample mode; and
third switch means connecting said storage capacitor to the first input of said potentiometric amplifier when said circuit is in its hold mode;
said potentiometric amplifier charging said storage capacitor while presenting a high impedance to the input signal when said first and second switch means are closed and said third switch means is open to put the circuit in its sample mode, and amplifying the signal stored by said storage capacitor when said first and second switch means are open and said third switch means is closed to put the circuit in its hold mode.

3,390,348

SYSTEM FOR GENERATING A SIGNAL REPRESENTING THE TIME DELAY OF A SIGNAL PATH

Carl-Erik Granqvist, Lidingo, Sweden, assignor to AGA Aktiebolag, Lidingo, Sweden, a corporation of Sweden
Filed Feb. 17, 1967, Ser. No. 616,919
Claims priority, application Sweden, Apr. 28, 1966, 5,814/66
12 Claims. (Cl. 331—18)

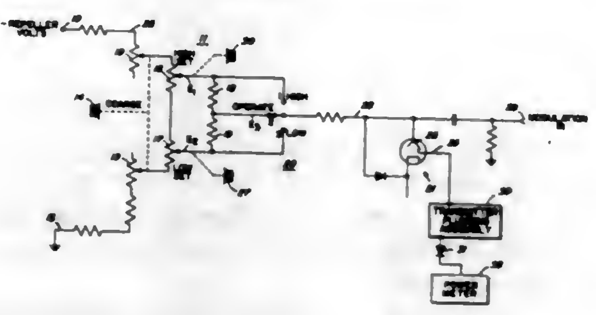


In an instrument for measuring a time delay, signals of frequencies $n\omega$ and $(n+1)\omega$ are applied to the delay path, a first marking signal is generated at coincidence on the input side, and a second marking signal representing coincidence on the output side. The time difference between the marking signals represents the delay. The first marking signal may start a pulse, which is terminated by the second marking signal, or the first signal may start a counter, which is stopped by the second signal.

3,390,349

METHOD AND MEANS FOR TUNING KLYSTRON FOR OPTIMUM MODULATION LINEARITY

Ben R. Hallford, Richardson, Tex., assignor to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa
Filed Jan. 11, 1967, Ser. No. 608,563
9 Claims. (Cl. 331—44)



A method of tuning a reflux klystron by repeller voltage settings and power meter monitoring to arrive at operation at the linearity center of the frequency versus repeller voltage characteristic. A potentiometer and switch circuitry is included between a repeller voltage source and the klystron repeller electrode which permits selective adjustment of repeller voltage for maximum power and for equal lesser power levels either side of maximum within the mode, together with automatic selection of a repeller voltage which is the mean of the two repeller voltages effecting the lesser power levels. The tuning system is based on an analysis of reflux klystron frequency and power output versus repeller voltage characteristics which substantiate that a repeller voltage which is the mean of those repeller voltages establishing equal fractional power levels either side of maximum power optimizes tuning at the linearity center of the frequency characteristic.

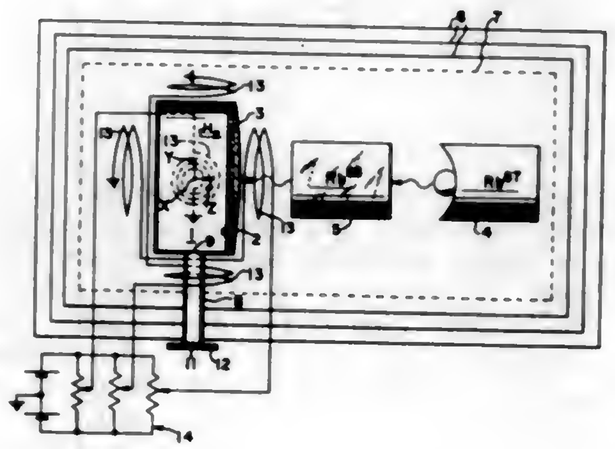
ERRATUM

For Class 331—18 see:
Patent No. 3,390,348

3,390,350

ATOMIC RESONANCE APPARATUS UTILIZING AN IMPROVED BUFFER GAS CELL

Paul Davidovits, New York, Robert Novick, Hartsdale, and Norman Knable, New York, N.Y., assignors to Varian Associates, Palo Alto, Calif., a corporation of California
Filed Oct. 5, 1964, Ser. No. 401,731
9 Claims. (Cl. 331—94)

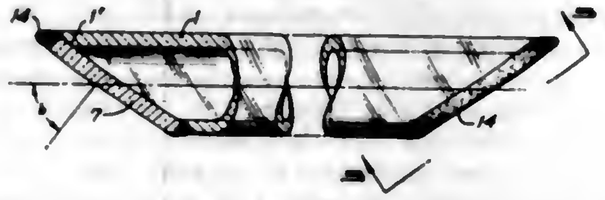


An atomic resonance maser is disclosed. The maser includes a cavity resonator preferably dimensioned for resonance in a circular electric mode and containing therewithin an ensemble of gaseous atoms such as alkali vapor in a buffer gas. One wall of the cavity resonator includes a light transmissive window for illuminating the alkali vapor from an external light source for optically pumping the vapor. In a preferred embodiment, the buffer gas includes a quenching gas constituent, such as nitrogen, at a partial pressure of 5–20 torr, whereby the gain of the maser apparatus is improved. In addition, the cavity resonator preferably has a temperature dependent frequency shift of an opposite sense to the temperature dependent frequency shift of the resonance frequency of the alkali vapor in the buffer gas medium, whereby the resonance frequency shift of the cavity is compensated by the resonance frequency shift of the atomic vapor. Improved gain is also obtained for the atomic resonance vapor by reducing the total unidirectional magnetic field over the ensemble of gaseous vapor to less than 100 microgauss, whereby the field dependent resonant lines are collapsed into the field independent resonant lines to permit more of the energy states of the atomic vapor to enter into the desired resonance transistion. A sufficient amount of atomic vapor is provided within the cavity and the cavity is dimensioned to be of a sufficient size and to have a sufficiently high Q, such that spontaneous emission of radiation from the upper energy levels to the lower energy levels of the atom results in producing a self-sustaining coherent emission of radiation characteristic of an atomic maser. A sample of the maser oscillations, produced within the cavity, is coupled out of the cavity to a suitable utilization device, such as an atomic clock, frequency standard or the like.

3,390,351

VACUUM SEALING OF GAS LASER WINDOWS

William E. Bell, Palo Alto, Calif., assignor to Spectra-Physics, Inc., Mountain View, Calif., a corporation of California
Filed May 15, 1963, Ser. No. 280,514
7 Claims. (Cl. 331—94.5)

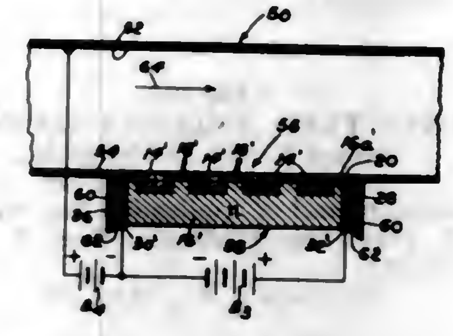


1. In a gas laser, the combination comprising: an envelope containing an optically-radiating gas, said envelope having at least one opening surrounded by a smooth guiding surface in precisely defined orientation relative to said envelope; at least one window of high optical quality, said window having a high optical quality surface facing inwardly of said envelope, a peripheral portion of said window surface conforming to and being in direct contact with said smooth guiding surface to thereby position said window in said precisely defined orientation relative to said envelope; and plastic sealing means disposed only outside and peripherally of said contacting portion of said window surface for joining said window to said envelope, said sealing means mechanically holding said window to said envelope in said precisely defined orientation relative to said evelope and in vacuum sealing relationship therewith, communication of contaminating vapors from said plastic sealing means to the laser gas being effectively avoided, and said sealing means having sufficient plasticity that holding strain is taken up by the sealing means rather than the window.

3,390,352

TUNNEL-EFFECT SEMICONDUCTOR, USED AS AN OSCILLATOR OR AMPLIFIER, FORMS PART OF SURFACE OF WAVEGUIDE OR CHAMBER

Hans P. Kleinknecht, Emmendingen, Germany, assignor, by mesne assignments, to International Telephone and Telegraph Corporation, a corporation of Delaware
Original application Nov. 6, 1961, Ser. No. 150,275, now Patent No. 3,309,586, dated Mar. 14, 1967. Divided and this application Nov. 15, 1966, Ser. No. 608,242
7 Claims. (Cl. 331—107)

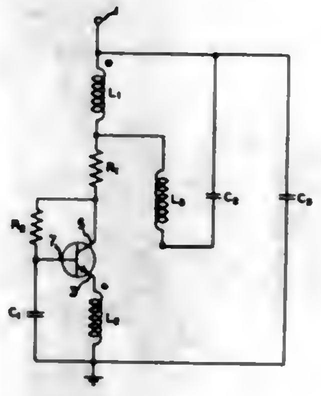


1. A microwave device comprising:
waveguide means including upper and lower electrically conductive sidewalls,
said lower sidewall including a body of semiconductor material electrically insulated therefrom, a major surface of said body forming part of the inner surface of said lower sidewall,
said body having a first region of one conductivity type extending to said major surface, said first region having a sufficiently high concentration of conductivity-type-determining impurities such that said region is degenerative,
said body including an active zone of opposite conductivity type adjacent said major surface and contiguous with said first region, forming a quantum-mechanical tunneling area at the P-N junction between said zone and said region;
means for applying an electrical bias between said first region and said active zone; and
means for generating an electromagnetic wave within said waveguide means to modulate the effective conductivity between said first region and said active zone.

3,390,353

TRANSISTOR OSCILLATOR CIRCUIT WITH A RESISTOR NETWORK FOR STABILIZATION AGAINST BETA VARIATIONS

Howard S. Teller, Jr., Whitesboro, N.Y., assignor to General Electric Company, a corporation of New York
Filed May 8, 1967, Ser. No. 636,900
5 Claims. (Cl. 331—117)

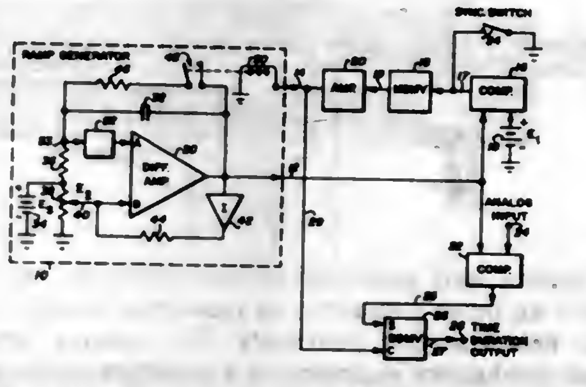


A transistor oscillator of the type including a first inductor in the collector circuit inductively coupled in regenerative feedback relationship to a second inductor in the emitter circuit, the oscillator including a first resistor connected between the first inductor and collector electrode and a second resistor connected between the collector and base electrodes. The resistor network compensates for beta variations between different transistors and for a given transistor over its lifetime. A conventional transistor ratio 455 kc. IF transformer may be employed for the three inductors.

3,390,354

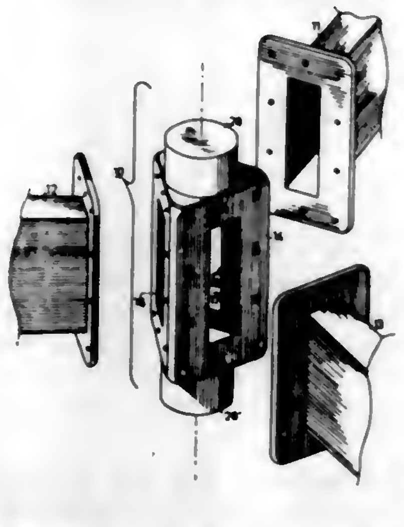
ANALOG VOLTAGE TO TIME DURATION CONVERTER

Edvard Munch, Fremont, Calif., assignor, by mesne assignments, to The Rucker Company, Oakland, Calif., a corporation of California
Filed Oct. 8, 1965, Ser. No. 494,151
7 Claims. (Cl. 332—9)



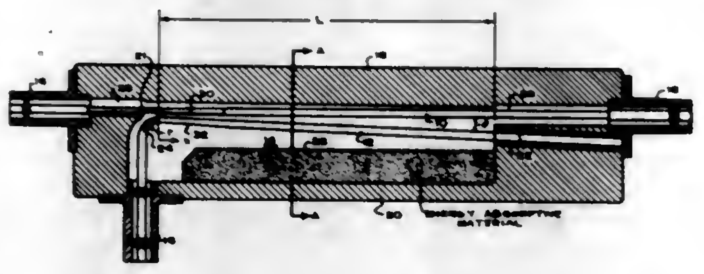
An analog voltage to time duration converter utilizing a ramp generator including a Miller integrator having a switch across its feedback capacitor for discharging the capacitor and for applying the same voltage to both the generator input and output terminal. A first comparator compares the ramp voltage with the analog voltage, and provides a first comparator output signal when they are equal. This comparator output signal is used to trigger a bistable multivibrator which provides the pulse whose width reflects the analog signal. A second comparator compares the ramp voltage with a reference voltage, and provides a second comparator output signal when they are equal. This second comparator output signal is used to trigger the switch across the feedback capacitor.

3,390,355
WAVEGUIDE SWITCH
Jan Vlietstra, Hengelo, Overijsel, Netherlands, assignor to N. V. Hollandse Signaalapparaten, Hengelo, Overijsel, Netherlands, a firm of The Netherlands
Filed Sept. 29, 1965, Ser. No. 491,158
Claims priority, application Netherlands, Oct. 2, 1964, 6411466
6 Claims. (Cl. 333—7)



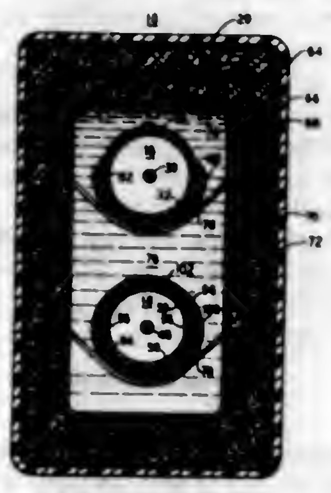
A waveguide switch has three ports, and a pivoted vane mounted to permit selective interconnection of one of the ports to either of the other ports. The vane is provided with plates at its ends that provide capacitive coupling with the adjacent switch walls, in order to permit switching of the device while high frequency power is applied to it.

3,390,356
TEM MODE COUPLER HAVING AN EXPONENTIALLY VARYING COEFFICIENT OF COUPLING
Auber G. Ryals, Palo Alto, and Richard W. Anderson, Los Altos, Calif., assignors to Hewlett-Packard Company, Palo Alto, Calif., a corporation of California
Filed July 30, 1965, Ser. No. 475,955
12 Claims. (Cl. 333—9)



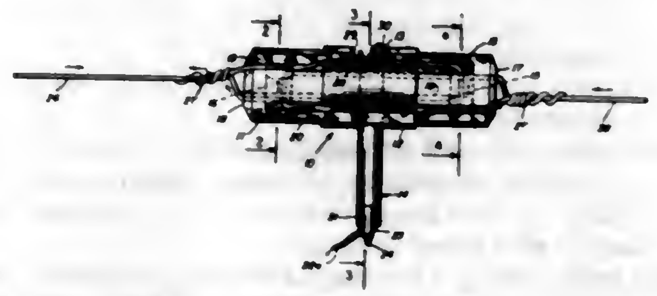
Primary and auxiliary inner conductors are mounted within an outer conductor in transverse electric and magnetic field coupling proximity. The spacing between the inner conductors increases at a constant angle in one direction from a region of tight coupling to a region of looser coupling where the auxiliary conductor terminates in a load that is axially aligned therewith. This provides an exponentially varying coefficient of coupling between the inner conductors. An inner portion of the outer conductor protrudes between the inner conductors near the region of tight coupling at a point where the auxiliary conductor diverges abruptly from the primary conductor to a connector terminal mounted in a side of the outer conductor. This minimizes non-exponential coupling between the inner conductors. The cross-sectional area of the inner conductors and the spacing between the inner sidewalls of the outer conductor and the inner conductors vary to provide the inner conductors with a substantially constant characteristic impedance and to provide the primary conductor with a low reflection transition into a pair of connector terminals mounted in the opposite ends of the outer conductors. An energy absorbent body is mounted within the outer conductor adjacent to at least one of the inner conductors to suppress spurious TE and TM modes that may be caused by the enlargement of the outer conductor to accommodate the increasing spacing of the inner conductors throughout the coupling region.

3,390,357
LOW-LOSS COMMUNICATIONS CABLE
David J. Thomson, Summit, N.J., assignor to Bell Telephone Laboratories, Incorporated, Berkeley Heights, N.J., a corporation of New York
Filed Dec. 29, 1966, Ser. No. 605,922
16 Claims. (Cl. 333—17)



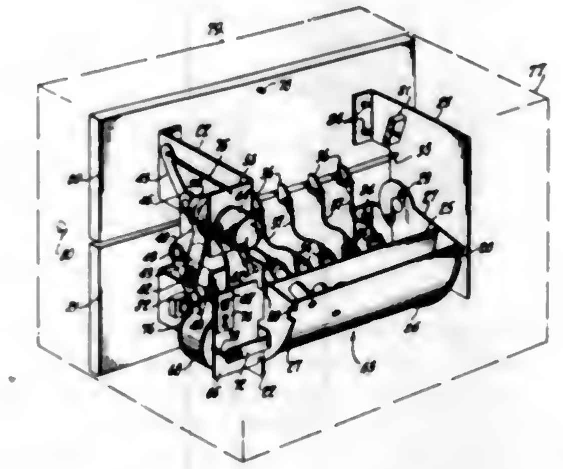
A longitudinal superconducting semicylinder arranged coaxially near the outer conductor of a coaxial cable and maintained with the cable at cryogenic temperature, carries a current that forms a magnetic field which supports the cable's superconducting center conductor coaxially within the outer conductor, when the center conductor carries an opposing urrent. Solid dielectrics between the coaxial conductors are not necessary. Thus, dielectric losses are eliminated.

3,390,358
MULTIPLE FEED ANTENNA CONNECTOR
Samuel Yatter, 111 Main St., Manasquan, N.J. 08736
Continuation-in-part of application Ser. No. 336,679, Jan. 9, 1964. This application June 8, 1965, Ser. No. 471,491
12 Claims. (Cl. 333—25)



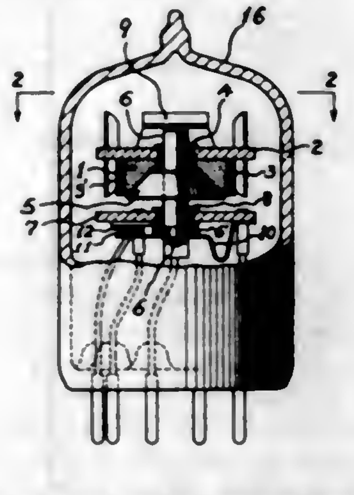
This application discloses one-piece, coaxial cable connectors in which oppositely disposed antenna legs are electrically connected to the cable or other feed lines by means of angularly disposed sets of longitudinal channels running in transverse directions to that of the cable which create a resistance to destruction of the connectors from the opposite pull of twin antennas.

3,390,359
SEQUENTIAL POWER SWITCH
Nathaniel B. Wales, Jr., New York, N.Y., and Charles B. Grady, Jr., West Orange, N.J., assignors to The Metrodynamics Corporation, Red Bank, N.J., a corporation of New Jersey
Filed May 5, 1966, Ser. No. 547,885
3 Claims. (Cl. 335—31)



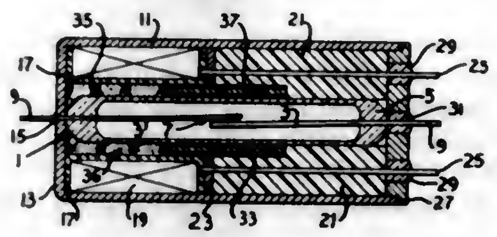
A plurality of power switches are sequentially closed by the thermal expansion of a drive member in response to its heating initiated by a power demand. The absence of power demand allows the switches to open in reverse sequence as the drive member slowly cools. Bias means urge all power switches to open, and a latch electromagnetically held closed by the presence of switchable power couples the switches to the thermal drive member. Power failure thus allows the latch and switches to open rapidly. The demand heater is disabled by this unlatching until the cooling drive member relatches the switches.

3,390,360
CURRENT AND TEMPERATURE RESPONSIVE MAGNETIC CONTROL DEVICE
Satsuro Umeda, 2/23 2-chome Uehara, Shibuya-ku, Tokyo, Japan
Filed Jan. 15, 1965, Ser. No. 425,754
Claims priority, application Japan, Aug. 27, 1964, 39/48,124
5 Claims. (Cl. 335—146)



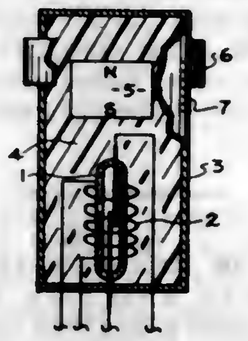
1. A magnetic control tube, comprising an evacuated glass envelope, lead wire pins extending through said envelope, a permanent magnet movably mounted in said envelope, a ferrimagnetism-thermistor having a negative temperature coefficient of magnetism fixedly mounted in said envelope adjacent said movably mounted magnet and toward which said magnet is attracted by the magnetic attraction force between said magnet and said thermistor, said ferrimagnetism-thermistor being electrically coupled between two of said pins, a spring bearing against the said magnet and urging it way from said thermistor against the attraction force, and at least one pair of contact elements one of which is mechanically coupled to said magnet and movable between two positions when said magnet moves, one of said positions being a closed contact position and the other being an open contact position, said contact elements being electrically coupled between two of said pins other then the aforementioned pins.

3,390,361
VARIABLE TIME DELAY REED RELAY HAVING A MOVABLE CORE
Clifford A. Bodge, Attleboro, Mass., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware
Filed Aug. 17, 1966, Ser. No. 572,947
12 Claims. (Cl. 335—152)



1. A relay comprising a sealed reed switch having magnetizable contact-operating blades, an electric coil for establishing when excited a magnetic field throughout a certain path, said path including a magnetizable part and said blades, a movably mounted core piece positioned in said path and movable to and from said magnetizable part, resilient means biasing said core piece to establish a comparatively large space with respect to said part in said path when the coil is deexcited, said core piece being magnetically drawn toward said part against the bias of said biasing means to reduce said space upon substantial excitation of the coil, whereby said magnetic field is strongly enough established throughout said path to magnetize said blades for operation thereof.

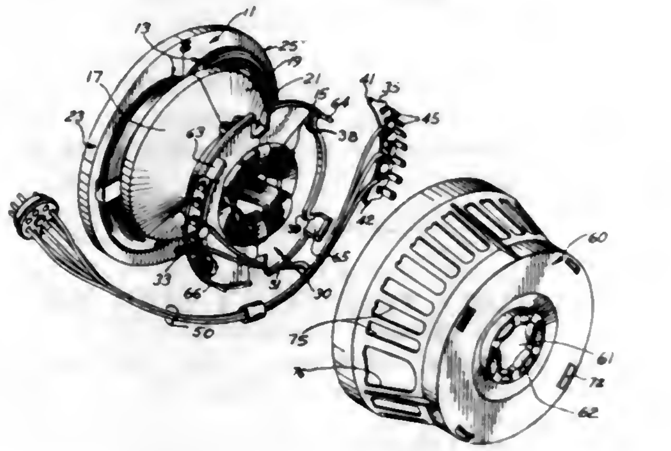
3,390,362
POLARIZED SENSITIVE CIRCUIT BREAKER UTILIZING A MAGNETIC REED SWITCH
Raymond W. Hoeppel, P.O. Box 5, Oak View, Calif. 93022
Filed Oct. 23, 1965, Ser. No. 503,988
8 Claims. (Cl. 335—153)



A sensitive circuit breaker comprises a reed relay with contacts biased closed by a permanent magnet located in a fixed position external to the relay, the contacts opening when current through the relay coil is excessive. Contacts are re-closed by a manually controlled variable magnetic field.

3,390,363
DEFLECTION YOKE LINER WITH COVER

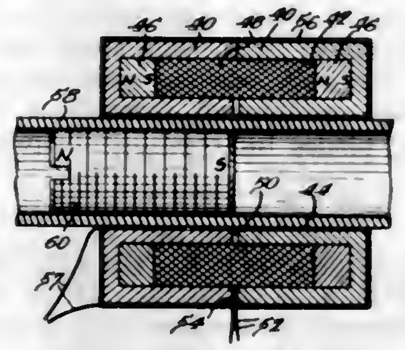
Arthur G. Weyrich, Rolling Meadows, and George F. Linning, Des Plaines, Ill., assignors to Amerline Corp., a corporation of Illinois
Filed Oct. 31, 1966, Ser. No. 590,713
1 Claim. (Cl. 335—210)



A deflection yoke for a television picture tube. The yoke liner is formed from two half-cone shaped sections adapted to mate and receive coils and an iron core. Terminal boards mate with slots on a flange at the rear end of the liner. A protective cover fits over the flange to protect the terminal boards and hold the liner halves together.

3,390,364
VARIABLE REACTOR HAVING COIL AND SIGNAL COILS ON TOROIDAL CORE

Martyn Russell, Elgin, Ill., assignor to Coilcraft, Inc., Cary, Ill., a corporation of Illinois
Filed Mar. 15, 1967, Ser. No. 623,335
8 Claims. (Cl. 336—110)

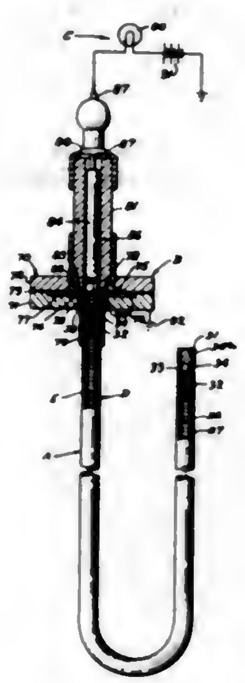


A variable reactor of the saturable core type is provided. Core is formed as a sleeve or hollow toroid and control and signal coils are wound thereon, one circumferentially and the other toroidally, to prevent signal induction between coils. Initial magnetic biasing of the core is provided for, including a movable magnetic slug for bias trimming.

3,390,365
SENSOR FOR HEAT OR TEMPERATURE DETECTION AND FIRE DETECTION

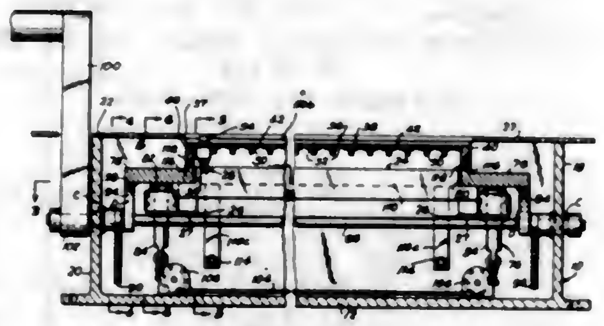
John E. Lindberg, Jr., 1024 Adrienne Drive, Alamo, Calif. 94507
Original application Apr. 1, 1963, Ser. No. 271,043, now Patent No. 3,277,860, dated Oct. 11, 1966. Divided and this application Sept. 9, 1965, Ser. No. 516,800
7 Claims. (Cl. 337—299)

This temperature-detection device disposes in an imperforate enclosure metallic hydride of the type that reversibly releases and takes up hydrogen, releasing it when heated above a threshold temperature. The metal of the hydride has a melting point above the highest temperature to which the sensor is to be subjected, under the pressure conditions obtaining within the enclosure. A continuous passage for gas is provided within the enclosure, and the gas is used to actuate a pressure switch that is connected to the enclosure. The pressure switch preferably is of the diaphragm type, preferably of molybdenum, and the chamber on the opposite side of the diaphragm from the enclosure may be prepressurized, and the pressure therein may be varied.



3,390,366
GANG OF VARIABLE RESISTANCE DEVICES WITH REMOVABLE BOARD CARRYING SETTABLE TAPS

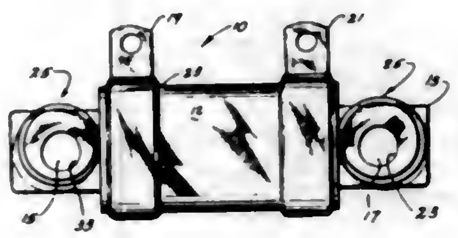
George C. Izenour, New Haven, Conn., assignor, by mesne assignments, to Century Lighting, Inc., Clifton, N.J., a corporation of New Jersey
Filed Aug. 12, 1966, Ser. No. 572,133
9 Claims. (Cl. 338—130)



An electrical unit composed of a stationary member on which there are fixed several resistance strips each with an affiliated collector alongside the same and spaced therefrom, a panel, voltage taps carried by the panel, the taps being settable along slots in the panel, an elevator carriage on which the panel is removably rested, means to move the elevator carriage and with it the panel from an elevated position in which the taps are spaced from the resistance strips and collectors to a lowered position in which each tap connects an associated collector to a point along the affiliated resistance strip, the tape being releasably retained on the panel in any position to which the taps are set, the taps holding such settings when the panel is either removed from the elevator carriage or when resting thereon in elevated position or when the elevator carriage and panel are in lowered position, the panel being locked against the elevator carriage when the carriage is in lowered position.

3,390,367
RESISTOR WITH A SECURED MOUNTING STRAP

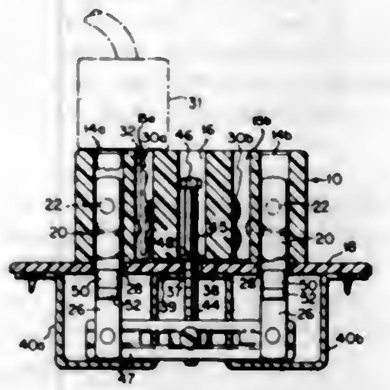
James R. O'Keeffe, Columbus, Nebr., assignor to Dale Electronics, Inc., Columbus, Nebr., a corporation of Nebraska
Filed Mar. 16, 1966, Ser. No. 534,862
14 Claims. (Cl. 338—318)



A mounting means for securing a mounting strap to a resistor having a body portion with a bore extending therethrough which is adapted to slidably receive the mounting strap. The mounting means is positioned on the mounting strap adjacent each of its ends and is movable into engagement with the end of the body portion adjacent thereto to provide vibration resistance qualities to the assembly.

3,390,368
ADAPTOR FOR CONVERTING ELECTRICAL TWO-RECEPTACLE SOCKETS INTO THREE-RECEPTACLE SOCKETS

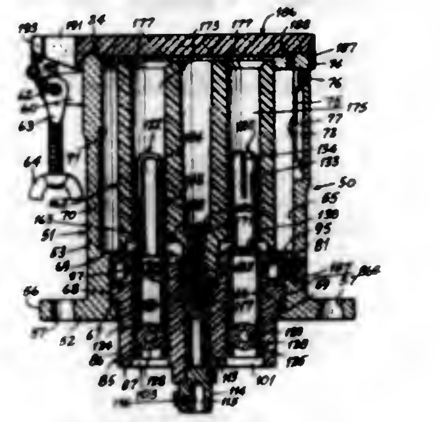
Andrew M. Archer, Rincon Seaman's Unit, San Francisco, Calif. 94119
Filed June 30, 1966, Ser. No. 561,901
8 Claims. (Cl. 339—14)



An adaptor for converting an electrical two-receptacle outlet socket into a three-receptacle outlet socket providing a ground connection, comprising a body of insulating material having a first, second, third and fourth receptacle provided at one side thereof, first and second conductive members in said first and second receptacle, respectively, and connector blades in conductive contact with said first and second conductive members projecting from another side of said body, a third conductive member extending from said third to said fourth receptacle, said third conductive member having an eyelet within said fourth receptacle, a bolt engaged within said eyelet and having a head within said fourth receptacle and a flange firmly secured to said bolt above said eyelet within said fourth receptacle, said bolt having a threaded end protruding from said body on said other side thereof. Anchoring members may be provided on said connector blades.

3,390,369
ELECTRIC PLUG OR RECEPTACLE ASSEMBLY WITH INTERCHANGEABLE PARTS

Marshall G. Zavertnik, Manchester, and James A. Kelly, St. Louis, Mo., and Clarence A. Rongey, Granite City, Ill., and Chester E. Williams, Rock Hill, Mo., assignors to Killark Electric Manufacturing Company, St. Louis, Mo., a corporation of Missouri
Filed Jan. 5, 1966, Ser. No. 540,423
12 Claims. (Cl. 339—14)



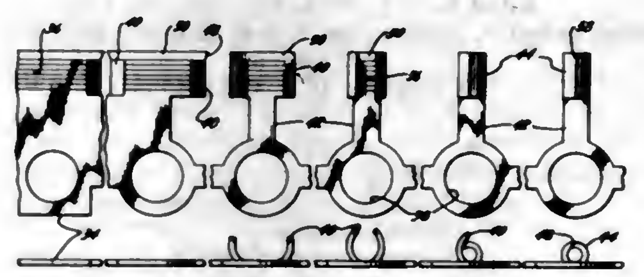
An electrical plug and receptacle assembly having readily interchangeable parts including different housing shells for the plug and receptacle assemblies, the housing shells complementing one another with one fitting within the other. The housing shells are interchangeable so that they can alternately contain other parts such as prongs or receptacle elements, arc chutes, and grounding rings for either a plug assembly or a receptacle assembly.

ERRATUM

For Class 339—38 see:
Patent No. 3,390,404

3,390,370
TERMINAL CONNECTOR AND METHOD OF MAKING SAME

Edwin J. Golankiewicz, Irvington, N.J., assignor to The Thomas & Betts Co., Elizabeth, N.J., a corporation of New Jersey
Filed May 2, 1966, Ser. No. 546,694
7 Claims. (Cl. 339—95)



The invention is directed to an improved electrical terminal connector of the type which is mechanically crimped to the stripped portion of an electrical conductor. The inner stripped conductor receiving ferrule is formed from a strip of sheet metal into a cylindrical ferrule. The longitudinal margins and one transverse margin of the sheet metal blank are beveled, so that when the metal is rolled up to form the ferrule, the seam of a portion of the cylindrical ferrule has an overlapped, feathered seam of substantially normal wall thickness. The seam of the remaining portion of the ferrule is an overlapped seam of double wall thickness. When the latter portion of the ferrule is subjected to a flaring operation, as during assembly of the ferrule to an outer barrel, the seam of the latter portion is altered to an overlapped feathered seam to present a continuous circular frusto-conical surface to conductors placed within the connector.

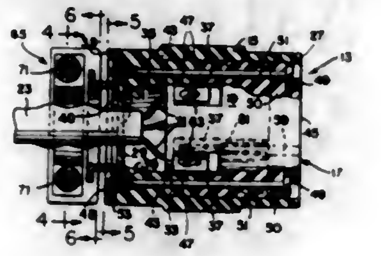
3,390,371

CABLE CLAMP FOR ELECTRICAL WIRING DEVICE

David E. Kramer, Morton Grove, Ill., assignor to Daniel Woodhead Company, Chicago, Ill., a corporation of Illinois

Filed June 24, 1966, Ser. No. 560,167

11 Claims. (Cl. 339—107)



An electrical wiring device and associated cable clamp, wherein the wiring device comprises axially aligned components including a generally cylindrical support body carrying electrical elements mounted thereon, and a jacket enclosing the sides and an end of said body, the body end enclosing portions of said jacket forming an outwardly facing seat for supporting a formed sheet metal bracket, fastening stems having ends attached to the bracket and extending thence through the aligned components, the bracket remote ends of the stems having heads engaging in bracket remote seats, formed in said body, to thereby hold the components together in assembled relationship, with the bracket held in the seat, said cable clamp comprising a pair of hollow, molded plastic parts held together in position to clamp upon the opposite sides of a device connected cable and in interfitting relation with outwardly and oppositely extending clamp carrying flanges on the bracket.

3,390,372

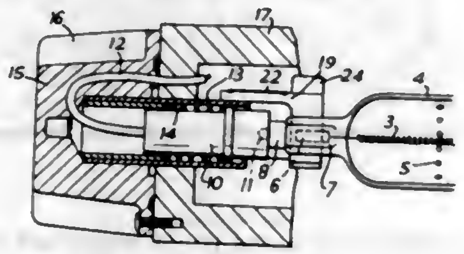
LAMP FITTINGS FOR TUNGSTEN-IODINE LAMPS

Raymond Charles Kember, Alfred John Burnett, and Ronald William Gosling, London, England, assignors to Thorn Electrical Industries Limited, London, England, a British company

Filed July 7, 1964, Ser. No. 380,801

Claims priority, application Great Britain, July 11, 1963, 27,580/63

7 Claims. (Cl. 339—112)



1. A lamp fitting including a heat-conducting metal housing: a contact member mounted within the housing for engagement with a contact of the lamp; a metal clip attached around said housing and having jaws adapted to engage a part of the lamp envelope to be cooled, said clip being adapted to conduct heat from said lamp to the housing, said clip including a pair of cooperating jaws; means biasing said jaws toward each other, but adapted to be opened to separate said jaws from each other whereby said jaws will release their grip upon said lamp.

3,390,373

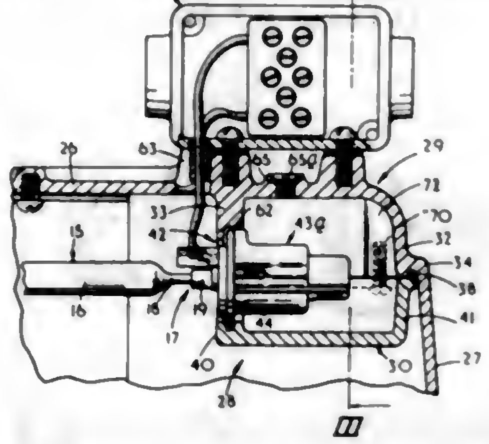
HEAT DISSIPATING ELECTRIC LAMP ASSEMBLIES

Reginald Ruston, Birmingham, England, assignor to Rowlands Electrical Accessories Limited, Smethwick, England, a British company

Filed Feb. 3, 1966, Ser. No. 524,903

Claims priority, application Great Britain, Feb. 11, 1965, 5,896/65

4 Claims. (Cl. 339—112)



A heat dissipating lamp assembly wherein, to provide for dissipation of heat from the lamp proper, an electric contact member which co-operates with a contact of the lamp proper, is slidably disposed in a sleeve and maintained in good thermal contact therewith by a resilient metal element acting between the contact member and the sleeve, the sleeve itself being disposed within a chamber defined by a housing having a greater surface area than the contact member and containing a heat transfer substance which is liquid at least at the operational temperature of the assembly to maintain good thermal contact between the sleeve and the housing.

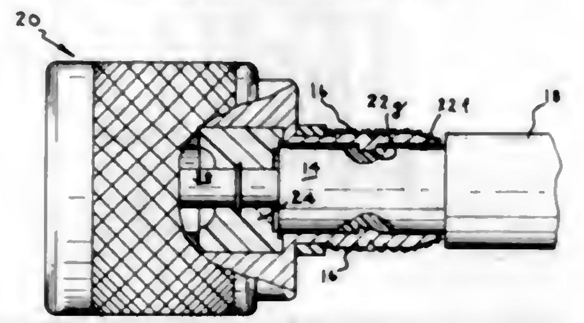
3,390,374

COAXIAL CONNECTOR WITH CABLE LOCKING MEANS

Edgar Wilmot Forney, Jr., Harrisburg, Pa., assignor to AMP Incorporated, Harrisburg, Pa.

Filed Sept. 1, 1965, Ser. No. 484,286

2 Claims. (Cl. 339—177)



A coaxial connector for high frequency use is disclosed which includes inwardly directed projections within the outer conductive shell of the connector of a height and shape to bite into the dielectric sheath of the cable and hold the cable in position during and after assembly of the connector on the cable. The connector includes a center contact pin having an annular rib on a height insignificant when compared to the inner and outer conductor spacing of the connector and positioned to bite into a dielectric insert held within the connector to prevent contact float. In a preferred embodiment the cable sheath is made to abut against the insert with the barb holding the contact pin being on one side of such abutment and with the projections holding the sheath being on the other side thereof.

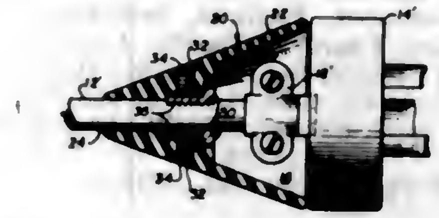
3,390,375

CORD ANTI-SNAG DEVICE

Craig Salmonson, Castro Valley, Calif. (4404 Burke Way, Fremont, Calif. 94536)

Filed May 31, 1966, Ser. No. 553,929

3 Claims. (Cl. 339—196)



A device for preventing an electrical cord from snagging, comprising a cone shaped member having a cavity therein and adapted to fit over a cord and against a cord connector, the device including a cord gripping means and a fastener means adapted to force the cord gripping means inwardly against the cord to secure the device to the cord and against the connector.

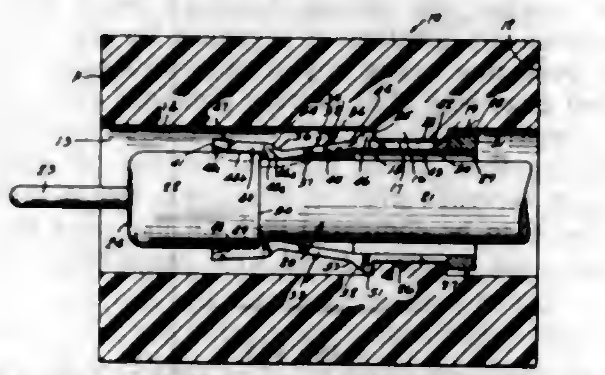
3,390,376

HIGH PERFORMANCE COLLET FOR ELECTRICAL CONNECTORS

Joseph A. Nava, Villa Park, Ill., assignor to The Pyle-National Company, Chicago, Ill., a corporation of New Jersey

Filed Mar. 3, 1967, Ser. No. 620,408

11 Claims. (Cl. 339—217)



An electrical connector comprising an insulator block, registered bores extending through the block and collets mounted within the bores for receiving electrical contacts and for securely holding and positioning the contacts within the bores. Each of the collets is generally tubularly shaped and comprises a circumferentially continuous cylindrical sleeve and a plurality of flexible and resilient fingers projecting axially from one end of the sleeve. The collet is formed by a machining operation rather than a stamping or punching operation in order to provide special radial and axial cross-sectional configurations, particularly with respect to the fingers.

3,390,377

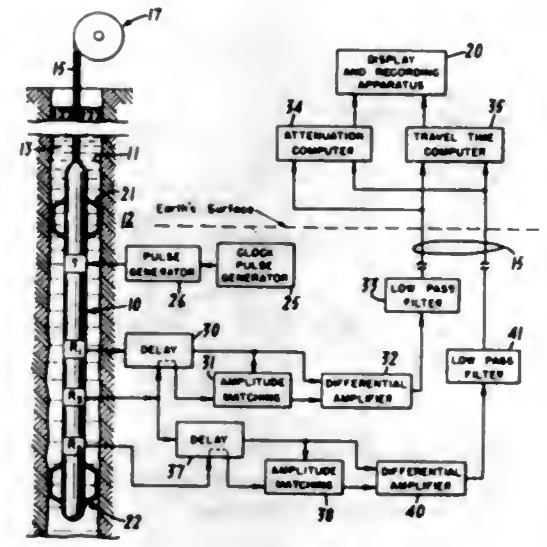
ACOUSTICAL WELL LOGGING METHODS AND APPARATUS

Jennings W. Elliott, West Redding, and Donald R. Grine, Redding, Conn., assignors to Schlumberger Well Surveying Corporation, Houston, Tex., a corporation of Texas

Continuation-in-part of application Ser. No. 484,925, Sept. 3, 1965. This application June 6, 1967, Ser. No. 644,029

12 Claims. (Cl. 340—18)

An acoustical well logging system for detecting the shear wave arrivals of an acoustic wave propagated through earth formations surrounding a borehole by transmitting acoustic energy from the borehole into the formation, receiving the acoustic energy from the formation at two locations in the borehole spaced different distances from the transmitter, delaying the electrical signal generated by the receiver located closer to the transmitter in accordance with the transit time of acoustic energy traveling at formation compressional velocities between the two receivers, adjusting the amplitude of the electrical signal generated by the receiver remote from the transmitter in accordance with the attenuation of acoustic energy traveling at formation compressional velocities between the two receivers, and combining the delayed electrical signal and the adjusted amplitude electrical signal so as to cancel the components of the electrical signals corresponding to the waves traveling at formation compressional velocities between the transmitter and the receivers.



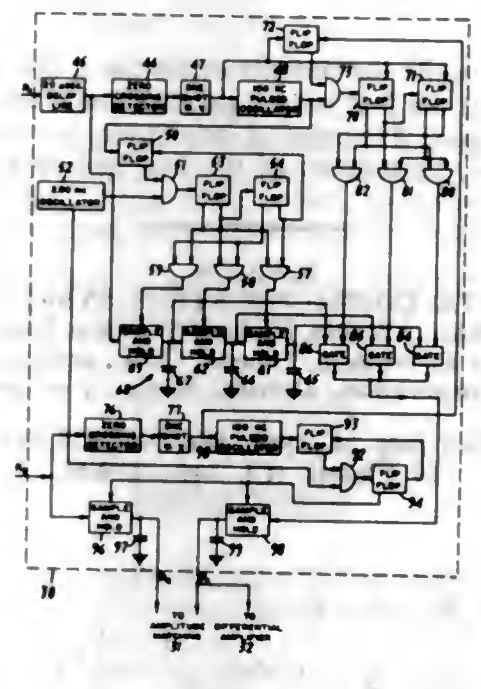
3,390,378

COMPARATOR FOR THE COMPARISON OF TWO BINARY NUMBERS

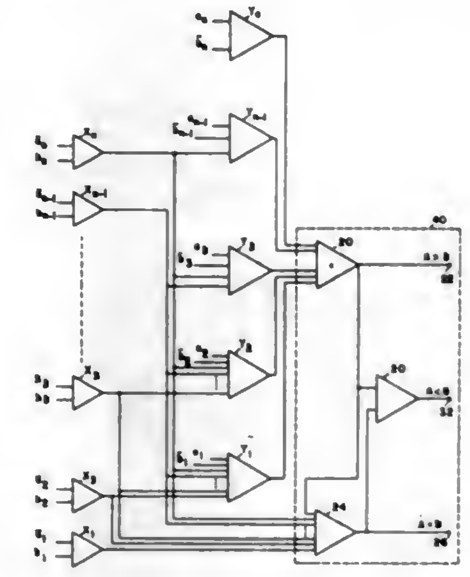
Hugh L. Dryden, Deputy Administrator of the National Aeronautics and Space Administration with respect to an invention of Tage O. Anderson, Arcadia, Calif., and Warren A. Lushbaugh, Los Angeles, Calif.

Filed Oct. 22, 1965, Ser. No. 502,701

11 Claims. (Cl. 340—146.2)



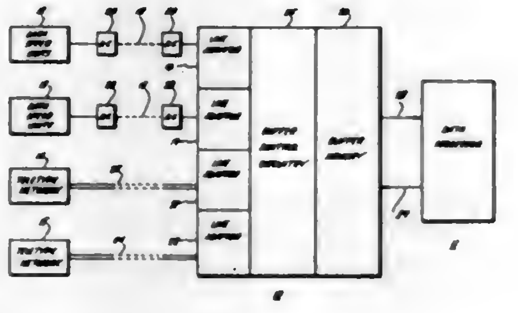
A full comparator is disclosed for two *n* bit numbers A and B. It includes *n* pairs of NAND gates. Each pair, which consists of first and second gates is associated with a different bit order. Each of the *n* first gates has only two inputs, while the number of inputs of each second gate varies from two for the second gate of the highest order to $2+(n-1)$ for the second gate of the lowest order. The gates are connected so that all the n first gates produce the same output when $A \geqq B$, while all the gates of the second group produce the same output when $A \leqq B$. The outputs of the n second gates are combined in a first output gate while the outputs of all the n first gates and the output of the first output gate are combined in a second output gate. The relative magnitudes of A and B are indicated by the outputs of the first and second output gates.



3,390,379
DATA COMMUNICATION SYSTEM

Carl B. Carlson, Arcadia, Richard S. Sharp, Sierra Madre, and James E. Wollum, Duarte, Calif., assignors to Burroughs Corporation, Detroit, Mich., a corporation of Michigan

Filed July 26, 1965, Ser. No. 474,649
19 Claims. (Cl. 340—172.5)

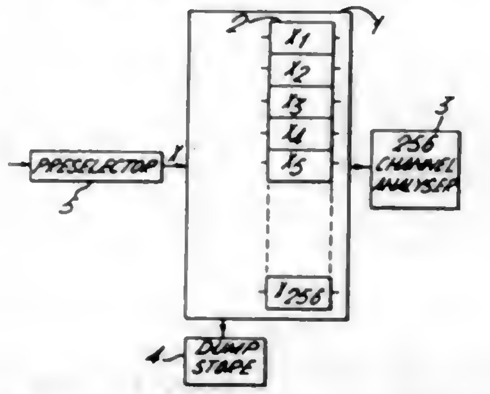


A data communication system having an improved data transmission terminal unit intermediate a data processor and peripheral units of differing types. The terminal unit includes a buffer memory which is divided into a plurality of equal segments, logical circuitry to effectuate buffer control and a number of line adaptors equal to the number of peripheral units. A uniform interface is provided between the buffer control circuitry and each line adaptor and, by accommodating each peripheral unit to this uniform interface, the line adaptors enable a single buffer memory and a single buffer control unit to be used in conjunction with many different types of peripheral units. Moreover, each peripheral unit is associated with a particular segment of the buffer memory and the processor may initiate a communication with a particular one of the peripheral units by addressing that segment of buffer memory associated with the selected peripheral unit.

3,390,380
BINARY-INFORMATION ANALYSING ARRANGEMENTS

Edmund Harry Cooke-Yarborough, Murray Hill, N.J., and Ivor Noel Hooton, Cassington, Oxford, Stanley Alfred Hickman, West Compton, near Shepton Mallet, Somerset, and Gilbert Maurice Prior, Chewton Mendip, near Bath, Somerset, England, assignors to United Kingdom Atomic Energy Authority, London, England, and Electric & Musical Industries Ltd., Hayes, England

Filed Aug. 18, 1965, Ser. No. 480,690
Claims priority, application Great Britain, Aug. 20, 1964, 34,181/64
15 Claims. (Cl. 340—172.5)

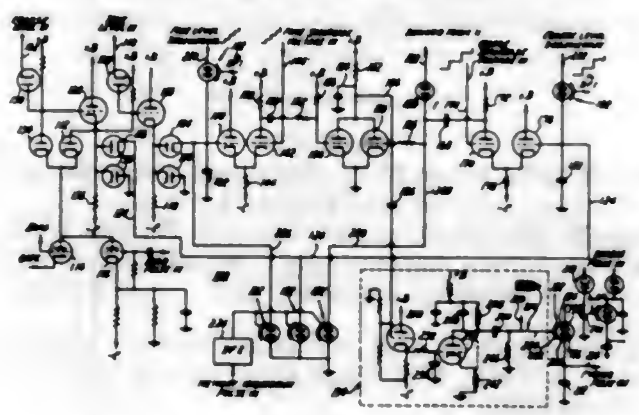


A binary-information analysing arrangement comprises a store having far fewer locations than the theoretically possible number of different incoming words but sufficient to accommodate a statistically significant fraction of said number, the storage locations being filled and characteristically labelled in sequence by the most frequently occurring words, any excess words being dumped or stored elsewhere. The storage locations each conveniently comprise a plurality of magnetic cores known as transfluxors, there being provided in one particular arrangement for each digit to be stored, means to enable the contents to be compared with an incoming signal in addition to the usual read and write requirements.

3,390,381
CAPACITOR SAMPLE AND HOLD CIRCUIT EMPLOYING SIGNAL COMPARISON AND REGENERATION

Francis H. Shepard, Jr., Berkeley Heights, N.J., assignor to Vogue Instrument Corp., Plainview, N.Y., a corporation of New York

Application May 19, 1960, Ser. No. 30,216, now Patent No. 3,273,013, dated Sept. 13, 1966, which is a continuation-in-part of application Ser. No. 641,653, Feb. 21, 1957. Divided and this application May 12, 1966, Ser. No. 566,453
7 Claims. (Cl. 340—173)



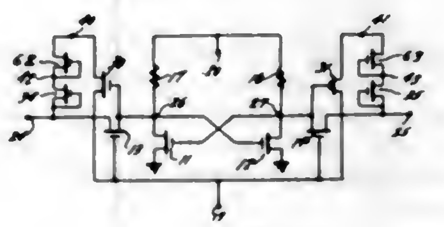
Electronic memory system in which a digit (e.g. any decimal digit) is represented by a corresponding voltage level on a capacitor, the voltage being periodically regenerated to provide for long-term accuracy. Regeneration is accomplished at a rate fast enough to prevent any effective change of the voltage stored on the capacitor,

and accuracy is obtained by resetting the capacitor voltage to an exact level corresponding to whatever level should then be stored on the capacitor. Change from one digit to any other within the range of the system is electronically controlled in accordance with an input signal.

3,390,382
ASSOCIATIVE MEMORY ELEMENTS EMPLOYING FIELD EFFECT TRANSISTORS

Ryo Igarashi, Tokyo, Japan, assignor to Nippon Electric Company Limited, Tokyo, Japan

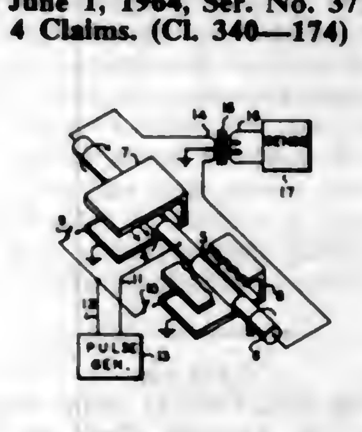
Filed Aug. 30, 1967, Ser. No. 664,382
Claims priority, application Japan, Aug. 31, 1966, 41/57,402; Sept. 26, 1966, 41/63,322
12 Claims. (Cl. 340—173)



Bistable transistor flip-flop elements in a memory bank provide operation of the elements in an associative, non-destructive comparison mode. First and second write-in transistors respectively provided for each transistor of the bistable element enable setting of the state of the flip-flop element in accordance with information to be stored. A pair of isolation transistors with their control terminals coupled to respective outputs of each flip-flop element insure non-destructive comparison of the state of the element with an interrogation signal. A non-matching comparison generates an output signal at a common terminal of the isolation transistors. A serially connected pair of transistors connected between terminals of each retrieval and write-in transistor reduce the number of terminal connections to each element by one-half. Field-effect transistors and integrated circuits are preferred in production of the flip-flop elements and the memory bank.

3,390,383
CYLINDRICAL THIN FILM MAGNETIC CORE MEMORY

Richard L. Snyder, Fullerton, Calif.
(4625 Van Kleek Drive, New Smyrna Beach, Fla. 32069)
Filed June 1, 1964, Ser. No. 371,593
4 Claims. (Cl. 340—174)

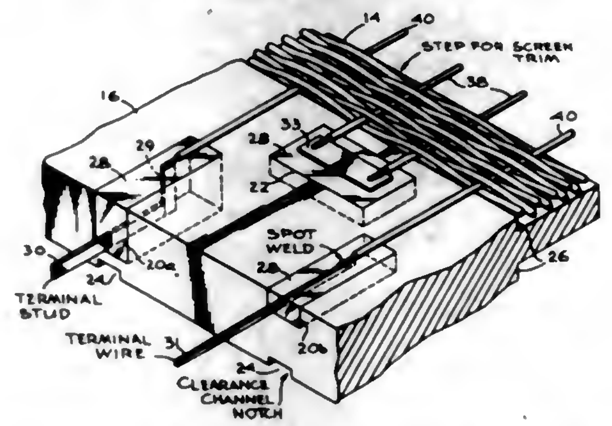


A plated wire memory in which coherent rotational switching is employed for both read and write operations. Parallel circuits are used for carrying both recording signals and sensing to reduce the length of signal propagation paths and, thereby, increase operating speed. In this example, a single digit position is served by four parallel lines. A single recording circuit is coupled to the lines by a diode network. The lines are coupled to a sense amplifier by means of a transformer having multiple primary windings.

3,390,384
ELECTRICAL CONNECTION STRUCTURE

John S. Davis, Glendale, Calif., assignor to The Bunker-Ramo Corporation, Canoga Park, Calif., a corporation of Delaware

Continuation-in-part of application Ser. No. 335,135, Jan. 2, 1964. This application Oct. 4, 1966, Ser. No. 584,272
15 Claims. (Cl. 340—174)

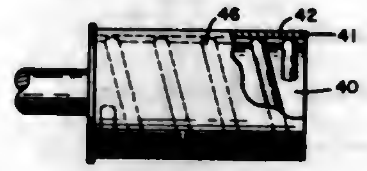


Arrangements for providing electrical connections selectively to and between extremely fine, closely spaced electrical conductors extending from a woven memory matrix and also providing support for such a matrix, the arrangements being such as to admit of fabrication by spot welding techniques on an automatic basis.

3,390,385
MAGNETIC DRUM RECORDING APPARATUS WITH REPLACEABLE SLEEVE

Gregory J. Ehalt, Long Lake, Minn., assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware

Filed Feb. 1, 1966, Ser. No. 524,267
6 Claims. (Cl. 340—174.1)



1. In a magnetic recording-reproducing apparatus where magnetic transducer members record and reproduce from a record surface comprising:

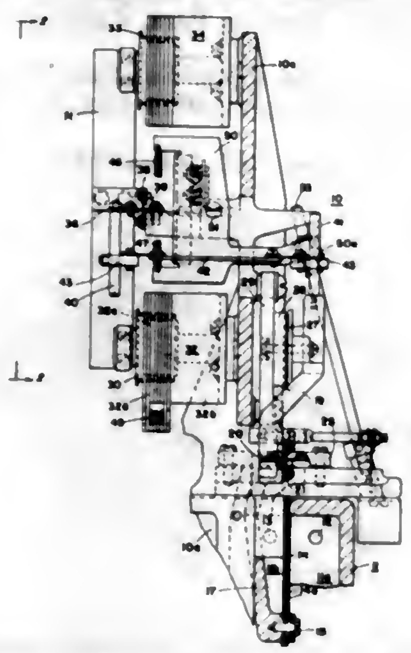
(a) a rotatable mandrel means;
(b) a driving means connected to said mandrel means for effecting rotation thereof;
(c) a separate recording sleeve means having an inner surface and containing on a peripheral surface thereof a magnetizable coating, said sleeve means being adapted to be received by a surface of said rotatable mandrel means; and
(d) said rotatable mandrel means supporting pressure means for applying a positive pressure directed outwardly for maintaining said sleeve means and said mandrel means in a non-relative motion relationship with respect to each other when said mandrel means is in a rotating condition.

3,390,386
SPAN TRIMMING ADJUSTMENT AND TEMPERATURE COMPENSATION FOR A TRANSMITTER OF THE FORCE BALANCE TYPE

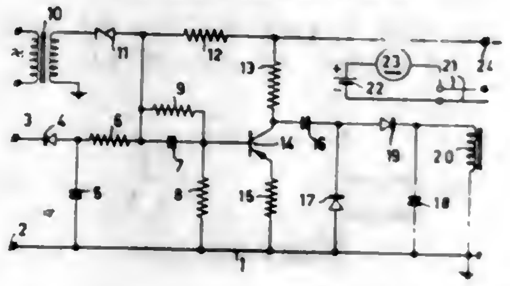
Edward J. Cranch, Bryn Athyn, and Richard M. Hickox, Glenside, Pa., assignors to Leeds & Northrup Company, a corporation of Pennsylvania

Filed Feb. 23, 1965, Ser. No. 434,567
10 Claims. (Cl. 340—187)

Apparatus providing for fine range or span trimming adjustment of a transmitter of the force balance type by modifying the iron structure around the air gap so that the air gap is adjustable in length thus changing the flux density of the field around the feedback coil of the transmitter.



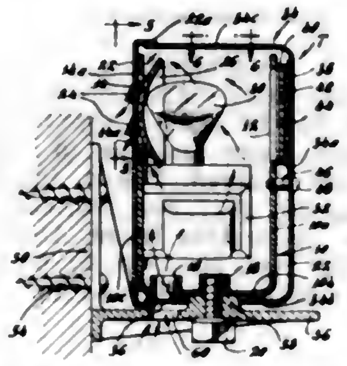
3,390,387
FAIL-SAFE MONITOR ALARM CIRCUIT
Eduard H. Hugenholtz, Willowdale, Ontario, Canada, assignor to North American Philips Company Inc., New York, N.Y., a corporation of Delaware
Filed Feb. 17, 1964, Ser. No. 345,521
Claims priority, application Canada, Feb. 21, 1963, 869,277
9 Claims. (Cl. 340—248)



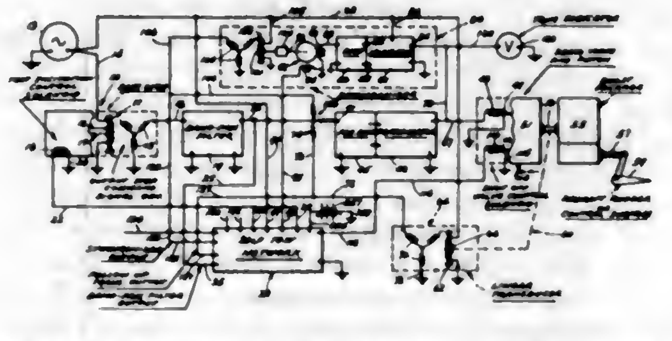
1. A fail-safe monitor circuit for indicating the operating condition of a system comprising, amplifier means having an input circuit and an output circuit, a source of AC voltage, a Zener diode gating element having a conductive state and a nonconductive state, means connecting said voltage source, said Zener diode and said amplifier input circuit in a series circuit, means responsive to the condition of said system for producing a monitor voltage indicative thereof, means for applying said monitor voltage across said Zener diode to control the state of conduction thereof thereby to control the application of said AC voltage to the input circuit of said amplifier means, and indicator means coupled to said amplifier output circuit and arranged to produce an indication in the absence of said AC voltage at the input circuit of said amplifier means or upon the malfunction of one or more of said circuit elements.

3,390,388
INTRUSION DETECTOR
William G. Kahl, Jr., Brookfield, John Gally, Jr., Bethel, and Peter F. Cavanaugh, Westport, Conn., assignors to Arrowhead Enterprises, Inc., Bethel, Conn., a corporation of Connecticut
Filed Mar. 24, 1965, Ser. No. 442,313
16 Claims. (Cl. 340—258)

1. A transmitter for an infrared photoelectric detection system which comprises: an enclosure including a bottom wall defining an air inlet therein, a back wall defining an air outlet in the upper portion thereof, and a front wall defining a radiation window therethrough; a focusing mirror positioned with its convex surface adjacent said back wall in light blocking relationship to said air outlet; infrared radiation generating means positioned at the focal point of said mirror to project radiation from said generating means and mirror through said window; transformer means supplying said radiation generating means and positioned in light blocking relationship to said air inlet; and infrared filter means positioned in said window.



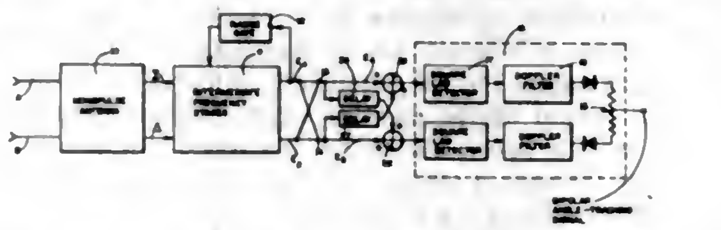
3,390,389
SELF-TEST MEANS FOR A SERVO SYSTEM
Joseph A. Bluish, Rochelle Park, N.J., assignor to The Bendix Corporation, a corporation of Delaware
Filed Dec. 6, 1965, Ser. No. 511,759
20 Claims. (Cl. 340—314)



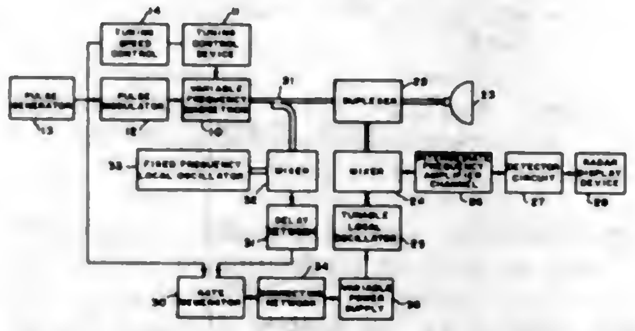
1. Means for testing a control system of a type including a condition sensor means for operating said control system; the combination comprising means for torquing said condition sensor means so as to provide output signals for testing said control system, means responsive to said test signals for effecting signals of a variable amplitude waveform, condition indicator means responsive to said signals of the variable amplitude waveform, timing means for rendering said condition indicator means effective after a predetermined time interval to provide a test phase, operator-operative means to simultaneously initiate operation of said torquing means and said timing means, and said condition indicator means being rendered effective by said timing means after said predetermined time interval has elapsed to provide an indication of an operative condition of said control system in response to said signals of the variable amplitude waveform.

3,390,390
CLUTTER-FORTIFIED MTT SYSTEM
Charles L. Vehrs, Jr., Anaheim, Calif., assignor to North American Rockwell Corporation, a corporation of Delaware
Filed Jan. 16, 1967, Ser. No. 609,440
11 Claims. (Cl. 343—16)

The subject invention relates to a sum-channel-normalized, monopulse-type clutter-fortified moving target-tracking system, and includes means for avoiding angular tracking errors due to tracking of the combined centroid of the target and clutter. A compensatory clutter-fortifier provides a clutter sample from each horn of a monopulse horn pair, the samples being sum channel normalized to clutter at the target range of interest. The normalized clutter sample from each horn, or signalling channel, is injected into the other of the two channels or horns, to effect a more nearly symmetrical fortified clutter state, prior to clutter-reference Doppler processing.

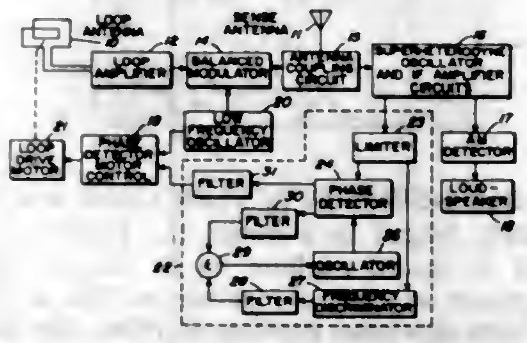


3,390,391
RADAR SYSTEM EMPLOYING VARIABLE FREQUENCY PULSES
Robert W. Kissinger, West Islip, and Salvatore Barbasso, Jr., Bayshore, N.Y., assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Nov. 5, 1965, Ser. No. 506,524
7 Claims. (Cl. 343—17.2)



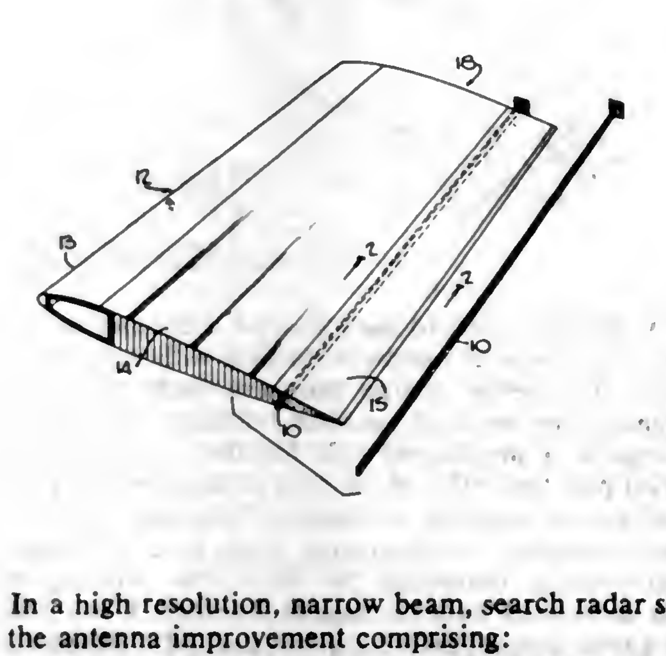
In a pulse radar system of the type in which the carrier frequency of successive pulses is continuously varied (i.e. frequency-agile radar), the problem arises of varying the local oscillator with the carrier frequency to maintain a constant intermediate frequency. In the disclosure a system is described in which the pulses are applied to a highly dispersive delay line which delays the pulses as a function of frequency. This variable delay is employed to derive a control voltage that varies with carrier frequency, and the control voltage is employed to control the local oscillator.

3,390,392
ADF SYSTEM EMPLOYING ANGLE MODULATION
Abbott F. Mayer, Marion, and Harris A. Stover, Cedar Rapids, Iowa, assignors to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa
Filed July 12, 1965, Ser. No. 471,072
4 Claims. (Cl. 343—117)



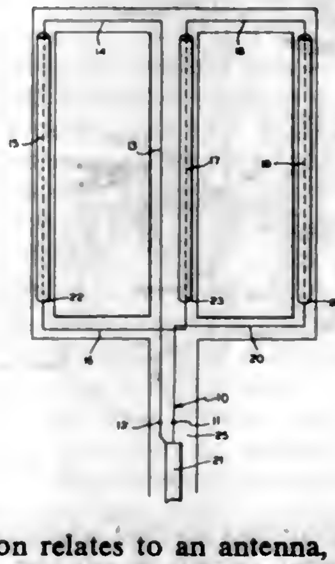
This invention describes an ADF (automatic direction finding) system which employs internally generated phase modulation instead of the internally generated amplitude modulation commonly employed in ADF systems. The inventive system has the advantage that amplitude modulation of the received signal cannot affect the direction finding properties of the system. The advantages are achieved by elimination of the 90° phase shift of the loop antenna input to minimize amplitude modulation. The commonly used systems employing amplitude modulation are disturbed when the received signal has amplitude modulation in the frequency range of the internally generated amplitude modulation.

3,390,393
AIRFOIL RADAR ANTENNA
Hubert W. Upton, Arlington, Tex., assignor to Bell Aerospace Corporation, Wheatfield, N.Y., a corporation of Delaware
Filed Sept. 17, 1964, Ser. No. 397,090
12 Claims. (Cl. 343—708)



1. In a high resolution, narrow beam, search radar system, the antenna improvement comprising:
- a rotatable airfoil, said airfoil being flexible in a direction perpendicular to the plane of rotation of said airfoil, and
- a slotted waveguide deployed within said airfoil along a substantial portion of the length of said airfoil near the trailing edge of said airfoil, the slots of said waveguide facing outwardly toward the trailing edge of said airfoil, the skin of said airfoil adjacent said waveguide being formed of a material that is transparent to radiation.

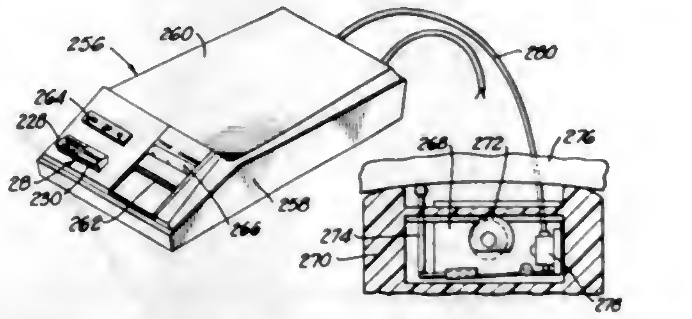
3,390,394
DUAL LOOP ANTENNA
Sven Reinhold Glimvall, Malmo, Sweden, assignor to Gote Sigvard Gustafson, Malmo, Sweden
Filed Oct. 2, 1964, Ser. No. 401,127
Claims priority, application Sweden, Oct. 4, 1963, 10,866/63
3 Claims. (Cl. 343—742)



The invention relates to an antenna, more particularly a TV antenna, of small dimensions and large band width and includes a continuous conductor placed in two rectangular loops, and metal powder tubes which are positioned around three of the long sides of the loops to reduce the Q-value of the antenna, and a plastic covering enclosing the conductor and the metal powder tubes.

3,390,395
ELAPSED TIME RECORDING DEVICE AND METHOD

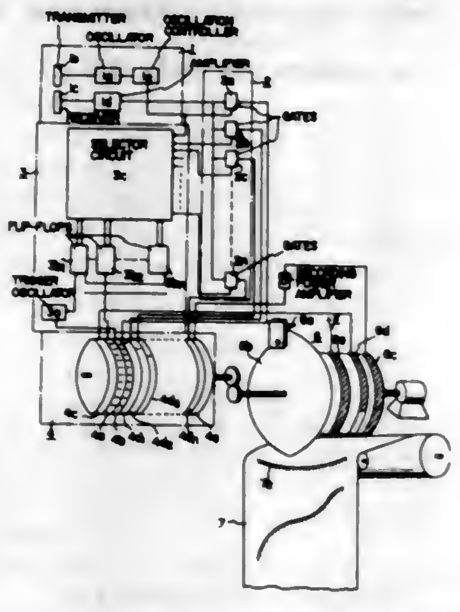
Harold Gamburd, Los Angeles, and James E. Walker, El Segundo, Calif., assignors to Commac, Inc., El Segundo, Calif., a corporation of California
Filed May 31, 1966, Ser. No. 553,895
21 Claims. (Cl. 346—1)



A sheet-like record member has a column of consecutive time interval numbers starting with zero and a column of expense charge numbers each relating to an aligned time interval member reflecting an accumulated charge at a preplanned rate for that particular time interval plus the entire of the next consecutive time interval. The record member is inserted into the device which, upon actuation, automatically feeds it to a starting position visually indicating the zero time interval number and associated expense charge number. Upon initiation of a time period, preferably the start of a phone call, the device intermittently feeds the record member for visually indicating the appropriate total accumulated time intervals expired and the total charge for said total time intervals plus the entire of the one being invaded, the final totals being permanently indicated on the record member at the phone call termination.

3,390,396
HIGH-SPEED RECORDING METHOD

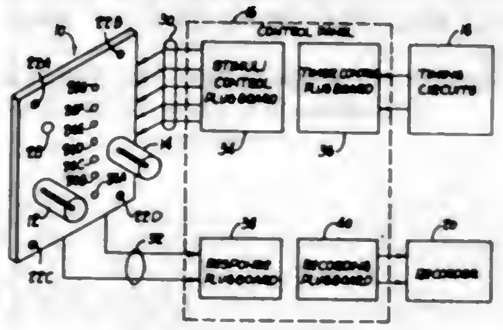
Masao Nishikawa, Yokohama-shi, and Saburo Yabe, Urawa-shi, Japan, assignors to Hakko Kogyo Kabushiki Kaisha, Tokyo-to, Japan, a joint-stock company of Japan
Filed Sept. 20, 1966, Ser. No. 580,811
1 Claim. (Cl. 346—1)



A high-speed recording method which comprises causing two ring counter circuits to operate simultaneously with respective cyclic periods which differ by a suitable very small time interval. The phenomenon to be recorded, such as a sound wave, is projected at the start of the counter circuit of shorter cyclic period. A time gate of a receiver is opened for intercepting the sound wave for a time equal to the small time interval from the start of the period of the counter circuit which completes its cycle with a delay. Reception is carried out successively *n* times through *n* cycles each for the small time interval difference after a lag time from the instant of the respective projection of the sound wave thereby to accomplish time selection of *n* divisions.

3,390,397
PSYCHOLOGICAL TESTING RECORDER

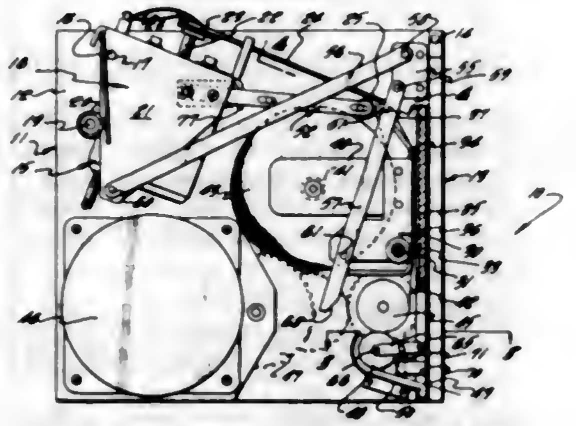
Bernard Z. Friedlander, 2231 Bellfield Ave., Cleveland Heights, Ohio 44106
Filed Feb. 16, 1966, Ser. No. 527,856
10 Claims. (Cl. 346—33)



A programmable control energizes stimuli-producing means such as lights in predetermined spatial and time patterns. Two manually operable actuators operate switches, which vary the patterns produced by the programmable control. Signals produced by movement of the actuators are recorded along with signals indicative of energization of the stimuli-producing means.

3,390,398
OSCILLOGRAPH LOADING

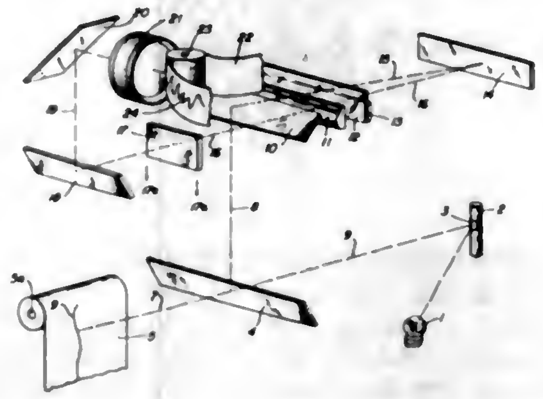
Joseph John Neff, Pasadena, Calif., assignor to Consolidated Electrodynamics Corporation, Pasadena, Calif., a corporation of California
Filed Feb. 28, 1966, Ser. No. 530,524
15 Claims. (Cl. 346—68)



A recording oscillograph in which a door and a platen are separately hinged to a frame, the platen carrying a supply roll of record medium on its reverse side. The door and platen are linked together so that as the door is moved from its closed position, in which the front side of the platen is disposed adjacent the door, to its open position, the platen moves about its hinge axis to expose the supply roll support to the exterior of the oscillograph for ready and easy loading of a fresh supply roll into the oscillograph. The medium is threaded into the oscillograph merely by unrolling a length of the medium from the roll and by closing the door.

3,390,399
OPTICAL RECORDER UTILIZING A FRESNEL/LENTICULAR LENS SYSTEM

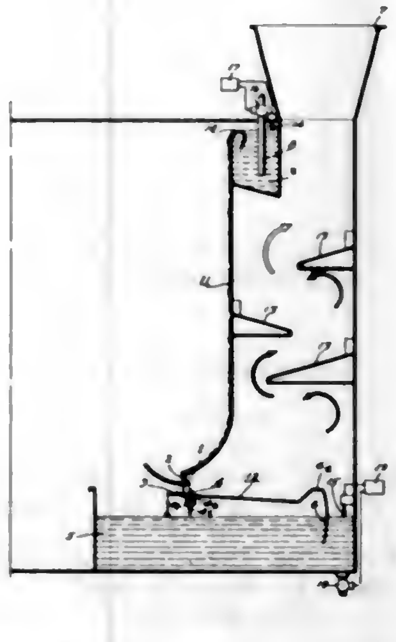
Vurnen J. Leonard, Littleton, Colo., assignor to Honeywell Inc., Minneapolis, Minn., a corporation of Delaware
Filed Jan. 11, 1967, Ser. No. 608,525
6 Claims. (Cl. 346—109)



A unique optical system utilizing a Fresnel lens and a lenticular lens in conjunction with a dichroic filter as well as standard optical devices is utilized. The dichroic filter splits a beam of light in accordance with the radiant energy wave lengths and applies separate beams to different devices. The Fresnel/lenticular lens system operates upon one of the beams to provide a desirable output signal which is utilized to effect recording.

3,390,400
SPRAY PAINTING BOOTH

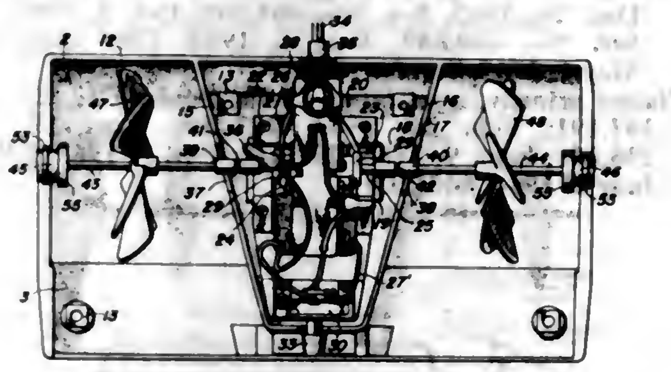
Nils Dock, Saltsjo-Duvnas, Sweden, assignor to Aktiebolaget Svenska Flaktfabriken, Stockholm, Sweden
Filed Oct. 5, 1966, Ser. No. 584,601
Claims priority, application Sweden, Oct. 7, 1965, 12,988/65
5 Claims. (Cl. 98—115)



This patent discloses an extractor arrangement in a spray painting booth adapted to more efficiently and economically cleanse ventilating air which passes through the spray painting booth. The ventilating air is passed through a slot over which water is passed, the lower portion of the slot being provided with a splash plate which increases the ability of the water to combine with paint particles and the like being carried toward the slot from the paint booth.

3,390,401
AIR TRANSLATING APPARATUS

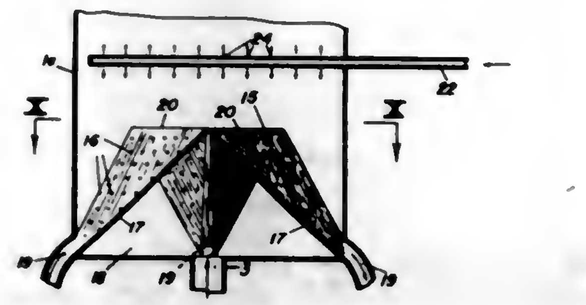
Masaya Matsuyoshi and Takashi Kobayashi, Osaka, and Hazime Sako, Toyonaka-shi, Japan, assignors to Matsushita Seiko Co., Ltd., Osaka, Japan, a corporation of Japan
Filed Mar. 13, 1967, Ser. No. 622,540
Claims priority, application Japan, Mar. 16, 1966, 41/24,828; Feb. 6, 1967, 42/10,884, 42/10,885
4 Claims. (Cl. 230—117)



An air translating apparatus using axial fan such as propeller fan. In particular, an air translating apparatus comprising an electric motor having its rotor shaft extending on both sides and axial fans mounted on both extensions of said shaft respectively, whereby air sucked into the apparatus through air sucking openings in the opposite end walls of the apparatus casing is delivered outwardly through an air discharge opening in the front wall of said casing after deflecting the air stream by a deflector.

3,390,402
APPARATUS FOR COUNTERCURRENT WASHING OF MOTHER LIQUOR FROM SOLID PRODUCTS

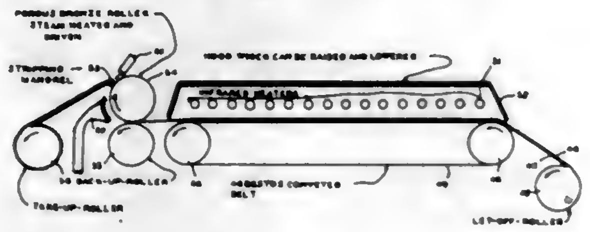
Alfred Goerg, Blonay, Vaud, Switzerland, assignor to Ciba Limited, Basel, Switzerland, a Swiss Company
Original application Aug. 5, 1963, Ser. No. 300,017, now Patent No. 3,309,177, dated Mar. 14, 1967. Divided and this application Mar. 10, 1967, Ser. No. 635,935
Claims priority, application Switzerland, Aug. 6, 1962, 9,371/62; July 16, 1963, 8,874/63
1 Claim. (Cl. 23—270)



1. An installation for continuously washing the mother liquor out of solid products by means of a washing liquid, comprising a vertically mounted washing vessel, an inlet in the upper portion of said vessel for injecting solid product containing mother liquor into said vessel from the top, an inlet in the bottom portion of said vessel for introducing washing liquid from below, a discharge duct in the upper portion of said vessel for discharging mother liquor and washing liquid, and a settling bottom for the solid product in the lower portion of said vessel, said settling bottom being constituted by the upper surface of an upwardly inwardly tapering-off hood-like structure whose bottom edge is joined about its periphery to the wall of said vessel, said settling bottom being perforated and having gutter-like indentations which increase in cross-section and in depth and lead from the highest point of said settling bottom straight to the wall of said vessel where they end

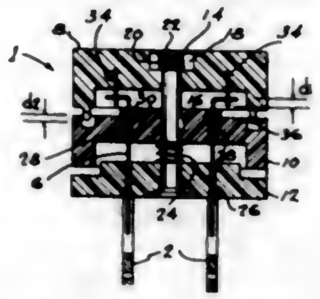
in outlet openings for the solid product and the washing liquid, said inlet for washing liquid debouching into the cavity between the lower side of said settling bottom and the bottom of said vessel.

3,390,403
ORIENTED PILE STRUCTURE
**Jan van Tilburg, Lyceumstraat 74,
Alkmaar, Netherlands**
Continuation-in-part of applications Ser. No. 333,535, Dec. 26, 1963, Ser. No. 401,580, Oct. 5, 1964, and Ser. No. 460,889, June 1, 1965. This application May 1, 1967, Ser. No. 638,691
Claims priority, application Netherlands, Dec. 27, 1962, 287,191; Feb. 20, 1963, 289,206; Aug. 19, 1963, 296,831; Sept. 9, 1963, 297,639; Oct. 7, 1963, 298,891; June 2, 1964, 6406208
15 Claims. (Cl. 161—67)



A novel flexible sheet material having a pile surface in which the individual pile structures of the pile surface are of an oriented thermoplastic polymer and a novel process for forming this pile-surfaced sheet material by introducing a thermoplastic polymer layer into a deforming device, and drawing the polymer layer from the deforming device by applying sufficient force to form said oriented pile structures.

3,390,404
SAFETY LOCKING DEVICE
**Morris D. Murchison, Ottawa, Ontario, Canada
(Box 239, Ingleside, Ontario, Canada)**
Filed Dec. 8, 1966, Ser. No. 600,097
Claims priority, application Canada, Dec. 21, 1965, 948,294
7 Claims. (Cl. 339—38)

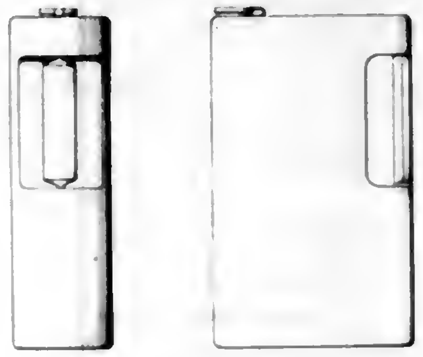


1. A safety locking device comprising:
(a) a first disc and a second disc,
(b) means mounting said discs in line with said first disc being rotatable with respect to said second disc and said first disc being movable toward said second disc,
(c) means biasing said discs towards each other,
(d) interlocking means preventing rotation of said first disc relative to said second disc until said discs are separated by a predetermined distance,
(e) and a locking arm extending through said second disc and rotatable between a locking position and an unlocking position, said locking arm including means located between said first and second discs and actuated by rotation of said first disc relative to said second disc to rotate said locking arm between said locking and unlocking positions.

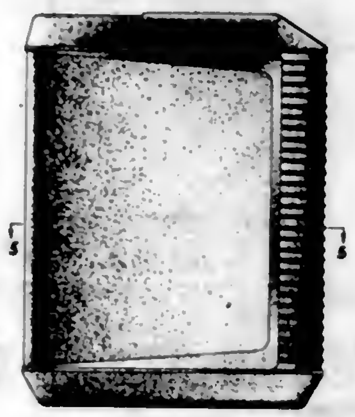
DESIGNS

JUNE 25, 1968

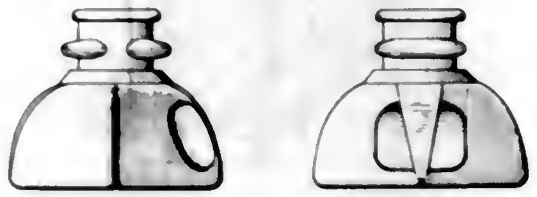
211,503
JUG OR THE LIKE
Victor F. Anderson, Wenonah, N.J., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware
Filed Sept. 21, 1967, Ser. No. 8,703
Term of patent 14 years
(Cl. D9—40)



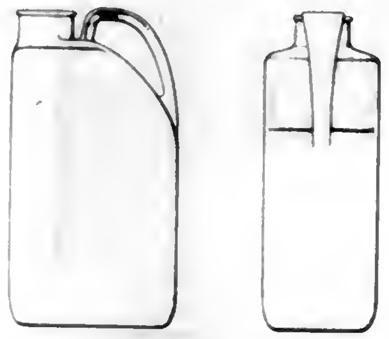
211,504
DISPENSING CONTAINER FOR POWDERED PRODUCTS OR THE LIKE
Harold J. Vanderhyde, North Merrick, N.Y., assignor to The Procter & Gamble Company, Cincinnati, Ohio, a corporation of Ohio
Filed June 12, 1967, Ser. No. 7,426
Term of patent 14 years
(Cl. D9—44)



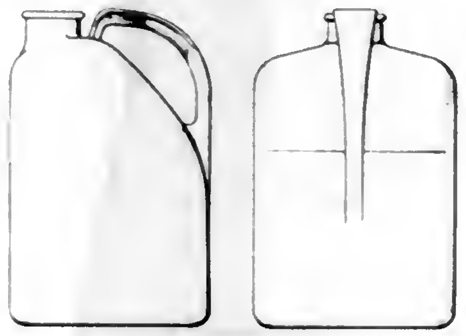
211,505
JUG
Victor F. Anderson, Wenonah, N.J., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware
Filed Sept. 28, 1967, Ser. No. 8,779
Term of patent 14 years
(Cl. D9—45)



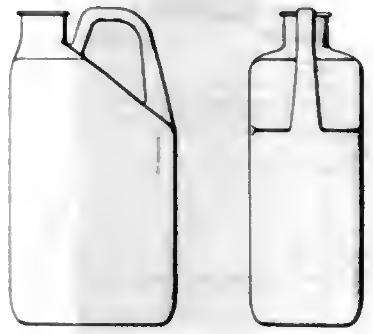
211,506
JUG
Victor F. Anderson, Wenonah, N.J., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware
Filed Sept. 21, 1967, Ser. No. 8,706
Term of patent 14 years
(Cl. D9—52)



211,507
JUG
Victor F. Anderson, Wenonah, N.J., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware
Filed Sept. 21, 1967, Ser. No. 8,707
Term of patent 14 years
(Cl. D9—52)



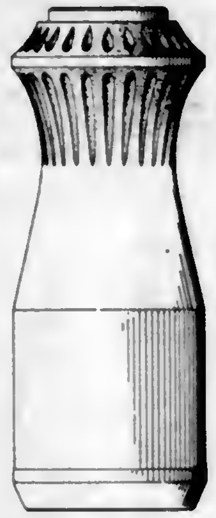
211,508
JUG
Victor F. Anderson, Wenonah, N.J., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware
Filed Sept. 28, 1967, Ser. No. 8,783
Term of patent 14 years
(Cl. D9—52)



211,509
BOTTLE OR SIMILAR ARTICLE

Harold J. Vanderhyde, North Merrick, N.Y., assignor to The Procter & Gamble Company, Cincinnati, Ohio, a corporation of Ohio

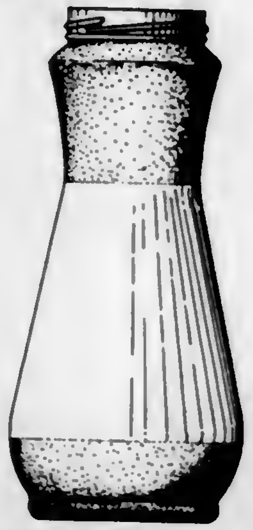
Filed May 26, 1967, Ser. No. 7,276
Term of patent 14 years
(Cl. D9—92)



211,510
BOTTLE

Daniel J. Kieffer, Muncie, Ind., assignor to Ball Brothers Company Incorporated, Muncie, Ind., a corporation of Indiana

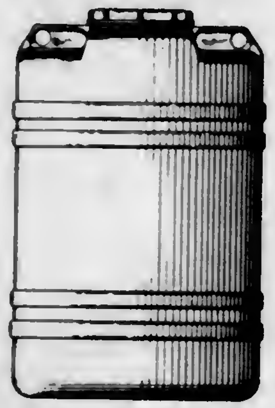
Filed Mar. 8, 1967, Ser. No. 6,132
Term of patent 14 years
(Cl. D9—100)



211,511
BARREL

Raymond J. Mangold, Corona, Calif., and Robert E. Marsh, Madison, Wis., assignors to Union Carbide Corporation, a corporation of New York

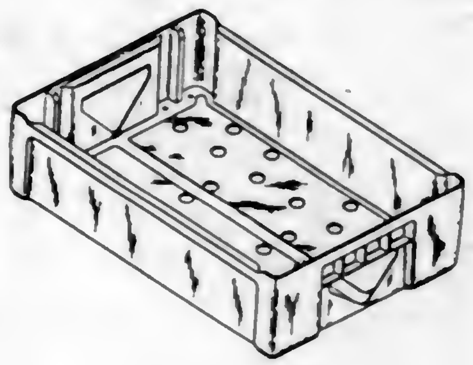
Filed Dec. 15, 1966, Ser. No. 5,056
Term of patent 14 years
(Cl. D9—170)



211,512
CASE FOR BEVERAGE CONTAINERS

James H. Gehl and Robert J. Stockman, Bernardsville, and Paul E. Ralph, Somerville, N.J., assignors to Union Carbide Corporation, a corporation of New York

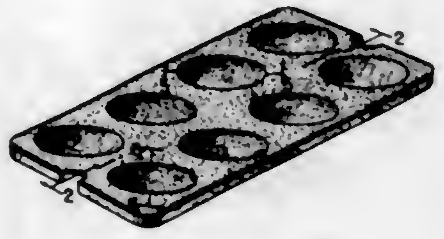
Filed Jan. 25, 1966, Ser. No. 765
Term of patent 14 years
(Cl. D9—177)



211,513
EGG TRAY

Thomas E. Brown, Slatersville, and James B. Swett, Barrington, R.I., assignors to Rexall Drug and Chemical Company, Los Angeles, Calif.

Filed Nov. 2, 1966, Ser. No. 4,511
Term of patent 14 years
(Cl. D9—190)

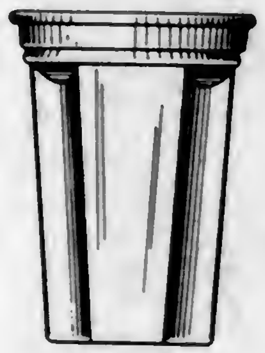


211,514
PACKAGING CONTAINER FOR FOOD OR THE LIKE

Stephen W. Amberg, St. James, N.Y., assignor to Lily-Tulip Cup Corporation, New York, N.Y., a corporation of Delaware

Continuation of design applications Ser. No. 5,124 and Ser. No. 5,125, Dec. 20, 1966. This application Sept. 13, 1967, Ser. No. 8,799

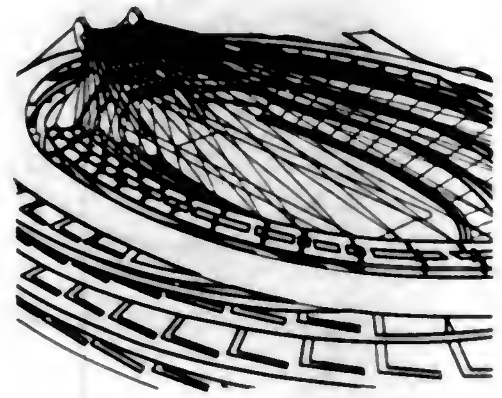
Term of patent 14 years
(Cl. D9—219)



211,515
AMPHITHEATER

Frederick I. Goldberg, 1625 Emmons Ave., Brooklyn, N.Y. 11235, and Robert Colwell Petrucelli, 228 New Hanover Ave., Meriden, Conn. 06450

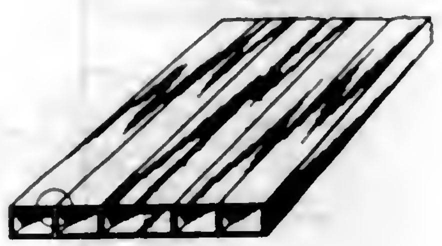
Filed Mar. 4, 1966, Ser. No. 1,410
Term of patent 14 years
(Cl. D13—1)



211,516
EXTRUDED CELLULAR PANEL FOR FURNITURE

Frantz Pottiez, Brussels, Belgium, assignor to Meurop, Société Anonyme, Rijmenam-Malines, Belgium, a corporation of Belgium

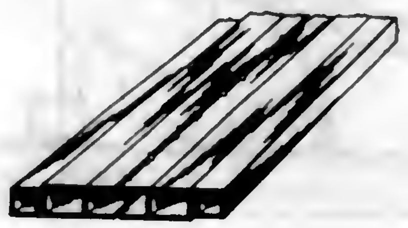
Filed July 18, 1966, Ser. No. 3,103
Term of patent 14 years
(Cl. D13—1)



211,517
EXTRUDED CELLULAR PANEL FOR FURNITURE

Frantz Pottiez, Brussels, Belgium, assignor to Meurop, Société Anonyme, Rijmenam-Malines, Belgium, a corporation of Belgium

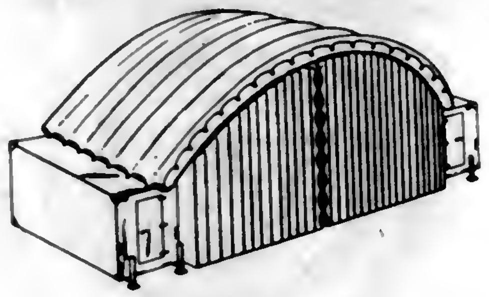
Filed July 18, 1966, Ser. No. 3,104
Term of patent 14 years
(Cl. D13—1)



211,518
COMBINATION INFLATABLE AND HARD SHELTER

Bernard Caminker, Tustin, La Vera A. Andrews, Fullerton, John H. Lavin, Los Alamitos, and Ronald F. Robberson, La Puente, Calif., assignors to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware

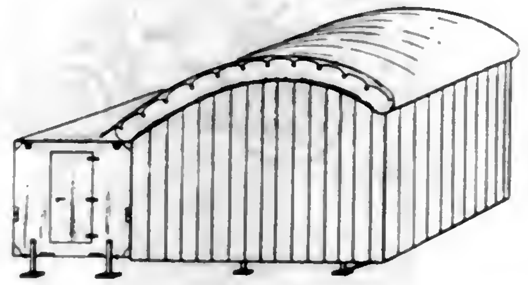
Filed Oct. 11, 1967, Ser. No. 8,951
Term of patent 14 years
(Cl. D13—1)



211,519
COMBINATION INFLATABLE AND HARD SHELTER

Bernard Caminker, Tustin, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware

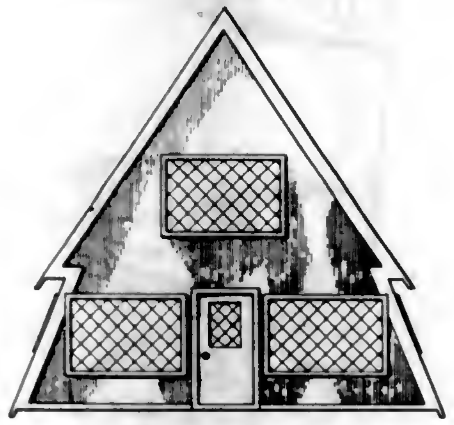
Filed Oct. 11, 1967, Ser. No. 8,952
Term of patent 14 years
(Cl. D13—1)



211,520
LODGE

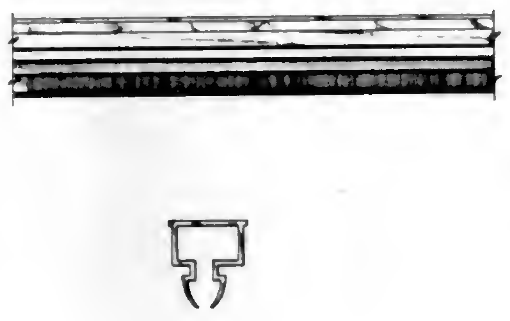
Stanley H. White 3rd, 6 Lunn, East Providence, R.I. 02915

Filed Dec. 21, 1967, Ser. No. 9,874
Term of patent 14 years
(Cl. D13—1)



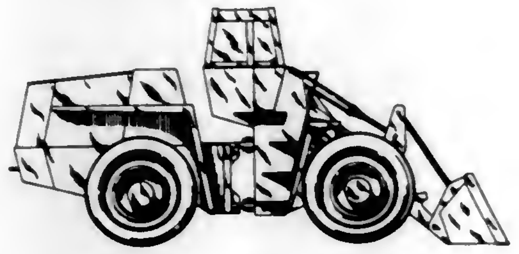
211,521
GLAZING BEAD

John Kenneth Rimington, 10562 109th St., Edmonton, Alberta, Canada
Filed July 14, 1967, Ser. No. 7,803
Term of patent 14 years
(Cl. D13—6)



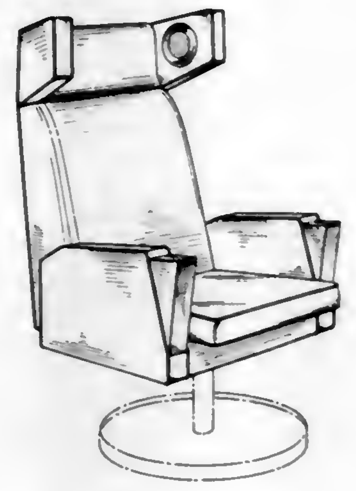
211,522
COMBINED LOADER AND CAB

Bruce L. Renquist, Racine, Wis., assignor to J. I. Case Company, Racine, Wis., a corporation of Wisconsin
Filed Aug. 11, 1967, Ser. No. 8,233
Term of patent 14 years
(Cl. D14—3)



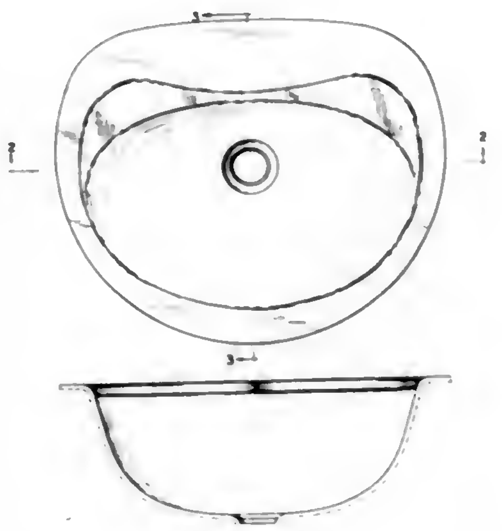
211,523
COMBINED LOUNGE CHAIR AND DUAL LOUDSPEAKER UNIT

Gordon L. Duern, Elmira, Ontario, Canada, assignor to Dominion Electrohome Industries Limited, Kitchener, Ontario, Canada
Filed Apr. 6, 1967, Ser. No. 6,552
Term of patent 14 years
(Cl. D15—11)



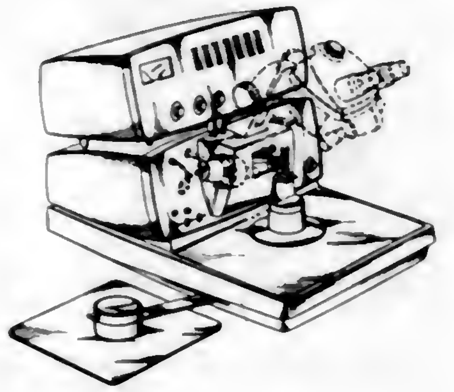
211,524
LAVATORY

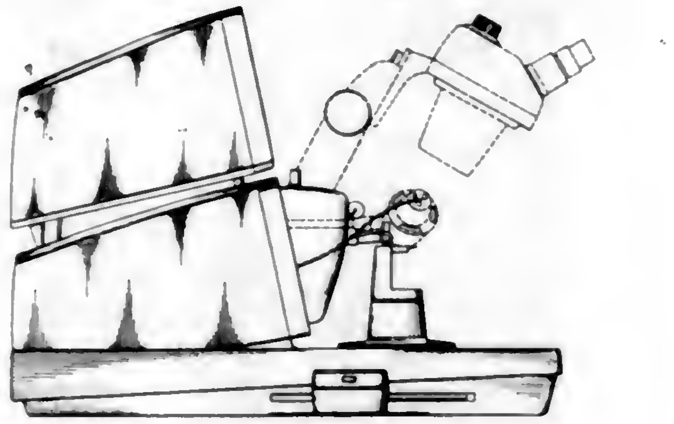
Robert G. Plantholt, Rochester, Mich., assignor to Borg-Warner Corporation, a corporation of Illinois
Filed Apr. 27, 1967, Ser. No. 6,861
Term of patent 14 years
(Cl. D23—58)



211,525
INDUSTRIAL ULTRASONIC WELDER

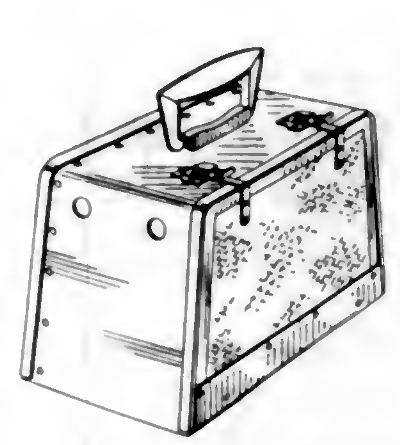
Channing W. Gilson, Los Angeles, and John E. Larrison, Costa Mesa, Calif., assignors to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed Jan. 16, 1967, Ser. No. 5,418
Term of patent 14 years
(Cl. D26—1)





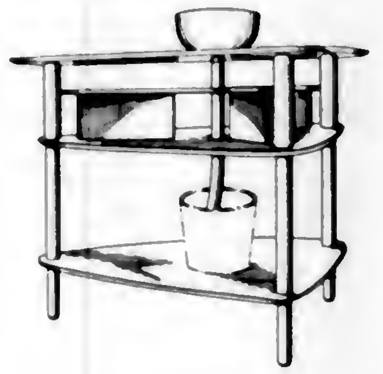
211,526
ANIMAL CARRIER

Gerald S. Ikelheimer, 1215 5th Ave., New York, N.Y. 10029
Filed Oct. 27, 1967, Ser. No. 9,189
Term of patent 14 years
(Cl. D30—1)



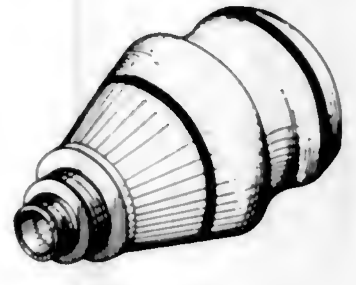
211,527
BAR TABLE

Jasper M. Rowland, 2977 Vesper Drive, Akron, Ohio 44313
Filed Mar. 27, 1967, Ser. No. 6,387
Term of patent 14 years
(Cl. D33—14)



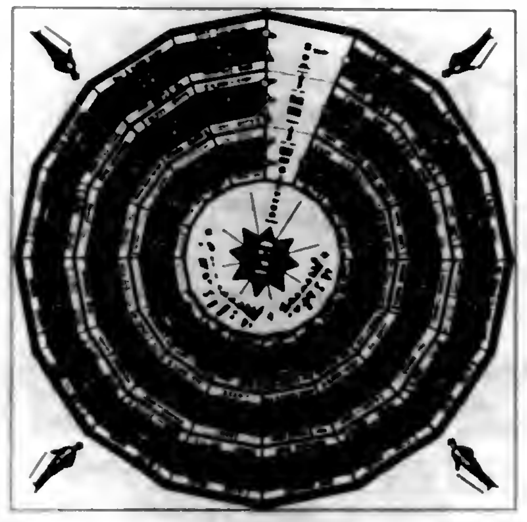
211,528
DISPENSER GLOBE

John R. Kane, Rahway, N.J., assignor to Moore Dispensers, Rahway, N.J., a corporation of New Jersey
Filed Mar. 22, 1967, Ser. No. 6,333
Term of patent 14 years
(Cl. D33—30)



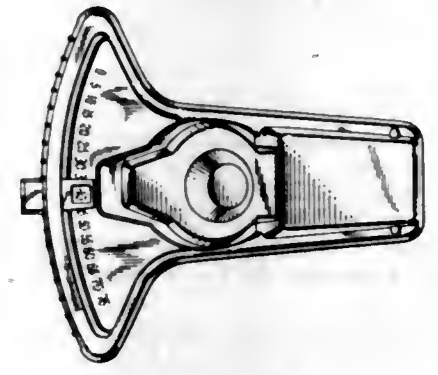
211,529
GAME BOARD

Jerome J. Donnellon, Butler County, Ohio (7958 Dimmick Road, Cincinnati, Ohio 45241)
Filed Feb. 6, 1967, Ser. No. 5,735
Term of patent 14 years
(Cl. D34—5)



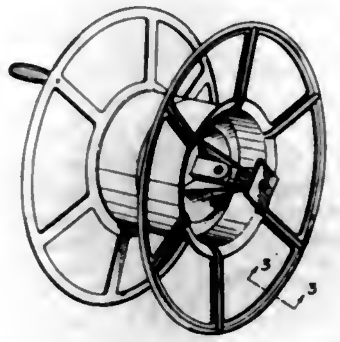
211,530
PROJECTILE LAUNCHER FOR A GAME

Frank Kohner, Washington Heights, and Albert Stubbmann, New Hyde Park, N.Y., assignors to Kohner Bros., Inc., East Paterson, N.J., a corporation of New York
Filed Apr. 6, 1967, Ser. No. 6,546
Term of patent 14 years
(Cl. D34—15)



211,531
HOSE REEL

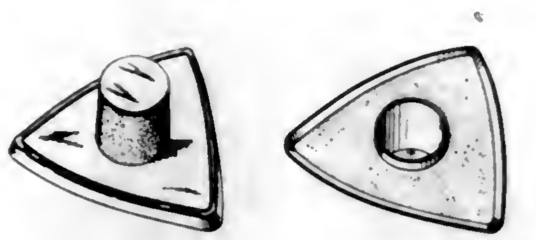
Francis E. Elmslie, 174 Union Blvd., Kitchener, Ontario, Canada
Filed July 20, 1967, Ser. No. 7,901
Term of patent 14 years
(Cl. D41—1)



211,532
SERVING TRAY OR THE LIKE

Harold P. Ashton, Providence, R.I., assignor to Rexall Drug and Chemical Company, Los Angeles, Calif., a corporation of Delaware

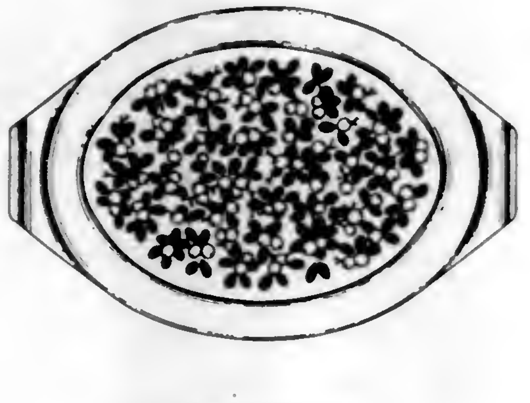
Filed Nov. 1, 1967, Ser. No. 9,246
Term of patent 14 years
(Cl. D44—10)



211,533
CASSEROLE COVER OR THE LIKE

Cynthia S. Gerow, Corning, N.Y., assignor to Corning Glass Works, Corning, N.Y., a corporation of New York

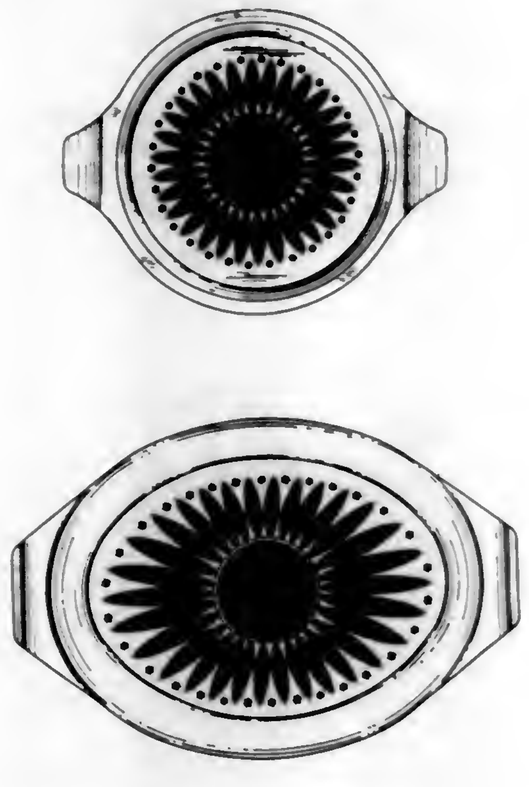
Filed July 10, 1967, Ser. No. 7,736
Term of patent 14 years
(Cl. D44—15)



211,534
CASSEROLE COVER

Cynthia S. Gerow, Corning, N.Y., assignor to Corning Glass Works, Corning, N.Y., a corporation of New York

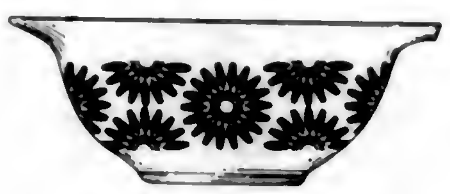
Filed July 10, 1967, Ser. No. 7,738
Term of patent 14 years
(Cl. D44—15)



211,535
MIXING BOWL OR THE LIKE

Cynthia S. Gerow, Corning, N.Y., assignor to Corning Glass Work, Corning, N.Y., a corporation of New York

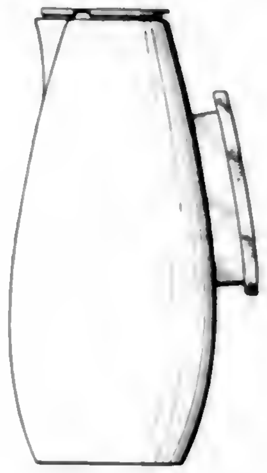
Filed July 10, 1967, Ser. No. 7,739
Term of patent 14 years
(Cl. D44—15)



211,536
PITCHER

Victor F. Anderson, Wenonah, N.J., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware

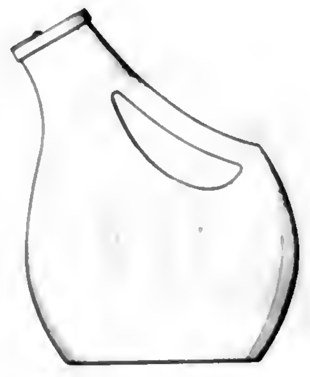
Filed Sept. 21, 1967, Ser. No. 8,704
Term of patent 14 years
(Cl. D44—21)



211,537
PITCHER

Victor F. Anderson, Wenonah, N.J., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware

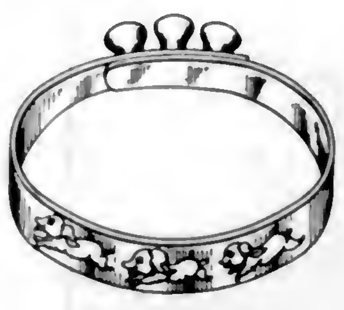
Filed Sept. 21, 1967, Ser. No. 8,705
Term of patent 14 years
(Cl. D44—21)



211,538
CHILD'S ANKLET

Anthony Liem, Pasadena, Calif.
(1800 Huntington Drive, San Marino, Calif. 91108)

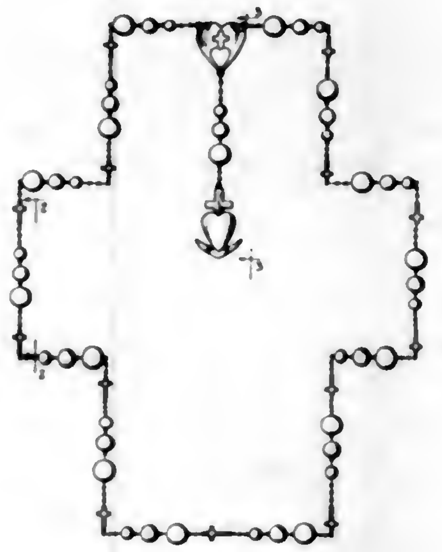
Filed Mar. 20, 1967, Ser. No. 6,287
Term of patent 14 years
(Cl. D45—4)



211,539
CHAPLET

Leonard Leo Lademann, Star Rte. 92334, Box 40, Pinon Hills P.O. 92372, Sharon Plains, Calif.

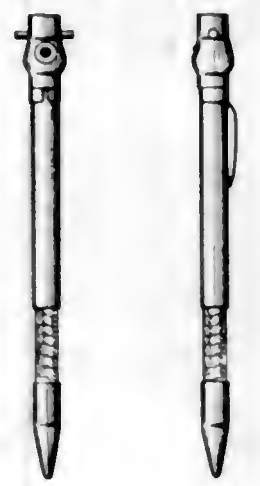
Filed Sept. 19, 1966, Ser. No. 4,007
Term of patent 14 years
(Cl. D45—16)



211,540
COMBINED TIRE GAUGE AND MARKER

Orlando A. Malanga, 4201 Montalvo St., San Diego, Calif. 92107

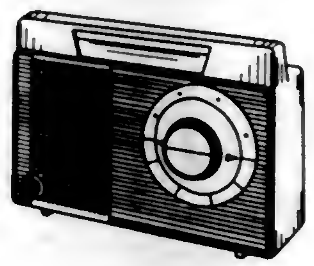
Filed July 31, 1967, Ser. No. 8,055
(Cl. D52—6)



211,541
PORTABLE RADIO

Leonardus Okko Sprik, Eindhoven, Netherlands, assignor to North American Philips Co., Inc.

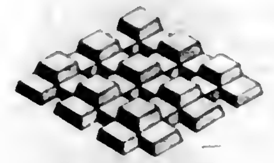
Filed Mar. 18, 1966, Ser. No. 1,534
Claims priority, application Switzerland Sept. 20, 1965
Term of patent 14 years
(Cl. D56—4)



211,542
PRE-CAST CONCRETE PAVING BLOCK

Matthew Robert Fenton, 6010 Centre, Pittsburgh, Pa. 15206

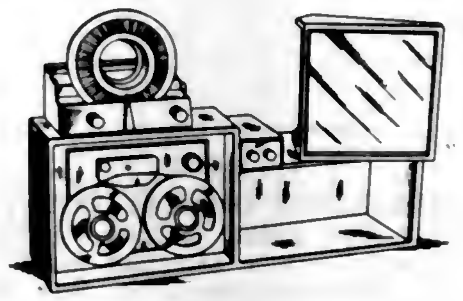
Filed June 23, 1967, Ser. No. 7,578
Term of patent 14 years
(Cl. D60—1)



211,543
COMBINED TRANSPARENCY PROJECTOR, REAR VISION PROJECTION SCREEN, MAGNETIC TAPE DECK AND STAND THEREFOR

James J. Bicknell and George W. Bicknell, Marshall, Mich., assignors, by mesne assignments, to Audio Visual Instruction Devices, Inc., Marshall, Mich., a corporation of Michigan

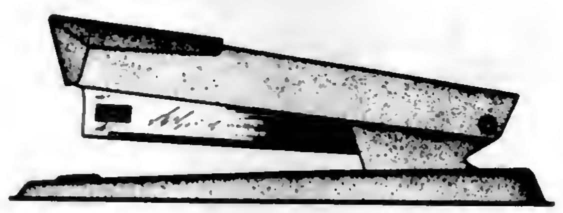
Filed Jan. 27, 1967, Ser. No. 5,593
Term of patent 14 years
(Cl. D61—1)



211,544
STAPLER

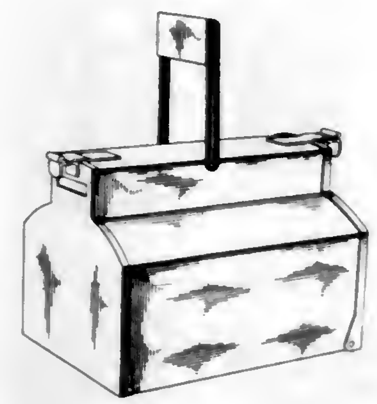
William Leon Gaya, Summit, N.J., assignor to The Bates Manufacturing Company, Orange, N.J., a corporation of New Jersey

Filed June 27, 1967, Ser. No. 7,613
Term of patent 14 years
(Cl. D74—1)



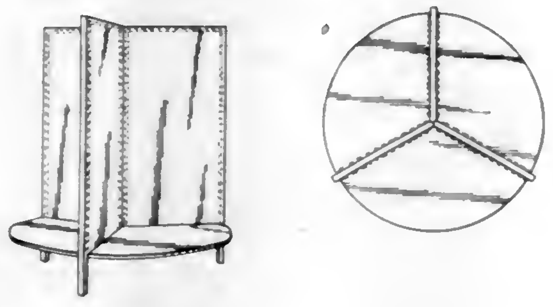
211,545
DOUBLE DOOR MAILBOX

Fred F. Strome, 6604 E. Floral,
Selma, Calif. 93662
Filed Mar. 16, 1967, Ser. No. 6,264
Term of patent 3½ years
(Cl. D74—9)



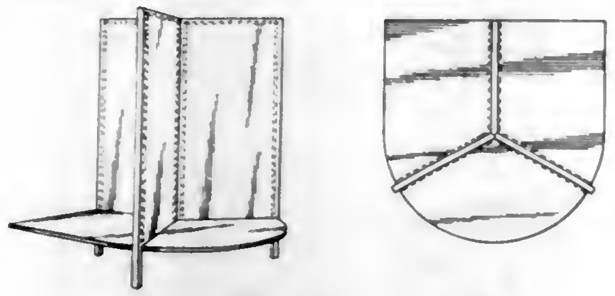
211,546
MERCHANDISE DISPLAY STAND

Elmer L. Reibold, Park Ridge, William W. Timpe, Prospect Heights, and Spartaco Trivellini, Roselle, Ill., assignors to E. L. Reibold Agency, Inc., Rosemont, Ill., a corporation of Illinois
Filed Apr. 13 1967, Ser. No. 6,667
Term of patent 14 years
(Cl. D80—9)



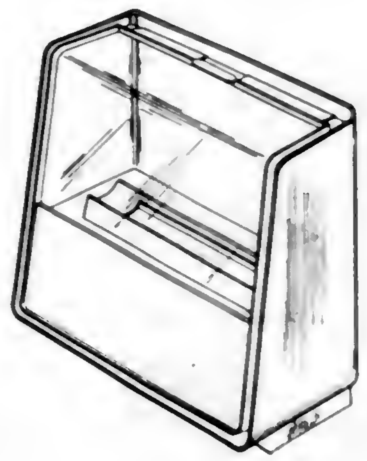
211,547
MERCHANDISE DISPLAY STAND

Elmer L. Reibold, Park Ridge, William W. Timpe, Prospect Heights, and Spartaco Trivellini, Roselle, Ill., assignors to E. L. Reibold Agency, Inc., Rosemont, Ill., a corporation of Illinois
Filed Apr. 13, 1967, Ser. No. 6,668
Term of patent 14 years
(Cl. D80—9)



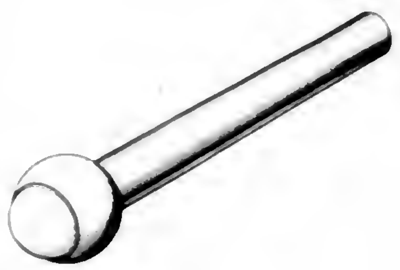
211,548
DISPLAY CASE

Thomas H. Hayes, Roanoke, Va., assignor to Creative Packaging Incorporated
Filed Mar. 6, 1967, Ser. No. 6,067
Term of patent 14 years
(Cl. D80—11)



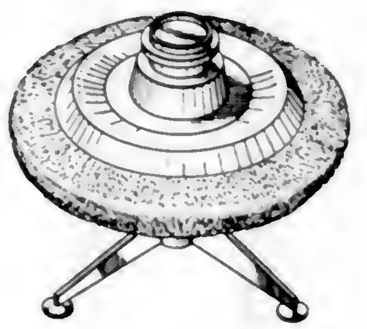
211,549
ELECTROTHERAPY FACIAL APPLICATOR

Mary R. Christopher, 7005 DeVille Drive,
Fort Worth, Tex. 76118
Filed June 19, 1967, Ser. No. 7,506
Term of patent 14 years
(Cl. D83—1)



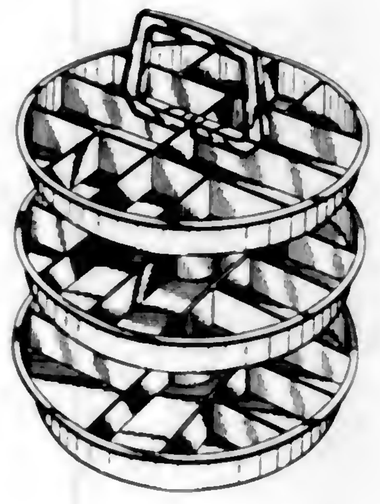
211,550
SHOE BUFFING MACHINE

John K. Miles and John R. Davis, Columbus, Ind., assignors to Arvin Industries, Inc., Columbus, Ind., a corporation of Indiana
Filed Sept. 21, 1967, Ser. No. 8,680
Term of patent 14 years
(Cl. D86—11)



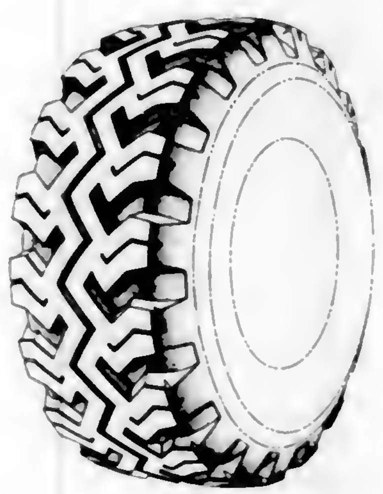
211,551
TIERED PARTS BIN

William D. Taylor, Wooster, Ohio, assignor to Rubbermaid Incorporated, Wooster, Ohio, a corporation of Ohio
Filed Mar. 27, 1967, Ser. No. 6,386
Term of patent 14 years
(Cl. D87—1)



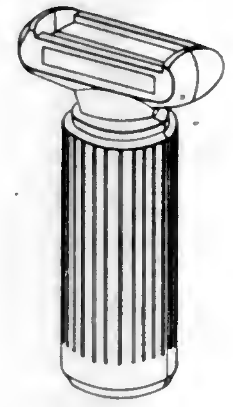
211,552
TIRE

David V. Cvengros, Akron, Ohio, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Filed July 27, 1967, Ser. No. 8,022
Term of patent 14 years
(Cl. D90—20)



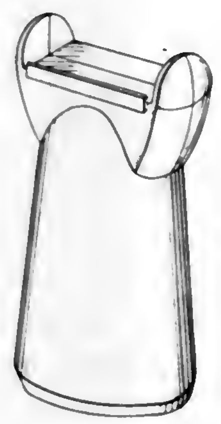
211,553
DRY SHAVER CASING

Adam Koroncai, Klagenfurt, Austria, assignor to Carinthia Elektrogerate Gesellschaft m.b.H., Klagenfurt, Carinthia, Austria
Original design application Mar. 9, 1966, Ser. No. 1,375, now Patent No. 207,944, dated June 13, 1967. Divided and this application May 4, 1967, Ser. No. 9,022
Term of patent 14 years
(Cl. D95—3)



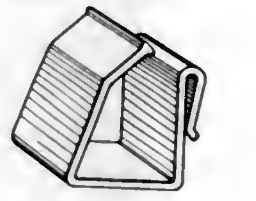
211,554
DRY SHAVER CASING

Adam Koroncai, Klagenfurt, Austria, assignor to Carinthia Elektrogerate Gesellschaft m.b.H., Klagenfurt, Carinthia, Austria
Original design application Mar. 9, 1966, Ser. No. 1,375, now Patent No. 207,944, dated June 13, 1967. Divided and this application May 4, 1967, Ser. No. 9,023
Claims priority, application Austria Sept. 9, 1965
Term of patent 14 years
(Cl. D95—3)



211,555
CLIP FOR HOLDING CARDS AND THE LIKE

William Haber, 5812 Donna,
Tarzana, Calif. 91356
Filed July 3, 1967, Ser. No. 7,677
Term of patent 14 years
(Cl. D96—3)



LIST OF REISSUE PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 25TH DAY OF JUNE, 1968

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

- ADX Corp.: *See*—
  - Alsobrook, James S., Jr. Re. 26,411.
- Alsobrook, James S., Jr., to ADX Corp. Tilting accessory for standard bed and tilting Hollywood bed frame. Re. 26,411, 6–25–68, Cl. 5—62.
- American Radiator & Standard Sanitary Corp.: *See*—
  - Chanaud, Robert C. Re. 26,410.
- Ampex Corp.: *See*—
  - Dolby, Ray M., Kabell, Murphy and Walsh. Re. 26,412.
- Chanaud, Robert C., to American Radiator & Standard Sanitary Corp. Precess flow meter. Re. 26,410, 6–25–68, Cl. 73—194.
- Cullen-Friestedt Co.: *See*—
  - Kaplan, Louis G. Re. 26,417.
- Dolby, Ray M., L. J. Kabell, H. E. Murphy, and H. L. Walsh, by Ampex Corp. Video recording system and method. Re. 26,412, 6–25–68, Cl. 178—5.4.
- Hamaker, John D. Anti-friction bearings. Re. 26,414, 6–25–68, Cl. 308—231.
- Kabell, Louis J.: *See*—
  - Dolby, Ray M., Kabell, Murphy, and Walsh. Re. 26,412.
- Kaplan, Louis G., to Cullen-Friestedt Co. Shock absorbing linkage mechanism. Re. 26,417, 6–25–68, Cl. 267—71.
- Keyes, Raymond S., by Kirkhof Mfg. Corp. Forming method. Re. 26,413, 6–25–68, Cl. 264—89.
- Kirkhof Mfg. Corp.: *See*—
  - Keyes, Raymond S. Re. 26,413.
- Ludwig Drum Co.: *See*—
  - Ludwig, William F. Re. 26,415.
- Ludwig, William F., to Ludwig Drum Co. Drumhead construction. Re. 26,415, 6–25–68, Cl. 84—411.
- Murphy, Howard E.: *See*—
  - Dolby, Ray M., Kabell, Murphy, and Walsh. Re. 26,412.
- Silverman, Daniel. Examining-sorting systems. Re. 26,416, 6–25–68, Cl. 209—111.7.
- Walsh, Harold L.: *See*—
  - Dolby, Ray M., Kabell, Murphy, and Walsh. Re. 26.412.

LIST OF DESIGN PATENTEES

- Amberg, Stephen W., to Lily-Tulip Cup Corp. Packaging container for food or the like. 211,514, 6–25–68 Cl. D9—219.
- Anderson, Victor F., to Shell Oil Co. Jug or the like. 211,503, 6–25–68, Cl. D9—40.
- Anderson, Victor F., to Shell Oil Co. Jug. 211,505, 6–25–68, Cl. D9—45.
- Anderson Victor F., to Shell Oil Co. Jug. 211,506, 6–25–68, D9—52.
- Anderson, Victor F., to Shell Oil Co. Jug. 211,507, 6–25–68, Cl. D9—52.
- Anderson, Victor F., to Shell Oil Co. Jug. 211,508, 6–25–68, Cl. D9—52.
- Anderson, Victor F., to Shell Oil Co. Pitcher. 211,536, 6–25–68, Cl. D44—21.
- Anderson, Victor F., to Shell Oil Co. Pitcher. 211,537, 6–25–68, Cl. D44—21.
- Andrews, La Vern A.: *See*—
  - Caminker, Bernard, Andrews, Lavin, and Robberson. 211 518.
- Arvin Industries, Inc.: *See*—
  - Miles, John K., and Davis. 211,550.
- Ashton, Harold P., to Rexall Drug and Chemical Co. Serving tray or the like. 211,532, 6–25–68, Cl. D44—10.
- Audio Visual Instruction Devices, Inc.: *See*—
  - Bicknell, James J. and G. W. 211,543.
- Ball Brothers Co. Inc.: *See*—
  - Kieffer Daniel J. 211,510.
- Bates Mfg. Co.: *See*—
  - Gaya, William L. 211,544.
- Bicknell, George W.: *See*—
  - Bicknell, James J. and G. W. 211,543.
- Bicknell, James J. and G. W., to Audio Visual Instruction Devices, Inc. Combined transparency projector, rear vision projection screen, magnetic tape deck and stand therefor. 211,543, 6–25–68, Cl. D61—1.
- Borg-Warner Corp.: *See*—
  - Plantholt, Robert G. 211,524.
- Brown, Thomas E., and J. B. Swett, to Rexall Drug and Chemical Co. Egg tray. 211,513, 6–25–68, Cl. D9—190.
- Caminker, Bernard, L. A. Andrews J. H. Lavin, and R. F. Robberson, to Hughes Aircraft Co. Combination inflatable and hard shelter. 211,518, 6–25–68, Cl. D13—1.
- Caminker, Bernard, to Hughes Aircraft Co. Combination inflatable and hard shelter. 211,519, 6–25–68, Cl. D13—1.
- Carinthia Elektrogerate Gesellschaft m.b.H.: *See*—
  - Koroncai, Adam. 211 553.
  - Koroncai, Adam. 211,554.
- Case, J. I., Co.: *See*—
  - Renquist, Bruce L. 211,522.
- Christopher, Mary R. Electrotherapy facial applicator. 211,549, 6–25–68, Cl. D83—1.
- Corning Glass Works: *See*—
  - Gerow Cynthia S. 211,533.
  - Gerow Cynthia S. 211,534.
  - Gerow, Cynthia S. 211,535.
- Creative Packaging Inc.: *See*—
  - Hayes, Thomas N. 211,548.
- Cvengros, David V., to The Goodyear Tire & Rubber Co. Tire. 211,552, 6–25–68, Cl. D90—20.
- Davis John R.: *See*—
  - Miles, John K., and Davis. 211,550.
- Dominion Electrohome Industries Ltd.: *See*—
  - Duern, Gordon L. 211,523.
- Donnellon, Jerome J. Game board. 211,529, 6–25–68, Cl. D34—5.
- Duern, Gordon L., to Dominion Electrohome Industries Ltd. Combined lounge chair and dual loudspeaker unit. 211,523, 6–25–68, Cl. L15—11.
- Elmslie, Francis E. Hose reel. 211,531, 6–25–68, Cl. D41—1.
- Fenton, Matthew R. Pre-cast concrete paving block. 211,542, 6–25–68, Cl. D60—1.
- Gaya, William L., to Bates Mfg. Co. Stapler. 211,544, 6–25–68. Cl. D74—1.
- Gehl, James H., R. J. Stockman, and P. E. Ralph, to Union Carbide Corp. Case for beverage containers. 211,512, 6–25–68, Cl. D9—177.
- Gerow, Cynthia S., to Corning Glass Works. Casserole cover or the like. 211,533, 6–25–68, Cl. D44—15.
- Gerow, Cynthia S., to Corning Glass Works. Casserole cover. 211,534, 6–25–68, Cl. D44—15.
- Gerow, Cynthia S., to Corning Glass Works. Mixing bowl or the like. 211,535. 6–25–68, Cl. D44—15.
- Gilson, Channing W., and J. E. Larrison, to Hughes Aircraft Co. Industrial ultrasonic welder. 211,525, 6–25–68, Cl. D26—1.
- Goldberg, Frederick I., and R. C. Petrucelli. Amphitheater. 211,515, 6–25–68, Cl. D13—1.
- Goodyear Tire & Rubber Co., The: *See*—
  - Cvengros, David V. 211,552.
- Haber, William. Clip for holding cards and the like. 211,555, 6–25–68, Cl. D96—3.
- Hayes, Thomas H. to Creative Packaging Inc. Display case. 211,548, 6–25–68, Cl. D80—11.
- Hughes Aircraft Co.: *See*—
  - Caminker, Bernard, Andrews, Lavin, and Robberson. 211,518.
  - Caminker, Bernard. 211,519.
  - Gilson, Channing W., and Larrison. 211 525.
- Ikelheimer, Gerald S. Animal carrier. 211,526, 6–25–68, Cl. D30—1.
- Kane, John R., to Moore Dispensers. Dispenser globe. 211,528, 6–25–68, Cl. D33—30.
- Kieffer, Daniel J., to Ball Brothers Co. Inc. Bottle. 211,510, 6–25–68, Cl. D9—100.
- Kohner Bros., Inc.: *See*—
  - Kohner, Frank, and Stubbmann. 211,530.
- Kohner, Frank, and A. Stubbmann, to Kohner Bros., Inc. Projectile launcher for a game. 211,530, 6–25–68. Cl. D34—15.
- Koroncai, Adam, to Carinthia Elektrogerate Gesellschaft m.b.H. Dry shaver casing. 211,553, 6–25–68, Cl. D95—3.
- Koroncai, Adam, to Carinthia Elektrogerate Gesellschaft m.b.H. Dry shaver casing. 211,554, 6–25–68, Cl. D95—3.
- Lademann, Leonard L. Chaplet. 211,539, 6–25–68, Cl. D45—16.
- Larrison, John E.: *See*—
  - Gilson, Channing W., and Larrison. 211 525.
- Lavin, John H.: *See*—
  - Caminker, Bernard, Andrews, Lavin, and Robberson. 211,518.
- Liem, Anthony. Child's anklet. 211,538, 6–25–68, Cl. D45—4.
- Lily-Tulip Cup Corp.: *See*—
  - Amberg, Stephen W. 211,514.
- Malanga Orlando A. Combined tire gauge and marker. 211,540, 6–25–68, Cl. D52—6.
- Mangold, Raymond J., and R. E. Marsh, to Union Carbide Corp. Barrel. 211,511, 6–25–68, Cl. D9—170.
- Marsh, Robert E.: *See*—
  - Mangold, Raymond J., and Marsh. 211,511.

- Meurop, Societe Anonyme: *See*—
  - Pottiez, Frantz. 211 516.
  - Pottiez, Frantz. 211,517.
- Miles, John K., and J. R. Davis, to Arvin Industries, Inc. Shoe buffing machine. 211,550, 6–25–68, Cl. D86—11.
- Moore Dispensers: *See*—
  - Kane, John R. 211,528.
- North American Philips Co., Inc.: *See*—
  - Sprik, Leonardus O. 211,541.
- Petrucelli, Robert C.: *See*—
  - Goldberg, Frederick I., and Petrucelli. 211,515.
- Plantholt, Robert G., to Borg-Warner Corp. Lavatory. 211,524, 6–25–68, Cl. D23—58.
- Pottiez, Frantz, to Meurop, Societe Anonyme. Extruded cellular panel for furniture. 211,516 6–25–68, Cl. D13—1.
- Pottiez, Frantz, to Meurop, Societe Anonyme. Extruded cellular panel for furniture. 211,517, 6–25–68, Cl. D13—1.
- Procter & Gamble Co., The: *See*—
  - Vanderhyde, Harold J. 211,504.
  - Vanderhyde, Harold J. 211,509.
- Ralph Paul E.: *See*—
  - Gehl, James H., Stockman and Ralph. 211,512.
- Reibold, E. L., Agency, Inc.: *See*—
  - Reibold, Elmer L., Timpe, and Trivellini. 211,546.
  - Reibold, Elmer L., Timpe, and Trivellini. 211,547.
- Reibold, Elmer L., W. W. Timpe, and S. Trivellini, to E. L. Reibold Agency, Inc. Merchandise display stand. 211,546, 6–25–68, Cl. D80—9.
- Reibold, Elmer L., W. W. Timpe, and S. Trivellini, to E. L. Reibold Agency, Inc. Merchandise display stand. 211,547, 6–25–68, Cl. D80—9.
- Renquist, Bruce L., to J. I. Case Co. Combined loader and cab. 211,522, 6–25–68, Cl. D14—3.
- Rexall Drug and Chemical Co.: *See*—
  - Brown, Thomas E., and Swett. 211,513.
  - Ashton, Harold P. 211,532.
- Rimington, John K. Glazing bead. 211,521, 6–25–68, Cl. D13—6.
- Robberson, Ronald F.: *See*—
  - Caminker, Bernard, Andrews, Lavin, and Robberson. 211,518.
- Rowland, Jasper M. Bar table. 211,527, 6–25–68, Cl. D33—14.
- Rubbermaid Inc.: *See*—
  - Taylor, William D. 211,551.
- Shell Oil Co.: *See*—
  - Anderson, Victor F. 211,503.
  - Anderson, Victor F. 211,505.
  - Anderson, Victor F. 211,506.
  - Anderson, Victor F. 211,507.
  - Anderson, Victor F. 211,508.
  - Anderson, Victor F. 211,536.
  - Anderson, Victor F. 211,537.
- Sprik, Leonardus O., to North American Philips Co., Inc. Portable radio. 211,541, 6–25–68, Cl. D56—4.
- Stockman, Robert J.: *See*—
  - Gehl, James H., Stockman, and Ralph. 211,512.
- Strome, Fred F. Double door mailbox. 211,545, 6–25–68, Cl. D74—9.
- Stubbmann, Albert: *See*—
  - Kohner, Frank, and Stubbmann. 211,530.
- Swett, James B.: *See*—
  - Brown, Thomas E., and Swett. 211,513.
- Taylor, William D., to Rubbermaid Inc. Tiered parts bin. 211,551, 6–25–68, Cl. D87—1.
- Timpe, William W.: *See*—
  - Reibold, Elmer L., Timpe, and Trivellini. 211,546.
  - Reibold, Elmer L., Timpe, and Trivellini. 211,547.
- Trivellini, Spartaco: *See*—
  - Reibold, Elmer L., Timpe, and Trivellini. 211,546.
  - Reibold, Elmer L., Timpe, and Trivellini. 211,547.
- Union Carbide Corp.: *See*—
  - Gehl, James H., Stockman, and Ralph. 211,512.
  - Mangold, Raymond J., and Marsh. 211,511.
- Vanderhyde, Harold J., to The Procter & Gamble Co. Dispensing container for powdered products or the like. 211,504, 6–25–68, Cl. D9—44.
- Vanderhyde, Harold J., to The Procter & Gamble Co. Bottle or similar article. 211,509, 6–25–68, Cl. D9—92.
- White, Stanley H., 3d. Lodge. 211,520, 6–25–68, Cl. D13—1.

LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 25TH DAY OF JUNE, 1968

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

- AB Akerlund & Rausing: *See*—
  - Bjorkengren, Carl-Axel. 3,389,783.
- ACF Industries, Inc.: *See*—
  - Pulcrano, Frank C., and Buckthorpe. 3,389,664.
- AGA Aktiebolag: *See*—
  - Granqvist, Carl-Erik. 3,390,348.
- AMP, Inc.: *See*—
  - Forney, Edgar W., Jr. 3,390,374.
  - Shlesinger, Bernard E., Jr. 3,390,227.
- ASF Gleitverschulss G.m.b.H.: *See*—
  - Siegel, Karl-Heinz. 3,389,733.
- Abbey Electronics Corp.: *See*—
  - Bosworth, Seymour, Zauderer, and Douglas. 3,390,327.
- Abbott Laboratories: *See*—
  - Harnden, Michael R. 3,390,152.
- Abere, Joseph F., and W. R. Brochman, to Minnesota Mining and Mfg. Co. Easy-open container and sealing tape. 3,389,827, 6–25–68, Cl. 220—53.
- Abramyan, Evgeny A., and V. A. Gaponov. Transformer controlled charged-particle accelerator. 3,390,303, 6–25–68, Cl. 315—57.
- Achermann, Franz: *See*—
  - Achermann, Werner and F. 3,389,782.
- Achermann, Werner and F. Lighting utensil, in particular for smokers. 3,389,782, 6–25–68, Cl. 206—29.
- Acme Markets, Inc.: *See*—
  - Sullivan, Joseph G., Soffa, and Eagleson. 3,389,744.
- Aerojet-General Corp.: *See*—
  - Frankel, Milton B., and Klager. 3,390,183.
  - Grakauskas, Vytautas. 3,389,976.
  - Grakauskas, Vytautas. 3,390,181.
  - Olberg, Ralph C., and Stammler. 3,390,027.
- Agency of Industrial Science and Technology: *See*—
  - Tanaka, Keiichi. 3,390,328.
- Air Preheater Co., Inc., The: *See*—
  - Speca, Elio J., and Slingerland. 3,389,451.
  - Wahlbeck, Ira H. 3,389,745.
- Air Reduction Co., Inc.: *See*—
  - Anderson, Emmett R. 3,390,222.
  - Hanks, Charles W. 3,390,249.
- Ajinomoto Co., Inc.: *See*—
  - Dazai, Miyoji, and Konishi. 3,390,175.
- Akai Electric Co. Ltd.: *See*—
  - Atsumi, Katsuya. 3,389,869.
- Akeby, Rolf R.: *See*—
  - Sjogren, Dick, and Akeby. 3,389,772.
- Aktiebolaget Svenska Flaktfabriken: *See*—
  - Dock, Nils. 3,390,400.
  - Larkfeldt, Birger, and Rosenberg. 3,389,648.
  - Larkfeldt, Birger, and Svensson. 3,389,649.
- Aktiengesellschaft Brown, Boveri & Cie: *See*—
  - Frowein, Egbertus A. 3,390,241.
- Aladdin Industries Ltd.: *See*—
  - Hebard, Hugh C., and Dearing. 3,389,715.
- Albert, Alfred A., to Hercules Inc. Gelled aqueous slurry explosive composition containing an inorganic nitrite. 3,390,031, 6–25–68, Cl. 149—45.
- Albert, Alfred A., and R. W. Lawrence, to Hercules Inc. Gelled aqueous slurry explosive composition containing as a gas generating agent a carbonate or bicarbonate with a nitrite. 3,390,032, 6–25–68, Cl. 149—45.
- Albright, Charles B., to Sperry Rand Corp. Sheet item alignment device for sheet handling system. 3,389,904, 6–25–68, Cl. 271—52.
- Alden, Harry E., to Johnson & Johnson. Machines for making swabs with cotton tips. 3,389,436, 6–25–68, Cl. 19—145.3.
- Alexander, Norman J., to Liberty Fabrics of New York, Inc. Textile fabric. 3,389,582, 6–25–68, Cl. 66—192.
- Alexander, Stephen H., S. R. Montgomery, and L. J. Spillane, to Monsanto Co. Hydrocarbon oil-urethane compositions. 3,390,119, 6–25–68, Cl. 260—33.6.
- Allan, Michael B., and K. Feodor, to Dominion Engineering Works, Ltd. Floating seal for adjustable blade. 3,389,920, 6–25–68, Cl. 277—174.
- Allen, Edward M., C. G. Dye, and J. A. Smrdel, to Pittsburgh Plate Glass Co. Process for packaging siliceous pigments. 3,389,529, 6–25–68, Cl. 53—24.
- Allen, Merton, to General Electric Co. Process for recovering intra-cellular proteins. 3,389,997, 6–25–68, Cl. 99—14.
- Allied Chemical Corp.: *See*—
  - Anello, Louis G., and Cunningham. 3,390,191.
  - Baltakmens, Gotlibs, and Tourish. 3,390,064.
  - Elbeck, Richard E. 3,390,091.
  - Kaplan, Melvin, and Arcesi. 3,390,164.
  - Montgomery, Everett G. 3,389,429.
  - Pike, Herbert J. 3,390,215.
  - Santimauro, John F., and Gerson. 3,390,155.
  - Schreffler, Robert Z. 3,389,445.
  - Sweeney, Richard F., and Nychka. 3,390,176.
- Alliger, Howard. Spray-type soot eliminator. 3,389,971, 6–25–68, Cl. 23—277.
- Allison, Ronald J. Harrow for use with farm planting equipment. 3,389,754, 6–25–68, Cl. 172—389.
- American Cyanamid Co.: *See*—
  - Chomitz, Nicholas, and Sanborn. 3,390,100.
  - Curtis, Gerard W., and Wozniak. 3,390,190.
  - Di Placido, John C. 3,390,004.
  - Lovell, James B., and Baer. 3,390,209.
  - Miller, Mary L., and Fornasar. 3,390,067.
- American Enka Corp.: *See*—
  - Heijnis, James W. I. 3,389,506.
- Amerline Corp.: *See*—
  - Weyrich, Arthur G., and Linning. 3,390,363.
- Amsted Industries Inc.: *See*—
  - Farekas, Stephen E. 3,389,616.
- Anaconda Wire and Cable Co.: *See*—
  - Ostrander, George W., and Pendleton. 3,389,458.
- Anderson Electric Corp.: *See*—
  - Cline, Leslie W. 3,389,478.
- Anderson, Emmett R., to Air Reduction Co., Inc. Electron beam apparatus with variable orientation of transverse deflecting field. 3,390,222, 6–25–68, Cl. 13—31.
- Anderson, Gerald R., to FMC Corp. Protecting sorting device optics. 3,389,792, 6–25–68, Cl. 209—111.6.
- Anderson, Gerald R., S. H. Creed, and J. T. Parker, to FMC Corp. Apple orienting and coring machine. 3,389,730, 6–25–68, Cl. 146—52.
- Anderson, John P.: *See*—
  - Van Ausdal, Robert K., Healy, and Anderson. 3,389,719.
- Anderson, Richard W.: *See*—
  - Ryals, Auber G., and Anderson. 3,390,356.
- Anderson, Tage O.: *See*—
  - Dryden, Hugh L. 3,390,378.
- Andreani, Eugenio. Ribbed drafting aprons with recessed supporting rolls. 3,389,437, 6–25–68, Cl. 19—252.
- Andrews, Phillip R.: *See*—
  - Theobald, Elwin, and Andrews. 3,389,447.
- Anello, Louis G., and W. J. Cunningham, to Allied Chemical Corp. Hydrogenation of methyl trifluoroacetate to trifluoroethanol. 3,390,191, 6–25–68, Cl. 260—633.
- Angier, Angier R., to S. Marshall Youngman. Illuminated sign. 3,390,259, 6–25–68, Cl. 240—11.2.
- Antunez, Armand E., Jr. Float valve. 3,389,887, 6–25–68, Cl. 251—367.
- Apblett, William R., J. Martin, and E. J. Philipps, to Foster Wheeler Corp. Application of a pulsating current to tube to tube sheet welding. 3,390,250, 6–25–68, Cl. 219—125.
- Arcesi, Joseph A.: *See*—
  - Kaplan, Melvin, and Arcesi. 3,390,164.
- Archer, Alan: *See*—
  - Wainwright, Ralph, and Archer. 3,389,661.
- Archer. Andrew M. Adaptor for converting electrical two-receptacle sockets into three-receptacle sockets. 3,390,368, 6–25–68, Cl. 339—14.
- Arcuri, Thomas J. Portable, disposable mixing container system. 3,389,893, 6–25–68, Cl. 259—146.
- Argabright, Perry A.: *See*—
  - Leary, Ralph J. Stogryn, and Argabright. 3,390,136.
- Argus Chemical Corp.: *See*—
  - Burford, Bruce L., and Kauder. 3,390,121.
- Armco Steel Corp.: *See*—
  - Tanczyn, Harry. 3,389,991.
- Armetti, Massimo. Protective packaging of plastic material for vials and the like, as well as process and equipment for obtaining it. 3,389,535, 6–25–68, Cl. 53—184.
- Armour Agricultural Chemical Co.: *See*—
  - Lee, Donald E. 3,389,959.
- Armour and Co.: *See*—
  - Beck, Herbert H. 3,390,001.
- Armour Pharmaceutical Co.: *See*—
  - Van Ness, La Verne W. 3,390,098.
- Armstrong, Richard L.: *See*—
  - Russell, Fred J., Armstrong, and Falk. 3,389,587.
- Armstrong Rubber Co., The: *See*—
  - Wise, Ralph M. 3,389,626.
- Arnold, Bruce C., and R. S. Evers, to Rolscreen Co. Venetian blind for double glazed sash. 3,389,737, 6–25–68, Cl. 160—107.
- Aro Corp.: *See*—
  - Brandenberg, Karl A. 3,389,720.
- Arrowhead Enterprises, Inc.: *See*—
  - Kahl, William G., Jr., Gally, and Cavanaugh. 3,390,388.
- Art Metal, Inc.: *See*—
  - Johnson, John H. 3,389,423.
- Asahidenka Kogyo Kabushiki Kaisha: *See*—
  - Utsugi, Yoshio, Katsumata, and Onozaki. 3,390,069.
- Asche, Clarence W., to North American Rockwell Corp. Dual-mode transfer valve. 3,389,639, 6–25–68, Cl. 91—33.
- Ashworth, James E., and A. L. Bartz, to United States Steel Corp. Rail corner mounting. 3,389,930, 6–25–68, Cl. 287—189.36.
- Asper, Richard L.: *See*—
  - Betts, Minford E., Hatton, and Asper. 3,389,870.

Aspro-Nicholas Ltd. : *See*—
  Baker, James A., James, and Polkinhorne. 3,390,051.
Atlantic Richfield Co. : *See*—
  Floeck, Peter E. 3,390,081.
  Floeck, Peter E. 3,390,085.
Atomic Energy of Canada Ltd. : *See*—
  Tarasuk, Walter R., Bessey, and Scholfield. 3,390,053.
Atsumi, Katsuya, to Akai Electric Co. Ltd. Tape drive motor control arrangement. 3,389,869, 6–25–68, Cl. 242—55.12.
Auld, James T., and R. H. Sawin. Tape applying device. 3,390,041, 6–25–68, Cl. 156—526.
Ault, Wayne E., to "Automatic" Sprinkler Corp. of America. Adjustable fitting for ceiling mounted sprinkler heads. 3,389,884, 6–25–68, Cl. 248—345.
Austin, William C., L. H. Conover, J. W. McFarland, and D. H. Morgan, to Chas. Pfizer & Co., Inc. Novel thiazine and thiazoline anthelmintic agents. 3,390,148, 6–25–68, Cl. 260—240.
Automated Building Components, Inc. : *See*—
  Jureit, John C., and Smith. 3,389,812.
"Automatic" Sprinkler Corp. of America : *See*—
  Ault, Wayne E. 3,389,884.
  Howard, John W. 3,389,753.
Avco Corp. : *See*—
  Beitman, Bernard J., Jr. 3,390,337.
  Straniti, Salvatore, and Kish. 3,389,746.
Aven, Manuel, and W. Garwacki, to General Electric Co. Seleno-telluride P-N junction device utilizing deep trapping states. 3,390,311, 6–25–68, Cl. 317—237.
Azuma, Hiroshi : *See*—
  Okazaki, Narukazu, and Azuma. 3,389,584.
Babcock & Wilcox Co., The : *See*—
  McDaniels, John D., Jr. 3,390,052.
Bach, Henry J., N. F. Barr, M. J. Getting, and J. S. Skinner, to Mobil Oil Corp. Resinous copolyesters comprising aliphatic diol, polyhydric alcohol and dicarboxylic acid diimide and coating solutions containing the same. 3,390,118, 6–25–68, Cl. 260—33.4.
Backe, Wolfgang, H.-G. Mobius, E.-A. Becker, and N. Jeschke. Method of and device for producing very fine adjustments for tool carriers and the like. 3,389,557, 6–25–68, Cl. 60—54.5.
Badische Anilin- & Soda-Fabrik Aktiengesellschaft : *See*—
  Frerker, Gart, Kutschera, Marx, and Schwindt. 3,390,010.
  Kranz, Joachim, and Gerstner. 3,390,149.
  Uhl, Guenter, Schwindt, Wilhelm, and Faulhaber. 3,390,114
  Wippel, Hans G. 3,390,145.
Baer, Ronald W. : *See*—
  Lovell, James B., and Baer. 3,390,209.
Baizer, Manuel M., to Monsanto Co. Electrolytic hydrodimerization of certain allyl compounds. 3,390,066, 6–25–68, Cl. 204—72.
Baker, Edward S., to The Boeing Co. Zero power detector switch and power transfer system. 3,390,275, 6–25–68, Cl. 307—64.
Baker, James A., J. W. James, and H. Polkinhorne, to Aspro-Nicholas Ltd. Dialkylaminocinnamates and dialkylbenzalmalonates in ultraviolet absorbing compositions and methods. 3,390,051, 6–25–68, Cl. 167—90.
Baldwin, D. H., Co. : *See*—
  Wayne, William C., Jr. 3,390,223.
Baltakmens, Gotlibs, and J. I. Tourish, to Allied Chemical Corp. Electrolytic process for preparing stannous fluoride. 3,390,064, 6–25–68, Cl. 204—94.
Banks, David E., D. F. Herdeg, R. E. Karcher, Jr., A. A. Khambaty, and W. B. Mercaldi, to United Shoe Machinery Corp. Controls for cutting presses. 3,389,628, 6–25–68, Cl. 83—62.
Barattini, Cesare, P. Bortolini, and A. Scarfi, to Montecantini Edison S.p.A. Process and apparatus for harvesting crystals. 3,389,974, 6–25–68, Cl. 23—295.
Barbasso, Salvatore, Jr. : *See*—
  Kissinger, Robert W., and Barbasso. 3,390,391.
Barkdoll, Joseph P., to SCM Corp. Typewriter carriage control. 3,389,774, 6–25–68, Cl. 197—64.
Barker, Joseph, to United Shoe Machinery Corp. Feeding device for tubular knitted fabric. 3,389,443, 6–25–68, Cl. 26—55.
Barker, Robert S. : *See*—
  Kollar, John, and Barker. 3,390,182.
Barley, Edward S. Orally operable water filter. 3,389,803, 6–25–68, Cl. 210—266.
Barnes, Philip E., to United Aircraft Corp. Hydraulic control mechanism with hydraulic delayed reset. 3,389,641, 6–25–68, Cl. 91—366.
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Barr, Naaman F. : *See*—
  Bach, Henry J., Barr, Getting, and Skinner. 3,390,118.
Bartz, August L. : *See*—
  Ashworth, James E., and Bartz. 3,389,930.
Batzer, Hans, O. Ernst, and D. Porret, to Ciba Ltd. Epoxides. 3,390,138, 6–25–68, Cl. 260—78.4.
Baumann, Kurt, to R. Krups. Dry shaver having a spring biased rocking lever to reciprocate a cutter block. 3,389,467, 6–25–68, Cl. 30—43.92.
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Bayer, Otto : *See*—
  Kocher, Ernst-Ulrich, Bayer, Wagner, and Von Der Emden. 3,390,130.
Beale, Evelyn S. L. Engine-cylinder pressure indicators. 3,389,599, 6–25–68, Cl. 73—115.
Bean, Rufus C. Folding partition. 3,389,741, 6–25–68, Cl. 160—199.
Beas, Urban J. : *See*—
  Kummerman, Henri, and Beas. 3,389,739.
Beck, Herbert H., to Armour and Co. Apparatus and methods for treating cheese with anti-spoilage agents. 3,390,001, 6–25–68, Cl. 99—162.
Becker, Ernst-August : *See*—
  Backe, Wolfgang, Mobius, Becker, and Jeschke. 3,389,557.
Becker, Hans-Dieter, to General Electric Co. Process for preparing a polyphenylene ether by oxidation of phenols with nickel peroxide. 3,390,125, 6–25–68, Cl. 260—47.
Bedi, Ram D., to M & T Chemicals Inc. Wax stopoff composition and process. 3,390,060, 6–25–68, Cl. 204—15.
Beier, Ernst, T. Bornhoft, J. Durner, H. Kasper, E. Maus, E. Planitzer, and F. Zeyher, to Bolkow Gesellschaft mit Beschrankter Haftung. Firing and guiding mechanism for jet-propelled missiles launched from launcher tubes. 3,389,637, 6–25–68, Cl. 89—1.815.
Beitman, Bernard J., Jr., to Avco Corp. Band changing and automatic tuning apparatus for transmitter T-pad output filter. 3,390,337, 6–25–68, Cl. 325—174.
Bell Aerospace Corp. : *See*—
  Upton, Hubert W. 3,390,393.
Bell, John F., to Zenith Radio Corp. Television receiver with automatic tuning responsive to detected sound carrier. 3,390,228, 6–25–68, Cl. 178—5.8.
Bell Telephone Laboratories, Inc. : *See*—
  Brown, Neil M. 3,389,875.
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  Giordmaine, Joseph A., and Rentzepis. 3,390,278.
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  Thomson, David J. 3,390,357.
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Bender, Howard S., F. C. Loew, and P. Resnick, to Interchemical Corp. Process for the preparation of 1-amino-2-alkylsulfuric acids. 3,390,167, 6–25–68, Cl. 260—458.
Bendix Corp., The : *See*—
  Bluish, Joseph A. 3,390,389.
  Fraioli, Anthony V. 3,390,161.
  Giardini, Dante S. 3,389,797.
  Van Ausdal, Robert K., Healy, and Anderson. 3,389,719.
Benelli, Giovanni, to S.A.S F.lli Benelli G. F. & C. Automatic shotgun. 3,389,487, 6–25–68, Cl. 42—17.
Benetta, Gianni, and G. Cinque, to Montecatini Edison S.p.A. Process of suspension polymerization of vinyl monomers. 3,390,142, 6–25–68, Cl. 260—92.8.
Bennett Industries, Inc. : *See*—
  Godshalk, Alva J. 3,389,828.
Bentley, William, and E. Start, to William Cotton Ltd. Production of articles on straight bar knitting machines. 3,389,580, 6–25–68, Cl. 66—89.
Bentzinger, Harlan A. : *See*—
  De Maria, John, and Bentzinger. 3,389,477.
Berchtold, Donald V., to The Coleman Co., Inc. Picnic chest construction. 3,389,824, 6–25–68, Cl. 220—9.
Beretta, Carlo P., to Fabbrica Darmi Pietro Beretta S.p.A. Single-trigger release mechanism for a double-barrelled shotgun. 3,389,488, 6–25–68, Cl. 42—42.
Berger, Abe, to General Electric Co. Organosilicon compounds and method of manufacture. 3,390,162, 6–25–68, Cl. 260—448.
Bergman, Raymond W. : *See*—
  Reeder, Jerry R., and Bergman. 3,389,546.
Bernhardt, Karl-Heinz : *See*—
  Gehring, Eckard, Bernhardt, and Geier. 3,389,430.
Berrenberg, Franz, Firma : *See*—
  Hany, Harald. 3,389,653.
Berruyer, Martial, and P. Menissier, to Commissariat A l'Energie Atomique. Apparatus for making grooves in deep bores in a workpiece. 3,389,620, 6–25–68, Cl. 77—3.
Bertele, Ubaldo. Shell structure for stair steps. 3,389,523, 6–25–68 Cl. 52—606.
Bessey, Pleman E. : *See*—
  Tarasuk, Walter R., Bessey, and Scholfield. 3,390,053.
Best, Stanley G., K. L. I. Harner, and D. P. Ramaker, to United Aircraft Corp. Hydraulic control mechanism having viscosity independent restoring mechanism. 3,389,640, 6–25–68, Cl. 91—366.
Beteiligungs- und Patentverwaltungsgesellschaft mit beschrankter Haftung : *See*—
  Wagner, Alfred. 3,390,220.
Better Packages, Inc. : *See*—
  Krueger, Theodore H., and Sharpe. 3,389,681.
Betts, Minford E., R. L. Hatton, and R. L. Asper, to The Kansas City Star Co. Coincidence splicer. 3,389,870, 6–25–68, Cl. 242—58.2.
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Bey, Ahmet K., ¼ to Frances Budreck. Electric motor. 3,389,611, 6–25–68, Cl. 74—88.
Beyerlein, Fritz-Werner, to Siemens Aktiengesellschaft. Encapsulated semiconductor element. 3,390,226, 6–25–68, Cl. 174—52.
Big Dutchman, Inc. : *See*—
  Van Huis, Robert L. 3,389,689.
Bigelow-Sanford, Inc. : *See*—
  Mueller, Helmut C. 3,389,667.
Billings, Marcus J. : *See*—
  Love, William D., Jr., and Billings. 3,389,923.
Binder, Alan M. Fuel induction device. 3,389,894, 6–25–68, Cl. 261—36.

Bird Machine Co. : *See*—
  Roos, John T. 3,389,800.
Birum, Gail H., and C. N. Matthews, to Monsanto Co. Process for the preparation of mesomeric phosphonium ester salts. 3,390,165, 6–25–68, Cl. 260—455.
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Bjorkengren, Carl-Axel, to AB Akerlund & Rausing. Material intended for a freezing package, and such a package. 3,389,783, 6–25–68, Cl. 206—46.
Black, Sivalls & Bryson, Inc. : *See*—
  McMinn, Robert E. 3,389,537.
Blake, George T. Guide device for attachment to the wall of a building under construction. 3,389,471, 6–25–68, Cl. 33—85.
Blau, Michael. Recreational device in the form of a skill wheel. 3,389,494, 6–25–68, Cl. 46—220.
Blessum, John T. : *See*—
  Gradin, James H., Holliver, Blessum, and Richardson. 3,390,286.
Bluish, Joseph A., to The Bendix Corp. Self-test means for a servo system. 3,390,389, 6–25–68, Cl. 340—314.
Bockelmann, John B. : *See*—
  Strandskov, Frede B., and Bockelmann. 3,389,999.
Bodge, Clifford A., to Texas Instruments Inc. Variable time delay reed relay having a movable core. 3,390,361, 6–25–68, Cl. 335—152.
Boeing Co., The : *See*—
  Baker, Edward S. 3,390,275.
  Deminet, Czeslaw. 3,390,267.
Boggs, James L., to National Cash Register Co. Means for adjustably controlling the width of a guideway. 3,389,905, 6–25–68, Cl. 271—59.
Bohm, Dieter H., to Maschinenfabrik Stromag GmbH. Electromagnetic gear coupling having means precluding malfunctioning thereof. 3,389,769, 6–25–68, Cl. 192—84.
Bohor, Bruce F., R. B. Cronin, and C. F. Knutson, to Continental Oil Co. Process for maintaining the permeability of clayey petroliferous formations during waterflooding. 3,389,750, 6–25–68, Cl. 166—9.
Bolgert, Edwin F. : *See*—
  Povalski, Eugene A., and Bolgert. 3,389,717.
Bolkow Gesellschaft mit Beschrankter Haftung : *See*—
  Beier, Ernst, Bornhoft, Durner, Kasper, Maus, Planitzer, and Zeyher. 3,389,637.
  Westrup, Manfred. 3,389,878.
Bonner, Richard B., and R. M. Jorda, to Shell Oil Co. Process for treating cold wet surfaces and resulting products. 3,390,007, 6–25–68, Cl. 117—182.
Borer, Herbert W., and R. R. Buck, to Caterpillar Tractor Co. Bucket actuating linkage for tractor mounted loader. 3,389,820, 6–25–68, Cl. 214—776.
Bornhoft, Theodor : *See*—
  Beier, Ernst, Bornhoft, Durner, Kasper, Maus, Planitzer, and Zeyher. 3,389,637.
Borsini, Giancarlo : *See*—
  Nicora, Carlo, and Borsini. 3,390,143.
Bortolini, Paolo : *See*—
  Barattini, Cesare, Bortolini, and Scarfi. 3,389,974.
Bosworth, Seymour, J. Zauderer, and W. S. Douglas, to Abbey Electronics Corp. Calibration device for electrical instruments having an error percentage indicator. 3,390,327, 6–25–68, Cl. 324—74.
Bouboulis, Constantine J. : *See*—
  Kirshenbaum, Isidor, Bouboulis, and White. 3,390,137.
Bournez, Lucien, and L. R. Clement, to Societe Nouvelle Spidem. Rolling mill for processing cold metal strip. 3,389,592, 6–25–68, Cl. 72—250.
Bowers, Thomas S. Wiping, honing and/or indexing device for clippers. 3,389,462, 6–25–68, Cl. 30—28.
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Bradbury, Robert E., Jr. to The Offshore Co. Jacking apparatus and controls. 3,389,890, 6–25–68, Cl. 254—106.
Bradshaw, Leo : *See*—
  Emmons, Jack D. 3,389,412.
Brandenberg, Karl A., to Aro Corp. NOT valve for fluid logic circuits. 3,389,720, 6–25–68, Cl. 137—625.66.
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Brennan, Francis M. : *See*—
  Litterst, Ralph S., and Brennan. 3,389,723.
Breslow, David S., to Hercules Inc. Cross-linked polymers and the process for their preparation. 3,390,183, 6–25–68, Cl. 260—75.
Breslow, David S., to Hercules Inc. Cross-linking agents and their use in cross-linking unsaturated polymers. 3,390,204, 6–25–68, Cl. 260—837.
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Brison, Robert J., and J. H. Litchfield, to John I. Haas, Inc. Separation of lupulin from hops. 3,390,000, 6–25–68, Cl. 99—50.
British Petroleum Co., Ltd., The : *See*—
  Groszek, Aleksander J. 3,390,080.
Brochman, Wilfred R. : *See*—
  Abere, Joseph F., and Brochman. 3,389,827.
Brodigan, Michael W. Abrading machine. 3,389,509, 6–25–68, Cl. 61—176.
Brothman, Abraham, M. Gomery, C. Yanis, and A. H. Miller, to Sangamo Electric Co. Digital unambiguous control of circuit interrupter means. 3,390,233, 6–25–68, Cl. 179—2.
Browder, Walter S. Reed facer. 3,389,630, 6–25–68, Cl. 84—458.
Brown, George A., R. C. Fuller, and H. G. Carlson, to Texas Instruments Inc. Method of treating planar junctions. 3,390,011, 6–25–68, Cl. 117—201.
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Brown, Robert R., M. W. Malia, R. C. Ruete, and F. A. Silva, to Elastic Stop Nut Corp. Device for detecting the presence of voltage in connectors of high voltage systems. 3,390,331, 6–25–68, Cl. 324—122.
Brownawell, Darrell W., and V. P. Catto, to Esso Research and Engineering Co. Middle distillate flow improver. 3,389,979, 6–25–68, Cl. 44—62.
Brownell, George L., to United States Steel Corp. Method of removing potassium ions from hydroxyalkyl alkyl maleates. 3,390,171, 6–25–68, Cl. 260—485.
Bruce, Samuel A. : *See*—
  McMinn, Curtis J., and Bruce. 3,390,071.
Bruder, Karl, and W. Huesges, to G. Siempelkamp & Co., Firma. Apparatus for the charging of multiplaten presses. 3,389,652, 6–25–68, Cl. 100—137.
Brumfield, John H. Wheel cover and retaining means therefor. 3,389,937, 6–25–68, Cl. 301—37.
Brunswick Corp. : *See*—
  Drehobl, William E. 3,389,511.
  Wheeler, Kenneth L. 3,389,421.
Buchowski, Roman, and L. L. Kocsis, to Zenith Radio Corp. Discharge circuit for a defibrillator. 3,389,704, 6–25–68, Cl. 128—419.
Buck, Roy R. : *See*—
  Borer, Herbert W., and Buck. 3,389,820.
Buckthorpe, Tom C. : *See*—
  Pulcrano, Frank C., and Buckthorpe. 3,389,664.
Budreck, Frances : *See*—
  Bey, Ahmet K. 3,389,611.
Buehler, Allan M. Door operators. 3,389,740, 6–25–68, Cl. 160—188.
Buhler, Markus. Deep-boring apparatus incorporating an electrical boring unit. 3,389,758, 6–25–68, Cl. 175—104.
Bull, Hendrix R., to Rheem Mfg. Co. Emulsion treater tank. 3,389,536, 6–25–68, Cl. 55—174.
Bunker-Ramo Corp., The : *See*—
  Davis, John S. 3,390,384.
  Matthew, Morton P. 3,389,658.
Burford, Bruce L., and O. S. Kauder, to Argus Chemical Corp. Color indication in polyester resin curing. 3,390,121, 6–25–68, Cl. 260—40.
Burkart, Jakob. Fluid coupling. 3,389,767, 6–25–68, Cl. 192—61.
Burke Flexo Products Co. : *See*—
  Peters, John K., and McClellan. 3,389,490.
Burnett, Alfred J. : *See*—
  Kember, Raymond C., Burnett, and Gosling. 3,390,372.
Burnett, Robert L., to Chevron Research Co. Xylene isomerization process. 3,390,199, 6–25–68, Cl. 260—668.
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Burroughs Corp. : *See*—
  Carlson, Carl B., Sharp, and Wollum. 3,390,379.
  Meyerhoff, Albert J., Huang, and Hebeler. 3,390,330.
Bush, Charles R., and W. C. Cook, to Lockheed Aircraft Corp. Turnbuckle. 3,389,924, 6–25–68, Cl. 287—60.
Buysch, Heinrich, to H. Krantz. Roller for uniform production of pressure. 3,389,448, 6–25–68, Cl. 29—110.
Buzzards Corp. : *See*—
  Williams, George B. 3,389,604.
Bydzovsky, Viktor : *See*—
  Janata, Vladimir, and Bydzovsky. 3,390,158.
Byrd, Patrick N. : *See*—
  Walsh, Peter J., and Byrd. 3,389,566.
Ciba Ltd. : *See*—
  Piller, Bernhard. 3,389,994.
  Porret, Daniel. 3,390,116.
Cabe, Ray W., to Tamar Electronics Industries, Inc. Support device for tubular light grid assembly. 3,390,260, 6–25–68, Cl. 240—11.4.
Cabushiki Kaisha Tadano Tekkosho : *See*—
  Sinohara, Sinitsu, Yokoyama, Kimura, and Miyaucti. 3,389,891.
Cahall, Richard L., Jr. : *See*—
  Griesheimer, Richard E., and Cahall. 3,389,432.
Caledex Machine Co. Ltd. : *See*—
  Williams, Albert H. 3,389,644.
Callahan, James L., R. K. Grasselli, and W. R. Knipple, to The Standard Oil Co. Promoted catalysts for the oxidation of olefins. 3,390,202, 6–25–68, Cl. 260—680.
Calumet & Hecla, Inc. : *See*—
  Habdas, Edward P. 3,390,018.
Cambon, Theophile F. L., and G. A. M. Igounenc, to Office National Industriel de l'Azote. Process of direct reduction of iron oxides in fluidized beds. 3,389,988, 6–25–68, Cl. 75—26.
Campbell, Rouel R., to Mitchell Camera Corp. Kinetograph movement mechanism. 3,389,842, 6–25–68, Cl. 226—69.
Canadian General Electric Co. Ltd. : *See*—
  Eastcott, Peter de H. 3,389,871.

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  - Heppolette, Robert L., Murdock, and Ternbah. 3,390,122.
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- Capps, Randolph P., to Multi-Zoner, Inc. Distributing damper assembly for plural zone heating. 3,389,858, 6–25–68, Cl. 237—2.
- Cardron Electronics, Inc.: *See—*
  - Di Toro, Michael J. 3,390,336.
- Carel, Alfred B., to Continental Oil Co. Sample vaporizing apparatus. 3,389,538, 6–25–68, Cl. 55—386.
- Carini, George F.: *See—*
  - Davies, Ben, and Carini. 3,390,002.
- Carlson, Carl B., R. S. Sharp, and J. E. Wollum, to Burroughs Corp. Data communication system. 3,390,379, 6–25–68, Cl. 340—172.5.
- Carlson, Harold G.: *See—*
  - Brown, George A., Fuller, and Carlson. 3,390,011.
- Carmichael, Thomas F.: *See—*
  - Eberline, Richard F., Carmichael, and Schilling. 3,390,291.
- Carnation Co.: *See—*
  - Miller, Jack M., and Masoner. 3,389,568.
- Carothers, James D., and M. O. Halfhill, to International Business Machines Corp. Double frequency detection system. 3,390,284, 6–25–68, Cl. 307—269.
- Carrier Corp.: *See—*
  - Endress, James W. 3,389,569.
  - Leonard, Louis H., Jr. 3,389,747.
  - McGrath, William L. 3,389,570.
  - McGrath, William L. 3,389,571.
  - McGrath, William L. 3,389,574.
  - Papapanu, James A. 3,389,572.
  - Papapanu, James A., and Decker. 3,389,573.
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- Case, J. I., Co.: *See—*
  - Long, Elton B. 3,389,816.
- Cashavelly, Christy: *See—*
  - Sullivan, Leroy J., and Cashavelly. 3,389,492.
- Cassidy, Herbert W. D., and J. J. Schwartz, to Thiokol Chemical Corp. Ignition apparatus for rocket motors. 3,389,659, 6–25–68, Cl. 102—70.
- Castiglione, Eugene, Jr. Pocket billiard cue stick and sight therefor. 3,389,911, 6–25–68, Cl. 273—68.
- Catalysts & Chemicals, Inc.: *See—*
  - Reitmeier, Ronald E. 3,390,102.
- Caterpillar Tractor Co.: *See—*
  - Borer, Herbert W., and Buck. 3,389,820.
  - Golan, Kenneth F., Ohaver, Pearce, and Rohweder. 3,389,770.
- Catto, Vincent P.: *See—*
  - Brownawell, Darrell W., and Catto. 3,389,979.
- Caughman, Roscoe S., and T. C. Fritz, to Eastman Kodak Co. Method and apparatus for making additive filters. 3,390,039, 6–25–68, Cl. 156—166.
- Cavalleri, Frank L. Clothesline. 3,389,808, 6–25–68, Cl. 211—119.16.
- Cavanaugh, Peter F.: *See—*
  - Kahl, William G., Jr., Gally, and Cavanaugh. 3,390,388.
- Celanese Corp.: *See—*
  - Fontana, Celeste M., and Conciatori. 3,390,180.
- Cellulosefabrik Attisholz A.-G. Vorm. Dr. B. Sieber: *See—*
  - Dubach, Max. 3,390,076.
- Century Lighting, Inc.: *See—*
  - Izenour, George C. 3,390,366.
- Cernuschi, Francesco L., to Pirelli Ltd. Upholstery supports. 3,389,742, 6–25–68, Cl. 160—371.
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- Char-Lynn Co.: *See—*
  - McDermott, Hugh L. 3,389,618.
- Chatillon Societa Anonima Italiana per le Fibre Tessili Artificiali S.p.A.: *See—*
  - Denti, Francesco, and Viscontini. 3,389,428.
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  - Bevarly, Henry W., and Schuhmann. 3,389,567.
  - Nield, Cyril H., Clarke, and Screttas. 3,390,146.
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  - De Maria, John, and Bentzinger. 3,389,477.
- Chemotronics, Inc.: *See—*
  - Geen, Henry C., and Rice. 3,390,106.
- Chevron Research Co.: *See—*
  - Burnett, Robert L. 3,390,199.
  - Csicsery, Sigmund M. 3,390,101.
  - Kautsky, George J. 3,389,980.
  - Mulaskey, Bernard F. 3,390,074.
  - Postlewaite, William R., and Ludwig. 3,389,563.
- Chick Master Incubator Corp.: *See—*
  - Springer, Charles R. 3,389,688.
- Chocoladefabriken Lindt & Sprungli Aktiengesellschaft: *See—*
  - Egli, Emil. 3,389,852.
- Cholvin, Robert L.: *See—*
  - Hardy, James A., and Cholvin. 3,389,553.
- Chomitz, Nicholas, and W. E. Sanborn, to American Cyanamid Co. Process for the preparation of extrudates from hydrogels. 3,390,100, 6–25–68, Cl. 252—455.
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- Christy, Marcia E.: *See—*
  - Hucker, Howard B., and Christy. 3,390,179.
- Chytil, Frank S.: *See—*
  - Naslund, Erik, and Chytil. 3,389,791.
- Ciba Corp.: *See—*
  - Kessler, Werner, and Iselin. 3,390,144.
  - Mull, Robert P. 3,390,177.
  - Speiser, Peter. 3,390,050.
- Ciba Ltd.: *See—*
  - Batzer, Hans, Ernst, and Porret. 3,390,138.
  - Goerg, Alfred. 3,390,402.
- Cicerchi, Ralph R.: *See—*
  - Gerek, Gene, and Cicerchi. 3,389,463.
- Cincinnati Shaper Co., The: *See—*
  - Griesheimer, Richard E., and Cahall. 3,389,432.
- Cinque, Gennaro: *See—*
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- Clark, Wilbur M.: *See—*
  - Day, Bernard E., and Clark. 3,390,294.
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- Clarke, James: *See—*
  - Nield, Cyril H., Clarke, and Screttas. 3,390,146.
- Cleereman, Kenneth J., and E. R. Sederlund, to The Dow Chemical Co. Mechanical seal for use in molding apparatus. 3,389,434, 6–25–68, Cl. 18—42.
- Clegg, David: *See—*
  - Paddison, Eric, Clegg, and Warren. 3,390,307.
- Clemens, John E., to Industrial Nucleonics Corp. Fuel gauging system for weightless tankages. 3,389,602, 6–25–68, Cl. 73—290.
- Clement, Louis R.: *See—*
  - Bournez, Lucien, and Clement. 3,389,592.
- Cleveland Trust Co., The: *See—*
  - Webb, Ernest C. 3,389,634.
- Cline, Leslie W., to Anderson Electric Corp. Apparatus for thermally conditioning articles and the like. 3,389,478, 6–25–68, Cl. 34—216.
- Coburn Mfg. Co., Inc.: *See—*
  - Suddarth, Jack M., and Gray. 3,389,508.
- Coder, William D., Jr.: *See—*
  - Hughes, George K., Coder, and Glaser. 3,390,128.
- Coilcraft, Inc.: *See—*
  - Russell, Martyn. 3,390,364.
- Coleman Co., Inc., The: *See—*
  - Berchtold, Donald V. 3,389,824.
- Colgate-Palmolive Co.: *See—*
  - Rockefeller, Winston G. 3,389,850.
- Collard, Earl W. Snap together window wall framing and joining construction. 3,389,527, 6–25–68, Cl. 52—731.
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- Collins Radio Co.: *See—*
  - Carter, Robert C. 3,390,343.
  - Fenwick, Charles A. 3,389,678.
  - Hallford, Ben R. 3,390,349.
  - Mayer, Abbott F., and Stover. 3,390,392.
- Columbian Carbon Co.: *See—*
  - Chappell, Sterling F., III, Olechowski, and Arseneaux. 3,390,195.
  - Chappell, Sterling F., III, and Olechowski. 3,390,196.
- Commac, Inc.: *See—*
  - Gamburd, Harold, and Walker. 3,390,395.
- Commissariat a l'Energie Atomique: *See—*
  - Berruyer, Martial, and Menissier. 3,389,620.
  - Breynat, Genevieve, and Pierson. 3,390,342.
  - Portal, Pierre, and Rouchard. 3,389,638.
  - Thireau, Remy. 3,389,612.
- Compagnie Generale d'Electricite: *See—*
  - Dubois, Andre, and Klein. 3,390,288.
- Conciatori, Anthony B.: *See—*
  - Fontana, Celeste M., and Conciatori. 3,390,180.
- Conn, John B.: *See—*
  - Taylor, Robert C., and Conn. 3,390,090.

- Conover, Lloyd H.: *See—*
  - Austin, William C., Conover, McFarland, and Morgan. 3,390,148.
- Consolidated Electrodynamics Corp.: *See—*
  - Gradin, James H., Tolliver, Blessum, and Richardson. 3,390,286.
  - Neff, Joseph J. 3,390,398.
- Continental Oil Co.: *See—*
  - Bohor, Bruce F., Cronin, and Knutson. 3,389,750.
  - Carel, Alfred B. 3,389,538.
  - Hughes, Ralph C., and Every. 3,389,714.
- Control Data Corp.: *See—*
  - Wilson, Ian, and Munzinger. 3,389,901.
- Controls Co. of America: *See—*
  - Obermann, George. 3,390,243.
- Cook, Reginald M.: *See—*
  - Shaw, Stuart W. K., and Cook. 3,389,992.
- Cook, Ronald A., to Ford Motor Co. Clutch with lever operated disc spring. 3,389,768, 6–25–68, Cl. 192—70.27.
- Cook, William C.: *See—*
  - Bush, Charles R., and Cook. 3,389,924.
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- Cooper, Wanda C. Paper based molding composition and process for making same. 3,390,003, 6–25–68, Cl. 106—193.
- Coopersmith, Leo, to The H. B. Ives Co. Letterbox plate. 3,389,854, 6–25–68, Cl. 232—46.
- Corliss, Duncan S.: *See—*
  - Keast, Russell R., and Corliss. 3,390,092.
- Cotton, William, Ltd.: *See—*
  - Bentley, William, and Start. 3,389,580.
- Couch, Robert O., and D. L. Wyatt, to New England Realty Co. Underground electrical vault. 3,390,225, 6–25–68, Cl. 174—37.
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- Creed, Sherman H.: *See—*
  - Anderson, Gerald R., Creed, and Parker. 3,389,730.
- Cremer, Joseph: *See—*
  - Heymer, Gero, Cremer, and Harnisch. 3,389,958.
- Cremer, Robert L., to King-Seeley Thermos Co. Plastic axle keepers for use on toy vehicles. 3,389,495, 6–25–68, Cl. 46—221.
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- Crofts, George B.: *See—*
  - Clanton, Henry M., and Crofts. 3,390,256.
- Cronin, Robert B.: *See—*
  - Bohor, Bruce F., Cronin, and Knutson. 3,389,750.
- Crowley, Lee F.: *See—*
  - Kamerer, George R., and Crowley. 3,390,339.
- Csicsery, Sigmund M., to Chevron Research Co. Catalyst activation process. 3,390,101, 6–25–68, Cl. 252—455.
- Cuesta, Antonio. Articulated boats. 3,389,673, 6–25–68, Cl. 114—71.
- Cunningham, William J.: *See—*
  - Anello, Louis G., and Cunningham. 3,390,191.
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- Dagley, James F.: *See—*
  - Van Sickler, Robert H., and Dagley. 3,390,299.
- Daimler-Benz Aktiengesellschaft: *See—*
  - Herschmann, Otto, and Deutschmann. 3,389,693.
- Dainihon Bungu Kabu Shikigaisha: *See—*
  - Matsumoto, Hiroyuki. 3,389,955.
- Dale Electronics, Inc.: *See—*
  - O'Keeffe, James R. 3,390,367.
- Dalibor, Horst, to Reichhold Chemicals, Inc. Process for the preparation of modified alkyd resin and resulting product. 3,390,110, 6–25–68, Cl. 260—20.
- Daniel Woodhead Co.: *See—*
  - Kramer, David E. 3,390,371.
- Daniels, Henricus P. C. Device for ultrasonic welding of the kind comprising a convertor and an amplitude transformer. 3,389,845, 6–25–68, Cl. 228—1.
- Danko, Arthur J.: *See—*
  - Kenney, Mahlon W., Weathersby, and Danko. 3,389,948.
- Darot, Alice, to Produits de Beaute-Parfums Jean d'Aveze. Powder container. 3,389,847, 6–25–68, Cl. 229—9.
- David, Israel A., to E. I. du Pont de Nemours and Co. Aromatic dicarbonyl sulfonate modified polycarbonamides. 3,389,549, 6–25–68, Cl. 57—140.
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- Davis, John S., to The Bunker-Ramo Corp. Electrical connection structure. 3,390,384, 6–25–68, Cl. 340—174.
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- Day, Phillip E., to Waterdome Corp. Apparatus for vapor compression distillation of water. 3,390,057, 6–25–68, Cl. 202—172.
- Dayco Corp.: *See—*
  - Freedlander, Abraham L., Garrett, and Matthews. 3,389,541.
- Dazai, Miyoji, and M. Konishi, to Ajinomoto Co., Inc. Process for purifying glutamic acid. 3,390,175, 6–25–68, Cl. 260—534.
- Dearing, Bertram S.: *See—*
  - Hebard, Hugh C., and Dearing. 3,389,715.
- De Benneville, Peter L., to Rohm & Haas Co. N-vinyl-2-piperazinones. 3,390,139, 6–25–68, Cl. 260—78.5.
- Decca Ltd.: *See—*
  - Phillipson, Alan, Spiller, Smith, and Cheesman. 3,390,217.
- Decker, Frank N., Jr.: *See—*
  - Papapanu, James A., and Decker. 3,389,573.
- De Flon-Anderson Co., Inc.: *See—*
  - De Flon, James G. 3,389,895.
- De Flon, James G., to De Flon-Anderson Co., Inc. Cooling tower fill bar. 3,389,895, 6–25–68, Cl. 261—111.
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- De Sisto, Richard E., to Signal Mfg. Co. Motor control. 3,390,317, 6–25–68, Cl. 318—345.
- Deutsch Fastener Corp.: *See—*
  - Gulistan, Bulent. 3,389,736.
- Deutsche Akademie der Wissenschaften zu Berlin: *See—*
  - Ebek, Alexander, and Raab. 3,389,987.
- Deutschmann, Herbert: *See—*
  - Herschmann, Otto, and Deutschmann. 3,389,693.
- Dew, Ernest H., to Esso Research and Engineering Co. Process for the preparation of dimethylbutenes. 3,390,201, 6–25–68, Cl. 260—676.
- Dexter Corp., The: *See—*
  - Hughes, George K., Coder, and Glaser. 3,390,128.
- Diamond Shamrock Corp.: *See—*
  - Wiseman, Russell M. 3,390,072.
- Di Bella, Eugene P., to Tenneco Chemicals, Inc. 2,6-substituted cyclohexanones as insecticides, miticides, fungicides, nematocides and herbicides. 3,389,986, 6–25–68, Cl. 71—123.
- Dickson Electronics Corp.: *See—*
  - White, Richard L. 3,390,306.
- Diehl, Francis L., to The Procter & Gamble Co. Detergent composition containing phosphonio sulfonates. 3,390,095, 6–25–68, Cl. 252—138.
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- Dirk, William R., to Lennox Industries, Inc. Refrigerant compressor with oil trap in discharge gas cavity. 3,389,853, 6–25–68, Cl. 230—206.
- Di Toro, Michael J., to Cardron Electronics, Inc. Apparatus and method for converting an input wave signal using adaptive network adjusted to time inverse of translating channel. 3,390,336, 6–25–68, Cl. 325—65.

- Dixie Mfg. Co., Inc.: *See*—
  - Wolfe, Russell C. 3,389,647.
- Dock, Nils, to Aktiebolaget Svenska Flaktfabriken. Spray painting booth. 3,390,400, 6–25–68, Cl. 98—115.
- Dominion Electric Corp.: *See*—
  - Robison, Russell O. 3,390,319.
- Dominion Engineering Works, Ltd.: *See*—
  - Allan, Michael B., and Feodor. 3,389,920.
- Dooley, James L., to McCulloch Corp. Exhaust charged internal combustion engine. 3,389,694, 6–25–68, Cl. 123—65.
- Dorr-Oliver Inc.: *See*—
  - Williamson, David E., and Rinato. 3,389,892.
- Douglas, William S.: *See*—
  - Bosworth, Seymour, Zauderer, and Douglas. 3,390,327.
- Dow Chemical Co., The: *See*—
  - Cleereman, Kenneth J., and Sederlund. 3,389,434.
  - Gohlke, Roland S., and Karle. 3,390,264.
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- Dresser Industries, Inc.: *See*—
  - Davies, Ben, and Carini. 3,390,002.
  - Ott, Eugene G. 3,389,761.
- Drew, Howard F.: *See*—
  - Diehl, Francis L., Drew, and Snoddy. 3,390,094.
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- Du Biel, Peter P.: *See*—
  - Wright, John T. and W. R., and Du Biel. 3,390,036.
- Dubois, Andre, and G. Klein, to Compagnie Generale d'Electricite. Device for driving out the combustion gases of a subatmospheric magnetohydrodynamic generator. 3,390,288, 6–25–68, Cl. 310—11.
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  - David Israel A. 3,389,549.
  - Engelhardt, Eugene H. 3,390,203.
  - Hull, Donald R. 3,390,034.
  - Miller, Donald N. 3,389,960.
  - Parrish, Robert G. 3,389,446.
  - Sands, Seymour. 3,390,035.
- Durner, Josef: *See*—
  - Beier, Ernst, Bornhoft, Durner, Kasper, Maus, Planitzer, and Zeyher. 3,389,637.
- Dye, Cloyde G.: *See*—
  - Allen, Edward M., Dye, and Smrdel. 3,389,529.
- Dyer, Richard F.: *See*—
  - Fletcher, Charles A., and Dyer. 3,389,444.
- Dynamics Corp. of America: *See*—
  - Wakeman, Alfred W. 3,389,836.
  - Wakeman, Alfred W. 3,390,097.
- Eager, George S., Jr.: *See*—
  - Rubinstein, Solomon, and Eager. 3,389,460.
- Eagles, Allen E., and B. Linder, to General Electric Co. Diffuse reflector incorporating wire mesh structure. 3,389,951, 6–25–68, Cl. 350—292.
- Eagleson, John R.: *See*—
  - Sullivan, Joseph G., Soffa, and Eagleson. 3,389,744.
- Eastcott, Peter de H., to Canadian General Electric Co. Ltd. Fluid regulating system. 3,389,871, 6–25–68, Cl. 242—75.44.
- Eastern Co., The: *See*—
  - Pastva, John V., Jr. 3,389,932.
- Eastin, Edward H. Amusement and sporting device. 3,389,922, 6–25–68, Cl. 280—11.23.
- Eastman Kodak Co.: *See*—
  - Caughman, Roscoe S., and Fritz. 3,390,039.
  - Fletcher, Charles A., and Dyer. 3,389,444.
  - Hagemeyer, Hugh J., Jr., Gammans, and Robinson. 3,390,115.
  - Kibler, Charles J. 3,390,134.
  - Martin, James C. 3,390,185.
- Eaton Yale & Towne Inc.: *See*—
  - Getz, Edward T., and Pacak. 3,389,935.
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- Eckrich, Peter, & Sons, Inc.: *See*—
  - Stelzer, James S. 3,389,532.
- Eckrodt, Gunter: *See*—
  - Schwab, Bruno, and Eckrodt. 3,389,435.
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- Ehrenreich, A. & Cie: *See*—
  - Gottschald, Rudolf 3,389,925.
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- Elastic Stop Nut Corp.: *See*—
  - Brown, Robert R., Malia, Ruete, and Silva. 3,390,331.
- Electric Regulator Corp.: *See*—
  - Wilcox, Lance C. 3,389,900.
- Elliot, Robert A.: *See*—
  - Newman, John D., and Elliot. 3,390,340.
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- Elmer, William B., to Sylvania Electric Products, Inc. Multizone high power light reflector. 3,390,262, 6–25–68, Cl. 240—41.37.
- Elox, Inc.: *See*—
  - Webb, Robert S. 3,390,244.
  - Webb, Robert S. 3,390,245.
  - Webb, Robert S. 3,390,246.
  - Webb, Robert S. 3,390,247.
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- Engle, Robert C.: *See*—
  - Ellis, Myron P., Engle, Czubak, and Randlett. 3,390,068.
- Englehart, Oscar D., and J. S. Shuster, to Pittsburgh Plate Glass Co. Glass sheet press bending apparatus with indexed cover over the shaping surface. 3,389,984, 6–25–68, Cl. 65—287.
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  - Paddison, Eric, Clegg, and Warren. 3,390,307.
  - Taylor, Kenneth R. 3,389,561.
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- Esso Research and Engineering Co.: *See*—
  - Brownawell, Darrell W., and Catto. 3,389,979.
  - Dew, Ernest H. 3,390,201.
  - Kirshenbaum, Isidor, Bouboulis, and White. 3,390,137.
  - Leary, Ralph J., Stogryn, and Argabright. 3,390,136.
  - Lion, Charlotte. 3,390,083.
  - O'Halloran, Rosemary. 3,390,086.
  - Stanford, Alfred E. 3,389,829.
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  - Wilson, James A. 3,390,015.
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  - Reeder, Jerry R., and Bergman. 3,389,546.
- Ethyl Corp.: *See*—
  - Griffing, Margaret E. 3,390,088.
  - Montgomery, Charles W. 3,390,208.
- Eumuco Aktiengesellschaft fur Maschinenbau: *See*—
  - Szakacsi, Janos. 3,389,593.
- European Atomic Energy Community (Euratom): *See*—
  - Finzi, Sergio, Faure, and Lebrun. 3,389,823.
- Evers, Robert S.: *See*—
  - Arnold, Bruce C., and Evers. 3,389,737.
- Everst & Jennings, Inc.: *See*—
  - Sully, Fenton F. 3,389,934.
- Every, Richard L.: *See*—
  - Hughes, Ralph C., and Every. 3,389,714.
- Ex-Cell-O Corp.: *See*—
  - Egleston, Harry B. 3,389,849.

- FMC Corp.: *See*—
  - Anderson, Gerald R. 3,389,792.
  - Anderson, Gerald R., Creed, and Parker. 3,389,730.
  - Forrest, Tom H. 3,390,077.
  - Hamilton, James P. 3,390,005.
  - Heaney, Richard, and Hall. 3,389,909.
  - Henriksen, Arthur J., and Thorpe. 3,390,219.
  - Keast, Russell R., and Corliss. 3,390,092.
  - Naslund, Erik, and Chytil. 3,389,791.
  - Topinka, George F. 3,389,864.
- Fa, Charles H., to North American Rockwell Corp. Semiconductor device and process for producing same. 3,390,022, 6–25–68, Cl. 148—33.
- Fabbrica Darmi Pietro Beretta S.p.A.: *See*—
  - Beretta, Carlo P. 3,389,488.
- Fabmagic, Inc.: *See*—
  - Glenn, Edward R. 3,389,422.
- Fabrique de Couronnes Boninchi S.A.: *See*—
  - Wyssen, Rodolphe. 3,389,551.
- Fairchild Camera and Instrument Corp.: *See*—
  - Weckler, Gene P. 3,390,273.
- Falbe, Jurgen F., and H. Tetteroo, to Shell Oil Co. Side chain chlorination of 2,4,5-trichloroacetophenones. 3,390,187, 6–25–68, Cl. 260—592.
- Falk, Harold W.: *See*—
  - Russell, Fred J., Armstrong, and Falk. 3,389,587.
- Farbenfabriken Bayer Aktiengesellschaft: *See*—
  - Brack, Alfred. 3,390,168.
  - Heller, Karl-Heinz, Nentwig, and Schnell. 3,390,160.
  - Kocher, Ernst-Ulrich, Bayer, Wagner, and Von Der Emden. 3,390,130.
  - Schnell, Hermann, Raichle, Prater, and Bruhne. 3,390,205.
- Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning: *See*—
  - Mohr, Reinhard, and Osterloh. 3,389,956.
- Farekas, Stephen E., to Amsted Industries Inc. Lever interlock. 3,389,616, 6–25–68, Cl. 74—483.
- Fattori, Lazzaro A. Helmet having rapid headsize adjustability. 3,389,405, 6–25–68, Cl. 2—3.
- Faulhaber, Gerhard: *See*—
  - Uhl, Guenter, Schwindt, Wilhelm, and Faulhaber. 3,390,114.
- Faure, Jacques F.: *See*—
  - Finzi, Sergio, Faure, and Lebrun. 3,389,823.
- Feather-Lite Mfg. Co.: *See*—
  - Zitomer, Abe. 3,389,505.
- Federal-Mogul Corp.: *See*—
  - Haefner, James R. 3,389,941.
- Fee, Harry R., R. W. Lawrence, and O. W. Marks, to Hercules Inc. Aqueous slurry blasting explosive containing silicon and an aeration agent. 3,390,028, 6–25–68, Cl. 149—39.
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- Feierstein, Harold E., C. Y. Shen, and R. R. Versen, to Monsanto Co. Detergent compositions containing hydrated alkali metal tripolyphosphates. 3,390,093, 6–25–68, Cl. 252—138.
- Feldpausch & Co.: *See*—
  - Feldpausch, Hugo. 3,389,727.
- Feldpausch, Hugo, to Feldpausch & Co. Tool with a working spindle, particularly a screw driving tool. 3,389,727, 6–25–68, Cl. 144—32.
- Fellwock, Charles G., to Whirlpool Corp. Reversible hinges for refrigerator door. 3,389,424, 6–25–68, Cl. 16—170.
- Fenton, Donald M.: *See*—
  - Hurwitz, Marvin J., and Fenton. 3,390,156.
- Fenwick, Charles A., to Collins Radio Co. Display for radio altimeter. 3,389,678, 6–25–68, Cl. 116—129.
- Feodor, Kanger: *See*—
  - Allan, Michael B., and Feodor. 3,389,920.
- Ferguson, Otis B., to Recovery Research Systems, Inc. Parachute system for mid-air load recovery. 3,389,880, 6–25–68, Cl. 244—137.
- Fiala, George T., and S. W. Pelton, to International Harvester Co. Balanced pressure relief valve. 3,389,796, 6–25–68, Cl. 210—130.
- Fibreboard Corp.: *See*—
  - Winters, John D., Visser, Kristoff, and Herring. 3,389,645.
- Fibreboard Paper Products Corp.: *See*—
  - Williams, David H., and Pellation. 3,389,519.
- Filippi, Ernest A., and D. H. Herbert; said Filippi assor. to Special Devices, Inc. Harness reel arrangement. 3,389,873, 6–25–68, Cl. 242—107.2.
- Finkl, A., & Sons Co.: *See*—
  - Finkl, Charles W. 3,389,989.
- Finkl, Charles W., to A. Finkl & Sons Co. Treatment of molten metal. 3,389,989, 6–25–68, Cl. 75—49.
- Finzi, Sergio, J. F. Faure, and J. P. Lebrun, to European Atomic Energy Community (Euratom). Container for the storage and/or transportation of liquefied gases. 3,389,823, 6–25–68, Cl. 220—9.
- Firma Opti-Holding A.G.: *See*—
  - Heimberger, Helmut. 3,389,441.
- Firma Homann-Maytag G.m.b.H.: *See*—
  - Nicolaus, Norbert, and Krugener. 3,389,946.
- Fisher-Haynes Corp.: *See*—
  - Haynes, Joe R. 3,389,438.
- Fisher Hovernor Co.: *See*—
  - Johnson, Cecil M., and Ross. 3,389,718.
- Fisher, Mahlon B., to Sylvania Electric Products, Inc. Photomultiplier. 3,390,272, 6–25–68, Cl. 250—199.
- Fishler, Benjamin: *See*—
  - Shiber, Shmuel, and Fishler. 3,389,614.
- Fitzpatrick, Kerien, to Rexall Drug and Chemical Co. Internal sealing means for autoclave motor housing. 3,389,973, 6–25–68, Cl. 23—290.
- Flaig Enterprises Inc.: *See*—
  - Flaig, Raymond A. 3,389,507.
- Flaig, Raymond A., to Flaig Enterprises Inc. Abrading apparatus. 3,389,507, 6–25–68, Cl. 51—8.
- Fletcher, Arthur F.: *See*—
  - Scullin, James P., and Fletcher. 3,390,111.
  - Scullin, James P., and Fletcher. 3,390,112.
- Fletcher, Charles A., and R. F. Dyer, to Eastman Kodak Co. Apparatus for entangling multifilament yarns. 3,389,444, 6–25–68, Cl. 28—1.
- Floeck, Peter E., to Atlantic Richfield Co. Rust inhibited extreme pressure grease. 3,390,081, 6–25–68, Cl. 252—32.7.
- Floeck, Peter E., to Atlantic Richfield Co. Grease composition. 3,390,085, 6–25–68, Cl. 252—34.7.
- Flotepak Corp.: *See*—
  - Lidgard, Edward J. 3,389,785.
  - Lidgard, Edward J. 3,389,786.
- Flow Surveys, Inc.: *See*—
  - Petty, Orwin E. 3,389,919.
- Flugel, Gunter. Tongs-like gadget for loosening screw caps of containers. 3,389,622, 6–25–68, Cl. 81—3.1.
- Fontana, Celeste M., and A. B. Conciatori, to Celanese Corp. Purification of bis(ortho - diamino - phenyl) compounds. 3,390,180, 6–25–68, Cl. 260—582.
- Food Systems, Inc.: *See*—
  - Hirt, Edwin R. 3,389,654.
- Foote, Daniel J., to Master Lock Co. Non-binding locking levers for padlocks. 3,389,586, 6–25–68, Cl. 70—38.
- Ford Motor Co.: *See*—
  - Cook, Ronald A. 3,389,768.
  - Meinert, Harold W. 3,389,763.
- Fornaciari, Luigi: *See*—
  - Pederzoli, Gianfranco, and Fornaciari. 3,389,464.
- Fornasar, Henry J.: *See*—
  - Miller, Mary L., and Fornasar. 3,390,067.
- Forney, Edgar W., Jr., to AMP, Inc. Coaxial connector with cable locking means. 3,390,374, 6–25–68, Cl. 339—177.
- Forrest, Tom H., to FMC Corp. Sewage treatment process. 3,390,077, 6–25–68, Cl. 210—6.
- Fort Wayne Tool & Die, Inc.: *See*—
  - Stuckey, Buddy S. 3,389,865.
- Forward, Robert L., to Hughes Aircraft Co. High power pulse time modulation communication system with explosive power amplification means. 3,390,334, 6–25–68, Cl. 325—48.
- Foster Wheeler Corp.: *See*—
  - Apblett, William R., Martin, and Philipps. 3,390,250.
- Fraioli, Anthony V., to The Bendix Corp. Process for separating trace quantities of an impurity isotope from a mixture of elements. 3,390,161, 6–25–68, Cl. 260—489.
- Frank, Alan I. W., to Alan I. W. Frank Corp. Mechanism for handling and testing containers. 3,389,811, 6–25–68, Cl. 214—6.5.
- Frank, Alan I. W., Corp.: *See*—
  - Frank, Alan I. W. 3,389,811.
- Frankel, Milton B., and K. Klager, to Aerojet-General Corp. Preparation of nitramines. 3,390,183, 6–25–68, Cl. 260—583.
- Frazier, David M. Closed circuit slurrifier. 3,389,938, 6–25–68, Cl. 302—14.
- Freedlander, Abraham L., W. C. Garrett, and R. E. Matthews, to Dayco Corp. Flexible lawnmower blade. 3,389,541, 6–25–68, Cl. 56—295.
- Frerker, Gert, P. Kutschera, M. Marx, and W. Schwindt, to Badische Anilin- & Soda-Fabrik Aktiengesellschaft. Process for dyeing a fibrous material with an aqueous pigment dye liquor and dye liquor. 3,390,010, 6–25–68, Cl. 117—161.
- Frichette, James D., to Weyerhaeuser Co. Molding compositions. 3,390,123, 6–25–68, Cl. 260—47.
- Friedlander, Bernard Z. Psychological testing recorder. 3,390,397, 6–25–68, Cl. 346—33.
- Friedman, Ronald S., and R. Hadfield, to Textron, Inc. Holding means for underfloor ducts. 3,389,885, 6–25–68, Cl. 248—361.
- Friedman, Sol, to Miner Industries, Inc. Vibratory games. 3,389,912, 6–25–68, Cl. 273—94.
- Fritz, Theodore C.: *See*—
  - Caughman, Roscoe S., and Fritz. 3,390,039.
- Frohbieter, Edwin H., to Whirlpool Corp. Proportioned air control for refrigerator-freezer. 3,389,575, 6–25–68, Cl. 62—190.
- Frowein, Egbertus A., to Aktiengesellschaft Brown, Boveri & Cie. Gas circulating system for compressed gas operated circuit breakers. 3,390,241, 6–25–68, Cl. 200—148.
- Fuller, Clyde R.: *See*—
  - Brown, George A., Fuller, and Carlson. 3,390,011.
- Furukawa, Junji, T. Saegusa, and H. Imai, to Nippon Oil Co., Ltd. Polymerization of cyclic ethers using a catalyst system comprising aluminum halide etherate. 3,390,129, 6–25–68, Cl. 260—67.
- Fyfe, Donald R., to The Metal Box Co., Ltd. Rollers. 3,389,449, 6–25–68, Cl. 29—116.
- G. K. N. Group Services Ltd.: *See*—
  - Gill, Peter J. 3,389,623.
- Gal, George, to Merck & Co., Inc. Process for preparing 3-indolyl acetic acids. 3,390,154, 6–25–68, Cl. 260—326.13.
- Galis, Alex J. Tree harvester machine. 3,389,728, 6–25–68, Cl. 144—34.
- Gally, John, Jr.: *See*—
  - Kahl, William G., Jr., Gally, and Cavanaugh. 3,390,888.
- Gamburd, Harold, and J. E. Walker, to Commac, Inc. Elapsed time recording device and method. 3,390,395, 6–25–68, Cl. 346—1.

- Gammans, William J.: *See—*
  - Hagemeyer, Hugh J., Jr., Gammans, and Robinson. 3,390,115.
- Gannoe, Thomas E., to Sylvania Electric Products Inc. Solder striping apparatus. 3,389,683, 6–25–68, Cl. 118—69.
- Gaponov, Vasily A.: *See—*
  - Abramyan, Evgeny A., and Gaponov. 3,390,303.
- Garbark, Roman F., to D. Gottlieb & Co. Stepping mechanism for use in a pinball machine or the like. 3,390,255, 6–25–68, Cl. 235—92.
- Gardiner, William C.: *See—*
  - Cooper, Roy M., Gardiner, and Newberry. 3,390,070.
- Gardner, Lawrence D., to Bell Telephone Laboratories, Inc. High speed vacuum chuck. 3,389,682, 6–25–68, Cl. 118—52.
- Garrett Corp., The: *See—*
  - Hardy, James A., and Cholvin. 3,389,553.
- Garrett, Wayne C.: *See—*
  - Freedlander, Abraham L., Garrett, and Matthews. 3,389,541.
- Garwacki, Walter: *See—*
  - Aven, Manuel, and Garwacki. 3,390,311.
- Geen, Henry C., and W. A. Rice, to Chemotronics, Inc. Cellular products. 3,390,106, 6–25–68, Cl. 260—2.5.
- Gebring, Eckard, K.-H. Bernhardt, and U. Geier, to Schloemann Aktiengesellschaft. Apparatus for distributing metal particles over the roll gaps of rolling mills. 3,389,430, 6–25–68. Cl. 18—9.
- Geier, Ulf: *See—*
  - Gebring, Eckard, Bernhardt, and Geier. 3,389,430.
- Geigy Chemical Corp.: *See—*
  - Hall, Luther A. R., and Gurney. 3,390,192.
  - Marand, Jean. 3,389,837.
- Gemmill, Robert M., Jr.: *See—*
  - Schick, John W., Stockinger, and Gemmill. 3,390,127.
- General Aniline & Film Corp.: *See—*
  - Levinos, Steven. 3,390,061.
  - Tripp, Bert E., Welch, and Panasik. 3,389,995.
  - Welch, Walter J. 3,389,996.
- General Cable Corp.: *See—*
  - Rubinstein, Solomon, and Eager. 3,389,460.
- General Dynamics Corp.: *See—*
  - Claffey, Thomas R. 3,389,846.
- General Electric Co.: *See—*
  - Allen, Merton. 3,389,997.
  - Aven, Manuel, and Garwacki. 3,390,311.
  - Becker, Hans-Dieter. 3,390,125.
  - Berger, Abe. 3,390,162.
  - Brown, John F., Jr. 3,390,163.
  - Day, Bernard E., and Clark. 3,390,294.
  - Eagles, Allen E., and Linder. 3,389,951.
  - Greenwood, Allan N. 3,390,305.
  - Harper, Kennard W. 3,389,950.
  - Hodges, Merwyn E. 3,390,279.
  - Miller, Richard H. 3,390,239.
  - Roberts, John A. 3,390,324.
  - Teller, Howard S., Jr. 3,390,353.
  - Van Sickler, Robert H., and Dagley. 3,390,299.
  - Werner, Horst R. 3,390,298.
- General Time Corp.: *See—*
  - Lundin, Robert S. 3,390,254.
- Gerek, Gene, and R. R. Cicerchi. Scoring device for coatings. 3,389,463, 6–25–68, Cl. 30—164.9.
- Gerry, Martin E., ½ to A. L. Sandberg. Sound synchronized cartridge. 3,389,953, 6–25–68, Cl. 352—78.
- Gerson, Herman: *See—*
  - Santimauro, John F., and Gerson. 3,390,155.
- Gerstner, Wolfgang: *See—*
  - Kranz, Joachim, and Gerstner. 3,390,149.
- Gesellschaft fur Huttenwerksanlagen m.b.H.: *See—*
  - Schimmel, Busso, and Tunder. 3,389,898.
  - Tunder, Siegfried, and Schefels. 3,389,897.
- Getting, Milan J.: *See—*
  - Barr, Naaman F., Getting, and Skinner. 3,390,117.
- Getting, Milan J.: *See—*
  - Bach, Henry J., Barr, Getting, and Skinner. 3,390,118.
- Getz, Edward T., and M. Pacak, to Eaton Yale & Towne Inc. Composite load supporting structure. 3,389,935, 6–25–68, Cl. 297—452.
- Gewirtz, Stanley, to Solid State Systems, Inc. Simplified apparatus for measuring primary electrical quantities. 3,390,329, 6–25–68, Cl. 324—115.
- Giardini, Dante S., to The Bendix Corp. Filtering system having dual cleaning means. 3,389,797, 6–25–68, Cl. 210—138.
- Giddings & Lewis, Inc.: *See—*
  - McDonough, James O., Susskind, and Grossimon. 3,390,315.
- Gilbert, Hiram G., to The Raymond Corp. Acceleration control device for an electric motor including a unijunction transistor and a controlled rectifier. 3,390,318, 6–25–68, Cl. 318—422.
- Gill, Peter J., to G. K. N. Group Services Ltd. Method of tightening high strength bolts and apparatus for use therein. 3,389,623, 6–25–68, Cl. 81—52.3.
- Giller, Solomon A., L. A. Wolf, and A. I. Meos. Method for imparting antimicrobic properties to polyvinyl alcohol articles. 3,390,008, 6–25–68, Cl. 117—138.5.
- Gingerich, John W.: *See—*
  - Smith, Reynold B., and Gingerich. 3,389,832.
- Giordmaine, Joseph A., and P. M. Rentzepis, to Bell Telephone Laboratories, Inc. Optical liquid parametric devices with increased coherence length using dye. 3,390,278, 6–25–68, Cl. 302—88.3.
- Giori, Gualtiero. Process for removing intaglio ink from a wiping cylinder. 3,389,656, 6–25–68, Cl. 101—170.
- Girard, Harry J.: *See—*
  - Knapp, Mary M., and Girard. 3,389,417.
- Gits Bros. Mfg. Co.: *See—*
  - Lojkutz, Bruno V. 3,389,921.
  - Wahl, Edward C. 3,389,916.
- Giunta, Joseph S., to United States Steel Corp. Tank-car heating system. 3,389,697, 6–25–68, Cl. 126—343.5.
- Glaser, Milton A.: *See—*
  - Hughes, George K., Coder, and Glaser. 3,390,128.
- Glenn, Edward R., to Fabmagic, Inc. Spring motor door closer. 3,389,422, 6–25–68, Cl. 16—78.
- Glidden Electric Corp., The: *See—*
  - Glidden, Roger C. 3,390,234.
- Glidden, Roger C., to The Glidden Electric Corp. Combination telephone fire alarm and meter reading system. 3,390,234, 6–25–68, Cl. 179—5.
- Glimvall, Sven R., to Gote Sigvard Gustafson. Dual loop antenna. 3,390,394, 6–25–68, Cl. 343—742.
- Godar, Richard L., and J. L. Richardson, to Petrolite Corp. Hydrocarbon additive for heat-exchanger anti-fouling. 3,390,073, 6–25–68, Cl. 208—48.
- Godshalk, Alva J., to Bennett Industries, Inc. Plastic containers. 3,389,828, 6–25–68, Cl. 220—73.
- Goerg, Alfred, to Ciba Ltd. Apparatus for countercurrent washing of mother liquor from solid products. 3,390,402 6–25–68, Cl. 23—270.
- Goess, John A., and C. Maron. Door hinge and assembly therefor. 3,389,503, 6–25–68, Cl. 49—396.
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- Golankiewicz, Edwin J., to The Thomas & Betts Co. Terminal connector and method of making same. 3,390,370, 6–25–68, Cl. 339—95.
- Golde, H. T., G.m.b.H.: *See—*
  - Werner, Johannes, Golde, and Schlick. 3,389,579.
- Golde, Hans: *See—*
  - Werner, Johannes, Golde, and Schlick. 3,389,579.
- Goldman, Richard L., W. R. Kritzler, and V. C. Sirvydas, to Philco Ford Corp. Fabrication of semiconductor device. 3,389,457, 6–25–68, Cl. 29—580.
- Goldstein, Allen E., R. W. Rouse, and T. T. Schroeter, to The Marquardt Corp. Hydrogen conversion and restorage work cycle. 3,389,555, 6–25–68, Cl. 60—39.46.
- Goloschekov, Alexander S.: *See—*
  - Morozov, Evgeny I., Khromob, Ivanov, and Goloschekov. 3,389,743.
- Gomery, Michael: *See—*
  - Brothman, Abraham, Gomery, Yanis, and Miller. 3,390,233.
- Good, Jack L. Stump pulverizing apparatus. 3,389,726, 6–25–68, Cl. 144—2.
- Goodrich-Gulf Chemicals, Inc.: *See—*
  - Kreider, Leonard C. 3,390,193.
- Goodyear Tire & Rubber Co., The: *See—*
  - Keck, Max H., and Wilson. 3,390,108.
- Gordon, Sherritt, Mines Ltd.: *See—*
  - Lund, John A. H., and Sillns. 3,389,993.
- Gote Sigvard Gustafson: *See—*
  - Glimvall, Sven R. 3,390,394.
- Gottlieb, D., & Co.: *See—*
  - Garbark, Roman F. 3,390,255.
- Gottschald, Rudolf, to A. Ehrenreich & Cie. Ball joints, especially for steering gears. 3,389,925, 6–25–68, Cl. 287—87.
- Gottschald, Rudolf, to Messrs A. Ehrenreich & Cie. Ball joints, especially in the form of angular joints. 3,389,926, 6–25–68, Cl. 287—87.
- Grace, W. R. & Co.: *See—*
  - Yates, Ronald A. 3,389,530.
- Gradin, James H., B. R. Tolliver, J. T. Blessum, and N. R. Richardson, to Consolidated Electrodynamics Corp. Hermetically sealed instrument transducer with external sensitivity selection. 3,390,286, 6–25–68, Cl. 310—8.4.
- Grady, Charles B., Jr.: *See—*
  - Wales, Nathaniel B., Jr., and Grady. 3,390,359.
- Grakauskas, Vytautas, to Aerojet-General Corp. Process for preparing mixed nitrogen trihalides such as dichlorofluoramine. 3,389,976, 6–25–68, Cl. 23—356.
- Grakauskas, Vytautas, to Aerojet-General Corp. Process for preparing N-nitro-N-fluoro-amines. 3,390,181, 6–25–68, Cl. 260—583.
- Granqvist, Carl-Erik, to AGA Aktiebolag. System for generating a signal representing the time delay of a signal path. 3,390,348, 6–25–68, Cl. 331—18.
- Grant, Louis A. Demolition tool crade. 3,389,755, 6–25–68, Cl. 173—44.
- Grasselli, Robert K.: *See—*
  - Callahan, James L., Grasselli, and Knipple. 3,390,202.
- Gray, Dolph L.: *See—*
  - Suddarth, Jack M., and Gray. 3,389,508.
- Gray, Harold W., and A. L. W. Watt, to The Hughes-Owens Co. Ltd. Sandwich drafting board structure. 3,389,520, 6–25–68, Cl. 52—309.
- Great Bend Mfg. Co.: *See—*
  - Schumacher, George D. 3,389,819.
- Grebe, John J. Aircraft. 3,389,879, 6–25–68, Cl. 244—17.11.
- Greenlee Bros. & Co.: *See—*
  - Herrstrum, Rudolph E., and Van Allen. 3,389,660.
- Greenwood, Allan N., to General Electric Co. Circuit interrupting means for a high voltage D-C circuit. 3,390,305, 6–25–68, Cl. 317—11.
- Gregori, Werner K. H. Concrete form structure for floors. 3,389,521, 6–25–68, Cl. 52—309.
- Grey, Mike W. Snap-in clipboard. 3,389,806, 6–25–68, Cl. 211—60.

- Griesheimer, Richard E., and R. L. Cahall, Jr., to The Cincinnati Shaper Co. Load indicating device for compacting press. 3,389,432, 6–25–68, Cl. 18—16.7.
- Griffing, Margaret E., to Ethyl Corp. Gasoline lubricating oils or organometallic antiknock fluids containing a mixture of mono-alkylphenol condensation products. 3,390,088, 6–25–68, Cl. 252—52.
- Grine, Donald R.: *See—*
  - Elliott, Jennings W., and Grine. 3,390,377.
- Groff, Emory L., to Poor & Co. Insulating end post. 3,389,859, 6–25–68, Cl. 238—152.
- Gross, Philip. Teaching and testing device. 3,389,479, 6–25–68, Cl. 35—9.
- Grossimon, Herbert P.: *See—*
  - McDonough, James O., Susskind, and Grossimon. 3,390,315.
- Groszek, Aleksander J., to The British Petroleum Co. Ltd. Molybdenum disulphide. 3,390,080, 6–25–68, Cl. 252—25.
- Grudus, Gabriel M.: *See—*
  - Tashlick, Irving, and Grudus. 3,390,107.
- Grunder, Hans-Rudolf, and F. Merz, to Maschinenfabrik Rieter A.G. Apparatus and method for spinning core-yarn. 3,389,545. 6–25–68, Cl. 57—12.
- Grundig Electro-Mechanische Versuchsanstalt: *See—*
  - Jacob Karlheinz. 3,389,942.
- Guenter, Richard G., to United States of America, Army. Solventless extrusion process for forming rocket propellant grains. 3,390,210, 6–25–68, Cl. 264—3.
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  - Collins, Kenneth L. 3,389,834.
- Gulf Research & Development Co.: *See—*
  - Lion, William D., and Stewart. 3,389,596.
  - Mori, Ernest A., and Schaub. 3,389,759.
  - Murphy, Clarence R. 3,390,059.
  - Pellegrini John P., Jr., and Spilners. 3,390 087.
  - Schulz, Johann G. D., and Whitaker. 3,390,174.
  - Selwitz, Charles M. 3,390,194.
- Gulistan, Bulent, to Deutsch Fastener Corp. Fastener retainer arrangement. 3,389,736, 6–25–68, Cl. 151—69.
- Gullett, William W., to Pickands Mather & Co. Manganese nitride. 3,389,990, 6–25–68, Cl. 75—122.
- Gumaelius, Robert L. B.: *See—*
  - Solomita, Evelyn, and Gumaelius. 3,389,914.
- Gurney, John A.: *See—*
  - Hall, Luther A. R., and Gurney. 3,390,192.
- Gutridge, Jack E., to Pullman Inc. Container car construction. 3,389,663. 6–25–68, Cl. 105—366.
- Gutshall, Charles E., to Illinois Tool Works Inc. Locking and sealing screw. 3,389,734, 6–25–68, Cl. 151—37.
- Haas, John I., Inc.: *See—*
  - Brison, Robert J., and Litchfield. 3,390,000.
- Habdas, Edward P., to Calumet & Hecla, Inc. Thermoelectric heat pump and heat flow pegs. 3,390,018, 6–25–68, Cl. 136—204.
- Haberecht, Rolf R., to Texas Instruments Inc. Method of making dielectric bodies having conducting portions. 3,390,012, 6–25–68, Cl. 117—212.
- Hadfield, Robert: *See—*
  - Friedman, Ronald S., and Hadfield. 3,389,885.
- Hadley Co., Inc.: *See—*
  - Hadley, Wilfred N. 3,390,038.
- Hadley, Wilfred N., to Hadley Co., Inc. Method and apparatus for trimming and joining the ends of two web lengths. 3,390,038, 6–25–68, Cl. 156—159.
- Haefner, James R., to Federal-Mogul Corp. Bearing locking collar. 3,389,941, 6–25–68, Cl. 308—236.
- Hagemeyer, Hugh J., Jr., W. J. Gammans, and A. G. Robinson, III, to Eastman Kodak Co. Polyvinyl chloride adhesive compositions. 3,390,115, 6–25–68, Cl. 260—31.6.
- Halle, Ernest. Planting wall. 3,389,499, 6–25–68, Cl. 47—33.
- Hakko Kogyo Kabushiki Kaisha: *See—*
  - Nishikawa, Masao, and Yabe. 3,390,396.
- Halcon International, Inc.: *See—*
  - Kollar, John, and Barker. 3,390,182.
- Halfhill, Martin O.: *See—*
  - Carothers, James D., and Halfhill. 3,390,284.
- Hall, Derek: *See—*
  - Heaney, Richard, and Hall. 3,389,909.
- Hall, Kimball P., to Hall Marine Corp. Jet propulsion apparatus. 3,389,558, 6–25–68, Cl. 60—221.
- Hall, Luther A. R., and J. A. Gurney, to Geigy Chemical Corp. Dihydropyrenes and photochromic compositions based thereon. 3,390,192, 6–25–68, Cl. 260—666.
- Hall Marine Corp.: *See—*
  - Hall, Kimball P. 3,389,558.
- Hallford, Ben R., to Collins Radio Co. Method and means for tuning klystron for optimum modulation linearity. 3,390,349, 6–25–68, Cl. 331—44.
- Halliburton Co.: *See—*
  - Pittman, Forrest C. 3,389,713.
- Halpern, Ernst, to Williamsburg Steel Products Co. Elevator door construction. 3,389,504, 6–25–68, Cl. 49—406.
- Hamilton, James P., to FMC Corp. Phosphate gel compositions. 3,390,005, 6–25–68, Cl. 106—287.
- Hanks, Charles W., to Air Reduction Co., Inc. Vaporization monitoring apparatus. 3,390,249, 6–25–68, Cl. 219—121.
- Hannigsberg, Claude, to Lignes Telegraphiques & Telephoniques. Regenerative repeater for biternary coded electric pulses. 3,390,283, 6–25–68, Cl. 307—268.
- Hany, Harald, to Firma Franz Berrenberg. Spindle press. 3,389,653, 6–25–68, Cl. 100—214.
- Harbert, Bobby C., to North American Rockwell Corp. Load failure detector device. 3,389,598, 6–25–68, Cl. 73—88.5.
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- Harding, Charles I.: *See—*
  - Sundaresan, Bommaya B., and Harding. 3,389,961.
- Hardy, James A., and R. L. Cholvin, to The Garrett Corp. Combined system for aircraft engine and cabin supercharging. 3,389,553, 6–25–68, Cl. 60—13.
- Harmon, Arizona B. Combination gate hinge and automatic closer. 3,389,501, 6–25–68, Cl. 49—386.
- Harmstorf, Rudolf. Method and device for installation of steel pipe below the bottom of a body of water. 3,389,564, 6–25–68, Cl. 61—72.4.
- Harnden, Michael R., to Abbott Laboratories. 9,10-alkoxy-3-alkyl-2,2-(dithiosubstituted) benzoquinolizines. 3,390,152, 6–25–68, Cl. 260—286.
- Harner, Kermit I.: *See—*
  - Best, Stanley G., Harner, and Ramaker. 3,389,640.
- Harnisch, Heinz: *See—*
  - Heymer, Gero, Cremer, and Harnisch. 3,389,958.
- Harnsberger, Bobby G., to Texaco Inc. Method and composition for consolidating incompetent oil-containing formations. 3,389,751, 6–25–68, Cl. 166—12.
- Harper, Kenneth A., to Phillips Petroleum Co. Process for recovering hydrocarbon gases from streams thereof containing H_2S. 3,390,075, 6–25–68, Cl. 208—341.
- Harper, Kennard W., to General Electric Co. Fiber optics scan system. 3,389,950, 6–25–68, Cl. 350—96.
- Harris, Elbert E.: *See—*
  - Chemerda, John M., and Harris. 3,390,153.
- Hartmann, Hans, and J. C. Stengelin. Apparatus for the biological purification of waste water. 3,389,798, 6–25–68, Cl. 210—150.
- Hasler, A.G.: *See—*
  - Diggelmann, Hans, and Siuda. 3,390,235.
- Hatch, Loranus P., to United States of America, Atomic Energy Commission. Separating salts having inverted solubility curves. 3,390,078, 6–25–68, Cl. 210—56.
- Hatton, Richard L.: *See—*
  - Betts, Minford E., Hatton, and Asper. 3,389,870.
- Hauni-Werke Koerber & Co., KG: *See—*
  - Wochnowski, Waldemar. 3,389,707.
- Haveg Industries, Inc.: *See—*
  - Love, William D., Jr., and Billings. 3,389,923.
- Hayasaki, Hidehiko: *See—*
  - Nakanishi, Minoru, and Hayasaki. 3,389,861.
- Hayhoe, Bruce: *See—*
  - Moorhead, Donald M., and Hayhoe. 3,389,962.
- Haynes, Joe R., to Fisher-Haynes Corp. Hinge clip. 3,389,438, 6–25–68, Cl. 24—84.
- Healy, Donald V.: *See—*
  - Van Ausdal, Robert K., Healy, and Anderson. 3,389,719.
- Heaney, Richard, and D. Hall, to FMC Corp. Letter-coding conveyor. 3,389,909, 6–25–68, Cl. 271—74.
- Hebard, Hugh C., and B. S. Dearing, to Aladdin Industries Ltd. Self-closing venting device for liquid containers. 3,389,715, 6–25–68, Cl. 137—43.
- Hebeler, Charles B.: *See—*
  - Meyerhoff, Albert J., Huang, and Hebeler. 3,390,330.
- Hecker, Harvard K.: *See—*
  - Siegerist, Walter L., and Hecker. 3,389,589.
- Heijnis, James W. Ij., to American Enka Corp. Two side sharpening of cutters. 3,389,506, 6–25–68, Cl. 51—3.
- Heimberger, Helmut, to Firma Opti-Holding A.G. Fluid-tight slide fastener. 3,389,441, 6–25–68, Cl. 24—205.1.
- Heisler, August J., Jr. Chip removing tool. 3,389,415, 6–25–68, Cl. 15—104.
- Heisler Co., The: *See—*
  - Kovacs, Lorand, and Heisler. 3,389,778.
- Heisler, Raymond A. Ear shaping apparatus. 3,389,669, 6–25–68, Cl. 113—1.
- Heisler, Raymond A.: *See—*
  - Kovacs, Lorand, and Heisler. 3,389,778.
- Hellebrand, Otto. Edge section for flat roofs with internal drainage. 3,389,515, 6–25–68, Cl. 52—94.
- Heller, Karl-Heinz, J. Nentwig, and H. Schnell, to Farbenfabriken Bayer Aktiengesellschaft. Process for the production of complex salts of bis-(O-hydroxy-aryl) sulphides and divalent metals. 3,390,160, 6–25–68, Cl. 260—433.
- Henderson, R. Sewall: *See—*
  - Manning, Evan N., and Henderson. 3,389,807.
- Hendricks, Klaas, and J. T. Soja, to Rocket Jet Engineering Corp. Package kit. 3,389,784, 6–25–68, Cl. 206—47.
- Henke, Elizabeth G. Nurse's cap box. 3,389,781, 6–25–68, Cl. 206—8.
- Henkel & Cie G.m.b.H.: *See—*
  - Stein, Werner, Koch, and Weiss. 3,390,096.
- Hennigan, Thomas J., to United States of America, National Aeronautics and Space Administration. Sealed electrochemical cell provided with a flexible casing. 3,390,017, 6–25–68, Cl. 136—166.
- Henriksen, Arthur J., and D. F. Thorpe, to FMC Corp. Electrode furnace. 3,390,219, 6–25–68, Cl. 13—6.
- Henry, David W., to Merck & Co., Inc. Process for the preparation of 1-(β-hydroxyethyl)-5-nitroimidazole-2-carboxylic acid lactone. 3,390,150, 6–25–68, Cl. 260—244.
- Heppolette, Robert L., J. D. Murdock, and M. Ternbah, to Canadian Industries Ltd. Hydrocarbon-sulfonic acid latent catalysts for thermosetting compositions. 3,390,122, 6–25–68, Cl. 260—40.
- Her Britannic Majesty's Government of the United Kingdom of Great Britain and Ireland, Secretary of State for Defence in: *See—*
  - Wear, Richard E. 3,389,621.
- Her Majesty's Postmaster General: *See—*
  - Lawrence, John A. 3,390,236.

Herberar, Edward J., to TRW Inc. Joint assembly. 3,389,927, 6–25–68, Cl. 287—87.
Herbert, Alfred, Ltd. : *See—*
  Sanders, Charles P. 3,389,771.
Herbert, Donald H. : *See—*
  Filippi, Ernest A., and Herbert. 3,389,873.
Hercules Inc. : *See—*
  Albert, Alfred A. 3,390,031.
  Albert, Alfred A., and Lawrence. 3,390,032.
  Breslow, David S. 3,390,133.
  Breslow, David S. 3,390,204.
  Fee Harry R., Lawrence, and Marks. 3,390,028.
  Fee, Harry R., Lawrence, and Marks. 3,390,030.
  Preckel, Ralph F. 3,390,029.
  Walker, John F. 3,390,132.
Herdeg, Donald F. : *See—*
  Banks, David E. Herdeg, Karcher, Khambaty, and Mercaldi, 3,389,628.
Hergeth K.G., Maschinenfabrik und Apparatebau : *See—*
  Schwab, Bruno, and Eckrodt. 3,389,435.
Herring, Jack G. : *See—*
  Winters, John D., Visser, Kristoff, and Herring. 3 389.645.
Herrstrum, Rudolph E., and R. F. Van Allen, to Greenlee Bros. & Co. Pump with pressure relief. 3,389,660, 6–25–68, Cl. 103—5.
Herschmann, Otto, and H. Deutschmann to Daimler-Benz Aktiengesellschaft. Metal ring for positioning the cylinder sleeve in the cylinder block of a liquid-cooled piston type internal combustion engine. 3,389,693, 6–25–68, Cl. 123—41.84.
Henry-Biabaud, Edmond, to Societe Anonyme Andre Citroen. Hydraulic shock absorbers with communication slide-valves. 3,389,766, 6–25–68, Cl. 188—88.
Hewlett-Packard Co. : *See—*
  Ryals, Auber G., and Anderson. 3,390,356.
  Strathman, John H., and Pettit. 3.390,302.
Heymer, Gero, J. Cremer, and H. Harnisch, to Knapsack Aktiengesellschaft. Process for the manufacture of alkali metal trimetaphosphates. 3,389,958, 6–25–68. Cl. 23—106.
Hickman Stanley A. : *See—*
  Cooke-Yarborough, Edmund H., Hooton, Hickman, and Prior. 3,390,380.
Hickox, Richard M. : *See—*
  Cranch, Edward J., and Hickox. 3,390,386.
Hirota, Kashichi. Collapsible box for carrying bottles. 3.389,831, 6–25–68. Cl. 220—111.
Hirt, Edwin R., to Food Systems, Inc. Article-lifting and stamping apparatus. 3,389,654, 6–25–68, Cl. 101—35.
Hitachi, Ltd. : *See—*
  Sawada, Ryoka and Kaneko. 3,390 301.
Hitchens, Aaron L. Cellular core including perimeter passageway means. 3,389,748, 6–25–68, Cl. 165—170.
Hodges, Merwyn E., to General Electric Co. Logical control means utilizing time delay and knockout "And" circuits. 3,390,279. 6–25–68. Cl. 307—208.
Hoeppel Raymond W. Polarized sensitive circuit breaker utilizing a magnetic reed switch. 3,390,362, 6–25–68, Cl. 335—153.
Hoffman, Raveran R. Anti-drip device. 3,389,822, 6–25–68, Cl. 215—13.
Hoffmann-La Roche Inc. : *See—*
  Wirz, Willi. 3,389 969.
Holland, L Virginia. Game and teaching method. 3,389,480, 6–25–68. Cl. 35—35.
Holm, Niels W., and R. D. Jarrett, to United States of America, Army. Stabilized radiation dosimeters. 3,390,099, 6–25–68. Cl. 252—408.
Holtam, John R., to Smiths Industries Ltd. Instruments for providing a representation dependent upon the value of a predetermined variable. 3,389,605. 6–25–68, Cl. 73—386.
Honeywell, Inc. : *See—*
  Leonard, Vurnen J. 3,390 399.
  Moses, Adrian J. 3,390,281.
Hood, George C. : *See—*
  Baumgartner, Herman J., Hood, and Weaver. 3,389,963.
Hooker Chemical Corp. : *See—*
  Van Ghemen, Max, and Wiberg. 3,390,189.
Hooton, Ivor N. : *See—*
  Cooke-Yarborough, Edmund H., Hooton, Hickman, and Prior. 3,390,380.
Horbach, Edwin. Resilient cellular wall covering and applying it. 3,389,518, 6–25–68, Cl. 52—309.
Horbis Brothers : *See—*
  Horbis, Victor A. 3,389,522.
Horbis, Victor A., to Horbis Brothers. Glass unit and method. 3 389,522, 6–25–68, Cl. 52—401.
Horvath, Louis W. Tubular frame shelter. 3,389,514, 6–25–68, Cl. 52—90.
Houdaille Industries, Inc. : *See—*
  Rumsey, Rollin D. 3,389,940.
Houser and Carafas Engineering Co. : *See—*
  Houser, Elwood W. 3,389 815.
Houser, Elwood W., to Houser and Carafas Engineering Co. Combination casket stay and mover. 3,389,815, 6–25–68, Cl. 214—82.
Howald, Brian W. : *See—*
  Kammiller, Neil A., and Howald. 3 390,320.
Howard, John W., to Automatic Sprinkler Corp. of America. Swivel tube connection for fire extinguishers. 3,389,753, 6–25–68, Cl. 169—30.
Howard, Robert C., to Wyomissing Corp. Stretchable anchor band. 3,389,722, 6–25–68, Cl. 139—423.
Hrabinski, Joseph R. Detection of trace amounts of water. 3,389,967. 6–25–68, Cl. 23—230.
Huang, Chien C. : *See—*
  Meyerhoff, Albert J., Huang, and Hebeler. 3,390,330.
Huber, J. M., Corp. : *See—*
  Iannicelli, Joseph. 3,390,120.
  Takewell, Robert B., and Kohn. 3 390,006.
Huber, William C., and E. Samfield, to United States of America, National Aeronautics and Space Administration. Inflatable tether. 3,389,877, 6–25–68, Cl. 244—1.
Huck Mfg. Co. : *See—*
  Seppi, Arvine W. 3 389,594.
Hucker, Howard B., and M. E. Christy, to Merck & Co., Inc. Novel 10,11-dihydro-10,11-dihydroxy-(3-substituted aminopropylidene) - 5H - dibenzo[a,d]cycloheptenes. 3,390,179, 6–25–68, Cl. 260—570.8.
Hugenholtz, Eduard H., to North American Philips Co., Inc. Fail-safe monitor alarm circuit. 3,390,387, 6–25–68, Cl. 340—248.
Hughes Aircraft Co. : *See—*
  Forward, Robert L. 3,390,334.
  Walsh, Peter J., and Byrd. 3,389,566.
Hughes, George K., W. D. Coder, Jr., and M. A. Glaser, to The Dexter Corp. Resin composition and method of preparing same, said resin resulting from the reaction of bisphenol. formaldehyde and a spaced polyphenol. 3,390,128, 6–25–68, Cl. 260—51.
Hughes-Owens Co. Ltd., The : *See—*
  Gray Harold W., and Watt. 3,389,520.
Hughes, Ralph C., and R. L. Every, to Continental Oil Co. Transportation of liquids and slurries. 3,389,714, 6–25–68, Cl. 137—13.
Hughes Tool Co. : *See—*
  Morris, Wilford V. 3,389,760.
Hull, Donald R., to E. I. du Pont de Nemours and Co. Method for attaching sliced aligned filaments to a backing. 3,390,034. 6–25–68, Cl. 156—72.
Humes, Daniel B. Decorative non-burning candle device. 3,390,043, 6–25–68, Cl. 161—19.
Humphrey, David H. Filing mechanism. 3,389,944, 6–25–68, Cl. 312—193.
Hunt Foods and Industries, Inc. : *See—*
  Wolfe, Wayne F., Miller, A. M. and R. 3,389,810.
Hunt, James P., to White Avionics Corp. Rotating light conductor for instrument reading. 3,390,274, 6–25–68, Cl. 250—231.
Hurwitz, Marvin J., and D. M. Fenton, to Rohm and Haas Co. Fulvene compositions and polymers. 3,390,156, 6–25–68, Cl. 260—346.8.
Husges, Walter : *See—*
  Bruder, Karl, and Husges. 3,389,652.
Hyatt, Asher A., to Monsanto Research Corp. Trialkyl nitroso-substituted aromatic quaternary ammonium halides. 3,390,178, 6–25–68, Cl. 260—567.6.
Hydro-Air Engineering, Inc. : *See—*
  Moehlenpah, Walter C. 3,389,528.
I.M.N., Industries Corp. : *See—*
  Schonberger, Milton. 3,389,500.
Iannicelli, Joseph, to J. M. Huber Corp. Polyurethanes containing amino orgonosilane modified clay. 3,390,120, 6–25–68, Cl. 260—37.
Ideal Toy Corp. : *See—*
  Owen, Charles L., Silhavy, and Meresz. 3,389,915.
Idees : *See—*
  Ramis. Jean. 3.389,833.
Igarashi, Ryo, to Nippon Electric Co., Ltd. Associative memory elements employing field effect transistors. 3,390,382, 6–25–68, Cl. 340—173.
Igounenc, Georges A. M. : *See—*
  Cambon, Theophile F. L., and Igounenc. 3,389,988.
Illingworth, William T., to Texas Instruments, Inc. Electric resistance welder. 3,390,248, 6–25–68, Cl. 219—86.
Illinois Tool Works Inc. : *See—*
  Gutshall, Charles E. 3,389,734.
  Koepke, John A. 3,390,242.
  Turnbull, Albert E. 3,389,613.
Imadate, Hiroshi, to Toa Electric Co., Ltd. Particle counting device including fluid conducting means breaking up particle clusters. 3,390,326, 6–25–68, Cl. 324—61.
Imai, Hirosuke : *See—*
  Furukawa, Junji, Saegusa, and Imai. 3,390,129.
Imaoka, Minoru : *See—*
  Utakoji, Masaru, and Imaoka. 3,390,079.
Imperial Chemical Industries Ltd. : *See—*
  Thompson, Morice W., and Waite. 3,390,206.
  Woods, George. 3,390,214.
Indian Head Mills, Inc. : *See—*
  Duhl, Daniel. 3,389,583.
Industrial Nucleonics Corp. : *See—*
  Clemens, John E. 3,389,602.
Ingram, George. Portable water distillation apparatus. 3,390,056, 6–25–68, Cl. 202—83.
Inland Container Corp. : *See—*
  McKee, Thomas M. 3,389,848.
Interchemical Corp. : *See—*
  Bender, Howard S., Loew, and Resnick. 3,390,167.
International Business Machines Corp. : *See—*
  Carothers, James D., and Halfhill. 3,390,284.
  Hardardt, Alfred T. 3,389,461.
  Jones, Jackie R., and Ottesen. 3,390,347.
  Lohmann, Adolf W. 3,390,257.
  Miller, Lewis F., and Neisser. 3,390,104.
  Roller, Donald C. 3,389,773.
International Harvester Co. : *See—*
  Fiala, George T., and Pelton. 3,389,796.
  McGrew, Charles B., Jr. 3 390.309.
  Swanson, William C. 3,389,556.
International Machinery Corp. S.A. : *See—*
  Mencacci, Samuel A. 3,389,788.

International Nickel Co., Inc., The : *See—*
  Shaw, Stuart W. K., and Cook. 3,389,992.
International Pipe & Ceramics Corp. : *See—*
  Tashlick, Irving, and Grudus. 3,390,107.
International Shoe Co. : *See—*
  Collins, Frank L. 3,389,585.
International Standard Electric Corp. : *See—*
  Simmons, John G. B., and Verderber. 3,390,295.
International Telephone and Telegraph Corp. : *See—*
  Kleinknecht, Hans P. 3,390,352.
  Majkrzak, Charles P. 3,389,868.
  Marley, John. 3,390,308.
Inukai, Takashi, and M. Kasai. Formation of Diels-Alder adducts by contacting a 1,3-diene with a mixture of $AlCl_3$, a hydrocarbon solvent, and an acrylic acid ester dienophile. 3,390,169, 6–25–68, Cl. 260—468.
Iselin, Beat : *See—*
  Kessler, Werner, and Iselin. 3,390,144.
Ishikawa, Yoshiko. Coin holder. 3,389,710, 6–25–68, Cl. 133—6.
Ishizuka, Kazuo, to Mitsu-bishi Pencil Co., Ltd. Method of making ball pens. 3,389,456, 6–25–68, Cl. 29—441.
Ivanov, Anatoly I. : *See—*
  Morozov, Evgeny I., Khromob, Ivanov, and Goloschekov, 3,389,743.
Ives, H. B., Co., The : *See—*
  Coopersmith, Leo. 3,389,854.
Ivey, Kenneth H. : *See—*
  Miller, John L., Jr., and Ivey. 3,390,046.
Iwata, Junzo : *See—*
  Miura, Takeo, and Iwata. 3,390,258.
Izenour, George C., to Century Lighting, Inc. Gang of variable resistance devices with removable board carrying settable taps. 3,390,366, 6–25–68, Cl. 338—130.
Jacob, Karlheinz, to Grundig Electro-Mechanische Versuchstalt. Storing device for convoluted tape and the like. 3,389,942, 6–25–68, Cl. 312—20.
Jacobs, John, III, to Sonic Engineering Corp. Liquid level responsive device. 3,389,603, 6–25–68, Cl. 73—308.
Jacobsen, Paul W. : *See—*
  Weber, Herbert H., and Jacobsen. 3,389,679.
Jacoby, Charles E., to SI Handling Systems, Inc. Low profile conveyor. 3,389,662, 6–25–68, Cl. 104—172.
Jaeger, Roland C., to Societe Anonyme Pour l'Industrie Chimique. a-(Thienyl-2)-4-stilbenol. 3,390,147, 6–25–68, Cl. 260—240.
Jager, Jolie : *See—*
  Dijken, Reinder H., Jager, and Krikke. 3,390,289.
James, John W. : *See—*
  Baker, James A., James, and Polkinhorne. 3,390,051.
Janata, Vladimir, and V. Bydzovsky, to Spofa, Sdruzeni podniku pro zdravotnickou vyrobu. Aromatic quaternary ammonium salts with disinfectant activity. 3,390,158, 6–25–68, Cl. 260—404.
Janniche, Paul J., Jr. : *See—*
  Cancro, Ciro A., and Janniche. 3,390,282.
Jantzen, George H., to M. Steinthal & Co., Inc. Tiedown buckle. 3,389,440, 6–25–68, Cl. 24—196.
Japan Stationery Co., Ltd., The : *See—*
  Matsumoto, Hiroyuki. 3,389,955.
Jarrett, Robert D. : *See—*
  Holm, Niels W., and Jarrett. 3,390,099.
Jefferson Chemical Co., Inc. : *See—*
  Moss, Philip H., Yeakey, and Speranza. 3,390,184.
Jepson, Ivar, J. W. Morgan, and J. W. Richmond, to Sunbeam Corp. Method of making clock motor and movement. 3,389,452, 6–25–68, Cl. 29—177.
Jerome, Wallace H. Method of loading turkeys and the like. 3,389,690, 6–25–68, Cl. 119—82.
Jerome, Wallace H. Poultry loading device. 3,389,780, 6–25–68, Cl. 198—165.
Jeschke, Norbert : *See—*
  Backe, Wolfgang, Mobius, Becker, and Jeschke. 3,389,557.
Jezerski, Vincent W. : *See—*
  Wilcox, Isaac L., and Jezerski. 3,389,896.
John Frederick W., to The Nagle Co., Inc. Rinser. 3,389,712, 6–25–68, Cl. 134—166.
Johns-Manville Corp. : *See—*
  De Gaugue, Charles L. E. 3,390,113.
Johnson, Cecil M., and S. E. Ross, to Fisher Hovernor Co. High and low pressure wellhead shut-in valve. 3,389,718, 6–25–68, Cl. 137—492.5.
Johnson, Don E., and E. A. Porter. Flash boiler. 3,389,692, 6–25–68, Cl. 122—41.
Johnson, Howard W., to Solo Cup Co. Dispenser mounting means. 3,389,883, 6–25–68, Cl. 248—224.
Johnson, James R. Drafting device for constructing perspective drawings. 3,389,470, 6–25–68, Cl. 33—77.
Johnson, John H., to Art Metal, Inc. Closure hinging and counterbalance device. 3,389,423, 6–25–68, Cl. 16—75.
Johnson & Johnson : *See—*
  Alden, Harry E. 3,389,436.
  Painter, Erle V., Mesek, and Shepherd. 3,390,218.
Jones, Harold B., and T. E. Zmuda, to Leitner Equipment Co. Self-closing cabinet doors. 3,389,943, 6–25–68, Cl. 312—138.
Jones, Jackie R., and H. Ottesen, to International Business Machines Corp. Sample and hold circuit. 3,390,347, 6–25–68, Cl. 330—51.
Jorda, Robert M. : *See—*
  Bonner, Richard B., and Jorda. 3,390,007.
Jorgensen, Jorgen. Fermentation process for producing alcoholic beverages from microalgae. 3,389,998, 6–25–68, Cl. 99—35.
Jureit, John C., and B. L. Smith, to Automated Building Components, Inc. Apparatus for unloading and storing wooden structural elements. 3,389,812, 6–25–68, Cl. 214—7.
Kabushiki Kaisha Hitachi Seisakusko and Hitachi Denshi Kabushiki Kaisha : *See—*
  Miura, Takeo, and Iwata. 3,390,258.
Kabushiki Kaisha Tanaka Seisakusho : *See—*
  Nakanishi, Minoru, and Hayasaki. 3,389,861.
Kadosch, Marcel, C. F. Pavlin, and E. Mace, to Societe Bertin & Cie. Fluidic device for alternately filling and emptying an enclosure. 3,389,698, 6–25–68, Cl. 128—1.
Kahl, William G., Jr., J. Gally, Jr., and P. F. Cavanaugh, to Arrowhead Enterprises, Inc. Intrusion detector. 3,390,388, 6–25–68. Cl. 340—258.
Kamerer, George R., and L. F. Crowley, to Radio Corp. of America. Pulse rate limiting circuit. 3,390,339, 6–25–68, Cl. 325—478.
Kammiller, Neil A., and B. W. Howald, to Lorain Products Corp. Transistor inverter for synchronized operation with a like paralleled inverter. 3,390,320, 6–25–68, Cl. 321—2.
Kampmann, Friedrich W., and H. Thome, to Knapsack Aktiengesellschaft. Means for tightening current supply plates on electrodes in open or closed type electric furnaces. 3,390,221, 6–25–68, Cl. 13—16.
Kanai. Kazumichi : *See—*
  Otsuka, Eiji, Kanai, and Chikaoka. 3,390,058.
Kane, Neil G. : *See—*
  Williams, Henry T., and Kane. 3,389,839.
Kaneko, Yoichi : *See—*
  Sawada, Ryoka, and Kaneko. 3,390,301.
Kansas City Star Co., The : *See—*
  Betts, Minford E., Hatton, and Asper. 3,389,870.
Kanzler, Ernest C., Jr. Balance game apparatus. 3,389,910, 6–25–68. Cl. 273—1.
Kaplan, Martin N. Statorless homopolar motor or reaction torque generator. 3,390,290, 6–25–68, Cl. 310—156.
Kaplan, Melvin, and J. A. Arcesi, to Allied Chemical Corp. Chlorinated polyisocyanate composition and preparation thereof. 3,390,164, 6–25–68, Cl. 260—453.
Karcher, Ralph E., Jr. : *See—*
  Banks, David E., Herdeg, Karcher, Khambaty, and Mercaldi, 3,389,628.
Karle, Franklin J. : *See—*
  Gohlke, Roland S., and Karle. 3,390,264.
Kasai, Michio : *See—*
  Inukai, Takashi, and Kasai. 3,390,169.
Kasper, Heinrich : *See—*
  Beier, Ernst. Bornhoft, Durner, Kasper, Maus, Planitzer, and Zeyher. 3,389,637.
Kat, Henderikus J., and J. C. Meuwissen, to Meuwissen Industrie N.V. Pallets. 3,389,813, 6–25–68, Cl. 214—10.5.
Kataoka, Hirohisa : *See—*
  Katsumura, Tatsuo, Kataoka, and Mizuno. 3,390,159.
Katsumata, Shigeru : *See—*
  Utsugi, Yoshio, Katsumata, and Onozaki. 3,390,069.
Katsumura, Tatsuo, H. Kataoka, and Y. Mizuno, to Nitto Chemical Industrial Co., Ltd. Process for preparing dioctyltin oxide. 3,390,159, 6–25–68, Cl. 260—429.7.
Katz, Jack. Retainer assembly. 3,389,735, 6–25–68, Cl. 151—41.76.
Kauder, Otto S. : *See—*
  Burford, Bruce L., and Kauder. 3,390,121.
Kauffman, Robert J., to Narad, Inc. Doorway void filler. 3,389,665, 6–25–68, Cl. 105—369.
Kautsky, George J., to Chevron Research Co. Gasoline fuel containing alkyl orthophosphates of N-aminoalkyl-substituted 2-amino-alkane detergents. 3,389,980, 6–25–68, Cl. 44—69.
Kawamoto, Mitsugi. Impact wrench. 3,389,756, 6–25–68, Cl. 173—93.5.
Keast, Russell R., and D. S. Corliss, to FMC Corp. Dishwashing detergent preparations containing sodium or potassium dichloroisocyanurate. 3,390,092, 6–25–68, Cl. 252—99.
Keck, Max H., and J. R. Wilson, to The Goodyear Tire & Rubber Co. Ethylene glycol-terephthalic acid-dimer acid copolyester resin. 3,390,108, 6–25–68, Cl. 260—7.5.
Kelley, Thomas M., and G. C. Underwood. Flip-top folding voting booth. 3,389 947, 6–25–68, Cl. 312—258.
Kelly, Harold S., to Phillips Petroleum Co. Thermoplastic articles and process and apparatus for making same. 3,389,431, 6–25–68, Cl. 18—14.
Kelly, James A. : *See—*
  Zavertnik, Marshall G., Kelly, Rongey, and Williams. 3,390,369.
Kelsey-Hayes Co. . *See—*
  Robinette, Richard T. 3,389,642.
Kelso, Leo J., to Walker Mfg. Co. Muffler with extended chamber. 3,389,764, 6–25–68, Cl. 181—48.
Kember, Raymond C., A. J. Burnett, and R. W. Gosling, to Thorn Electrical Industries Ltd. Lamp fittings for tungsten-iodine lamps. 3,390,372, 6–25–68, Cl. 339—112.
Kemp, Bobbie G. Centrifugal refrigeration machine with plural motors. 3,389,577, 6–25–68, Cl. 62—499.
Kennedy, Roland L. Device for preventing hypotension syndrome of late pregnancy. 3,389,702, 6–25–68, Cl. 128—361.
Kenney, Mahlon W., M. Weathersby, and A. J. Danko, to The Seeburg Corp. Automatic delivery mechanism. 3,389,948, 6–25–68, Cl. 312—310.
Kenron Aluminum & Glass Corp. : *See—*
  Sarlo, Dominick J., and Siegal. 3,389,512.
Kent Engineering : *See—*
  Van Noord, Andrew J. 3,389,874.
Kessler, Werner, and B. Iselin, to Ciba Corp. Process for the selective removal of substituted phenylsulfenyl protective groups in the synthesis of peptides. 3,390,144, 6–25–68, Cl. 260—112.5.

- Khambaty, Abdullah A.: *See—*
  - Banks, David E., Herdeg, Karcher, Khambaty, and Mercaldi. 3,389,628.
- Khromob, Alexei M.: *See—*
  - Morozov, Evgeny I., Khromob, Ivanov, and Goloschekov. 3,389,743.
- Kibler, Charles J., to Eastman Kodak Co. Prepolymer crystallization and solid phase polymerization. 3,390,134, 6-25-68, Cl. 260—75.
- Kieft, Roy T., and J. M. Roeh. Boat dock assembly. 3,389,675, 6-25-68, Cl. 114—230.
- Killark Electric Mfg. Co.: *See—*
  - Zavertnik, Marshall G., Kelly, Rongey, and Williams. 3,390,369.
- Kimura, Hironori: *See—*
  - Sinohara, Sinitsu, Yokoyama, Kimura, and Miyaucti. 3,389,891.
- King-Seeley Thermos Co.: *See—*
  - Cremer, Robert L. 3,389,495.
  - Cremer, Robert L. 3,389,496.
  - Cremer, Robert L. 3,389,497.
  - Cremer, Robert L. 3,389,498.
- Kirshenbaum, Isidor, C. J. Boubouiis, and C. M. White, to Esso Research and Engineering Co. Flexible polyureas. 3,390,137, 6-25-68, Cl. 260—77.5.
- Kish, Richard E.: *See—*
  - Straniti, Salvatore, and Kish. 3,389,746.
- Kishel, Joseph F., to Weston Instruments, Inc. Tri-axial impact indicator. 3,389,607, 6-25-68, Cl. 73—492.
- Kisling, James W., to Schlumberger Technology Corp. Well logging methods and apparatus having reversible function electrode arrays. 3,390,323, 6-25-68, Cl. 324—10.
- Kissinger, Robert W., and S. Barbasso, Jr., to North American Philips Co., Inc. Radar system employing variable frequency pulses. 3,390,391, 6-25-68, Cl. 343—17.2.
- Kistler Instrumente A.G.: *See—*
  - Sonderegger, Hans C. 3,390,287.
- Kittridge, John B., and A. L. Micchelli, to Minnesota Mining and Mfg. Co. Epoxy resins cured by novel polyamines. 3,390,124, 6-25-68, Cl. 260—47.
- Klager, Karl: *See—*
  - Frankel, Milton B., and Klager. 3,390,183.
- Klawsnik, Frank, and W. T. Patton, to Radio Corp. of America. Parallel amplifiers with input and output coupling by means of closely-packed, electrically small input and output radiators. 3,390,333, 6-25-68, Cl. 325—14.
- Klein, Georges: *See—*
  - Dubois, Andre, and Klein. 3,390,288.
- Kleine-Wischede, Karl. Automatic chain welding machine. 3,389,552, 6-25-68, Cl. 59—16.
- Kleinknecht, Hans P., to International Telephone and Telegraph Corp. Tunnel-effect semiconductor, used as an oscillator or amplifier, forms part of surface of waveguide or chamber. 3,390,352, 6-25-68, Cl. 331—107.
- Kleinman, Henry M., to Radio Corp. of America. Transistor protection circuit. 3,390,345, 6-25-68, Cl. 330—11.
- Klibanoff, Allen L.: *See—*
  - Cerych, John Z., and Klibanoff. 3,390,026.
- Kline, Kenneth H., to North American Rockwell Corp. Voltage sensitive integration circuit. 3,390,341, 6-25-68, Cl. 328—127.
- Knable, Norman: *See—*
  - Davidovits, Paul, Novick, and Knable. 3,390,350.
- Knapp, Mary M., and H. J. Girard. Pipe line swipe. 3,389,417, 6-25-68, Cl. 15—104.06.
- Knapsack Aktiengesellschaft: *See—*
  - Heymer, Gero, Cremer, and Harnisch. 3,389,958.
  - Kampmann, Friedrich W., and Thome. 3,390,221.
- Knudson, Clarence B. Switch actuating device. 3,389,610, 6-25-68, Cl. 74—42.
- Knutson, Carroll F.: *See—*
  - Bohor, Bruce F., Cronin, and Knutson. 3,389,750.
- Kobayashi, Takashi: *See—*
  - Matsuyoshi, Masaya, Kobayashi, and Sako. 3,390,401.
- Koch, Otto: *See—*
  - Stein, Werner, Koch, and Weiss. 3,390,096.
- Kocher, Ernst-Ulrich, O. Bayer, K. Wagner, and W. Von Der Emden, to Farbenfabriken Bayer Aktiengesellschaft. Process for the production of cyclic solphonyl nitrogenous copolymers of formaldehyde. 3,390,130, 6-25-68, Cl. 260—67.5.
- Kocsis, Louis L.: *See—*
  - Buchowski, Roman, and Kocsis. 3,389,704.
- Koepke, John A., to Illinois Tool Works, Inc. Switch mechanism utilizing a single spring element to provide lost motion. 3,390,242, 6-25-68, Cl. 200—153.
- Kohler Co.: *See—*
  - Povalski, Eugene A., and Bolgert. 3,389,717.
- Kollar, John, and R. S. Barker, to Halcon International, Inc. Method for preparing amine N oxides. 3,390,182, 6-25-68, Cl. 260—583.
- Kohn, Theodore: *See—*
  - Takewell, Robert B., and Kohn. 3,390,006.
- Konishi, Masahiko: *See—*
  - Dazai, Miyoji, and Konishi. 3,390,175.
- Koppers Co., Inc.: *See—*
  - Leston, Gerd. 3,390,198.
- Kovacs, Lorand, and R. A. Heisler, to The Heisler Co. Apparatus for orienting eared containers. 3,389,778, 6-25-68, Cl. 198—33.
- Kramer, David E., to Daniel Woodhead Co. Cable clamp for electrical wiring device. 3,390,371, 6-25-68, Cl. 339—107.
- Krantz, H.: *See—*
  - Buysch, Heinrich. 3,389,448.
- Kranz, Joachim, and W. Gerstner, to Badische Anilin- & Soda-Fabrik Aktiengesellschaft. Process for the production of β-quinophthalines. 3,390,149, 6-25-68, Cl. 260—240.7.
- Kreider, Leonard C., to Goodrich-Gulf Chemicals, Inc. Method of making ethylidene-1-cyclohexenes. 3,390,193, 6-25-68, Cl. 260—666.
- Krikke, Minne: *See—*
  - Dijken, Reinder H., Jager, and Krikke. 3,390,289.
- Kristoff, Basil L.: *See—*
  - Winters, John D., Visser, Kristoff, and Herring. 3,389,645.
- Kritzler, William R.: *See—*
  - Goldman, Richard L., Kritzler, and Sirvydas. 3,389,457.
- Krueger, Theodore H., and E. E. Sharpe, to Better Packages, Inc. Dispenser for gummed tape. 3,389,681, 6-25-68, Cl. 118—44.
- Krugener, Heinz: *See—*
  - Nicolaus, Norbert, and Krugener. 3,389,946.
- Krups, Robert: *See—*
  - Baumann, Kurt. 3,389,467.
- Kuhl, Hans. Flier for roving machines. 3,389,547, 6-25-68, Cl. 57—117.
- Kummerman, Henri, and U. J. Beas, to MacGregor & Co. (Naval Architects) Ltd. Closing device for hatch covers and the like. 3,389,739, 6-25-68, Cl. 160—188.
- Kutschera, Peter: *See—*
  - Frerker, Gert, Kutschera, Marx, and Schwindt. 3,390,010.
- Lachaussee, Henri, and G. Morieras, to Societe Rhodiaceta. Cords. 3,389,548, 6-25-68, Cl. 57—140.
- La Huis Clinical Laboratories, Inc.: *See—*
  - Masen, John M. 3,389,968.
- Lake, Abraham W. Barbeque structure and mounting means. 3,389,696, 6-25-68, Cl. 126—25.
- Lake, Alan W., to Henry W. Peabody (Industrial) Ltd. Cold rolling lubrication. 3,390,084, 6-25-68, Cl. 252—34.7.
- Langston Co., The: *See—*
  - Moser, Henry W., and Meister. 3,390,040.
- Larkfeldt, Birger, and J. Rosenberg, to Aktiebolaget Svenska Flaktfabriken. Device for the supply of ventilating air in rooms. 3,389,648, 6-25-68, Cl. 98—41.
- Larkfeldt, Birger, and A. Svensson, to Aktiebolaget Svenska Flaktfabriken. Valve for supplied or exhausted room air. 3,389,649, 6-25-68, Cl. 98—41.
- La Salle Machine Tool, Inc.: *See—*
  - Sattler, Robert I. 3,389,454.
  - Van den Kieboom, Johannes L. 3,389,413.
- Lavine, Arthur A. Obstacle warning device. 3,390,271, 6-25-68 Cl. 250—199.
- Lawrence, John A., to Her Majesty's Postmaster General. Telecommunication systems having primary and secondary ranks of matrices. 3,390,236, 6-25-68, Cl. 179—18.
- Lawrence, Robert W.: *See—*
  - Fee, Harry R., Lawrence, and Marks. 3,390,028.
  - Fee, Harry R., Lawrence, and Marks. 3,390,030.
  - Albert, Alfred A., and Lawrence. 3,390,032.
- Lear Siegler, Inc.: *See—*
  - Tersch, Richard W. 3,389,476.
- Leary, Ralph J., E. L. Stogryn, and P. A. Argabright, to Esso Research and Engineering Co. 2,3-bis-(difluoramino)-butane-1,4-diisocyanate and polyurethanes prepared therefrom. 3,390,136, 6-25-68, Cl. 260—77.5.
- Lebourg, Maurice P., to Schlumberger Technology Corp. Zone protection. 3,389,752, 6-25-68, Cl. 166—46.
- Lebrun, Jean P.: *See—*
  - Finzi, Sergio, Faure, and Lebrun. 3,389,823.
- Lee, Donald E., to Armour Agricultural Chemical Co. Manufacture of triple superphosphate. 3,389,959, 6-25-68, Cl. 23—109.
- Leeds & Northrup Co.: *See—*
  - Cranch, Edward J., and Hickox. 3,390,386.
- Leeman, Jan N. J., to Stamicarbon N.V. Cyclone washer with water only. 3,389,793, 6-25-68, Cl. 209—211.
- Leesona Corp.: *See—*
  - Pitts, Thomas E. 3,389,867.
- Leitner Equipment Co.: *See—*
  - Jones, Harold B., and Zmuda. 3,389,943.
- Lemcke, George A., and P. A. Tucher, to Parish Mfg. & Distributing Corp. Bag making apparatus and method. 3,389,643, 6-25-68, Cl. 93—8.
- Lemelson, Jerome H., to The Triax Co. Load responsive control means for a material handling apparatus. 3,389,814, 6-25-68, Cl. 214—16.4.
- Lennox Industries, Inc.: *See—*
  - Dirk, William R. 3,389,853.
- Leonard, Louis H., Jr., to Carrier Corp. Heating and cooling system. 3,389,747, 6-25-68, Cl. 165—39.
- Leonard, Vurnen J., to Honeywell, Inc. Optical recorder utilizing a fresnel/lenticular lens system. 3,390,399, 6-25-68, Cl. 346—109.
- Leston, Gerd, to Koppers Co., Inc. Tertiary-butyl-5-methyl catechol as polymerization inhibitor for hot styrene. 3,390,198, 6-25-68, Cl. 260—666.5.
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- Levinos, Steven, to General Aniline & Film Corp. Protective localized area resin coatings for electroplating. 3,390,061, 6-25-68, Cl. 204—15.
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- Lewis, Ronald G.: *See—*
  - Erman, William F., Lewis, and Gustafson. 3,390,197.

- Liberty Fabrics of New York, Inc.: *See—*
  - Alexander, Norman J. 3,389,582.
- Lidgard, Edward J., to Flotepak Corp. Shipping container for frangible material. 3,389,785, 6-25-68, Cl. 206—62.
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- Liebscher, Anton: *See—*
  - Rollman, Ernest E., Liebscher, and Szerenyi. 3,390,213.
- Lignes Telegraphiques & Telephoniques: *See—*
  - Hannigsberg, Claude. 3,390,283.
- Lindberg, John E., Jr. Sensor for heat or temperature detection and fire detection. 3,390,365, 6-25-68, Cl. 337—299.
- Linder, Bernd: *See—*
  - Eagles, Allen E., and Linder. 3,389,951.
- Linn, Kenneth, to Maywood, Inc. Decorative mold guide apparatus. 3,389,474, 6-25-68, Cl. 33—174.
- Linning, George F.: *See—*
  - Weyrich, Arthur G., and Linning. 3,390,363.
- Lion, Charlotte, to Esso Research and Engineering Co. Polyester additives for hydrocarbon oil compositions and process of preparing the same. 3,390,083, 6-25-68, Cl. 252—33.4.
- Lion, William D., and R. M. Stewart, to Gulf Research & Development Co. Viscosity measurement. 3,389,596, 6-25-68, Cl. 73—60.
- Lipscomb, Willis L. Columnar cellular louver light control unit. 3,390,263, 6-25-68, Cl. 240—108.
- Litchfield, John H.: *See—*
  - Brison, Robert J., and Litchfield. 3,390,000.
- Litterst, Ralph S., and F. M. Brennan, to Texas Instruments Inc. Liquid insertion and machine. 3,389,723, 6-25-68, Cl. 141—90.
- Llewellyn, Peter M., to Varian Associates. Ion cyclotron resonance mass spectrometer having means for detecting the energy absorbed by resonant ions. 3,390,265, 6-25-68, Cl. 250—41.9.
- Lockheed Aircraft Corp.: *See—*
  - Bush, Charles R., and Cook. 3,389,924.
- Loew, Frederic C.: *See—*
  - Bender, Howard S., Loew, and Resnick. 3,390,167.
- Logan, Campbell F. Fluid recovery system and method. 3,389,559, 6-25-68, Cl. 61—1.
- Loggins, John T.: *See—*
  - Mott, George E., and Loggins. 3,389,562.
- Lohmann, Adolf W., to International Business Machines Corp. Optical computer for correlation and convolution. 3,390,257, 6-25-68, Cl. 235—181.
- Lojkutz, Bruno V., to Gits Bros. Mfg. Co. Seal adapted for a link belt assembly. 3,389,921, 6-25-68, Cl. 277—235.
- Long, Elton B., to J. I. Case Co. Overcenter backhoe. 3,389,816, 6-25-68, Cl. 214—138.
- Lonza Ltd.: *See—*
  - Reverdin, Andre P., Wicht, and Volken. 3,390,109.
- Lorain Products Corp.: *See—*
  - Kammiller, Neil A., and Howald. 3,390,320.
  - Plow, Robert J. 3,390,321.
- Lorenz, Rainer, K. Witter, and J. Schonefeldt, to North American Philips Co., Inc. Vibrating scraper for inking intaglio printing molds with dry powder. 3,389,655, 6-25-68, Cl. 101—157.
- Love, William D., Jr., and M. J. Billings, to Haveg Industries, Inc. Joint connection. 3,389,923, 6-25-68, Cl. 285—321.
- Lovell, James B., and R. W. Baer, to American Cyanamid Co. Sulfur containing diphenylene diphosphates. 3,390,209, 6-25-68, Cl. 260—929.
- Lowenfish, Joshua D. Heating device. 3,390,251, 6-25-68, Cl. 219—213.
- Lowrey, Walter E. Device for holding a fish, especially for use in connection with ice fishing. 3,389,491, 6-25-68, Cl. 43—53.5.
- Lubrizol Corp., The: *See—*
  - Le Suer, William M., and Norman. 3,390,082.
- Ludwig, Milton: *See—*
  - Postlewaite, William R., and Ludwig. 3,389,563.
- Lummus Co., The: *See—*
  - Sze, Morgan C. 3,390,200.
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- Lundin, Robert S., to General Time Corp. Incompatible modulus counting device. 3,390,254, 6-25-68, Cl. 235—92.
- Luscombe, Arthur J. Power transmission system for tractor powered implements. 3,389,609, 6-25-68, Cl. 74—15.2.
- Lushbaugh, Warren A.: *See—*
  - Dryden, Hugh L. 3,390,378.
- Lyman, George F. Reel. 3,389,872, 6-25-68, Cl. 242—71.8.
- Lyon Metal Products, Inc.: *See—*
  - Studinski, Robert A., and Stewart. 3,389,949.
- Lyon, William B. Supporting track and advancing pawls for article display and storage apparatus. 3,389,804, 6-25-68, Cl. 211—1.5.
- M & T Chemicals Inc.: *See—*
  - Bedi, Ram D. 3,390,060.
  - Passal, Frank. 3,390,062.
- Maas, John E., and T. F. Osika, to McGill Mfg. Co., Inc. Toggle switch assembly. 3,390,237, 6-25-68, Cl. 200—67.
- Macala, John. Hinge plate recessing device. 3,389,729, 6-25-68, Cl. 145—60.5.
- Mace, Edouard: *See—*
  - Kadosch, Marcel, Pavlin, and Mace. 3,389,698.
- MacGregor & Co. (Naval Architects) Ltd.: *See—*
  - Kummerman, Henri, and Beas. 3,389,739.
- Mack, Charles D., to Varian Associates. High frequency electron discharge devices of the klystron type incorporating below cut-off waveguide leaky wall H-field tuners. 3,390,300, 6-25-68, Cl. 315—5.21.
- Mackey, Richard C.: *See—*
  - Witte, Robert S., and Mackey. 3,390,268.
- MacPhee, Craig, and R. Ruelle, to United States of America, Interior. Fish culture by squawfish population eradication. 3,389,685, 6-25-68, Cl. 119—3.
- Majkrzak, Charles P., to International Telephone and Telegraph Corp. Device for coiled stowage of cables. 3,389,868, 6-25-68, Cl. 242—54.
- Malakoff, Irving, to Obi Inc. Artificial grass mat. 3,390,044, 6-25-68, Cl. 161—19.
- Malia, Michael W.: *See—*
  - Brown, Robert R., Malia, Ruete, and Silva. 3,390,331.
- Manchester, Kenneth E., to Sprague Electric Co. Method of making a semiconductor by ionic bombardment. 3,390,019, 6-25-68, Cl. 148—1.5.
- Mandekic, Anthony V. Power-operated mechanical steering apparatus for trailers and semi-trailers. 3,389,762, 6-25-68, Cl. 180—79.2.
- Mandelkorn, Joseph. Semiconductor material and method of making same. 3,390,020, 6-25-68, Cl. 148—1.5.
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- Manning, Evan N., and R. S. Henderson. Garment support. 3,389,807, 6-25-68, Cl. 211—94.
- Marand, Jean, to Geigy Chemical Corp. Plug valve assembly for aerosol type dispensers of fluid products. 3,389,837, 6-25-68, Cl. 222—193.
- Marbach, Edward P.: *See—*
  - Marbach, Jacob P. and E. P. 3,389,835.
- Marbach, Jacob P. and E. P. Stationary analytical sampling device. 3,389,835, 6-25-68, Cl. 222—135.
- Marforio, Nerino, to S.p.A. Virginio Rimoldi & C. Sewing machine provided with a cutting device. 3,389,668, 6-25-68, Cl. 112—125.
- Marietta, James W., Jr.: *See—*
  - Tipper, Maynard J. G., and Marietta. 3,389,533.
- Marks, Orin W.: *See—*
  - Fee, Harry R., Lawrence, and Marks. 3,390,028.
  - Fee, Harry R., Lawrence, and Marks. 3,390,030.
- Marley, John, to International Telephone and Telegraph Corp. Multiple chip integrated circuit assembly. 3,390,308, 6-25-68, Cl. 317—100.
- Maron, Clarence: *See—*
  - Goess, John A., and Maron. 3,389,503.
- Marquardt Corp., The: *See—*
  - Clanton, Henry M., and Crofts. 3,390,256.
  - Goldstein, Allen E., Rouse, and Schroeter. 3,389,555.
- Martin Concrete Products Corp.: *See—*
  - Zemsky, Calvin L. 3,389,560.
- Martin, James C., to Eastman Kodak Co. Alkoxyvinylcyclobutanone compounds and process for their preparation. 3,390,185, 6-25-68, Cl. 260—586.
- Martin, Joseph: *See—*
  - Apblett, William R., Martin, and Philipps. 3,390,250.
- Martin, Louis. Device for transferring flat or sheet products. 3,389,908, 6-25-68, Cl. 271—74.
- Martin Marietta Corp.: *See—*
  - Squires, Thurston W. 3,390,344.
- Martz, Paul D.: *See—*
  - Taylor, Donald M., and Martz. 3,389,686.
- Marx, Matthias: *See—*
  - Frerker, Gert, Kutschera, Marx, and Schwindt. 3,390,010.
- Maschinenfabrik Rieter A.G.: *See—*
  - Grunder, Hans-Rudolf, and Merz. 3,389,545.
- Maschinenfabrik Stromsg G.m.b.H.: *See—*
  - Bohm, Dieter H. 3,389,769.
- Masciantonio, Philip X., and W. E. Peoples, to United States Steel Corp. Method of recovering quinoline bases. 3,390,151, 6-25-68, Cl. 260—283.
- Masen, John M., to La Huis Clinical Laboratories, Inc. Method of determining thyroxin iodine in blood serum. 3,389,968, 6-25-68, Cl. 23—230.
- Masoner, Clarence B.: *See—*
  - Miller, Jack M., and Masoner. 3,389,568.
- Master Lock Co.: *See—*
  - Foote, Daniel J. 3,389,586.
- Master Pneumatic-Detroit, Inc.: *See—*
  - Thrasher, George E., Jr. 3,389,799.
- Mathers, Kenneth R., to Niagara Therapy Mfg. Corp. Roller massage assembly. 3,389,699, 6-25-68, Cl. 128—33.
- Mathews, Joseph F.: *See—*
  - Moss, Fred D., and Mathews. 3,390,207.
- Matsumoto, Hiroyuki, to Dainihon Bungu Kabu Shikigaisha, d/b/a The Japan Stationery Co., Ltd. Push-out type mechanical pencil. 3,389,955, 6-25-68, Cl. 401—94.
- Matsushita Seiko Co., Ltd.: *See—*
  - Matsuyoshi, Masaya, Kobayashi, and Sako. 3,390,401.
- Matsuyoshi, Masaya, T. Kobayashi, and H. Sako, to Matsushita Seiko Co., Ltd. Air translating apparatus. 3,390,401, 6-25-68, Cl. 230—117.
- Matthews, Clifford N.: *See—*
  - Birum, Gail H., and Matthews. 3,390,165.
  - Birum, Gail H., and Matthews. 3,390,166.
- Matthew, Morton P., to Bunker-Ramo Corp. Document positioning and feeding control for printers. 3,389,658, 6-25-68, Cl. 101—287.
- Matthews, Robert E.: *See—*
  - Freedlander, Abraham L., Garrett, and Matthews. 3,389,541.
- Mauer, William V. System for controlling refrigerant condensing pressures by dynamic hydraulic balance. 3,389,576, 6-25-68, Cl. 62—196.
- Maus, Eicke: *See—*
  - Beier, Ernst, Bornholfft, Durner, Kasper, Maus, Planitzer, and Zevher. 3,389,637.
- Mayer, Abbott F., and H. A. Stover, to Collins Radio Co. ADF system employing angle modulation. 3,390,392, 6-25-68, Cl. 343—117.

Maywood, Inc. : *See—*
Linn, Kenneth. 3,389,474.
McClellan, Bingham A. : *See—*
Peters, John K., and McClellan. 3,389,490.
McCulloch Corp. : *See—*
Dooley, James L. 3,389,694.
McDaniels, John D., Jr., to The Babcock & Wilcox Co. Control arrangement for a nuclear reactor. 3,390,052, 6–25–68, Cl. 176—35.
McDavid, William D., to Tenneco Chemicals, Inc. Modified rosin oils and their use in paper. 3,390,046, 6–25–68, Cl. 162—180.
McDermott, Hugh L., to Char-Lynn Co. Torque transmitting device. 3,389,618, 6–25–68, Cl. 74—804.
McDonough, James O., A. K. Susskind, and H. P. Grossimon, to Giddings & Lewis, Inc. Apparatus for numerical control of a multiaxes machine tool including interpolation and feedrate control. 3,390,315, 6–25–68, Cl. 318—162.
McFarland, James W. : *See—*
Austin, William C., Conover, McFarland, and Morgan. 3,390,148.
McFarland, Lowery J., to United States Steel Corp. Blast furnace bell. 3,389,899, 6–25–68, Cl. 266—27.
McGill, Howard L., and H. G. Smith, Jr., to Schlumberger Technology Corp. Effective seal forming device. 3,389,917, 6–25–68, Cl. 277—63.
McGill Mfg. Co., Inc. : *See—*
Maas, John E., and Osika. 3,390,237.
McGrath, William L., to Carrier Corp. Refrigerant condensate circuit in multiple-effect absorption refrigeration systems. 3,389,570, 6–25–68, Cl. 62—101.
McGrath, William L., to Carrier Corp. Multiple-effect absorption refrigeration systems. 3,389,571, 6–25–68, Cl. 62—101.
McGrath, William L., to Carrier Corp. Multiple-effect absorption refrigeration systems with refrigerant economizers. 3,389,574, 6–25–68, Cl. 62—101.
McGrew, Charles B., Jr., to International Harvester Co. Molded combination automotive glove compartment and electrical fuse panel. 3,390,309, 6–25–68, Cl. 317—116.
McKee, Thomas M., to Inland Container Corp. Packing member. 3,389,848, 6–25–68, Cl. 229—14.
McMinn, Curtis J., and S. A. Bruce, to Reynolds Metals Co. Cathode construction for aluminum reduction cell. 3,390,071, 6–25–68, Cl. 204—243.
McMinn, Robert E., to Black, Sivalls & Bryson, Inc. Pipeline scrubber. 3,389,537, 6–25–68, Cl. 55—337.
McNickle, Bernard F. : *See—*
Lewis, Eugene W., Warden, Mills, and McNickle. 3,389,468.
Mechema Ltd. : *See—*
Cutler, Neville G. 3,390,048.
Medart Engineering & Equipment Co., The : *See—*
Siegerist, Walter L., and Hecker. 3,389,589.
Medwin, Albert H., to Radio Corp. of America. Semiconductor translating circuit. 3,390,314, 6–25–68, Cl. 317—235.
Meinert, Harold W., to Ford Motor Co. Guard for tractor power takeoff shaft. 3,389,763, 6–25–68, Cl. 180—82.
Meister, Hans : *See—*
Moser, Henry W., and Meister. 3,390,040.
Mencacci, Samuel A., to International Machinery Corp. S.A. Apparatus for processing products in frangible containers. 3,389,788, 6–25–68, Cl. 209—74.
Menissier, Pierre : *See—*
Berruyer, Martial, and Menissier. 3,389,620.
Meos, Alexander I. : *See—*
Giller, Solomon A., Wolf, and Meos. 3,390,008.
Mercaldi, William B. : *See—*
Banks, David E., Herdeg, Karcher, Khambaty, and Mercaldi. 3,389,628.
Merck & Co., Inc. : *See—*
Chamberlin, Earl M., Slates, and Weinstock. 3,390,188.
Chemerda, John M., and Harris. 3,390,153.
Dulaney, Eugene L., and Putter. 3,390,055.
Gal, George. 3,390,154.
Henry, David W. 3,390,150.
Hucker, Howard B., and Christy. 3,390,179.
Taylor, Robert C., and Conn. 3,390,090.
Meresz, Henryk W. : *See—*
Owen, Charles L., Silhavy, and Meresz. 3,389,915.
Merz, Franz : *See—*
Grunder, Hans-Rudolf, and Merz. 3,389,545.
Mesek, Frederick K. : *See—*
Painter, Erle V., Mesek, and Shepherd. 3,390,218.
Metal Box Co., Ltd., The : *See—*
Fyfe, Donald R. 3,389,449.
Metrodynamics Corp., The : *See—*
Wales, Nathaniel B., Jr., and Grady. 3,390,359.
Meuwissen, Johan C. : *See—*
Kat, Henderikus J., and Meuwissen. 3,389,813.
Meuwissen Industrie N.V. : *See—*
Kat, Henderikus J., and Meuwissen. 3,389,813.
Meyer, Engelbert A., to Warren Fastener Corp. Molding assembly. 3,389,526, 6–25–68, Cl. 52—718.
Meyerhoff, Albert J., C. C. Huang, and C. B. Hebeler, to Burroughs Corp. Thin film cryogenic supercurrent measuring device. 3,390,330, 6–25–68, Cl. 324—117.
Micchelli, Albert L. : *See—*
Kittridge, John B., and Micchelli. 3,390,124.
Michael, Harold J., to North American Rockwell Corp. Metal treatment. 3,390,021, 6–25–68, Cl. 148—20.
Michielsen, Franciscus, to Miko P.V.B.A. Packing-filters and device for using such packing-filters. 3,389,650, 6–25–68, Cl. 99—295.
Michigan Bank : *See—*
Eberline, Richard F., Carmichael, and Schilling. 3,390,291.
Microdot, Inc. : *See—*
Russell, John D. 3,389,459.
Micromatic Hone Corp. : *See—*
Ellis, Myron P., Engle, Czubak, and Randlett. 3,390,068.
Miko P.V.B.A. : *See—*
Michielsen, Franciscus. 3,389,650.
Miller, Allen H. : *See—*
Brothman, Abraham, Gomery, Yanis, and Miller. 3,390,233.
Miller, Alwin M. : *See—*
Wolfe, Wayne F., and A. M. and R. Miller. 3,389,810.
Miller, Donald N., to E. I. du Pont de Nemours and Co. Process for producing strong nitric acid. 3,389,960, 6–25–68, Cl. 23—160.
Miller, Jack M., and C. B. Masoner, to Carnation Co. Method and apparatus for removing processing heat from a food product in filled and closed containers. 3,389,568, 6–25–68, Cl. 62—63.
Miller, John L., Jr., and K. H. Ivey, to United States of America, Interior. Method of making paper from mica flakes which have been subjected to hot aqua regia. 3,390,045, 6–25–68, Cl. 162—3.
Miller, Lewis F., and K. E. Neisser, Jr., to International Business Machines Corp. Electrical resistor compositions, elements and method of making same. 3,390,104, 6–25–68, Cl. 252—512.
Miller, Mary L., and H. J. Fornasar, to American Cyanamid Co. Alkali-etched, acrylate irradiation-grafted porous polytetrafluoroethylene felt and method for preparing same. 3,390,067, 6–25–68, Cl. 204—159.17.
Miller, Richard H., to General Electric Co. Electric circuit breaker with voltage-controlling resistances and means for switching the resistances in synchronism. 3,390,239, 6–25–68, Cl. 200—146.
Miller, Roland : *See—*
Wolfe, Wayne F., and A. M. and R. Miller. 3,389,810.
Miller, Wendell S. Light responsive apparatus for comparing cards or the like. 3,390,253, 6–25–68, Cl. 235—61.7.
Milligan, Charles T. : *See—*
Ehe, Albert L., and Milligan. 3,389,531.
Mills, Jack H. : *See—*
Lewis, Eugene W., Warden, Mills, and McNickle. 3,389,468.
Miner Industries, Inc. : *See—*
Friedman, Sol. 3,389,912.
Minesota Mining and Mfg. Co. : *See—*
Abere, Joseph F., and Brochman. 3,389,827.
Kittridge, John B., and Micchelli. 3,390,124.
Youngquist, Robert J. 3,390,230.
Youngquist, Robert J. 3,390,231.
Mitchell Camera Corp. : *See—*
Campbell, Rouel R. 3,389,842.
Mitchell, Eugene V. Retractable mud visor for goggles. 3,389,406, 6–25–68, Cl. 2—14.
Mitsubishi Genshiryoku Kogyo Kabushiki-Kaisha : *See—*
Umeya, Kaoru, Watanabe, and Kondo. 3,390,216.
Mitsubishi Pencil Co., Ltd. : *See—*
Ishizuka, Kazuo. 3,389,456.
Miura, Takeo, and J. Iwata, to Kabushiki Kaisha Hitachi Seisakusko and Hitachi Denshi Kabushiki Kaisha. Simplified analog computer and simulator having synchronously switched input and output to effect time-sharing. 3,390,258, 6–25–68, Cl. 235—184.
Miyagi, Masahisa, to Nippon Electric Co., Ltd. Frequency-diversity transmitter-receiver. 3,390,335, 6–25–68, Cl. 325—56.
Miyaucti, Hiromi : *See—*
Sinohara, Sinitsu, Yokoyama, Kimura, and Miyaucti. 3,389,891.
Mizuno, Yutaka : *See—*
Katsumura, Tatsuo, Kataoka, and Mizuno. 3,390,159.
Mobil Oil Corp. : *See—*
Bach, Henry J., Barr, Getting, and Skinner. 3,390,118.
Barr, Naaman P., Getting, and Skinner. 3,390,117.
Roeser, Gerald P. 3,390,131.
Schick, John W., Stockinger, and Gemmill. 3,390,127.
Mobius, Hans-Gerold : *See—*
Backe, Wolfgang, Mobius, Becker, and Jeschke. 3,389,557.
Moe, James E. : *See—*
Scott, Harrison A., and Moe. 3,390,304.
Moehlenpah, Walter G., to Hydro-Air Engineering, Inc. Method and fixture for truss fabricating. 3,389,528, 6–25–68, Cl. 52—741.
Mohr, Reinhard, and F. Osterloh, to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning. Dyeing nickel-modified polypropylene textiles with an acyl dihydroxybenzene azo dye. 3,389,956, 6–25–68, Cl. 8—42.
Moline, David A., to The Steel Co. of Canada, Ltd. Bridle. 3,389,591, 6–25–68, Cl. 72—205.
Molson Breweries Ltd. : *See—*
Pugh, Arthur G. 3,389,817.
Monsanto Co. : *See—*
Alexander, Stephen H., Montgomery, and Spillane. 3,390,119.
Baizer, Manuel M. 3,390,066.
Birum, Gail H., and Matthews. 3,390,165.
Birum, Gail H., and Matthews. 3,390,166.
Feierstein, Harold E., Shen, and Versen. 3,390,093.
Sears, James K. 3,390,170.
Smith, Lowell R., and Speziale. 3,389,985.
Monsanto Research Corp. : *See—*
Hyatt, Asher A. 3,390,178.
Montecatini Edison S.p.A. : *See—*
Barattini, Cesare, and Bortolini. 3,389,974.
Benetta, Gianni, and Cinque. 3,390,142.
Nicora, Carlo, and Borsini. 3,390,143.
Perugini, Giancarlo. 3,390,292.

Montgomery, Charles W., to Ethyl Corp. Polymer blends. 3,390,208, 6–25–68, Cl. 260—897.
Montgomery, Everett G., to Allied Chemical Corp. Spinning apparatus. 3,389,429, 6–25–68, Cl. 18—8.
Montgomery, Stewart R. : *See—*
Alexander, Stephen H., Montgomery, and Spillane. 3,390,119.
Moody, Willard B. Prefabricated wall nail-tie assembly. 3,389,525, 6–25–68, Cl. 52—714.
Moore, Alfred A. Pasting machine for wall covering material. 3,389,680, 6–28–68, Cl. 118—42.
Moore Vue, Inc. : *See—*
Watson, Gerald L., and Stradley. 3,389,789.
Moorhead, Donald M., and B. Hayhoe, to Moorhead Machinery & Boiler Co. Method for conversion of anhydrous ammonia to aqueous ammonia and apparatus therefor. 3,389,962, 6–25–68, Cl. 23—193.
Moorhead Machinery & Boiler Co. : *See—*
Moorhead, Donald M., and Hayhoe. 3,389,962.
Morgan, Derek H. : *See—*
Austin, William C., Conover, McFarland, and Morgan. 3,390,148.
Morgan, John W. : *See—*
Jepson, Ivar, Morgan, and Richmond. 3,389,452.
Mori, Ernest A., and P. W. Schaub, to Gulf Research & Development Co. Retrievable piston advance jet bits. 3,389,759, 6–25–68, Cl. 175—258.
Morieras, Gilbert : *See—*
Lachaussee, Henri, and Morieras. 3,389,548.
Morihara, Kazuyuki, to Shionogi & Co., Ltd. Process for preparing proteinases. 3,390,054, 6–25–68, Cl. 195—66.
Morley, John D., to National Electric Welding Machines Co. Trimming mechanism for strip welder. 3,389,627, 6–25–68, Cl. 83—34.
Morozov, Evgeny I., A. M. Khromob, A. I. Ivanov, and A. S. Goloschekov. Method of making resinous shell molds. 3,389,743, 6–25–68, Cl. 164—43.
Morra, Peter J., and L. D. West. Portable apparatus for applying acoustic materials. 3,389,838, 6–25–68, Cl. 222—193.
Morris, Wilford V., to Hughes Tool Co. Rolling cutters for rock formations mounted on simple beam bearings. 3,389,760, 6–25–68, Cl. 175—371.
Morrison, Richard H. Rain garments. 3,389,407, 6–25–68, Cl. 2—84.
Moser, Henry W., and H. Meister, to The Langston Co. Single facer machine. 3,390,040, 6–25–68, Cl. 156—473.
Moses, Adrian J., to Honeywell Inc. Control apparatus. 3,390,281, 6–25–68, Cl. 307—232.
Moskowitz, Lawrence, to Schaevitz Engineering. Accelerometer. 3,389,608, 6–25–68, Cl. 73—517.
Moss, Fred D., and J. F. Mathews, to Shell Oil Co. Method of making block copolymers of dienes and vinyl aryl compounds. 3,390,207, 6–25–68, Cl. 260—879.
Moss, Philip H., E. L. Yeakey, and G. P. Speranza, to Jefferson Chemical Co., Inc. Production of primary amines by ammonolysis. 3,390,184, 6–25–68, Cl. 260—585.
Motorola, Inc. : *See—*
Race, William J. 3,390,338.
Mott, George E., and J. T. Loggins, to Texaco Inc. Salvageable multi-well offshore well protector platform. 3,389,562, 6–25–68, Cl. 61—46.5.
Mount Hope Machine Co., Inc. : *See—*
Robertson, John D. 3,389,450.
Mueller, Helmut C., to Bigelow-Sanford, Inc. Method and apparatus for cutting pile yarns. 3,389,667, 6–25–68, Cl. 112—79.
Mulaskey, Bernard F., to Chevron Research Co. Hydrocracking process employing a promoted catalyst. 3,390,074, 6–25–68, Cl. 208—111.
Mull, Robert P., to Ciba Corp. Aralkenyl-aminoguanidines and the salts thereof. 3,390,177, 6–25–68, Cl. 260—564.
Müller, Hans. Filter. 3,389,855, 6–25–68, Cl. 233—2.
Müllers, Karl A. Method of operation of an automatic spool machine, in particular a cross-spool automatic winding machine. 3,389,866, 6–25–68, Cl. 242—35.5.
Mullins, George, to Panelgraphic Corp. Instrument panel lighting. 3,389,484, 6–25–68, Cl. 40—130.
Multicup Automation Co., Inc. : *See—*
Ehe, Albert L., and Milligan. 3,389,531.
Multi-Zoner, Inc. : *See—*
Capps, Randolph P. 3,389,858.
Munch, Edvard, to The Rucker Co. Analog voltage to time duration converter. 3,390,354, 6–25–68, Cl. 332—9.
Munzinger, Erwin K. : *See—*
Wilson, Ian, and Munzinger. 3,389,901.
Murchison, Morris D. Safety locking device. 3,390,404, 6–25–68, Cl. 339—38.
Murdock, James D. : *See—*
Heppolette, Robert L., Murdock, and Ternbah. 3,390,122.
Murphy, Clarence R., to Gulf Research & Development Co. Vacuum distillation of dimethylmetadioxane from an acidic aqueous phase. 3,390,059, 6–25–68, Cl. 203—94.
Musel, Robert J., and E. G. Thomas. Combined dispensing container and closure. 3,389,840, 6–25–68, Cl. 222—548.
N.A.S. Hydraulic and Vulcanising Machinery Co. : *See—*
Vicini, Dino. 3,389,433.
N.V. Hollandse Signaalapparaten : *See—*
Vlietstra, Jan. 3,390,355.
Nagle Co., Inc., The : *See—*
John, Frederick W. 3,389,712.
Nakanishi, Minoru, and H. Hayasaki, to Kabushiki Kaisha Tanaka Seisakusho. Device for gas cutting utilizing a shield gas. 3,389,861, 6–25–68, Cl. 239—422.
Narad, Inc. : *See—*
Kauffman, Robert J. 3,389,665.
Naslund, Erik, and F. S. Chytil, to FMC Corp. Flatware sorter. 3,389,791, 6–25–68, Cl. 209—99.
National Aeronautics and Space Administration : *See—*
Dryden, Hugh L. 3,390,378.
National Cash Register Co. : *See—*
Boggs, James L. 3,389,905.
Touchman, William S. 3,389,843.
National Electric Welding Machines Co. : *See—*
Morley John D. 3,389,627.
National Research Corp. : *See—*
Cerych, John Z., and Klibanoff. 3,390,026.
Nava, Joseph A., to The Pyle-National Co. High performance collet for electrical connectors. 3,390,376, 6–25–68, Cl. 339—217.
Neff, Joseph J., to Consolidated Electrodynamics Corp. Oscillograph loading. 3,390,398, 6–25–68, Cl. 346—68.
Neisser, Kenneth E., Jr. : *See—*
Miller, Lewis F., and Neisser. 3,390,104.
Nelson, Charles E., to The Dow Chemical Co. Primary cell with plural U-shaped magnesium anode assemblies. 3,390,016, 6–25–68, Cl. 136—100.
Nentwig, Joachim : *See—*
Heller, Karl-Heinz, Nentwig, and Schnell. 3,390,160.
New England Realty Co. : *See—*
Couch, Robert O., and Wyatt. 3,390,225.
Wyatt, David L. 3,390,224.
Newall Engineering Co., The : *See—*
Saxby, Michael E. 3,389,595.
Newman, John D., and R. A. Elliott, to Plessey-U D Ltd. Digital counter employing logic gating network independent of counter stage(s) control to effect reset operation. 3,390,340, 6–25–68, Cl. 328—48.
Niagara Therapy Mfg. Corp. : *See—*
Mathers, Kenneth R. 3,389,699.
Nicolaus, Norbert, and H. Krugener, to Firma Homann-Maytag G.m.b.H. Cart for carrying trays. 3,389,946, 6–25–68, Cl. 312—236.
Nicora, Carlo, and G. Borsini, to Montecatini Edison S.p.A. Process for the production of vinylchloride polymers by low-temperature polymerization in the presence of a ceric salt catalyst and an organo-metallic reducing agent. 3,390,143, 6–25–68, Cl. 260—92.8.
Nield, Cyril H., J. Clarke, and C. G. Screttas, to Chemetron Corp. Preparation of azo compounds. 3,390,146, 6–25–68, Cl. 260—192.
Nippon Electric Co., Ltd. : *See—*
Igarashi, Ryo. 3,390,382.
Miyagi, Masahisa. 3,390,335.
Nippon Oil Co., Ltd. : *See—*
Furkawa, Junji, Saegusa, and Imai. 3,390,129.
Nishikawa, Masao, and S. Yabe, to Hakko Kogyo Kabushiki Kaisha. High-speed recording method. 3,390,396, 6–25–68, Cl. 346—1.
Nitram Chemicals, Inc., Wilson-Toomer Division of the Emhart Corp. and The University Florida : *See—*
Sundaresan, Bommaya B., and Harding. 3,389,961.
Nitto Chemical Industrial Co., Ltd. : *See—*
Katsumura, Tatsuo, Kataoka, and Mizuno. 3,390,159.
Norman, George R. : *See—*
Le Suer, William M., and Norman. 3,390,082.
Normant, Henri, to Rhone-Poulenc S.A. Preparation of aldehydes and ketones. 3,390,186, 6–25–68, Cl. 260—590.
North American Philips Co., Inc. : *See—*
de Jager, Frank, and Zegers. 3,390,232.
Dijken, Reinder H., Jager, and Krikke. 3,390,289.
Hugenholtz, Eduard H. 3,390,387.
Kissinger, Robert W., and Barbasso. 3,390,391.
Lorenz, Rainer, Witter, and Schonefeldt. 3,389,655.
Schoen, Hermann. 3,390,285.
Skoyles, Derek R. 3,389,939.
Stelwagen, Jan. 3,389,881.
North American Rockwell Corp. : *See—*
Asche, Clarence W. 3,389,639.
Fa, Charles H. 3,390,022.
Harbert, Bobby C. 3,389,598.
Kline Kenneth H. 3,390,341.
Michael, Harold J. 3,390,021.
Shira, Chester S. 3,390,023.
Vehrs, Charles L., Jr. 3,390,390.
Novick, Robert : *See—*
Davidovits, Paul, Novick, and Knable. 3,390,350.
Nowak, Klaus F. Trim ring for automobile headlights and device for retention thereof. 3,390,261, 6–25–68, Cl. 240—41.5.
Nuclear Corp. of America : *See—*
Teutsch, Marvin W. 3,389,635.
Null, H. L. Automotive vehicle wash systems. 3,389,860, 6–25–68, Cl. 239—124.
Nunan, Craig S., to Varian Associates. High energy particle generator. 3,390,293, 6–25–68, Cl. 313—63.
Nychka, Henry R. : *See—*
Sweeney, Richard F., and Nychka. 3,390,176.
Obermann, George, to Controls Co. of America. Multiple switch assembly. 3,390,243, 6–25–68, Cl. 200—166.
Obi Inc. : *See—*
Malakoff, Irving. 3,390,044.
O'Connor, Thomas J. Sine bar. 3,389,473, 6–25–68, Cl. 33—174.
Office National Industriel de l'Azote : *See—*
Cambon, Theophile F. L., and Igounenc. 3,389,988.
Offshore Co., The : *See—*
Bradbury, Robert E., Jr. 3,389,890.
O'Halloran, Rosemary, to Esso Research and Engineering Co. Sulfur containing ashless dispersant. 3,390,086, 6–25–68, Cl. 252—47.5.

Ohaver, David S. : *See—*
Golan, Kenneth F., Ohaver, Pearce, and Rohweder. 3,389,770.
Olshei, John R., and F. R. Weymouth, Jr., to Trico Products Corp. Windshield wiper. 3,389,419, 6–25–68, Cl. 15—250.12.
Okazaki, Narukazu, and H. Azuma, to Wakayama Tetsuko Kabushiki Kaisha. Apparatus for continuously treating textile fabrics. 3,389,584, 6–25–68, Cl. 68—177.
O'Keeffe, James R., to Dale Electronics, Inc. Resistor with a secured mounting strap. 3,390,367, 6–25–68, Cl. 338—318.
Olberg, Ralph C., and M. Stammler, to Aerojet-General Corp. Polyurethane propellant composition prepared with organic lead compound. 3,390,027, 6–25–68, Cl. 149—19.
Olds, Leonard E., M. C. Udy, and J. R. Wesel, to Strategic Materials Corp. Process for selectively carbiding titanium iron and vanadium values. 3,389,957, 6–25–68, Cl. 23—16.
Olechowski, Jerome R. : *See—*
Chappell, Sterling F., III., Olechowski, and Arseneaux. 3,390,195.
Chappell, Sterling F., III, and Olechowski. 3,390,196.
Olin Mathieson Chemical Corp. : *See—*
Cooper, Roy M., Gardiner, and Newberry. 3,390,070.
Olstowski, Franciszek, to The Dow Chemical Co. Process for preparing low density graphite structures. 3,389,964, 6–25–68, Cl. 23—209.1.
O'Neill, Clyde W. Intravenous fluid level signalling apparatus. 3,390,238, 6–25–68, Cl. 200—85.
Ortho Pharmaceutical Corp. : *See—*
Scheer, Irving. 3,390,157.
Osika, Thomas F. : *See—*
Maas, John E., and Osika. 3,390,237.
Osterloh, Fritz : *See—*
Mohr, Reinhard, and Osterloh. 3,389,956.
Ostrander, George W., and W. W. Pendleton, to Anaconda Wire and Cable Co. Crystallized glass ceramic coatings. 3,389,458, 6–25–68, Cl. 29—605.
Otsnka, Eiji, K. Kanai, and S. Chikaoka, to Toyo Koatsn Industries, Inc. Plural stage pressure distillation of urea synthesis effluent with liquified gas addition. 3,390,058, 6–25–68, Cl. 203—49.
Ott, Eugene G., to Dresser Industries, Inc. Drill bit and inserts therefor. 3,389,761, 6–25–68, Cl. 175—374.
Ottesen, Hjalmar : *See—*
Jones, Jackie R., and Ottesen. 3,390,347.
Jones, Jackie R., and Ottesen. 3,390,349.
Owen. Charles L., F. J. Silhavy, and H. W. Meresz, to Ideal Toy Corp. Audio device. 3,389,915, 6–25–68, Cl. 274—1.
Owens-Illinois, Inc. : *See—*
Reyburn, Nathaniel R. 3,389,427.
Oy. Sateko : *See—*
Rystl, Alpo. 3,389.777.
Pacak, Matthew : *See—*
Getz, Edward T., and Pacak. 3,389,935.
Packard Instrument Co., Inc. : *See—*
Packard, Lyle E. 3,390,269.
Packard. Lyle E., to Packard Instrument Co., Inc. Apparatus for automatic standardization with external standards in liquid scintillation spectrometry. 3,390,269, 6–25–68, Cl. 250—71.5.
Paddison, Eric, D. Clegg, and R. H. J. Warren, to The English Electric Co. Ltd. Electrical relays. 3,390,307, 6–25–68, Cl. 317—33.
Painter, Erle V., F. K. Mesek, and R. C. Shepherd, to Johnson & Johnson. Method of pleating sheet materials. 3,390,218, 6–25–68, Cl. 264—282.
Pallos. Ferenc M. : *See—*
Pitt, Harold M., and Pallos. 3,390,140.
Panasik, Theodore : *See—*
Tripp. Bert E., Welch, and Panasik. 3,389,995.
Panelgraphic Corp. : *See—*
Mullins, George. 3,389,484.
Papapanu. James A., to Carrier Corp. Multiple-effect absorption refrigeration systems. 3,389,572, 6–25–68, Cl. 62—101.
Papapanu, James A., and F. N. Decker, Jr., to Carrier Corp. Refrigerant condensate circuit in multiple-effect absorption refrigeration systems. 3,389,573, 6–25–68, Cl. 62—101.
Papazian. Zareh, to Societe d'Exploitation des Brevets Industriels SEBI. Rapidly secured button. 3,389,439, 6–25–68, Cl. 24—90.
Parish Mfg. & Distributing Corp. : *See—*
Lemcke, George A., and Tucher. 3,389,643.
Parke, Davis & Co. : *See—*
Scherrer, Robert A. 3,390,172.
Parker, John T. : *See—*
Anderson, Gerald R., Creed, and Parker. 3,389,730.
Parris, Horace T. Wall surface scarifying and preparing tool. 3,389,466, 6–25–68, Cl. 30—366.
Parrish, Robert G., to E. I. du Pont de Nemours and Co. Process for producing foam fabrics. 3,389,446, 6–25–68, Cl. 28—76.
Passal, Frank, to M & T Chemicals Inc. Electroplating nickel and electrolyte therefor. 3,390,062, 6–25–68. Cl. 204—49.
Pastva, John V., Jr., to The Eastern Co. Door lock. 3,389,932. 6–25–68, Cl. 292—173.
Pattiani, William C. Magazine having a ribbon-like shaving blade. 3 389,465, 6–25–68, Cl. 30—346.5.
Patton, Willard T. : *See—*
Klawsnik, Frank, and Patton. 3,390,333.
Paul, Bryant M. Saw guide. 3,389,724, 6–25–68, Cl. 143—160.
Pavlecka, John. Impact cushioning steering mechanism. 3,389,617, 6–25–68, Cl. 74—492.
Pavlin, Cyrille F. : *See—*
Kadosch, Marcel, Pavlin, and Mace. 3,389,698.
Peabody, Henry W. (Industrial) Ltd. : *See—*
Lake, Alan W. 3,390,084.
Pearce, Shairyl I. : *See—*
Golan, Kenneth F., Ohaver, Pearce, and Rohweder. 3,389,770.
Pearson, August G. Bath tub seat. 3,389,408, 6–25–68, Cl. 4—185.
Peck, Robert L., to Textron Electronics, Inc. Electromechanical devices using ionic semiconductors. 3,390,313, 6–25–68, Cl. 317—262.
Pederzoli, Gianfrance, and L. Fornaciari, to Emme Di Emme. Hedge clipper. 3,389,464, 6–25–68, Cl. 30—264.
Pellation, Ernest C. : *See—*
Williams, David H., and Pellation. 3,389,519.
Pellegrini, John P., Jr., and I. J. Spilners, to Gulf Research and Development Co. Synthetic lubricant stabilized with triorganotin and lead derivatives of ferrocene. 3,390,087, 6–25–68, Cl. 252—49.7.
Pelton, Sterling W. : *See—*
Fiala, George T., and Pelton. 3,389,796.
Pendleton, John M. Machine for making cushioning packaging material or the like. 3,389,534, 6–25–68, Cl. 53—180.
Pendleton, Wesley W. : *See—*
Ostrander, George W., and Pendleton. 3,389,458.
Penny, Robert N., to The Rover Co. Ltd. Axial flow rotor. 3,389,889, 6–25–68, Cl. 253—39.15.
Peoples, William E. : *See—*
Masciantonio. Philip X., and Peoples. 3,390,151.
Perkin-Elmer Corp., The : *See—*
Vollmer, John W. 3,390,297.
Perugini, Giancarlo, to Montecatini Edison S.p.A. Fluid coolant system for a plasma jet generator. 3,390,292, 6–25–68, Cl. 313—23.
Peters, John K., and B. A. McClellan, to Burke Flexo Products Co. Fishing lures. 3,389,490, 6–25–68, Cl. 43—42.1.
Peters Machinery Co. : *See—*
Talbot, Richard C. 3,389,684.
Peterson, Glen. Magnet charger. 3,390,310, 6–25–68, Cl. 317—157.5.
Petrolite Corp. : *See—*
Godar, Richard L., and Richardson. 3,390,073.
Pettit, James R. : *See—*
Strathman, John H., and Pettit. 3,390,302.
Petty, Orwin E., to Flow Surveys, Inc. Flow director means. 3,389,919, 6–25–68, Cl. 277—126.
Pfaff and Kendall : *See—*
Schlosser, Francis G. 3,389,882.
Pfizer, Chas., & Co., Inc. : *See—*
Austin, William C., Conover, McFarland, and Morgan. 3,390,148.
Philco-Ford Corp. : *See—*
Goldman, Richard L., Kritzler, and Sirvydas. 3,389,457.
Storck, Robert C. 3,390,252.
Philipps, Edward J. : *See—*
Apblett, William R., Martin, and Philipps. 3,390,250.
Phillips Petroleum Co. : *See—*
Harper, Kenneth A. 3,390,075.
Kelly, Harold S. 3,389,431.
Wilcox, Isaac L., and Jezerski. 3,389,896.
Phillipson, Alan, B. H. R. Spiller, R. Smith, and H. Cheesman, to Decca Ltd. Method to prevent warping of hot embossed disk records by preheating the central annulus. 3,390,217, 6–25–68, Cl. 264—107.
Pickands Mather & Co. : *See—*
Gullett, William W. 3,389,990.
Pierson, Alexandre : *See—*
Breynat, Genevieve, and Pierson. 3,390,342.
Pike. Herbert J., to Allied Chemical Corp. Foam-filled nylon article and method of making same. 3,390,215, 6–25–68, Cl. 264—45.
Pilkington Bros. Ltd. : *See—*
Robinson, Albert S., and Silverwood. 3,389,983.
Piller, Bernhard, to Ciba Ltd. Photographic light-sensitive material. 3,389,994, 6–25–68, Cl. 96—84.
Piper, William B. Illuminated sign. 3,389,483, 6–25–68, Cl. 40—32.
Piquerez, Ervin. Watch stem. 3,389,550, 6–25–68, Cl. 58—63.
Pirelli Ltd. : *See—*
Cernuschi, Francesco L. 3,389,742.
Pitt, Harold M., and F. M. Pallos, to Stauffer Chemical Co. Process for the copolymerization of carbon bisulfide with an olefinic organic compound. 3,390,140, 6–25–68, Cl. 260—79.
Pittman, Forrest C., to Halliburton Co. Apparatus for cleaning the interior of curved conduits. 3,389,713, 6–25–68, Cl. 134—167.
Pitts, Thomas E., to Leesona Corp. Textile apparatus. 3,389,867, 6–25–68, Cl. 242—35.6.
Pittsburgh Plate Glass Co. : *See—*
Allen, Edward M., Dye, and Smrdel. 3,389,529.
Englebart, Oscar D., and Shuster. 3,389,984.
Seiner, Jerome A. 3,390,135.
Planitzer, Erich : *See—*
Beier, Ernst, Bornhoft, Durner, Kasper, Maus, Planitzer, and Zeyher. 3,389,637.
Plasser, Franz, and J. Theurer. Mobile track correction apparatus. 3,389,469, 6–25–68, Cl. 33—1.
Plessey Co. Ltd., The : *See—*
Thompson, Philip M. 3,390,280.
Plessey-U D Ltd. : *See—*
Newman, John D., and Elliot. 3,390,340.
Plow, Robert J., to Lorain Products Corp. Poly-phase regulated rectifier. 3,390,321, 6–25–68, Cl. 321—5.
Plummer. Dexter R., to Rank Precision Industries Ltd. d.b.a. The Rank Organisation. Double inverted image optical alignment testing apparatus. 3,389,632, 6–25–68, Cl. 88—14.

Poage, Jesse L. Animal holder and positioner. 3,389,691, 6–25–68, Cl. 119—103.
Poland, Elmer R. Hole centering adapter. 3,389,472, 6–25–68, Cl. 33—174.
Polkinhorne. Harry : *See—*
Baker, James A., James, and Polkinhorne. 3,390,051.
Pollack, Slava A., to TRW Inc. Refrigerator for multiplier phototubes. 3,389,578, 6–25–68, Cl. 62—514.
Poly-Pak Corp. of America : *See—*
Whiteford, Carlton L. 3,389,825.
Pooler, Carroll E., Jr. Sliding jaw pipe wrench having automatically acting pin and hole adjustment means. 3,389,624, 6–25–68, Cl. 81—129.
Poor & Co. : *See—*
Groff, Emory L. 3,389,859.
Porret, Daniel, to Ciba Ltd. Process for the manufacture of solutions of prepolymers of a diallylphthalate. 3,390,116, 6–25–68, Cl. 260—32.8.
Porret, Daniel : *See—*
Batzer, Hans, Ernst, and Porret. 3,390,138.
Portal, Pierre, and J. Rouchard, to Commissariat a l'Energie Atomique. Linear divider. 3,389,638, 6–25–67, Cl. 90—56.
Porter, Elmo A. : *See—*
Johnson, Don E., and Porter. 3,389,692.
Postlewaite, William R., and M. Ludwig, to Chevron Research Co. Apparatus for laying submarine pipelines. 3,389,563, 6–25–68, Cl. 61—72.3.
Pottharst, John E., Jr. Inert gas generator. 3,389,972, 6–25–68. Cl. 23—281.
Povalski, Eugene A., and E. F. Bolgert, to Kohler Co. Removable valve unit with flow control device. 3,389,717, 6–25–68. Cl. 137—315.
Pratt, Houston W. Liquid gyro stabilizer. 3,389,674, 6–25–68, Cl. 114—122.
Preckel, Ralph F., to Hercules Inc. Inorganic oxidizer salt explosive composition containing organic fuel solvent for said salt. 3,390,029, 6–25–68, Cl. 149—41.
Presna Mechanika, narodny podnik : *See—*
Vichr, Radek. 3,390,316.
Pressley, William L., Sr. Cam type rope clamp. 3,389,765. 6–25–68. Cl. 188—65.5.
Primack, Howard : *See—*
Criswell, Byron R., and Primack. 3,389,703.
Prior. Gilbert M. : *See—*
Cooke-Yarborough, Edmund H., Hooton, Hickman, and Prior. 3,390,380.
Procter & Gamble Co., The : *See—*
Diehl, Francis L. 3,390,095.
Diehl, Francis L., Drew, and Snoddy. 3,390.094.
Erman, William F., Lewis, and Gustafson. 3,390,197.
Produits de Beaute-Parfums Jean d'Aveze : *See—*
Darot, Alice 3,389,847.
Prunty. Thomas O. : *See—*
Circle, Robert R., and Prunty. 3 390.240.
Pryor. Ronald W. Jointer with replaceable finishing member. 3 389,420, 6–25–68, Cl. 15—235.3.
Pugh, Arthur G., to Molson Breweries Ltd. Hydraulic bottle uncaser. 3,389,817, 6–25–68. Cl. 214—300.
Pulcrano Frank C., and T. C. Buckthorpe, to ACF Industries, Inc. Railway flat car for transporting containers. 3,389,664, 6–25–68. Cl. 105—366.
Pullman Inc. : *See—*
Gutridge, Jack E. 3,389,663.
Putter, Irving : *See—*
Dulaney, Eugene L., and Putter. 3,390,055.
Pyle-National Co., The : *See—*
Nava Joseph A. 3,390,376.
Qualter, Hall & Co. (Sales) Ltd. : *See—*
Wainwright, Ralph, and Archer. 3,389,661.
Quik Willem C. J. : *See—*
De Ruiter, Hendrikus, Van Weeren, and Quik. 3,389,965.
Raab, Siegfried : *See—*
Ebek Alexander, and Raab. 3,389,987.
Race William J., to Motorola, Inc. Receiver mounting apparatus permitting adjustment of control shaft position. 3,390,338, 6–25–68, Cl. 325—352.
Radio Corp. of America : *See—*
Brown, Martin R. 3,390,033.
Kamerer, George R., and Crowley. 3,390,339.
Klawsnik, Frank, and Patton. 3,390,333.
Kleinman, Henry M. 3,390,345.
Medwin, Albert H. 3,390,314.
Wheatley Carl F., Jr. 3,390,346.
Raichle, Karl : *See—*
Schnell, Hermann, Raichle, Prater, and Bruhne. 3,390,205.
Railroad Accessories Corp. : *See—*
Scott, Harrison A., and Moe. 3,390,304.
Ramaker, Donald P. : *See—*
Best, Stanley G., Harner, and Ramaker. 3,389,640.
Ramis, Jean, to Idees. Dispensing container. 3,389,833, 6–25–68, Cl. 222—95.
Rank Precision Industries Limited : *See—*
Plummer, Dexter R. 3,389,632.
Rappoccio, Dominick J., to Weston Instruments, Inc. Suppressed scale electrical instrument with adjustable auxiliary spring means. 3,390,332, 6–25–68, Cl. 324—132.
Rasmussen, Carl E. Strawberry harvester. 3,389,542, 6–25–68, Cl. 56—331.
Rau, Mathias. Fluid pressure testing apparatus for automatic vehicle transmissions. 3,389,600, 6–25–68, Cl. 73—118.
Raymond Corp., The : *See—*
Gilbert, Hiram G. 3,390,318.
Raytheon Education Co. : *See—*
Williams, David A. 3,390,229.
Rebane, George J. : *See—*
Braunheim, Stephen T., and Rebane. 3,389,790.
Recovery Research Systems, Inc. : *See—*
Ferguson, Otis B. 3,389.880.
Redifon Air Trainers Ltd. : *See—*
Rutherford, Stuart H. 3,389,954.
Rednick, Alvin B., and M. Secora, to Smith Kline & French Laboratories. Pharmaceutical tablets coated with wax-free ammonia solubilized water soluble shellac. 3,390,049, 6–25–68 Cl. 167—82.
Reeder, Jerry R., and R. W. Bergman, to Ethicon Inc. Process and apparatus for making continuous strings from animal gut. 3,389,546, 6–25–68, Cl. 57—35.
Regulators, Inc. : *See—*
Rogers, David W. 3,390,322.
Reichhold Chemicals, Inc. : *See—*
Dalibor, Horst. 3,390,110.
Davis, Bernard J. 3,390,126.
Reinhardt, Anthony D., and R. C. Slifka, to United States Steel Corp. Apparatus for controlling the position of work rolls. 3,389,588. 6–25–68, Cl. 72—8.
Reinhart, William F. : *See—*
Mann, John S., and Reinhart. 3,389,978.
Reitmeier, Ronald E., to Catalysts & Chemicals, Inc. Reduction-activation of copper oxide-zinc oxide low temperature shift catalysts. 3,390.102, 6–25–68, Cl. 252—475.
Rekuperator K.G., Dr.-Ing. Schack & Co. *See—*
Tunder, Siegfried, and Schefels. 3,389,897.
Rentzepis. Peter M. : *See—*
Giordmaine, Joseph A., and Rentzepis. 3,390,278.
Reverdin, Andre P., P. Wicht, and K. Volken, to Lonza Ltd. Alkali stable terpolymer compositions and process for their manufacture. 3,390,109, 6–25–68, Cl. 260—17.
Rexall Drug and Chemical Co. : *See—*
Fitzpatrick, Kerlen. 3,389,973.
Reyburn, Nathaniel R., to Owens-Illinois, Inc. Apparatus for molding preforms of thermosetting plastics. 3,389,427, 6–25–68, Cl. 18—4.
Reyes, Robert M. Power-driven semi-automatic hair curler. 3,389.708, 6–25–68, Cl. 132—34.
Reynolds Metals Co. : *See—*
McMinn, Curtis J., and Bruce. 3,390,071.
Reynolds, R. J., Tobacco Co. : *See—*
Schumacher, Joseph N. 3,389,706.
Rheem Mfg. Co. : *See—*
Bull, Hendrix R. 3,389,536.
Tipper, Mrnard J. G., and Marietta. 3,389,533.
Rhone-Poulenc S.A. : *See—*
Normant, Henri. 3,390,186.
Rice, Warren A. : *See—*
Geen, Henry C., and Rice. 3.390,106.
Richards, Harry F., to Shell Oil Co. Copolymerization process. 3,390,141, 6–25–68, Cl. 260—88.2.
Richardson, James L. : *See—*
Godar, Richard L., and Richardson. 3,390,073.
Richardson, Neil R. : *See—*
Gradin, James H., Tolliver, Blessum, and Richardson. 3,389,286.
Richmond, James W. : *See—*
Jepson, Ivar, Morgan, and Richmond. 3,389,452.
Richter, Sidney B., to Velsicol Chemical Corp. Composition and methods for controlling insect, mite and nematode pests with O-ethyl-S-[N′-methoxy-N′-methyl-acetamide] - N - isopropylthiophosphoramide. 3,390,047, 6–25–68, Cl. 167—22.
Rimoldi, Virginio, & C., S.p.A. : *See—*
Marforio, Nerino. 3,389,668.
Rinato, Joseph A. : *See—*
Williamson, David E., and Rinato. 3,389,892.
Rinehart, John R. Utility cart or basket carrier. 3,389,818, 6–25–68, Cl. 214—372.
Roantree Electro-Mech Corp. : *See—*
Roantree, William J. 3,389,615.
Roantree, William J., to Roantree Electro-Mech Corp. Variable speed spiral gearing mechanism. 3,389,615, 6–25–68, Cl. 74—424.7.
Roberts, John A., to General Electric Co. Leak detecting system with energy conversion means. 3,390,324, 6–25–68, Cl. 324—33.
Robertson, John D., to Mount Hope Machine Co., Inc. Non-deflecting roll. 3,389,450, 6–25–68, Cl. 29—116.
Robinette, Richard T., to Kelsey-Hayes Co. Power booster for brakes. 3,389,642, 6–25–68, Cl. 91—369.
Robinson, Albert S., and F. W. Silverwood, to Pilkington Bros. Ltd. Method and apparatus for removing dross from the surface of a molten metal glass sheet float bath. 3,389,983, 6–25–68, Cl. 65—27.
Robinson, Alfred G., III : *See—*
Hagemeyer, Hugh J., Jr., Gammans, and Robinson. 3,390,115.
Robison, Russell O., to Dominion Electric Corp. Charging unit for a battery-containing handle for an electric knife or the like. 3,390,319, 6–25–68, Cl. 320—2.
Rockefeller, Winston G., to Colgate-Palmolive Co. Carton with unitary coupon. 3,389,850, 6–25–68, Cl. 229—16.
Rocket Jet Engineering Corp. : *See—*
Hendricks, Klaas, and Soja. 3,389,784.
Roeh, John M. : *See—*
Kleft, Roy T., and Roeh. 3,389,675.
Roelen, Otto, and W. Rottig, to Ruhrchemie Aktiengesellschaft. Catalyst and process for preparation thereof. 3,390,103, 6–25–68, Cl. 252—432.
Roeser, Gerald P., to Mobil Oil Corp. Copolyester of trishydroxyalkyl isocyanurate. 3,390,131, 6–25–68, Cl. 260—75.
Rogers, David W., to Regulators, Inc. Phase controlled inverter. 3,390,322, 6–25–68, Cl. 321—18.

- Rogers, Walter C., Jr., to Royal Development Co., Inc. Sofa bed. 3,389,409, 6–25–68, Cl. 5—17.
- Rohm & Haas Co.: *See—*
  - De Benneville, Peter L. 3,390,139.
  - Hurwitz, Marvin J., and Fenton. 3,390,156.
- Rohweder, Gerald D.: *See—*
  - Golan, Kenneth F., Ohaver, Pearce, and Rohweder. 3,389,770.
- Roller, Donald C., to International Business Machines Corp. Printer with mechanical read-write transducer and selectively resettable information storage tape. 3,389,773, 6–25–68, Cl. 197—20.
- Rollman, Ernest E., A. Liebscher, and A. Szerenyi, to Ro-Search, Inc. Method of manufacture of footwear. 3,390,213, 6–25–68, Cl. 264—45.
- Roloff, August F. and M. S. Sighting element for bow for archery. 3,389,695, 6–25–68, Cl. 124—24.
- Roloff, Mina S.: *See—*
  - Roloff, August F. and M. S. 3,389,695.
- Rolscreen Co.: *See—*
  - Arnold, Bruce C., and Evers. 3,389,737.
- Rongey, Clarence A.: *See—*
  - Zavertnik, Marshall G., Kelly, Rongey, and Williams. 3,390,369.
- Roos, John T., to Bird Machine Co. Tilting pan filter residual filtrate trap. 3,389,800, 6–25–68, Cl. 210—328.
- Ro-Search, Inc.: *See—*
  - Rollman, Ernest E., Liebscher, and Szerenyi. 3,390,213.
- Rosenberg, Joel: *See—*
  - Larkfeldt, Birger, and Rosenberg. 3,389,648.
- Ross, Henry S., and M. P. Wolverton. Motor-driven score drums. 3,389,857, 6–25–68, Cl. 235—144.
- Ross, Shelby E.: *See—*
  - Johnson, Cecil M., and Ross. 3,389,718.
- Rossner, Wolfgang, to Siemens Aktiengesellschaft. Device for directed feeding of wires. 3,389,844, 6–25–68, Cl. 226—196.
- Roth, Leo. Window shade apparatus. 3,389,738, 6–25–68, Cl. 160—120.
- Rottig, Walter: *See—*
  - Roelen, Otto, and Rottig. 3,390,103.
- Roubal, Joseph J. Film strip mount. 3,389,485, 6–25–68, Cl. 40—159.
- Rouchard, Jacques: *Sec—*
  - Portal, Pierre, and Rouchard. 3,389,638.
- Rouse, Robert W.: *See—*
  - Goldstein, Allen E., Rouse, and Schroeter. 3,389,555.
- Rover Co. Ltd., The: *See—*
  - Penny, Robert N. 3,389,889.
- Rowlands Electric Accessories Ltd.: *See—*
  - Ruston, Reginald. 3,390,373.
- Royal Development Co., Inc.: *See—*
  - Rogers, Walter C., Jr. 3,389,409.
- Rubinstein, Solomon, and G. S. Eager, Jr., to General Cable Corp. Manufacture of bare or pre-insulated metal clad sodium conductor. 3,389,460, 6–25–68, Cl. 29—624.
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- Rucker Co., The: *See—*
  - Munch, Edvard. 3,390,354.
- Rudowsky, Stephen, Sr.: *See—*
  - Towns, Edward J., and Rudowsky. 3,389,749.
- Ruelle, Richard: *See—*
  - MacPhee, Craig, and Ruelle. 3,389,685.
- Ruete, Robert C.: *See—*
  - Brown, Robert R., Malia, Ruete, and Silva. 3,390,331.
- Ruggles, Donald H. Structural panels and structures containing such panels. 3,389,513, 6–25–68, Cl. 52—82.
- Ruggles, Norman T. Curb and gutter slip form. 3,389,646, 6–25–68, Cl. 94—46.
- Ruhrchemie Aktiengesellschaft: *See—*
  - Roelen, Otto, and Rottig. 3,390,103.
- Rumsey, Rollin D., to Houdaille Industries, Inc. Viscous shear critical shaft dampers. 3,389,940, 6–25–68, Cl. 308—26.
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- Ruys, Frans W. Apparatus for actuating a result unit of a calculating machine, and the like, each time when the apparatus is operated. 3,389,856, 6–25–68, Cl. 235—62.
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- Rysti, Alpo, to Sateko Oy. Device for turning logs. 3,389,777, 6–25–68, Cl. 198—33.
- S.A.S.F.lli Benelli G.F. & C.: *See—*
  - Benelli, Giovanni. 3,389,487.
- SCM Corp.: *See—*
  - Barkdoll, Joseph P. 3,389,774.
- SI Handling Systems, Inc.: *See—*
  - Jacoby, Charles E. 3,389,662.
- Saegusa, Takeo: *See—*
  - Furukawa, Junji, Saegusa, and Imai. 3,390,129.
- St. John, Raymond H. Connector means for attaching components into an integral structure. 3,389,931, 6–25–68, Cl. 287—189.36.
- Sako, Hazime: *See—*
  - Matsuyoshi, Masaya, Kobayashi, and Sako. 3,390,401.
- Salmonson, Craig. Cord anti-snag device. 3,390,375, 6–25–68, Cl. 339—196.
- Samfield, Edwin: *See—*
  - Huber, William C., and Samfield. 3,389,877.
- Samson Apparate-Bau AG.: *See—*
  - Backe, Wolfgang, Mobius, Becker, and Jeschke. 3,389,557.
- Sanborn, William E.: *See—*
  - Chomitz, Nicholas, and Sanborn. 3,390,100.
- Sandberg, Aaron L.: *See—*
  - Gerry, Martin E. 3,389,953.
- Sanders, Charles P., to Alfred Herbert Ltd. Magazine for feeding a plurality of identical articles to a delivery point. 3,389,771, 6–25–68, Cl. 193—15.
- Sands, Seymour, to E. I. du Pont de Nemours and Co. Method for manufacturing tufted carpets. 3,390,085, 6–25–68, Cl. 156—72.
- Sangamo Electric Co.: *See—*
  - Brothman, Abraham, Gomery, Yanis, and Miller. 3,390,233.
- Santimauro, John F., and H. Gerson, to Allied Chemical Corp. Novel 9,10-dihydro-9 10-dioxoanthracene-diyl-bis-(4′-carbamoylphthalic anhydrides). 3,390,155, 6–25–68, Cl. 260—346.3.
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- Sarlo, Dominick J., and B. L. Siegal, to Kenron Aluminum & Glass Corp. Roof structure. 3,389,512, 6–25–68, Cl. 52—11.
- Sattler, Robert I., to La Salle Machine Tool, Inc. Method of machining a gear case. 3,389,454, 6–25–68, Cl. 29—406.
- Saulsbury, Laforest S.: *See—*
  - Weitzner, Dorothea M., and Saulsbury. 3,389,636.
- Sause, Henry, Jr. Load-handling device. 3,389,775, 6–25–68, Cl. 198—1.
- Sawada, Ryoka, and Y. Kaneko, to Hitachi Ltd. Cavity resonator having alternate apertured drift tubes connected to opposite end walls. 3,390,301, 6–25–68, Cl. 315—5.39.
- Sawin, Richard H.: *See—*
  - Auld, James T., and Sawin. 3,390 041.
- Saxby, Michael E., to The Newall Engineering Co. Gauging apparatus. 3,389,595, 6–25–68, Cl. 73—37.5.
- Scarfi, Alberto: *See—*
  - Barattini, Cesare, Bortolini, and Scarfi. 3,389,974.
- Schaefer, F. & M., Brewing Co., The: *See—*
  - Strandskov, Frede B., and Bockelmann. 3,389,999.
- Schaevitz Engineering: *See—*
  - Moskowitz, Lawrence. 3,389,608.
- Schaub, Paul W.: *See—*
  - Mori Ernest A., and Schaub. 3,389.759.
- Scheer, Irving, to Ortho Pharmaceutical Corp. 3-desoxy-6α-methyl-17α-oxygenated-Δ^4-pregnenes. 3,390,157, 6–25–68, Cl. 260—397.4.
- Schefels, Gerhard: *See—*
  - Tunder, Siegfried, and Schefels. 3,389,897.
- Scheibel, Edward G. Liquid-liquid extraction column having rotatable pumping impeller assemblies. 3,389,970, 6–25–68, Cl. 23—270.5.
- Scherrer, Robert A., to Parke, Davis & Co. N-(3-trifluoromethylphenyl)anthranilic acids. 3,390,172, 6–25–68, Cl. 260—518.
- Schiavi, Vincent. Adjustable scraper blade for road motor graders. 3,389,482, 6–25–68, Cl. 172—664.
- Schick, John W., J. H. Stockinger, and R. M. Gemmill, Jr., to Mobil Oil Corp. Water-soluble ketone-aldehyde-phenol resins and process of making same. 3,390,127, 6–25–68, Cl. 260—50.
- Schiess Aktiengesellschaft: *See—*
  - Wagner, Hans. 3 389,625.
- Schilling, Edward A.: *See—*
  - Eberline, Richard F., Carmichael, and Schilling. 3,390,291.
- Schimmel, Busso, and S. Tunder, to Gesellschaft fur Huttenwerksanlagen m.b.H. Cupola furnace plant having a shaker ladle. 3,389,898, 6–25–68, Cl. 266—18.
- Schlick, Horst: *See—*
  - Werner, Johannes, Golde, and Schlick. 3,389,579.
- Schloemann Aktiengesellschaft: *See—*
  - Gehring, Eckard, Bernhardt, and Geier. 3,389.430.
- Schlosser, Francis G., to Pfaff and Kendall. Adjustable sign span support. 3,389,882, 6–25–68, Cl. 248—125.
- Schlumberger Technology Corp.: *See—*
  - Kisling, James W. 3,390 328.
  - Lebourg, Maurice P. 3,389,752.
  - McGill, Howard L., and Smith. 3,389,917.
- Schlumberger Well Surveying Corp.: *See—*
  - Elliott, Jennings W., and Grine. 3,390 377.
- Schmid, Leopold F. Hydraulic shock absorber for automotive-vehicle suspensions and the like. 3,389,903, 6–25–68, Cl. 267—64.
- Schnell, Hermann: *See—*
  - Heller, Karl-Heinz, Nentwig, and Schnell. 3,390,160.
- Schnell, Hermann, K. Raichle, K. Prater, and F. Bruhne, to Farbenfabriken Bayer Aktiengesellschaft. Monocarboxylic acids as thickening aids for magnesium oxide containing unsaturated polyesters. 3,390,205, 6–25–68, Cl. 260—865.
- Schnellpressenfabrik Koenig & Bauer Aktiengesellschaft: *See—*
  - Schwabach, Teo. 3,389,657.

- Schoen, Hermann, to North American Philips Co., Inc. Circuit arrangement for varying the operating point of a translator with constant dissipation. 3,390,285, 6–25–68, Cl. 307—296.
- Scholfield, Paul D.: *See—*
  - Tarasuk, Walter R., Bessey, and Scholfield. 3,390,053.
- Schonberger, Milton, to I.M.N. Industries Corp. Window regulating mechanism. 3,389,500, 6–25–68, Cl. 49—351.
- Schonefeldt, Jens: *See—*
  - Lorenz, Rainer, Witter, and Schonefeldt. 3,389,655.
- Schott, Charles W., to Union Carbide Corp. Method for making high strength spherical glass bodies. 3,389,982, 6–25–68, Cl. 65—21.
- Schreiner, Robert Z., to Allied Chemical Corp. Moving side wall crimping process and apparatus therefor. 3,389,445, 6–25–68, Cl. 28—1.
- Schriesheim, Alan: *See—*
  - Wallace, Thomas J., and Schriesheim. 3,390,173.
- Schroeter, Thomas T.: *See—*
  - Goldstein, Allen E., Rouse, and Schroeter. 3,389,555.
- Schuhmann, Leo C.: *See—*
  - Bevarly, Henry W., and Schuhmann. 3,389,567.
- Schultz, Dale G. Portable charcoal broiler. 3,389,651, 6–25–68, Cl. 99—393.
- Schultze-Bonatz, Heinz. Furniture element. 3,389,666, 6–25–68, Cl. 108—17.
- Schulz, Johann G. D., and A. C. Whitaker, to Gulf Research & Development Co. Process for the preparation of adipic acid. 3,390,174, 6–25–68, Cl. 260—533.
- Schumacher, George D., to Great Bend Mfg. Co. Attaching bracket for front end loaders. 3,389,819, 6–25–68, Cl. 214—780.
- Schumacher, Joseph N., to R. J. Reynolds Tobacco Co. Tobacco product. 3,389,706, 6–25–68, Cl. 131—17.
- Schutte, Herman D. Screen mill. 3,389,862, 6–25–68, Cl. 241—86.
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- Schwartz, Frederick A. Reusable form for folding shirts. 3,389,841, 6–25–68, Cl. 223—71.
- Schwartz, Jules J.: *See—*
  - Cassidy, Herbert W. D., and Schwartz. 3,389,659.
- Schwindt, Wolfgang: *See—*
  - Frerker, Gert, Kutschera, Marx, and Schwindt. 3,390,010.
- Schwindt, Wolfgang: *See—*
  - Uhl, Guenter, Schwindt, Wilhelm, and Faulhaber. 3,390,114.
- Scott, Harrison A., and J. E. Moe, to Railroad Accessories Corp. High intensity railroad crossing signals with separate frequencies of repetition for lamps and relay flasher. 3,390,304, 6–25–68, Cl. 315—217.
- Screttas, Consantinos G.: *See—*
  - Nield, Cyril H., Clarke, and Screttas. 3,390,146.
- Scullin, James P., and A. F. Fletcher, to Tenneco Chemicals, Inc. Vinyl halide resins stabilized with mixtures comprising polyols, phenols and barium, cadmium and zinc salts. 3,390,111, 6–25–68, Cl. 260—23.
- Scullin, James P., and A. F. Fletcher, to Tenneco Chemicals, Inc. Vinyl halide resins stabilized with mixtures comprising polyols, phenols and barium and cadmium salts. 3,390,112, 6–25–68, Cl. 260—23.
- Sears, James K., to Monsanto Co. Treatment of esters with polycarbonates of di-(monohydroxyaryl) alkanes. 3,390,170, 6–25–68, Cl. 260—475.
- Secora, Michael: *See—*
  - Rednick, Alvin B., and Secora. 3,390,049.
- Sederlund, Edward R.: *See—*
  - Cleereman, Kenneth J., and Sederlund. 3,389,434.
- Seeburg Corp., The: *See—*
  - Kenney, Mahlon W., Weathersby, and Danko. 3,389,948.
- Seiner, Jerome A., to Pittsburgh Plate Glass Co. Continuous polyester process. 3,390,135, 6–25–68, Cl. 260—75.
- Seitz-Werke G.m.b.H.: *See—*
  - Stobe, Lothar. 3,389,802.
- Selwitz, Charles M., to Gulf Research & Development Co. Phenol recovery. 3,390,194, 6–25–68, Cl. 260—621.
- Semplak, Ralph A., to Bell Telephone Laboratories, Inc. Variable capacitance liquid flow gauge. 3,389,601, 6–25–68, Cl. 73—171.
- Sencabaugh, Dwight M. Applicator and massage device. 3,389,418, 6–25–68, Cl. 15—244.
- Seppi, Arvine W., to Huck Mfg. Co. Multiple station transfer device. 3,389,594, 6–25–68, Cl. 72—419.
- Sharp, Richard S.: *See—*
  - Carlson, Carl B., Sharp, and Wollum. 3,390,379.
- Sharpe, Everett E.: *See—*
  - Krueger, Theodore H., and Sharpe. 3,389,681.
- Shaw, Stuart W. K., and R. M. Cook, to The International Nickel Co., Inc. Nickel-base alloy for use at elevated temperature. 3,389,992, 6–25–68, Cl. 75—171.
- Shawhan, Elbert N., to Sun Oil Co. Apparatus for impedance measurement with compensation for cable length, tube aging, and the like. 3,390,325, 6–25–68, Cl. 324—60.
- Shell Oil Co.: *See—*
  - Baumgartner, Herman J., Hood, and Weaver. 3,389,963.
  - Bonner, Richard B., and Jorda. 3,390,007.
  - Christie, Samuel H. 3,390,037.
  - De Ruiter, Hendrikus, Van Weeren, and Quik. 3,389,965.
  - Falbe, Jurgen F., and Tetteroo. 3,390,187.
  - Moss, Fred D., and Mathews. 3,390,207.
  - Richards, Harry F. 3,390,141.
- Shen, Chung Y.: *See—*
  - Feierstein, Harold E., Shen, and Versen. 3,390,093.
- Shepard, Francis H., Jr., to Vogue Instrument Corp. Capacitor sample and hold circuit employing signal comparison and regeneration. 3,390,381, 6–25–68, Cl. 340—173.
- Shiber, Shmuel, and B. Fishler. Transmission. 3,389,614, 6–25–68, Cl. 74—330.
- Shionogi & Co., Ltd.: *See—*
  - Morihara, Kazuyuki. 3,390,054.
- Shira, Chester S., to North American Rockwell Corp. Method of heat treating age-hardenable alloys. 3,390,023, 6–25–68, Cl. 148—127.
- Shlesinger, Bernard E., Jr., to AMP Inc. Compression ring crimp connectors. 3,390,227, 6–25–68, Cl. 174—84.
- Shuster, James S.: *See—*
  - Englehart, Oscar D., and Shuster. 3,389,984.
- Sidelman, Abraham. Snap action hair holding means. 3,389,709, 6–25–68, Cl. 132—46.
- Siegal, Burton L.: *See—*
  - Sarlo, Dominick J., and Siegal. 3,389,512.
- Siegel, Karl-Heinz, to ASF Gleitverschuiss G.m.b.H. Flexible container of plastic material. 3,389,733, 6–25–68, Cl. 150—3.
- Sieger, Albert. Filter and manual fuel pump for carburetor. 3,389,801, 6–25–68, Cl. 210—135.
- Siegerist, Walter L., and H. K. Hecker, to The Medart Engineering & Equipment Co. Straightening machine. 3,389,589, 6–25–68, Cl. 72—164.
- Siemens Aktiengeselschaft: *See—*
  - Beyerlein, Fritz-Werner. 3,390,226.
  - Rossner, Wolfgang. 3,389,844.
  - Ziegler, Albert. 3,389,516.
  - Ziegler, Albert. 3,390,211.
- Siemens-Planiawerke Aktiengesellschaft fur Kohlefabrikate: *See—*
  - Rubisch, Ottmar. 3,390,013.
- Siempelkamp, G., & Co., Firma: *See—*
  - Bruder, Karl, and Husges. 3,389,652.
- Signal Mfg. Co.: *See—*
  - De Sisto, Richard E. 3,390,317.
- Silhavy, Frank J.: *See—*
  - Owen, Charles L., Silhavy, and Meresz. 3,389,915.
- Silins, Vilnis: *See—*
  - Lund, John A. H., and Silins. 3,389,993.
- Silva, Frank A.: *See—*
  - Brown, Robert R., Malia, Ruete, and Silva. 3,390,331.
- Silverwood, Frederick W.: *See—*
  - Robinson, Albert S., and Silverwood. 3,389,983.
- Simmons, John G. B., and R. R. Verderber, to International Standard Electric Corp. Display element comprising phosphor and metal-insulator-metal bistable device. 3,390,295, 6–25–68, Cl. 313—108.
- Sims, John R. Tow rope retrieving device for water skiers. 3,389,676, 6–25–68, Cl. 115—6.1.
- Sinclair Research, Inc.: *See—*
  - Van Nordstrand, Robert A. 3,389,975.
  - Verdol, Joseph A. 3,390,105.
- Sinohara, Sinitsu, T. Yokoyama, H. Kimura, and H. Miyaucti, to Cabushiki Kaisha Tadano Tekkosho. Winch. 3,389,891, 6–25–68, Cl. 254—187.
- Sirvydas, Victor C.: *See—*
  - Goldman, Richard L., Kritzler, and Sirvydas. 3,389,457.
- Siuda, Karl: *See—*
  - Diggelmann, Hans, and Siuda. 3,390,235.
- Sjogren, Dick, and R. R. Akeby. Proportional spacing tape embossing tool. 3,389,772, 6–25–68, Cl. 197—6.7.
- Skinner, Jack S.: *See—*
  - Barr, Naaman F., Getting, and Skinner. 3,390,117.
  - Bach, Henry J., Barr, Getting, and Skinner. 3,390,118.
- Skoyles, Derek R., to North American Philips Co., Inc. Antilock apparatus for vehicle brakes. 3,389,939, 6–25–68, Cl. 303—21.
- Slates, Harry L.: *See—*
  - Chamberlin, Earl M., Slates, and Weinstock. 3,390,188.
- Slayden, Alvin W. Undershorts construction for men. 3,389,701, 6–25–68, Cl. 128—159.
- Slayton, Claude J. Silverware sorting machine. 3,389,711, 6–25–68, Cl. 134—63.
- Slifka, Robert C.: *See—*
  - Reinhardt, Anthony D., and Slifka. 3,389,588.
- Slingerland, Lyle R.: *See—*
  - Speca, Elio J., and Slingerland. 3,389,451.
- Smith, Berny L.: *See—*
  - Jureit, John C., and Smith. 3,389,812.
- Smith, Gordon. Can construction. 3,389,830, 6–25–68, Cl. 220—97.
- Smith, Homer G., Jr.: *See—*
  - McGill, Howard L., and Smith. 3,389,917.
- Smith, J. Perry, to TRW, Inc. Electric discharge device having spaced electrodes sealed to opposite end of envelope. 3,390,296, 6–25–68, Cl. 313—182.
- Smith Kline & French Laboratories: *See—*
  - Rednick, Alvin B., and Secora. 3,390,049.
- Smith, Lowell R., and A. J. Speziale, to Monsanto Co. Herbicidal method employing trihalothionoacetamides. 3,389,985, 6–25–68, Cl. 71—88.
- Smith, Reynold B., and J. W. Gingerich, to York Tape & Label Corp. Tail-tab dispensers. 3,389,832, 6–25–68, Cl. 221—70.
- Smith Industries Ltd.: *See—*
  - Holtam, John R. 3,389,605.
- Smrdel, Joseph A.: *See—*
  - Allen, Edward M., Dye, and Smrdel. 3,389,529.
- Snoddy, Arnon O.: *See—*
  - Diehl, Francis L., Drew, and Snoddy. 3,390,094.
- Snyder, Richard L. Cylindrical thin film magnetic core memory. 3,390,383, 6–25–68, Cl. 340—174.
- Societé à R.L.: S. T. Dupont: *See—*
  - Tissot-Dupont, Michael L. A. 3,389,886.

- Societe Anonyme Andre Citroen : *See—*
  - Henry-Biabaud, Edmond. 3,389,766.
- Societe Anonyme Pour l'Industrie Chimique : *See—*
  - Jaeger, Roland C. 3,390,147.
- Societe Bertin & Cie : *See—*
  - Kadosch, Marcel, Pavlin, and Mace. 3,389,698.
- Societe d'Exploitation des Brevets Industriels SEBI : *See—*
  - Papazian, Zareh. 3,389,439.
- Societe Industrielle de Transformation des Plastiques : *See—*
  - Leurent, Chislain. 3,389,502.
- Societe Nouvelle Spidem : *See—*
  - Bournez, Lucien, and Clement. 3,389,592.
  - Diolot, Lucien. 3,389,590.
- Societe Rhodiaceta : *See—*
  - Lachaussee, Henri, and Morieras. 3,389,548.
- Soffa, Lawrence A. : *See—*
  - Sullivan, Joseph G., Soffa, and Eagleson. 3,389,744.
- Soja, John T. : *See—*
  - Hendricks, Klaas, and Soja. 3,389,784.
- Solid State Systems, Inc. : *See—*
  - Gewirtz, Stanley. 3,390,329.
- Solo Cup Co. : *See—*
  - Johnson, Howard W. 3,389,883.
- Solomita, Evelyn, and R. L. B. Gumaelius, to said Solomita, assignor to S. G. Weil. Multiple picture puzzle book. 3,389,914, 6–25–68, Cl. 273—155.
- Sonderegger, Hans C., to Kistler Instrumente A.G. Piezoelectric building units. 3,390,287, 6–25–68, Cl. 310—9.6.
- Sonic Engineering Corp. : *See—*
  - Jacobs, John, III. 3,389,603.
- Southern Research & Engineering Co. : *See—*
  - Whitehead, Richard K., Sr., R. K., Jr., A. C., and H. C. 3,389,876.
- Spandorfer, Lester M., to Sperry Rand Corp. One-way transmission logic circuit. 3,390,276, 6–25–68, Cl. 307—88.
- Spandorfer, Lester M., to Sperry Rand Corp. Logical devices. 3,390,277, 6–25–68, Cl. 307—88.
- Speca, Elio J., and L. R. Slingerland, to The Air Preheater Co., Inc. Method of making an interlocking strip structure. 3,389,451, 6–25–68, Cl. 29—160.
- Special Devices, Inc. : *See—*
  - Filippi, Ernest A., and Herbert. 3,389,873.
- Spectra-Physics, Inc. : *See—*
  - Bell, William E. 3,390,351.
- Speiser, Peter, to Ciba Corp. Stable pharmaceutical beads containing medicament incorporated in synthetic copolymer by bead polymerization. 3,390,050, 6–25–68, Cl. 167—83.
- Sperry Rand Corp. : *See—*
  - Albright, Charles B. 3,389,904.
  - Ehalt, Gregory J. 3,390,385.
  - Spandorfer, Lester M. 3,390,276.
  - Spandorfer, Lester M. 3,390,277.
  - Waldrop, Thomas W. 3,389,732.
- Speziale, Angelo J. : *See—*
  - Smith, Lowell R., and Speziale. 3,389,985.
- Spillane, Leo J. : *See—*
  - Alexander, Stephen H., Montgomery, and Spillane. 3,390,119.
- Spiller, Basil H. R. : *See—*
  - Phillipson, Alan, Spiller, Smith, and Cheesman. 3,390,217.
- Spilners, Ilgvars J. : *See—*
  - Pellegrini, John P., Jr., and Spilners. 3,390,087.
- Spofa, Sdruzeni podniku pro zdravotnickou vyrobu : *See—*
  - Janata, Vladimir, and Bydzovsky. 3,390,158.
- Sprague Electric Co. : *See—*
  - England, Walter F. 3,390,312.
  - Manchester, Kenneth E. 3,390,019.
- Springer, Charles R., to Chick Master Incubator Corp. Poultry egg hatcher. 3,389,688, 6–25–68, Cl. 119—35.
- Squires, Thurston W., to Martin Marietta Corp. Operational amplifier. 3,390,344, 6–25–68, Cl. 330—9.
- Stamicarbon N.V. : *See—*
  - Leeman, Jan N. J. 3,389,793.
- Stammler, Manfred : *See—*
  - Olberg, Ralph C., and Stammler. 3,390,027.
- Standard Chemical Products, Inc. : *See—*
  - Valko, Emry I. 3,390,009.
- Standard Oil Co., The : *See—*
  - Callahan, James L., Grasselli, and Knipple. 3,390,202.
  - Mann, John S., and Reinhart. 3,389,978.
- Stanford, Alfred E., to Esso Research and Engineering Co. Method of providing an inert atmosphere. 3,389,829, 6–25–68, Cl. 220—88.
- Start, Ernest : *See—*
  - Bentley, William, and Start. 3,389,580.
- Stauffer Chemical Co. : *See—*
  - Pitt, Harold M., and Pallos. 3,390,140.
- Steel Co. of Canada, Ltd., The : *See—*
  - Moline, David A. 3,389,591.
- Stein, Alfred J., Jr., to Texas Instruments Inc. Flux for fusing tin to gallium arsenide and method of making and using same. 3,390,024, 6–25–68, Cl. 148—182.
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- Steinthal, M., & Co., Inc. : *See—*
  - Jantzen, George H. 3,389,440.
- Stelle, Russell T. Process for making lightweight fired ceramic bodies. 3,390,212, 6–25–68, Cl. 264—44.
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- Stengelin, Johann C. : *See—*
  - Hartmann, Hans, and Stengelin. 3,389,798.
- Stentz, Raymond H. : *See—*
  - Treinen, Robert L., and Stentz. 3,390,270.
- Sterner, Robert L., to Textile Machine Works. Yarn feed controlling means for knitting machines. 3,389,581, 6–25–68, Cl. 66—133.
- Stewart, Edward C. : *See—*
  - Studinski, Robert A., and Stewart. 3,389,949.
- Stewart, Ross M. : *See—*
  - Lion, William D., and Stewart. 3,389,596.
- Stobe, Lothar, to Seitz-Werke G.m.b.H. Tank filter with interchangeable clamping plates. 3,389,802, 6–25–68, Cl. 210—232.
- Stock, Richard R. Shelter. 3,389,510, 6–25–68, Cl. 52—2.
- Stockinger, John H. : *See—*
  - Schick, John W., Stockinger, and Gemmill. 3,390,127.
- Stogryn, Eugene L. : *See—*
  - Leary, Ralph J., Stogryn, and Argabright. 3,390,136.
- Storck, Robert C., to Philco-Ford Corp. Electric heating tool. 3,390,252, 6–25–68, Cl. 219—234.
- Stover, Harris A. : *See—*
  - Mayer, Abbott F., and Stover. 3,390,392.
- Stradley, Donald L. : *See—*
  - Watson, Gerald L., and Stradley. 3,389,789.
- Strandskov, Frede B., and J. B. Bockelmann, to The F. & M. Schaefer Brewing Co. Methods for achieving the chemical preservation of beer and resultant beer compositions. 3,389,999, 6–25–68, Cl. 99—48.
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- Strategic Materials Corp. : *See—*
  - Olds, Leonard E., Udy, and Wesel. 3,389,957.
- Strathman, John H., and J. R. Pettit, to Hewlett-Packard Co. Display stabilizer. 3,390,302, 6–25–68, Cl. 315—25.
- Strauss, Harry L., Jr. Method of bonding diamond and metal. 3,389,981, 6–25–68, Cl. 51—293.
- Strieter, Frederick J., to Texas Instruments Inc. Method of forming small geometry diffused junction semiconductor devices by diffusion. 3,390,025, 6–25–68, Cl. 148—187.
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- Suddarth, Jack M., and D. L. Gray, to Coburn Mfg. Co., Inc. Cylinder grinder. 3,389,508, 6–25–68, Cl. 51—60.
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- Sully, Fenton F., to Everst & Jennings, Inc. Adjustable connector for collapsible cross-braces for wheelchairs. 3,389,934, 6–25–68 Cl. 297—42.
- Sulzer Bros. Ltd. : *See—*
  - Ergenc, Sahabettin. 3,389,565.
  - Wolf, Gottlieb. 3,389,554.
- Sun Oil Co. : *See—*
  - Shawhan, Elbert N. 3,390,325.
- Sunbeam Corp. : *See—*
  - Jepson, Ivar, Morgan, and Richmond. 3,389,452.
- Sundaresan, Eommaya B., and C. I. Harding, to Nitram Chemicals, Inc., Wilson-Toomer Division of the Emhart Corp. and The University of Florida. Methods of recovering gases and vapors. 3,389,961, 6–25–68, Cl. 23—162.
- Susskind, Alfred K. : *See—*
  - McDonough, James O., Susskind, and Grossimon. 3,390,315.
- Svensson, Anders : *See—*
  - Larkfeldt, Birger, and Svensson. 3,389,649.
- Swanson, William C., to International Harvester Co. Orifice adjusting mechanism. 3,389,556, 6–25–68, Cl. 60—53.
- Sweeney, Richard F., and H. R. Nychka, to Allied Chemical Corp. Highly fluorinated surface active compositions and preparation thereof. 3,390,176, 6–25–68, Cl. 260—539.
- Sylvania Electric Products Inc. : *See—*
  - Gannoe, Thomas E. 3,389,683.
  - Elmer, William B. 3,390,262.
  - Fisher, Mahlon B. 3,390,272.
- Symons Mfg. Co. : *See—*
  - Williams, Walter D. 3,389,929.
- Szakacsi, Janos, to Eumuco Aktiengesellschaft fur Maschinenbau. Horizontal forging and upsetting machine. 3,389,593, 6–25–68, Cl. 72—417.
- Sze, Morgan C., to The Lummus Co. Production of aromatic hydrocarbons by hydrodealkylation and hydrogenolysis. 3,390,200, 6–25–68, Cl. 260—672.
- TRW Inc. : *See—*
  - Herbenar, Edward J. 3,389,927.
  - Pollack, Slava A. 3,389,578.
  - Smith, J. Perry. 3,390,296.
  - Witte, Robert S., and Mackey. 3,390,268.
- T & T Chinchilla Inc. : *See—*
  - Taylor, Donald M., and Martz. 3,389,686.
- Takewell, Robert B., and T. Kohn, to J. M. Huber Corp. Method of making carbon black/silica pigment. 3,390,006, 6–25–68, Cl. 106—288.
- Talbot, Richard C., to Peters Machinery Co. Hot melt glue applicator. 3,389,684, 6–25–68, Cl. 118—202.
- Tamar Electronics Industries, Inc. : *See—*
  - Cabe, Ray W. 3,390,260.
- Tamburr, Owen. Multiple lead cutter. 3,389,629, 6–25–68, Cl. 83—200.

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- Tarter, Carl M., and W. J. Walker. Tire installation tool. 3,389,453, 6–25–68, Cl. 29—273.
- Tarver, Donald A, to Texas Instruments Inc. CVD process for producing tungsten carbide and article of manufacture. 3,389,977, 6–25–68, Cl. 29—195.
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- Taylor, Kenneth R., to The English Electric Co. Ltd. Method of and apparatus for providing anchors in earth and/or rock formations. 3,389,561, 6–25–68, Cl. 61—45.
- Taylor Machine Works : *See—*
  - Estes, Clancy E. 3,389,933.
- Taylor, Robert C., and J. B. Conn, to Merck & Co., Inc. Metallic selenides and tellurides and process for making same. 3,390,090, 6–25–68, Cl. 252—62.3.
- Teigen, Ferdinand A. Apparatus for topping onions. 3,389,731, 6–25–68, Cl. 146—83.
- Teller, Howard S., Jr., to General Electric Co. Transistor oscillator circuit with a resistor network for stabilization against beta variations. 3,390,353, 6–25–68, Cl. 331—117.
- Tenneco Chemicals, Inc. : *See—*
  - Di Bella, Eugene P. 3,389,986.
  - McDavid, William D. 3,390,046.
  - Scullin, James P., and Fletcher. 3,390,111.
  - Scullin, James P., and Fletcher. 3,390,112.
- Termet, Pierre M. Device for slaughtering small animals for food. 3,389,425, 6–25–68, Cl. 17—1.
- Ternbah, Mirko : *See—*
  - Heppolette, Robert L., Murdock, and Ternbah. 3,390,122.
- Tersch, Richard W., to Lear Siegler, Inc. Gate device for gears. 3,389,476, 6–25–68, Cl. 33—179.5.
- Teter, Harry I. Pipe casing driving machine. 3,389,757, 6–25–68, Cl. 175—22.
- Tetteroo, Hans : *See—*
  - Falbe, Jergen F., and Tetteroo. 3,390,187.
- Tetzlaff, Clarence C., to Wittek Mfg. Co. Hose clamp with load distributing member. 3,389,442, 6–25–68, Cl. 24—278.
- Teutsch, Marvin W., to Nuclear Corp. of America. Electrostatic copier. 3,389,635, 6–25–68, Cl. 88—24.
- Texaco Inc. : *See—*
  - Harnsberger, Bobby G. 3,389,751.
  - Mott, George E., and Loggins. 3,389,562.
- Texas Instruments Inc. : *See—*
  - Bodge, Clifford A. 3,390,361.
  - Brown, George A., Fuller, and Carlson. 3,390,011.
  - Clark, Kenneth B. 3,389,455.
  - Haberecht, Rolf R. 3,890,012.
  - Illingworth, William T. 3,390,248.
  - Litterst, Ralph S., and Brennan. 3,389,723.
  - Stein, Alfred J., Jr. 3,390,024.
  - Strieter, Frederick J. 3,390,025.
  - Tarver, Donald A. 3,389,977.
  - Wilks, Ramon W. 3,389,787.
- Textile Machine Works : *See—*
  - Sterner, Robert L. 3,389,581.
- Textron Electronics, Inc. : *See—*
  - Peck, Robert L. 3,390,313.
- Textron, Inc. : *See—*
  - Friedman, Ronald S., and Hadfield. 3,389,885.
- Theobald, Elwin, and P. R. Andrews. Omnidirectional cutting tool. 3,389,447, 6–25–68, Cl. 29—78.
- Theurer, Josef : *See—*
  - Plasser, Franz, and Theurer. 3,389,469.
- Thiokol Chemical Corp. : *See—*
  - Cassidy, Herbert W. D., and Schwartz. 3,389,659.
- Thireau, Remy, to Commissariat a l'Energie Atomique. Device for effecting the accurate positional adjustment of a component. 3,389,612, 6–25–68, Cl. 74—89.15.
- Thomas & Betts Co., The : *See—*
  - Golankiewicz, Edwin J. 3,390,370.
- Thomas, Carroll E. Artist's water color kit. 3,389,945, 6–25–68, Cl. 312—231.
- Thomas, Elmer G. : *See—*
  - Musel, Robert J., and Thomas. 3,389,840.
- Thome, Heinrich : *See—*
  - Kampmann, Friedrich W., and Thome. 3,390,221.
- Thompson, Morice W., and F. A. Waite, to Imperial Chemical Industries Ltd. Process for preparing polymers having one terminal functional group capable of condensation reaction. 3,390,206, 6–25–68, Cl. 260—875.
- Thompson, Philip M., to The Plessey Co. Ltd. Semiconductor coupling means for two transistors or groups of transistors. 3,390,280, 6–25–68, Cl. 307—215.
- Thomson, David J., to Bell Telephone Laboratories, Inc. Low-loss communications cable. 3,390,357, 6–25–68, Cl. 333—17.
- Thorn Electrical Industries Ltd. : *See—*
  - Kember, Raymond C., Burnett, and Gosling. 3,390,372.
- Thorpe, Dean F. : *See—*
  - Henriksen, Arthur J., and Thorpe. 3,390,219.
- Thrasher, George E., Jr., to Master Pneumatic-Detroit, Inc. Lubricant reservoir structure with vent means. 3,389,799, 6–25–68, Cl. 210—251.
- Tidwell, Carl H. Table saw guide. 3,389,725, 6–25–68, Cl. 143—169.
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- Tipper, Maynard J. G., and J. W. Marietta, Jr., to Rheem Mfg. Co. Packaging apparatus and method. 3,389,533, 6–25–68, Cl. 53—134.
- Tirtiaux, Robert, and R. Tourret, to Esso Research and Engineering Co. Lubricating oil containing polymeric additive. 3,390,089, 6–25–68, Cl. 252—56.
- Tissot-Dupont, Michel L. A., to Societé á R. L. named S. T. Dupont. Pneumatic pilot valve with snap action. 3,389,886, 6–25–68, Cl. 251—75.
- Toa Electric Co., Ltd. : *See—*
  - Imadate, Hiroshi. 3,390,326.
- Tobin, John J., Jr. Exterior mirror assembly for vehicles. 3,389,952, 6–25–68, Cl. 350—303.
- Tolliver, Billy R. : *See—*
  - Gradin, James H., Tolliver, Blessum, and Richardson. 3,390,286.
- Topinka, George F., to FMC Corp. Waste disposal unit. 3,389,864, 6–25–68, Cl. 241—141.
- Touchman, William S., to The National Cash Register Co. Intermittent motion apparatus. 3,389,843, 6–25–68, Cl. 226—134.
- Tourish, John P. : *See—*
  - Baltakmens, Gotliebs, and Tourish. 3,390,064.
- Tourret, Roger : *See—*
  - Tirtiaux, Robert, and Tourret. 3,390,089.
- Towns, Edward J., and S. Rudowsky, Sr. Process for molding fluorocarbon resin material to an article. 3,389,749, 6–25–68, Cl. 156—245.
- Toyo Koatsu Industries, Inc. : *See—*
  - Otsuka, Eiji, Kanai, and Chikaoka. 3,390,058.
- Trammell, Earl M., Jr. Vehicle license plate holders. 3,389,486, 6–25–68, Cl. 40—209.
- Tranoco, Inc. : *See—*
  - Travis, Charles F. 3,389,721.
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- Triax Company, The : *See—*
  - Lemelson, Jerome H. 3,389,814.
- Trico Products Corp. : *See—*
  - Oishei, John R., and Weymouth. 3,389,419.
- Tripp, Bert E., W. J. Welch, and T. Panasik, to General Aniline & Film Corp. Two-component heat developable diazotypes containing amidine compounds. 3,389,995, 6–25–68, Cl. 96—91.
- Trussell, Harry B. Poultry breeding apparatus. 3,389,687, 6–25–68, Cl. 119—21.
- Tucher, Peter A. : *See—*
  - Lemcke, George A., and Tucher. 3,389,643.
- Tunder, Siegfried, and G. Schefels, to Gesellschaft fur Huttenwerksanlagen m.b.H., and Rekuperator K.G., Dr.-Ing. Schack & Co. Method of operating a hot blast cupola furnace. 3,389,897, 6–25–68, Cl. 263—52.
- Tunder, Siegfried : *See—*
  - Schimmel, Busso, and Tunder. 3,389,898.
- Tunstall, Wilfred. Simulated space travel game apparatus with vertically extending board. 3,389,913, 6–25–68, Cl. 273—134.
- Turnbull, Albert E., to Illinois Tool Works Inc. Lever and link mechanisms. 3,389,613, 6–25–68, Cl. 74—110.
- Turner, Lyman H., to Xerox Corp. Document-handling apparatus. 3,389,907, 6–25–68, Cl. 271—74.
- Udy, Murray C. : *See—*
  - Olds, Leonard E., Udy, and Wesel. 3,389,957.
- Uhl, Guenter, W. Schwindt, H. Wilhelm, and G. Faulhaber, to Badische Anilin- & Soda-Fabrik Aktiengesellschaft. Binders for pigment dyeings and prints on fibrous material comprising addition polymers containing halohydrin groups and an epoxy compound. 3,390,114, 6–25–68, Cl. 260—29.6.
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- Underwood, Glenn C. : *See—*
  - Kelley, Thomas M., and Underwood. 3,389,947.
- Union Carbide Corp. : *See—*
  - Schott, Charles W. 3,389,982.
- United Aircraft Corp. : *See—*
  - Barnes, Philip E. 3,389,641.
  - Best, Stanley G., Harner, and Ramaker. 3,389,640.
- United Kingdom Atomic Energy Authority : *See—*
  - Cooke-Yarborough, Edmund H., Hooton, Hickman, and Prior. 3,390,380.
- United Shoe Machinery Corp. : *See—*
  - Banks, David E., Herdeg, Karcher, Khambaty, and Mercaldi. 3,389,628.
  - Barker, Joseph. 3,389,443.
  - Walton, Richard R. 3,389,906.

- United States of America,
  - Army : *See*—
    - Guenter, Richard G. 3 390,210.
    - Holm, Niels, W., and Jarrett. 3,390,099.
  - Atomic Energy Commission : *See*—
    - Hatch, Loranus P. 3,390,078.
    - Treinin, Robert L., and Stentz. 3,390,270.
    - Watson, Barron C. 3,389,606.
  - Interior : *See*—
    - MacPhee, Craig, and Ruelle. 3,389,685.
    - Miller, John L., Jr., and Ivey. 3,390,045.
  - National Aeronautics and Space Administration : *See*—
    - Canero, Giro A., and Janniche. 3,390,282.
    - Hennigan, Thomas J. 3,390,017.
    - Huber, William C., and Saffield. 3,389,877.
- United States Steel Corp. : *See*—
  - Ashworth, James E., and Bartz. 3,389,930.
  - Brownell, George L. 3,390,171.
  - Giunta, Joseph S. 3,389,697.
  - Masciantonio, Philip X., and Peoples. 3,390,151.
  - McFarland, Lowery J. 3,389,899.
  - Reinhardt, Anthony D., and Slifka. 3,389,588.
- Upton, Hubert W., to Bell Aerospace Corp. Airfoil radar antenna. 3,390,393, 6–25–68, Cl. 343—708.
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- VDO Tachometer Werke Adolf Schindling GmbH : *See*—
  - Werner, Johannes, Golde, and Schlick. 3,389,579.
- Vaillancourt, Walter J. Toggle bolt with toggle support means. 3,389,631, 6–25–68, Cl. 85—3.
- Valko, Emery I., to Standard Chemical Products, Inc. Process for rendering hydrophobic fibers containing textile antistatic and the treating composition. 3,390,009, 6–25–68, Cl. 117—139.5.
- Van Allen, Richard F. : *See*—
  - Herrstrum, Rudolph E., and Van Allen. 3,389,660.
- Van Ausdal, Robert K., D. V. Healy, and J. P. Anderson, to The Bendix Corp. Electrohydraulic servovalve having minimum flow during quiescent operation. 3,389,719, 6–25–68, Cl. 137—625.61.
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- Van der Meulen, Leonard. Device for the continuous manufacture of bags from a synthetic material. 3,390,042, 6–25–68, Cl. 156—583.
- Van Ghemen, Max, and E. Wiberg, to Hooker Chemical Corp. Process for preparing pentaorganotriphosphines. 3,390,189, 6–25–68, Cl. 260—606.5.
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- Van Sickler, Robert H., and J. F. Dagley, to General Electric Co. Filament supports for tubular incandescent lamps. 3,390,299, 6–25–68, Cl. 313—274.
- Van Tilburg, Jan. Oriented pile structure. 3,390,403, 6–25–68, Cl. 161—67.
- Van Weeren, Pieter A. : *See*—
  - De Ruiter, Hendrikus, Van Weeren, and Quik. 3,389,965.
- Varian Associates : *See*—
  - Davidovits, Paul, Novick, and Knable. 3,390,350.
  - Llewellyn, Peter M. 3,390 265.
  - Mack, Charles D. 3,390,300.
  - Nunan, Craig S. 3,390,293.
- Vehrs, Charles L., Jr., to North American Rockwell Corp. Clutter-fortified MTT system. 3,390,390, 6–25–68, Cl. 343—16.
- Velsicol Chemical Corp. : *See*—
  - Richter, Sidney B. 3,390,047.
- Verderber, Rudolph R. : *See*—
  - Simmons, John G. B., and Verderber. 3,390,295.
- Verdol, Joseph A., to Sinclair Research, Inc. Method of making a crosslinked polymer foam and product obtained therefrom. 3,390,105, 6–25–68, Cl. 260—2.5.
- Versen, Robert R. : *See*—
  - Feierstein, Harold E., Shen, and Versen. 3,390,093.
- Vichr, Radek, to Presna Mechanika, narodyn podnik. Pulse speed regulator for an electric motor. 3,390,316, 6–25–68, Cl. 318—325.
- Vicini, Dino, to N.A.S. Hydraulic and Vulcanizing Machinery Co. Automatic feed metering device for injection moulding machines. 3,389,433, 6–25–68, Cl. 18—30.
- Viscontini, Vittorio R. : *See*—
  - Denti, Francesco, and Viscontini. 3,389,428.
- Visser, Simon : *See*—
  - Winters, John D., Visser, Kristoff, and Herring. 3,389,645.
- Vlietstra, Jan, to N.V. Hollandse Signaalapparaten. Wave guide switch. 3,390,355, 6–25–68, Cl. 333—7.
- Vogue Instrument Corp. : *See*—
  - Shepard, Francis H., Jr. 3,390,381.
- Volken, Kurt : *See*—
  - Reverdin, Andre P., Wicht, and Volken. 3,390,109.
- Vollmer, John W., to The Perkin-Elmer Corp. Shield for hollow cathode lamps. 3,390,297, 6–25–68, Cl. 313—209.
- Von Der Emden, Wolfgang : *See*—
  - Kocher, Ernst-Ulrich, Bayer, Wagner, and Von Der Emden. 3,390,130.
- Wagner, Alfred, to Beteiligungs- und Patentverwaltungsgesellschaft mit beschrankter Haftung. Electrode holder for arc furnaces. 3,390,220, 6–25–68, Cl. 13—15.
- Wagner, Hans, to Schiess Aktiengesellschaft. Device for straightening a rectilinearly displaceable tool reciprocating member of machine tools. 3,389,625, 6–25–68, Cl. 82—2.
- Wagner, Kuno : *See*—
  - Kocher, Ernst-Ulrich, Bayer, Wagner, and Von Der Emden. 3,390,130.
- Wahl, Edward C., to Gits Bros. Mfg. Co. Floating ring shaft seal. 3,389,916, 6–25–68, Cl. 277—41.
- Wahlbeck, Ira H., to The Air Preheater Co., Inc. Hydrostatic bearing and axial adjusting means for the simultaneous rotary and axial movement of the rotor in a rotary regenerative air preheater. 3,389,745, 6–25–68, Cl. 165—9.
- Wainwright, Ralph, and A. Archer, to Qualter, Hall & Co. (Sales) Ltd. Monorail trackway. 3,389,061, 6–25–68, Cl. 104—106.
- Waite, Frederick A. : *See*—
  - Thompson, Morice W., and Waite. 3,390,206.
- Wakayama Tetsuko Kabushiki Kaisha : *See*—
  - Okazaki, Narukazu, and Azuma. 3,389,584.
- Wakeman, Alfred W., to Dynamics Corp. of America. Foam producing and dispensing device. 3,389,836, 6–25–68, Cl. 222—189.
- Wakeman, Alfred W., to Dynamics Corp. of America. Foam producing and dispensing device. 3,390,097, 6–25–68, Cl. 252—359.
- Waldrop, Thomas W., to Sperry Rand Corp. Forage chopper. 3,389,732, 6–25–68, Cl. 146—117.
- Wales, Nathaniel B., Jr., and C. B. Grady, Jr., to The Metrodynamics Corp. Sequential power switch. 3,390,359, 6–25–68, Cl. 335—31.
- Walker, James E. : *See*—
  - Gamburd, Harold, and Walker. 3,390,395.
- Walker, John F., to Hercules, Inc. Polyester resins. 3,390,132, 6–25–68, Cl. 260—75.
- Walker Mfg. Co. : *See*—
  - Kelso, Leo J. 3,389,764.
- Walker, Walter J. : *See*—
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- Warden, Fuller : *See*—
  - Lewis, Eugene W., Warden, Mills, and McNickle. 3,389,468.
- Warren Fastener Corp. : *See*—
  - Meyer, Engelbert A. 3,389,526.
- Warren, Robin H. J. : *See*—
  - Paddison, Eric, Clegg, and Warren. 3,390,307.
- Watanabe, Takaaki : *See*—
  - Umeya, Kaoru, Watanabe, and Kondo. 3,390,216.
- Waterdome Corp. : *See*—
  - Day, Phillip E. 3,390,057.
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  - Gray, Harold W., and Watt. 3,389,520.
- Wayne, William C., Jr., to D. H. Baldwin Co. Electrical organ. 3,390,223, 6–25–68, Cl. 84—1.24.
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- Weathersby, Menger : *See*—
  - Kenney, Mahlon W., Weathersby, and Danko. 3,389,948.
- Weaver, Donald D. : *See*—
  - Baumgartner, Herman J., Hood, and Weaver. 3,389,963.
- Webb, Ernest C., to The Cleveland Trust Co. Apparatus for projecting printed bowling game scores. 3,389,634, 6–25–68, Cl. 88—24.
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- Webb, Robert S., to Elox, Inc. Coolant circulation system for electrical discharge machining apparatus. 3,390,247, 6–25–68, Cl. 219—69.
- Weber, H. G., and Co., Inc. : *See*—
  - Weber, Herbert H., and Jacobsen. 3,389,679.
- Weber, Herbert H., and P. W. Jacobsen, to H. G. Weber and Co., Inc. Pilot for glue detector probe and for locating glue line on a moving and weaving web. 3,389,679, 6–25–68, Cl. 118—8.
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- Weil, Steve G. : *See*—
  - Solomita, Evelyn, and Gumaelius. 3,389,914.
- Weiss, Herbert : *See*—
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- Weitzner, Dorothea M., and L. S. Saulsbury. Combined viewer and audio recorder for optical slide carrying record medium. 3,389,636, 6–25–68, Cl. 88—28.
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- Welcker, Clyde J. and R. L. Shrimp processing machine. 3,389,426, 6–25–68, Cl. 17—2.
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  - Welcker, Clyde J. and R. L. 3,389,426.
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- Wesel, John R. : *See*—
  - Olds, Leonard E., Udy, and Wesel. 3,389,957.
- West, Le Roy D. : *See*—
  - Morra, Peter J., and West. 3,389,838.
- Westinghouse Electric Corp. : *See*—
  - Circle, Robert R., and Prunty. 3,390,240.
- Westland Aircraft Ltd. : *See*—
  - Winter, Anthony. 3,389,672.
- Weston Instruments, Inc. : *See*—
  - Kishel, Joseph F. 3,389,607.
  - Rappoccio, Dominick J. 3,390,332.
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  - Dunnington, Jon B. 3,389,517.
  - Frichette, James D. 3,390,123.
- Weymouth, Frederick R., Jr. : *See*—
  - Oishei, John R., and Weymouth. 3,389,419.
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- Wheeler ,Kenneth L., to Brunswick Corp. Furniture glide. 3,389,421, 6–25–68, Cl. 16—42.
- Whirlpool Corp. : *See*—
  - Fellwock, Charles G. 3,389,424.
  - Frohbieter, Edwin H. 3,389,575.
- Whitaker, Arthur C. : *See*—
  - Schulz, Johann G. D., and Whitaker. 3,390,174.
- White Avionics Corp. : *See*—
  - Hunt, James P. 3,390,274.
- White, Charles M. : *See*—
  - Kirshenbau, Isidor, Bouboulis, and White. 3,390,137.
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  - Whitehead, Richard K., Sr., R. K., Jr., A. C. and H. C. 3,389,876.
- Whitehead, Harry C. : *See*—
  - Whitehead, Richard K., Sr., R. K., Jr., A. C. and H. C. 3,389,876.
- Whitehead, Richard K., Jr. : *See*—
  - Whitehead, Richard K., Sr., R. K., Jr., A. C. and H. C. 3,389,876.
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- Wiberg, Egon : *See*—
  - Van Ghemen, Max, and Wiberg. 3,390,189.
- Wicht, Paul : *See*—
  - Reverdin, Andre P., Wicht, and Volken. 3,390,109.
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- Wilcox, Lance C., to Electric Regulator Corp. Timing system. 3,389,900, 6–25–68, Cl. 267—1.
- Wilhelm, Hans : *See*—
  - Uhl, Guenter, Schwindt, Wilhelm, and Faulhaber. 3,390,114.
- Wilks, Ramon W., to Texas Instruments Inc. Unmounted component transport, 3,389,787, 6–25–68, Cl. 209—73.
- Williams, Albert H., to Caledex Machine Co. Ltd. Box-wrapping apparatus. 3,389,644, 6–25–68, Cl. 93—40.
- Williams, Chester E. : *See*—
  - Zavertnik, Marshall G., Kelly, Rongey, and Williams. 3,390,369.
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- Williamsburg Steel Products Co. : *See*—
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- Williamson, David E., and J. A. Rinato, to Dorr-Oliver Inc. Apparatus for flocculating treatment of liquids in horizontal through-flow tanks. 3,389,892, 6–25–68, Cl. 259—100.
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- Wilson, John R. : *See*—
  - Keck, Max H., and Wilson. 3,390,108.
- Wilson, Ray. Overhead crane with main beam. 3,389,809, 6–25–68, Cl. 212—10.
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  - Tetzlaff, Clarence C. 3,389,442.
- Witter, Klaus : *See*—
  - Lorenz, Rainer, Witter, and Schonefeldt. 3,389,655.
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  - Giller, Solomon A., Wolf, and Meos. 3,390,008.
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  - Carlson, Carl B., Sharp, and Wollum. 3,390,379.
- Wolverton, Marcine P. : *See*—
  - Ross, Henry S., and Wolverton. 3,389,857.
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- Wozniak, Edmund P. : *See*—
  - Curtis, Gerard W., and Wozniak. 3,390,190.
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- Wright, William R. : *See*—
  - Wright, John T. and W. R., and Du Biel. 3,390,036.
- Wright, Wm. E., & Sons Co. : *See*—
  - Wright, John T. and W. R., and Du Biel. 3,390,036.
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- Wyatt, David L. : *See*—
  - Couch, Robert O., and Wyatt. 3,390,225.
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  - Eichorn, Roger H. 3,389,863.
  - Turner, Lyman H. 3,389,907.
- Yabe, Saburo : *See*—
  - Nishikawa, Masao, and Yabe. 3,390,396.

Yanis, Conrad: *See*—
Brothman, Abraham, Gomery, Yanis, and Miller. 3,390,233.
Yates, Ronald A., to W. R. Grace & Co. Method and apparatus for heat shrinking packaging film. 3,389,530, 6–25–68, Cl. 53—30.
Yatter, Samuel. Multiple feed antenna connector. 3,390,358, 6–25–68, Cl. 333—25.
Yeakey, Ernest L.: *See*—
Moss, Philip H., Yeakey, and Speranza. 3,390,184.
Yeomans, Ralph D. Self-adjusting telescoping bookends. 3,389,805, 6–25–68, Cl. 211—43.
Yokoyama, Takesi: *See*—
Sinohara, Sinitsu, Yokoyama, Kimura, and Miyaucti. 3,389,891.
York Tape & Label Corp.: *See*—
Smith, Reynold B., and Gingerich. 3,389,832.
Yost, Oscar A. Floating assembly for off-shore drilling, mining or fishing platform. 3,389,671, 6–25–68, Cl. 114—.5.
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Angier, Angier R. 3,390,259.
Youngquist, Robert J., to Minnesota Mining and Mfg. Co. Video recording and reproducing with vertical sync pulse generation. 3,390,230, 6–25–68, Cl. 178—6.6.
Youngquist, Robert J., to Minnesota Mining and Mfg. Co. Video recording control and synchronizing system. 3,390,231, 6–25–68, Cl. 178—6.6.
Zauderer, Jerome: *See*—
Bosworth, Seymour, Zauderer, and Douglas. 3,390,327.
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Zegers, Leo E.: *See*—
De Jager, Frank, and Zegers. 3,390,232.
Zemsky, Calvin L., to Martin Concrete Products Corp. Diffusion well construction. 3,389,560, 6–25–68, Cl. 61—41.
Zenith Radio Corp.: *See*—
Bell, John F. 3,390,228.
Buchowski, Roman, and Kocsis. 3,389,704.
Criswell, Byron R., and Primack. 3,389,703.
Zeyher, Fritz: *See*—
Beier, Ernst, Bornhoft, Durner, Kasper, Maus, Planitzer, and Zeyher. 3,389,637.
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Jones, Harold B., and Zmuda. 3,389,943.
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308 : 3,389,410
339 : 3,389,411
7– 14.25: 3,389,412
8– 42 : 3,389,956
10–139 : 3,389,413
13– 6 : 3,390,219
15 : 3,390,220
16 : 3,390,221
31 : 3,390,222
15– 3.17: 3,389,414
104 : 3,389,415
3,389,416
.06: 3,389,417
235.3 : 3,389,420
244 : 3,389,418
250.12: 3,389,419
16– 42 : 3,389,421
75 : 3,389,423
78 : 3,389,422
170 : 3,389,424
17– 1 : 3,389,425
2 : 3,389,426
18– 4 : 3,389,427
8 : 3,389,428
3,389,429
9 : 3,389,430
14 : 3,389,431
16.7 : 3,389,432
30 : 3,389,433
42 : 3,389,434
19– 80 : 3,389,435
145.3 : 3,389,436
252 : 3,389,437
23– 16 : 3,389,957
106 : 3,389,958
109 : 3,389,959
160 : 3,389,960
162 : 3,389,961
193 : 3,389,962
204 : 3,389,963
209.1 : 3,389,964
212 : 3,389,965
230 : 3,389,966
3,389,967
3,389,968
270 : 3,390,402
.5 : 3,389,969
3,389,970
277 : 3,389,971
281 : 3,389,972
290 : 3,389,973
295 : 3,389,974
315 : 3,389,975
356 : 3,389,976
24– 84 : 3,389,438
90 : 3,389,439
196 : 3,389,440
205.1 : 3,389,441
278 : 3,389,442
26– 55 : 3,389,443
28– 1 : 3,389,444
3,389,445
76 : 3,389,446
29– 78 : 3,389,447
110 : 3,389,448
116 : 3,389,449
3,389,450
160 : 3,389,451
177 : 3,389,452
195 : 3,389,977
273 : 3,389,453
406 : 3,389,454
420 : 3,389,455
441 : 3,389,456
580 : 3,389,457
605 : 3,389,458
610 : 3,389,459
624 : 3,389,460
625 : 3,389,461
30– 28 : 3,389,462
43.92: 3,389,467
164.9 : 3,389,463
264 : 3,389,464
346.5 : 3,389,465
30–366 : 3,389,466
32– 59 : 3,389,468
33– 1 : 3,389,469
77 : 3,389,470
85 : 3,389,471
174 : 3,389,472
3,389,473
3,389,474
3,389,475
179.5 : 3,389,476
184.5 : 3,389,477
34–216 : 3,389,478
35– 9 : 3,389,479
35 : 3,389,480
36– 2.5 : 3,389,481
40– 32 : 3,389,483
130 : 3,389,484
159 : 3,389,485
209 : 3,389,486
42– 17 : 3,389,487
42 : 3,389,488
43– 17 : 3,389,489
42.1 : 3,389,490
53.5 : 3,389,491
44– 57 : 3,389,978
62 : 3,389,979
69 : 3,389,980
46– 7 : 3,389,492
25 : 3,389,493
220 : 3,389,494
221 : 3,389,495
3,389,496
3,389,497
3,389,498
47– 33 : 3,389,499
49–351 : 3,389,500
386 : 3,389,501
388 : 3,389,502
396 : 3,389,503
406 : 3,389,504
463 : 3,389,505
51– 3 : 3,389,506
8 : 3,389,507
60 : 3,389,508
176 : 3,389,509
293 : 3,389,981
52– 2 : 3,389,510
9 : 3,389,511
11 : 3,389,512
82 : 3,389,513
90 : 3,389,514
94 : 3,389,515
224 : 3,389,516
238 : 3,389,517
309 : 3,389,518
3,389,519
3,389,520
3,389,521
401 : 3,389,522
606 : 3,389,523
713 : 3,389,524
714 : 3,389,525
718 : 3,389,526
731 : 3,389,527
741 : 3,389,528
53– 24 : 3,389,529
30 : 3,389,530
126 : 3,389,531
128 : 3,389,532
134 : 3,389,533
180 : 3,389,534
184 : 3,389,535
55–174 : 3,389,536
337 : 3,389,537
386 : 3,389,538
56– 6 : 3,389,539
25.4 : 3,389,540
295 : 3,389,541
331 : 3,389,542
337 : 3,389,543
377 : 3,389,544
57– 12 : 3,389,545
35 : 3,389,546
117 : 3,389,547
140 : 3,389,548
3,389,549
58– 63 : 3,389,550
90 : 3,389,551
59– 16 : 3,389,552
60– 13 : 3,389,553
60– 13 : 3,389,554
39.46: 3,389,555
53 : 3,389,556
54.5 : 3,389,557
221 : 3,389,558
61– 1 : 3,389,559
41 : 3,389,560
45 : 3,389,561
46.5 : 3,389,562
72.3 : 3,389,563
.4 : 3,389,564
62– 9 : 3,389,565
45 : 3,389,566
58 : 3,389,567
63 : 3,389,568
84 : 3,389,569
101 : 3,389,570
3,389,571
3,389,572
3,389,573
3,389,574
190 : 3,389,575
196 : 3,389,576
499 : 3,389,577
514 : 3,389,578
64– 2 : 3,389,579
65– 21 : 3,389,982
27 : 3,389,983
287 : 3,389,984
66– 89 : 3,389,580
133 : 3,389,581
192 : 3,389,582
193 : 3,389,583
68–177 : 3,389,584
69– 19.1 : 3,389,585
70– 38 : 3,389,586
451 : 3,389,587
71– 88 : 3,389,985
123 : 3,389,986
72– 8 : 3,389,588
164 : 3,389,589
201 : 3,389,590
205 : 3,389,591
250 : 3,389,592
417 : 3,389,593
419 : 3,389,594
73– 37.5 : 3,389,595
60 : 3,389,596
81 : 3,389,597
88.5 : 3,389,598
115 : 3,389,599
118 : 3,389,600
171 : 3,389,601
194 : RE.26,410
290 : 3,389,602
308 : 3,389,603
362 : 3,389,604
386 : 3,389,605
492 : 3,389,606
3,389,607
517 : 3,389,608
74– 15.2 : 3,389,609
42 : 3,389,610
88 : 3,389,611
89.15: 3,389,612
110 : 3,389,613
330 : 3,389,614
424.7 : 3,389,615
483 : 3,389,616
492 : 3,389,617
804 : 3,389,618
75– 10 : 3,389,987
26 : 3,389,988
49 : 3,389,989
122 : 3,389,990
126 : 3,389,991
171 : 3,389,992
208 : 3,389,993
76–107 : 3,389,619
77– 3 : 3,389,620
58 : 3,389,621
81– 3.1 : 3,389,622
52.3 : 3,389,623
129 : 3,389,624
82– 2 : 3,389,625
83– 2 : 3,389,626
34 : 3,389,627
62 : 3,389,628
200 : 3,389,629
84– 1.24: 3,390,223
84–411 : RE.26,415
458 : 3,389,630
85– 3 : 3,389,631
88– 14 : 3,389,632
24 : 3,389,633
3,389,634
3,389,635
28 : 3,389,636
89– 1.815 3,389,637
90– 56 : 3,389,638
91– 33 : 3,389,639
366 : 3,389,640
3,389,641
369 : 3,389,642
93– 8 : 3,389,643
40 : 3,389,644
44 : 3,389,645
94– 46 : 3,389,646
96– 84 : 3,389,994
91 : 3,389,995
3,389,996
98– 1.5 : 3,389,647
41 : 3,389,648
3,389,649
115 : 3,390,400
99– 14 : 3,389,997
35 : 3,389,998
48 : 3,389,999
50 : 3,390,000
162 : 3,390,001
295 : 3,389,650
393 : 3,389,651
100–137 : 3,389,652
214 : 3,389,653
101– 35 : 3,389,654
157 : 3,389,655
170 : 3,389,656
232 : 3,389,657
287 : 3,389,658
102– 70 : 3,389,659
103– 5 : 3,389,660
104–106 : 3,389,661
172 : 3,389,662
105–366 : 3,389,663
3,389,664
369 : 3,389,665
106– 58 : 3,390,002
193 : 3,390,003
238 : 3,390,004
287 : 3,390,005
288 : 3,390,006
108– 17 : 3,389,666
112– 79 : 3,389,667
125 : 3,389,668
113– 1 : 3,389,669
116 : 3,389,670
114– .5 : 3,389,671
67 : 3,389,672
71 : 3,389,673
122 : 3,389,674
230 : 3,389,675
115– 6.1 : 3,389,676
116–114 : 3,389,677
129 : 3,389,678
117–132 : 3,390,007
138.5 : 3,390,008
139.5 : 3,390,009
161 : 3,390,010
201 : 3,390,011
212 : 3,390,012
219 : 3,390,013
118– 8 : 3,389,679
42 : 3,389,680
44 : 3,389,681
52 : 3,389,682
69 : 3,389,683
202 : 3,389,684
119– 3 : 3,389,685
17 : 3,389,686
21 : 3,389,687
35 : 3,389,688
52 : 3,389,689
82 : 3,389,690
103 : 3,389,691
122– 41 : 3,389,692
123– 41.84: 3,389,693
65 : 3,389,694
124– 24 : 3,389,695
126– 25 : 3,389,696
343.5 : 3,389,697
128– 1 : 3,389,698
33 : 3,389,699
91 : 3,389,700
159 : 3,389,701
361 : 3,389,702
404 : 3,389,703
419 : 3,389,704
131– 10.5 : 3,389,705
17 : 3,389,706
135 : 3,389,707
132– 34 : 3,389,708
46 : 3,389,709
133– 6 : 3,389,710
134– 63 : 3,389,711
166 : 3,389,712
167 : 3,389,713
136– 6 : 3,390,014
86 : 3,390,015
100 : 3,390,016
166 : 3,390,017
204 : 3,390,018
137– 13 : 3,389,714
43 : 3,389,715
240 : 3,389,716
315 : 3,389,717
492.5 : 3,389,718
625.61: 3,389,719
.66: 3,389,720
139–157 : 3,389,721
423 : 3,389,722
141– 90 : 3,389,723
143–160 : 3,389,724
169 : 3,389,725
144– 2 : 3,389,726
32 : 3,389,727
34 : 3,389,728
145– 60.5 : 3,389,729
146– 52 : 3,389,730
83 : 3,389,731
117 : 3,389,732
148– 1.5 : 3,390,019
3,390,020
20 : 3,390,021
33 : 3,390,022
127 : 3,390,023
182 : 3,390,024
187 : 3,390,025
149– 5 : 3,390,026
19 : 3,390,027
39 : 3,390,028
41 : 3,390,029
3,390,030
45 : 3,390,031
3,390,032
150– 3 : 3,389,733
151– 37 : 3,389,734
41.76: 3,389,735
69 : 3,389,736
156– 24 : 3,390,033
72 : 3,390,034
3,390,035
93 : 3,390,036
148 : 3,390,037
159 : 3,390,038
166 : 3,390,039
245 : 3,389,749
473 : 3,390,040
526 : 3,390,041
583 : 3,390,042
160–107 : 3,389,737
120 : 3,389,738
188 : 3,389,739
3,389,740
199 : 3,389,741
371 : 3,389,742
161– 19 : 3,390,043
3,390,044
67 : 3,390,403
162– 3 : 3,390,045
180 : 3,390,046
164– 43 : 3,389,743
165– 2 : 3,389,744
9 : 3,389,745
3,389,746
39 : 3,389,747
170 : 3,389,748
166– 9 : 3,389,750
12 : 3,389,751
46 : 3,389,752
167– 22 : 3,390,047
167– 42 : 3,390,048
82 : 3,390,049
83 : 3,390,050
90 : 3,390,051
169– 30 : 3,389,753
172–389 : 3,389,754
664 : 3,389,482
173– 44 : 3,389,755
93.5 : 3,389,756
174– 37 : 3,390,224
3,390,225
52 : 3,390,226
84 : 3,390,227
175– 22 : 3,389,757
104 : 3,389,758
258 : 3,389,759
371 : 3,389,760
374 : 3,389,761
176– 35 : 3,390,052
78 : 3,390,053
178– 5.4 : RE.26,412
.8 : 3,390,228
6 : 3,390,229
.6 : 3,390,230
3,390,231
69.5 : 3,390,232
179– 2 : 3,390,233
5 : 3,390,234
18 : 3,390,235
3,390,236
180– 79.2 : 3,389,762
82 : 3,389,763
181– 48 : 3,389,764
188– 65.5 : 3,389,765
88 : 3,389,766
192– 61 : 3,389,767
70.27: 3,389,768
84 : 3,389,769
87.13: 3,389,770
193– 15 : 3,389,771
195– 66 : 3,390,054
80 : 3,390,055
197– 6.7 : 3,389,772
20 : 3,389,773
64 : 3,389,774
198– 1 : 3,389,775
30 : 3,389,776
33 : 3,389,777
3,389,778
75 : 3,389,779
165 : 3,389,780
200– 67 : 3,390,237
85 : 3,390,238
146 : 3,390,239
148 : 3,390,240
3,390,241
153 : 3,390,242
166 : 3,390,243
202– 83 : 3,390,056
172 : 3,390,057
203– 49 : 3,390,058
94 : 3,390,059
204– 15 : 3,390,060
3,390,061
49 : 3,390,062
58 : 3,390,063
72 : 3,390,066
94 : 3,390,064
95 : 3,390,065
159.17: 3,390,067
212 : 3,390,068
219 : 3,390,069
3,390,070
243 : 3,390,071
266 : 3,390,072
206– 8 : 3,389,781
29 : 3,389,782
46 : 3,389,783
47 : 3,389,784
62 : 3,389,785
3,389,786
208– 48 : 3,390,073
111 : 3,390,074
341 : 3,390,075
209– 73 : 3,389,787
74 : 3,389,788
75 : 3,389,789
97 : 3,389,790
99 : 3,389,791
111.6 : 3,389,792

209–111.7	Re.26,416
211	3,389,793
219	3,389,794
210–.3	3,390,076
6	3,390,077
56	3,390,078
112	3,389,795
130	3,389,796
135	3,389,801
138	3,389,797
150	3,389,798
232	3,389,802
251	3,389,799
266	3,389,803
328	3,389,800
211–1.5	3,389,804
43	3,389,805
50	3,389,806
94	3,389,807
119.16	3,389,808
212–10	3,389,809
214–6	3,389,810
.5	3,389,811
7	3,389,812
10.5	3,389,813
16.4	3,389,814
82	3,389,815
83.3	3,389,821
138	3,389,816
300	3,389,817
372	3,389,818
776	3,389,820
780	3,389,819
215–13	3,389,822
219–69	3,390,244
	3,390,245
	3,390,246
	3,390,247
86	3,390,248
121	3,390,249
125	3,390,250
213	3,390,251
234	3,390,252
220–9	3,389,823
	3,389,824
23.4	3,389,825
35	3,389,826
53	3,389,827
73	3,389,828
88	3,389,829
97	3,389,830
111	3,389,831
221–70	3,389,832
222–95	3,389,833
133	3,389,834
135	3,389,835
189	3,389,836
193	3,389,837
	3,389,838
502	3,389,839
548	3,389,840
223–71	3,389,841
226–69	3,389,842
134	3,389,843
196	3,389,844
228–1	3,389,845
29	3,389,846
229–9	3,389,847
14	3,389,848
16	3,389,850
17	3,389,849
43	3,389,851
51	3,389,852
230–117	3,390,401
206	3,389,853
232–46	3,389,854
233–2	3,389,855
235–61.7	3,390,253
235–62	3,389,856
92	3,390,254
	3,390,255
144	3,389,857
153	3,390,256
181	3,390,257
184	3,390,258
237–2	3,389,858
238–152	3,389,859
239–124	3,389,860
422	3,389,861
240–11.2	3,390,259
.4	3,390,260
41.37	3,390,262
.5	3,390,261
108	3,390,263
241–86	3,389,862
94	3,389,863
141	3,389,864
242–1.1	3,389,865
35.5	3,389,866
.6	3,389,867
54	3,389,868
55.12	3,389,869
58.2	3,389,870
71.8	3,389,872
75.44	3,389,871
107.2	3,389,873
	3,389,874
128	3,389,875
130.2	3,389,876
244–1	3,389,877
12	3,389,878
17.11	3,389,879
137	3,389,880
248–18	3,389,881
125	3,389,882
224	3,389,883
345	3,389,884
361	3,389,885
250–41.9	3,390,264
	3,390,265
49.5	3,390,266
51.5	3,390,267
71	3,390,268
.5	3,390,269
83.1	3,390,270
199	3,390,271
	3,390,272
214	3,390,273
231	3,390,274
251–75	3,389,886
367	3,389,887
252–12	3,390,079
25	3,390,080
32.7	3,390,081
	3,390,082
33.4	3,390,083
34.7	3,390,084
	3,390,085
47.5	3,390,086
49.7	3,390,087
52	3,390,088
56	3,390,089
62.3	3,390,090
63.5	3,390,091
99	3,390,092
138	3,390,093
	3,390,094
	3,390,095
161	3,390,096
359	3,390,097
404	3,390,098
408	3,390,099
432	3,390,103
455	3,390,100
	3,390,101
475	3,390,102
252–512	3,390,104
253–4	3,389,888
39.15	3,389,889
254–106	3,389,890
187	3,389,891
259–100	3,389,892
146	3,389,893
260–2.5	3,390,105
	3,390,106
	3,390,107
7.5	3,390,108
17	3,390,109
20	3,390,110
23	3,390,111
	3,390,112
.7	3,390,113
29.6	3,390,114
31.6	3,390,115
32.8	3,390,116
33.4	3,390,117
	3,390,118
.6	3,390,119
37	3,390,120
40	3,390,121
	3,390,122
47	3,390,123
	3,390,124
	3,390,125
50	3,390,127
51	3,390,128
67	3,390,129
.5	3,390,130
75	3,390,131
	3,390,132
	3,390,133
	3,390,134
	3,390,135
77.5	3,390,136
	3,390,137
78.4	3,390,138
.5	3,390,139
79	3,390,140
.5	3,390,126
88.2	3,390,141
92.8	3,390,142
	3,390,143
112.5	3,390,144
158	3,390,145
192	3,390,146
240	3,390,147
	3,390,148
.7	3,390,149
244	3,390,150
283	3,390,151
286	3,390,152
307	3,390,153
326.13	3,390,154
346.3	3,390,155
.8	3,390,156
397.4	3,390,157
404	3,390,158
429.7	3,390,159
433	3,390,160
439	3,390,161
448	3,390,162
.2	3,390,163
453	3,390,164
455	3,390,165
	3,390,166
458	3,390,167
465	3,390,168
468	3,390,169
475	3,390,170
485	3,390,171
518	3,390,172
524	3,390,173
533	3,390,174
534	3,390,175
260–539	3,390,176
564	3,390,177
567.6	3,390,178
570.8	3,390,179
582	3,390,180
583	3,390,181
	3,390,182
	3,390,183
585	3,390,184
586	3,390,185
590	3,390,186
592	3,390,187
594	3,390,188
606.5	3,390,189
609	3,390,190
621	3,390,194
633	3,390,191
666	3,390,192
	3,390,193
	3,390,195
	3,390,196
	3,390,197
.5	3,390,198
668	3,390,199
672	3,390,200
676	3,390,201
680	3,390,202
827	3,390,203
837	3,390,204
865	3,390,205
875	3,390,206
879	3,390,207
897	3,390,208
929	3,390,209
261–36	3,389,894
111	3,389,895
263–5	3,389,896
52	3,389,897
264–3	3,390,210
32	3,390,211
44	3,390,212
45	3,390,213
	3,390,214
	3,390,215
89	Re.26,413
102	3,390,216
107	3,390,217
282	3,390,218
266–13	3,389,898
27	3,389,899
267–1	3,389,900
	3,389,901
	3,389,902
64	3,389,903
71	Re.26,417
271–52	3,389,904
59	3,389,905
70	3,389,906
74	3,389,907
	3,389,908
	3,389,909
273–1	3,389,910
68	3,389,911
94	3,389,912
134	3,389,913
155	3,389,914
274–1	3,389,915
277–41	3,389,916
63	3,389,917
116.4	3,389,918
126	3,389,919
174	3,389,920
235	3,389,921
280–11.23	3,389,922
285–321	3,389,923
287–60	3,389,924
87	3,389,925
	3,389,926
287–87	3,389,927
90	3,389,928
189.36	3,389,929
	3,389,930
	3,389,931
292–173	3,389,932
294–76	3,389,933
297–42	3,389,934
452	3,389,935
459	3,389,936
301–37	3,389,937
302–14	3,389,938
303–21	3,389,939
307–64	3,390,275
88	3,390,276
	3,390,277
.3	3,390,278
208	3,390,279
215	3,390,280
232	3,390,281
260	3,390,282
268	3,390,283
269	3,390,284
296	3,390,285
308–26	3,389,940
231	Re.26,414
236	3,389,941
310–8.4	3,390,286
9.6	3,390,287
11	3,390,288
42	3,390,289
156	3,390,290
	3,390,291
312–20	3,389,942
138	3,389,943
193	3,389,944
231	3,389,945
236	3,389,946
258	3,389,947
310	3,389,948
339	3,389,949
313–23	3,390,292
63	3,390,293
67	3,390,294
108	3,390,295
182	3,390,296
209	3,390,297
220	3,390,298
274	3,390,299
315–5.21	3,390,300
.39	3,390,301
25	3,390,302
57	3,390,303
217	3,390,304
317–11	3,390,305
22	3,390,306
33	3,390,307
100	3,390,308
116	3,390,309
157.5	3,390,310
235	3,390,314
237	3,390,311
260	3,390,312
262	3,390,313
318–162	3,390,315
325	3,390,316
345	3,390,317
422	3,390,318
320–2	3,390,319
321–2	3,390,320
5	3,390,321
18	3,390,322
324–10	3,390,323
33	3,390,324
60	3,390,325
61	3,390,326
74	3,390,327
83	3,390,328
324–115	3,390,329
117	3,390,330
122	3,390,331
132	3,390,332
325–14	3,390,333
43	3,390,334
56	3,390,335
65	3,390,336
174	3,390,337
352	3,390,338
478	3,390,339
328–48	3,390,340
127	3,390,341
227	3,390,342
329–146	3,390,343
330–9	3,390,344
11	3,390,345
	3,390,346
51	3,390,347
331–18	3,390,348
44	3,390,349
94	3,390,350
.5	3,390,351
107	3,390,352
117	3,390,353
332–9	3,390,354
333–7	3,390,355
9	3,390,356
17	3,390,357
25	3,390,358
335–31	3,390,359
146	3,390,360
152	3,390,361
153	3,390,362
210	3,390,363
336–110	3,390,364
337–299	3,390,365
338–130	3,390,366
318	3,390,367
339–14	3,390,368
	3,390,369
38	3,390,404
95	3,390,370
107	3,390,371
112	3,390,372
	3,390,373
177	3,390,374
196	3,390,375
217	3,390,376
340–18	3,390,377
146.2	3,390,378
172.5	3,390,379
	3,390,380
173	3,390,381
	3,390,382
174	3,390,383
	3,390,384
.1	3,390,385
187	3,390,386
248	3,390,387
258	3,390,388
314	3,390,389
343–16	3,390,390
17.2	3,390,391
117	3,390,392
708	3,390,393
742	3,390,394
346–1	3,390,395
	3,390,396
33	3,390,397
68	3,390,398
109	3,390,399
350–96	3,389,950
292	3,389,951
303	3,389,952
352–78	3,389,953
85	3,389,954
401–94	3,389,955

CLASSIFICATION OF DESIGNS

D 9–40	211,503
44	211,504
45	211,505
52	211,506
	211,507
	211,508
92	211,509
100	211,510
170	211,511
D 9–177	211,512
190	211,513
219	211,514
D13–1	211,515
	211,516
	211,517
	211,518
	211,519
	211,520
D13–6	211,521
D14–3	211,522
D15–11	211,523
D23–58	211,524
D26–1	211,525
D30–1	211,526
D33–14	211,527
30	211,528
D34–5	211,529
D34–15	211,530
D41–1	211,531
D44–10	211,532
15	211,533
	211,534
	211,535
21	211,536
	211,537
D45–4	211,538
D45–16	211,539
D52–6	211,540
D56–4	211,541
D60–1	211,542
D61–1	211,543
D74–1	211,544
9	211,545
D80–9	211,546
	211,547
D80–11	211,548
D83–1	211,549
D86–11	211,550
D87–1	211,551
D90–20	211,552
D95–3	211,553
	211,554
D96–3	211,555

GEOGRAPHICAL INDEX OF RESIDENCE OF INVENTORS

(U.S. States, Territories and Armed Forces, the Commonwealth of Puerto Rico, and the Canal Zone)

(NOTE.—CODES ARE CHANGED AS OF JANUARY 1, 1967)

Alabama	1
Alaska	2
American Samoa	3
Arizona	4
Arkansas	5
California	6
Canal Zone	7
Colorado	8
Connecticut	9
Delaware	10
District of Columbia	11
Florida	12
Georgia	13
Guam	14
Hawaii	15
Idaho	16
Illinois	17
Indiana	18
Iowa	19
Kansas	20
Kentucky	21
Louisiana	22
Maine	23
Maryland	24
Massachusetts	25
Michigan	26
Minnesota	27
Mississippi	28
Missouri	29
Montana	30
Nebraska	31
Nevada	32
New Hampshire	33
New Jersey	34
New Mexico	35
New York	36
North Carolina	37
North Dakota	38
Ohio	39
Oklahoma	40
Oregon	41
Pennsylvania	42
Puerto Rico	43
Rhode Island	44
South Carolina	45
South Dakota	46
Tennessee	47
Texas	48
Utah	49
Vermont	50
Virginia	51
Virgin Islands	52
Washington	53
West Virginia	54
Wisconsin	55
Wyoming	56
U.S. Air Force	57
U.S. Army	58
U.S. Navy	59

(First number in listing denotes location according to above key. Refer to patent number in body of the Official Gazette to obtain details as to inventor name, location, etc.)

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6	Re.26,412 3,389,410 3,389,416 3,389,422 3,389,447 3,389,453 3,389,459 3,389,465 3,389,470 3,389,507 3,389,519 3,389,533 3,389,536 3,389,542 3,389,553 3,389,555 3,389,563 3,389,566 3,389,578 3,389,587 3,389,610 3,389,619 3,389,639 3,389,645 3,389,646 3,389,654 3,389,680 3,389,694 3,389,708 3,389,719 3,389,720 3,389,724 3,389,730 3,389,735 3,389,736 3,389,741 3,389,748 3,389,762 3,389,779
6	3,389,784 3,389,790 3,389,791 3,389,792 3,389,805 3,389,807 3,389,810 3,389,835 3,389,838 3,389,839 3,389,842 3,389,846 3,389,873 3,389,887 3,389,895 3,389,901 3,389,909 3,389,910 3,389,913 3,389,918 3,389,923 3,389,930 3,389,934 3,389,945 3,389,947 3,389,953 3,389,963 3,389,976 3,389,980 3,390,022 3,390,023 3,390,027 3,390,057 3,390,063 3,390,065 3,390,074 3,390,081 3,390,085 3,390,101 3,390,140 3,390,141 3,390,150 3,390,181 3,390,183 3,390,199 3,390,207 3,390,222 3,390,238 3,390,249 3,390,253
6	3,390,256 3,390,257 3,390,259 3,390,260 3,390,263 3,390,265 3,390,268 3,390,271 3,390,272 3,390,273 3,390,284 3,390,286 3,390,290 3,390,293 3,390,296 3,390,300 3,390,334 3,390,341 3,390,347 3,390,351 3,390,354 3,390,356 3,390,362 3,390,365 3,390,368 3,390,375 3,390,379 3,390,383 3,390,384 3,390,390 3,390,395 3,390,398
8	3,389,716 3,389,744 3,389,765 3,389,937 3,390,302 3,390,399
9	3,389,492 3,389,603 3,389,626 3,389,640 3,389,641 3,389,658 3,389,681 3,389,746 3,389,825 3,389,836 3,389,854 3,389,892
9	3,389,900 3,389,902 3,390,070 3,390,097 3,390,254 3,390,297 3,390,313 3,390,366 3,390,377 3,390,388
10	3,389,482 3,389,549 3,389,960 3,390,031 3,390,032 3,390,034 3,390,035 3,390,064 3,390,132 3,390,203 3,390,204 3,390,210
11	3,389,701 3,390,378
12	3,389,543 3,389,559 3,389,673 3,389,774 3,389,801 3,389,812 3,389,828 3,389,859 3,389,911 3,389,938 3,389,961 3,390,046 3,390,180 3,390,344
13	Re.26,411 3,389,438 3,389,687 3,389,728 3,389,876 3,389,924 3,389,959 3,390,120
16	3,389,685 3,390,219
17	Re.26,415 Re.26,417
17	3,389,408 3,389,442 3,389,452 3,389,466 3,389,485 3,389,495 3,389,496 3,389,497 3,389,498 3,389,512 3,389,546 3,389,556 3,389,585 3,389,588 3,389,611 3,389,660 3,389,684 3,389,703 3,389,704 3,389,734 3,389,738 3,389,770 3,389,796 3,389,820 3,389,857 3,389,864 3,389,883 3,389,893 3,389,915 3,389,916 3,389,921 3,389,929 3,389,943 3,389,948 3,389,949 3,389,989 3,390,047 3,390,077 3,390,098 3,390,105 3,390,128 3,390,152 3,390,218 3,390,228 3,390,242 3,390,243 3,390,255 3,390,269 3,390,338 3,390,363
17	3,390,364 3,390,371 3,390,376
18	Re.26,410 3,389,424 3,389,472 3,389,532 3,389,616 3,389,643 3,389,663 3,389,754 3,389,848 3,389,865 3,389,899 3,390,212 3,390,229 3,390,237 3,390,309
19	3,389,609 3,389,678 3,389,686 3,389,718 3,389,816 3,389,853 3,390,392
20	3,389,568 3,389,819 3,389,824
21	3,389,567 3,389,773 3,390,102 3,390,223
22	3,389,426 3,389,562 3,389,624 3,389,972 3,390,195 3,390,196 3,390,201 3,390,208
23	3,390,380
24	3,389,489 3,389,647 3,389,659 3,389,968 3,389,990 3,389,991 3,390,005 3,390,017 3,390,029

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37	:	3,389,409
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38	:	3,389,822
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39	:	3,390,299
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40	:	RE.26,416
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41	:	3,389,509
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42	:	3,389,427
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43	:	3,389,944
44	:	3,389,455
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45	:	3,389,721
47	:	3,389,444
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48	:	3,389,412
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		3,390,184
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Design Patents

6	:	211,511
		211,518
		211,519
		211,525
		211,538
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		211,540
		211,545
6	:	211,555
17	:	211,546
		211,547
18	:	211,510
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26	:	211,524
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34	:	211,503
34	:	211,505
		211,506
		211,507
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34	:	211,537
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36	:	211,504
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		211,514
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36	:	211,530
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39	:	211,529
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42	:	211,542
44	:	211,513
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48	:	211,549
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55	:	211,522

U.S. DEPARTMENT OF COMMERCE

OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE

June 25, 1968 Volume 851 Number 4

TRADEMARKS

NOTICES

Trademark Suits

Notices under 15 U.S.C. 1116; Trademark Act of July 5, 1946

Reg. No. 421,759 (SCRAM), Acme Chemical Company, Surface cleaner in paste form, also usable as soap; **Reg. No. 806,667** (S-PLUS), U.S. Cleaner Corporation, All-purpose cleaner and degreaser, **filed** Oct. 17, 1966, D.C. Mass. (Boston), Doc. 66–758–C, *U.S. Cleaner Corporation* v. *Duo Chem Corporation and Elmer C. Loveland.*

Reg. No. 692,879. (See Reg. No. 797,397.)

Reg. No. 694,278. (See Reg. No. 797,397.)

Reg. No. 721,716 (SAFEWAY), Safeway Stores, Incorporated, Retail grocery services, **filed** June 18, 1964, D.C. Nebr. (Omaha), Doc. C–02060, *Safeway Stores, Incorporated* v. *Liberty Gas & Oil Company, Inc., doing business as Saveway Stations et al.* Consent decree; defendants are permanently enjoined, Mar. 27, 1968.

Reg. No. 756,580 (SHIRTMAKER DIVISION AND DESIGN), Pantsmaker, Inc., Ladies' and girls' shirts and blouses, **filed** May 4, 1965, D.C., S.D.N.Y., Doc. 65–C–1345, *Pantsmaker, Inc.* v. *Spartans Industries, Inc.* Dismissed on stipulation with prejudice, Mar. 15, 1968.

Reg. No. 758,137 (ELLE), France Editions & Publications, Magazine, **filed** Feb. 10, 1967, D.C., S.D.N.Y., Doc. 67–C–569, *France Editions & Publications* v. *Elle 5th Avenue, Inc. et al.* Consent judgment; defendants permanently enjoined, Mar. 21, 1968.

Reg. No. 763,977 (TAREYTON AND DESIGN), Blue Gem Mfg. Co., Misses' and girls' sportswear—namely, blouses, capri pants and shorts, **filed** Sept. 13, 1967, D.C., S.D.N.Y., Doc. 67–C–3517, *Blue Gem Mfg. Co.* v. *Tareyton Fashions, Inc.* Defendant permanently enjoined from making use and selling women's apparel or similar merchandise under the mark "Tareyton," Mar. 27, 1968.

Reg. No. 768,772 (DELTA AND DESIGN), Delta Tire Corporation, Non-metallic tires; **Reg. No. 843,204** (DELTA ETC. AND DESIGN), same, **filed** Mar. 18, 1968, D.C., C.D. Calif. (Los Angeles), Doc. 68–435–HP, *Delta Tire Corp. et al.* v. *Martin L. Marion, etc.*

Reg. No. 797,397 (TREVIRA), Farbwerke Hoechst Aktiengesellschaft, Synthetic fibers; **Reg. No. 692,879**, same, Yarns and threads; **Reg. No. 694,278**, same, Hosiery, mesh work and knitted garments, other garments, underwear, and neckties, **filed** July 25, 1967, D.C., S.D.N.Y., Doc. 67–C–2844, *Canadian Hoechst Limited* v. *Stevcoknit Textile Company et ano.* Stipulation and order of dismissal, Mar. 20, 1968.

Reg. No. 806,667. (See Reg. No. 421,759.)

Reg. No. 822,598 (DESIGNERS U.S.A. AND DESIGN), The Berger Brothers Company, Women's blouses, jackets, skirts, suits and negligees, **filed** Mar. 14, 1968, D.C., S.D.N.Y., Doc.

CONDITION OF TRADEMARK APPLICATIONS AS OF APRIL 30, 1968

Total number of applications awaiting action [excluding renewals and Sec. 12(c)] 16, 519

Date of oldest new application .... May 23, 1967

Date of oldest amended application (filing date) .... April 20, 1965

C. M. WENDT, Director, Trademark Examining Operation **TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION**	Oldest Application	
	New	Amended
(I) L. J. BETTENDORF, Classes 2, 3, 4, 5, 7, 9, 10, 11, 27, 28, 30, 32, 33, 37, 38, 39, 40, 41, 42, 43, 50; Certification Marks, Classes A and B	5–23–67	4–20–65
(II) F. H. WETHERBEE, Classes 1, 6, 15, 18, 45, 46, 47, 48, 49, 51, 52; Collective Membership Mark, Class 200	6–28–67	7–6–65
(III) P. S. BALL, Classes 19, 21, 23, 26, 31, 34, 35, 36	8–18–67	10–23–65
(IV) M. E. ABRAMSON, Classes 8, 12, 13, 14, 16, 17, 20, 22, 24, 25, 29, 44; Service Marks, Classes 100, 101, 102, 103, 104, 105, 106, and 107	5–26–67	12–23–65
Renewals (All Classes)	4–9–68	....
Sec. 12(c) Publications (All Classes)	4–15–68	....

Applications filed during the month of April 1968—2,640

Registrations Issued .... 413—No. 851,254 to No. 851,666

Renewals Issued 100

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402 to whom all subscriptions should be made payable and all communications addressed; subscription price $12.00 per annum, foreign mailing $4.00 additional; single copies, 25 cents each.

PRINTED COPIES OF TRADEMARK REGISTRATIONS are furnished by the Patent Office for 20 cents each. Address orders to the Commissioner of Patents, Washington, D.C. 20231.

68–C–1065, *The Berger Brothers Co.* v. *Association for Creative Design U.S.A. Inc. et al.*

Reg. No. 833,170 (GARDEN MAGIC AND DESIGN), Michigan Peat, Inc., Sphagnum peat moss and dehydrated cattle manure used as soil conditioners, filed Mar. 26, 1968, D.C., S.D. Tex. (Houston), Doc. 68–H–267, *Bay-Houston Towing Co.* v. *Taylor-Evans Fertilizer, Inc., and Golden Acres Fertilizer Co., Inc.*

Reg. No. 839,587 (POW AND DESIGN), Gerard James O'Brien, Phonograph records, filed Mar. 1, 1968, D.C., S.D.N.Y., Doc. 68–C–872, *Gerard James O'Brien* v. *Bye, Inc.*

Reg. No. 842,152 (CRAIG'S), Craig's, Ltd., Dresses, suits, coats, skirts, slacks, shorts, sweaters, blouses, pajamas, nightgowns, lingerie, hosiery, socks, and shoes, filed Mar. 14, 1968, D.C., S.D. Tex. (Houston), Doc. 68–H–207, *Craig's Ltd.* v. *Craig's, Inc.*

Reg. No. 843,204. (See Reg. No. 768,772.)

MARKS PUBLISHED FOR OPPOSITION

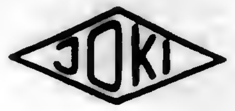
SECTION 1

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Application for the registration of these marks in more than one class has been filed as provided in section 30 of said act as amended by Public Law 772, 87th Congress, approved Oct. 9, 1962, 76 Stat. 769. Opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.

A separate fee of twenty-five dollars for each class opposed must accompany the opposition.

[NOTE: For publication of marks presented in applications for registration in one class, see section 2.]

SN 256,624. John Kirkegaard, Copenhagen, Denmark. Filed July 27, 1966.



Owner of Danish Reg. No. 284–1951, dated Mar. 8, 1951.

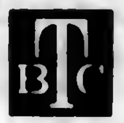
Class 21—Electrical Apparatus, Machines, and Supplies

For Electric Motors and Electric Geared Motors (Int. Cl. 7).

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

For Conveyor Pulley Systems (Int. Cl. 7).

SN 258,336. United States Tabulating Binder Corporation, Niles, Ill. Filed Nov. 9, 1966.



Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

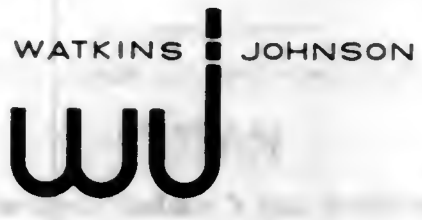
For Machines for Placing an Adhered Binding Cover to the Edge Portions of a Plurality of Aligned Sheets So As To Form a Book (Int. Cl. 7).

Class 37—Paper and Stationery

For Paper Sheets for Receipt of Data Processing Information, Folders for Containing Such Sheets, Binders for Such Sheets, and Posts for Such Binders (Int. Cl. 16).

First use May 18, 1964.

SN 259,872. Watkins-Johnson Company, Palo Alto, Calif. Filed Dec. 2, 1966.



Class 21—Electrical Apparatus, Machines, and Supplies

For Traveling-Wave Tubes, Backward-Wave Oscillators, Yttrium-Iron-Garnet Filters, Oscillators, Electronic Intrusion Alarms, Amplifiers, Transmitters, and Receivers (Int. Cl. 9).

First use September 1959.

Class 26—Measuring and Scientific Appliances

For Telemetering Amplifiers, Telemetering Transmitters, and Telemetering Receivers (Int. Cl. 9).

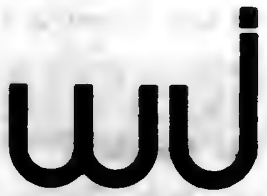
First use May 1962.

Class 34—Heating, Lighting, and Ventilating Apparatus

For Production and Laboratory Furnaces (Int. Cl. 11).

First use January 1965.

SN 259,873. Watkins-Johnson Company, Palo Alto, Calif. Filed Dec. 2, 1966.



Class 21—Electrical Apparatus, Machines, and Supplies

For Traveling-Wave Tubes, Backward-Wave Oscillators, Yttrium-Iron-Garnet Filters, Oscillators, Electronic Intrusion Alarms, Amplifiers, Transmitters, and Receivers (Int. Cl. 9).

First use September 1959.

Class 26—Measuring and Scientific Appliances

For Telemetering Amplifiers, Telemetering Transmitters, and Telemetering Receivers (Int. Cl. 9).

First use May 1962.

Class 34—Heating, Lighting, and Ventilating Apparatus

For Production and Laboratory Furnaces (Int. Cl. 11).

First use January 1965.

SN 261,415. Thomas J. Tobin, Jr., and John P. Tobin (joint owners), Kansas City, Mo. Filed Dec. 27, 1966.

LET'S GET GROWING

Owner of Reg. No. 801,583.

Class 1—Raw or Partly Prepared Materials

For Grass Seed (Int. Cl. 31).

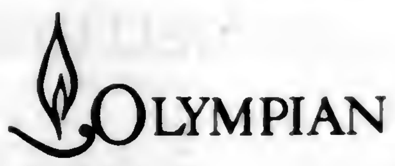
First use during March 1962.

Class 10—Fertilizers

For Fertilizer (Int. Cl. 1).

First use during March 1965.

SN 268,911. Prepo Corporation, Edgerton, Wis. Filed Apr. 12, 1967.



Class 15—Oils and Greases

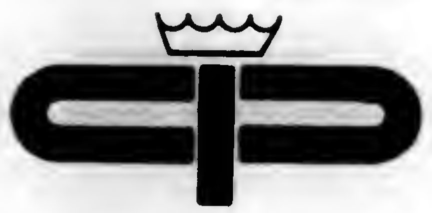
For Petroleum Distillate Fuels for Use in Candles, Lamps, and Other Flame-Type Devices (Int. Cl. 4).

Class 34—Heating, Lighting, and Ventilating Apparatus

For Liquid Fueled Candles and Lamps (Int. Cl. 11).

First use at least as early as Apr. 22, 1966.

SN 275,010. Bernard Klein, Inc., d.b.a. Crown Paper Co., Yonkers, N.Y. Filed June 29, 1967.



Class 6—Chemicals and Chemical Compositions

For Germicide-Disinfectant-Deodorant Preparation (Int. Cl. 5).

Class 37—Paper and Stationery

For Bathroom and Facial Tissue, Paper Napkins and Towels (Int. Cl. 16).

First use at least as early as 1963.

SN 276,869. Nettie Rosenstein, Inc., New York, N.Y. Filed July 26, 1967.

MLLE GHE

Owner of Reg. No. 762,863.

Class 51—Cosmetics and Toilet Preparations

For Perfumes, Dusting Powder, Bath Oil, Perfumed Oil, and Toilet Water (Int. Cl. 3).

Class 52—Detergents and Soaps

For Toilet Soaps (Int. Cl. 3).

First use October 1965.

SN 277,958. Frances Denney, Inc., Philadelphia, Pa. Filed Aug. 10, 1967.

CHENANGO

Class 51—Cosmetics and Toilet Preparations

For Men's Cologne (Int. Cl. 3).

Class 52—Detergents and Soaps

For Men's Toilet Soaps (Int. Cl. 3).

First use July 14, 1964.

SN 281,845. Trans-Lux Corporation, New York, N.Y. Filed Oct. 5, 1967.

TRANS-LUX

Owner of Reg. Nos. 209,929, 339,213, and 355,263.

Class 26—Measuring and Scientific Appliances

For Screens Upon Which Pictures May Be Projected and Shown in Daylight; Machines for Projection From Transparent Media Upon a Screen; Rear Projection Screens; Optical Projection Equipment—Namely, Stereopticons, Stereopticon Slides, Lenses, Lens Holders and Lens Mounts, Moving Picture Film, Sound Film, Combined Picture and Sound Film; Moving Picture Projection Apparatus and Parts Thereof—Namely, Film Trap Assemblies, Film Feeding and/or Guiding Devices, Film Magazines, Miscellaneous Equipment for Projection Apparatus; Projector Cabinets; Screen Frames; Screen Cabinets; Sound Reproducing Equipment; Amplifiers; Loud Speaker Units; Synchronous Sound-Picture Reproducing Equipment; Stock Ticker Projectors for the Recording of Stock Quotations on Film and the Projection Thereof Upon a Screen; Machines for Projection From Opaque Media Upon a Screen; Viewers for Closed-Circuit Television; Equipment for the Projection of an Image of Stock Ticker Tape and for the Transmission and Reception of the Image Via Electronic Means; Electronic Display and Read-Out Devices; and Display Tapes (Int. Cl. 9).

First use Dec. 15, 1911.

Class 104—Communication

For Leasing of Ticker Tape Projection Equipment, Closed Circuit Television Equipment, Background Projection Equipment for Television and Photographic Studios, Read-Out Devices, and Travelling Message Signs; Operating and Managing Same for Customers When Requested (Int. Cl. 38).

First use during 1924.

Class 107—Education and Entertainment

For Providing Motion Picture Entertainment in Theatres, Leasing and Distributing Motion Picture Films, Leasing Teaching Devices, Leasing Programs for Television, and Booking Entertainment To Be Furnished Passengers in Transit (Int. Cl. 41).

First use during 1924.

SN 286,055. International Research and Development Corporation, Worthington, Ohio. Filed Dec. 4, 1967.

MECHANALYSIS

Class 21—Electrical Apparatus, Machines, and Supplies

For Electrical Apparatus—Namely, Transducers, Detectors, Amplifiers, Integrators, Oscillators, Solid State Circuits, Cables, Stroboscope Light Devices, and Components Therefor (Int. Cl. 9).

Class 26—Measuring and Scientific Appliances

For Apparatus for Observing and Measuring Mechanical Vibration Including Support Stands; Vibration Pick Up Devices; Devices for Metering, Indicating, and Recording Mechanical Vibrations (Int. Cl. 9).

Class 100—Miscellaneous

For Vibration Investigation and Measurement Services for Continuous and Periodic Monitoring of Unbalance in Rotating Bodies and for Correction of Such Unbalance (Int. Cl. 42).

First use June 21, 1967.

SN 286,300. Parr Instrument Co., Moline, Ill. Filed Dec. 6, 1967.

PARR

Class 6—Chemicals and Chemical Compositions

For Calorimetric Chemicals—Namely, Benzoic Acid, Potassium Perchlorate, Barium Chloride, and Sodium Peroxide for Use as Catalysts or Reagents (Int. Cl. 1).

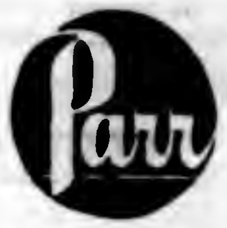
First use at least as early as 1940.

Class 26—Measuring and Scientific Appliances

For Laboratory Instruments and Apparatus—Namely, Calorimeters, Calorimeter Controllers, and Calorimetric Thermometers; Combustion Bombs (in the Nature of a Chamber), and Igniters Therefor; Pressure Reactors for Conducting Chemical Reactions and Tests at Elevated Temperatures and Pressures, Hydrogenators, Autoclaves, and Temperature Controllers Therefor; Apparatus for Indicating the Melting Point of Substances; Turbidimeters; and Parts for Said Laboratory Instruments and Apparatus (Int. Cl. 9).

First use at least as early as 1899.

SN 286,301. Parr Instrument Co., Moline, Ill. Filed Dec. 6, 1967.



Class 6—Chemicals and Chemical Compositions

For Calorimetric Chemicals—Namely, Benzoic Acid, Potassium Perchlorate, Barium Chloride, and Sodium Peroxide for Use as Catalysts or Reagents (Int. Cl. 1).

First use on or about Jan. 1, 1950; at least as early as 1940 as to "Parr."

Class 26—Measuring and Scientific Appliances

For Laboratory Instruments and Apparatus—Namely, Calorimeters, Calorimeter Controllers, and Calorimetric Thermometers; Combustion Bombs (in the Nature of a Chamber), and Igniters Therefor; Pressure Reactors for Conducting Chemical Reactions and Tests at Elevated Temperatures and Pressures, Hydrogenators, Autoclaves, and Temperature Controllers Therefor; Apparatus for Indicating the Melting Point of Substances; Turbidimeters; and Parts for Said Laboratory Instruments and Apparatus (Int. Cl. 9).

First use Nov. 7, 1946; at least as early as 1899 as to "Parr."

SECTION 2

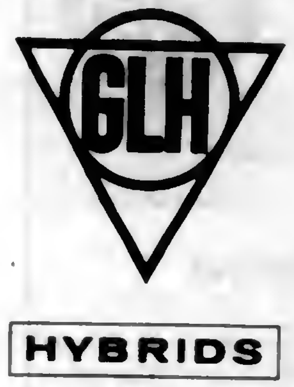
The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Opposition under section 13 may be filed within thirty days of publication. See Rules 2.101 to 2.105.

A fee of twenty-five dollars must accompany the opposition.

[NOTE: For publication of marks presented in a combined application for registration in more than one class, see section 1.]

Class 1 — Raw or Partly Prepared Materials

SN 270,129. Great Lakes Hybrids Cooperative, Inc., Lansing, Mich. Filed Apr. 27, 1967.



The word "Hybrids" is disclaimed apart from the mark as shown.

For Hybrid Seed Corn (Int. Cl. 31).

First use July 1, 1966.

SN 271,863. Philip G. Whitman, Inc., New York, N.Y. Filed May 18, 1967.

SKIVERTEX

For Plastic Sheet Material for Use as a Covering for Hard, Rigid Surfaces (Particularly as a Covering for Hard Covers for Books); for Use in the Manufacture of Wallets; and for Use in the Manufacture of Covers for Soft-Cover Books (Int. Cl. 17).

First use Mar. 14, 1967.

SN 275,696. Scott Paper Company, Delaware County, Pa. Filed July 10, 1967.

SECURI-TEE

For Flexible Polyurethane Foam (Int. Cl. 17).

First use Oct. 17, 1962.

SN 276,402. Allied Chemical Corporation, New York, N.Y. Filed July 20, 1967.

U-FOAM

For Aerosol Urethane Foam Kits (Int. Cl. 1).

First use Oct. 10, 1966.

SN 281,344. Molybdenum Corporation of America, New York, N.Y. Filed Sept. 28, 1967.

Molycorp

For Molybdenum Ores, Barite Ores, Celestite Ores, and Bastnasite Ores (Int. Cl. 6).

First use on or about Jan. 1, 1965.

SN 288,743. International Minerals & Chemical Corporation, Skokie, Ill. Filed Jan. 15, 1968.

CAL/SO BOND

For Blended Calcium and Sodium Bentonite, Specifically a Mixture of Clays for Use as a Foundry Sand Binder (Int. Cl. 1).

First use Nov. 4, 1967.

SN 293,995. H. Schwarz Leather Co. Inc., Edgewater, N.J. Filed Mar. 25, 1968.

GRAN-GATOR COWHIDE

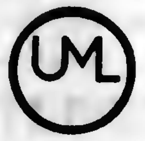
The word "Cowhide" is disclaimed apart from the mark as shown.

For Genuine Cowhide Leather in the Piece (Int. Cl. 18).

First use Aug. 1, 1967.

Class 2 — Receptacles

SN 260,691. United Medical Laboratories, Inc., Portland, Oreg. Filed Dec. 13, 1966.



For Containers for Microscopic Slides, Packaging for Disposable Needles, and Metal Containers for Vacuum Tubes (Int. Cls. 6 and 20).

First use Oct. 10, 1958.

SN 279,172. Cope Allman International Limited, London, England. Filed Aug. 28, 1967.

COPLASTIC

Owner of British Reg. No. 892,465, dated Mar. 26, 1966.
For Bottles, Jars, and the Like Made of Plastic (Int. Cl. 21).

SN 279,175. Crown Zellerbach Corporation, San Francisco, Calif. Filed Aug. 28, 1967.

FRESHGARD

Owner of Reg. Nos. 730,240 and 749,432.
For Plastic Grocery Bags (Int. Cl. 16).
First use Apr. 11, 1967.

SN 281,114. Dallas A. Prosser, Milwaukee, Wis. Filed Sept. 25, 1967.

DALLA

For Waste Container Holder (Int. Cl. 21).
First use Sept. 16, 1967.

SN 281,490. Riegel Paper Corporation, New York, N.Y. Filed Sept. 29, 1967.

QUIK DIP

For Paperboard Cartons for Ice Cream (Int. Cl. 16).
First use Aug. 18, 1967.

SN 281,822. Ronthor Reiss Corporation, New York, N.Y. Filed Oct. 4, 1967.

RONTHOR

Owner of Reg. Nos. 728,660, 841,639, and others.
For Plastic Utility Trays (Without Legs) (Int. Cl. 20).
First use Dec. 27, 1962.

SN 286,724. Gilbert Schlichting, Sparks, Nev. Filed Dec. 11, 1967.

ACU RITE

For Data Processing Card Containers (Int. Cl. 20).
First use Feb. 3, 1967.

SN 287,575. Phillips Petroleum Company, Bartlesville, Okla. Filed Dec. 26, 1967.

BAKESTER

For Carrying Trays for Articles (Int. Cl. 21).
First use Nov. 17, 1967.

SN 292,060. Seal Bag Co., Inc., Rochester, N.Y. Filed Feb. 28, 1968.

TRAF-LITE LITTERBAG

No claim is made to "Litterbag" apart from the mark as shown.
For Plastic Litterbag for Use in Automobiles (Int. Cl. 22).
First use Jan. 24, 1968.

Class 3 — Baggage, Animal Equipments, Portfolios, and Pocketbooks

SN 265,734. John Romain, Inc., Long Island City, N.Y. Filed Mar. 1, 1967.

John Romain

"John Romain" was the founder of the applicant corporation, now deceased. Owner of Reg. No. 792,864.
For Handbags (Int. Cl. 18).
First use April 1959.

SN 275,279. Majelli, Inc., East Meadow, N.Y. Filed July 3, 1967.

majelli

For Handbags and Pocketbooks (Int. Cl. 18).
First use June 1, 1966.

SN 294,994. Helzberg's Diamond Shops, Inc., Kansas City, Mo. Filed Apr. 5, 1968.

I AM LOVED

For Travel Bags (Int. Cl. 18).
First use Mar. 20, 1968.

Class 5 — Adhesives

SN 271,088. Endicott Johnson Corporation, Endicott, N.Y. Filed May 9, 1967.

ENDWELL

For Industrial Adhesives Such as Used in Bonding Shoe Components, Floor and Wall Tiling, and in Connection With Pressure Sensitive Sealing Tape (Int. Cl. 1).
First use Apr. 3, 1967.

SN 287,540. General Aniline & Film Corporation, New York, N.Y. Filed Dec. 26, 1967.

GAFTAPE

For Pressure Sensitive Adhesive Tapes (Int. Cl. 16).
First use Sept. 29, 1967.

Class 6 — Chemicals and Chemical Compositions

SN 252,417. Red Top Maintenance Service, Inc., Denver, Colo. Filed Aug. 15, 1966.

RED TOP

Owner of Reg. No. 805,777.
For Disinfectants and Aerosol Deodorants (Int. Cl. 5).
First use June 22, 1965.

SN 253,380. W. & R. Balston, Limited, Maidstone, Kent, England. Filed Aug. 29, 1966.

Whatman

Owner of British Reg. No. B886,933; dated Nov. 15, 1965; and U.S. Reg. No. 507,638.
For Chemical Preparations for Use in Laboratories and in the Bio-Chemical Industry, and Indicator Papers (Chemical Test Papers) (Int. Cl. 1).

SN 267,130. Coral Chemical Company, Waukegan, Ill. Filed Mar. 20, 1967.

CORAK

For Chemical Compounds and Compositions Connected With a Plating-on-Plastic Process Which Are—Namely, Solid Acid and Oxidizer Conditioners, Catalyst Rinses, Acid Electroless Metal Plating Solutions, and Alkaline Electroless Metal Plating Solutions (Int. Cl. 1).
First use Oct. 1, 1966.

SN 271,144. Geigy Chemical Corporation, Ardsley, N.Y. Filed May 10, 1967.

ZERO

For Room Deodorant (Int. Cl. 5).
First use Jan. 18, 1967.

SN 273,267. Drew Chemical Corporation, New York, N.Y. Filed June 7, 1967.

DREWTAIN

For Polyelectrolyte for Use as a Retention Aid During the Manufacture of Paper and Paper Products (Int. Cl. 1).
First use Nov. 18, 1966.

SN 275,272. Kay-Fries Chemicals, Inc., West Haverstraw, N.Y. Filed July 3, 1967.

KFC

Owner of Reg. Nos. 561,778, 565,876, and 704,456.
For Organic Intermediate Chemicals—Namely, Tetra Methoxy Propane and Diethyl Phthalate (Int. Cl. 1).
First use on or about May 1, 1967.

SN 277,060. Merck & Co., Inc., Rahway, N.J. Filed July 28, 1967.

DRUB

For Parasiticide for Veterinary Use (Int. Cl. 5).
First use July 22, 1967.

SN 277,556. Heekin, Inc., Cincinnati, Ohio. Filed Aug. 4, 1967.

Jiffy starch

Applicant disclaims the term "Starch" apart from the mark as shown. Owner of Reg. No. 441,137.
For Laundry Starch (Int. Cl. 3).
First use on or about May 9, 1967.

SN 280,552. The Cambridge Tile Manufacturing Company, Cincinnati, Ohio. Filed Sept. 18, 1967.

ACID FLEX

No claim is made to the exclusive right to the use of the word "Acid" separate and apart from the mark as shown.
For Grout Additive (Int. Cl. 1).
First use June 27, 1967.

SN 281,684. Colgate-Palmolive Company, New York, N.Y. Filed Oct. 3, 1967.

ACTION

For Laundry Starch (Int. Cl. 3).
First use Jan. 24, 1967.

SN 281,685. Colgate-Palmolive Company, New York, N.Y. Filed Oct. 3, 1967.

SPREE

For Laundry Starch (Int. Cl. 3).
First use Jan. 24, 1967.

SN 281,686. Colgate-Palmolive Company, New York, N.Y. Filed Oct. 3, 1967.

GALAXY

For Laundry Starch (Int. Cl. 3).
First use Jan. 24, 1967.

SN 281,695. Fairmount Chemical Co., Inc., Newark, N.J. Filed Oct. 3, 1967.

D-MIRE

For Chemical Algaecide for Use on Lithographic Presses (Int. Cl. 5).
First use Dec. 16, 1964.

SN 281,812. Nott Manufacturing Co., Inc., Pleasant Valley, N.Y. Filed Oct. 4, 1967.

K.R.O.

For Rodenticide (Int. Cl. 5).
First use on or about Sept. 19, 1967.

SN 282,078. W. R. Grace & Co., New York, N.Y. Filed Oct. 9, 1967.

D-SECT

For Insect Killer (Int. Cl. 5).
First use Sept. 18, 1967.

SN 282,086. Hercules Incorporated, Wilmington, Del. Filed Oct. 9, 1967.

MAGNOX

For Magnetic Ferric Oxide (Int. Cl. 1).
First use Aug. 31, 1967.

SN 282,166. American Fluoride Corporation, New York, N.Y. Filed Oct. 10, 1967.

TRAC

For Chemical Rodenticide (Int. Cl. 5).
First use Jan. 2, 1967.

SN 282,622. Patek & Co., San Francisco, Calif. Filed Oct. 16, 1967.

IRON-EX

For Composition for Preventing Discoloration of Fabrics Caused by the Presence of Iron in Water Systems, and for Removing Iron Discoloration From Fabrics (Int. Cl. 8).
First use on or about Jan. 6, 1967.

SN 283,213. American Home Products Corporation, New York, N.Y. Filed Oct. 24, 1967.

SOC

Owner of Reg. No. 591,414.
For Laundry Bleach (Int. Cl. 3).
First use Apr. 22, 1965.

SN 287,612. Albert Verley & Company, South Plainfield, N.J. Filed Dec. 27, 1967.

JADU

For Perfume Concentrate for Use in the Manufacture of Toiletries and Cosmetics (Int. Cl. 1).
First use Nov. 3, 1967.

SN 290,560. Organon Inc., West Orange, N.J. Filed Feb. 8, 1968.

PREDICTOR

For Kit Containing Chemical Preparations and Testing Apparatus for the Diagnostic Detection of Pregnancy (Int. Cl. 9).
First use Jan. 25, 1968.

Class 7 — Cordage

SN 278,188. CF & I Steel Corporation, Denver, Colo. Filed Aug. 14, 1967.

LOK-STRESS

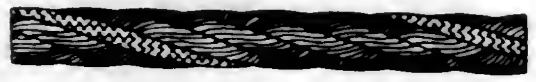
For Wire Strand Used in Prestressed Concrete (Int. Cl. 6).
First use June 13, 1967.

SN 281,819. Ponit Trading Company, St. Louis, Mo. Filed Oct. 4, 1967.

CARDINAL

For Binder and Baler Twines (Int. Cl. 22).
First use Feb. 23, 1965.

SN 293,432. E. H. Edwards Company, South San Francisco, Calif. Filed Mar. 18, 1968.



The drawing is lined for orange, and no claim is made to the representation of a section of rope. The mark consists of an orange colored strand forming a structural part of the wire rope.
For Wire Rope (Int. Cl. 6).
First use Oct. 18, 1967.

Class 8 — Smokers' Articles, Not Including Tobacco Products

SN 287,814. S. M. Frank & Co., Inc., New York, N.Y. Filed Dec. 29, 1967.

MEDICO
Apollo

Owner of Reg. Nos. 304,764 and 810,916.
For Smokers' Pipes (Int. Cl. 34).
First use Nov. 8, 1967.

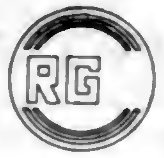
Class 9 — Explosives, Firearms, Equipments, and Projectiles

SN 260,384. The Spesco Corporation, Atlanta, Ga. Filed Dec. 9, 1966.

FALCON

For Hand Guns—Namely, Pistols and Revolvers (Int. Cl. 13).
First use Nov. 11, 1966.

SN 278,910. Rohm-Gesellschaft mbH. Werkzeug- und Maschinenfabrik, Sontheim (Brenz), Germany. Filed Aug. 23, 1967.



For Firearms—Namely, Pistols, Revolvers, and Starter Pistols (Int. Cl. 13).
First use 1952 ; in commerce 1952.

SN 288,567. Fred Wesemann, Sterling, Colo. Filed Jan. 10, 1968.

FLINCH-X

For Pneumatic Recoil Buffer Unit for Gun Stock of Firearm for Absorbing the Recoil Shock of a Firing Thereof (Int. Cl. 13).
First use Oct. 1, 1967.

Class 12 — Construction Materials

SN 272,828. General Polymers Corporation, Cincinnati, Ohio. Filed June 1, 1967.

DECO REZ

For Components To Produce a Polyester or Epoxy Floor Topping—Namely, Polyester or Epoxy Resin, Polyester or Epoxy Hardener, and Marble Chips (Int. Cl. 19).
First use Jan. 11, 1967.

SN 274,802. Worldsbest Industries, Inc., Cudahy, Wis. Filed June 26, 1967.

GUARDMASTER

Owner of Reg. No. 563,628.
For Safety Gates for Babies and Pets (Int. Cl. 20).
First use Apr. 24, 1967.

SN 276,918. American Metal Climax, Inc., New York, N.Y. Filed July 27, 1967.

I LINE

For Metal Glass Framing Members (Int. Cl. 6).
First use May 4, 1967.

SN 284,660. Dresser Industries, Inc., Dallas, Tex., assignee of Harbison-Walker Refractories Company, Pittsburgh, Pa. Filed Nov. 18, 1967.

TOPEX S

For Refractory Brick (Int. Cl. 19).
First use July 21, 1966.

SN 285,739. Home Comfort Products Co., Princeville, Ill. Filed Nov. 28, 1967.

X-act

For Simulated Panel-Type Shutters and Doors (Int. Cl. 19).
First use December 1966.

Class 13 — Hardware and Plumbing and Steam-Fitting Supplies

SN 263,707. Supreme Metal Fabricators, Inc., Westbury, N.Y. Filed Jan. 31, 1967.

Supremetal

For Sinks, Drainboard Tops, Towel Holders, and Fruit Pans (Int. Cls. 6 and 21).
First use June 1962.

SN 266,672. Seymour Mann, d.b.a. Seymour Mann Imports, New York, N.Y. Filed Mar. 14, 1967.

Pewtertone
Olde Tankardware

For Pewter-Coated Ice Buckets, Pitchers, Mugs, Water Jugs, Trays, Chafing Dishes, and Fondue Dishes (Int. Cl. 21).
First use Aug. 25, 1966.

SN 267,762. Mission Manufacturing Company (Delaware corporation), Houston, Tex., assignee of Mission Manufacturing Company (Texas corporation), Houston, Tex. Filed Mar. 28, 1967.

UNI-CHEK

For Check Valves (Int. Cl. 6).
First use Jan. 30, 1967.

SN 268,592. Flint & Walling Manufacturing Co., Inc., Kendallville, Ind. Filed Apr. 7, 1967.

AIR-E-TAINER

For Components for Water Systems and Conditioning Equipment—Namely, Tank Floats and Tanks (Int. Cl. 11).
First use Mar. 6, 1967.

SN 272,610. International Catalytic Corporation, Hurst, Tex. Filed May 29, 1967.

MAGNITE

For Catalytic Water Conditioners in the Nature of Cellular Devices Installed in a Water System Whose Catalytic Action Releases Electrons Which Arrest the Possibility of Rust and Corrosion (Int. Cl. 11).
First use Aug. 28, 1957.

SN 274,911. Wisconsin Centrifugal, Inc., Waukesha, Wis. Filed June 27, 1967.

CENTRI-FORGED

For Centrifugally Cast Metal Parts—Namely, Pipe Elbows (Int. Cl. 6).
First use June 1, 1967.

SN 275,460. Olympia Brewing Company, Olympia, Wash. Filed July 6, 1967.

OLY TAP

Applicant disclaims the term "Tap" apart from the mark as shown, and without prejudice to the applicant's rights therein which may have been established or which might be established in the future. Owner of Reg. Nos. 87,001 and 607,405.
For Tapping Device for Beer Kegs (Int. Cl. 6).
First use June 13, 1967.

SN 276,088. Beneke Corporation, Columbus, Miss. Filed July 17, 1967.

VELVET TOUCH

For Toilet Seats (Int. Cl. 11).
First use January 1965.

SN 276,089. Beneke Corporation, Columbus, Miss. Filed July 17, 1967.

SAMARITAN

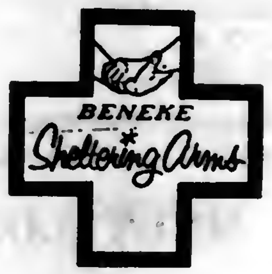
For Toilet Seats (Int. Cl. 11).
First use January 1965.

SN 276,090. Beneke Corporation, Columbus, Miss. Filed July 17, 1967.

TUFFY

Owner of Reg. No. 607,550.
For Toilet Seats (Int. Cl. 11).
First use January 1953.

SN 276,091. Beneke Corporation, Columbus, Miss. Filed July 17, 1967.



For Toilet Seats (Int. Cl. 11).
First use January 1964.

SN 276,092. Beneke Corporation, Columbus, Miss. Filed July 17, 1967.

SHELTERING ARMS

For Toilet Seats (Int. Cl. 11).
First use January 1964.

SN 276,093. Beneke Corporation, Columbus, Miss. Filed July 17, 1967.

TOWN & COUNTRY

For Toilet Seats (Int. Cl. 11).
First use July 1956.

SN 278,619. Tubex Corporation, Chicago, Ill. Filed Aug. 18, 1967.

TUBEX

For Metal Tubing (Int. Cl. 6).
First use July 10, 1967.

SN 278,875. Continental Manufacturing Company, Cincinnati, Ohio. Filed Aug. 23, 1967.

Comafco

For Valves (Int. Cl. 6).
First use July 11, 1967.

SN 279,398. Johnson Enterprises, Inc., Rockford, Ill. Filed Aug. 30, 1967.

JETS SEAL

For Plugs for Beer Barrels (Int. Cl. 20).
First use July 8, 1967.

SN 279,407. Nordskog Company, Inc., Van Nuys, Calif. Filed Aug. 30, 1967.

AERO-HEAD

For Lavatory Units Used in Air Carriers (Int. Cl. 11).
First use on or about Feb. 1, 1965.

SN 279,448. Associated Spring Corporation, Bristol, Conn. Filed Aug. 31, 1967.

DOUBLER

For Die Spring Assembly (Int. Cl. 6).
First use Aug. 10, 1967.

SN 279,561. Ladish Co., Cudahy, Wis. Filed Sept. 1, 1967.

TRI-FLO

Owner of Reg. No. 824,403.
For Valves (Int. Cl. 6).
First use Aug. 21, 1967.

SN 280,330. Reddi Car Corp., Sayville, N.Y. Filed Sept. 14, 1967.

NEET LOK

For Bolt Fasteners and the Like (Int. Cl. 6).
First use on or about Aug. 18, 1967.

SN 290,220. Empire Slip-On Hook Co., Inc., Dorado, Puerto Rico. Filed Feb. 5, 1968.

EMPIRE

Owner of Reg. Nos. 622,374 and 658,202.
For Drapery Hardware (Int. Cl. 6).
First use on or about May 27, 1949.

Class 14 — Metals and Metal Castings and Forgings

SN 281,283. Fuji Seitetsu Kabushiki Kaisha (Fuji Iron & Steel Co., Ltd.), Chiyoda-ku, Tokyo, Japan. Filed Sept. 27, 1967.

SNOW-GRIP

For Galvanized Sheet (Int. Cl. 6).
First use July 1965; in commerce in or about August 1965.

Class 15 — Oils and Greases

SN 269,279. James A. Biddlecome, d.b.a. Burress Enterprises, New York, N.Y. Filed Apr. 17, 1967.

SUPERSLICK

For Trombone Lubricating Cream (Int. Cl. 4).
First use May 18, 1966.

SN 279,926. The British Petroleum Company Limited, London, England. Filed Sept. 8, 1967.

ENERJET

Owner of British Reg. No. 684,342, dated Nov. 28, 1949.
For Gasoline and Lubricating Oils (Int. Cl. 4).

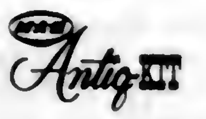
SN 281,621. Power Lube Company, San Diego, Calif. Filed Oct. 2, 1967.

POWER LUBE

Applicant disclaims the word "Lube" apart from the mark as shown.
For Lubricating Oil (Int. Cl. 4).
First use March 1957.

Class 16 — Protective and Decorative Coatings

SN 251,994. M. A. Bruder and Sons, Incorporated, Philadelphia, Pa. Filed Aug. 9, 1966.



Applicant disclaims "Antiq-Kit" apart from the mark as shown. Owner of Reg. No. 379,725.
For Paint To Be Used in Antiquing Surfaces (Int. Cl. 2).
First use Aug. 11, 1965.

SN 262,821. Tivian Laboratories Inc., Providence, R.I. Filed Jan. 18, 1967.

CERAMITATION

For Two-Component Composition To Produce Imitation Hard Enamel for Jewelry and Decorative Articles (Int. Cl. 2).
First use June 15, 1964.

SN 266,900. McCloskey Varnish Co., Philadelphia, Pa. Filed Mar. 16, 1967.

VAREX

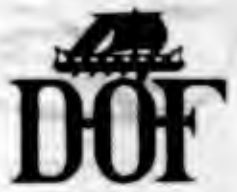
Owner of Reg. No. 700,720.
For Clear Varnishes Used as Protective Coatings on Furniture, Panelling, and Like Products (Int. Cl. 2).
First use Oct. 1, 1928.

SN 272,256. M. A. Bruder & Sons, Inc., Philadelphia, Pa. Filed May 24, 1967.

FLAME SHIELD

For Fire Retardant Coatings for Interior Surfaces (Int. Cl. 17).
First use Jan. 10, 1967.

SN 277,933. Pratt & Lambert, Incorporated, Buffalo, N.Y. Filed Aug. 9, 1967.



For Oil Finish for Wood (Int. Cl. 2).
First use July 28, 1967.

SN 279,150. London Chemical Company, Inc., Melrose Park, Ill. Filed Aug. 28, 1967.

SEALBRITE

For Rosin-Based Protective Coating To Keep Metallic Surfaces Clean and Solderable (Int. Cl. 2).
First use in 1948.

Class 17 — Tobacco Products

SN 257,156. Bartlett & Bickley Limited, London, England. Filed Oct. 25, 1966.

BARBIC

Priority claimed under Sec. 44(d) on British Reg. No. 899,260, dated Sept. 9, 1966.
Owner of U.S. Reg. No. 529,464.
For Cigarette Tobacco, Pipe Tobacco, and Chewing Tobacco (Int. Cl. 34).

SN 266,015. Douwe Egberts Koninklijke Tabakafabriek-Koffiebranderijen-Theehandel N.V., Joure, Netherlands. Filed Mar. 6, 1967.

THREE POINTS

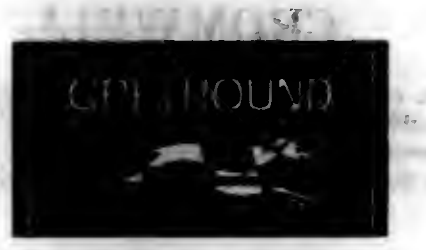
Owner of Dutch Reg. No. 102,036, dated July 21, 1949.
For Cigarette Tobacco, Shag Tobacco, Pipe Tobacco, and Chewing Tobacco (Int. Cl. 34).

SN 266,147. Alfred Dunhill Limited, London, England. Filed Mar. 7, 1967.

GOLD BLEND

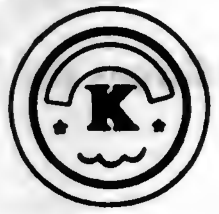
Applicant makes no claim to the word "Blend" apart from the mark as shown.
For Smoking Tobacco (Int. Cl. 34).
First use Nov. 18, 1966; in commerce Nov. 18, 1966.

SN 271,044. John Chapman Limited, Industria, Johannesburg, Republic of South Africa. Filed May 9, 1967.



"John Chapman" is the name of the now deceased founder of the applicant company. Owner of Reg. No. 821,486.
For Smoking Tobacco (Int. Cl. 34).
First use Mar. 10, 1939; in commerce Apr. 9, 1954.

SN 282,514. Camacho Cigars, Inc., Miami, Fla. Filed Oct. 16, 1967.



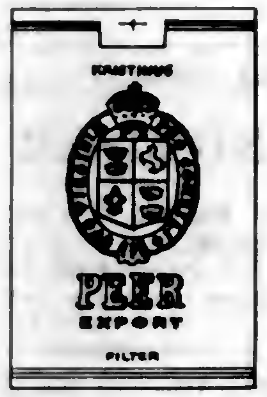
For Cigars (Int. Cl. 34).
First use Nov. 21, 1960.

SN 283,360. R. J. Reynolds Tobacco Company, Winston-Salem, N.C. Filed Oct. 25, 1967.

BREEF

For Cigarettes (Int. Cl. 34).
First use Oct. 18, 1967.

SN 283,531. Kristinus Kommanditgesellschaft, Munich, Germany. Filed Oct. 27, 1967.



Applicant disclaims any exclusive right to the words "Export" and "Filter," apart from the mark as shown. Owner of German Reg. No. 804,368, dated May 20, 1965.
For Filter Cigarettes Made From or Comprising Virginia Tobacco (Int. Cl. 34).

SN 283,673. Kristinus Kommanditgesellschaft, Munich, Germany. Filed Oct. 30, 1967.

PEER

Owner of German Reg. No. 606,712, dated Apr. 19, 1951.
For Cigarettes (Int. Cl. 34).
First use 1949; in commerce 1957.

SN 289,900. John Sinclair Limited, Newcastle-Upon-Tyne, England. Filed Jan. 30, 1968.

CROMWELL

The mark consists of the name of the famous Seventeenth Century English statesman.
For Cigarettes (Int. Cl. 34).
First use Sept. 15, 1967; in commerce Sept. 15, 1967.

SN 290,172. Samuel B. Jacobs, Hoboken, N.J. Filed Feb. 2, 1968.

FLOR DE MEXICO

Applicant disclaims the word "Mexico" apart from the mark as shown.
For Cigars (Int. Cl. 34).
First use on or about Aug. 16, 1967.

Class 18—Medicines and Pharmaceutical Preparations

SN 237,881. Michael V. Sivak, Erie, Pa. Filed Feb. 2, 1966.

ASPIRUB

For Analgesic Preparation for the Symptomatic Relief of Strains, Sprains, Neuralgias, Muscular and Arthritic Aches and Pains (Int. Cl. 5).
First use Nov. 1, 1958.

SN 255,609. Fisons Pharmaceuticals Limited, Loughborough, England. Filed Oct. 3, 1966.

PRENOMISER FORTE

Owner of U.S. Reg. No. 782,301; and British Reg. No. 875,203, dated Feb. 4, 1965.
For Pharmaceutical Preparations for the Alleviation and Treatment of Respiratory Ailments (Int. Cl. 5).

SN 255,610. Fisons Pharmaceuticals Limited, Loughborough, England. Filed Oct. 3, 1966.

PRENOMISER PLUS

Owner of British Reg. No. 875,204, dated Feb. 4, 1965; and U.S. Reg. No. 782,301.
For Pharmaceutical Preparations for the Alleviation and Treatment of Respiratory Ailments (Int. Cl. 5).

SN 264,932. Imperial Chemical Industries Limited, London, England. Filed Feb. 17, 1967.

PLANIT

Owner of British Reg. No. B869,805, dated Sept. 28, 1964.
For Veterinary Substances and Preparations for the Treatment of Poultry (Int. Cl. 5).

SN 264,933. Imperial Chemical Industries Limited, London, England. Filed Feb. 17, 1967.

ZANIL

Owner of British Reg. No. 877,557, dated Mar. 30, 1965.
For Preparations for the Treatment of Liver Fluke in Animals (Int. Cl. 5).

SN 266,073. Palmedico, Inc., Columbia, S.C. Filed Mar. 6, 1967.

ENNADE

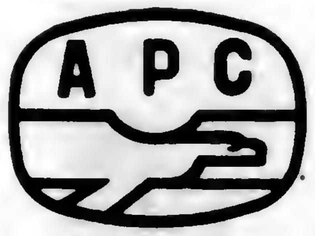
For Geriatric Formula; Stimulant (Int. Cl. 5).
First use Jan. 4, 1965.

SN 271,680. Archifar Laboratori Chimico-Farmacologici S.p.A., Milan, Italy. Filed May 17, 1967.

LEVOMYCETIN

Owner of Italian Reg. No. 108,332, dated July 18, 1952.
For Pharmaceutical Antibiotic Preparations (Int. Cl. 5).

SN 273,460. American Pharmaceutical Company, Bronx, N.Y. Filed June 9, 1967.



The letters "APC" are disclaimed apart from the mark as shown. Owner of Reg. No. 730,676.
For Line of Pharmaceutical and Medicinal Preparations (Int. Cl. 5).
First use on or about Apr. 20, 1966.

SN 276,222. Ciba Limited, Basel, Switzerland. Filed July 18, 1967.

BRADOPHEN

Owner of Swiss Reg. No. 172,659, dated Oct. 28, 1958.
For Antiseptic Preparation—Namely, Disinfectant (Int. Cl. 5).

SN 276,810. Bristol-Myers Company, New York, N.Y. Filed July 26, 1967.

CONTEND

For Analgesic (Int. Cl. 5).
First use Mar. 6, 1967.

SN 278,273. Bristol-Myers Company, New York, N.Y. Filed Aug. 15, 1967.

POLYTEG

For Antibiotic (Int. Cl. 5).
First use Mar. 16, 1967.

SN 278,862. American Home Products Corporation, New York, N.Y. Filed Aug. 23, 1967.

EQUILOID

For Equine Encephalomyelitis Vaccine and Tetanus Toxoid (Int. Cl. 5).
First use Aug. 15, 1967.

SN 279,112. Sterling Drug Inc., New York, N.Y. Filed Aug. 25, 1967.

DELACAINE

For Anesthetic (Int. Cl. 5).
First use July 27, 1967.

SN 279,339. USV Pharmaceutical Corporation, New York, N.Y. Filed Aug. 29, 1967.

SPANDECON

For Orally Effective Nasal Decongestant (Int. Cl. 5).
First use Aug. 9, 1967.

SN 279,399. Knoll Pharmaceutical Company, Orange, N.J. Filed Aug. 30, 1967.

CORDILOX

For Pharmaceutical Preparation for the Treatment of Cardiac and Circulatory Disorders (Int. Cl. 5).
First use Aug. 22, 1967.

SN 279,620. Bristol-Myers Company, New York, N.Y. Filed Sept. 5, 1967.

BREAKTHRU

Owner of Reg. No. 757,502.
For Antacid (Int. Cl. 5).
First use May 27, 1967.

SN 279,621. Bristol-Myers Company, New York, N.Y. Filed Sept. 5, 1967.

OVER AND OUT

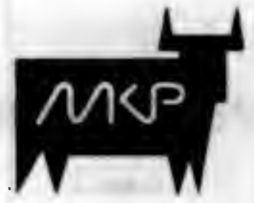
For Analgesic Tablets (Int. Cl. 5).
First use July 10,1967.

SN 282,844. Carlos G. Villarreal, d.b.a. St. Martin Pharmacal Co., Los Angeles, Calif. Filed Oct. 18, 1967.

ST. MARTIN

For Dietary Supplement—Namely, Iron Tonic With Vitamins (Int. Cl. 5).
First use on or about Oct. 25, 1966.

SN 290,802. Masti-Kure Products Company, Inc., Norwich, Conn. Filed Feb. 12, 1968.



The mark consists of the letters "MKP" and design. Owner of Reg. No. 814,725.
For Veterinary Preparations for Use on Livestock, Particularly Cattle (Int. Cl. 5).
First use on or about Dec. 27, 1967.

Class 19—Vehicles

SN 279,471. Gem-Top Mfg., Inc., Clackamas, Oreg. Filed Aug. 31, 1967.

GEM SPORT

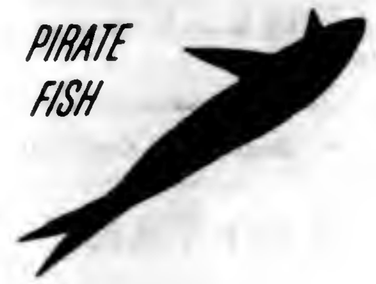
For Detachable Top or Cover for Pick-Up Trucks (Int. Cl. 12).
First use July 19, 1967.

SN 279,617. Bike Toter Inc., Santa Monica, Calif. Filed Sept. 5, 1967.

BIKE TOTER

For Vehicle-Mounted Bicycle-Carrying Racks and Parts Thereof (Int. Cl. 12).
First use July 9, 1962.

SN 279,619. William M. Bower, d.b.a. B & B Manufacturing Co., Setauket, N.Y. Filed Sept. 5, 1967.



For Sailboats (Int. Cl. 12).
First use May 28, 1966.

SN 281,606. Mobility Unlimited, Inc., Royal Oak, Mich. Filed Oct. 2, 1967.

AMPHICAT

For Powered Amphibious Vehicles (Int. Cl. 12).
First use July 21, 1967.

SN 285,355. Steed-Pollak Manufacturing Company, Inc., Fitzgerald, Ga. Filed Nov. 21, 1967.

BIG BEAVER

Owner of Reg. No. 759,550.
For Travel Trailers (Int. Cl. 12).
First use on or about Feb. 8, 1964.

Class 20—Linoleum and Oiled Cloth

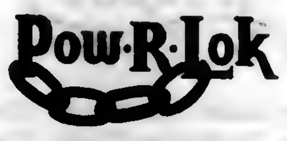
SN 272,636. Robbins Products, Inc., Tuscumbia, Ala. Filed May 29, 1967.

ULTRAFLOR

For Plastic Covering Sold in Rolls for Floors and Walls, and Covering and Finish Coat Therefor Sold in Cans, Such Roll Goods and Finish Coat Materials Comprising a Single Package Item (Int. Cl. 27).
First use Apr. 24, 1967.

Class 21—Electrical Apparatus, Machines, and Supplies

SN 253,272. Battery Power Incorporated, New Orleans, La. Filed Aug. 29, 1966.



For Batteries (Int. Cl. 9).
First use in or about September 1960.

SN 261,750. Ormat Turbines (1965) Ltd., Yavne, Israel. Filed Dec. 30, 1966.

RUNA

Priority claimed under Sec. 44(d) on Israeli Reg. No. 26,300, dated July 26, 1966.

For Generators, Turbo-Generators, and Power Generating Units for the Generation of Electrical Power (Int. Cl. 7).

SN 263,411. Stow Laboratories, Inc., Stow, Mass. Filed Jan. 26, 1967.

PITRAN

For Miniature Solid State Transducer Used for Converting Forces and Pressures Into Electric Signals (Int. Cl. 9).

First use Nov. 18, 1966.

SN 264,865. Victory Engineering Corporation, Springfield, N.J. Filed Feb. 16, 1967.

VECO-VAMP

Owner of Reg. Nos. 216,807 and 616,524.

For Electronic Components—Namely, Thermistors, Varistors, and Resistors (Int. Cl. 9).

First use July 14, 1965.

SN 264,866. Victory Engineering Corporation, Springfield, N.J. Filed Feb. 16, 1967.

THINISTOR

For Electronic Components—Namely, Thermistors, Varistors, and Resistors (Int. Cl. 9).

First use Apr. 7, 1965.

SN 264,868. Victory Engineering Corporation, Springfield, N.J. Filed Feb. 16, 1967.

ISOTHERM

For Electronic Components—Namely, Thermistors, Varistors, and Resistors (Int. Cl. 9).

First use Oct. 5, 1954.

SN 265,516. Goldpoint Industries, Inc., New York, N.Y. Filed Feb. 27, 1967.

WATCH DOG

For Photoelectric Switch To Actuate Lights at Dusk (Int. Cl. 9).

First use Dec. 3, 1962.

SN 265,574. Viking Instruments, Inc., East Haddam, Conn. Filed Feb. 27, 1967.

ALERT-LINE

For AM and FM Monitor Receivers, RF Frequency Standards, Audio Frequency Tone Generators, Antenna Couplers, and Security Alarm Systems (Int. Cl. 9).

First use Jan. 27, 1967, on FM monitor receivers.

SN 265,631. Industrial Engravers, Inc., Jamaica, N.Y. Filed Feb. 28, 1967.

Glaspon

For Metallic Instrument Panels and Metallic Instrument Dials, All Having a Protective Finish Thereon for Use on Electrical Instruments (Int. Cl. 9).

First use on or about May 15, 1966.

SN 266,412. Eastern Electronics, Albany, N.Y. Filed Mar. 10, 1967.

TOP VALET

For Solid State Controlled Sensing Device To Automatically Raise Automobile Convertible Tops in the Event of Rain (Int. Cl. 9).

First use on or about Feb. 21, 1967.

SN 267,729. Chrondek Electronics, Inc., Costa Mesa, Calif. Filed Mar. 28, 1967.

CHRONDEK

For Racing Timing Systems and Racing Starting Systems, and Components Thereof, Including Electronic Timers, Photo Pickups, Light Sources, and Display Panels and Stands (Int. Cl. 9).

First use August 1964.

SN 268,311. HMH Publishing Co., Inc., Chicago, Ill. Filed Apr. 4, 1967.

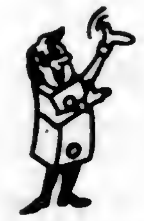
PLAYBOY

Owner of Reg. Nos. 291,272 and 652,412.

For Radios (Int. Cl. 9).

First use in or about April 1962.

SN 268,510. Mech-Tronics Nuclear Corporation, Melrose Park, Ill. Filed Apr. 6, 1967.



For Electronic Apparatus, Comprising Preamplifiers, Bins for Modular Instruments, Amplification Modules, Preamplification Modules, High Voltage Power Supply Modules, Time Analysis Modules, Amplitude Analysis Modules, and Module Kits Consisting of Mechanical Frames for Electronic Assemblies (Int. Cl. 9).

First use Mar. 21, 1967.

SN 269,855. Carol Wire & Cable Corp., Pawtucket, R.I. Filed Apr. 24, 1967.

POWR-CENTER

For Extension Cords (Int. Cl. 9).

First use on or about Mar. 21, 1967.

SN 271,046. Dracon Industries, Van Nuys, Calif. Filed May 9, 1967.

TELE-RACK

For Metal Rack for Supporting Electrical Equipment Such as Electrical Relays (Int. Cl. 9).

First use Apr. 6, 1967.

SN 272,948. Pinlites Inc., Fairfield, N.J. Filed June 2, 1967.

PINLITE

Owner of Reg. No. 715,378.

For Miniature Incandescent Lamps (Int. Cl. 11).

First use Mar. 7, 1960.

SN 273,406. National Periodical Publications, Inc., New York, N.Y. Filed June 8, 1967.

BATMAN

Owner of Reg. Nos. 378,913, 382,770, 804,709, and others.

For Flashlights, Children's Night Lights, Transistor Radios, and Two-Way Portable Radios (Int. Cls. 9 and 11).

First use February 1966.

SN 274,322. Holyoke Wire and Cable Corporation, Holyoke, Mass. Filed June 20, 1967.

Holyoke

For Electrical Wire, Insulated Wire, Electrical Cables, Cable Connector Assemblies, and Electrical Harnesses (Int. Cl. 9).

First use September 1916.

SN 275,136. General Dynamics Corporation, Rochester, N.Y. Filed June 30, 1967.

ANDEFT

For Electronic Data Communications Equipment, Including Frequency Differential Phase Shift Keyed Modems (Int. Cl. 9).

First use at least as early as 1961.

SN 275,520. Fluid Power Accessories, Inc., Wheeling, Ill. Filed July 7, 1967.

MULTI-PAK

For Valves—Namely, Solenoid Control Valves (Int. Cl. 9).

First use on or about June 8, 1967.

SN 275,543. M-R-S, Inc., Oklahoma City, Okla. Filed July 7, 1967.

METER MATE

For Protective Housing for Service Meters (Int. Cl. 9).

First use July 1963.

SN 275,544. M-R-S, Inc., Oklahoma City, Okla. Filed July 7, 1967.

METER MATE

For Protective Housing for Service Meters (Int. Cl. 9).

First use July 1963.

SN 276,770. Trans-American Electronics International Co., Inc., Chicago, Ill. Filed July 25, 1967.

AGENA

For Radio and Television Receiving Sets (Int. Cl. 9).

First use Apr. 5, 1967.

SN 277,088. Tideland Signal Corporation, Houston, Tex. Filed July 28, 1967.

MAXLUMINA

For Marine Signal Lantern (Int. Cl. 9).

First use on or before June 29, 1967.

SN 278,914. Orlando Trasorras, New York, N.Y. Filed Aug. 23, 1967.

TELESIGNAL

For Burglar Alarms and Fire Alarms (Int. Cl. 9).

First use June 1, 1967.

SN 279,444. Alan Industries, Inc., Doylestown, Pa. Filed Aug. 31, 1967.

Soundmate

For Wireless Intercom Systems (Int. Cl. 9).

First use May 23, 1967.

SN 279,468. Fisher Radio Corporation, Long Island City, N.Y. Filed Aug. 31, 1967.

XP-6B

For Speakers (Int. Cl. 9).

First use June 15, 1967.

SN 279,546. Fisher Radio Corporation, Long Island City, N.Y. Filed Sept. 1, 1967.

ACOUSTIGLAS

For Speakers (Int. Cl. 9).

First use Oct. 11, 1966.

SN 279,918. Anaconda Wire and Cable Company, New York, N.Y. Filed Sept. 8, 1967.

SPANWAY

Owner of Reg. No. 721,829.

For Electric Wires and Cables, and Spacers for Electric Wires and Cables, Particularly Aerial Wires and Cables (Int. Cl. 9).

First use Apr. 28, 1960.

SN 281,964. Carol Wire & Cable Corp., Pawtucket, R.I. Filed Oct. 6, 1967.

PERMALINE

For Electrical Wire and Cable, and Covering for Electrical Wire and Cable (Int. Cl. 9).

First use in or about November 1962.

SN 281,967. Carol Wire & Cable Corp., Pawtucket, R.I. Filed Oct. 6, 1967.

CLEARFLEX

For Electrical Wire and Cable (Int. Cl. 9).

First use in or about October 1962.

SN 284,714. Naturalite, Inc., Garland, Tex. Filed Nov. 13, 1967.

ILLUMINOMETER

For Light Responsive Electronic Device for Opening and Closing an Electric Circuit at a Predetermined Level of Illumination (Int. Cl. 9).

First use Sept. 18, 1967.

Class 22 — Games, Toys, and Sporting Goods

SN 259,685. Tai Sang Industrial Company Limited, Kennedy Town, Hong Kong. Filed Nov. 29, 1966.

"BLUE-BOX"

For Toys—Namely, Animal Models, Puppets, Tea Sets, Dolls, Soldiers, Embroidery Sets, Building Blocks, Guns, Trains, Medical Kits, Vehicles, Puzzles; Ships, Planes, Rockets, Underwater Gear, Cooking Equipment, and the Like (Int. Cl. 28).

First use on or about Jan. 1, 1957; in commerce on or about Mar. 1, 1957.

SN 266,042. House of Games Corporation Limited, Scarborough, Ontario, Canada. Filed Mar. 6, 1967.

RATRACE

Claims priority under Sec. 44(d) on Canadian application filed Dec. 19, 1966; Reg. No. 152,794, dated Aug. 25, 1967.

For Equipment Sold as a Unit for Playing a Board Game (Int. Cl. 28).

First use Feb. 28, 1967; in commerce Mar. 1, 1967.

SN 267,368. Wilson Sporting Goods Co., River Grove, Ill., assignee of Wilson Sporting Goods Co., River Grove, Ill. Filed Mar. 22, 1967.

INDESTRUCTO

Owner of Reg. Nos. 637,105 and 729,130.

For Golf Bags (Int. Cl. 28).

First use May 1, 1920.

SN 267,371. Wilson Sporting Goods Co., River Grove, Ill., assignee of Wilson Sporting Goods Co., River Grove, Ill. Filed Mar. 22, 1967.

WALKER CUP

Owner of Reg. No. 637,094.

For Golf Clubs and Golf Balls (Int. Cl. 28).

First use Feb. 24, 1955.

SN 268,694. Brunswick Corporation, Chicago, Ill. Filed Apr. 10, 1967.

SWING A WAY

For Apparatus for Enabling Golf To Be Simulated and Played in a Limited Space (Int. Cl. 28).

First use Jan. 4, 1967.

SN 268,758. Northwestern Golf Company, Chicago, Ill. Filed Apr. 10, 1967.

CORRECTA

For Grips Incorporated as a Component Part of Golf Clubs (Int. Cl. 28).

First use Sept. 1, 1962.

SN 269,367. Wilson Sporting Goods Co., River Grove, Ill., assignee of Wilson Sporting Goods Co., River Grove, Ill. Filed Apr. 71, 1967.

DI-VI-DO

For Golf Bags (Int. Cl. 28).

First use Oct. 30, 1959.

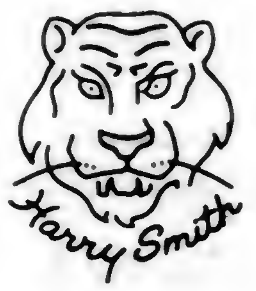
SN 273,213. Beverly T. Strout, d.b.a. Quality School Products, Springfield, Mass. Filed June 6, 1967.

TRY-GUIDE

For Equipment Comprising an Alphabetic Stick for Playing an Educational Letter, Number, and/or Word Game (Int. Cl. 28).

First use 1963.

SN 277,440. Columbia Industries, Inc., San Antonio, Tex. Filed Aug. 3, 1967.



"Harry Smith" is the name of a living individual whose consent is of record.

For Bowling Balls (Int. Cl. 28).

First use June 14, 1967.

SN 279,329. Raichle Sportschuh AG (Raichle Chaussures de Sport SA) (Raichle Boot Co. Ltd.), Kreuzlingen, Switzerland. Filed Aug. 29, 1967.

Raichle

For Ski Boots (Int. Cl. 28).

First use March 1936; in commerce April 1950.

SN 279,356. Bantamlite, Inc., New York, N.Y. Filed Aug. 30, 1967.

SGT. RAY

For Toy Flashlights (Int. Cl. 28).

First use Aug. 15, 1967.

SN 279,841. Medalist Manufacturing Company, Inc., Hazlehurst, Ga. Filed Sept. 7, 1967.

MEDALIST

For Golf Balls (Int. Cl. 28).

First use Sept. 1, 1967.

SN 279,875. Topps Chewing Gum, Incorporated, Brooklyn, N.Y. Filed Sept. 7, 1967.

GOOFY GOGGLES

The word "Goggles" is disclaimed apart from the mark as shown, without disclaiming any common law rights therein.

For Toy Eye Shields Marked With Slogans (Int. Cl. 28).

First use Aug. 21, 1967.

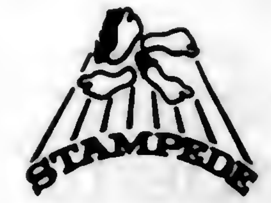
SN 288,009. Cypress Gardens Skis, Inc., Cypress Gardens, Fla. Filed Jan. 3, 1968.

EL Diablo
The Devil

For Water Skis (Int. Cl. 28).

First use Dec. 5, 1966.

SN 289,158. G. R. Mertz, Bellingham, Wash. Filed Jan. 19, 1968.



For Equipment Sold as a Unit for Playing an Indoor/Outdoor Amusement Game (Int. Cl. 28).

First use Dec. 20, 1967.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

SN 245,004. McGraw-Edison Company, Elgin, Ill. Filed May 5, 1966.

apparall

For Machinery for Use in the Clothing and Textile Industries—Namely, Presses, Such as High Temperature Presses, for Imparting of Permanent Crease and Finish to Fabrics (Int. Cl. 7).

First use Jan. 29, 1965.

SN 252,983. Southern Saw Service, Inc., d.b.a. Atsa Mfgrs., Atlanta, Ga. Filed Aug. 24, 1966.

ATSA

Owner of Reg. Nos. 723,828 and 733,953.

For Electric Cutlery Sharpeners, Band Saw Blades, and Carcass Saws (Int. Cl. 7).

First use on or about May 9, 1966.

SN 267,099. Alvin E. Coles, d.b.a. Coles Pattern Shop, Fresno, Calif. Filed Mar. 20, 1967.

2Z

For Post Removing Apparatus (Int. Cl. 7).

First use Oct. 13, 1964.

SN 267,172. Miehle-Goss-Dexter, Incorporated, Chicago, Ill. Filed Mar. 20, 1967.

VERSA-FOLD

For Machines for Feeding and Folding Sheet Material (Int. Cl. 7).

First use May 1962.

SN 268,527. Rex Chainbelt Inc., Milwaukee, Wis. Filed Apr. 6, 1967.

REX

Owner of Reg. Nos. 126,139, 803,833, and others.

For Stationary and Portable Mixing, Remixing, Agitating, and Batching Apparatus for Concrete and Other Bulk Materials, and Controls for Such Apparatus; Truck Mixers and Concrete Mixers for Mounting on Trucks; Concrete Conveying, Distributing, Spouting, and Finishing Machines for Roadways, Curbs and Sidewalks; Soil and Roadway Stabilization, Grading and Compaction Vehicles; Power-Operated Hammers for Tamping and Breaking Soil and Roadways; Rotary and Piston Pumps for Liquids and Semi-Liquids; Apparatus and Vehicles for Spreading Granular or Semi-Liquid Materials on Roadways; Conveyors; Elevators; Belt Idlers and Pulleys; Traveling Water Screens Such as for Water-Intake Systems; Screens of the Vibrating and Non-Vibrating Type for Sand, Gravel, and Other Solid Materials; Conveyor Buckets; Bulk Material Handling and Feeding Systems Comprising Feeders, Hoppers, Bins and/or Gates Therefor; Power Transmission and Conveyor Chains and Attachments Therefor; Sprockets; Shaft Couplings; Shaft Bearings; Fluid-Operated Cylinders, Positioners and Shock-Absorbers for Machinery; Fluid Flow Pressure Regulators and Lubricators; Knives and Blades for Agricultural and Industrial Machinery; Settling, Collecting, Removing, Washing, Flocculating, and Agglomerating Apparatus for Liquid Clarification, Separation, Treatment and Purification Systems; and Parts for the Foregoing (Int. Cls. 7 and 11).

First use Jan. 18, 1962.

SN 269,710. R. M. Wade & Co., Portland, Oreg. Filed Apr. 20, 1967.

ELECTRI-ROLL

For Gear Drive Wheel Conveyor Units for Moving Sprinkler Irrigation Pipes (Int. Cl. 7).

First use Apr. 1, 1966.

SN 270,595. The Mining Engineering Company (Meco) Limited, Worcester, England. Filed May 3, 1967.

MECO VARITROUGH

Owner of British Reg. No. 854,807, dated Oct. 20, 1963; and U.S. Reg. Nos. 244,965 and 244,966.

For Conveyors (Machines), Incorporating Toughed Idlers (Int. Cl. 7).

SN 270,596. The Mining Engineering Company (Meco) Limited, Worcester, England. Filed May 3, 1967.

Meco VARITROUGH

Owner of British Reg. No. 861,493, dated Mar. 12, 1964; and U.S. Reg. Nos. 244,965 and 244,966.

For Conveyors (Machines) Incorporating Troughed Idlers (Int. Cl. 7).

SN 272,930. Hughes Tool Company, Houston, Tex. Filed June 2, 1967.

Cookie Cutter

Applicant asserts no rights in the word "Cutter" apart from the composite mark.

For Core Drills Used in Pavement Cutting (Int. Cl. 7).

First use Apr. 27, 1967.

SN 274,695. AMP Incorporated, Harrisburg, Pa. Filed June 26, 1967.

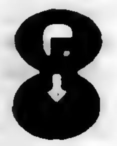
AMP-FIT

Owner of Reg. Nos. 405,714, 821,029, and others.

For Portable Mechanical Crimp Type Tools To Apply Mechanical Tube Fittings (Int. Cl. 8).

First use Jan. 27, 1966.

SN 277,032. Dresser Industries, Inc., Dallas, Tex. Filed July 28, 1967.



Owner of Reg. Nos. 657,089 and 772,790.

For Oil Field Tools and Related Accessories—Namely, Well Swabs, Tubing Catchers for Wells, Well Packers, Tubing Anchors for Wells, Hydraulic Anchors for Wells, Oil Savers for Wells, Blowout Preventers for Wells, Drilling Heads for Wells, Intermitters for Gas Lift Installations on Wells, Surface Controllers for Gas Lift Installations on Wells, Sucker Rod Strippers, Tubing Strippers, Circulating Valves for Use in Wells, Safety Joints for Use in Wells, Downhole Separators for Use in Wells, Gas Lift Flow Valves for Wells, Tubing Spiders, Blocks and Hooks for Use on Wells, Rotary Swivels for Wells, Kellys, Releasing Attachments for Well Swabs, Pipe Unions for Use on Wells, Rubber Pipe Protective Sleeves, Rubber Slush Pump and Stuffing Box Rings, Mandrels for Mounting Gas Lift Valves in Wells, Stabilizer Sleeves for Drill Pipe, and Parts for the Foregoing Equipment (Int. Cls. 7 and 17).

First use Nov. 1, 1962.

SN 277,288. Koch Engineering Company, Inc., Wichita, Kans. Filed Aug. 1, 1967.

FLEXIRING

Owner of Reg. No. 699,780.

For Pieces or Bodies of Metal, Plastic or Ceramic for Use as Filler Bodies in Columns or Towers During Chemical or Physical Processes (Int. Cl. 11).

First use in or about September 1966.

SN 277,740. Vaughan & Bushnell Mfg. Co., Chicago, Ill. Filed Aug. 7, 1967.

CARPENTER'S PRIDE

The word "Carpenter's" is disclaimed apart from the mark as shown.

For Pocket Knives and Hammers for Use by Carpenters (Int. Cl. 8).

First use July 20, 1967.

SN 278,144. Edward L. Von Hofen, Avon Lake, Ohio. Filed Aug. 11, 1967.

MIRACLE

For Conveyor Chain and Parts Thereof.

First use June 20, 1967.

SN 278,674. A. F. Dormeyer Manufacturing Company, Chicago, Ill. Filed Aug. 21, 1967.

AF Dormeyer

A. F. Dormeyer is president of applicant corporation.

For Hair Clippers (Int. Cl. 8).

First use July 1966.

SN 278,831. Textron, Inc., Providence, R.I. Filed Aug. 22, 1967.

HOMELITE

Owner of Reg. Nos. 151,508, 842,370, and others.

For Fruit Harvesters and Demolition Saws (Int. Cl. 7).

First use Apr. 24, 1967.

SN 279,115. Sukup Manufacturing Company, Sheffield, Iowa. Filed Aug. 25, 1967.

STIRWAY

For Auger Type Apparatus for Stirring Granular Material (Int. Cl. 7).

First use Mar. 6, 1967.

SN 279,964. Standard Sewing Equipment Corp., New York, N.Y. Filed Sept. 8, 1967.

MAJESTIC

Owner of Reg. No. 267,864.

For Sewing Machines, Parts Thereof and Attachments Therefor (Int. Cl. 7).

First use at least as early as July 14, 1967.

SN 280,248. Oneida Ltd., Oneida, N.Y. Filed Sept. 13, 1967.

FANTASY

Owner of Reg. Nos. 385,842 and 636,451.

For Stainless Steel Flatware (Int. Cl. 8).

First use Aug. 24, 1967.

SN 280,313. Gilreath Hydraulics, Inc., Houston, Tex. Filed Sept. 14, 1967.

TURBO-FLITE

For Centrifuges (Int. Cl. 7).

First use June 8, 1967.

SN 280,725. Oneida Ltd., Oneida, N.Y. Filed Sept. 19, 1967.

MANSION STAINLESS U.S.A.

Applicant disclaims the word "Stainless" and the term "U.S.A." apart from the mark as shown. Owner of Reg. No. 506,560.

For Stainless Steel Flatware (Int. Cl. 8).

First use Oct. 21, 1966.

SN 280,883. Oneida Ltd., Oneida, N.Y. Filed Sept. 21, 1967.

VENETIA

For Stainless Steel Flatware (Int. Cl. 8).

First use Sept. 8, 1967.

SN 281,053. Fansteel Metallurgical Corporation, North Chicago, Ill. Filed Sept. 25, 1967.

MACO

For Rotary Cutting Tools Including End Mills and Cutting Inserts for Application to Metal Cutting Tools, and Toolholders and Single Point Tools and Special Insert Forms for Cutting Tools (Int. Cl. 7).

First use December 1953.

SN 281,054. Fansteel Metallurgical Corporation, North Chicago, Ill. Filed Sept. 25, 1967.

MILL-ALL

For Rotary Cutting Tools Including End Mills and Cutting Inserts for Application to Metal Cutting Tools (Int. Cl. 7).

First use May 1950.

SN 281,098. K. J. Miller Corporation, Brookfield, Ill. Filed Sept. 25, 1967.

MILLER

For Air Compressors and Paint Spray Guns (Int. Cl. 7).

First use May 1961.

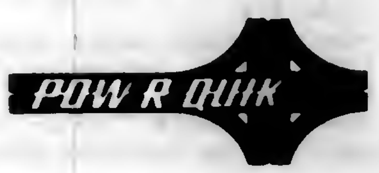
SN 281,125. Servis Equipment Company, Inc., Dallas, Tex. Filed Sept. 25, 1967.

SERVIS

For Earth Moving Blades, Combination Earth Scarifiers and Scrapers, Rotary Stalk Cutters, Rotary Brush Cutters and Shredders, and Rotary Posthole Diggers (Int. Cl. 7).

First use 1914 on earth moving blades.

SN 287,701. Olin Mathieson Chemical Corporation, New York, N.Y. Filed Dec. 28, 1967.



For Dual Starter System and Components Thereof Including Starter, Lubricator, Air Components, Starter Cartridge, Manifold, Breech, and Tubing for Use on Diesel Engines (Int. Cl. 7).

First use on or about Aug. 24, 1967.

SN 293,089. Kaman Corporation, Bloomfield, Conn. Filed Mar. 13, 1968.

KACARB

For Machine Bearings (Int. Cl. 7).

First use August 1966.

SN 294,144. Merriman Inc., Hingham, Mass. Filed Mar. 26, 1968.

SPHERILUBE

For Low Friction Bearings (Int. Cl. 7).

First use September 1966.

SN 294,231. Merriman Inc., Hingham, Mass. Filed Mar. 27, 1968.

SPURICAL

For Machine Gears Made of Powdered Metal (Int. Cl. 7).

First use March 1960.

Class 24 — Laundry Appliances and Machines

SN 287,671. Proctor-Silex Incorporated, Philadelphia, Pa. Filed Dec. 27, 1967.

TUCK-A-WAY

For Ironing Tables (Int. Cl. 21).

First use in or about January 1964.

SN 287,762. Proctor-Silex Incorporated, Philadelphia, Pa. Filed Dec. 28, 1967.

FLIP-TOP

For Ironing Tables (Int. Cl. 21).

First use in or about March 1960.

Class 26 — Measuring and Scientific Appliances

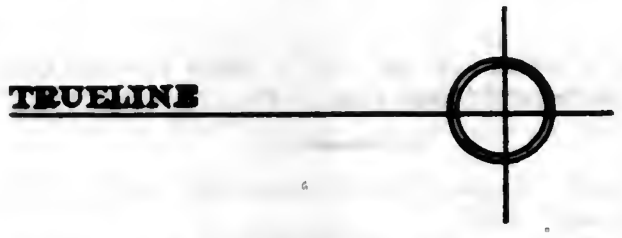
SN 193,585. Chronetics, Inc., Yonkers, N.Y. Filed May 15, 1964.

NANOCOUNTER

For Multi-Circuit Electronic Computing System (Int. Cl. 9).

First use Apr. 24, 1964.

SN 246,404. Trueline Instruments, Inc., Englewood, Colo. Filed May 23, 1966.



For Trailer Levels and Grade and Tilt Indicators for Vehicles (Int. Cl. 9).

First use on or about Jan. 10, 1966.

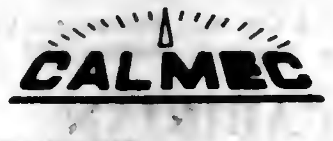
SN 274,985. Pneumo Dynamics Corporation, Cleveland, Ohio. Filed June 28, 1967.

STOW

For Automatic Integral Weight and Balance Systems for Aircraft Including Weight Sensors and Electrical Measuring and Indicating Circuits (Int. Cl. 9).

First use on or about Feb. 28, 1967.

SN 277,606. Ametek, Inc., New York, N.Y. Filed Aug. 7, 1967.



Owner of Reg. No. 811,228.

For Marine Autopilots (Int. Cl. 9).

First use Apr. 5, 1967.

SN 281,767. Century Projector Corporation, New York, N.Y. Filed Oct. 4, 1967.

ANAPFET

For Optical Sound Reproducer for Reproducing Optical Sound Tracks From Motion Picture Film (Int. Cl. 9).

First use April 1967.

SN 290,642. Philamon Laboratories, Inc., Westbury, N.Y. Filed Feb. 8, 1968.

ISO-FORK

For Electrically Driven Tuning Fork Apparatus Used, for Example, as Frequency Standards (Int. Cl. 9).

First use Jan. 26, 1968.

SN 293,439. Optical Scanning Corporation, Newton, Pa. Filed Mar. 18, 1968.

OPSCAN

Owner of Reg. No. 829,752.

For Data Processing Equipment—Namely, Optical Mark and Character Reading Systems (Int. Cl. 9).

First use Feb. 8, 1968.

Class 27 — Horological Instruments

SN 271,635. Semag, Grenchen, Switzerland. Filed May 16, 1967.

SEMAG

Owner of Swiss Reg. No. 171,030, dated June 25, 1958.

For Watches and Clocks (Int. Cl. 14).

SN 277,642. Endura Time Corporation, New York, N.Y. Filed Aug. 7, 1967.

STRADA

"Strada" is an Italian word meaning "street."

For Clocks and Watches; Movements and Other Parts Thereof (Int. Cl. 14).

First use on or about Mar. 1, 1967.

SN 283,185. Baumgartner Frères S.A., Grenchen, Solothurn, Switzerland. Filed Sept. 25, 1967.

866

Priority claimed under Sec. 44(d) on Swiss Reg. No. 224,266, dated Apr. 12, 1967.

For Watches and Watch Movements and Parts Thereof (Int. Cl. 14).

SN 287,653. Jenny & Cie S.A. Fabrique d'Horlogerie, Lengnau Près Bienne, Lengnau, Switzerland. Filed Dec. 27, 1967.

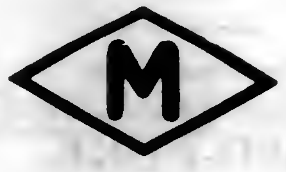
CABIRIAN

Priority claimed under Sec. 44(d) on Swiss Reg. No. 225,876, dated July 5, 1967.

For Watches and Parts of Watches (Int. Cl. 14).

Class 28 — Jewelry and Precious-Metal Ware

SN 283,450. Mastagem Jewelry Co., New York, N.Y. Filed Oct. 26, 1967.



For Earrings (Int. Cl. 14).

First use September 1967.

Class 29 — Brooms, Brushes, and Dusters

SN 288,098. International Playtex Corporation, Dover, Del. Filed Jan. 4, 1968.

NATURALIZED

For Toothbrushes and Hair Brushes (Int. Cl. 21).

First use Dec. 20, 1967.

Class 31 — Filters and Refrigerators

SN 272,410. Sequestrator Products Corporation, Wrightsville, Pa. Filed May 25, 1967.

SEQUESTRATOR

For Water Conditioning Equipment for Residential, Institutional and Industrial Applications (Int. Cl. 11).

First use August 1958.

SN 279,282. Dean Products, Inc., Brooklyn, N.Y. Filed Aug. 29, 1967.

TYDEAN

Owner of Reg. No. 553,674.

For Cooling Plates, Emersion Coolers, Cooling Cabinets, Cooling Shrouds, Cooling Drums, Refrigerated Filter Presses, Refrigerated Dip Pans, Utensils for Cooling and Refrigerating Food, Chemicals, Gases and Liquids, Cooling Platens, Refrigerated Counter Tops, Coolers for Sterilizing Laboratory Equipment (Int. Cl. 11).

First use Apr. 14, 1967.

SN 279,612. Barnard Enterprises, Inc., Ontario, Calif. Filed Sept. 5, 1967.

BI-FLO

For Engine Coolant Filter (Int. Cl. 12).

First use March 1966.

Class 32 — Furniture and Upholstery

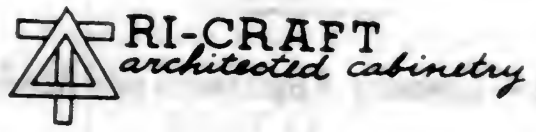
SN 267,525. Hickory Springs Manufacturing Company of Arkansas, Inc., Fort Smith, Ark. Filed Mar. 24, 1967.

RUBBERTHANE

For Foamed Polyurethane With Latex Added Sold Shaped and Pre-Cut to Size for Use in Upholstering and Mattresses (Inc. Cl. 17).

First use Feb. 10, 1967.

SN 271,008. Atlantic Alloy Industries, Inc., Union, N.J. Filed May 8, 1967.



Applicant disclaims the term "Architected Cabinetry" apart from the mark as shown.

For Cabinets for Hospitals and Other Institutions (Int. Cl. 20).

First use Dec. 1, 1966.

SN 274,263. Thomas Industries Inc., Louisville, Ky. Filed June 19, 1967.

THOMAS

Owner of Reg. No. 839,485.

For Bathroom or Medicine Cabinets of Metal and/or Wood (Int. Cl. 20).

First use on or before June 9, 1966.

SN 275,150. Levittmark Incorporated, Lake Success, N.Y. Filed June 30, 1967.

LEVITTMARK

For Living Room, Dining Room, Bedroom, Kitchen, and Porch Furniture; Mattresses and Box Springs (Int. Cl. 20).

First use Aug. 31, 1966.

SN 281,334. Vistron Corporation, Cleveland, Ohio. Filed Sept. 27, 1967.

LOMA

For Hand and Table Mirrors, Infant Training Chairs, and Infant Toilet Seats (Int. Cl. 20).

First use prior to Jan. 1, 1948.

SN 282,051. Business Efficiency Aids, Inc., Skokie, Ill. Filed Oct. 9, 1967.

MICRO/FINDER

For Filing Trays (Int. Cl. 16).

First use Aug. 11, 1967.

SN 292,136. C. E. Robinson Company, Joliet, Ill. Filed Feb. 28, 1968.

CERCO

For Steel Storage Racks (Int. Cl. 20).

First use in or at least by 1952.

Class 34 — Heating, Lighting, and Ventilating Apparatus

SN 258,069. Clear Air Waste Reduction, Inc., Stone Park, Ill. Filed Nov. 7, 1966.

CLEAR-AIR

For Incinerators for Industrial, Commercial, and Municipal Use, Parts and Controls Therefor (Int. Cl. 11).

First use Oct. 19, 1966.

SN 278,327. Union Carbide Corporation, New York, N.Y. Filed Aug. 15, 1967.

UCAR

Owner of Reg. No. 802,115.

For Hardfacing Electrodes (Int. Cl. 9).

First use on or about June 2, 1967.

SN 279,286. Dean Products, Inc., Brooklyn, N.Y. Filed Aug. 29, 1967.

TYDEAN

Owner of Reg. No. 553,674.

For Heating Platens and Plates, Emersion Heaters, Heating Ovens, Heat Exchangers, Melting Tanks, Drum Warmers, Heat Treating Furnaces, Heating Tanks, Heated Filter Presses, Heated Dip Pans, Utensils for Heating Food, Chemicals, Gases and Liquids, Heated Countertops and Heaters for Sterilizing Laboratory Equipment (Int. Cl. 11).

First use Apr. 14, 1967.

SN 280,659. Western Engineering & Mfg. Co., Venice, Calif. Filed Sept. 18, 1967.

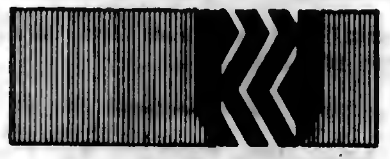
HUSTLER

For Propeller Blades for Axial Flow Ventilators (Int. Cl. 11).

First use Aug. 25, 1967.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 273,217. Uniroyal, Inc., New York, N.Y. Filed June 6, 1967.



The drawing is lined for the color red. Owner of Reg. No. 785,612.

For Tires; Tubes; Tire Repair Material, for Example, Components Such as Tread Rubber, Patches, and the Like (Int. Cl. 12).

First use April 1967.

SN 284,802. C. E. Conover & Co., Inc., Fairfield, N.J. Filed Nov. 14, 1967.

CON-O-VERSAL

For Plastic Seals, Specifically Seals Made of Polytetrafluoroethylene (Int. Cl. 17).

First use May 1967.

SN 284,804. C. E. Conover & Co., Inc., Fairfield, N.J. Filed Nov. 14, 1967.

REV-O-SLIDE

For Combination Seals, Primarily for Dynamic Sealing of Cylinder Bores and Piston Rods, With an Elastomeric O-Ring Squeezed Behind a Second Elastomeric Ring of Non-Circular Cross Section and With Generally Parallel Sealing Faces on Its Opposite Sides (Int. Cl. 17).

First use March 1965.

SN 284,805. C. E. Conover & Co., Inc., Fairfield, N.J. Filed Nov. 14, 1967.

REV-O-CAP

For Combination Seals, Primarily for Dynamic Sealing of Cylinder Bores and Piston Rods, With an Elastomeric O-Ring Squeezed Behind a Second Elastomeric Ring of Non-Circular Cross Section and Having a Concave Contact Surface Bearing Against a Substantial Arc of the Circumference of the Cross Section of the O-Ring (Int. Cl. 17).

First use March 1965.

SN 284,806. C. E. Conover & Co., Inc., Fairfield, N.J. Filed Nov. 14, 1967.

CON-O-SCRAPE

For Reciprocating Seals With Scraper Rings for Preventing Dirt and Other Foreign Matter From Being Carried Between the Contacting Sealing Surfaces (Int. Cl. 17).

First use May 1967.

SN 284,921. Kelly-Springfield Tire Company, Cumberland, Md. Filed Nov. 15, 1967.

Duke

Owner of Reg. No. 549,572.
For Tires and Inner Tubes (Int. Cl. 12).
First use Sept. 11, 1962.

SN 285,229. The Hercules Tire & Rubber Company, Findlay, Ohio. Filed Nov. 20, 1967.

PANTHER

For Pneumatic Tires and Tubes (Int. Cl. 12).
First use Dec. 15, 1966.

SN 285,769. Sealol, Inc., Warwick, R.I. Filed Nov. 28, 1967.

MINI-MAZE

For Fluid Seals (Int. Cl. 17).
First use Oct. 16, 1967.

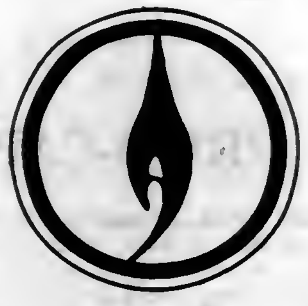
Class 36 — Musical Instruments and Supplies

SN 243,165. Perfect Photo, Inc., Philadelphia, Pa. Filed Apr. 11, 1966.

cameron

For Magnetic Recording Tape (Int. Cl. 9).
First use Oct. 15, 1965.

SN 282,876. Autometronics, Inc., Selden, N.Y. Filed Oct. 19, 1967.



For Cases for Holding Magnetic Tape Cartridges (Int. Cl. 9).
First use Aug. 24, 1967.

SN 283,429. C. G. Conn Ltd., Elkhart, Ind. Filed Oct. 26, 1967.

CONTINENTAL

For Pianos (Int. Cl. 15).
First use Aug. 23, 1967.

SN 283,452. National Gramophon Works Corporation, Mount Kisco, N.Y. Filed Oct. 26, 1967.

SUPRAPHON

For Phonograph Records and Albums (Int. Cl. 9).
First use Oct. 20, 1967.

SN 283,475. United Artists Records, Inc., New York, N.Y. Filed Oct. 26, 1967.

For Phonograph Records (Int. Cl. 9).
First use Oct. 17, 1966.

Class 37 — Paper and Stationery

SN 265,501. The Eagle-Picher Company, d.b.a. Fabricon Products Division, River Rouge, Mich. Filed Feb. 27, 1967.

Fabricon ... [illegible]!!

The mark is lined for the colors yellow, red, and blue, but color is not an essential feature of the mark. Owner of Reg. No. 825,943.
For Plastic Sheets Intended Primarily for Use in Forming Packages and Bags (Int. Cl. 17).
First use on or about Feb. 1, 1967.

SN 267,616. Dalomark Corporation, Englewood, N.J. Filed Mar. 27, 1967.

CAMEO

For Filled Collapsible Tube Ball Point Ink Dispensing Devices (Int. Cl. 16).
First use Mar. 14, 1967.

SN 279,075. International Paper Company, New York, N.Y. Filed Aug. 25, 1967.

SARATOGA TABLET

The word "Tablet" is disclaimed apart from the mark as shown.
For Writing and Printing Paper (Int. Cl. 16).
First use January 1940.

SN 281,667. American Sugar Company, New York, N.Y. Filed Oct. 3, 1967.

DOMINO

For Paper Placemats (Int. Cl. 21).
First use May 24, 1967.

SN 282,792. Eberhard Faber Inc., Wilkes-Barre, Pa. Filed Oct. 18, 1967.

SINGLEX

For Erasers (Int. Cl. 16).
First use Oct. 23, 1947.

SN 283,278. Quality Park Envelope Company, St. Paul, Minn. Filed Oct. 24, 1967.

PARKRAFT

For Envelopes (Int. Cl. 16).
First use Oct. 1, 1955.

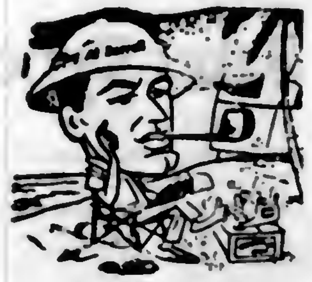
SN 287,967. Target Stores, Inc., Minneapolis, Minn. Filed Jan. 2, 1968.

TARGET

For Household Plastic Wrap (Int. Cl. 17).
First use March 1967.

Class 38 — Prints and Publications

SN 251,701. Alfred Augustus Burrell, d.b.a. Al Burrell, Bremerton, Wash. Filed Aug. 4, 1966.



For Manuscripts and Magazine Features (Int. Cl. 16).
First use May 10, 1956.

SN 261,881. Service Publications, Inc., New York, N.Y. Filed Jan. 3, 1967.

AH

For Periodical Magazine Devoted to Matters Concerning Hairdressing (Int. Cl. 16).
First use on or about 1877.

SN 261,882. Service Publications, Inc., New York, N.Y. Filed Jan. 3, 1967.

AMERICAN HAIRDRESSER

For Periodical Magazine Devoted to Matters Concerning Hairdressing (Int. Cl. 16).
First use on or about 1877.

SN 263,345. Ball Brothers Company Incorporated, Muncie, Ind. Filed Jan. 26, 1967.

BALL

For Publications—Namely, Product and Information Books, Booklets, Brochures, Pamphlets, Leaflets, Bulletins, and Advertising Releases, Instruction Books and Manuals, Technical Reports and Proposals, Newsletters, and Company News Releases, and the Like (Int. Cl. 16).
First use at least as early as Dec. 31, 1915.

SN 268,115. Wills & Hepworth Limited, Loughborough, England. Filed Mar. 1, 1967.

LADYBIRD

Owner of British Reg. Nos. 370,827 and 635,653, dated Dec. 29, 1915, and Mar. 10, 1945, respectively.
For Books (Int. Cl. 16).

SN 268,805. Visual Graphics Corporation, New York, N.Y. Filed Apr. 10, 1967.

Friz Quadrata

For Sheets of Letters and Other Characters for Use in Photo-Printing and Photographic Reproduction (Int. Cl. 16).
First use May 17, 1966.

SN 268,806. Visual Graphics Corporation, New York, N.Y. Filed Apr. 10, 1967.

Andrich Minerva Italic

The term "Italic" is disclaimed apart from the mark.
For Sheets of Letters and Other Characters for Use in Photo-Printing and Photographic Reproduction (Int. Cl. 16).
First use Jan. 18, 1965.

SN 268,807. Visual Graphics Corporation, New York, N.Y. Filed Apr. 10, 1967.

Arrow

For Sheets of Letters and Other Characters for Use in Photo-Printing and Photographic Reproduction (Int. Cl. 16).
First use May 17, 1966.

SN 268,808. Visual Graphics Corporation, New York, N.Y. Filed Apr. 10, 1967.

GIORGIO

For Sheets of Letters and Other Characters for Use in Photo-Printing and Photographic Reproduction (Int. Cl. 16).
First use May 11, 1966.

SN 268,809. Visual Graphics Corporation, New York, N.Y. Filed Apr. 10, 1967.

Jana

For Sheets of Letters and Other Characters for Use in Photo-Printing and Photographic Reproduction (Int. Cl. 16).
First use Feb. 1, 1965.

SN 268,810. Visual Graphics Corporation, New York, N.Y. Filed Apr. 10, 1967.

Jay Gothic Bold

The term "Gothic Bold" is disclaimed apart from the mark.
For Sheets of Letters and Other Characters for Use in Photo-Printing and Photographic Reproduction (Int. Cl. 16).
First use Feb. 1, 1965.

SN 268,811. Visual Graphics Corporation, New York, N.Y. Filed Apr. 10, 1967.

LINCOLN GOTHIC

The term "Gothic" is disclaimed apart from the mark.
For Sheets of Letters and Other Characters for Use in Photo-Printing and Photographic Reproduction (Int. Cl. 16).
First use Jan. 28, 1965.

SN 268,812. Visual Graphics Corporation, New York, N.Y. Filed Apr. 10, 1967.

Neilison Casual Script

The term "Script" is disclaimed apart from the mark.

For Sheets of Letters and Other Characters for Use in Photo-Printing and Photographic Reproduction (Int. Cl. 16).

First use Dec. 15, 1964.

SN 268,815. Visual Graphics Corporation, New York, N.Y. Filed Apr. 10, 1967.

York

For Sheets of Letters and Other Characters for Use in Photo-Printing and Photographic Reproduction (Int. Cl. 16).

First use May 10, 1966.

SN 268,816. Visual Graphics Corporation, New York, N.Y. Filed Apr. 10, 1967.

Wolf Antiqua

The term "Antiqua" is disclaimed apart from the mark.

For Sheets of Letters and Other Characters for Use in Photo-Printing and Photographic Reproduction (Int. Cl. 16).

First use May 27, 1966.

SN 268,817. Visual Graphics Corporation, New York, N.Y. Filed Apr. 10, 1967.

Emphasis

For Sheets of Letters and Other Characters for Use in Photo-Printing and Photographic Reproduction (Int. Cl. 16).

First use Jan. 11, 1965.

SN 268,818. Visual Graphics Corporation, New York, N.Y. Filed Apr. 10, 1967.

Egyptian 505

The term "Egyptian" is disclaimed apart from the mark.

For Sheets of Letters and Other Characters for Use in Photo-Printing and Photographic Reproduction (Int. Cl. 16).

First use May 19, 1966.

SN 268,819. Visual Graphics Corporation, New York, N.Y. Filed Apr. 10, 1967.

Domning Antiqua

The term "Antiqua" is disclaimed apart from the mark.

For Sheets of Letters and Other Characters for Use in Photo-Printing and Photographic Reproduction (Int. Cl. 16).

First use May 21, 1966.

SN 268,821. Visual Graphics Corporation, New York, N.Y. Filed Apr. 10, 1967.

DAVIDA BOLD

The term "Bold" is disclaimed apart from the mark.

For Sheets of Letters and Other Characters for Use in Photo-Printing and Photographic Reproduction (Int. Cl. 16).

First use Feb. 1, 1965.

SN 268,822. Visual Graphics Corporation, New York, N.Y. Filed Apr. 10, 1967.

Basilea

For Sheets of Letters and Other Characters for Use in Photo-Printing and Photographic Reproduction (Int. Cl. 16).

First use Feb. 1, 1965.

SN 268,823. Visual Graphics Corporation, New York, N.Y. Filed Apr. 10, 1967.

Baker Signet

The term "Signet" is disclaimed apart from the mark.

For Sheets of Letters and Other Characters for Use in Photo-Printing and Photographic Reproduction (Int. Cl. 16).

First use Feb. 1, 1965.

SN 268,824. Visual Graphics Corporation, New York, N.Y. Filed Apr. 10, 1967.

VISA

For Sheets of Letters and Other Characters for Use in Photo-Printing and Photographic Reproduction (Int. Cl. 16).

First use May 11, 1966.

SN 268,825. Visual Graphics Corporation, New York, N.Y. Filed Apr. 10, 1967.

Jay Gothic

The term "Gothic" is disclaimed apart from the mark.

For Sheets of Letters and Other Characters for Use in Photo-Printing and Photographic Reproduction (Int. Cl. 16).

First use May 4, 1966.

SN 268,826. Visual Graphics Corporation, New York, N.Y. Filed Apr. 10, 1967.

Stettler

For Sheets of Letters and Other Characters for Use in Photo-Printing and Photographic Reproduction (Int. Cl. 16).

First use Jan. 28, 1965.

SN 268,827. Visual Graphics Corporation, New York, N.Y. Filed Apr. 10, 1967.

Solitaire

For Sheets of Letters and Other Characters for Use in Photo-Printing and Photographic Reproduction (Int. Cl. 16).

First use Jan. 29, 1965.

SN 268,828. Visual Graphics Corporation, New York, N.Y. Filed Apr. 10, 1967.

Arnholm Sans Medium

The term "Sans Medium" is disclaimed apart from the mark.

For Sheets of Letters and Other Characters for Use in Photo-Printing and Photographic Reproduction (Int. Cl. 16).

First use Feb. 25, 1965.

SN 268,829. Visual Graphics Corporation, New York, N.Y. Filed Apr. 10, 1967.

Exempla

For Sheets of Letters and Other Characters for Use in Photo-Printing and Photographic Reproduction (Int. Cl. 16).

First use Feb. 21, 1966.

SN 268,830. Visual Graphics Corporation, New York, N.Y. Filed Apr. 10, 1967.

Neil Bold

The term "Bold" is disclaimed apart from the mark.

For Sheets of Letters and Other Characters for Use in Photo-Printing and Photographic Reproduction (Int. Cl. 16).

First use May 10, 1966.

SN 268,831. Visual Graphics Corporation, New York, N.Y. Filed Apr. 10, 1967.

Vivaldi

For Sheets of Letters and Other Characters for Use in Photo-Printing and Photographic Reproduction (Int. Cl. 16).

First use May 17, 1966.

SN 268,832. Visual Graphics Corporation, New York, N.Y. Filed Apr. 10, 1967.

Amelia

For Sheets of Letters and Other Characters for Use in Photo-Printing and Photographic Reproduction (Int. Cl. 16).

First use May 24, 1966.

SN 268,833. Visual Graphics Corporation, New York, N.Y. Filed Apr. 10, 1967.

Antikva *Margaret*

The term "Antikva" (Hungarian for old) is disclaimed apart from the mark.

For Sheets of Letters and Other Characters for Use in Photo-Printing and Photographic Reproduction (Int. Cl. 16).

First use May 24, 1966.

SN 268,834. Visual Graphics Corporation, New York, N.Y. Filed Apr. 10, 1967.

Andrich Minerva

For Sheets of Letters and Other Characters for Use in Photo-Printing and Photographic Reproduction (Int. Cl. 16).

First use Jan. 18, 1965.

SN 270,263. North American Philips Company, Inc., New York, N.Y. Filed Apr. 28, 1967.

PRACTIBOOK

For Textbooks Which Constitute Part of a Course in Electricity and Electronics (Int. Cl. 16).

First use Apr. 17, 1967.

SN 270,264. North American Philips Company, Inc., New York, N.Y. Apr. 28, 1967.

PRACTRONICS

For Educational Course Materials Which Constitute a Course in Electricity and Electronics and Comprise Textbooks, a Portable Test Set and Necessary Component Parts To Complete All Required Tests (Int. Cl. 16).

First use Apr. 17, 1967.

SN 270,265. North American Philips Company, Inc., New York, N.Y. Apr. 28, 1967.

NORELCO

Owner of Reg. Nos. 595,576, 599,360, and others.

For Educational Course Materials Which Constitute a Course in Electricity and Electronics and Comprise Textbooks, a Portable Test Set and Necessary Component Parts To Complete All Required Tests (Int. Cl. 16).

First use Apr. 17, 1967.

SN 271,503. McGraw-Hill, Inc., New York, N.Y. Filed May 15, 1967.

LITTLE THEATER SERIES

No registration rights are claimed to the word "Series" apart from the mark as shown.

For Printed Scripts for Plays for Familiarizing Young Students of Drama With the Characteristics of the Legitimate Theater and Sold in Cardboard Covers Designed Like Books Which Can Be Folded Into Representations Like Small Theaters (Int. Cl. 16).

First use Apr. 21, 1967.

SN 273,094. F. J. McGettigan, Wynnewood, Pa. Filed June 5, 1967.

DIAL-A-FISH

For Rotatable Chart Containing Information Relative to Fishing (Int. Cl. 16).

First use May 26, 1967.

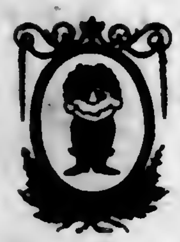
SN 275,143. Insurance Publishing House, Inc., Dallas, Tex. Filed June 30, 1967.

RAPID-
-RATER

For Printed Charts for Computing Insurance Premiums (Int. Cl. 16).

First use July 15, 1966.

SN 275,393. The C. M. Paula Company, Cincinnati, Ohio. Filed July 5, 1967.



For Greeting Cards, and Printed Signs (Int. Cl. 16).
First use May 12, 1966.

SN 275,408. Sheldon R. Songstad, d.b.a. Knight of the Month Club, Sioux Falls, S. Dak. Filed June 30, 1967.

KNIGHT GUIDE

Applicant disclaims use of the word "Guide" except in association with the mark as shown.
For Directory and Guide Published Monthly (Int. Cl. 16).
First use Mar. 1, 1967.

SN 276,685. Pioneer Girls, Wheaton, Ill. Filed July 24, 1967.

PIONEER GIRLS PERSPECTIVE

For Magazine Published Quarterly (Int. Cl. 16).
First use June 9, 1967.

SN 276,956. Silver State Merchandisers, Inc., Las Vegas, Nev. Filed July 27, 1967.

NIFTY NICKEL

For Weekly Newspaper With Primary Emphasis on Want Ad Advertising (Int. Cl. 16).
First use January 1964.

SN 277,261. Chilton Company, Philadelphia, Pa. Filed Aug. 1, 1967.

For Periodical Publication in the Nature of a Business or Trade Magazine (Int. Cl. 16).
First use Jan. 15, 1962.

SN 278,627. National Association of Evangelicals, Wheaton, Ill. Filed Aug. 8, 1967.

PROFILE

For Religious Publication is the Nature of a News Sheet Furnishing Information About Applicant Organization, Its Representatives, and Officers (Int. Cl. 16).
First use May 1, 1967.

SN 283,063. The Hollywood Reporter Corporation, Los Angeles, Calif. Filed Oct. 23, 1967.

For Daily Newspaper Dealing Primarily With the Entertainment Industry (Int. Cl. 16).
First use Sept. 3, 1930.

SN 288,574. Harper & Row, Publishers, Incorporated, New York, N.Y. Filed Jan. 11, 1968.

SCIP

For Computer Programs and Printouts of Data and Related Instructional Information (Int. Cl. 16).
First use Dec. 7, 1967.

SN 290,446. Heritage Journal Press, Inc., Danielson, Conn. Filed Feb. 7, 1968.

HERITAGE JOURNAL

Without waiving any of its common law right, applicant disclaims exclusive right to use the word "Journal" except in the combination shown.
For Periodical Pamphlet Distributed for the Purpose of Publicizing Current Events and Attractions in Eastern Connecticut (Int. Cl. 16).
First use Dec. 1, 1967.

Class 39 — Clothing

SN 263,829. Handcraft Manufacturing Corp., New York, N.Y. Filed Feb. 2, 1967.

Perma-stitch

For Men's and Boys' Handkerchiefs (Int. Cl. 25).
First use Nov. 16, 1966.

SN 269,851. Lansea Knitwear Limited, Montreal, Quebec, Canada, assignee of Robert R. Boronow, Limited, Montreal, Quebec, Canada. Filed Apr. 24, 1967.

LANSEA

Owner of Canadian Reg. No. N.S. 97/25,089, dated May 25, 1946.
For Knitted and/or Woven Clothing—Namely, Sweaters and Hosiery for Men, Women, and Children; Dresses, Suits, Skirts, Jackets, Slacks, and Pants for Women and Girls (Int. Cl. 25).

SN 271,430. Bates Manufacturing Company, Incorporated, Lewiston, Maine. Filed May 15, 1967.

SIR BATES

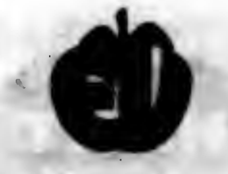
Owner of Reg. Nos. 86,025, 296,006, and others.
For Trousers, Jackets, Knit Shirts, Sweaters, Jump Suits, Socks, and Scarves (Int. Cl. 25).
First use Apr. 21, 1967.

SN 271,728. Roydon Wear, Inc., New York, N.Y. Filed May 17, 1967.

ROY PRESS

The word "Press" is disclaimed apart from the mark as shown. Owner of Reg. No. 679,653.
For Wearing Apparel—Namely, Pants, Shorts, and Shirts (Int. Cl. 25).
First use Apr. 5, 1967.

SN 275,618. Boris Smoler and Sons, Chicago, Ill. Filed July 10, 1967.



Owner of Reg. No. 789,703.
For Ladies' and Misses' Dresses (Int. Cl. 25).
First use June 21, 1967.

SN 278,301. Independent Grocers' Alliance Distributing Co., Chicago, Ill. Filed Aug. 15, 1967.

IGA

For Uniforms—Namely, Aprons, Coats, Shirts, and Caps (Int. Cl. 25).
First use spring of 1952.

SN 279,472. Glamorise Foundations, Inc., New York, N.Y. Filed Aug. 31, 1967.

PRETTY TRIM

For Foundation Garments (Int. Cl. 25).
First use Aug. 11, 1967.

SN 280,383. Barrow Manufacturing Company, Winder, Ga. Filed Sept. 15, 1967.

POLLIWOGS

For Men's and Boys' Slacks, Shorts, and Jeans (Int. Cl. 25).
First use July 17, 1967.

SN 280,425. Kenrose Manufacturing Co., Inc., New York, N.Y. Filed Sept. 15, 1967.

KenRobes

For Women's Wearing Apparel—Namely, Robes, Dusters, and Dresses (Int. Cl. 25).
First use Aug. 1, 1967.

SN 280,617. The Mayer Company, Inc., New York, N.Y. Filed Sept. 18, 1967.

SUTTON EAST

For Hosiery (Int. Cl. 25).
First use on or about Aug. 30, 1967.

SN 280,769. Curlee Clothing Company, St. Louis, Mo. Filed Sept. 20, 1967.

ST. ARCH

For Men's Suits, Topcoats, Sport Coats, and Slacks (Int. Cl. 25).
First use Sept. 1, 1967.

SN 281,177. Cotton Club Frocks, Inc., New York, N.Y. Filed Sept. 26, 1967.

PENNETTE

For Women's Dresses (Int. Cl. 25).
First use May 10, 1963.

SN 281,184. Facelle Company Limited, Toronto, Ontario, Canada. Filed Sept. 26, 1967.

Freshabyes

Owner of U.S. Reg. No. 775,433.
For Disposable Diapers (Int. Cl. 25).
First use on or about Aug. 14, 1967; in commerce on or about Aug. 14, 1967.

SN 281,189. Glenader Corporation, New York, N.Y. Filed Sept. 26, 1967.

COLORMETRICS

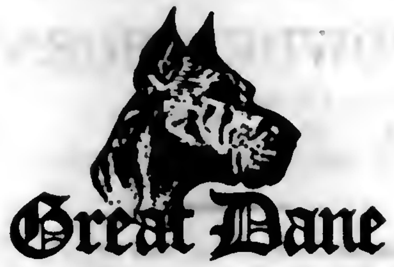
For Ladies', Misses', and Girls' Outerwear—Namely, Scarfs, Shifts, Blouses, Shells, Bandanas, and Tops Consisting of Blousettes, Bandeaux and Halters (Int. Cl. 25).
First use July 18, 1967.

SN 281,806. McGregor-Doniger Inc., New York, N.Y. Filed Oct. 4, 1967.

FORCE 9

For Sweaters (Int. Cl. 25).
First use Sept. 21, 1967.

SN 281,870. Cosmopolitan Manufacturing Company, Boston, Mass. Filed Oct. 5, 1967.



For Coats (Int. Cl. 25).
First use 1929.

SN 281,878. Exquisite Form Industries, Inc., New York, N.Y. Filed Oct. 5, 1967.

MAGIC MISS

Owner of Reg. No. 701,895.
For Brassieres and Corsets (Int. Cl. 25).
First use Sept. 15, 1967.

SN 282,066. Elvetta Products Co. Inc., New York, N.Y. Filed Oct. 9, 1967.

Nattinet

Owner of Reg. No. 433,366.
For Hair Nets, Water Wave Nets, and Hair Snoods (Int. Cl. 26).
First use Nov. 27, 1945.

SN 282,099. R. C. King Company, Incorporated, Seattle, Wash. Filed Oct. 9, 1967.

SKI KING

For Ski Clothing Including Ski Jackets, Pants, Caps, Sweaters, Turtle Neck Shirts, and Socks (Int. Cl. 25).
First use July 15, 1966.

SN 282,100. R. C. King Company, Incorporated, Seattle, Wash. Filed Oct. 9, 1967.

SKI QUEEN

For Ski Clothing Including Ski Jackets, Pants, Caps, Sweaters, Turtle Neck Shirts, and Socks (Int. Cl. 25).
First use Sept. 22, 1967.

SN 282,190. Howard Stores Corporation, Brooklyn, N.Y. Filed Oct. 10, 1967.

Miss Forewyn

For Women's and Young Women's Dresses, Coats, Raincoats, Car Coats, Robes; Sportswear—Namely, Sweaters, Skirts, Slacks, Blouses, Pant Tops, Swimwear, and Shorts; and Lingerie (Int. Cl. 25).
First use December 1943.

SN 282,301. Irving M. Schuyler, New York, N.Y. Filed Oct. 11, 1967.

JORJI

For Ladies' Slips, Petticoats, Brassieres, and Hostess Lounging Robes, Pajamas and Peignoirs (Int. Cl. 25).
First use May 1, 1967.

SN 282,318. Blue Bell, Inc., Greensboro, N.C. Filed Oct. 12, 1967.

POWDER HORN

Owner of Reg. No. 677,762.
For Boots (Int. Cl. 25).
First use Oct. 4, 1967.

SN 282,984. Colfax Industries, Clifton, N.J. Filed Oct. 20, 1967.

LEONARDO STRASSI

"Leonardo Strassi" is a fictitious name and does not identify a particular individual. Owner of Reg. No. 755,574.
For Men's Jackets and Slacks (Int. Cl. 25).
First use Sept. 1, 1964.

SN 283,220. Cannon Mills Company, Kannapolis, N.C. Filed Oct. 24, 1967.

Little Secrets

For Hosiery (Int. Cl. 25).
First use Oct. 9, 1967.

SN 283,560. Phillips-Van Heusen Corporation, New York, N.Y. Filed Oct. 27, 1967.

417

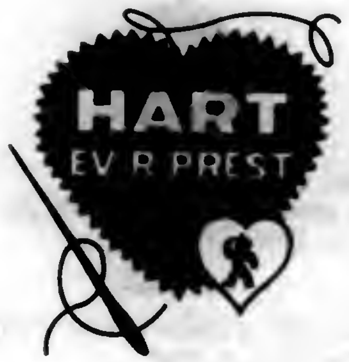
For Men's and Boys' Shirts, Cuffs, Collars, Pajamas, Sports Shirts, Underwear, Knit Shirts, Slacks, and Sweaters (Int. Cl. 25).
First use July 1, 1959.

SN 283,981. Cape Ann Manufacturing Co., Gloucester, Mass. Filed Nov. 2, 1967.

PORT COAT

The word "Coat" is disclaimed apart from the mark as shown.
For Outer Coats (Int. Cl. 25).
First use on or about Aug. 1, 1967.

SN 286,427. C. Hart Manufacturing Company, Columbus, Ohio. Filed Dec. 7, 1967.



The word "Ev-R-Prest" is disclaimed apart from the mark as shown. Owner of Reg. Nos. 592,215, 592,216, and 644,762.
For Uniforms for Persons in Government Agencies, Including Police and Firemen's Uniforms, and Men's and Women's Industrial Uniforms (Int. Cl. 25).
First use Apr. 25, 1967.

SN 287,016. House of Worsted-Tex, Inc., Philadelphia, Pa. Filed Dec. 15, 1967.

TROPI-TEX VIBRA

Owner of Reg. Nos. 301,422, 561,863, and others.
For Men's and Young Men's Suits (Int. Cl. 25).
First use on or about Aug. 1, 1967.

SN 287,195. Wolverine World Wide, Inc., Rockford, Mich. Filed Dec. 18, 1967.

HEADSTRONG

For Protective Headwear (Int. Cl. 25).
First use on or about Dec. 1, 1967.

SN 287,212. Riko Enterprises, Inc., Philadelphia, Pa. Filed Dec. 19, 1967.

The drawing is lined for red and blue. The word "Philadelphia" is disclaimed apart from the mark as shown.
For Men's and Boys' Basketball Shoes (Int. Cl. 25).
First use Nov. 6, 1967.

SN 287,560. William B. Kessler, Inc., Hammonton, N.J. Filed Dec. 26, 1967.

ONE MAN SHOW

For Men's Clothing—Namely, Suits, Jackets, Topcoats, Trousers, and Sportcoats (Int. Cl. 25).
First use Nov. 16, 1967.

SN 288,479. Robert Miles Sherman, d.b.a. De Martel, Dressmaker, New York, N.Y. Filed Jan. 10, 1968.

ZIN-ZIN

Owner of Reg. Nos. 820,459 and 820,896.
For Women's Blouses, Sweaters, Dresses, Slacks, Shirts, Jackets, and Shorts (Int. Cl. 25).
First use Dec. 12, 1967.

SN 288,480. Robert Miles Sherman, d.b.a. De Martel, Dressmaker, New York, N.Y. Filed Jan. 10, 1968.

ZAZZETTE

For Women's Blouses, Sweaters, Dresses, Slacks, Shirts, Jackets, and Shorts (Int. Cl. 25).
First use Dec. 11, 1967.

SN 288,734. Arthur Winer, Incorporated, Gary, Ind. Filed Jan. 12, 1968.

SILHOUETTE SLACKS

The word "Slacks" is disclaimed apart from the mark as shown.
For Men's Slacks (Int. Cl. 25).
First use on or about Dec. 5, 1967.

SN 288,935. Bo-Peep Manufacturing Company, Inc., New York, N.Y. Filed Jan. 16, 1968.

EXHIBIT A

For Boys' and Girls' Sportswear—Namely, Slacks, Shirts, Pants, and Shorts (Int. Cl. 25).
First use Dec. 22, 1967.

SN 290,016. Puritan Fashions Corporation, New York, N.Y. Filed Jan. 31, 1968.

SWINGAWAY

For Women's Wear—Namely, Dresses and Dress Ensembles (Int. Cl. 25).
First use Jan. 8, 1968.

SN 290,017. Puritan Fashions Corporation, New York, N.Y. Filed Jan. 31, 1968.

JUDY GIBBS

"Judy Gibbs" is a fanciful name.
For Women's Wear—Namely, Dresses and Dress Ensembles (Int. Cl. 25).
First use July 20, 1962.

SN 290,985. Top Form-Yolande, Inc., New York, N.Y. Filed Feb. 13, 1968.

TRAVEL KING

For Men's Pajamas (Int. Cl. 25).
First use Jan. 25, 1968.

SN 291,150. Glen Oaks Sales Co., Inc., New York, N.Y. Filed Feb. 15, 1968.

MR. BROOMSTICKS

Owner of Reg. No. 813,037.
For Men's Slacks (Int. Cl. 25).
First use July 15, 1964; Jan. 15, 1964, as to "Broomsticks."

SN 291,670. Kops Bros., Inc., New York, N.Y. Filed Feb. 23, 1968.
For Women's Foundation Garments (Int. Cl. 25).

JOY FOREVER

First use November 1967.

SN 294,347. Blue Bell, Inc., Greensboro, N.C. Filed Mar. 28, 1968.

BOY PROOF

For Boys' Slacks (Int. Cl. 25).
First use Mar. 26, 1968.

SN 294,997. Helsberg's Diamond Shops, Inc., Kansas City, Mo. Filed Apr. 5, 1968.

For Sportswear—Namely, Ladies' Blouses, and Men's Jackets and Sweatshirts (Int. Cl. 25).
First use Mar. 20, 1968.

Class 40—Fancy Goods, Furnishings, and Notions

SN 279,016. Union Novelty Co., Inc., New York, N.Y. Filed Aug. 9, 1967.

"LIFE SPANGLES"

The word "Spangles" is disclaimed apart from the mark as shown.
For Spangles and Sequins (Int. Cl. 26).
First use Aug. 2, 1967.

SN 279,159. Alexandra Wigs Corp., Miami, Fla. Filed Aug. 28, 1967.

Applicant disclaims the word "Wigs" apart from the mark as shown.
For Wigs and Wiglets (Int. Cl. 26).
First use Dec. 13, 1966.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 261,921. Coin Sales Corporation, New York, N.Y. Filed Jan. 4, 1967.

Owner of Reg. Nos. 771,953 and 821,690.
For Fabric Piece Goods Used in Making Insulated Clothing, Including Car Coats, Children's Snow Suits, and Ski Wear (Int. Cl. 24).
First use at least by February 1966.

SN 268,860. Bates Manufacturing Company, Incorporated, Lewiston, Maine. Filed Apr. 11, 1967.

SUPER DISCIPLINED

Owner of Reg. No. 605,225.
For Bedspreads (Int. Cl. 24).
First use Apr. 6, 1960.

SN 275,275. Kimberly-Clark Corporation, Neenah, Wis. Filed July 3, 1967.

LAURENTIAN

For Book Cover Fabric (Int. Cl. 16).
First use Aug. 10, 1961.

SN 284,724. Pellon Corporation, New York, N.Y. Filed Nov. 13, 1967.

BONDAFLEX

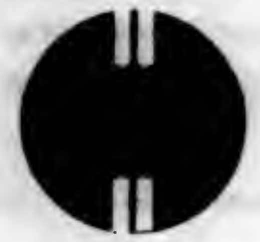
For Woven and Non-Woven Textile Fabrics in the Piece Provided With a Heat-Fusible Adhesive Coating (Int. Cl. 24).
First use May 5, 1967.

SN 285,456. Pearce Woolen Mills, Woolrich, Pa. Filed Nov. 22, 1967.

PEARCE CAPRI

Owner of Reg. Nos. 517,973 and 570,872.
For Woolen Blankets (Int. Cl. 24).
First use Sept. 4, 1962.

SN 285,556. Knoll Associates, Inc., New York, N.Y. Filed Nov. 24, 1967.



Owner of Reg. Nos. 557,746, 805,953, and others.
For Curtain and Upholstery Fabrics of Cotton, Wool, Silk, Synthetic Fibers and Plastic Yarn, and Carpeting (Int. Cl. 24).
First use on or about Oct. 16, 1967.

SN 292,061. Thompson of California, Inc., Hermosa Beach, Calif. Filed Feb. 28, 1968.

CUPRASHAN

For Piece Goods for Making Into Wearing Apparel of All Kinds, Draperies, Tablecloths, and the Like (Int. Cl. 24).
First use Mar. 8, 1966.

Class 43 — Thread and Yarn

SN 280,012. British Celanese Limited, London, England. Filed Sept. 11, 1967.

TRICELON

Owner of British Reg. No. 891,407, dated Mar. 2, 1966; and U.S. Reg. Nos. 640,423 and 640,840.
For Yarns (Int. Cl. 23).

SN 285,834. Kirkpatrick Brothers Limited, Manchester, England. Filed Nov. 21, 1967.

LINRON

Owner of British Reg. No. 899,308, dated Sept. 12, 1966.
For Yarns of Linen and Yarns Made From Blends of Natural and Man-Made Textile Fibres (Int. Cl. 23).

Class 44 — Dental, Medical, and Surgical Appliances

SN 220,593. United States Catheter & Instrument Corporation (Delaware corporation), Glens Falls, N.Y., assignee of United States Catheter & Instrument Corporation (New York corporation), Glens Falls, N.Y. Filed June 7, 1965.

LEVY

For Electrode Catheters (Int. Cl. 10).
First use March 1960.

SN 266,021. Dynamic Classics, Ltd., New York, N.Y. Filed Mar. 6, 1967.

DENTAL HYDRO BRUSH

Applicant disclaims any exclusive rights to the words "Dental" and "Brush" apart from the mark as shown.
For Water Powered Dental Cleaning Device (Int. Cl. 21).
First use Jan. 13, 1967.

SN 284,733. Ritter Pfaudler Corporation, Rochester, N.Y. Filed Nov. 13, 1967.

SANI-CUP

For Hand Held Water-Flush Cup Cuspidor Used as a Dental Operation Accessory (Int. Cl. 10).
First use Oct. 25, 1967.

SN 285,835. J. A. Henckels Zwillingswerk AG, Solingen, Germany. Filed Nov. 29, 1967.

FRIODUR

Owner of German Reg. No. 673,266, dated Mar. 10, 1952; and U.S. Reg. No. 627,712.
For Devices for Body and Beauty Care—Namely, Nail Files, Nail Scissors, Nail Nippers, Nail Pliers, Cuticle Scissors, Tweezers, Nail Cleaners, Nail Scrapers, and Corn Knives (Int. Cl. 8).

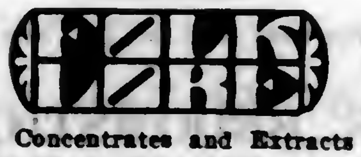
SN 293,000. Ethicon, Inc., Somerville, N.J. Filed Mar. 12, 1968.

ETHISTRIP

For Surgical Closures (Int. Cl. 10).
First use Jan. 18, 1968.

Class 45 — Soft Drinks and Carbonated Waters

SN 280,788. J. F. Laxier Manufacturing Co., St. Louis, Mo. Filed Sept. 20, 1967.



For Flavoring Concentrates and Extracts and Flavoring Syrups Adapted for Use in Making Soft Drink Beverages (Int. Cl. 32).
First use Mar. 1, 1924.

SN 280,866. The Frostie Company, Camden, N.J. Filed Sept. 21, 1967.

THE HAPPIEST TASTE IN TOWN

For Soft Drinks (Int. Cl. 32).
First use at least as early as Apr. 20, 1965.

SN 289,942. The Coca-Cola Company, Atlanta, Ga. Filed Jan. 31, 1968.

Simba

For Soft Drink Syrup and Beverage Made Therefrom (Int. Cl. 32).
First use Jan. 28, 1968.

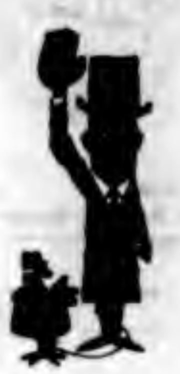
Class 46 — Foods and Ingredients of Foods

SN 230,691. The Pillsbury Company, Minneapolis, Minn. Filed Oct. 20, 1965.

EXTRA LIGHTS

For Pancake Mix (Int. Cl. 30).
First use Sept. 14, 1965.

SN 240,229. Deacon Jones, Inc., Portland, Oreg. Filed Feb. 28, 1966.



The drawing is lined for orange and gray, but no claim is made to color.
For Chicken Breading Mixes, Biscuit Mixes, and Batters for Fish and Chicken (Int. Cl. 30).
First use Dec. 14, 1961.

SN 250,667. Kadison Laboratories, Inc., Chicago, Ill. Filed July 20, 1966.

SAUCE EASY

The word "Sauce" is disclaimed apart from the mark as shown.
For All Purpose Sauce Base Derived Principally From Cereal Flour and Hydrogenated Vegetable Oil (Int. Cl. 30).
First use Mar. 16, 1966.

SN 251,909. Frutas Refrigeradas, S.A., Zamora, Michoacan, Mexico. Filed Aug. 8, 1966.

For Frozen Fruits and Vegetables (Int. Cl. 29).
First use Dec. 1, 1965; in commerce Jan. 17, 1966.

SN 257,611. General Mills, Inc., Minneapolis, Minn. Filed Oct. 31, 1966.

CHEWSIES

For Fudge Brownie Mixes, and Noodle Casserole With Culinary Sour Cream Sauce Mix (Int. Cl. 30).
First use Aug. 22, 1966.

SN 264,815. Fisher Foods, Inc., d.b.a. Fisher, Fazio, Costa, Super Markets, Cleveland, Ohio. Filed Feb. 16, 1967.

HERITAGE HOUSE

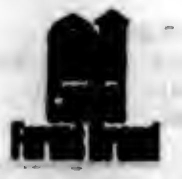
For Frozen Potatoes, Canned Vegetables, Spices, Vinegar, Mustard, Prepared Cake and Biscuit Mixes, Peanut Butter, Potato Chips, Flour, Egg Noodles, Elbow Macaroni, and Spaghetti (Int. Cls. 29 and 30).
First use on or about Jan. 20, 1966.

SN 266,782. Betty T. Pinckney, d.b.a. De Sales Industries, Savannah, Ga. Filed Mar. 15, 1967.

deSales

For Dry Mixture of Seasonings, Dehydrated Vegetables, and Spices for Food Flavoring Purposes (Int. Cl. 30).
First use at least as early as Nov. 24, 1966.

SN 267,751. Hartford Provision Co., Inc., Stamford, Conn. Filed Mar. 28, 1967.

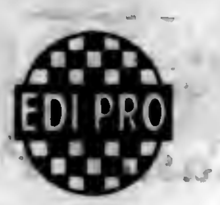


Applicant disclaims the word "Brand" apart from the mark as shown. Owner of Reg. No. 708,142.
For Frozen, Fresh, and Canned Meats, Fresh and Smoked Sausage Products, Smoked Meat Products; Fresh Dressed and Frozen Poultry; Butter; Margarine; Fresh Eggs; Mayonnaise; Mustard; Salad Dressing; Horseradish; Vinegar; Pickles; Pickle Relish; Frozen Vegetables; Frozen Vegetable and Fruit Canned Juices; Frozen Fish and Frozen Shell Fish; Refrigerated Packaged Fresh Potato Salad, Macaroni Salad, Cole Slaw, and Fresh Fruit Salad (Int. Cls. 29, 30, and 32).
First use August 1965.

SN 268,410. Hoffman Bros. Packing Co., Inc., Los Angeles, Calif. Filed Apr. 5, 1967.

Applicant disclaims the words "Brand" and "Coney Island" apart from the mark as shown.
For Refrigerated Frankfurters (Int. Cl. 29).
First use on or about Feb. 8, 1967.

SN 272,308. Ralston Purina Company, St. Louis, Mo. Filed May 24, 1967.



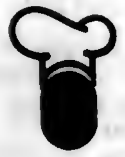
The drawing is lined for red, but no claim is made to color.
Owner of Reg. Nos. 35,569, 686,958, and others.
For Edible Soy Protein (Int. Cl. 29).
First use May 4, 1961.

SN 273,322. Standard Brands Incorporated, d.b.a. Clinton Corn Processing Company, New York, N.Y. Filed June 7, 1967.

GRAINVERT 12

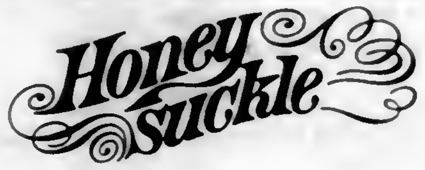
For Enzyme Preparation for Use in Grain Treatment and in Animal Feeds (Int. Cl. 1).
First use Apr. 22, 1967.

SN 274,460. Pronto Food Corporation, Chicago, Ill. Filed June 21, 1967.



For Prepared Pizzas; Meat Sauces; and Cooked and Frozen Prepared Meats and Meat Products—Namely, Beefburgers, Meat Loaf, Meat Balls, Barbeque Beef, Short Ribs of Beef, Corned Beef, Smoked Beef, and Steaks (Int. Cls. 29 and 30).
First use prior to 1963.

SN 274,462. Ralston Purina Company, St. Louis, Mo. Filed June 21, 1967.



Owner of Reg. No. 827,235.
For Frozen, Prepared Turkey Roasts and Turkey Slices With Gravy (Int. Cl. 29).
First use Mar. 3, 1965.

SN 275,128. F & F Laboratories, Inc., Chicago, Ill. Filed June 30, 1967.

Peanut Hill

Without waiver of its common-law rights, applicant makes no claim to the word "Peanut" apart from the mark as shown. Owner of Reg. No. 544,897.
For Peanut Candy Bars (Int. Cl. 30).
First use 1963.

SN 276,824. Desserts, Inc., Medford, Oreg. Filed July 26, 1967.

FLIRT

For Mixture of a Concentrated Fruit, Stabilizers, and Flavoring Agents for Making Frozen Fruit Confections (Int. Cl. 30).
First use Jan. 3, 1967.

SN 277,091. Universal Foods Corporation, Milwaukee, Wis. Filed July 28, 1967.

FONTINELLA

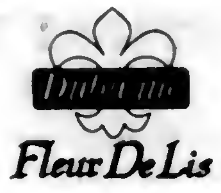
For Cheese (Int. Cl. 29).
First use Mar. 7, 1960.

SN 277,093. Western Packers, d.b.a. Golden West Meat Products, Los Angeles, Calif. Filed July 28, 1967.

Casino Pup

Applicant disclaims the word "Pup" apart from the mark as shown.
For Hot Dogs and Sausages (Int. Cl. 29).
First use Mar. 1, 1966.

SN 280,219. Dubuque Packing Company, Dubuque, Iowa. Filed Sept. 13, 1967.



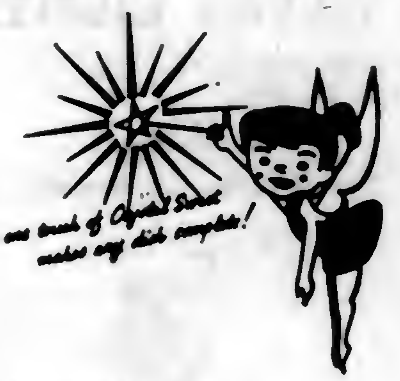
Owner of Reg. Nos. 544,472, 701,071, and 793,000.
For Smoked Ham and Prepared Meat Products (Int. Cl. 29).
First use June 25, 1963; July 3, 1933, as to "Dubuque"; May 1, 1959, as to the "Fleur de Lis design."

SN 280,505. Mildred Yeager, Dallas, Tex. Filed Sept. 15, 1967.

Party-Pretti

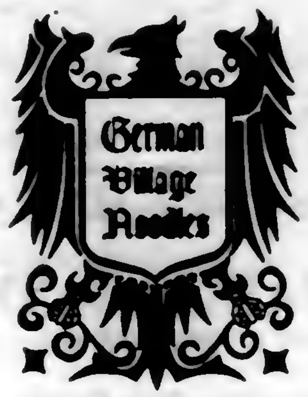
For Sugar (Colored) (Int. Cl. 30).
First use May 31, 1967.

SN 281,020. American Crystal Sugar Company, Denver, Colo. Filed Sept. 25, 1967.


—one touch of Crystal Sugar makes any dish complete!

Owner of Reg. No. 579,907.
For Granulated and Refined Sugar (Int. Cl. 30).
First use September 1955.

SN 282,071. German Village Foods, Inc., Columbus, Ohio. Filed Oct. 9, 1967.



The word "Noodles" is disclaimed apart from the mark as shown.
For Noodles (Int. Cl. 30).
First use Jan. 19, 1966.

SN 283,477. The Wander Company, d.b.a. Poppycock Candies, Chicago, Ill. Filed Oct. 26, 1967.

CRITTLE

For Candy (Int. Cl. 30).
First use Sept. 26, 1967.

SN 284,425. General Mills, Inc., Minneapolis, Minn. Filed Nov. 9, 1967.

DRIVE

Owner of Reg. No. 785,707.
For Canned, High Nutritive Beverage Which Is Dairy in Nature and Chocolate Flavored (Int. Cl. 30).
First use on or prior to Oct. 19, 1967.

SN 289,058. Louket Markets Inc., Jersey City, N.J. Filed Jan. 18, 1968.

PATHMARK

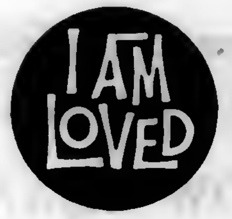
For Fruit Juices and Preserves (Int. Cls. 29 and 32).
First use Dec. 20, 1967.

SN 291,938. General Mills, Inc., Minneapolis, Minn. Filed Feb. 27, 1968.

KERNAL KRISPS

The word "Krisps" is disclaimed apart from the mark as shown.
For Cereal Derived Ready-To-Eat Snack (Int. Cl. 30).
First use on or prior to Feb. 20, 1968.

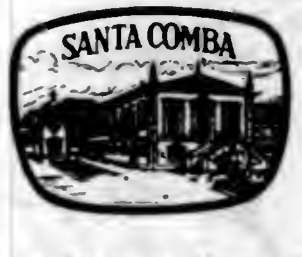
SN 294,998. Helzberg's Diamond Shops, Inc., Kansas City, Mo. Filed Apr. 5, 1968.



For Candies (Int. Cl. 30).
First use Mar. 26, 1968.

Class 47 — Wines

SN 255,022. Ribeiro & Irmao, Oporto, Portugal. Filed Sept. 23, 1966.



No claim is made to the words "Santa Comba" apart from the mark as shown.
For Wines (Int. Cl. 33).
First use Dec. 20, 1965; in commerce Dec. 20, 1965.

Class 48 — Malt Beverages and Liquors

SN 273,209. The F. & M. Schaefer Brewing Co., Brooklyn, N.Y. Filed June 6, 1967.

PARTY BOTTLES

Applicant makes no claim of exclusive right to use the word "Bottles," apart from the mark as shown.
For Bottles of Beer (Int. Cl. 32).
First use Oct. 3, 1966.

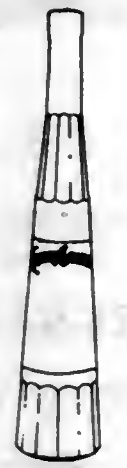
Class 49 — Distilled Alcoholic Liquors

SN 256,642. The R. L. Buse Company, Cincinnati, Ohio. Filed Oct. 18, 1966.

OLD POT STILL

For Whiskey (Int. Cl. 33).
First use May 1, 1945.

SN 263,770. Foremost-McKesson, Inc., New York, N.Y., by merger and change of name from McKesson & Robbins, Incorporated, New York, N.Y. Filed Feb. 1, 1967.



No claim is made to the word "Liquore" apart from the mark as shown. Owner of Reg. Nos. 325,782, 797,636, and others.
For Liqueur (Int. Cl. 33).
First use at least as early as 1934.

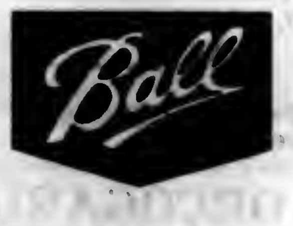
SN 288,978. Palomino & Vergara, S.L., Jerez de la Frontera, Cadiz, Spain. Filed Jan. 16, 1968.

JOHN PETER

"John Peter" is not the name of a living individual. Owner of Spanish Reg. No. 216,950, dated June 11, 1949.
For Sherry (Int. Cl. 33).

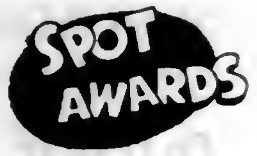
Class 50 — Merchandise Not Otherwise Classified

SN 263,247. Ball Brothers Company Incorporated, Muncie, Ind. Filed Jan. 25, 1967.



Owner of Reg. No. 221,780.
For Metal Closures for Containers (Int. Cl. 6).
First use on or about Jan. 4, 1960.

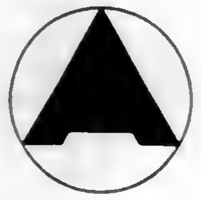
SN 277,068. The Program Aids Company, Inc., Mount Vernon, N.Y. Filed July 28, 1967.



The drawing is lined for red, but no claim is made to color. The word "Awards" is disclaimed apart from the mark as shown.

For Trophies (Int. Cl. 20).
First use Sept. 15, 1955.

SN 282,037. American Dockbridge, Inc., Cudahy, Wis. Filed Oct. 9, 1967.



For Loading Ramps (Int. Cl. 20).
First use Nov. 13, 1958.

SN 283,472. Tri-Lite Incorporated, Skokie, Ill. Filed Oct. 26, 1967.

TRI-SAFE

For Highway Safety Signs and Reflectors (Int. Cl. 19).
First use Oct. 16, 1967.

SN 283,929. Rexall Drug and Chemical Company, d.b.a. Syroco, Los Angeles, Calif. Filed Nov. 1, 1967.

FLORAL MATES

For Decorative Household Furnishings—Namely, Wall Plaques (Int. Cl. 20).
First use Oct. 3, 1967.

SN 284,027. Outside Carpets, Inc., Rome, Ga. Filed Nov. 2, 1967.

JORDOMAT

For Floor Mats and Matting (Int. Cl. 27).
First use June 1, 1966.

SN 287,337. Polytop Corporation, Slatersville, R.I. Filed Dec. 21, 1967.

FLASH SEAL

The word "Seal" is disclaimed apart from the mark as shown.

For Dispensing Closures—Namely, Closures Which Are Adapted To Be Opened and Closed Without Being Removed From a Container (Int. Cl. 20).
First use Feb. 17, 1966.

SN 290,833. Eagle-Picher Industries, Inc., Cincinnati, Ohio. Filed Feb. 12, 1968.

ORCOGARD

For Floor Mats Formed From Plastic, Sponge Rubber, and Similar Materials (Int. Cl. 27).
First use Jan. 25, 1968.

SN 291,062. Germain's, Inc., Los Angeles, Calif. Filed Feb. 14, 1968.

GARD'N AID

For Vine Guide Kits Containing Ties, Plastic Disks, and Adhesive for Supporting Climbing Plants on Wall Surfaces (Int. Cl. 20).
First use at least as early as 1961.

SN 292,009. Polychrome Corporation, Yonkers, N.Y. Filed Feb. 27, 1968.

AK

For Presensitized Offset Plates (Int. Cl. 7).
First use January 1968.

SN 292,010. Polychrome Corporation, Yonkers, N.Y. Filed Feb. 27, 1968.

DK

For Presensitized Offset Plates (Int. Cl. 7).
First use January 1968.

SN 292,011. Polychrome Corporation, Yonkers, N.Y. Filed Feb. 27, 1968.

SK

For Presensitized Offset Plates (Int. Cl. 7).
First use January 1958.

Class 51 — Cosmetics and Toilet Preparations

SN 262,315. Clairol Incorporated, New York, N.Y. Filed Jan. 11, 1967.

SLOW CHANGE

For Hair Tinting, Dyeing and Coloring Preparation (Int. Cl. 3).
First use Sept. 26, 1966.

SN 270,556. Clairol Incorporated, New York, N.Y. Filed May 3, 1967.

THE SURFERS

For Lipstick (Int. Cl. 3).
First use Dec. 19, 1966.

SN 271,045. K.L. Cosmetics, Ltd., Brooklyn, N.Y. Filed May 9, 1967.

For Mascara, Eye Shadow, Eye Liner, Face Powder, Face Moisturizing Cream, Skin Cleanser and Refreshener Lotions, Lipstick, Lip Gloss, Liquid and Stick Foundation Make-Up, Pads Impregnated With Nail Polish Remover, and Eye Make-Up (Int. Cl. 3).
First use Apr. 15, 1966.

SN 276,892. The Upjohn Company, Kalamazoo, Mich. Filed July 26, 1967.

VOLARE

"Volare" is Italian meaning "to fly." Owner of Reg. No. 829,018.

For Cologne, Cold Cream, Body Lotion, and Hair Spray (Int. Cl. 3).
First use Dec. 9, 1966.

SN 277,617. Avon Products, Inc., New York, N.Y. Filed Aug. 7, 1967.

LARGO

For Perfume, Solid Perfume, Perfume Oil, Cologne, Cologne Mist, Dusting Powder, Cream Sachet, and Powder Sachet (Int. Cl. 3).
First use July 10, 1967.

SN 277,696. Merle Norman Cosmetics, Inc., Los Angeles, Calif. Filed Aug. 7, 1967.

SHEER GLO

For Face Powder (Int. Cl. 3).
First use June 27, 1967.

SN 277,781. Avon Products, Inc., New York, N.Y. Filed Aug. 8, 1967.

HEADLONG

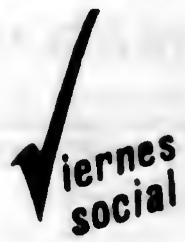
For Cologne Mist, Powder Sachet, Cream Sachet, Dusting Powder, Cologne, Perfume Oil, Solid Perfume, and Perfume (Int. Cl. 3).
First use July 24, 1967.

SN 278,101. Haviland Laboratories, Inc., d.b.a. Ann Haviland, New York, N.Y. Filed Aug. 11, 1967.

ODAMOUR

For Bath Oil (Int. Cl. 3).
First use July 15, 1967.

SN 280,174. Perfumes of Puerto Rico Inc., d.b.a. Perfumes of Puerto Rico, Hato Rey, Puerto Rico. Filed Sept. 12, 1967.



The English translation of "Viernes Social" is "social Friday."

For Perfumes, Colognes, Hair Spray, Hair Pomade, and Personal Deodorant (Int. Cls. 3 and 5).
First use April 1967.

SN 281,044. DeMert & Dougherty, Inc., Chicago, Ill. Filed Sept. 25, 1967.

LACQUA

For Hair Spray (Int. Cl. 3).
First use on or about Aug. 6, 1967.

SN 281,193. Richard Hudnut, Morris Plains, N.J. Filed Sept. 26, 1967.

DETOUR

For Fluid Make-Up (Int. Cl. 3).
First use Sept. 20, 1967.

SN 292,850. Lapinal, Inc., Los Angeles, Calif. Filed Mar. 11, 1968.

For Hair Bleaches, Hair Dressings, Wave Sets, Hair Dyes, and Hair Conditioners (Int. Cl. 3).
First use Dec. 1, 1949.

SN 294,120. Alberto-Culver Company, Melrose Park, Ill. Filed Mar. 26, 1968.

BLAZE

Owner of Reg. No. 829,616.
For Toothpaste Preparation (Int. Cl. 3).
First use Nov. 22, 1967.

SN 294,127. Alberto-Culver Company, Melrose Park, Ill. Filed Mar. 26, 1968.

S.P.A.D.

For Hairdressing and Conditioner Preparation (Int. Cl. 3).
First use Nov. 22, 1967.

SN 294,562. Skyline Ind., Inc., Charlottesville, Va. Filed Apr. 1, 1968.

MICRO NET

For Hair Spray in Aerosol Spray Containers (Int. Cl. 3).
First use Oct. 18, 1967.

Class 52 — Detergents and Soaps

SN 236,452. Pennsalt Chemicals Corporation, Philadelphia, Pa., assignee of B. T. Babbitt, Inc., Albany, N.Y. Filed Jan. 14, 1966.

RED DEVIL

Owner of Reg. Nos. 243,369 and 811,496.
For Sodium Hydroxide Cleaning Compound for Clogged Drains (Int. Cl. 3).
First use Feb. 1, 1912.

SN 272,071. The Kendall Company, Boston, Mass. Filed May 22, 1967.

INK-LINGS

For Solvent-Saturated Towelettes for Removing Inks and Stains From the Hands (Int. Cl. 3).
First use Aug. 12, 1964.

SN 274,529. Metalline Chemicals Corporation, Milwaukee, Wis. Filed June 22, 1967.

MC2

For Industrial Metal Detergents and Activators for Cleaning Metal Prior to Electroplating, Anodizing, and/or Chemical Treatment (Int. Cl. 1).
First use Apr. 3, 1967.

SN 277,616. Avon Products, Inc., New York, N.Y. Filed Aug. 7, 1967.

LARGO

For Toilet Soap (Int. Cl. 3).
First use July 10, 1967.

SN 277,782. Avon Products, Inc., New York, N.Y. Filed Aug. 8, 1967.

HEADLONG

For Toilet Soap (Int. Cl. 3).
First use July 24, 1967.

SN 278,362. Avon Products, Inc., New York, N.Y. Filed Aug. 16, 1967.

SEASCAPE

For Hair Shampoo and Toilet Soap (Int. Cl. 3).
First use July 31, 1967.

SN 278,365. Avon Products, Inc., New York, N.Y. Filed Aug. 16, 1967.

DIRECT LINE

For Hair Shampoo and Toilet Soap (Int. Cl. 3).
First use July 31, 1967.

SN 278,367. Avon Products, Inc., New York, N.Y. Filed Aug. 16, 1967.

AGENDA

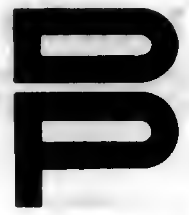
For Hair Shampoo and Toilet Soap (Int. Cl. 3).
First use July 31, 1967.

SN 279,311. Madison Chemical Corporation, Maywood, Ill. Filed Aug. 29, 1967.

CHEM-STEAM

For Cleaning and Descaling Composition (Int. Cl. 1).
First use Jan. 10, 1963.

SN 281,377. Lan-O-Sheen, Inc., St. Paul, Minn. Filed Sept. 28, 1967.



For Bio-Degradable Laundry Detergent and Water Conditioner (Int. Cl. 3).
First use July 12, 1967.

SN 282,048. Bristol-Myers Company, New York, N.Y. Filed Oct. 9, 1967.

KNUCKLES AND KNEES

For Toilet Soap (Int. Cl. 3).
First use July 7, 1967.

SN 283,718. St. Louis Janitor Supply Co., d.b.a. Navy Brand Manufacturing Company, St. Louis, Mo. Filed Oct. 30, 1967.

CAR-GLO

For Liquid Detergent for Use on Automobiles, Buses, Trains, Airplanes, and the Like (Int. Cl. 3).
First use 1948.

SERVICE MARKS

Class 100 — Miscellaneous

SN 253,549. Parents Without Partners, Inc., New York, N.Y. Filed Aug. 31, 1966.

PWP

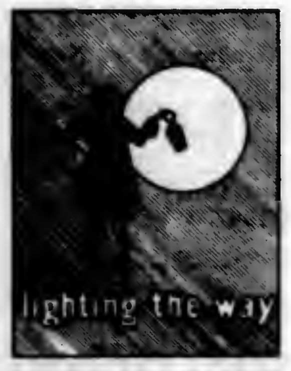
For Eleemosynary Services—Namely, Providing Educational Services Directed to the Problems of the Single Parents and Their Children; and Dissemination of Educational Material Relating to the Welfare and Interests of Single Parents and Their Children (Int. Cl. 42).
First use on or about Mar. 10, 1958.

SN 262,334. Harbridge House, Inc., Boston, Mass. Filed Jan. 11, 1967.

FIAT

For Furnishing Analytical Consulting Services and Systems Analysis Services in the Planning and Construction of Major Facilities Projects (Int. Cl. 42).
First use Nov. 3, 1965.

SN 264,796. C & H Electric Company, Chicago, Ill. Filed Feb. 16, 1967.



The drawing is lined for the color green.
For Commercial and Industrial Designing and Engineering Services in the Electrical Field (Int. Cl. 42).
First use October 1964.

SN 269,318. Intercon Research, Incorporated, Indianapolis, Ind. Filed Apr. 17, 1967.

INTERCON

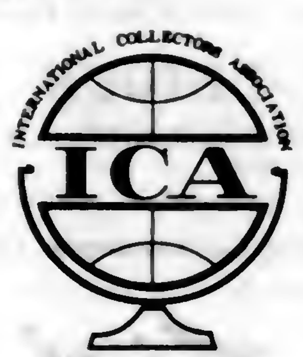
For Research and Development Services for Others in the Field of Structural Materials for Use in Erecting Residences, Office and Industrial Buildings, Institutions, and the Like (Int. Cl. 42).
First use Oct. 13, 1965.

SN 270,925. Kirschenbaum Bros. Inc., Brooklyn, N.Y. Filed May 8, 1967.

WESTMINSTER CHAPELS

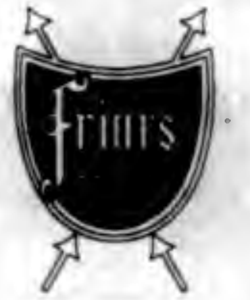
Applicant disclaims exclusive right to the word "Chapels" separate and apart from its use in the mark as shown.
For Arranging, Preparing, and Directing Funeral Ceremonies (Int. Cl. 42).
First use 1949.

SN 271,798. International Collectors Association, Minneapolis, Minn. Filed May 18, 1967.



For Association Services—Namely, Informative and Educational Services on Matters Pertaining to the Collection Industry, viz, Trends in the Collection Industry as Determined Through Research, and Distributed to Its Members (Int. Cl. 42).
First use Feb. 21, 1967.

SN 275,251. Friars, Santa Monica, Calif. Filed July 3, 1967.



For Restaurant Services (Int. Cl. 42).
First use Mar. 28, 1962.

SN 275,805. Big Daddy's Enterprises, Inc., Brooklyn, N.Y., assignee of Robert M. Napp and Murray L. Handwerker (joint owners), d.b.a. Big Daddy's Drive In Restaurants, Brooklyn, N.Y. Filed Aug. 23, 1967.

Big Daddy's

The drawing is lined for red, but no claim is made to color.
For Restaurant Services (Int. Cl. 42).
First use Aug. 26, 1964.

SN 280,953. John R. Jacobson, d.b.a. Sir Knight, Kansas City, Mo. Filed Sept. 22, 1967.

SIR KNIGHT

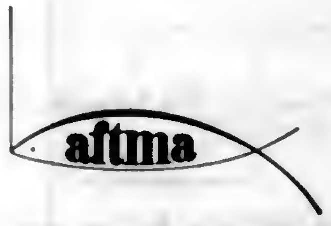
For Formal Wear Rental (Int. Cl. 42).
First use during October 1956.

SN 281,136. Tracor, Inc., Travis, Tex. Filed Sept. 25, 1967.

TRĀCOR

Owner of Reg. No. 788,286.
For Acoustical Consulting, Research, and Design Services (Int. Cl. 42).
First use at least as early as Aug. 28 1967; at least as early as May 1, 1962, as to "Tracor."

SN 289,233. American Fishing Tackle Manufacturers Association, Chicago, Ill. Filed Jan. 22, 1968.



For Association Services Rendered to Fishing Tackle Manufacturers by Such Means as Offering Information and Advice to Members by Staging Trade Shows, by Operating Collection Agencies, and by Providing Public Relations Services (Int. Cl. 42).
First use Aug. 5, 1962.

SN 293,991. Oakite Products, Inc., Berkeley Heights, N.J. Filed Mar. 25, 1968.

OAKITE

Owner of Reg. Nos. 80,287, 733,538, and others.
For Advice, Consultation, and Analysis Furnished to Industrial Concerns and Institutions Regarding Methods and Procedures for Cleaning; Descaling; Paint, Rust, and Slime Removal; and Sanitizing (Int. Cl. 42).
First use at least as early as 1927.

Class 101 — Advertising and Business

SN 266,814. Unishops, Inc., Jersey City, N.J. Filed Mar. 15, 1967.

UNISHOPS

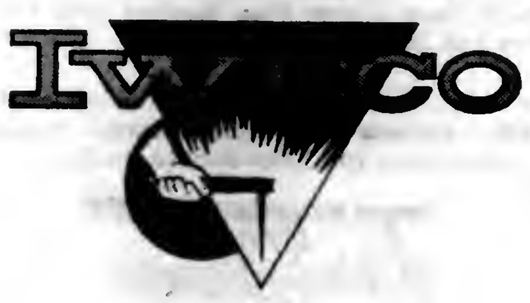
For Operating Men's and Boys' Wear Sections in Department Stores (Int. Cl. 35).
First use on or about Feb. 14, 1962.

SN 269,350. Vernon J. Rossi, d.b.a. Retail Merchandising Service, Riverside, Calif. Filed Apr. 17, 1967.

RMS

For Merchandising Planning Services for Independent Clothing Stores, Including Personalized Analysis and Review of the Individual Merchandising Problems of Customer Stores; the Furnishing of Specific Recommendations Regarding Types and Quantities of Clothing for the Stores To Buy for Best Timing Effect and To Avoid Over-Buying; and Periodic Furnishing of Merchandising Trend, and Other Useful Business Information to the Stores (Int. Cl. 35).
First use during April 1957.

SN 269,895. Industrial Welding Equipment Company, Houston, Tex. Filed Apr. 24, 1967.



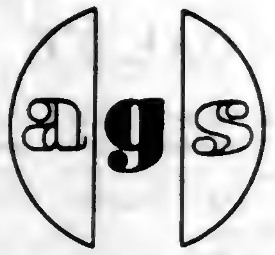
For Distributorship Services in the Field of Welding Supplies (Int. Cl. 35).
First use Apr. 13, 1954.

SN 274,359. The Trade Fair Forum, Inc., New York, N.Y. Filed June 20, 1967.

THE TRADE FAIR FORUM

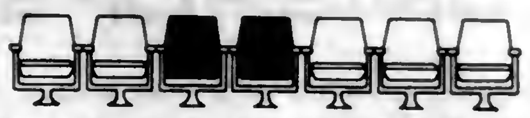
For Promoting the Goods and Services of Others by Arranging for Special Luncheon Parties Which Feature the Food Products of Applicant's Clients, and Also Exhibits Thereat Other Products and Services of the Applicant's Clients (Int. Cl. 35).
First use Apr. 19, 1967.

SN 284,340. American Girl Service, Inc., New York, N.Y. Filed Nov. 8, 1967.



Owner of Reg. Nos. 773,837 and 814,189.
For Employment Agency and Temporary Help Services—Namely, Furnishing Permanent and Temporary Secretarial, Clerical, Technical, and Industrial Personnel, and Management and Coordination of Such Services (Int. Cl. 35).
First use Feb. 5, 1964.

SN 289,063. Ticket Reservation Systems, Inc., New York, N.Y. Filed Jan. 18, 1968.



The drawing is lined for red, but no claim is made to color.
For Vending Tickets and Scrip for Others Using Centralized Computers To Control Remote Box Offices, and Providing Accounting Services in Connection With Ticket Sales (Int. Cl. 35).
First use April 1966.

Class 102 — Insurance and Financial

SN 259,097. The First National Bank of Chicago, Chicago, Ill. Filed Nov. 21, 1966.

FIRSTCARD

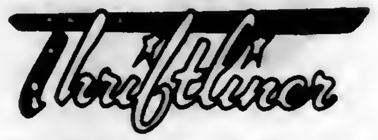
For Credit Card Services (Int. Cl. 36).
First use in or about October 1966.

SN 272,321. Uni-Serv Corporation, Great Neck, N.Y. Filed May 24, 1967.

UNI-SERV

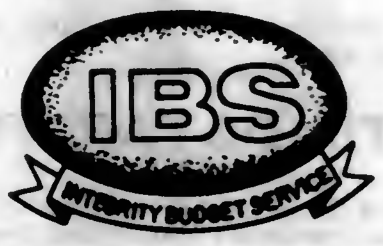
Owner of Reg. Nos. 746,760 and 747,072.
For Credit Card Charge Plan Services (Int. Cl. 36).
First use Apr. 30, 1962.

SN 275,668. Indiana Lumbermans Mutual Insurance Company, Indianapolis, Ind. Filed July 10, 1967.



For Underwriting of Automobile Insurance (Int. Cl. 36).
First use July 1, 1963.

SN 279,074. Integrity Budget Service, Inc., Schofield, Wis. Filed Aug. 25, 1967.



No claim is made to the wording "Budget Service" apart from the mark as shown.
For Debt Adjustment Services (Int. Cl. 36).
First use on or about Sept. 1, 1966.

Class 103 — Construction and Repair

SN 263,079. Holiday Out in America, Knoxville, Tenn. Filed Jan. 23, 1967.

HOLIDAY OUT

For Maintaining and Operating Camp Ground Facilities for Camp Site Owners (Int. Cl. 37).
First use May 14, 1966.

SN 282,786. The Dow Chemical Company, Midland, Mich. Filed Oct. 18, 1967.

ZONETROL

For Treatment of Subterranean Formations With Aqueous Solutions of Polymers To Aid in the Recovery of Oil (Int. Cl. 37).
First use June 5, 1967.

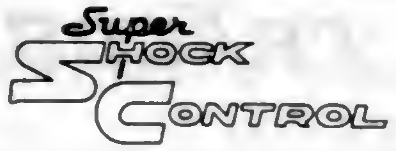
SN 284,023. Robert E. McKee General Contractor, Inc., El Paso, Tex. Filed Nov. 2, 1967.

REMCON

For General Construction Services, Mainly the Construction of Hospitals, Office Buildings, Schools, Hotels, Apartment Buildings, Other Miscellaneous Commercial Structures, Roads, and Dams (Int. Cl. 37).
First use in or about November 1936.

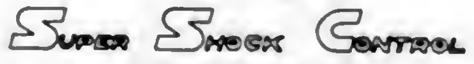
Class 105 — Transportation and Storage

SN 268,058. The Atchison, Topeka and Santa Fe Railway Company, Chicago, Ill. Filed May 3, 1963.



For Railway Transportation Services (Int. Cl. 39).
First use Jan. 22, 1960.

SN 168,061. The Atchison, Topeka and Santa Fe Railway Company, Chicago, Ill. Filed May 3, 1963.



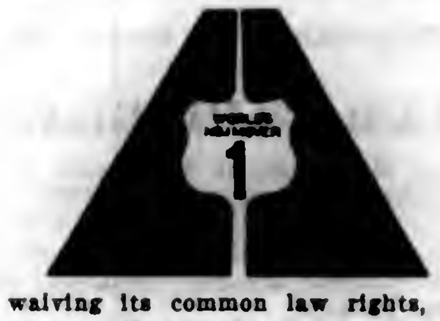
For Railway Transportation Services (Int. Cl. 39).
First use Dec. 10, 1959.

SN 256,264. The Atchison, Topeka and Santa Fe Railway Company, Chicago, Ill. Filed Oct. 12, 1966.

SHOCK CONTROL

For Railway Transportation Services (Int. Cl. 39).
First use June 14, 1958.

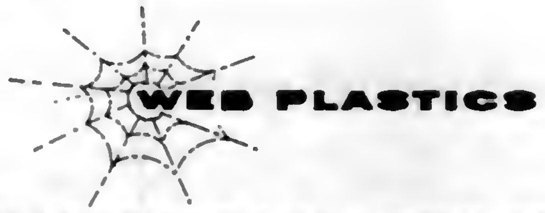
SN 260,809. Allied Van Lines, Inc., Broadview, Ill. Filed Dec. 15, 1966.



Without waiving its common law rights, applicant disclaims the phrase "World's No. 1 Mover," apart from the mark as shown.
For Packing, Storage, and Transportation of Goods (Int. Cl. 39).
First use during October 1966.

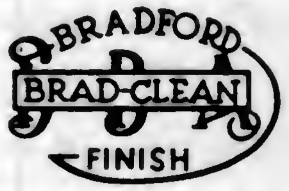
Class 106 — Material Treatment

SN 257,220. Web Plastics Company, Richwood, Ohio. Filed Oct. 25, 1966.



Applicant disclaims exclusive right in "Plastics" apart from the mark as shown, but waives no common law rights therein. Owner of Reg. No. 825,126.
For Extrusion Services—Namely, Extruding Plastic Articles to Customer's Specification (Int. Cl. 40).
First use at least as early as Apr. 25, 1960.

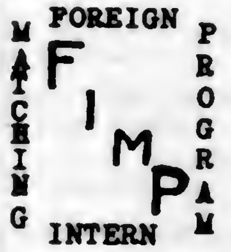
SN 272,801. Bradford Dyeing Association (U.S.A.) Inc., Westerly, R.I. Filed June 1, 1967.



No claim is made to exclusive use of the word "Finish" apart from the mark as shown. Owner of Reg. Nos. 384,379, 643,088, and others.
For Services in Applying Various Finishes to the Industrial Fabrics of Others (Int. Cl. 40).
First use Apr. 21, 1967.

Class 107 — Education and Entertainment

SN 254,267. Harold Charles Franklin, M.D., Madrid, Spain. Filed Sept. 12, 1966.



Applicant disclaims any exclusive rights in the wording "Foreign Intern Matching Program" apart from the mark as shown.
For Aiding Graduates of Foreign Medical Schools To Obtain Internships in Hospitals in the United States of America, Careful Attention Being Given To Matching Each Intern's Qualifications and Desires With the Most Appropriate Hospital (Int. Cl. 41).
First use Aug. 25, 1966; in commerce Aug. 25, 1966.

SN 261,175. The Washington Post Company, Washington, D.C. Filed Dec. 20, 1966.

TWO MINUTES TO GO

For Radio Program Comprising Sports Description and Discussion (Int. Cl. 41).
First use not later than September 1966.

SN 274,045. Christian Men, Inc., San Antonio, Tex. Filed June 16, 1967.

LAYMAN'S LEADERSHIP INSTITUTE

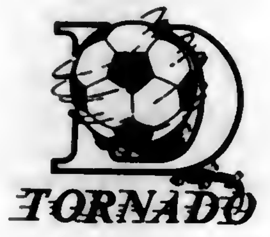
For Interdenominational Meetings of an Educational and Inspirational Nature for Business and Professional Leaders and Their Wives, the Focus Thereof Being on the Total Ministry of the Laity (Int. Cl. 41).
First use Dec. 15, 1955.

SN 275,436. William E. De Wart, Prides Crossing, Mass. Filed July 6, 1967.

TEDDY AND THE PANDAS

For Musical Entertainment Services Rendered by a Vocal and Instrumental Group (Int. Cl. 41).
First use as early as about 1963.

SN 279,056. Dallas Tornado Soccer Club, Dallas, Tex. Filed Aug. 25, 1967.



For Entertainment Services—Namely, Soccer Exhibitions Rendered Live in Stadia and Through the Media of Radio and Television Broadcasts (Int. Cl. 41).
First use May 21, 1967.

SN 281,227. Frank Scinlaro, New York, N.Y. Filed Sept. 26, 1967.

THE DONUTS

For Musical Entertainment Services—Namely, Vocal and Instrumental Performances of Popular Music (Int. Cl. 41).
First use June 21, 1967.

SN 293,431. California Institute of Technology, Pasadena, Calif. Filed Mar. 18, 1968.

CALTECH

For Educational and Research Services at the University Level, Specializing in the Scientific and Engineering Fields (Int. Cl. 41).
First use at least as early as 1926.

COLLECTIVE MEMBERSHIP MARKS

Class 200

SN 274,888. Physicians Epicure Society, Inc., Stroudsburg, Pa. Filed June 27, 1967.

PHYSICIANS EPICURE SOCIETY

For Indicating Membership in the Applicant.
First use Dec. 23, 1966.

SN 275,232. Club Caribbean, Inc., Houston, Tex. Filed July 3, 1967.

CLUB CARIBBEAN

For Indicating Membership in Travel and Vacation Club.
First use on or before Feb. 21, 1967.

SN 293,338. Beefmaster Breeders Universal, San Antonio, Tex. Filed Mar. 15, 1968.

BEEFMASTERS

For Indicating Membership in Applicant Association.
First use Aug. 12, 1945.

TRADEMARK REGISTRATIONS ISSUED

PRINCIPAL REGISTER

Class 1 — Raw or Partly Prepared Materials

851,254. ACCOBOND American Cyanamid Company. SN 264,787. Pub. 4–9–68. Filed 2–16–67.

851,255. TROVIPOR. Dynamit Nobel Aktiengesellschaft. SN 270,910. Pub. 4–9–68. Filed 5–8–67.

Class 3 — Baggage, Animal Equipments, Portfolios, and Pocketbooks

851,256. JOHN MEYER OF NORWICH. John Meyer of Norwich, Inc. MULTIPLE CLASS (Classes 3, 26, 28, and 39). SN 267,780. Pub. 4–9–68. Filed 3–29–67.

851,257. BUENO. Sirco Products Co., Inc. SN 269,463. Pub. 4–9–68. Filed 4–18–67.

Class 4 — Abrasives and Polishing Materials

851,258. EX STATIC PLASTI SHINE AND DESIGN. Ex/Static Chemical Corporation. SN 273,493. Pub. 4–9–68. Filed 6–9–67.

Class 5 — Adhesives

851,259. UNISET. Amicon Corporation. SN 273,016. Pub. 4–9–68. Filed 6–5–67.

Class 6 — Chemicals and Chemical Compositions

851,260. DAXAMINE. Progressive Products Co. SN 249,675. Pub. 8–1–67. Filed 7–6–66.

851,261. TIMICA. The Mearl Corporation. SN 260,944. Pub. 2–20–68. Filed 12–16–66.

851,262. YOGA. India Arts. SN 266,332. Pub. 4–9–68. Filed 3–9–67.

851,263. BUFLEX. Buckman Laboratories, Inc. SN 269,397. Pub. 4–9–68. Filed 4–18–67.

851,264. SOLV-FINISH. H. Kohnstamm & Co., Inc. SN 269,540. Pub. 4–9–68. Filed 4–19–67.

851,265. SUN DROPS. The Selig Chemical Industries, Inc. SN 270,163. Pub. 4–9–68. Filed 4–27–67.

851,266. TANGLEFOOT. The Tanglefoot Company. MULTIPLE CLASS (Classes 6 and 10). SN 272,990. Pub. 4–9–68. Filed 6–5–67.

851,267. SONO JELL. Witco Chemical Company, Inc. SN 274,018. Pub. 4–9–68. Filed 6–15–67.

851,268. CHARO. Requa Manufacturing Co., Inc. SN 274,092. Pub. 4–9–68. Filed 6–16–67.

851,269. KINSOFT. Diamond Shamrock Corporation. SN 288,465. Pub. 4–9–68. Filed 1–10–68.

Class 9 — Explosives, Firearms, Equipments, and Projectiles

851,270. HOLLAND & HOLLAND. Holland & Holland Limited. SN 275,526. Pub. 4–9–68. Filed 7–7–67.

Class 10 — Fertilizers

851,266. (See Class 6 for this trademark.)

851,271. "ONE STEP." Diamond Shamrock Corporation, by change of name from Diamond Alkali Company. SN 268,457. Pub. 4–9–68. Filed 4–6–67.

851,272. CROP KING TYON. Woods Industries, Inc., d.b.a. Crop King Company. SN 272,657. Pub. 4–9–68. Filed 5–29–67.

851,273. BIO-GRO. W. R. Grace & Co. SN 285,418. Pub. 4–9–68. Filed 11–22–67.

Class 11 — Inks and Inking Materials

851,274. POLYTUF. Interchemical Corporation. SN 273,072. Pub. 4–9–68. Filed 6–5–67.

Class 12 — Construction Materials

851,275. PARKERSBURG. Textron, Inc., SN 250,531. Pub. 4–9–68. Filed 7–18–66.

851,276. STANSTRIP. The Standard Products Company. SN 267,993. Pub. 4–9–68. Filed 3–30–67.

851,277. FLOW-STONE. Tombill Corporation. SN 269,703. Pub. 4–9–68. Filed 4–20–67.

851,278. DURALOX. Allied Compositions Co., Inc. SN 271,330. Pub. 4–9–68. Filed 5–12–67.

851,279. INSTANT UTILITY. Practical Products Corp. SN 271,512. Pub. 4–9–68. Filed 5–15–67.

851,280. SNAP-WRAP. Marine Barriers, Inc. SN 271,951. Pub. 4–9–68. Filed 5–19–67.

851,281. LAZY T. J. Ralph Duncan. SN 272,176. Pub. 4–9–68. Filed 5–23–67.

851,282. CHAN-A-LINE. Logan Co. SN 272,195. Pub. 4–9–68. Filed 5–23–67.

851,283. ORLYT IMPERIAL. Burnham Corporation. SN 273,223. Pub. 4–9–68. Filed 6–5–67.

851,284. ULTRATITE. Penn Valley Polymers Company. SN 273,409. Pub. 4–9–68. Filed 6–8–67.

851,285. HYDRO-PRESSED. C & B Silo Company. SN 273,850. Pub. 4–9–68. Filed 6–14–67.

851,286. HYDRA-CRETE. C & B Silo Company. SN 273,851. Pub. 4–9–68. Filed 6–14–67.

851,287. LOK-RIB. The B. F. Goodrich Company. SN 273,957. Pub. 4–9–68. Filed 6–15–67.

851,288. POREX. Concrete Plank Co., Inc. SN 274,049. Pub. 4–9–68. Filed 6–16–67.

851,289. NAARCOLOR. North American Aluminum Corporation. SN 274,453. Pub. 4–9–68. Filed 6–21–67.

Class 13 — Hardware and Plumbing and Steam-Fitting Supplies

851,290. HEIMSYPHON. Karl Hinz. SN 232,782. Pub. 4–9–68. Filed 11–16–65.

851,291. BAC 2 BAC. JMJ Corporation. SN 251,435. Pub. 4–9–68. Filed 8–1–66.

851,292. PLUGLOK. Thornhill-Craver Company. SN 252,220. Pub. 4–9–68. Filed 8–11–66.

851,293. DURACREST AND DESIGN. Metro Wholesale Corporation. SN 257,288. Pub. 4–9–68. Filed 10–26–66.

851,294. COLT 150 AND DESIGN. The Bates Manufacturing Company. MULTIPLE CLASS (Classes 13 and 23). SN 266,139. Pub. 4–9–68. Filed 3–7–67.

851,295. AEROTIGHT. G.K.N. Screws & Fasteners Limited. SN 269,879. Pub. 4–9–68. Filed 4–24–67.

851,296. THEY WORK. Crawford Fitting Company. SN 270,758. Pub. 4–9–68. Filed 5–5–67.

851,297. SENCOTE. Senco Products, Inc. SN 273,316. Pub. 4–9–68. Filed 6–7–67.

851,298. SPECTRACK. The Gould-Mersereau Co., Inc. SN 273,393. Pub. 4–9–68. Filed 6–8–67.

851,299. AQUAMATIC. D. B. Smith & Company, Inc. SN 273,996. Pub. 4–9–68. Filed 6–15–67.

851,300. DUOTRAX. Eastern Products Corporation. SN 287,783. Pub. 4–9–68. Filed 12–29–67.

Class 14—Metals and Metal Castings and Forgings

851,301. ROBLINGER. Nathaniel E. Slavin, d.b.a. N. E. Slavin & Co. SN 265,742. Pub. 4–9–68. Filed 3–1–67.

Class 15—Oils and Greases

851,302. CHEMALOY. Ashland Oil & Refining Company. SN 248,956. Pub. 10–31–67. Filed 6–27–66.

851,303. SUPER-STA. Continental Oil Company. SN 265,049. Pub. 12–12–67. Filed 2–20–67.

851,304. FLUO-KEM. Bel-Art Products. SN 273,161. Pub. 4–9–68. Filed 6–6–67.

Class 16—Protective and Decorative Coatings

851,305. ROCK-TAR. The Valspar Corporation. SN 255,483. Pub. 4–9–68. Filed 9–29–66.

851,306. STOPS RUST. Rust-Oleum Corporation. SN 257,091. Pub. 4–9–68. Filed 10–24–66.

851,307. PARIS. Paris Paint & Varnish Co., Inc. SN 248,398. CONCURRENT USE. Pub. 12–6–66. Filed 6–20–66.

851,308. ZIEBART XL5. Ziebart Process Corp. SN 268,114. Pub. 4–9–68. Filed 3–31–67.

Class 18—Medicines and Pharmaceutical Preparations

851,309. IMNEX. Geigy Chemical Corporation (New York corporation), by merger from Geigy Chemical Corporation (Delaware corporation). SN 238,859. Pub. 4–9–68. Filed 2–15–66.

851,310. EXOLAN. Dermal Laboratories Limited. SN 246,892. Pub. 2–20–68. Filed 5–31–66.

851,311. E. H. GREENWOOD. Edward H. Greenwood. SN 252,847. Pub. 4–9–68. Filed 8–22–66.

851,312. VETICEUTICALS. Zirin Veticeuticals, Inc. SN 261,124. Pub. 4–9–68. Filed 12–19–66.

851,313. TA-RO. M. R. Leclerc & Co. SN 263,469. Pub. 4–9–68. Filed 1–27–67.

851,314. TEE–34. Ciba Corporation, d.b.a. The Gland-O-Lac Company. SN 265,170. Pub. 4–9–68. Filed 2–21–67.

851,315. GILT EDGE. Central Soya Company, Inc. SN 268,576. Pub. 4–9–68. Filed 4–7–67.

851,316. DURA MAX. Bristol-Myers Company. SN 269,164. Pub. 4–9–68. Filed 4–14–67.

851,317. LOT-O-LASS. Vit-A-Way, Inc. SN 270,826. Pub. 4–9–68. Filed 5–5–67.

851,318. KOAGAMIN. Chatham Pharmaceuticals, Inc. SN 272,696. Pub. 4–9–68. Filed 5–31–67.

851,319. CHATHAM. Chatham Pharmaceuticals, Inc. SN 272,697. Pub. 4–9–68. Filed 5–31–67.

851,320. MISCELLANEOUS DESIGN. Chemie Grünenthal G.m.b.H. SN 272,700. Pub. 4–9–68. Filed 5–31–67.

851,321. PEDIAFLOR. Abbott Laboratories, d.b.a. Ross Laboratories. SN 273,012. Pub. 4–9–68. Filed 6–5–67.

851,322. DIA-GLO S.A. Diamond Laboratories, Inc. MULTIPLE CLASS (Classes 18 and 46). SN 282,231. Pub. 4–9–68. Filed 10–11–67.

851,323. MATCHMAKERS. Chesebrough-Pond's Inc. SN 282,268. Pub. 4–9–68, Filed 10–11–67.

851,324. NORIDAY. Syntex Laboratories, Inc. SN 282,484. Pub. 4–9–68. Filed 10–13–67.

851,325. FENTRINAL. Mead Johnson & Company. SN 289,452. Pub. 4–9–68. Filed 1–24–68.

851,326. LOTYROGEN. Mead Johnson & Company. SN 289,453. Pub. 4–9–68. Filed 1–24–68.

851,327. CELAGEN. Mead Johnson & Company. SN 289,454. Pub. 4–9–68. Filed 1–24–68.

851,328. LOTYROLAC. Mead Johnson & Company. SN 289,455. Pub. 4–9–68. Filed 1–24–68.

851,329. ALKA–2. Miles Laboratories, Inc. SN 289,641. Pub. 4–9–68. Filed 1–26–68.

851,330. VANTAGE. Richardson-Merrell Inc. SN 289,645. Pub. 4–9–68. Filed 1–26–68.

Class 19—Vehides

851,331. GLASTIC. The Glastic Corporation. SN 249,701. Pub. 4–9–68. Filed 6–23–66.

851,332. WHIPPET. Jefferey L. Fried, d.b.a. Walton-March. SN 251,295. Pub. 4–9–68. Filed 7–29–66.

851,333. MDA. Railroad Dynamics, Inc. SN 259,676. Pub. 4–9–68. Filed 11–29–66.

851,334. SCATMOBILE. New Frontier Corporation. SN 267,346. Pub. 4–9–68. Filed 3–22–67.

851,335. THE TOUGH BIRDS. North American Rockwell Corporation, by merger and change of name from Rockwell-Standard Corporation. SN 270,273. Pub. 3–12–68. Filed 4–28–67.

851,336. MISCELLANEOUS DESIGN. Aluminum Company of America. SN 272,794. Pub. 4–9–68. Filed 6–1–67.

851,337. COLDSTREAM. John E. Mitchell Company. SN 272,937. Pub. 4–9–68. Filed 6–2–67.

851,338. "ORANGE CRATE." Schwinn Bicycle Company. SN 274,991. Pub. 4–9–68. Filed 6–28–67.

Class 20—Linoleum and Oiled Cloth

851,339. FF (DESIGN). Finger Furniture Co., Inc. MULTIPLE CLASS (Classes 20, 21, 24, 32, 34, and 42). SN 209,503. Pub. 4–9–68. Filed 1–7–65.

851,340. TRU-VINYL CREST. Reverso Products, Inc. SN 252,754. Pub. 12–19–67. Filed 8–19–66.

851,341. CHATEAU. American Biltrite Rubber Co., Inc. SN 255,403. Pub. 4–9–68. Filed 9–29–66.

851,342. SPRING LAWN. Congoleum-Nairn Inc. SN 260,651. Pub. 4–9–68. Filed 12–13–66.

851,343. THE WONDERFUL WORLD OF CONGOLEUM-NAIRN. Congoleum-Nairn Inc. SN 270,897. Pub. 4–9–68. Filed 5–8–67.

851,344. HAWAIIAN CORAL. Congoleum-Nairn Inc. SN 270,900. Pub. 4–9–68. Filed 5–8–67.

851,345. PERSIAN TILE. Congoleum-Nairn Inc. SN 275,239. Pub. 4–9–68. Filed 7–3–67.

851,346. CARESSE. Stix Products, Inc. SN 286,977. Pub. 4–9–68. Filed 12–15–67.

Class 21—Electrical Apparatus, Machines, and Supplies

851,339. (See Class 20 for this trademark.)

851,347. TELECTERN. Telemation, Inc. SN 240,982. Pub. 4–9–68. Filed 3–14–66.

851,348. SOLAR. Gould-National Batteries, Inc. SN 243,439. Pub. 4–9–68. Filed 4–14–66.

851,349. STANDEL AND DESIGN. Standel Co. MULTIPLE CLASS (Classes 21 and 36). SN 244,054. Pub. 4–9–68. Filed 4–22–66.

851,350. CORTINA. Eico Electronic Instrument Co., Inc. MULTIPLE CLASS (Classes 21 and 36). SN 248,028. Pub. 4–9–68. Filed 6–14–66.

851,351. EC AND DESIGN. Elgar Electronics Corporation. SN 253,292. Pub. 4–9–68. Filed 8–29–66.

851,352. DYNA-COM 5. Lafayette Radio Electronics Corporation. SN 253,974. Pub. 4–9–68. Filed 9–7–66.

851,353. CSC AND DESIGN. California Systems Components, Inc. MULTIPLE CLASS (Classes 21 and 26). SN 255,694. Pub. 4–9–68. Filed 10–4–66.

851,354. TOMAC. American Hospital Supply Corporation. SN 258,660. Pub. 4–9–68. Filed 11–15–66.

851,355. TOBISONIC AND DESIGN. Tobishi Electronic Industries, Ltd. MULTIPLE CLASS (Classes 21 and 36). SN 260,286. Pub. 4–9–68. Filed 12–7–66.

851,356. MIKADO. Associated Importers. SN 267,600. Pub. 4–9–68. Filed 3–27–67.

851,357. MISCELLANEOUS DESIGN. Van Wyck International Corporation. SN 267,693. Pub. 4–9–68. Filed 3–27–67.

851,358. BLAK-RAY. Ultra-Violet Products, Inc. SN 268,245. Pub. 4–9–68. Filed 4–3–67.

851,359. SURE TO LIGHT SURELITE AND DESIGN. Surelite Products Company, Inc. SN 270,013. Pub. 4–9–68. Filed 4–25–67.

851,360. SUNWOOD. Sunbeam Lighting Company. SN 272,113. Pub. 4–9–68. Filed 5–22–67.

851,361. COMBO LINE. AMP Incorporated. SN 272,249. Pub. 4–9–68. Filed 5–24–67.

851,362. R-LITE. Genisco Technology Corporation. SN 274,201. Pub. 4–9–68. Filed 6–19–67.

851,363. C-LITE. Genisco Technology Corporation. SN 274,202. Pub. 4–9–68. Filed 6–19–67.

851,364. STERIREGISTER. Bell Hospital Systems, Inc. SN 275,506. Pub. 4–9–68. Filed 7–7–67.

851,365. ELIPTI-GRIP. The Thomas & Betts Co. SN 275,562. Pub. 4–9–68. Filed 7–7–67.

851,366. PIGGY. The Thomas & Betts Co. SN 275,564. Pub. 4–9–68. Filed 7–7–67.

851,367. B & B AND DESIGN. B & B Electronics Corp. SN 275,740. Pub. 4–9–68. Filed 7–11–67.

851,368. RITZ AND DESIGN. Dr.-Ing. Hans Ritz Messwandlerwerk GmbH. SN 262,027. Pub. 11–28–67. Filed 1–6–67.

851,369. LIGHTYEAR. The Ruby Lighting Corporation. SN 276,872. Pub. 4–9–68. Filed 7–26–67.

851,370. K MART AND DESIGN. S. S. Kresge Company. SN 277,921. Pub. 4–9–68. Filed 8–9–67.

851,371. DDS (DESIGN). Digital Data Systems, Inc. SN 278,198. Pub. 4–9–68. Filed 8–14–67.

851,372. PIL. TRW, Inc. SN 287,407. Pub. 4–9–68. Filed 12–22–67.

Class 22—Games, Toys, and Sporting Goods

851,373. "KITTEN KRIES." Alexander Doll Company, Inc., d.b.a. Madame Alexander. SN 269,044. Pub. 4–9–68. Filed 4–13–67.

851,374. FENWICK AND DESIGN. Fenwick Products, Inc. SN 271,698. Pub. 4–9–68. Filed 5–17–67.

851,375. PROFESSOR POOK. J. Swedlin, Inc., d.b.a. Gund Manufacturing Company. SN 272,424. Pub. 4–9–68. Filed 5–25–67.

851,376. LANCE AND DESIGN. The Soraba Corporation. SN 272,863. Pub. 4–9–68. Filed 6–1–67.

851,377. STRATEGY POKER. Milton Bradley Company. SN 273,166. Pub. 4–9–68. Filed 6–6–67.

851,378. WORD OUT. Milton Bradley Company. SN 273,168. Pub. 4–9–68. Filed 6–6–67.

851,379. WORD WILD. Milton Bradley Company. SN 273,169. Pub. 4–9–68. Filed 6–6–67.

851,380. MAGIC-MINNOW. Atlantic Lures, Inc. SN 273,468. Pub. 4–9–68. Filed 6–9–67.

851,381. MOON WAGON. Big Boy Manufacturing Co., Inc. SN 275,222. Pub. 4–9–68. Filed 7–3–67.

851,382. SWAT-A-SHOT. Omico Plastics Inc. SN 275,954. Pub. 4–9–68. Filed 7–13–67.

851,383. RAICHELL. Bruck Tackle & Manufacturing Co. SN 276,056. Pub. 4–9–68. Filed 6–26–67.

851,384. "REBECCA." Alexander Doll Company, Inc., d.b.a. Madame Alexander. SN 276,076. Pub. 4–9–68. Filed 7–17–67.

851,385. SEX AND DESIGN. Donald A. E. Beer, d.b.a. Essex Game Company. SN 282,532. Pub. 4–9–68. Filed 10–16–67.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

851,294. (See Class 13 for this trademark.)

851,386. BEARFOOT CHOX. Bearfoot Airway Corporation. SN 231,376. Pub. 4–9–68. Filed 10–23–65.

851,387. COLT. Colt Manufacturing Company, Inc. SN 237,313. Pub. 2–27–68. Filed 1–26–66.

851,388. COLT AND DESIGN. Colt Manufacturing Company, Inc. SN 237,314. Pub. 2–27–68. Filed 1–26–66.

851,389. NEW ORBIT AND DESIGN. Dura Corporation (New York corporation), assignee of Dura Corporation (Michigan corporation). SN 248,445. Pub. 8–29–67. Filed 6–20–66.

851,390. POWER PNEUMATICS. Albert Ray Bowers, d.b.a. Power Pneumatics Company. SN 252,537. Pub. 4–9–68. Filed 8–17–66.

851,391. F–12. United Engineering and Foundry Company. SN 254,357. Pub. 4–9–68. Filed 9–13–66.

851,392. ATLAS AND DESIGN. Atlas Tool & Manufacturing Co. SN 254,430. Pub. 4–9–68. Filed 9–14–66.

851,393. PAP. Carrier Corporation. SN 255,776. Pub. 4–9–68. Filed 10–5–66.

851,394. PYRO FOAM. Pyro Foam Corp., assignee of Bramley Barnes. SN 258,486. Pub. 4–9–68. Filed 11–14–66.

851,395. PI (DESIGN). Pumps Incorporated. SN 259,021. Pub. 4–9–68. Filed 11–18–66.

851,396. WHALEBACK. Missouri-Rogers Corporation. SN 259,449. Pub. 4–9–68. Filed 11–25–66.

851,397. FILPER. Filper Corporation. SN 260,326. Pub. 4–9–68. Filed 12–8–66.

851,398. F IN A CIRCLE (DESIGN). Filper Corporation. SN 260,327. Pub. 4–9–68. Filed 12–8–66.

851,399. BOSAL AND DESIGN. Vennootschap Onder de Firma Karel Bos. SN 264,259. Pub. 4–9–68. Filed 2–8–67.

851,400. PRESCO. Precision Systems Company, Inc. SN 265,732. Pub. 4–9–68. Filed 3–1–67.

851,401. PAY-O-TROL. United Mattress Machinery Company. SN 267,479. Pub. 4–9–68. Filed 3–22–67.

851,402. THERM-OR-SET. Kingsley Dryer Corporation. SN 269,992. Pub. 4–9–68. Filed 4–25–67.

851,403. BLUE AND DESIGN. Subscription Television, Inc., by merger from John Blue Company, Incorporated. SN 270,345. Pub. 3–5–68. Filed 5–1–67.

851,404. ROTAIRE. The Bendix Corporation. SN 270,877. Pub. 4-9-68. Filed 5-8-67.

851,405. STUMP KING. Wayne Manufacturing Co. SN 271,978. Pub. 4-9-68. Filed 5-19-67.

851,406. SYNER/POST. A. B. Chance Company, assignee of Pitman Manufacturing Company. SN 272,206. Pub. 4-9-68. Filed 5-23-67.

851,407. STEINEMANN AND DESIGN. George Koch Sons, Inc. SN 273,291. Pub. 4-9-68. Filed 6-7-67.

851,408. HOT LINE. Sackner Products, Inc. SN 273,312. Pub. 4-9-68. Filed 6-7-67.

851,409. VPRY. Gertrude C. Van Pelt, d.b.a. Van Pelt Electric Company. SN 273,540. Pub. 4-9-68. Filed 6-9-67.

851,410. WESTWOOD. Washington Forge, Incorporated. SN 273,542. Pub. 4-9-68. Filed 6-9-67.

851,411. LL AND DESIGN. Sanco Corporation. SN 274,096. Pub. 4-9-68. Filed 6-16-67.

851,412. FARMERS PRIDE. The Union Fork and Hoe Company. SN 274,371. Pub. 4-9-68. Filed 6-20-67.

851,413. CENTENNIAL. Western Sewing Machine Distributors, Inc. SN 283,075. Pub. 4-9-68. Filed 10-23-67.

Class 24 — Laundry Appliances and Machines

851,339. (See Class 20 for this trademark.)

Class 25 — Locks and Safes

851,414. INGERSOLL AND DESIGN. Ingersoll Locks Limited. SN 263,578. Pub. 4-9-68. Filed 1-30-67.

Class 26 — Measuring and Scientific Appliances

851,256. (See Class 3 for this trademark.)

851,353. (See Class 21 for this trademark.)

851,415. CYBERTRONIC. Johnson Service Company, assignee of Fischbach and Moore, Incorporated. SN 148,169. Pub. 3-17-64. Filed 7-2-62.

851,416. THERMO CLIX. The Nason Company. SN 231,467. Pub. 4-9-68. Filed 10-23-65.

851,417. PRESSURE CLIX. The Nason Company. SN 231,468. Pub. 4-9-68. Filed 10-23-65.

851,418. ANSITRON. Ansitron, Inc., by change of name from ANS, Inc. SN 231,879. Pub. 4-9-68. Filed 11-1-65.

851,419. PC AND DESIGN. Precision-Cosmet Company, Inc. SN 255,227. Pub. 4-9-68. Filed 9-27-66.

851,420. EYE IN FOUR COLORS (DESIGN). Cool-Ray, Inc. SN 255,781. Pub. 4-9-68. Filed 10-5-66.

851,421. ULTRAPETTE. American Hospital Supply Corporation, assignee of Dade Reagents, Inc. SN 258,364. Pub. 4-9-68. Filed 11-10-66.

851,422. MULTIPETTE. American Hospital Supply Corporation, assignee of Dade Reagents, Inc. SN 258,365. Pub. 4-9-68. Filed 11-10-66.

851,423. 3DEPIX. Marks Polarized Corporation. SN 260,261. Pub. 4-9-68. Filed 12-7-66.

851,424. WHITERLITE. Macbeth Corporation. SN 262,046. Pub. 4-9-68. Filed 1-6-67.

851,425. ACCRALETTE. Vaughan Contact Lens Lab., Inc. SN 264,457. Pub. 4-9-68. Filed 2-10-67.

851,426. JAYARK SUPER/8. Jayark Instruments Corporation. SN 265,471. Pub. 4-9-68. Filed 2-27-67.

851,427. AUTO-INSTANT. Keystone Mfg. Corp. SN 266,237. Pub. 4-9-68. Filed 3-8-67.

851,428. DURATATE. Kono Manufacturing Co. Inc. SN 268,882. Pub. 4-9-68. Filed 4-11-67.

851,429. DOCUFAX. Fletcher Paper Company. SN 269,757. Pub. 4-9-68. Filed 4-21-67.

851,430. BALCONTROL. Baldwin-Gegenheimer Corporation. SN 271,428. Pub. 4-9-68. Filed 5-15-67.

851,431. OPTOBINER. Photo Research Corporation. SN 271,720. Pub. 4-9-68. Filed 5-17-67.

851,432. AUDISCAN. Audiscan Incorporated. SN 271,906. Pub. 4-9-68. Filed 5-19-67.

851,433. NEGATRANS. Charles Beseler Company. SN 273,364. Pub. 4-9-68. Filed 6-8-67.

851,434. FUJICA COMPACT 35. Fuji Photo Film Co., Ltd. SN 273,756. Pub. 4-9-68. Filed 6-13-67.

851,435. +LIGHT. Rinn Corporation. SN 275,490. Pub. 4-9-68. Filed 7-5-67.

851,436. +LITE. Rinn Corporation. SN 275,491. Pub. 4-9-68. Filed 7-5-67.

851,437. DDS (DESIGN). Digital Data Systems, Inc. SN 278,200. Pub. 4-9-68. Filed 8-14-67.

851,438. GAF-X. General Aniline & Film Corporation. SN 281,883. Pub. 4-9-68. Filed 10-5-67.

Class 27 — Horological Instruments

851,439. UNITRON. Bulova Watch Company, Inc. SN 265,760. Pub. 4-9-68. Filed 3-2-67.

851,440. TIC TOCKETBOOKS. Sheffield Watch of New York, Inc. SN 278,040. Pub. 4-9-68. Filed 8-10-67.

Class 28 — Jewelry and Precious-Metal Ware

851,256. (See Class 3 for this trademark.)

851,441. MYLU. Mylu Design Co. SN 261,316. Pub. 4-9-68. Filed 12-22-66.

851,442. REFLECTIONS. Textron Inc. (Delaware corporation), by merger and change of name from Textron Inc. (Rhode Island corporation). SN 274,356. Pub. 2-20-68. Filed 6-20-67.

851,443. LADY OF DISTINCTION. Textron Inc. (Delaware corporation), by merger and change of name from Textron Inc. (Rhode Island corporation). SN 274,357. Pub. 2-20-68. Filed 6-20-67.

851,444. LADY OF VENICE. Textron Inc. (Delaware corporation), by merger and change of name from Textron Inc. (Rhode Island corporation). SN 274,358. Pub. 2-20-68. Filed 6-20-67.

851,445. YVES SAINT LAURENT. Lanvin-Charles of the Ritz, Inc. SN 275,346. Pub. 4-9-68. Filed 7-5-67.

851,446. ICE GOLD. Coro, Inc. SN 279,174. Pub. 4-9-68. Filed 8-28-67.

851,447. FROM GENERATION TO GENERATION. Oneida Ltd. SN 280,621. Pub. 4-9-68. Filed 9-18-67.

Class 29 — Brooms, Brushes, and Dusters

851,448. T.L.C. Polychem Corporation. SN 274,342. Pub. 4-9-68. Filed 6-20-67.

Class 30 — Crockery, Earthenware, and Porcelain

851,449. CITATION. Shenango Ceramics, Inc. SN 260,594. Pub. 4-9-68. Filed 12-12-66.

Class 31 — Filters and Refrigerators

851,450. UNISIV. Universal Oil Products Company. SN 243,061. Pub. 4-9-68. Filed 3-23-66.

851,451. FOOD-LIFE PRESERVER. General Motors Corporation. SN 267,146. Pub. 4-9-68. Filed 3-20-67.

851,452. WATER BOY. Neptune Microfloc, Incorporated. SN 267,650. Pub. 4-9-68. Filed 3-27-67.

851,453. CLARK EQUIPMENT AND DESIGN. Clark Equipment Company. SN 279,806. Pub. 4-9-68. Filed 9-7-67.

851,454. FILTERJET. Millipore Corporation. SN 279,987. Pub. 4-9-68. Filed 9-11-67.

Class 32 — Furniture and Upholstery

851,339. (See Class 20 for this trademark.)

851,455. CLARK EQUIPMENT AND DESIGN. Clark Equipment Company. SN 279,807. Pub. 4-9-68. Filed 9-7-67.

Class 33 — Glassware

851,456. STAR LIKE DEVICE (DESIGN). Vetreria di Vernante S.p.A. SN 254,821. Pub. 4-9-68. Filed 9-20-66.

851,457. VERNANTE. Vetreria di Vernante S.p.A. SN 254,822. Pub. 4-9-68. Filed 9-20-66.

851,458. CORY ROD. Cory Corporation. SN 260,730. Pub. 4-9-68. Filed 12-14-66.

Class 34 — Heating, Lighting, and Ventilating Apparatus

851,339. (See Class 20 for this trademark.)

851,459. TAB-LOC. Repco Products Corporation. SN 212,051. Pub. 4-9-68. Filed 2-15-65.

851,460. COBRAMATIC. M.K. Products, Inc. SN 255,634. Pub. 4-9-68. Filed 10-3-66.

851,461. CYCLO BURNER AND DESIGN. Sargent Building Specialties Inc. SN 258,416. Pub. 4-9-68. Filed 11-10-66.

851,462. NU-WAY AND DESIGN. Emerson Electric Co. SN 258,515. Pub. 4-9-68. Filed 11-14-66.

851,463. RADIANTQUARTZ. Radiant Oven Corp. SN 268,895. Pub. 4-9-68. Filed 4-11-67.

851,464. WATER PAC AND DESIGN. Kleer-Vu Industries, Inc. SN 283,751. Pub. 4-9-68. Filed 10-31-67.

Class 36 — Musical Instruments and Supplies

851,349. (See Class 21 for this trademark.)

851,350. (See Class 21 for this trademark.)

851,355. (See Class 21 for this trademark.)

851,465. NEW GENERATION AND DESIGN. Womack Electronics, Inc. SN 256,328. Pub. 4-9-68. Filed 10-12-66.

851,466. AMRAWCO. Richard A. Craft, d.b.a. Amrawco. SN 260,023. Pub. 4-9-68. Filed 12-5-66.

851,467. TROYE. Strum & Drum Inc. SN 264,693. Pub. 4-9-68. Filed 2-14-67.

851,468. NATURAL SOUND. Natural Sound Studios. SN 286,481. Pub. 4-9-68. Filed 12-8-67.

Class 37 — Paper and Stationery

851,469. KB. Kurtz Bros. SN 255,099. Pub. 4-9-68. Filed 9-26-66.

851,470. DERMASCRIPT. Dermik Laboratories, Inc. SN 271,286. Pub. 4-9-68. Filed 5-11-67.

851,471. ST. REGIS. St. Regis Paper Company. SN 272,100. Pub. 4-9-68. Filed 5-22-67.

851,472. PIZAZZ. Hassenfeld Bros. Inc. SN 273,770. Pub. 4-9-68. Filed 6-13-67.

851,473. TRA-PAK. Hassenfeld Bros. Inc. SN 273,771. Pub. 4-9-68. Filed 6-13-67.

851,474. INCENTIVE. International Paper Company. SN 274,745. Pub. 4-9-68. Filed 6-26-67.

851,475. CURLAM. Curwood, Inc. SN 276,737. Pub. 4-9-68. Filed 7-25-67.

851,476. BUENA. Noland Paper Company, Inc. SN 276,944. Pub. 4-9-68. Filed 7-27-67.

851,477. AGRIFAX AND DESIGN. Federal Intermediate Credit Bank of St. Paul. SN 278,350. Pub. 4-9-68. Filed 8-16-67.

Class 38 — Prints and Publications

851,478. FOCUS. Buffalo Courier-Express, Inc. SN 191,358. Pub. 4-9-68. Filed 4-17-64.

851,479. UM AND DESIGN. Xerox Corporation, assignee of University Microfilms, Inc. SN 240,991. Pub. 4-9-68. Filed 3-14-66.

851,480. LUTHERAN WHEAT RIDGE. Walther League. SN 264,264. Pub. 4-9-68. Filed 2-8-67.

851,481. GARDEN CHATTER. Hallmark Cards, Incorporated. SN 267,251. Pub. 4-9-68. Filed 8-21-67.

851,482. METALS/MATERIALS TODAY. American Society for Metals. SN 268,932. Pub. 4-9-68. Filed 4-12-67.

851,483. VASPA ETC. AND DESIGN. Lebhar-Friedman Publications, Inc. SN 270,396. Pub. 4-9-68. Filed 5-1-67.

851,484. KNOW YOUR WORLD. Xerox Corporation. SN 270,447. Pub. 4-9-68. Filed 5-1-67.

851,485. DOUGLAS VAN DORN AND DESIGN. Douglas-Van Dorn, Ltd. SN 272,818. Pub. 4-9-68. Filed 6-1-67.

851,486. OPTI-COPY. Western Blue Print Company. SN 273,705. Pub. 4-9-68. Filed 6-12-67.

851,487. INDUSTRIAL RESEARCH. Industrial Research, Inc. SN 274,122. Pub. 4-9-68. Filed 6-2-67.

851,488. BANTAM MATRIX. Bantam Books, Inc. SN 276,085. Pub. 4-9-68. Filed 7-17-67.

851,489. UG UNITED GROCERS AND DESIGN. United Grocers, Ltd. SN 277,320. Pub. 4-9-68. Filed 8-1-67.

Class 39 — Clothing

851,256. (See Class 3 for this trademark.)

851,490. JESSE JEANS LEAN WESTERN STYLE ETC. AND DESIGN. Stadium Manufacturing Co., Inc. SN 263,623. Pub. 4-9-68. Filed 1-30-67.

851,491. SPORT-TEX AND DESIGN. Spring City Knitting Company. SN 264,606. Pub. 10-31-67. Filed 2-13-67.

851,492. ELAYNE. Elayne A. Wieder and Beatrice S. Wieder (partnership). SN 267,211. Pub. 4-9-68. Filed 3-20-67.

851,493. DON MANUEL. Sunshine Originals of Miami, Inc. SN 269,470. Pub. 4-9-68. Filed 4-18-67.

851,494. BILL BRUCE SHOES. Elbert C. Stepp 2nd, d.b.a. Bill Bruce Shoes. SN 269,803. Pub. 4-9-68. Filed 4-21-67.

851,495. S.R.O. Caressa, Inc., assignee of Charles River Shoes, Inc. SN 271,340. Pub. 1-30-68. Filed 5-12-67.

851,496. DE MANUSO. Howard Stores Corporation. SN 271,369. Pub. 4-9-68. Filed 5-12-67.

851,497. FEDERICO PIO AND DESIGN. Styles by Seymour, Inc. SN 271,542. Pub. 4-9-68. Filed 5-15-67.

851,498. MR. ANDREW. Factory Outlet Shoes of Kansas, Inc. SN 272,716. Pub. 4-9-68. Filed 5-31-67.

851,499. TRULEURS. Levoy's Inc. SN 273,509. Pub. 4-9-68. Filed 6-9-67.

851,500. FLUSHABYE. Facelle Company Limited. SN 273,751. Pub. 4-9-68. Filed 6-13-67.

851,501. DIVING GIRL (DESIGN). Jantzen Inc. SN 276,072. Pub. 3-26-68. Filed 7-17-67.

851,502. MAVERICK. Blue Bell, Inc., assignee of J. W. Carter Company. SN 280,509. Pub. 4-9-68. Filed 9-18-67.

851,503. B-X. Chadbourn Gotham, Inc. SN 284,612. Pub. 4-9-68. Filed 11-13-67.

851,504. B. J. NETHERTON ETC. AND DESIGN. A. S. Beck Shoe Corporation. SN 284,982. Pub. 4-9-68. Filed 11-16-67.

851,505. PLAYTEX. International Playtex Corporation. SN 288,154. Pub. 4-9-68. Filed 12-26-67.

851,506. SODA-SET AND DESIGN. Aimcee Wholesale Corporation. SN 288,908. Pub. 4-9-68. Filed 1-16-68.

Class 40 — Fancy Goods, Furnishings, and Notions

851,507. LARRY MATHEWS. Mathews Hair Products, Inc. SN 278,811. Pub. 4-9-68. Filed 8-22-67.

Class 41 — Canes, Parasols, and Umbrellas

851,508. LONDON FOG. The Londontown Manufacturing Company. SN 273,967. Pub. 4-9-68. Filed 6-15-67.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

851,339. (See Class 20 for this trademark.)

851,509. MICROTEX. Joseph Bancroft & Sons Co. SN 262,473. Pub. 4-9-68. Filed 1-13-67.

851,510. SOIL-OUT. Beaunit Corporation. SN 274,172. Pub. 4-9-68. Filed 6-19-67.

851,511. TRAVEL SHRUNK. Abney Mills. SN 275,987. Pub. 4-9-68. Filed 7-14-67.

851,512. SOFTEE. Glen Mfg. Inc. SN 278,296. Pub. 4-9-68. Filed 8-15-67.

851,513. TUFFRAN. Ruson Davco, Inc. SN 279,218. Pub. 4-9-68. Filed 8-28-67.

851,514. W AND DESIGN. Wyandotte Industries Corporation. SN 279,428. Pub. 4-9-68. Filed 8-30-67.

Class 43 — Thread and Yarn

851,515. ORTALION. Bemberg S.p.A. SN 278,659. Pub. 4-9-68. Filed 8-21-67.

Class 44 — Dental, Medical, and Surgical Appliances

851,516. V.I.P. AND DESIGN. Profit-Mor Equipment Co., Inc., d.b.a. P-M Products. SN 245,755. Pub. 4-9-68. Filed 5-16-66.

851,517. 21ST CENTURY MASSAGE. Edmond Bordeaux Szekely, d.b.a. Twenty-First Century Products Co. SN 256,983. Pub. 4-9-68. Filed 10-21-66.

851,518. RETELAST. Manifatture Enzo Bernucci & Fratelli. SN 258,311. Pub. 4-9-68. Filed 11-9-66.

851,519. MARK 6. Bird Space Technology, Inc. SN 258,481. Pub. 1-2-68. Filed 11-14-66.

851,520. MARK 2/6. Bird Space Technology, Inc. SN 258,482. Pub. 1-2-68. Filed 11-14-66.

851,521. MARK 2. Bird Space Technology, Inc. SN 258,483. Pub. 1-2-68. Filed 11-14-66.

851,522. SSK AND DESIGN. S. S. Kresge Company. SN 274,070. Pub. 4-9-68. Filed 6-16-67.

851,523. APOLLO. Taiyo Electronics Corporation. SN 275,705. Pub. 4-9-68. Filed 7-10-67.

851,524. MINALATOR. Medco Products Company, Inc. SN 277,194. Pub. 4-9-68. Filed 7-31-67.

Class 45 — Soft Drinks and Carbonated Waters

851,525. PASSIONA. Cottee's Limited. SN 237,820. Pub. 4-9-68. Filed 2-2-66.

851,526. HIGH ROCK. High Rock Ginger Ale Co. SN 278,694. Pub. 4-9-68. Filed 8-21-67.

851,527. QUIN-JIN. V. & E. Kohnstamm, Inc. SN 279,303. Pub. 4-9-68. Filed 8-29-67.

851,528. RED RIDING HOOD. J. F. Lazier Manufacturing Co., d.b.a. J. F. Lazier Mfg. Co. SN 279,308. Pub. 4-9-68. Filed 8-29-67.

851,529. SPLURGE. Pola-Rona, Inc. SN 279,409. Pub. 4-9-68. Filed 8-30-67.

851,530. ESCO AND DESIGN. Eng-Skell Company. SN 284,133. Pub. 4-9-68. Filed 11-6-67.

851,531. SNO-POP. Eng-Skell Company. SN 284,135. Pub. 4-9-68. Filed 11-6-67.

Class 46 — Foods and Ingredients of Foods

851,322. (See Class 18 for this trademark.)

851,532. WESTMAN AND DESIGN. Westman Commission Company. SN 215,149. Pub. 4-9-68. Filed S.R. 3-29-65; Am. P.R. 10-31-66.

851,533. PARAMOUNT. Hirsch Bros. & Co., Inc. SN 243,134. Pub. 4-9-68. Filed 4-11-66.

851,534. ORIBAI AND DESIGN. Jose Maria Legarda Alonso. SN 244,292. Pub. 4-9-68. Filed 4-26-66.

851,535. HI FOLKS! "THE BEST DRESSED TURKEY IN TOWN" AND DESIGN. Uebelhack Turkey Farm. SN 245,431. Pub. 4-9-68. Filed 5-11-66.

851,536. SUPER-MOL. National Molasses Company. SN 247,613. Pub. 4-9-68. Filed 6-8-66.

851,537. BENDICKS BITTERMINTS. Bendicks (Mayfair) Limited. SN 250,131. Pub. 4-9-68. Filed 7-13-66.

851,538. COACH-HOUSE. Anderson, Clayton & Co. SN 251,593. Pub. 4-9-68. Filed 8-3-66.

851,539. CLAUDEL AND GIRL DESIGN. Claudel. SN 254,674. Pub. 4-9-68. Filed 9-19-66.

851,540. EMBASSY AND DESIGN. The Southland Corporation. SN 259,480. Pub. 4-9-68. Filed 11-25-66.

851,541. GLORIA. C. Pappas Company, Inc. SN 263,286. Pub. 4-9-68. Filed 1-25-67.

851,542. QUEEN OF THE VALLEY. Anthony Guerriero, d.b.a. A. Guerriero. SN 264,208. Pub. 4-9-68. Filed 2-8-67.

851,543. CONLEY'S. National Sea Products Limited, by merger from National Sea Products Limited. SN 265,323. Pub. 4-9-68. Filed 2-23-67.

851,544. BIMINI. Sumter Dairies, Inc. SN 265,353. Pub. 4-9-68. Filed 2-23-67.

851,545. BUNKY BAIT AND DESIGN. Haynie Products, Inc. SN 268,737. Pub. 4-9-68. Filed 4-10-67.

851,546. MERRYBERRY. Rhodia Inc. SN 269,348. Pub. 4-9-68. Filed 4-17-67.

851,547. BALLARD. The Pillsbury Company. SN 269,447. Pub. 4-9-68. Filed 4-18-67.

851,548. FF LITTLE FOSTER AND DESIGN. Meyenberg Milk Products, Inc. SN 270,739. Pub. 4-9-68. Filed 5-5-67.

851,549. WESSA. Wessanen's Koninklijke Fabrieken N.V. SN 270,990. Pub. 4-9-68. Filed 5-8-67.

851,550. MINERAL KIST. Forrest D. Hill, d.b.a. Hereford Produce Company. SN 271,366. Pub. 4-9-68. Filed 5-12-67.

851,551. WHITE FENCE FARMS. Hales & Hunter Co. SN 271,703. Pub. 4-9-68. Filed 5-17-67.

851,552. CHARKO SLIVERS AND DESIGN. Gro-Kote!, Inc., d.b.a. Gro-Kote, Inc. SN 272,722. Pub. 4-9-68. Filed 5-31-67.

851,553. FAVORITE AND DESIGN. A. Bertolla & Sons. SN 272,799. Pub. 4-9-68. Filed 6-1-67.

851,554. CROWN'S DRESSUP AND DESIGN. Crown Food Products, Inc. SN 272,812. Pub. 4-9-68. Filed 6-1-67.

851,555. MR. GOODBAR. Hershey Foods Corporation, by change of name from Hershey Chocolate Corporation. SN 273,278. Pub. 4-9-68. Filed 6-7-67.

851,556. G GUITTARD AND DESIGN. Guittard Chocolate Co. SN 273,396. Pub. 4-9-68. Filed 6-8-67.

851,557. FOREST FRUIT. Mille-Lacs M-P Co., d.b.a. Mille Lacs Maple Products, Mille Lacs Maple Corp., and Mille Lacs Maple Products Corporation. SN 273,515. Pub. 4-9-68. Filed 6-9-67.

851,558. FLOW COATED. Central Soya Company, Inc. SN 273,601. Pub. 4-9-68. Filed 6-12-67.

851,559. TODD'S OLD VIRGINIA. The E. M. Todd Company. SN 273,812. Pub. 4-9-68. Filed 6-13-67.

851,560. WESSANEN. Wessanen's Koninklijke Fabrieken N.V. SN 274,798. Pub. 4-9-68. Filed 6-26-67.

851,561. SWEETHEART. M. Pagano & Sons, Inc. SN 277,374. Pub. 4-9-68. Filed 8-2-67.

851,562. TAILSPINNERS. Helen Saatzer. SN 277,386. Pub. 4-9-68. Filed 8-2-67.

851,563. ALLEVE. Carnation Company, d.b.a. Albers Milling Company. SN 277,436. Pub. 4-9-68. Filed 8-3-67.

851,564. TJ. Duffy-Mott Company, Inc. SN 279,542. Pub. 4-9-68. Filed 9-1-67.

851,565. GOLDEN T-BIRD. Jerome Foods, Inc. SN 282,331. Pub. 4-9-68. Filed 10-12-67.

851,566. GOLDEN CHEF. Jerome Foods, Inc. SN 282,332. Pub. 4-9-68. Filed 10-12-67.

851,567. CRUNCH BERRIES. The Quaker Oats Company. SN 283,072. Pub. 4-9-68. Filed 10-23-67.

851,568. CHOICE OF SEA AND DESIGN. Prospect Enterprises, Inc., d.b.a. Prospect Enterprises. SN 284,878. Pub. 4-9-68. Filed 11-15-67.

851,569. REGAL RED. A. M. Macheca & Co. SN 285,170. Pub. 4-9-68. Filed 11-20-67.

851,570. SWEET BREW. Ralston Purina Company. SN 287,210. Pub. 4-9-68. Filed 12-19-67.

851,571. GROTESQUE HUMAN FACE (DESIGN). Campbell Soup Company. SN 288,254. Pub. 4-9-68. Filed 1-8-68.

851,572. GROTESQUE HUMAN FACE (DESIGN). Campbell Soup Company. SN 288,255. Pub. 4-9-68. Filed 1-8-68.

851,573. GROTESQUE HUMAN FACE (DESIGN). Campbell Soup Company. SN 288,256. Pub. 4-9-68. Filed 1-8-68.

851,574. SUGARAINS. General Mills, Inc. SN 289,056. Pub. 4-9-68. Filed 1-18-68.

851,575. MISS DIETWORTH. Lever Brothers Company. SN 289,227. Pub. 4-9-68. Filed 1-18-68.

851,576. MAYWOOD. Maywood Packing Company. SN 289,451. Pub. 4-9-68. Filed 1-24-68.

Class 47 — Wines

851,577. DIESTRO. Jaime Fernandez Diestro, S.A. MULTIPLE CLASS (Classes 47 and 49). SN 263,072. Pub. 4-9-68. Filed 1-23-67.

851,578. STING RAY. Michigan Wineries, Inc. SN 277,583. Pub. 4-9-68. Filed 7-6-67.

851,579. MISCELLANEOUS DESIGN. Michigan Wineries, Inc. SN 277,584. Pub. 4-9-68. Filed 7-6-67.

Class 49 — Distilled Alcoholic Liquors

851,577. (See Class 47 for this trademark.)

851,580. PLYMOUTH. Coates & Co. (Plymouth) Limited. SN 272,916. Pub. 4-9-68. Filed 6-2-67.

851,581. EL GORDO. John Gross & Co. SN 278,066. Pub. 4-9-68. Filed 6-5-67.

851,582. SOUR BELLY. John Gross & Co. SN 278,067. Pub. 4-9-68. Filed 6-5-67.

851,583. CANADIAN PRIDE. Canadian Schenley Distilleries, Ltd. SN 277,981. Pub. 4-9-68. Filed 8-10-67.

Class 50 — Merchandise Not Otherwise Classified

851,584. FOTO CUBE. Foto-Cube, Inc., assignee of Ebnersons Associates. SN 245,815. Pub. 4-9-68. Filed 5-17-66.

851,585. EXTRUDO. Raven Industries, Inc. SN 256,374. Pub. 4-9-68. Filed 10-13-66.

851,586. VULCAN 714. Reeves Brothers, Inc. SN 268,336. Pub. 4-9-68. Filed 4-4-67.

851,587. VY-GUARD. Morgan Adhesives Company. SN 279,667. Pub. 4-9-68. Filed 9-5-67.

Class 51 — Cosmetics and Toilet Preparations

851,588. SNAPPER. Yardley of London, Inc., d.b.a. Yardley. SN 243,055. Pub. 4-9-68. Filed 4-8-66.

851,589. LATE LATE. Yardley of London, Inc., d.b.a. Yardley. SN 243,056. Pub. 4-9-68. Filed 4-8-66.

851,590. DOUBLE HELPING. Chadbourn Gotham, Inc. SN 264,024. Pub. 4-9-68. Filed 2-6-67.

851,591. TOTAL BEAUTY. American Home Products Corporation. SN 264,711. Pub. 12-19-67. Filed 2-15-67.

851,592. HOSHI. Chas. Pfizer & Co., Inc. SN 266,681. Pub. 4-9-68. Filed 3-14-67.

851,593. HITARI. Chas. Pfizer & Co., Inc. SN 266,682. Pub. 4-9-68. Filed 3-14-67.

851,594. MASUMI. Chas. Pfizer & Co., Inc. SN 266,683. Pub. 4-9-68. Filed 3-14-67.

851,595. CREME SIMON. Laboratoires de Beaute Simon. SN 267,254. Pub. 4-9-68. Filed 3-21-67.

851,596. FROST LIME. The J. B. Williams Company, Inc. SN 269,134. Pub. 4-9-68. Filed 4-13-67.

851,597. THE MISTY BLONDES. Helene Curtis Industries, Inc. SN 272,927. Pub. 4-9-68. Filed 6-2-67.

851,598. T.L.C. Polychem Corporation. SN 274,343. Pub. 4-9-68. Filed 6-20-67.

851,599. JUVARE. Juvare, Inc. MULTIPLE CLASS (Classes 51 and 52). SN 277,324. Pub. 4-9-68. Filed 8-2-67.

851,600. RAZOR/EASE. Razor/Ease Inc., assignee of Henry M. Finn. SN 281,977. Pub. 4-9-68. Filed 10-6-67.

851,601. WOLFF FRERES. Wolff Freres, Inc. SN 285,806. Pub. 4-9-68. Filed 11-29-67.

851,602. LANVINETTE. Lanvin-Charles of the Ritz, Inc. SN 285,890. Pub. 4-9-68. Filed 11-30-67.

851,603. IF YOU DARE. Ar. Winarick, Inc. SN 288,990. Pub. 4-9-68. Filed 1-17-68.

Class 52 — Detergents and Soaps

851,599. (See Class 51 for this trademark.)

851,604. PENETRIX. Spramor Corporation of America. SN 256,481. Pub. 2-20-68. Filed 10-14-66.

851,605. TAKE OVER. Clairol Incorporated. SN 271,344. Pub. 4–9–68. Filed 5–12–67.

851,606. ISOPREP. Allied Research Products, Inc. SN 271,579. Pub. 2–20–68. Filed 5–16–67.

851,607. ITALIAN MARBLE. Manufacturers Marketing Co., U.S.A., Inc. SN 276,754. Pub. 4–9–68. Filed 7–25–67.

851,608. SARI. Manufacturers Marketing Co., U.S.A., Inc. SN 276,755. Pub. 4–9–68. Filed 7–25–67.

851,609. PC & E SAFE CHEMICALS AND DESIGN. Photofabrication Chemical and Equipment Company. SN 277,293. Pub. 4–9–68. Filed 8–1–67.

851,610. 92. Photofabrication Chemical and Equipment Company. SN 277,294. Pub. 4–9–68. Filed 8–1–67.

851,611. 13/LS. Photofabrication Chemical and Equipment Company. SN 277,295. Pub. 4–9–68. Filed 8–1–67.

851,612. 909. Photofabrication Chemical and Equipment Company. SN 277,296. Pub. 4–9–68. Filed 8–1–67.

851,613. ROMANA. The Hewitt Soap Company, Inc. SN 283,389. Pub. 4–9–68. Filed 10–26–67.

Service Marks

Class 100 — Miscellaneous

851,614. SHINING BROW. W. H. Keland. SN 242,732. Pub. 4–9–68. Filed 4–5–66.

851,615. CRP. Petty Geophysical Engineering Company. SN 250,683. Pub. 4–9–68. Filed 7–20–66.

851,616. ASSOCIATION OF TEMPORARY PERSONAL CONTRACTORS, INC. AND DESIGN. Association of Temporary Personnel Contractors, Inc. SN 251,990. Pub. 4–9–68. Filed 8–9–66.

851,617. TAC. The Architects Collaborative, Inc. SN 256,712. Pub. 4–9–68. Filed 10–19–66.

851,618. MISCELLANEOUS DESIGN. General Oceanographics, Inc. SN 266,222. Pub. 4–9–68. Filed 3–8–67.

851,619. CHICKEN CHAMP AND DESIGN. Chicken Champ International, Inc. SN 268,702. Pub. 4–9–68. Filed 4–10–67.

851,620. BFI B. FREUDENBERG INC. B. Freudenberg Inc. MULTIPLE CLASS (Classes 100, 101, and 103). SN 269,844. Pub. 4–9–68. Filed 4–24–67.

851,621. HOLIDAY INN OF AMERICA. Holiday Inns of America, Inc. SN 273,399. Pub. 4–9–68. Filed 6–8–67.

851,622. HOLIDAY INNS OF AMERICA. Holiday Inns of America, Inc. SN 273,400. Pub. 4–9–68. Filed 6–8–67.

Class 101 — Advertising and Business

851,620. (See Class 100 for this trademark.)

851,623. J. O. FRANKLIN & SONS THERE'S FAME IN THE NAME. J. O. Franklin, Jr., d.b.a. J. O. Franklin & Sons. SN 242,123. Pub. 4–9–68. Filed 3–29–66.

851,624. MISCELLANEOUS DESIGN. Capcomp, Inc. SN 245,563. Pub. 4–9–68. Filed 5–13–66.

851,625. FRANCHISE-ALL. James J. Foltz, d.b.a. Franchise-All Company. SN 252,561. Pub. 4–9–68. Filed 8–17–66.

851,626. COLONIAL COTTAGE AND DESIGN. Minute Man Dairy Stores, Inc. SN 253,230. Pub. 4–9–68. Filed 8–26–66.

851,627. POPCAST. Recording Materials & Supplies Corporation. SN 255,231. Pub. 4–9–68. Filed 9–27–66.

851,628. "TOGETHER WE BUILD A GREATER NORTH DAKOTA !" AND DESIGN. Greater North Dakota Association, North Dakota State Chamber of Commerce. SN 258,102. Pub. 4–9–68. Filed 11–7–66.

851,629. SD AND DESIGN. Security Dynamics Investment Corporation. SN 263,614. Pub. 4–9–68. Filed 1–30–67.

851,630. NDC AND DESIGN. National Dividend Club, Inc. SN 263,935. Pub. 4–9–68. Filed 2–3–67.

851,631. SP AND DESIGN. Satterwhite Printing Company, Inc. SN 265,848. Pub. 4–9–68. Filed 3–2–67.

851,632. BLOCKADE RUNNERS AND DESIGN. Blockade Runners, Inc. SN 267,002. Pub. 4–9–68. Filed 3–17–67.

851,633. THE GARDEN LIVING INDUSTRIES OF THE EASTERN UNITED STATES. New York State Nurserymen's Association, Inc. SN 267,348. Pub. 4–9–68. Filed 3–22–67.

851,634. MARQUETTE. Marquette Corporation. SN 274,077. Pub. 4–9–68. Filed 6–16–67.

Class 102 — Insurance and Financial

851,635. KEYCHECKS. Keystone Custodian Funds, Inc. SN 266,551. Pub. 4–9–68. Filed 3–13–67.

851,636. EQUILIFE. Equitable Life Insurance Company. SN 274,506. Pub. 4–9–68. Filed 6–22–67.

851,637. CONVENIENCE CORNER. Harris Trust and Savings Bank. SN 286,794. Pub. 4–9–68. Filed 12–13–67.

Class 103 — Construction and Repair

851,620. (See Class 100 for this trademark.)

851,638. QUALIFIED SERVICE CENTER AND DESIGN. Walker Manufacturing Company. SN 254,825. Pub. 4–9–68. Filed 9–20–66.

851,639. AAA AND DESIGN. AAA Pipe Cleaning Corp. SN 256,335. Pub. 4–9–68. Filed 10–13–66.

851,640. PMI AND DESIGN. P.M.I. Corporation. SN 264,092. Pub. 12–5–67. Filed 2–6–67.

851,641. THE CAN-DO SHOP AND DESIGN. Cole National Corporation. MULTIPLE CLASS (Classes 103 and 106). SN 266,201. Pub. 4–9–68. Filed 3–8–67.

851,642. DREAM POOLS. Perry Manufacturing Corporation. SN 267,264. Pub. 4–9–68. Filed 3–21–67.

Class 104 — Communication

851,643. INFO-COM. The Western Union Telegraph Company. SN 272,125. Pub. 4–9–68. Filed 5–22–67.

Class 105 — Transportation and Storage

851,644. AIRWAYS LEASING. Airways Rent-A-Car System. SN 232,051. Pub. 4–9–68. Filed 11–3–65.

851,645. TRANS CARIBBEAN AIRWAYS AND DESIGN. Trans Caribbean Airways, Inc. SN 262,075. Pub. 4–9–68. Filed 1–6–67.

851,646. SHIP VIA CROUCH BROS. INC. CB FASTEST BY LAND AND DESIGN. Crouch Bros., Inc. SN 270,759. Pub. 4–9–68. Filed 5–5–67.

Class 106 — Material Treatment

851,641. (See Class 103 for this trademark.)

Class 107 — Education and Entertainment

851,647. THE ROBERT A. TAFT INSTITUTE OF GOVERNMENT. The Robert A. Taft Institute of Government. SN 243,730. Pub. 4–9–68. Filed 4–18–66.

851,648. AIA AUTOMATION INSTITUTE OF AMERICA AND DESIGN. C-E-I-R, Inc. SN 243,772. Pub. 4–9–68. Filed 4–19–66.

851,649. GENCO. Kepner-Tregoe and Associates, Inc. SN 246,983. Pub. 4–9–68. Filed 6–1–66.

851,650. PIGSKIN PLAYBACK. Charles L. Getz, Jr. SN 249,975. Pub. 4–9–68. Filed 7–11–66.

851,651. BULLDOGS. Continental Fooball Club of Philadelphia, Inc., d.b.a. Philadelphia Bulldogs. SN 254,376. Pub. 4–9–68. Filed 9–13–66.

851,652. WHERE THE TIME OF YOUR LIFE IS RIGHT UNDER YOUR NOSE. Your Father's Mustache International, Inc., by change of name from Warrenton Restaurant, Inc. SN 255,840. Pub. 4–9–68. Filed 10–5–66.

851,653. STRAWBERRY BOWL. William H. Wachter. SN 273,703. Pub. 4–9–68. Filed 6–12–67.

851,654. FANCIFUL DOLLAR (DESIGN). Leadership Techniques Institute, Inc. SN 287,485. Pub. 4–9–68. Filed 12–26–67.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 1 — Raw or Partly Prepared Materials

851,655. Asbestospray Corp., Newark, N.J. SN 257,548. Filed 10–28–66.

ASBESTOSPRAY

For Acoustic and Thermal Insulating Fibers (Int. Cl. 17).
First use Dec. 29, 1949.

Class 12 — Construction Materials

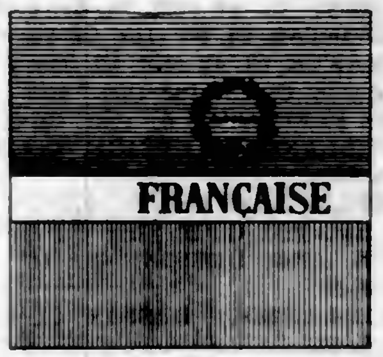
851,656. Young Door Company, Inc., Plymouth, Ind. SN 276,200. Filed P.R. 7–17–67 ; Am. S.R. 4–12–68.

SILENTFOLD

For Folding Door Units (Int. Cl. 19).
First use Jan. 26, 1967.

Class 17 — Tobacco Products

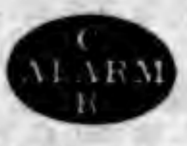
851,657. Service d'Exploitation Industrielle des Tabacs et Allumettes, Baltimore, Md. SN 265,741. Filed P.R. 3–1–67 ; Am. S.R. 3–14–68.



The mark is lined for the colors red, blue, and gold. Owner of French Reg. No. 709,292, dated Apr. 20, 1966.
For Cigarettes (Int. Cl. 34).

Class 21 — Electrical Apparatus, Machines, and Supplies

851,658. Frank M. Perelman, d.b.a. Packaged Modular Components Co., Los Angeles, Calif. SN 259,573. Filed P.R. 11–28–66 ; Am. S.R. 4–22–68.



For Alarm Systems for Automobiles (Int. Cl. 9).
First use Apr. 14, 1965.

Class 26 — Measuring and Scientific Appliances

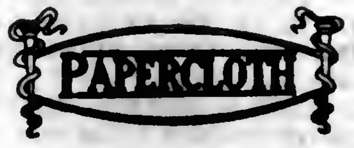
851,659. Libby's Camera Co., Chicago, Ill. SN 222,039. Filed P.R. 6–25–65 ; Am. S.R. 4–6–68.

CARRYPAC

For Package or Carrying Case Containing Camera, Flash Bulbs, Film, Lenses and Accessories.
First use Nov. 15, 1964.

Class 37 — Paper and Stationery

851,660. Clearprint Paper Company, Inc., d.b.a. Clearprint Paper Co., Emeryville, Calif. SN 262,568. Filed P.R. 1–16–67 ; Am. S.R. 4–24–68.



For Tracing Paper (Int. Cl. 16).
First use June 1, 1946.

Class 38 — Prints and Publications

851,661. H. S. Crocker Co., Inc., San Bruno, Calif. SN 253,423. Filed P.R. 8–30–66 ; Am. S.R. 4–25–68.

the TALL BOOK of
San Francisco

For Travel and Guide Books Published From Time to Time (Int. Cl. 16).
First use Aug. 9, 1966.

851,662. Gorman Publishing Co., Chicago, Ill. SN 260,841. Filed P.R. 12–15–66 ; Am. S.R. 5–3–68.

BAKERY PRODUCTION
AND MARKETING

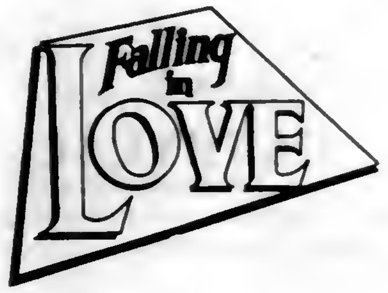
For Trade Magazine Published Monthly (Int. Cl. 16).
First use Sept. 19, 1966.

851,663. The American Journal of Economics and Sociology, Inc., New York, N.Y. SN 273,732. Filed P.R. 6-13-67; Am. S.R. 4-30-68.

THE AMERICAN JOURNAL OF ECONOMICS AND SOCIOLOGY

For Quarterly Periodical or Magazine in the Social Sciences (Int. Cl. 16).
First use Oct. 28, 1941.

851,664. National Periodical Publications, Inc., New York, N.Y. SN 286,237. Filed P.R. 12-5-67; Am. S.R. 4-9-68.

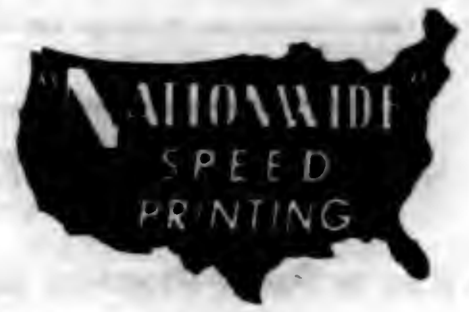


For Comic Magazine (Int. Cl. 16).
First use July 14, 1955.

Service Marks

Class 101 — Advertising and Business

851,665. Nationwide Speed Printing, Bloomington, Ill. SN 277,200. Filed P.R. 7-31-67; Am. S.R. 4-15-68.



For Printing Services (Int. Cl. 35).
First use Apr. 5, 1967.

Class 103 — Construction and Repair

851,666. Pat Griffin Co., Fort Collins, Colo. SN 281,470. Filed 9-29-67.

THE WORLD'S BEST SERVICE
Your Own!

For Self-Service Gasoline Stations (Int. Cl. 37).
First use Sept. 27, 1963.

TRADEMARK REGISTRATIONS RENEWED

32,036. UNION PACIFIC OVERLAND ETC. AND DESIGN. Cl. 19 (Int. Cl. 12). 10-4-1898.
68,512. "WHITE BEAR" ETC. AND DESIGN. Cl. 46 (Int. Cl. 29). 4-14-08.
68,531. "THE CASTLE BRAND" AND REPRESENTATION OF CASTLE. Cl. 46 (Int. Cl. 29). 4-14-08.
68,697. HERALDIC DRAGON (DESIGN). Cl. 42 (Int. Cl. 24). 4-21-08.
68,731. PS STUBS. Cl. 23 (Int. Cl. 8). 4-28-08.
68,793. GEM. Cl. 43 (Int. Cl. 23). 4-28-08.
69,092. SHIELD-SHAPED DESIGN. Cl. 48 (Int. Cl. 31). 5-19-08.
70,228. SIRENO. Cl. 23 (Int. Cl. 9). 8-11-08.
229,494. NOWY SWIAT THE POLISH MORNING WORLD. Cl. 38 (Int. Cl. 16). 6-28-27.
237,743. VICTOPAC. Cl. 35 (Int. Cl. 17). 1-17-28.
240,070. "S" AND REPRESENTATION OF ANCHOR. Cl. 6 (Int. Cl. 1). 3-20-28.
240,193. "SEA HAWK" ETC. AND DESIGN. Cl. 46 (Int. Cl. 29). 3-20-28.
240,257. DODGE. Cl. 23 (Int. Cl. 7). 3-20-28.
240,574. RAMON ALLONES. Cl. 17 (Int. Cl. 34). 4-3-28.
241,490. REPRESENTATION OF BLUE DIAMOND ON ORANGE BACKGROUND. Cl. 6 (Int. Cl. 1). 5-1-28.
241,979. BLUE RIBBON. Cl. 21 (Int. Cls. 7, 9, and 11). 5-8-28.
241,985. "BLUE RIBBON" ETC. AND CIRCULAR DESIGN. Cl. 21 (Int. Cl. 9). 5-8-28.
242,517. FLORA MIR. Cl. 46 (Int. Cls. 29 and 30). 5-29-28.
243,181. "SUNDAY DINNER PRODUCTS" ETC. AND ORNAMENTAL DESIGN. Cl. 46 (Int. Cl. 29). 6-12-28.
244,545. "AGFA" AND DESIGN. Cl. 26 (Int. Cl. 9). 7-17-28.
245,185. REPRESENTATION OF A LEAF AND DESIGN. Cl. 38 (Int. Cl. 16). 8-7-28.
245,626. HELIANE. Cl. 17 (Int. Cl. 34). 8-21-28.
245,851. GOLDEN GIRL. Cl. 45 (Int. Cl. 32). 8-21-28.
246,499. "OTIS" AND DESIGN. Cl. 15 (Int. Cl. 4). 9-11-28.
246,744. OILATUM. Cl. 18 (Int. Cl. 5). 9-11-28.
246,911. GRAND CANYON. Cl. 42 (Int. Cl. 24). 9-18-28.
246,950. SILVER BOW. Cl. 46 (Int. Cl. 30). 9-18-28.
247,027. "THE GRAY LINE." Cl. 38 (Int. Cl. 16). 9-18-28.
247,580. CHALLENGE. Cl. 46 (Int. Cl. 29). 10-2-28.
247,877. WE THEY. Cl. 22 (Int. Cl. 16). 10-9-28.
248,035. LEXIDE. Cl. 50 (Int. Cl. 17). 10-16-28.
436,661. MELDORIS. Cl. 51 (Int. Cls. 3 and 5). 2-17-48.
438,316. PUROCELL. Cl. 1 (Int. Cl. 1). 4-13-48.
438,407. "NU-HEX." Cl. 13 (Int. Cl. 6). 4-20-48.
438,595. TELEVISTAS. Cl. 38 (Int. Cl. 16). 5-4-48.
438,714. ROOMAKER. Cl. 42 (Int. Cl. 24). 5-11-48.
438,973. KARBATE. Cl. 23 (Int. Cls. 7 and 11). 5-25-48.
439,005. TROIS FLEURS. Cl. 51 (Int. Cl. 3). 6-1-48.
439,028. MISCELLANEOUS DESIGN. Cl. 14 (Int. Cl. 6). 6-1-48.
439,130. SUPERLA. Cl. 15 (Int. Cl. 4). 6-1-48.
439,374. CYCLEMATIC. Cl. 23 (Int. Cl. 7). 6-22-48.
439,697. ESTEE AND DESIGN. Cl. 46 (Int. Cl. 30). 7-13-48.
439,701. MISCELLANEOUS DESIGN. Cl. 14 (Int. Cl. 6). 7-13-48.
439,715. TRIDENT. Cl. 14 (Int. Cl. 6). 7-13-48.
439,858. ALTOIDS. Cl. 18 (Int. Cl. 5). 7-27-48.
440,181. BI-SICLE (BUILT FOR TWO). Cl. 46 (Int. Cls. 30 and 32). 8-17-48.
440,293. GOLDEN DAWN. Cl. 46 (Int. Cls. 29, 30, and 32). 8-24-48.
440,488. EVERGREEN (DESIGN). Cl. 37 (Int. Cl. 16). 9-7-48.
440,722. PSI AND DESIGN. Cl. 13 (Int. Cl. 6). 9-21-48.
441,002. JACK DANIEL'S. Cl. 49 (Int. Cl. 33). 10-12-48.
441,086. LORD FRANCIS AND DESIGN. Cl. 3 (Int. Cl. 18). 10-19-48.
500,064. TALCO. Cl. 46 (Int. Cl. 31). 4-13-48.
500,108. VICKY VAUGHN. Cl. 39 (Int. Cl. 25). 4-20-48.
500,142. RUTASCORB. Cl. 18 (Int. Cl. 5). 4-27-48.
500,211. LUBALOY. Cl. 9 (Int. Cl. 13). 5-11-48.
500,218. VITACRILIC. Cl. 44 (Int. Cl. 5). 5-11-48.
500,251. DORODOL. Cl. 18 (Int. Cl. 5). 5-11-48.
500,252. DIATRAEGUS. Cl. 18 (Int. Cl. 5). 5-11-48.
500,286. O-CEDAR. Cl. 52 (Int. Cl. 3). 5-11-48.
500,346. PAR GOLFER. Cl. 39 (Int. Cl. 25). 5-11-48.
500,809. PRECALCIN. Cl. 18 (Int. Cl. 5). 7-6-48.

500,952. SENGBUSCH. Cl. 37 (Int. Cl. 16). 7-13-48.
501,181. CLARIN. Cl. 32 (Int. Cl. 20). 7-27-48.
501,182. ILG AND DESIGN. Cl. 34 (Int. Cl. 11). 7-27-48.
501,189. BELDEN. Cl. 21 (Int. Cl. 9). 7-27-48.
501,300. THEOGLYCINATE. Cl. 18 (Int. Cl. 5). 8-3-48.
501,443. HORLACHER. Cl. 48 (Int. Cl. 32). 8-10-48.
501,449. REDWOOD EMPIRE AND DESIGN. Cl. 46 (Int. Cl. 31). 8-10-48.
501,461. PINE BUDS. Cl. 52 (Int. Cl. 3). 8-10-48.
501,515. VOGUE KNITTING BOOK. Cl. 38 (Int. Cl. 16). 8-10-48.
501,591. HENDRYX. Cl. 3 (Int. Cl. 18). 8-17-48.
501,607. PANDORA. Cl. 43 (Int. Cl. 23). 8-17-48.
501,670. FABRILITE. Cl. 42 (Int. Cl. 24). 8-17-48.
501,756. JOCKEY AND DESIGN. Cl. 46 (Int. Cl. 31). 8-24-48.
501,805. ISIS. Cl. 46 (Int. Cl. 30). 8-24-48.
501,981. BELLEWOOD. Cl. 46 (Int. Cl. 30). 9-7-48.
501,998. KOWLYK. Cl. 46 (Int. Cl. 31). 9-7-48.
502,055. JEWETT. Cl. 36 (Int. Cl. 15). 9-14-48.
502,058. ALL BEE. Cl. 18 (Int. Cl. 5). 9-14-48.
502,067. VULCA. Cl. 6 (Int. Cls. 1 and 5). 9-14-48.
502,073. LENZ AND DESIGN. Cl. 21 (Int. Cl. 9). 9-14-48.
502,078. ANNIVERSARY. Cl. 28 (Int. Cl. 14). 9-14-48.
502,086. WINKLER. Cl. 34 (Int. Cl. 11). 9-14-48.
502,367. VEG-ALL. Cl. 46 (Int. Cl. 29). 9-21-48.
502,382. QUIK FIX. Cl. 6 (Int. Cl. 17). 9-21-48.
502,446. KLEAN SHYNE. Cl. 52 (Int. Cl. 3). 9-28-48.
502,453. EVERITE. Cl. 52 (Int. Cl. 1). 9-28-48.
502,502. TMAL-PAC. Cl. 44 (Int. Cl. 10). 9-28-48.
502,587. APOLLO. Cl. 52 (Int. Cl. 3). 9-28-48.
502,779. POWER DOME. Cl. 23 (Int. Cl. 7). 10-12-48.
502,797. DUTCH MASTERS. Cl. 17 (Int. Cl. 34). 10-12-48.
502,868. CLASSIC LADY. Cl. 39 (Int. Cl. 25). 10-12-48.
502,889. SCHAEFER. Cl. 48 (Int. Cl. 32). 10-12-48.
502,894. BEAUCLAIR. Cl. 47 (Int. Cl. 33). 10-12-48.
502,895. BEAUMONT. Cl. 47 (Int. Cl. 33). 10-12-48.
502,901. HADLEY. Cl. 39 (Int. Cl. 25). 10-12-48.
502,909. REFRESHABLE. Cl. 39 (Int. Cl. 25). 10-12-48.
503,055. WEEDAR. Cl. 6 (Int. Cl. 5). 10-19-48.
503,077. KIMWIPES. Cl. 37 (Int. Cl. 16). 10-19-48.
503,286. DISHTERGENT. Cl. 52 (Int. Cl. 3). 10-19-48.

TRADEMARK REGISTRATIONS CANCELED

Section 8

The following registrations issued May 8, 1962

730,976. P PRUDEN-HIGHCLIFF COALS ETC. AND DESIGN. Cl. 1.
730,981. SUN-GLO AND DESIGN. Cl. 1.
730,982. EMERALD COAL AND DESIGN. Cl. 1.
730,983. SILHOUETTE REPRESENTATION OF HERCULES. Cl. 1.
730,985. WORM HAY. Cl. 1.
730,987. CONTINENTAL. Cl. 1.
730,994. DE ROCHEMONT. Cl. 3.
730,999. UNIDISPERS. Cl. 6.
731,000. UNIMICRON. Cl. 6.
731,001. CROMOSPERS. Cl. 6.
731,004. ABRAC. Cl. 6.
731,019. TRIO. Cl. 6.
731,021. CYQUEST. Cl. 6.
731,023. TRACE. Cl. 6.
731,029. RIW AND DESIGN. Cl. 12.
731,031. SANDALITE. Cl. 12.
731,032. PAR-GRIP. Cl. 12.
731,034. SILHOUETTE REPRESENTATION OF HERCULES. Cl. 12.
731,036. DUCTITE. Cl. 12.
731,041. VINYLBOND. Cl. 13.
731,047. STA-LUM. Cl. 13.
731,048. WATERFLEX. Cl. 13.
731,049. LAVFLEX. Cl. 13.
731,058. CHEMWELD. Cl. 16.
731,064. SINOPAX. Cl. 18.
731,067. LUPULENE. Cl. 18.
731,071. RAUDIPRAL. Cl. 18.
731,073. KETROBARB. Cl. 18.
731,075. VERSIDYNE. Cl. 18.
731,080. SILHOUETTE REPRESENTATION OF HERCULES. Cl. 21.
731,081. SAT-O-LOOP AND DESIGN. Cl. 22.
731,082. VETRA-PUTT. Cl. 22.
731,084. JET-SKI. Cl. 22.
731,085. BUBBLE BOARD. Cl. 22.
731,086. TRAV-L-BINGAROO. Cl. 22.
731,088. AMIGOS AND DESIGN. Cl. 22.
731,091. HEDDA GET BEDDA. Cl. 22.
731,092. LEVACAST. Cl. 22.
731,093. OAKSEE OAKEE AND HUMAN CARICATURES. Cl. 22.
731,096. NIEUCHESS. Cl. 22.
731,097. PSYCHO PLUG LURE. Cl. 22.
731,100. SPORTSMAN'S INC. ETC. AND DESIGN. Cl. 22.
731,102. PAD-E-PALS. Cl. 22.
731,103. MR. BIG. Cl. 22.
731,106. TOP TEN PINS AND DESIGN. Cl. 22.
731,114. ADCO. Cl. 22.
731,115. ARCADIA. Cl. 22.
731,116. WHIRL-A-PAINT. Cl. 22.
731,117. SPACE WHIRLER. Cl. 22.
731,119. COLOR-ALONG. Cl. 22.
731,121. DIAMOND PLUS. Cl. 23.
731,122. KOFFEE KART. Cl. 23.
731,129. IDENT-A-MATIC. Cl. 23.
731,130. VO-AG. Cl. 23.
731,131. FELLER-MATIC. Cl. 23.
731,136. AMIGO. Cl. 28.
731,146. PHOTO COATER. Cl. 26.
731,147. INEA. Cl. 27.
731,154. INDESIT. Cl. 31.
731,155. GUARDSMAN SUPERTRED. Cl. 35.
731,160. SCOR-VUE. Cl. 37.
731,163. D'AR FI. Cl. 37.
731,165. SILHOUETTE REPRESENTATION OF HERCULES. Cl. 37.
731,170. SHRINK-PAK. Cl. 37.
731,172. PROFIT-WISE PRODUCTION. Cl. 38.
731,173. MONEY TALKS. Cl. 38.
731,174. KRUGER AND DESIGN. Cl. 38.
731,176. THE LUMBER JOURNAL. Cl. 38.
731,178. CONSOGAS NEWS. Cl. 38.
731,181. AROUND THE BLOCK WITH DUNC & LOO. Cl. 38.
731,185. DIAMOND FLASHES AND DESIGN. Cl. 38.
731,189. HUSH-A-BYE AND DESIGN. Cl. 39.
731,190. GLENCAIRN. Cl. 39.
731,194. ROCKALL AND DESIGN. Cl. 39.
731,195. MARV-O-STEP. Cl. 39.
731,197. KERRY KNIT AND DESIGN. Cl. 39.
731,199. MARQUESA D' ITALIA. Cl. 39.
731,201. SPOOK-TOWN. Cl. 39.
731,202. FROST MASTER. Cl. 39.
731,203. HOPPITY BY SIMPLEX. Cl. 39.
731,205. HEM-O-TAN. Cl. 39.
731,207. VULCA-TITE. Cl. 39.
731,216. HUSH-A-BYE. Cl. 42.
731,220. VULCOFOAM. Cl. 42.
731,222. CREPELAN AND DESIGN. Cl. 42.
731,224. STYN-STRETCH. Cl. 42.
731,225. SPARKLE-LAINE. Cl. 43.
731,231. NEW YORKER AND DESIGN. Cl. 45.
731,232. A-C-RO. Cl. 45.
731,233. CEROLA. Cl. 45.
731,237. BIRS T AND DESIGN. Cl. 46.
731,242. TASTY+VEND. Cl. 46.
731,246. PAN CRISP BRAND. Cl. 46.
731,248. DAISY-CREST. Cl. 46.
731,255. MACBETH'S SCOTCH PIPER AND DESIGN. Cl. 49.
731,258. NAIL DRI AND DESIGN. Cl. 51.
731,270. TANAGRA. Cl. 51.
731,278. DEEDEE. Cl. 52.
731,283. SERVO-CHEMERGIC. Cl. 52.
731,287. GOTIT. Cl. 52.
731,290. SPACE AGE. Cl. 52.
731,292. MANGINEERING. Cl. 100.

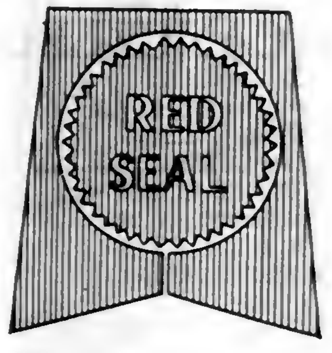
731,298. QUICK-SAVE. Cl. 101.
731,300. IN GOD WE TRUST U.B.C.A. IN SHIELD DESIGN. Cl. 102.
731,302. INGRAM. Cl. 103.
731,303. TRANS-AMERICAN REFRIGERATED SERVICES. Cl. 105.
731,308. ONE O'CLOCK CLUB. Cl. 107.
731,311. THE HARMONICA RASCALS. Cl. 107.
731,316. FIRST IN FASHION CRAFTSMANSHIP. Cl. 3.
731,320. VESTRY-LITE. Cl. 21.
731,323. FIRST IN FASHION CRAFTSMANSHIP. Cl. 28.
731,324. FIRST IN FASHION CRAFTSMANSHIP. Cl. 39.
731,325. FRENCH KNIT AND DESIGN. Cl. 39.
731,326. YOKEBACKS. Cl. 39.

Section 18

242,227. "SWEETARTS" ETC. AND DESIGN. Cl. 46. 5-15-28.
528,416. WHITE STAR AND REPRESENTATION OF A STAR AND DESIGN. Cl. 21. 8-1-50.
658,292. WHITE STAR. Cl. 34. 2-11-58.
820,793. THE UNCRUSHABLES. Cl. 39. 12-20-66.

TRADEMARK REGISTRATIONS AMENDED, DISCLAIMED, CORRECTED, ETC.

110,843. RED SEAL AND DESIGN. Cl. 45. 6-13-16. Warner Jenkinson Manufacturing Company, St. Louis, Mo. Amended to appear:



429,582. WOODEE. Cl. 52. 5-6-47. Windsor Wax Company, Inc., Hoboken, N.J. Corrected: In the certificate, line 5, and in the statement, column 1, line 4, "New Jersey" should be deleted and *New York* should be inserted.

430,241. WOODEE. Cl. 4. 6-10-47. Windsor Wax Company, Inc., Hoboken, N.J. Corrected: In the certificate, line 5 and in the statement, column 1, line 4, "New Jersey" should be deleted and *New York* should be inserted.

501,262. SS-C. Cl. 6. 7-27-48. Philadelphia Quartz Company, Philadelphia, Pa. Amended: In the statement, column 1, line 5, after "Pennsylvania" *, now located at Public Ledger Bldg., Independence Square, Philadelphia, Pa. 19106* is inserted and in line 7, "silicate of soda" is deleted and ***sodium silicate*** is inserted.

575,408. WINGED CHEVRON. Cl. 38. 6-9-53. Standard Oil Company of California, San Francisco, Calif. Amended to appear:

CHEVRON

741,258. AP AND REPRESENTATION OF AN EYE AND CROWN. Cl. 26. 11-27-62. Asahi Kogaku Kogyo Kabushiki Kaisha, doing business as Asahi Optical Industry Co., Ltd., Tokyo, Japan. Corrected: In the statement, column 1, line 6, before "adapter" ***photographic cameras, telescopes, binoculars, and lenses, parts of aforementioned articles,*** should be inserted and in column 2, line 8, after "editors" ***and exposure meters*** should be inserted.

744,617. CRAFTLINE. Cl. 12. 2-5-63. Dealers Window Corporation, Toledo, Ohio. Corrected: In the statement, column 1, line 1, "Dealer's" should be deleted and ***Dealers*** should be inserted.

779,174. TOR. Cl. 52. 10-27-64. Huntington Laboratories, Inc., Huntington, Ind. Amended to appear:

TOR

842,173. NU CREST. Cl. 46. 1-9-68. Paul M. Cooter, doing business as The Cooter Company, Atherton, Calif. Corrected: In the statement, column 2, line 1, the description of goods should be deleted and ***canned fruit and vegetables, preserves and jellies, fruit juices and vegetable juices, canned meats, dehydrated fruits*** should be inserted.

844,110. KUSTOM. Cl. 36. 2-13-68. Ross, Inc., Chanute, Kans. Corrected: In the statement, column 2, line 3, before "and" ***and electric guitars*** should be inserted.

845,393. MOLDOMAT. Cl. 23. 3-5-68. William Gluck, doing business as Gluco, Monroeville, Pa. Corrected: In the statement, column 1, line 3, "15139" should be deleted and ***15146*** should be inserted.

INDEX OF REGISTRANTS

JUNE 25, 1968

(Registered; Renewed; Canceled; Amended, Disclaimed, Corrected, etc.; New Certificates; 12c Publications.)

A & B Games, San Diego, Calif. 731,088, canc. Cl. 22.
AAA Pipe Cleaning Corp., Cleveland, Ohio. 851,639, pub. 4-9-68. Cl. 103.
AMP Inc., Harrisburg, Pa. 851,361, pub. 4-9-68. Cl. 21.
A-M-R Chemical Co., Inc., Brooklyn, N.Y. 731,258, canc. Cl. 51.
A/S Bergenhus Canning Co.: *See*—
  Braadland, John.
  A/S Einar Hausvik & Co.
A/S Einer Hausvik & Co., to A/S Bergenhus Canning Co., Bergen, Norway. 240,193, ren. 6-25-68. Cl. 46.
Abba-Fyrtornet AB: *See*—
  Aktiebolaget Sveriges Forenade Konservfabriker.
Abbott Laboratories, d.b.a. Ross Laboratories, Chicago, Ill. 851,321, pub. 4-9-68. Cl. 18.
Abney Mills, Greenwood, S.C. 851,511, pub. 4-9-68. Cl. 42.
Acerola Corp., The, Toa Baja, Puerto Rico. 731,232-3, canc. Cl. 45.
Adco, Inc., Sedalia, Mo. 502,446, ren. 6-25-68. Cl. 52.
Agfa-Gevaert Aktiengesellschaft: *See*—
  I.G. Farbenindustrie Aktiengesellschaft.
Aimcee Wholesale Corp., New York, N.Y. 851,506, pub. 4-9-68. Cl. 39.
Airways Rent-A-Car System, Los Angeles, Calif. 851,644, pub. 4-9-68. Cl. 105.
Aktiebolaget Sveriges Forenade Konservfabriker, Gottenborg, to Abba-Fyrtornet AB, Stockholm, Sweden. 68,531, ren. 6-25-68. Cl. 46.
Albers Milling Co.: *See*—
  Carnation Co.
Alexander Doll Co., Inc., d.b.a. Madame Alexander, New York, N.Y. 851,373, pub. 4-9-68. Cl. 22.
Alexander Doll Co., Inc., d.b.a. Madame Alexander, New York, N.Y. 851,384, pub. 4-9-68. Cl. 22.
Allied Chemical Corp.: *See*—
  Solvay Process Co., The.
Allied Compositions Co., Inc., Maspeth, N.Y. 851,278, pub. 4-9-68. Cl. 12.
Allied Research Products, Inc., Baltimore, Md. 851,606, pub. 2-20-68. Cl. 52.
Alonso, Jose M. L., Bilbao, Spain. 851,534, pub. 4-9-68. Cl. 46.
Aluminum Co. of America, Pittsburgh, Pa. 851,336, pub. 4-9-68. Cl. 19.
Amchem Products, Inc.: *See*—
  American Chemical Paint Co.
American Biltrite Rubber Co., Inc., Trenton, N.J. 851,341, pub. 4-9-68. Cl. 20.
American Chemical Paint Co., to Amchem Products, Inc., Ambler, Pa. 503,055, ren. 6-25-68. Cl. 6.
American Cyanamid Co., New York, N.Y. 731,021, canc. Cl. 6.
American Cyanamid Co., Wayne, N.J. 851,254, pub. 4-9-68. Cl. 1.
American Doll & Toy Corp., Brooklyn, N.Y. 731,091, canc. Cl. 22.
American Home Products Corp., New York, N.Y. 851,591, pub. 12-19-67. Cl. 51.
American Hospital Supply Corp.: *See*—
  Staunt, Martin.
American Hospital Supply Corp., Evanston, Ill. 851,354, pub. 4-9-68. Cl. 21.
American Hospital Supply Corp., Evanston, Ill., from Dade Reagents, Inc., Miami, Fla. 851,421-2, pub. 4-9-68. Cl. 26.
American Journal of Economics and Sociology, Inc., The, New York, N.Y. 851,663. Cl. 38.
American Machine & Foundry Co., New York, N.Y. 731,058, canc. Cl. 16.
American Oil Co., The: *See*—
  Standard Oil Co.
American Society for Metals, Metals Park, Ohio. 851,482, pub. 4-9-68. Cl. 38.
American Thread Co., The, New York, N.Y. 68,793, ren. 6-25-68. Cl. 43.
Amicon Corp., Lexington, Mass. 851,259, pub. 4-9-68. Cl. 5.
Amrawco: *See*—
  Craft, Richard A.
Anderson, Clayton & Co., Dallas, Tex. 851,538, pub. 4-9-68. Cl. 46.
Anheuser-Busch Brewing Assn., to Anheuser-Busch, Inc., St. Louis, Mo. 69,092, ren. 6-25-68. Cl. 48.
Anheuser-Busch, Inc.: *See*—
  Anheuser-Busch Brewing Assn.
Ans, Inc.: *See*—
  Ansitron, Inc.
Ansitron, Inc., from Ans, Inc., Huntington, N.Y. 851,418, pub. 4-9-68. Cl. 26.
Arcadia Doll Co., Inc., New York, N.Y. 731,114-5, canc. Cl. 22.
Architects Collaborative, Inc., The, Cambridge, Mass. 851,617, pub. 4-9-68. Cl. 100.
Asahi Kogaku Kogyo Kabushiki Kaisha, d.b.a. Asahi Optical Industry Co., Ltd., Tokyo, Japan. 741,258, cor. Cl. 26.
Asbestospray Corp., Newark, N.J. 851,655. Cl. 1.
Ashland Oil & Refining Co., Ashland, Ky. 851,302, pub. 10-31-67. Cl. 15.
Associated Importers, San Francisco, Calif. 851,356, pub. 4-9-68. Cl. 21.
Association of Temporary Personnel Contractors, Inc., New York, N.Y. 851,616, pub. 4-9-68. Cl. 100.
Atlantic Lures, Inc., Providence, R.I. 851,380, pub. 4-9-68. Cl. 22.
Atlas Tool & Mfg. Co., St. Louis, Mo. 851,392, pub. 4-9-68. Cl. 23.
Audiscan Inc., Bellevue, Wash. 851,432, pub. 4-9-68. Cl. 26.
Austria Tabakwerke Aktiengesellschaft Vorm. Oesterreichische Tabakregie: *See*—
  General-Direktion der Osterr. Tabakregie.
Avalon Hill Co., The, Baltimore, Md. 731,096, canc. Cl. 22.
B & B Electronics Corp., Gardena, Calif. 851,367, pub. 4-9-68. Cl. 21.
Baldwin-Gegenheimer Corp., Stamford, Conn. 851,430, pub. 4-9-68. Cl. 26.
Bancroft, Joseph, & Sons Co., Rockford, Wilmington, Del. 851,509, pub. 4-9-68. Cl. 42.
Bantam Books, Inc., New York, N.Y. 851,488, pub. 4-9-68. Cl. 38.
Barnes, Bramley: *See*—
  Pyro Foam Corp.
Bates Mfg. Co., The, Orange, N.J. 851,294, pub. 4-9-68. Multiple Class (Classes 13 and 23).
Baxter Laboratories, Inc., Morton Grove, Ill. 731,073, canc. Cl. 18.
Bearfoot Airway Corp., Wadsworth, Ohio. 851,386, pub. 4-9-68. Cl. 23.
Beaulieu Vineyard, San Francisco, Calif. 502,894-5, ren. 6-25-68. Cl. 47.
Beaunit Corp., New York, N.Y. 851,510, pub. 4-9-68. Cl. 42.
Beck, A. S., Shoe Corp., New York, N.Y. 851,504, pub. 4-9-68. Cl. 39.
Beer, Donald A. E., d.b.a. Essex Game Co., New York, N.Y. 851,385, pub. 4-9-68. Cl. 22.
Bel-Art Products, Pequannock, N.J. 851,304, pub. 4-9-68. Cl. 15.
Belden Corp.: *See*—
  Belden Mfg. Co.
Belden Mfg. Co., to Belden Corp., Chicago, Ill. 501,189, ren. 6-25-68. Cl. 21.
Bell Hospital Systems, Inc., Bridgeport, Conn. 851,364, pub. 4-9-68. Cl. 21.
Bellows Co., The, Akron, Ohio, to International Basic Economy Corp., New York, N.Y. 502,779, ren. 6-25-68. Cl. 28.
Bemberg S.p.A., Milan, Italy. 851,515, pub. 4-9-68. Cl. 43.
Bendicks (Mayfair) Ltd., Winchester, Hampshire, England. 851,537, pub. 4-9-68. Cl. 46.
Bendix Corp., The, Dayton, Ohio. 851,404, pub. 4-9-68. Cl. 23.
Bernat, Emile, & Sons Co., Jamaica Plain, Mass. 731,225, canc. Cl. 43.
Bertolla, A., & Sons, Loxley, Ala. 851,553, pub. 4-9-68. Cl. 46.
Beseler, Charles, Co., East Orange, N.J. 851,433, pub. 4-9-68. Cl. 26.
Big Boy Mfg. Co., Inc., Burbank, Calif. 851,381, pub. 4-9-68. Cl. 22.
Bird Space Technology, Inc., Palm Springs, Calif. 851,519-21, pub. 1-2-68. Cl. 44.
Birs Beteiligungs- und Verwaltungsgesellschaft AG, Basel, Switzerland. 731,237, canc. Cl. 46.
Blakeslee, C. Scott, d.b.a. C. Scott Blakeslee & Associates, Grand Rapids, Mich. 731,086, canc. Cl. 22.
Blakeslee, C. Scott, & Associates: *See*—
  Blakeslee, C. Scott.
Blask, Maxwell A., d.b.a. Personal Stationery Co., San Francisco, Calif., to The United States Playing Card Co., Cincinnati, Ohio. 247,877, ren. 6-25-68. Cl. 22.
Blockade Runners, Inc., Atlanta, Ga. 851,632, pub. 4-9-68. Cl. 101.
Blue Bell, Inc., Greensboro, N.C., from J. W. Carter Co., Nashville, Tenn. 851,502, pub. 4-9-68. Cl. 39.
Blue Diamond Coal Co., Knoxville, Tenn. 730,982, canc. Cl. 1.
Blue, John, Co., Inc.: *See*—
  Subscription Television, Inc.
Boake, A., Roberts & Co. Ltd., London, England. 731,004, canc. Cl. 6.
Borg-Warner Corp., Chicago, Ill. 528,416, canc. Cl. 21.
Borg-Warner Corp., Chicago, Ill. 658,292, canc. Cl. 34.
Bowers, Albert R., d.b.a. Power Pneumatics Co., Bristol, Tenn. 851,390, pub. 4-9-68. Cl. 23.
Bowker & Budd Ltd., Bosham, England. 731,194, canc. Cl. 39.
Boysen, Walter N., Co.: *See*—
  Chew-Grow Coatings Inc.
Braadland, John, Stavanger, to A/S Bergenhus Canning Co., Bergen, Norway. 68,512, ren. 6-25-68. Cl. 46.
Bradley, Milton, Co., Springfield, Mass. 851,377-9, pub. 4-9-68. Cl. 22.
Brayten Pharmaceutical Co., to Chattem Drug & Chemical Co., d.b.a. Brayten Pharmaceutical Co., Chattanooga, Tenn. 501,300, ren. 6-25-68. Cl. 18.
Bristol-Myers Co., New York, N.Y. 851,316, pub. 4-9-68. Cl. 18.
Broadcasting Publications, Inc., Washington, D.C. 438,595, ren. 6-25-68. Cl. 38.

Bruce, Bill, Shoes : *See—*
Stepp, Elbert C., II.
Bruck Tackle & Mfg. Co., Portland, Oreg. 851,383, pub. 4–9–68. Cl. 22.
Brumbach, John D. : *See—*
Davis & Gatterall.
Buckeye Cellulose Corp., The : *See—*
Traders Oil Mill Co.
Buckley, Newhall Co., The, New York, to John Mullins & Sons, Inc., d.b.a. The Buckley Newhall Co., Brooklyn, N.Y. 241,979, ren. 6–25–68. Cl. 21.
Buckley, Newhall Co., The, New York, to John Mullins & Sons, Inc., d.b.a. The Buckley Newhall Co., Brooklyn, N.Y. 241,985, ren. 6–25–68. Cl. 21.
Buckman Laboratories, Inc., Memphis, Tenn. 851,263, pub. 4–9–68. Cl. 6.
Buffalo Courier-Express, Inc., Buffalo, N.Y. 851,478, pub. 4–9–68. Cl. 38.
Buffington's Inc., Worcester, Mass., to Crookes-Barnes Laboratories, Inc., Wayne, N.J. 500,251–2, ren. 6–25–68. Cl. 18.
Bullard Co., The, Bridgeport, Conn. 731,172, canc. Cl. 38.
Bulova Watch Co., Inc., Flushing, N.Y. 851,439, pub. 4–9–68. Cl. 27.
Burnham Corp., Irvington-on-Hudson, N.Y. 841,283, pub. 4–9–68. Cl. 12.
C & B Silo Co., Charlotte, Mich. 851,285–6, pub. 4–9–68. Cl. 12.
C-E-I-R, Inc., Washington, D.C. 851,648, pub. 4–9–68. Cl. 107.
California Bleaching Water Co., San Francisco, to L.C.F., Inc., Los Angeles, Calif. 247,580, ren. 6–25–68. Cl. 46.
California Systems Components, Inc., Northridge, Calif. 851,353, pub. 4–9–68. Multiple Class (Classes 21 and 26).
Campbell Soup Co., Camden, N.J. 851,571–3, pub. 4–9–68. Cl. 46.
Canadian Schenley Distilleries, Ltd., Quebec, Canada. 851,583, pub. 4–9–68. Cl. 49.
Capcomp, Inc., Washington, D.C. 851,624, pub. 4–9–68. Cl. 101.
Caressa, Inc., Miami, Fla., from Charles River Shoes, Inc., Everett, Mass. 851,495, pub. 1–30–68. Cl. 39.
Carnation Co., d.b.a. Albers Milling Co., Los Angeles, Calif. 851,563, pub. 4–9–68. Cl. 46.
Carp's, Inc., St. Louis, Mo. 731,197, canc. Cl. 39.
Carrier Corp., Syracuse, N.Y. 851,393, pub. 4–9–68. Cl. 23.
Carter, J. W., Co. : *See—*
Blue Bell, Inc.
Cashmere Corp. of America, The, Cleveland, Ohio, to The Hadley Corp., Weaverville, N.C. 502,901, ren. 6–25–68. Cl. 39.
Cedar Rapids Shredding Co., Inc., Cedar Rapids, Iowa. 730,985, canc. Cl. 1.
Central D Mfg. Co., Culver City, Calif. 731,048–9, canc. Cl. 13.
Central Soya Co., Inc., Fort Wayne, Ind. 851,315, pub. 4–9–68. Cl. 18.
Central Soya Co., Inc., Fort Wayne, Ind. 851,558, pub. 4–9–68. Cl. 46.
Chadbourn Gotham, Inc., Charlotte, N.C. 851,503, pub. 4–9–68. Cl. 39.
Chadbourn Gotham, Inc., Charlotte, N.C. 851,590, pub. 4–9–68. Cl. 51.
Chance, A. B., Co., Centralia, from Pitman Mfg. Co., Grandview, Mo. 851,406, pub. 4–9–68. Cl. 23.
Charles River Shoes, Inc. : *See—*
Caressa, Inc.
Chatham Pharmaceuticals, Inc., Newark, N.J. 851,318–9, pub. 4–9–68. Cl. 18.
Chattem Drug & Chemical Co. : *See—*
Brayten Pharmaceutical Co.
Chemie Grunenthal G.m.b.H., Rhineland, Germany. 851,320, pub. 4–9–68. Cl. 18.
Chesebrough-Pond's Inc., New York, N.Y. 851,323, pub. 4–9–68. Cl. 18.
Chicken Champ International, Inc., New York, N.Y. 851,619, pub. 4–9–68. Cl. 100.
Ciba Corp., d.b.a. The Gland-O-Lac Co., New York, N.Y. 851,314, pub. 4–9–68. Cl. 18.
Ciba Ltd., Basle, Switzerland. 730,999, canc. Cl. 6.
Ciba Ltd., Basle, Switzerland. 731,000–1, canc. Cl. 6.
Cifuentes Pego y Compania, Havana, Cuba, to Cifuentes y Compania, Madrid, Spain. 240,574, ren. 6–25–68. Cl. 17.
Cifuentes y Compania : *See—*
Cifuentes Pego y Compania.
Clairol Inc., New York, N.Y. 851,605, pub. 4–9–68. Cl. 52.
Clarin Mfg. Co., Chicago, Ill. 501,181, ren. 6–25–68. Cl. 32.
Clark Equipment Co., Buchanan, Mich. 851,453, pub. 4–9–68. Cl. 31.
Clark Equipment Co., Buchanan, Mich. 851,455, pub. 4–9–68. Cl. 32.
Claudel, Paris, France. 851,539, pub. 4–9–68. Cl. 46.
Clearprint Paper Co. : *See—*
Clearprint Paper Co., Inc.
Clearprint Paper Co., Inc., d.b.a. Clearprint Paper Co., Emeryville, Calif. 851,660. Cl. 37.
Coates & Co. (Plymouth) Ltd., Plymouth, England. 851,580, pub. 4–9–68. Cl. 49.
Cole National Corp., Cleveland, Ohio. 851,641, pub. 4–9–68. Multiple Class (Classes 103 and 106).
Color-Along Co., Salem, Va. 731,119, canc. Cl. 22.
Colorguard Corp., New York, N.Y. 731,041, canc. Cl. 13.
Colt Mfg. Co., Inc., Winneconne, Wis. 851,387–8, pub. 2–27–68. Cl. 23.
Concrete Plank Co., Inc., Arlington, N.J. 851,288, pub. 4–9–68. Cl. 12.
Conde Nast Publications Inc., The, New York, N.Y. 501,515, ren. 6–25–68. Cl. 38.
Congoleum-Nairn Inc., Kearny, N.J. 851,342–5, pub. 4–9–68. Cl. 20.
Consogas, Inc., Madison, Wis. 731,178, canc. Cl. 38.
Consolidated Cigar Corp., New York, N.Y. 502,797, ren. 6–25–68. Cl. 17.
Consolidated Foods Corp. : *See—*
Lowe, Joe, Corp.
Constantine Dress Co., Boston, Mass. 502,868, ren. 6–25–68. Cl. 39.
Continental Football Club of Philadelphia, Inc., d.b.a. Philadelphia Bulldogs, Philadelphia, Pa. 851,651, pub. 4–9–68. Cl. 107.
Continental Oil Co., Ponca City, Okla. 851,303, pub. 12–12–67. Cl. 15.
Cool-Ray, Inc., Chelsea, Mass. 851,420, pub. 4–9–68. Cl. 26.
Cooter, Paul M., d.b.a. The Cooter Co., Atherton, Calif. 842,173, cor. Cl. 46.
Coro, Inc., Providence, R.I. 851,446, pub. 4–9–68. Cl. 28.
Cory Corp., Chicago, Ill. 851,458, pub. 4–9–68. Cl. 33.
Cottee's Ltd., New South Wales, Australia. 851,525, pub. 4–9–68. Cl. 45.
Craft, Richard A., d.b.a. Amrawco, Lyons, Ill. 851,466, pub. 4–9–68. Cl. 36.
Crawford Fitting Co., Solon, Ohio. 851,296, pub. 4–9–68. Cl. 13.
Crocker, H. S., Co., Inc., San Bruno, Calif. 851,661. Cl. 38.
Crookes-Barnes Laboratories, Inc. : *See—*
Buffington's Inc.
Crop King Co. : *See—*
Woods Industries, Inc.
Crouch Bros., Inc., Elwood, Kans. 851,646, pub. 4–9–68. Cl. 105.
Crown Food Products, Inc., Atlanta, Ga. 851,554, pub. 4–9–68. Cl. 46.
Crown Rubber Co., Fremont, Ohio. 731,220, canc. Cl. 42.
Curtis, Helene, Industries, Inc., Chicago, Ill. 851,597, pub. 4–9–68. Cl. 51.
Curwood, Inc., New London, Wis. 851,475, pub. 4–9–68. Cl. 37.
Custom Farms, Inc., Trenton, N.J. 731,248, canc. Cl. 46.
Dade Reagents, Inc. : *See—*
American Hospital Supply Corp.
Dana Corp. : *See—*
Victor Mfg. & Gasket Co.
Daniel, Jack, Distillery, Lem Motlow, Prop., Inc., Lynchburg, Tenn. 441,002, ren. 6–25–68. Cl. 49.
D'Ar Fi Co. : *See—*
D'Arcy, Thomas E.
D'Arcy, Thomas E., d.b.a. The D'Ar Fi Co., Denver, Colo. 731,163, canc. Cl. 37.
Davis & Gatterall, New York, N.Y., from J. D. Brumbach, Reading, Pa. 731,189, canc. Cl. 39.
Davis & Catterall, New York, N.Y. 731,216, canc. Cl. 42.
De Mert & Dougherty, Inc., Chicago, Ill. 731,278, canc. Cl. 52.
Dealers Window Corp., Toledo, Ohio. 744,617, cor. Cl. 12.
Dell Publishing Co., Inc., New York, N.Y. 731,181, canc. Cl. 38.
Demco : *See—*
Slocum, Gerald W.
Dermal Laboratories Ltd., London, England. 851,310, pub. 2–20–68. Cl. 18.
Dermik Laboratories, Inc., Syosset, N.Y. 851,470, pub. 4–9–68. Cl. 37.
Diamond Alkali Co. : *See—*
Diamond Shamrock Corp.
Diamond Laboratories, Inc., Des Moines, Iowa. 851,322, pub. 4–9–68. Multiple Class (Classes 18 and 46).
Diamond Shamrock Corp., Cleveland, Ohio. 851,269, pub. 4–9–68. Cl. 6.
Diamond Shamrock Corp., from Diamond Alkali Co., Cleveland, Ohio. 851,271, pub. 4–9–68. Cl. 10.
Diestro, Jaime Fernandez, S.A., Cadiz, Spain. 851,577, pub. 4–9–68. Multiple Class (Classes 47 and 49).
Digital Data Systems, Inc., Houston, Tex. 851,371, pub. 4–9–68. Cl. 21.
Digital Data Systems, Inc., Houston, Tex. 851,437, pub. 4–9–68. Cl. 26.
Diversey Corp., The, Chicago, Ill. 502,453, ren. 6–25–68. Cl. 52.
Dodge Mfg. Corp., Mishawaka, Ind., and Oneida, N.Y., to The Reliance Electric and Engineering Co., Euclid, Ohio. 240,257, ren. 6–25–68. Cl. 23.
Dominion Magnesium Ltd., Ontario, Canada. 439,028, ren. 6–25–68. Cl. 14.
Douglas-Van Dorn, Ltd., Baltimore, Md. 851,485, pub. 4–9–68. Cl. 38.
Drackett Co., The : *See—*
O-Cedar Corp'n.
Du Pont de Nemours, E. I., & Co., Wilmington, Del., to Stauffer Chemical Co., New York, N.Y. 501,670, ren. 6–25–68. Cl. 42.
Duffy-Mott Co., Inc., New York, N.Y. 851,564, pub. 4–9–68. Cl. 46.
Duncan, J. Ralph, Abilene, Tex. 851,281, pub. 4–9–68. Cl. 12.
Dura Corp., from Dura Corp., Oak Park, Mich. 851,389, pub. 8–29–67. Cl. 23.
Dynamit Nobel Aktiengesellschaft, Troisdorf, Germany. 851,255, pub. 4–9–68. Cl. 1.
Eastern Products Corp., Baltimore, Md. 851,300, pub. 4–9–68. Cl. 13.
Eberle, J. N., & Cie, G.m.b.H., Augsburg, Germany. 731,147, canc. Cl. 27.
Ebnersons Associates : *See—*
Foto-Cube, Inc.
Eico Electronic Instrument Co., Inc., Flushing, N.Y. 851,350, pub. 4–9–68. Multiple Class (Classes 21 and 36).
Elgar Electronics Corp., San Diego, Calif. 851,351, pub. 4–9–68. Cl. 21.
El-Tronics, Inc., Warren, Pa. 731,320, canc. Cl. 21.

Emerson Electric Co., St. Louis, Mo. 851,462, pub. 4–9–68. Cl. 34.
Engelhorn, John, & Sons, Newark, N.J. 731,246, canc. Cl. 46.
Eng-Skell Co., San Francisco, Calif. 851,530–1, pub. 4–9–68. Cl. 45.
Enterprise Aluminum Co., The, Massillon, Ohio. 731,047, canc. Cl. 13.
Equitable Life Insurance Co., Washington, D.C. 851,636, pub. 4–9–68. Cl. 102.
Essex Game Co. : *See—*
Beer, Donald A. E.
Estee Candy Co., New York, N.Y., to Estee Candy Co., Inc., Palisades Park, N.J. 439,697, ren. 6–25–68. Cl. 46.
Estee Candy Co., Inc. : *See—*
Estee Candy Co.
Ex/Static Chemical Corp., Columbus, Ohio. 851,258, pub. 4–9–68. Cl. 4.
Facelle Co. Ltd., Toronto, Ontario, Canada. 851,500, pub. 4–9–68. Cl. 39.
Factory Outlet Shoes of Kansas, Inc., Wichita, Kans. 851,498, pub. 4–9–68. Cl. 39.
Federal Intermediate Credit Bank of St. Paul, St. Paul, Minn. 851,477, pub. 4–9–68. Cl. 37.
Feldt Mfg. Co., Inc., Dallas, Tex. 731,326, canc. Cl. 39.
Feller Jones Corp., New York, N.Y. 731,131, canc. Cl. 23.
Fenwick Products, Inc., Long Beach, Calif. 851,374, pub. 4–9–68. Cl. 22.
Filper Corp., San Ramon, Calif. 851,397–8, pub. 4–9–68. Cl. 23.
Finger Furniture Co., Inc., Houston, Tex. 851,339, pub. 4–9–68. Multiple Class (Classes 20, 21, 24, 32, 34, and 42).
Finn, Henry M. : *See—*
Razor/Ease Inc.
Fischbach & Moore, Inc. : *See—*
Johnson Service Co.
Fletcher Paper Co., Alpena, Mich. 851,429, pub. 4–9–68. Cl. 26.
Flora Mir Candy Corp. : *See—*
Flora Mir Candy Shop.
Flora Mir Candy Shop, to Flora Mir Candy Corp., Brooklyn, N.Y. 242,517, ren. 6–25–68. Cl. 46.
Foltz, James J., d.b.a. Franchise-All Co., Pittsburgh, Pa. 851,625, pub. 4–9–68. Cl. 101.
Ford Products Co., Pawtucket, R.I. 731,106, canc. Cl. 22.
Forest Fiber Products Co., Forest Grove, Oreg. 731,031, canc. Cl. 12.
Foto-Cube, Inc., from Ebnersons Associates, Chelmsford, Mass. 851,584, pub. 4–9–68. Cl. 50.
Franchise-All Co. : *See—*
Foltz, James J.
Franklin, J. O., Jr., d.b.a. Franklin & Sons, Milwaukee, Wis. 851,623, pub. 4–9–68. Cl. 101.
Franklin & Sons : *See—*
Franklin, J. O., Jr.
Fran-Stef Mfg. Co., New York, N.Y. 441,086, ren. 6–25–68. Cl. 3.
French Knit Originals, The : *See—*
French Knitwear Co., Inc.
French Knitwear Co., Inc., d.b.a. The French Knit-Originals, New York, N.Y. 731,325, canc. Cl. 39.
Freudenberg, B., Inc., New York, N.Y. 851,620, pub. 4–9–68. Multiple Class (Classes 100, 101, and 103).
Fricke Dental Mfg. Co. : *See—*
Fricke, Lawrence R.
Fricke, Lawrence R., d.b.a. Fricke Dental Mfg. Co., Chicago, Ill. 500,218, ren. 6–25–68. Cl. 44.
Fried, Jefferey L., d.b.a. Walton-March, Highland Park, Ill. 851,332, pub. 4–9–68. Cl. 19.
Fuji Photo Film Co., Ltd., Kanagawa Prefecture, Japan. 851,434, pub. 4–9–68. Cl. 26.
Fuld Brothers, Inc., Baltimore, Md. 731,290, canc. Cl. 52.
G.K.N. Screws & Fasteners Ltd., Birmingham, England. 851,295, pub. 4–9–68. Cl. 13.
Gardner Mfg. Co., Horicon, Wis. 731,122, canc. Cl. 23.
Geigy Chemical Corp., from Geigy Chemical Corp., Ardsley, N.Y. 851,309, pub. 4–9–68. Cl. 18.
General Aniline & Film Corp. : *See—*
I.G. Farbenindustrie Aktiengesellschaft.
General Aniline & Film Corp., New York, N.Y. 851,438, pub. 4–9–68. Cl. 26.
General Mills, Inc., Minneapolis, Minn. 851,574, pub. 4–9–68. Cl. 46.
General Motors Corp., Detroit, Mich. 851,451, pub. 4–9–68. Cl. 31.
General Oceanographics, Inc., Northridge, Calif. 851,618, pub. 4–9–68. Cl. 100.
General-Direktion der Osterr. Tabakregie, to Austria Tabakwerke Aktiengesellschaft Vorm. Oesterreichische Tabakregie, Vienna, Austria. 245,626, ren. 6–25–68. Cl. 17.
Genisco Technology Corp., Compton, Calif. 851,362–3, pub. 4–9–68. Cl. 21.
Getz, Charles L., Jr., Cleveland, Ohio. 851,650, pub. 4–9–68. Cl. 107.
Gland-O-Lac Co., The : *See—*
Ciba Corp.
Glastic Corp., The, Cleveland, Ohio. 851,331, pub. 4–9–68. Cl. 19.
Glen Mfg. Inc., Milwaukee, Wis. 851,512, pub. 4–9–68. Cl. 42.
Globe Artists, Inc., Brooklyn, N.Y. 731,311, canc. Cl. 107.
Gluck, William, d.b.a. Gluco, Monroeville, Pa. 845,393, cor. Cl. 23.
Golden Dawn Foods : *See—*
Rosenblum, Nathan, & Co.
Golden Dawn Foods Wholesale Grocery Co. : *See—*
Rosenblum, Nathan, & Co.
Golden Dawn Foods, Inc. : *See—*
Rosenblum, Nathan, & Co.
Goodrich, B. F., Co., The, Akron, Ohio. 851,287, pub. 4–9–68. Cl. 12.
Gorman Publishing Co., Chicago, Ill. 851,662. Cl. 38.
Gottesman & Co. Inc., to Standard Packaging Corp., New York, N.Y. 438,316, ren. 6–25–68. Cl. 1.
Gould-Mersereau Co., Inc., The, New York, N.Y. 851,298, pub. 4–9–68. Cl. 13.
Gould-National Batteries, Inc., St. Paul, Minn. 851,348, pub. 4–9–68. Cl. 21.
Grace, W. R., & Co., Cambridge, Mass. 731,170, canc. Cl. 37.
Grace, W. R., & Co., New York, N.Y. 851,273, pub. 4–9–68. Cl. 10.
Gray Line Owners, The, Assn. of, Baltimore, Md., to Gray Line Sight-Seeing Companies, Associated (Inc.), New York, N.Y. 247,027, ren. 6–25–68. Cl. 38.
Gray Line Sight-Seeing Companies, Associated (Inc.) : *See—*
Gray Line Owners, The, Assn. of.
Great Atlantic & Pacific Tea Co., The, to The Great Atlantic & Pacific Tea Co., Inc., New York, N.Y. 500,064, ren. 6–25–68. Cl. 46.
Great Atlantic & Pacific Tea Co., Inc., The : *See—*
Great Atlantic & Pacific Tea Co., The.
Greater North Dakota Association, North Dakota State Chamber of Commerce, Fargo, N. Dak. 851,628, pub. 4–9–68. Cl. 101.
Greenwood, Edward H., Saginaw, Mich. 851,311, pub. 4–9–68. Cl. 18.
Griffin, Pat, Co., Fort Collins, Colo. 851,666. Cl. 103.
Gro-Kote, Inc. : *See—*
Gro-Kote !, Inc.
Gro-Kote !, Inc., d.b.a. Gro-Kote, Inc., Santa Rosa, Calif. 851,552, pub. 4–9–68. Cl. 46.
Gross, John, & Co., Baltimore, Md. 851,581–2, pub. 4–9–68. Cl. 49.
Guerriero, A. : *See—*
Guerriero, Anthony.
Guerriero, Anthony, d.b.a. A. Guerriero, Fresno, Calif. 851,542, pub. 4–9–68. Cl. 46.
Guglielmino, Joseph, Skokie, Ill. 731,116, canc. Cl. 22.
Guittard Chocolate Co., Burlingame, Calif. 851,556, pub. 4–9–68. Cl. 46.
Gund Mfg. Co. : *See—*
Swedlin, J., Inc.
Hadley Corp., The : *See—*
Cashmere Corp. of America, The.
Hales & Hunter Co., Chicago, Ill. 851,551, pub. 4–9–68. Cl. 46.
Hallmark Cards, Inc., Kansas City, Mo. 851,481, pub. 4–9–68. Cl. 38.
Halloween, Inc., Brooklyn, N.Y. 731,201, canc. Cl. 39.
Harnish, William E., d.b.a. Wm. E. Harnish Golf Enterprises, Dayton, Ohio. 731,082, canc. Cl. 22.
Harnish, Wm. E., Golf Enterprises : *See—*
Harnish, William E.
Harris Trust and Savings Bank, Chicago, Ill. 851,637, pub. 4–9–68. Cl. 102.
Haspel Bros., Inc., New Orleans, La. 502,909, ren. 6–25–68. Cl. 39.
Hassenfeld Bros., Inc., Central Falls, R.I. 731,102–3, canc. Cl. 22.
Hassenfeld Bros. Inc., Pawtucket, R.I. 851,472–3, pub. 4–9–68. Cl. 37.
Haynie Products, Inc., Baltimore, Md. 851,545, pub. 4–9–68. Cl. 46.
Hays Mfg. Co., Erie, Pa. 438,407, ren. 6–25–68. Cl. 13.
Heart of Dixie Products Co., Montgomery, Ala. 731,130, canc. Cl. 23.
Hendryx, Andrew B., Co., The, New Haven, Conn., to Prevue Metal Products, Inc., Chicago, Ill. 501,591, ren. 6–25–68. Cl. 3.
Hercules Powder Co., Wilmington, Del. 730,983, canc. Cl. 1.
Hercules Powder Co., Wilmington, Del. 781,034, canc. Cl. 12.
Hercules Powder Co., Wilmington, Del. 731,080, canc. Cl. 21.
Hercules Powder Co., Wilmington, Del. 731,165, canc. Cl. 37.
Hereford Produce Co. : *See—*
Hill, Forrest D.
Hershey Chocolate Corp. : *See—*
Hershey Foods Corp.
Hershey Foods Corp., from Hershey Chocolate Corp., Hershey, Pa. 851,555, pub. 4–9–68. Cl. 46.
Hershfield, Ben, d.b.a. Hershfield Diamond Co., Tujunga, Calif. 731,121, canc. Cl. 23.
Hershfield Diamond Co. : *See—*
Hershfield, Ben.
Hewitt Soap Co., Inc., The, Dayton, to The Procter & Gamble Co., Cincinnati, Ohio. 501,461, ren. 6–25–68. Cl. 52.
Hewitt Soap Co., Inc., The, Dayton, Ohio. 851,613, pub. 4–9–68. Cl. 52.
High Rock Ginger Ale Co., Norfolk, Va. 851,526, pub. 4–9–68. Cl. 45.
Hill, Forrest D., d.b.a. Hereford Produce Co., Hereford, Tex. 851,550, pub. 4–9–68. Cl. 46.
Hinz, Karl, Solingen-Wald, Germany. 851,290, pub. 4–9–68. Cl. 13.
Hirsch Bros. & Co., Inc., Louisville, Ky. 851,583, pub. 4–9–68. Cl. 46.
Hoffmann-La Roche Inc., Nutley, N.J. 731,075, canc. Cl. 18.
Holiday Inns of America, Inc., Memphis, Tenn. 851,621–2, pub. 4–9–68. Cl. 100.
Holland & Holland Ltd., London, England. 851,270, pub. 4–9–68. Cl. 9.
Holmes-Darst Coal Corp., Knoxville, Tenn. 730,976, canc. Cl. 1.
Horizons Unlimited, Inc., New York, N.Y. 731,195, canc. Cl. 39.
Horlacher Brewing Co., Allentown, Pa. 501,443, ren. 6–25–68. Cl. 48.

Howard Stores Corp., Brooklyn, N.Y. 851,496, pub. 4–9–68. Cl. 39.
Hudnut, Richard, Morris Plains, N.J. 439,005, ren. 6–25–68. Cl. 51.
Huntington Laboratories, Inc., Huntington, Ind. 779,174. Am. 7(d). Cl. 52.
I.G. Farbenindustrie Aktiengesellschaft, Frankfort-on-the-Main, and Berlin, Germany, to General Aniline & Film Corp., New York, N.Y. 241,490, ren. 6–25–68. Cl. 6.
I.G. Farbenindustrie Aktiengesellschaft, Frankfort-on-the-Main, and Berlin, to Agfa-Gevaert Aktiengesellschaft, Leverkusen, Germany. 244,454, ren. 6–25–68. Cl. 26.
ILG Electric Ventilating Co., to ILG Industries Inc., Chicago, Ill. 501,182, ren. 6–25–68. Cl. 34.
ILG Industries Inc. : *See*—
ILG Electric Ventilating Co.
Ideal Fishing Float Co., Inc., Richmond, Va. 731,085, canc. Cl. 22.
Indes Industria Elettrodomestici S.p.A., Strada Piossasco, Turin, Italy. 731,154, canc. Cl. 31.
India Arts, San Francisco, Calif. 851,262, pub. 4–9–68. Cl. 6.
Industrial Research, Inc., Beverly Shores, Ind. 851,487, pub. 4–9–68. Cl. 38.
Ingram Oil and Refining Co. : *See*—
Murphy Corp.
Ingersoll Locks Ltd., London, England. 851,414, pub. 4–9–68. Cl. 25.
Interchemical Corp., New York, N.Y. 851,274, pub. 4–9–68. Cl. 11.
International Basic Economy Corp. : *See*—
Bellows Co., The.
International Imports of California, Los Angeles, Calif. 731,-199, canc. Cl. 39.
International Paper Co., New York, N.Y. 851,474, pub. 4–9–68. Cl. 37.
International Playtex Corp., Dover, Del. 851,505, pub. 4–9–68. Cl. 39.
International Silver Co., The, Meriden, Conn. 502,078, ren. 6–25–68. Cl. 28.
JMJ Corp., Portland, Oreg. 851,291, pub. 4–9–68. Cl. 13.
Jantzen Inc., Portland, Oreg. 851,501, pub. 3–26–68. Cl. 39.
Japan Food Corp., San Francisco, Calif. 730,981, canc. Cl. 1.
Jayark Instruments Corp., New York, N.Y. 851,426, pub. 4–9–68. Cl. 26.
Jerome Foods, Inc., Barron, Wis. 851,565–6, pub. 4–9–68. Cl. 46.
Jet-Ski Co., Inc., Grand Rapids, Minn. 731,084, canc. Cl. 22.
Johns-Manville Corp., New York, N.Y. 731,036, canc. Cl. 12.
Johnson Service Co., from Fischbach & Moore, Inc., Dallas, Tex. 851,415, pub. 3–17–64. Cl. 26.
Juvare, Inc., Salisbury, N.C. 851,599, pub. 4–9–68. Multiple Class (Classes 51 and 52).
Kaufmann, R. & M., Inc., to R. & M. Kaufmann Inc., Aurora, Ill. 500,108, ren. 6–25–68. Cl. 39.
Keil, Wm. E. B., Los Angeles, Calif. 731,092, canc. Cl. 22.
Keland, W. H., Racine, Wis. 851,614, pub. 4–9–68. Cl. 100.
Kepner-Tregoe and Associates, Inc., Princeton, N.J. 851,649, pub. 4–9–68. Cl. 107.
Keystone Custodian Funds, Inc., Boston, Mass. 851,635, pub. 4–9–68. Cl. 102.
Keystone Mfg. Corp., Boston, Mass. 851,427, pub. 4–9–68. Cl. 26.
Kimberly-Clark Corp., Neenah, Wis. 503,077, ren. 6–25–68. Cl. 37.
Kingsley Dryer Corp., Cherry Hill, N.J. 851,402, pub. 4–9–68. Cl. 23.
Kleer-Vu Industries, Inc., New York, N.Y. 851,464, pub. 4–9–68. Cl. 34.
Koch, George, Sons, Inc., Evansville, Ind. 851,407, pub. 4–9–68. Cl. 23.
Kohnstamm, H., & Co., Inc., New York, N.Y. 851,264, pub. 4–9–68. Cl. 6.
Kohnstamm, V. & E., Inc., Brooklyn, N.Y. 851,527, pub. 4–9–68. Cl. 45.
Kolar Laboratories, Inc., Chicago, Ill., to David C. Points, Sr., d.b.a. Meldoris Cosmetic Distributors, Birmingham, Ala. 436,661, ren. 6–25–68. Cl. 51.
Kono Mfg. Co. Inc., Woodside, N.Y. 851,428, pub. 4–9–68. Cl. 26.
Kresge, S. S., Co., Detroit, Mich. 851,370, pub. 4–9–68. Cl. 21.
Kresge, S. S., Co., Detroit, Mich. 851,522, pub. 4–9–68. Cl. 44.
Kruger, Arthur F., Hamburg-Fuhlsbuttel, Germany. 731,174, canc. Cl. 38.
Kurtz Bros., Clearfield, Pa. 851,469, pub. 4–9–68. Cl. 37.
L.C.F., Inc. : *See*—
California Bleaching Water Co.
Laboratoires De Beaute Simon, Lyon Rhone, France. 851,595, pub. 4–9–68. Cl. 51.
Lafayette Radio Electronics Corp., Syosset, N.Y. 851,352, pub. 4–9–68. Cl. 21.
Lampl Fashions, Inc., Cleveland, Ohio. 500,346, ren. 6–25–68. Cl. 39.
Lanvin-Charles of the Ritz, Inc., New York, N.Y. 851,445, pub. 4–9–68. Cl. 28.
Lanvin-Charles of the Ritz, Inc., New York, N.Y. 851,602, pub. 4–9–68. Cl. 51.
Larsen Co., The, Green Bay, Wis. 502,367, ren. 6–25–68. Cl. 46.
Lawrence, A. C., Leather Co. : *See*—
Swift & Co.
Lazier, J. F., Mfg. Co., Inc., to Sun Drop Sales Corp. of America, St. Louis, Mo. 245,851, ren. 6–25–68. Cl. 45.
Lazier, J. F., Mfg. Co., d.b.a. J. F. Lazier Mfg. Co., St. Louis, Mo. 851,528, pub. 4–9–68. Cl. 45.
Leadership Techniques Institute, Inc., Chicago, Ill. 851,654, pub. 4–9–68. Cl. 107.
Lebhar-Friedman Publications, Inc., New York, N.Y. 851,483, pub. 4–9–68. Cl. 38.
Leclerc, M. R., & Co., Schaffhouse, Switzerland. 851,313, pub. 4–9–68. Cl. 18.
Lees, J. B. & S., Ltd., West Bromwich, England. 439,701, ren. 6–25–68. Cl. 14.
Lees, J. B. & S., Ltd., West Bromwich, England. 439,715, ren. 6–25–68. Cl. 14.
Lenz Electric Mfg. Co., Chicago, Ill. 502,073, ren. 6–25–68. Cl. 21.
Lever Brothers Co., New York, N.Y. 851,575, pub. 4–9–68. Cl. 46.
Levoy's Inc., Salt Lake City, Utah. 851,499, pub. 4–9–68. Cl. 39.
Libby's Camera Co., Chicago, Ill. 851,659. Cl. 26.
Logan Co., Louisville, Ky. 851,282, pub. 4–9–68. Cl. 12.
Londontown Mfg. Co., The, Baltimore, Md. 851,508, pub. 4–9–68. Cl. 41.
Lowe, Joe, Co. : *See*—
Lowe, Joe, Corp.
Lowe, Joe, Corp., New York, N.Y., to Consolidated Foods Corp., d.b.a. Joe Lowe Co., Englewood, N.J. 440,181, ren. 6–25–68. Cl. 46.
M.K. Products, Inc., Santa Ana, Calif. 851,460, pub. 4–9–68. Cl. 34.
Macbeth Corp., Newburgh, N.Y. 851,424, pub. 4–9–68. Cl. 26.
Macheca, A. M., & Co., St. Louis, Mo. 851,569, pub. 4–9–68. Cl. 46.
Madame Alexander : *See*—
Alexander Doll Co., Inc.
Mangineering, Inc., Los Angeles, Calif. 731,292, canc. Cl. 100.
Manifatture Enzo Bernucci & Fratelli, Milan, Italy. 851,518, pub. 4–9–68. Cl. 44.
Manufacturers Marketing Co., U.S.A., Inc., New York, N.Y. 851,607–8, pub. 4–9–68. Cl. 52.
Marine Barriers, Inc., Avalon, Calif. 851,280, pub. 4–9–68. Cl. 12.
Marks Polarized Corp., Whitestone, N.Y. 851,423, pub. 4–9–68. Cl. 26.
Marlboro Shirt Co., Inc., New York, N.Y. 731,202, canc. Cl. 39.
Marquette Corp., Minneapolis, Minn. 851,634, pub. 4–9–68. Cl. 101.
Mathews Hair Products, Inc., New York, N.Y. 851,507, pub. 4–9–68. Cl. 40.
Matthews, Jas. H., & Co., Pittsburgh, Pa. 731,129, canc. Cl. 23.
Maywood Packing Co., Corning, Calif. 851,576, pub. 4–9–68. Cl. 46.
McKesson & Robbins, Inc., Bridgeport, Conn., to Stiefel Laboratories, Inc., Oak Hill, N.Y. 246,744, ren. 6–25–68. Cl. 18.
McLean, Jean E., d.b.a. Promenade, Costa Mesa, Calif. 820,-793, canc. Cl. 39.
McVey, Alice M., d.b.a. D. T. McVey Leather Co., Boston, Mass. 731,205, canc. Cl. 39.
McVey, D. T., Leather Co. : *See*—
McVey, Alice M.
Mead Johnson & Co., Evansville, Ind. 851,325–8, pub. 4–9–68. Cl. 18.
Mearl Corp., The, Ossining, N.Y. 851,261, pub. 2–20–68. Cl. 6.
Medco Products Co., Inc., Tulsa, Okla. 851,524, pub. 4–9–68. Cl. 44.
Meldoris Cosmetic Distributors : *See*—
Kolar Laboratories, Inc.
Metro Wholesale Corp., New York, N.Y. 851,293, pub. 4–9–68. Cl. 13.
Meyenberg Milk Products, Inc., San Francisco, Calif. 851,548, pub. 4–9–68. Cl. 46.
Meyer, John, of Norwich, Inc., Norwich, Conn. 851,256, pub. 4–9–68. Multiple Class (Classes 3, 26, 28, and 39).
Michigan Wineries, Inc., Paw Paw, Mich. 851,578–9, pub. 4–9–68. Cl. 47.
Midwest Dental Mfg. Co. : *See*—
Staunt, Martin.
Miles Laboratories, Inc., Elkhart, Ind. 851,329, pub. 4–9–68. Cl. 18.
Mille-Lacs Maple Corp. : *See*—
Mille-Lacs M-P Co.
Mille-Lacs Maple Products : *See*—
Mille-Lacs M-P Co.
Mille-Lacs Maple Products Corp. : *See*—
Mille-Lacs M-P Co.
Mille-Lacs M-P Co., d.b.a. Mille-Lacs Maple Products, Mille-Lacs Maple Corp., and Mille-Lacs Maple Products Corp., Madison, Wis. 851,557, pub. 4–9–68. Cl. 46.
Millipore Corp., Bedford, Mass. 851,454, pub. 4–9–68. Cl. 31.
Minute Man Dairy Stores, Inc., Atlantic City, N.J. 851,626, pub. 4–9–68. Cl. 101.
Missouri-Rogers Corp., Joplin, Mo. 851,396, pub. 4–9–68. Cl. 23.
Mitchell, John E., Co., Dallas, Tex. 851,337, pub. 4–9–68. Cl. 19.
Monarch Food Packers, Inc., d.b.a. Monarch Mfg. Co., Atlanta, Ga. 731,231, canc. Cl. 45.
Monarch Mfg. Co. : *See*—
Monarch Food Packers, Inc.
Montana Flour Mills Co., Great Falls, Mont. 246,950, ren. 6–25–68. Cl. 46.
Montana Flour Mills Co., Great Falls, Mont. 501,805, ren. 6–25–68. Cl. 46.
Morgan Adhesives Co., Stow, Ohio. 851,587, pub. 4–9–68. Cl. 50.
Mullins, John, & Sons, Inc. : *See*—
Buckley, Newhall Co., The.
Murphy Corp., El Dorado, Ark., from Ingram Oil and Refining Co., New Orleans, La. 731,302, canc. Cl. 103.

Mylu Design Co., New York, N.Y. 851,441, pub. 4–9–68. Cl. 28.
Nason Co., The, Clarkston, Mich. 851,416–17, pub. 4–9–68. Cl. 26.
National Carbon Co., Inc., to Union Carbide Corp., New York, N.Y. 438,973, ren. 6–25–68. Cl. 23.
National Dividend Club, Inc., Minneapolis, Minn. 851,630, pub. 4–9–68. Cl. 101.
National Molasses Co., Willow Grove, Pa. 851,536, pub. 4–9–68. Cl. 46.
National Periodical Publications, Inc., New York, N.Y. 851,-664. Cl. 38.
National Sea Products Ltd., from National Sea Products Ltd., Halifax, Nova Scotia, Canada. 851,543, pub. 4–9–68. Cl. 46.
National Starch and Chemical Corp. : *See*—
National Starch Products Inc.
National Starch Products Inc., to National Starch and Chemical Corp., New York, N.Y. 502,067, ren. 6–25–68. Cl. 6.
Nationwide Speed Printing, Bloomington, Ill. 851,665. Cl. 101.
Natural Sound Studios, Sudbury, Mass. 851,468, pub. 4–9–68. Cl. 36.
Neptune Microfloc, Inc., Corvallis, Oreg. 851,452, pub. 4–9–68. Cl. 31.
New Frontier Corp., Grand Rapids, Mich. 851,334, pub. 4–9–68. Cl. 19.
New York State Nurserymen's Association, Inc., New York, N.Y. 851,633, pub. 4–9–68. Cl. 101.
Newcomer Corp., The, Columbia, Mo. 731,019, canc. Cl. 6.
Nicholas International Ltd., Ontario, Canada. 731,064, canc. Cl. 18.
Nicholas International Ltd., Ontario, Canada. 731,067, canc. Cl. 18.
Noland Paper Co., Inc., Buena Park, Calif. 851,476, pub. 4–9–68. Cl. 37.
North American Aluminum Corp., Kalamazoo, Mich. 851,289, pub. 4–9–68. Cl. 12.
North American Rockwell Corp., from Rockwell-Standard Corp., Pittsburgh, Pa. 851,335, pub. 3–12–68. Cl. 19.
Nowy Swait Publishing Co. Inc., to Nowy Swait Publishing Corp., New York, N.Y. 229,494, ren. 6–25–68. Cl. 38.
Nowy Swait Publishing Corp. : *See*—
Nowy Swait Publishing Co. Inc.
Oak Rubber Co., The, Ravenna, Ohio. 731,093, canc. Cl. 22.
O-Cedar Corp'n, Chicago, Ill., to The Drackett Co., Cincinnati, Ohio. 500,286, ren. 6–25–68. Cl. 52.
Oilgear Co., The, Milwaukee, Wis. 439,374, ren. 6–25–68. Cl. 23.
Olin Industries, Inc., East Alton, Ill., to Olin Mathieson Chemical Corp., New York, N.Y. 500,211, ren. 6–25–68. Cl. 9.
Olin Mathieson Chemical Corp. : *See*—
Olin Industries, Inc.
Olin Mathieson Chemical Corp., New York, N.Y. 731,071, canc. Cl. 18.
Omico Plastics Inc., Owensboro, Ky. 851,382, pub. 4–9–68. Cl. 22.
Oneida Ltd., Oneida, N.Y. 851,447, pub. 4–9–68. Cl. 28.
Otis Elevator Co., New York, N.Y. 246,499, ren. 6–25–68. Cl. 15.
P-M Products : *See*—
Profit-Mor Equipment Co., Inc.
P.M.I. Corp., San Francisco, Calif. 851,640, pub. 12–5–67. Cl. 103.
Pacific Plywood Co., Dillard, Oreg. 731,032, canc. Cl. 12.
Packaged Modular Components Co. : *See*—
Perelman, Frank M.
Pagano, M., & Sons, Inc., Brooklyn, N.Y. 851,561, pub. 4–9–68. Cl. 46.
Pandora Knitwear, Inc., New York, N.Y. 501,607, ren. 6–25–68. Cl. 43.
Pappas, C., Co., Inc., Boston, Mass. 851,541, pub. 4–9–68. Cl. 46.
Paris Paint & Varnish Co., Inc., Brooklyn, N.Y. 851,307, pub. 12–6–66. Cl. 16.
Pendleton Woolen Mills, Portland, Oreg. 246,911, ren. 6–25–68. Cl. 42.
Penn Valley Polymers Co., Phoenixville, Pa. 851,284, pub. 4–9–68. Cl. 12.
Pepperell Mfg. Co., Biddeford, Maine, to West Point-Pepperell, Inc., West Point, Ga. 68,697, ren. 6–25–68. Cl. 42.
Perelman, Frank M., d.b.a. Packaged Modular Components Co., Los Angeles, Calif. 851,658. Cl. 21.
Perry Mfg. Corp., Trenton, N.J. 851,642, pub. 4–9–68. Cl. 103.
Personal Stationery Co. : *See*—
Blask, Maxwell A.
Petty Geophysical Engineering Co., San Antonio, Tex. 851,-615, pub. 4–9–68. Cl. 100.
Pfizer, Chas., & Co., Inc., New York, N.Y. 851,592–4, pub. 4–9–68. Cl. 51.
Philadelphia Bulldogs : *See*—
Continental Football Club of Philadelphia Inc.
Philadelphia Quartz Co., Philadelphia, Pa. 501,262. Am. 7(d). Cl. 6.
Photo Research Corp., Hollywood, Calif. 851,431, pub. 4–9–68. Cl. 26.
Photofabrication Chemical and Equipment, Pennsauken, N.J. 851,609–12, pub. 4–9–68. Cl. 52.
Pillsbury Co., The, Minneapolis, Minn. 851,547, pub. 4–9–68. Cl. 46.
Pioneer Industries, Inc., from Pioneer Industries, Inc., Darby, Pa. 730,994, canc. Cl. 3.
Pioneer Industries, Inc., from Pioneer Industries, Inc., Darby, Pa. 731,316, canc. Cl. 3.
Pioneer Industries, Inc., from Pioneer Industries, Inc., Darby, Pa. 731,323–4, canc. Cl. 28.
Piping Specialties, Inc., New York, N.Y. 440,722, ren. 6–25–68. Cl. 13.
Pitman Mfg. Co. : *See*—
Chance, A. B., Co.
Points, David C., Sr. : *See*—
Kolar Laboratories, Inc.
Pola-Rona, Inc., Altadena, Calif. 851,529, pub. 4–9–68. Cl. 45.
Polychem Corp., New Haven, Conn. 851,448, pub. 4–9–68. Cl. 29.
Polychem Corp., New Haven, Conn. 851,598, pub. 4–9–68. Cl. 51.
Post Advertising Co., Inc., Chicago, Ill. 731,173, canc. Cl. 38.
Power Pneumatics Co. : *See*—
Bowers, Albert R.
Practical Products Corp., Dallas, Tex. 851,279, pub. 4–9–68. Cl. 12.
Precision Systems Co., Inc., Bound Brook, N.J. 851,400, pub. 4–9–68. Cl. 23.
Precision-Cosmet Co., Inc., Minneapolis, Minn. 851,419, pub. 4–9–68. Cl. 26.
Premium Service Co., Inc., The, Teterboro, N.J. 731,298, canc. Cl. 101.
Prevue Metal Products, Inc. : *See*—
Hendryx, Andrew B., Co., The.
Pritchard, M. J., Inc. : *See*—
Pritchard, Manion J.
Pritchard, Manion J., to M. J. Pritchard, Inc., Minneapolis, Minn. 501,756, ren. 6–25–68. Cl. 46.
Procter & Gamble Co., The : *See*—
Hewitt Soap Co., Inc., The.
Procter & Gamble Co., The, Cincinnati, Ohio. 502,587, ren. 6–25–68. Cl. 52.
Profit-Mor Equipment Co., Inc., d.b.a. P-M Products, Indianapolis, Ind. 851,516, pub. 4–9–68. Cl. 44.
Progressive Products Co., San Francisco, Calif. 851,260, pub. 8–1–67. Cl. 6.
Promenade : *See*—
McLean, Jean E.
Prospect Enterprises : *See*—
Prospect Enterprises, Inc.
Prospect Enterprises, Inc., d.b.a. Prospect Enterprises, Los Angeles, Calif. 851,568, pub. 4–9–68. Cl. 46.
Pumps Inc., Bedford, Ohio. 851,395, pub. 4–9–68. Cl. 23.
Pyro Foam Corp., Oakland, from Bramley Barnes, Daly City, Calif. 851,394, pub. 4–9–68. Cl. 23.
Quaker Oats Co., The, Chicago, Ill. 851,567, pub. 4–9–68. Cl. 46.
Radiant Oven Corp., Fort Lee, N.J. 851,463, pub. 4–9–68. Cl. 34.
Railroad Dynamics, Inc., Newton Square, Pa. 851,333, pub. 4–9–68. Cl. 19.
Ralston Purina Co., St. Louis, Mo. 851,570, pub. 4–9–68. Cl. 46.
Raven Industries, Inc., Sioux Falls, S. Dak. 851,585, pub. 4–9–68. Cl. 50.
Razor/Ease Inc., Miami Beach, Fla., from Henry M. Finn, Boston, Mass. 851,600, pub. 4–9–68. Cl. 51.
Recording Materials & Supplies Corp., New York, N.Y. 851,-627, pub. 4–9–68. Cl. 101.
Reeves Brothers, Inc., New York, N.Y. 851,586, pub. 4–9–68. Cl. 50.
Reliance Electric & Engineering Co., The : *See*—
Dodge Mfg. Corp.
Repco Products Corp., Philadelphia, Pa. 851,459, pub. 4–9–68. Cl. 34.
Requa Mfg. Co., Inc., Brooklyn, N.Y. 851,268, pub. 4–9–68. Cl. 6.
Reverso Products, Inc., Brooklyn, N.Y. 851,340, pub. 12–19–67. Cl. 20.
Rhodia Inc., New York, N.Y. 851,546, pub. 4–9–68. Cl. 46.
Richardson-Merrell Inc. : *See*—
Walker Vitamin Products, Inc.
Richardson-Merrell Inc., New York, N.Y. 851,330, pub. 4–9–68. Cl. 18.
Rinn Corp., Elgin, Ill. 851,435–6, pub. 4–9–68. Cl. 26.
Ritz, Hans, Dr.-Ing., Messwandlerwerk G.m.b.H., Hamburg, Germany. 851,368, pub. 11–28–67. Cl. 21.
Robins, A. H., Co., to A. H. Robins Co., Inc., Richmond, Va. 502,058, ren. 6–25–68. Cl. 18.
Robins, A. H., Co., Inc. : *See*—
Robins, A. H. Co.
Rockwell-Standard Corp. : *See*—
North American Rockwell Corp.
Rosenblum, Nathan, & Co., d.b.a. Golden Dawn Foods, to Golden Dawn Foods Wholesale Grocery Co., to Golden Dawn Foods, Inc., Sharon, Pa. 440,293, ren. 6–25–68. Cl. 46.
Ross, Inc., Chanute, Kans. 844,110, cor. Cl. 36.
Ross Laboratories : *See*—
Abbott Laboratories.
Ruby Lighting Corp., The, New York, N.Y. 851,369, pub. 4–9–68. Cl. 21.
Ruson Davco, Inc., Chelsea, Mass. 851,513, pub. 4–9–68. Cl. 42.
Rust-Oleum Corp., Evanston, Ill. 851,306, pub. 4–9–68. Cl. 16.
Saatzer, Helen, St. Cloud, Minn. 851,562, pub. 4–9–68. Cl. 46.
Sackner Products, Inc., Grand Rapids, Mich. 851,408, pub. 4–9–68. Cl. 23.
St. Regis Paper Co., New York, N.Y. 851,471, pub. 4–9–68. Cl. 37.
Sanco Corp., Winston-Salem, N.C. 851,411, pub. 4–9–68. Cl. 23.
Sargent Building Specialties Inc., Kearny, N.J. 851,461, pub. 4–9–68. Cl. 34.
Satterwhite Printing Co., Inc., Richmond, Va. 851,631, pub. 4–9–68. Cl. 101.
Saxone Shoe Co. Ltd., Kilmarnock, Scotland. 731,190, canc. Cl. 39.

Schaefer, F. & M., Brewing Co., The, Brooklyn, N.Y. 502,889, ren. 6–25–68. Cl. 48.
Schloss & Kahn Grocery Co., to Schloss & Kahn, Inc., Montgomery, Ala. 243,181, ren. 6–25–68. Cl. 46.
Schloss & Kahn, Inc.: *See—*
  Schloss & Kahn Grocery Co.
Scholastic Testing Service, Inc., Chicago, Ill. 731,160, canc. Cl. 37.
Schwinn Bicycle Co., Chicago, Ill. 851,338, pub. 4–9–68. Cl. 19.
Scripps-Howard Radio, Inc., d.b.a. Television Station WEWS, Cleveland, Ohio. 731,308, canc. Cl. 107.
Sears, Roebuck & Co., Chicago, Ill. 731,155, canc. Cl. 35.
Sears, Roebuck & Co., Chicago, Ill. 731,207, canc. Cl. 39.
Security Dynamics Investment Corp., Chicago, Ill. 851,629, pub. 4–9–68. Cl. 101.
Selig Chemical Industries, Inc., The, Atlanta, Ga. 851,265, pub. 4–9–68. Cl. 6.
Senco Products, Inc., Cincinnati, Ohio. 851,297, pub. 4–9–68. Cl. 13.
Sengbusch Self-Closing Inkstand Co., Milwaukee, Wis. 500,952, ren. 6–25–68. Cl. 37.
Seretny, Adolf, d.b.a. Val Setz, Portland, Oreg. 731,081, canc. Cl. 22.
Service d'Exploitation Industrielle des Tabacs et Allumettes, Baltimore, Md. 851,657. Cl. 17.
Setz, Val: *See—*
  Seretny, Adolf.
Sheffield Watch of New York, Inc., New York, N.Y. 851,440, pub. 4–9–68. Cl. 27.
Shenango Ceramics, Inc., New Castle, Pa. 851,449, pub. 4–9–68. Cl. 30.
Simplex Shoe Mfg. Co., Milwaukee, Wis. 731,203, canc. Cl. 39.
Sirco Products Co., Inc., Mount Vernon, N.Y. 851,257, pub. 4–9–68. Cl. 3.
Sireno Co., The, New York, N.Y., to Sireno Signal Mfg. Corp., Kearny, N.J. 70,228, ren. 6–25–68. Cl. 23.
Sireno Signal Mfg. Corp.: *See—*
  Sireno Co., The.
Slavin, N. E., & Co.: *See—*
  Slavin, Nathaniel E.
Slavin, Nathaniel E., d.b.a. N. E. Slavin & Co., Cambridge, Mass. 851,301, pub. 4–9–68. Cl. 14.
Slocum, Gerald W., d.b.a. Demco, Dowagiac, Mich. 731,136, canc. Cl. 23.
Smith & Co., to Smith Kendon Ltd., London, England. 439,858, ren. 6–25–68. Cl. 18.
Smith, D. B., & Co., Inc., Utica, N.Y. 851,299, pub. 4–9–68. Cl. 13.
Smith Kendon Ltd.: *See—*
  Smith & Co.
Societe Technique de Parfumerie "F. Millot," Paris, France. 731,270, canc. Cl. 51.
Sock-It Co., Inc., High Point, N.C. 731,117, canc. Cl. 22.
Solvay Process Co., The, Solvay, to Allied Chemical Corp., New York, N.Y. 240,070, ren. 6–25–68. Cl. 6.
Soraba Corp., The, Healdsburg, Calif. 851,376, pub. 4–9–68. Cl. 22.
Southern Lumber Journal & Building Material Dealer, The, Jacksonville, Fla. 731,176, canc. Cl. 38.
Southland Corp., The, Dallas, Tex. 851,540, pub. 4–9–68. Cl. 46.
Spink, Charles C., & Son: *See—*
  Sporting News Publishing Co., The.
Sporting News Publishing Co., The, d.b.a. Charles C. Spink & Son, St. Louis, Mo. 731,185, canc. Cl. 38.
Sportsman's, Inc., Fisherville, Va. 731,100, canc. Cl. 22.
Spramor Corp. of America, Chicago, Ill. 851,604, pub. 2–20–68. Cl. 52.
Spring City Knitting Co., Spring City, Pa. 851,491, pub. 10–31–67. Cl. 39.
Stadium Mfg. Co., Inc., New York, N.Y. 851,490, pub. 4–9–68. Cl. 39.
Standard Oil Co., Whiting, Ind., and Chicago, Ill., to The American Oil Co., Chicago, Ill. 439,130, ren. 6–25–68. Cl. 15.
Standard Oil Co. of California, San Francisco, Calif. 575,408. Am. 7(d). Cl. 38.
Standard Packaging Corp.: *See—*
  Gottesman & Co. Inc.
Standard Products Co., The, Cleveland, Ohio. 851,276, pub. 4–9–68. Cl. 12.
Standard Toch Industries, Inc., Philadelphia, Pa. 731,029, canc. Cl. 12.
Standel Co., Temple City, Calif. 851,349, pub. 4–9–68. Multiple Class (Classes 21 and 36).
Stauffer Chemical Co.: *See—*
  Du Pont de Nemours, E. I., and Co.
Staunt, Martin, d.b.a. Midwest Dental Mfg. Co., Chicago, to American Hospital Supply Corp., Evanston, Ill. 502,502, ren. 6–25–68. Cl. 44.
Steinert, M., & Sons Co., Inc., Boston, Mass. 502,055, ren. 6–25–68. Cl. 36.
Stein-Tex, Inc., New York, N.Y. 731,224, canc. Cl. 42.
Stepp, Elbert C., 2nd, d.b.a. Bill Bruce Shoes, Shenandoah, Va. 851,494, pub. 4–9–68. Cl. 39.
Stewart-Warner Corp.: *See—*
  U.S. Machine Corp.
Stiefel Laboratories, Inc.: *See—*
  McKesson & Robbins, Inc.
Stix Products, Inc., New York, N.Y. 851,346, pub. 4–9–68. Cl. 20.
Stromeyer, J., Co., Philadelphia, Pa. 501,981, ren. 6–25–68. Cl. 46.
Strum & Drum Inc., Chicago, Ill. 851,467, pub. 4–9–68. Cl. 36.
Stubs, Peter, Ltd., Warrington and Rotherham, England. 68,731, ren. 6–25–68. Cl. 23.
Styles by Seymour, Inc., New York, N.Y. 851,497, pub. 4–9–68. Cl. 39.
Subscription Television, Inc., New York, N.Y., from John Blue Co., Inc., Hunstville, Ala. 851,403, pub. 3–5–68. Cl. 23.
Suitime Inc., New York, N.Y. 731,222, canc. Cl. 42.
Sumter Dairies, Inc., Sumter, S.C. 851,544, pub. 4–9–68. Cl. 46.
Sun Drop Sales Corp. of America: *See—*
  Lazier, J. F., Mfg. Co., Inc.
Sunbeam Lighting Co., Los Angeles, Calif. 851,360, pub. 4–9–68. Cl. 21.
Sunshine Originals of Miami, Inc., Hialeah, Fla. 851,493, pub. 4–9–68. Cl. 39.
Surelite Products Co., Inc., Bronx, N.Y. 851,359, pub. 4–9–68. Cl. 21.
Swedlin, J., Inc., d.b.a. Gund Mfg. Co., Brooklyn, N.Y. 851,375, pub. 4–9–68. Cl. 22.
Sweetarts Co., Dundee, Oreg. 242,227, canc. Cl. 46.
Swift & Co., d.b.a. A. C. Lawrence Leather Co., Chicago, Ill. 730,987, canc. Cl. 1.
Syntex Laboratories, Inc., Palo Alto, Calif. 851,324, pub. 4–9–68. Cl. 18.
Szekely, Edmond B., d.b.a. Twenty-First Century Products Co., San Diego, Calif. 851,517, pub. 4–9–68. Cl. 44.
TRW, Inc., New York, N.Y. 851,372, pub. 4–9–68. Cl. 21.
Tablet & Ticket Co., The, Chicago, Ill. 245,185, ren. 6–25–68. Cl. 38.
Taft, Robert A., Institute of Government, The, New York, N.Y. 851,647, pub. 4–9–68. Cl. 107.
Taiyo Electronics Corp., Tokyo, Japan. 851,523, pub. 4–9–68. Cl. 44.
Tanglefoot Co., The, Grand Rapids, Mich. 851,266, pub. 4–9–68. Multiple Class (Classes 6 and 10).
Tasty Baking Co., Philadelphia, Pa. 731,242, canc. Cl. 46.
Telemation, Inc., Salt Lake City, Utah. 851,347, pub. 4–9–68. Cl. 21.
Television Station WEWS: *See—*
  Scripps-Howard Radio, Inc.
Textron, Inc., Providence, R.I. 851,275, pub. 4–9–68. Cl. 12.
Textron Inc., from Textron Inc., Providence, R.I. 851,442–4, pub. 2–20–68. Cl. 28.
Thomas & Betts Co., The, Elizabeth, N.J. 851,365–6, pub. 4–9–68. Cl. 21.
Thomas, Orrin H., Clearfield, Pa. 731,146, canc. Cl. 26.
Thornhill-Craver Co., Houston, Tex. 851,292, pub. 4–9–68. Cl. 13.
Tobishi Electronic Industries, Ltd., Tokyo, Japan. 851,355, pub. 4–9–68. Multiple Class (Classes 21 and 36).
Todd, E. M., Co., The, Richmond, Va. 851,559, pub. 4–9–68. Cl. 46.
Tombill Corp., Franklin Park, Ill. 851,277, pub. 4–9–68. Cl. 12.
Traders Oil Mill Co., Fort Worth, Tex., to The Buckeye Cellulose Corp., Cincinnati, Ohio. 501,998, ren. 6–25–68. Cl. 46.
Trans Caribbean Airways, Inc., New York, N.Y. 851,645, pub. 4–9–68. Cl. 105.
Trans-American Refrigerated Services, Ltd., Chicago, Ill. 731,303, canc. Cl. 105.
Twenty-First Century Products Co.: *See—*
  Szekely, Edmond B.
Uebelhack Turkey Farm, Mount Vernon, Ind. 851,535, pub. 4–9–68. Cl. 46.
Ukiah Fruit Growers, Inc., Ukiah, Calif. 501,449, ren. 6–25–68. Cl. 46.
Ultra-Violet Products, Inc., San Gabriel, Calif. 851,358, pub. 4–9–68. Cl. 21.
Union Carbide Corp.: *See—*
  National Carbon Co., Inc.
Union Fork & Hoe Co., The, Columbus, Ohio. 851,412, pub. 4–9–68. Cl. 23.
Union Pacific Railroad Co., Omaha, Nebr. 32,036, ren. 6–25–68. Cl. 19.
Uniroyal, Inc.: *See—*
  United States Rubber Co.
United Engineering & Foundry Co., Pittsburgh, Pa. 851,391, pub. 4–9–68. Cl. 23.
United Grocers, Ltd., Richmond, Calif. 851,489, pub. 4–9–68. Cl. 38.
United Mattress Machinery Co., Quincy, Mass. 851,401, pub. 4–9–68. Cl. 23.
United Merchants & Manufacturers, Inc., New York, N.Y. 438,714, ren. 6–25–68. Cl. 42.
U.S. Machine Corp., Lebanon, Ind., to Stewart-Warner Corp., Chicago, Ill. 502,086, ren. 6–25–68. Cl. 34.
United States Playing Card Co., The: *See—*
  Blask, Maxwell A.
United States Rubber Co., to Uniroyal, Inc., New York, N.Y. 248,035, ren. 6–25–68. Cl. 50.
U.S. Sanitary Specialties Corp., Chicago, Ill. 731,283, canc. Cl. 52.
U.S. Vitamin Corp., to U.S. Vitamin & Pharmaceutical Corp., New York, N.Y. 500,142, ren. 6–25–68. Cl. 18.
U.S. Vitamin & Pharmaceutical Corp.: *See—*
  U.S. Vitamin Corp.
Universal Bonded-Credit Association, Inc., Boise, Idaho. 731,300, canc. Cl. 102.
Universal Oil Products Co., Des Plaines, Ill. 851,450, pub. 4–9–68. Cl. 31.
University Microfilms, Inc.: *See—*
  Xerox Corp.
Valspar Corp., The, Rockford, Ill. 851,305, pub. 4–9–68. Cl. 16.
Van Pelt Electric Co.: *See—*
  Van Pelt, Gertrude C.

Van Pelt, Gertrude C., d.b.a. Van Pelt Electric Co., Pittsburgh, Pa. 851,409, pub. 4–9–68. Cl. 23.
Van Wyck International Corp., New York, N.Y. 851,357, pub. 4–9–68. Cl. 21.
Vaughan Contact Lens Lab., Inc., Raleigh, N.C. 851,425, pub. 4–9–68. Cl. 26.
Vennootschap Onder de Firma Karel Bos, Alkmaar, Netherlands. 851,399, pub. 4–9–68. Cl. 23.
Vetreria de Vernante S.p.A., Cuneo, Italy. 851,456–7, pub. 4–9–68. Cl. 33.
Victor Mfg. & Gasket Co., Chicago, Ill., to Dana Corp., Toledo, Ohio. 237,743, ren. 6–25–68. Cl. 35.
Vit-A-Way, Inc., Fort Worth, Tex. 851,317, pub. 4–9–68. Cl. 18.
Wachter, William H., Cullman, Ala. 851,653, pub. 4–9–68. Cl. 107.
Walker Mfg. Co., Racine, Wis. 851,638, pub. 4–9–68. Cl. 103.
Walker Vitamin Products, Inc., Mount Vernon, to Richardson-Merrell Inc., New York, N.Y. 500,809, ren. 6–25–68. Cl. 18.
Walther League, Chicago, Ill. 851,480, pub. 4–9–68. Cl. 38.
Walton-March: *See—*
  Fried, Jefferey L.
Warner, Jenkinson, Mfg. Co., St. Louis, Mo. 110,843. Am. 7(d). Cl. 45.
Warrenton Restaurant, Inc.: *See—*
  Your Father's Mustache.
Washington Forge, Inc., Englishtown, N.J. 851,410, pub. 4–9–68. Cl. 23.
Wausau Paper Mills Co., The, Brokaw, Wis. 440,488, ren. 6–25–68. Cl. 37.
Wayne Mfg. Co., Pomona, Calif. 851,405, pub. 4–9–68. Cl. 23.
Wessanen's Koninklijke Fabrieken N.V., Wormerveer, Netherlands. 851,549, pub. 4–9–68. Cl. 46.
Wessanen's Koninklijke Fabrieken N.V., Wormerveer, Netherlands. 851,560, pub. 4–9–68. Cl. 46.
West Chemical Products, Inc.: *See—*
  West Disinfecting Co.
West Disinfecting Co., to West Chemical Products, Inc., Long Island City, N.Y. 503,286, ren. 6–25–68. Cl. 52.
West, Joseph P., d.b.a. West Reproduction, Dearborn, Mich. 731,023, canc. Cl. 6.
West Point-Pepperell, Inc.: *See—*
  Pepperell Mfg. Co.
West Reproduction: *See—*
  West, Joseph P.
Western Blue Print Co., Kansas City, Mo. 851,486, pub. 4–9–68. Cl. 38.
Western Distributing Co.: *See—*
  Western Liquor Distributors, Inc.
Western Liquor Distributors, Inc., d.b.a. Western Distributing Co., Culver City, Calif. 731,255, canc. Cl. 49.
Western Sewing Machine Distributors, Inc., St. Louis, Mo. 851,413, pub. 4–9–68. Cl. 23.
Western Union Telegraph Co., The, New York, N.Y. 851,643, pub. 4–9–68. Cl. 104.
Westman Commission Co., Denver, Colo. 851,532, pub. 4–9–68. Cl. 46.
White, Edward C., Sr., d.b.a. White Mfg. Co., Decatur, Ala. 731,287, canc. Cl. 52.
White Mfg. Co.: *See—*
  White, Edward C., Sr.
Wieder, Elayne A., and Beatrice S. Wieder, New York, N.Y. 851,492, pub. 4–9–68. Cl. 39.
Williams, J. B., Co., Inc., The, New York, N.Y. 851,596, pub. 4–9–68. Cl. 51.
Winarick, Ar., Inc., New York, N.Y. 851,603, pub. 4–9–68. Cl. 51.
Windsor Wax Co., Inc., Hoboken, N.J. 429,582, cor. Cl. 52.
Windsor Wax Co., Inc., Hoboken, N.J. 430,241, cor. Cl. 4.
Windsor-Lloyd Products, Inc., Philadelphia, Pa. 502,382, ren. 6–25–68. Cl. 6.
Winston Sales Co., Inc., Chicago, Ill. 731,097, canc. Cl. 22.
Witco Chemical Co., Inc., New York, N.Y. 851,267, pub. 4–9–68. Cl. 6.
Wolff Freres, Inc., New York, N.Y. 851,601, pub. 4–9–68. Cl. 51.
Womack Electronics, Inc., Danville, Va. 851,465, pub. 4–9–68. Cl. 36.
Woods Industries, Inc., d.b.a. Crop King Co., Yakima, Wash. 851,272, pub. 4–9–68. Cl. 10.
Wyandotte Industries Corp., New York, N.Y. 851,514, pub. 4–9–68. Cl. 42.
Xerox Corp., Rochester, N.Y., from University Microfilms, Inc., Ann Arbor, Mich. 851,479, pub. 4–9–68. Cl. 38.
Xerox Corp., Rochester, N.Y. 851,484, pub. 4–9–68. Cl. 38.
Yardley: *See—*
  Yardley of London, Inc.
Yardley of London, Inc., d.b.a. Yardley, Totowa, N.J. 851,588–9, pub. 4–9–68. Cl. 51.
Young Door Co., Inc., Plymouth, Ind. 851,656. Cl. 12.
Your Father's Mustache, from Warrenton Restaurant, Inc., New Haven, Conn. 851,652, pub. 4–9–68. Cl. 107.
Ziebart Process Corp., Detroit, Mich. 851,308, pub. 4–9–68. Cl. 16.
Zirin Veticeuticals, Inc., Hialeah, Fla. 851,312, pub. 4–9–68. Cl. 18.

U.S. GOVERNMENT PRINTING OFFICE: O—1968

GAZETTE

UNITED STATES
PATENT OFFICE

JUNE

VOL. 851

1968

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